DRAFT

PTKL2040

DRAFT KUALA LUMPUR 2040 LOCAL PLAN

PROMOTING CITY DEVELOPMENT

VOLUME 2

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PROMOTING CITY DEVELOPMENT

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DRAF PTKL2040

The Draft Kuala Lumpur Local Plan 2040 (KLLP2040) was prepared by Kuala Lumpur City Hall (KLCH) by taking into accounts the needs and input from various groups including professionals, government agencies, industries, shareholders and the local communities.

The Draft of the KLLP2040 translates the long-term vision **City for All** by strengthening the planning of Kuala Lumpur in line with the sustainability agenda. This draft document consists of two (2) volumes, namely Volume 1 and Volume 2. The foundational content and justification for the proposed land use zone and intensity is contained in Volume 1, Draft KLLP2040. This plan establishes the planning strategies and identifies proposals for development implementation in Kuala Lumpur leading up to the year 2040. KLCH will use the Draft KLLP2040 to assess any development phases in Kuala Lumpur.

This document provides administrative framework and guide to the KLCH in performing its duties as local authorities taking account the achievement of KLCP 2020.

In view of this, KLCH would like to extend its upmost appreciation to all parties involved, whether at the Federal, State, Local or Communities level for their contribution and cooperation in the preparation of KLLP2040 Draft.

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Preface

Assalamualaikum Warahmatullahi Wabarakatuh

Greetings and Salam Malaysia MADANI,

Alhamdulillah, praise to Allah, the most gracious most gracious and the most merciful. I extend my gratitude and heartiest congratulations to Kuala Lumpur City Hall (KLCH) for having successfully prepared the Draft Kuala Lumpur Local Plan 2040 (KLLP2040).

The preparation of the plan is as stipulated under Section 13, Federal Territory (Planning) Act 1982 (Act 267). This plan also acts as the main document for any development planning in the Federal Territory Kuala Lumpur.

Kuala Lumpur is the Capital City that plays the role in transforming Malaysia to a developed country by 2040. KLCH has taken a proactive approach by outlining the transformation achievement level in Draft KLLP2040. Through the Kuala Lumpur City Plan 2020 (KLCP2020) that has been gazetted, the goal of Kuala Lumpur is to be a competitive city focusing on tourism and commercial sectors while elevating its position as a city in the world that focuses primarily on the financial and commercial sector.

Draft KLLP2040 will become an important document used as a basis in regulating municipal development in Kuala Lumpur. Therefore, the government is always committed in managing and implementing municipal development competently, efficiently, systematic and global standard.

Draft KLLP2040 takes into account global, national and Kuala Lumpur Federal Territory development policies so that planning and development in Kuala Lumpur is more relevant and holistic as well as becomes a reference at the international level.

The future planning of Kuala Lumpur implements the MADANI Malaysia Policy or (SCRIPT) based on Sustainability, Care and Compassion, Respect, Innovation, Prosperity and Trust in shaping a progressive society. This framework is also supported by the goals of Sustainable Development 2030 (SDGs) and the New Urban Agenda (NUA), which are the national commitments at the global level.

Besides, to realise Kuala Lumpur's attainment of Low Carbon City status by 2050, Draft KLLP2040 outlines detailed guidelines and initiatives to ensure its joint implementation with the city's residents.

The government is always attentive and conscientious in making sure the plan helps Kuala Lumpur achieve its goal in becoming a **City for All** by the year 2040.

Thank you and best regards.

YB DR. ZALIHA BINTI MUSTAFA
Minister in Prime Minister's Department
(Federal Territories)

Preface

Assalamualaikum Warahmatullahi Wabarakatuh

Greetings and Salam Malaysia MADANI,

Praise to Allah SWT, the most gracious the most merciful, Alhamdulillah, Kuala Lumpur City Hall (KLCH) has successfully prepared the Draft Kuala Lumpur Local Plan 2040 (KLLP2040) which is the core of future planning for the development of Kuala Lumpur. The Draft KLLP2040 is in line with the 17 Sustainable Development Goals (SDGs) and New Urban Agenda (NUA) to ensure Kuala Lumpur will flourish dynamically, while meeting the needs of today and the days forward. The preparation of the Draft KLLP2040 also takes into account current government policy, the MADANI Malaysia Policy or (SCRIPT) by incorporating all the core elements of the MADANI Malaysia in its planning initiative.

Draft KLLP2040 is a comprehensive action plan that encompasses of all aspects of current and the future changes. These includes climate change, economic development, changes in demography, lifestyle, infrastructural needs, as well as sustainable urban management, and development.

Through this plan, various planning strategies, implementation proposals, and initiatives are outlined to form a flexible and orderly framework in line with changing market demand and the needs of the population that need to be balanced with the changing demographics of Kuala Lumpur's population in the future. Therefore, the Draft KLLP2040 would serve as the foundational main reference for all, especially stakeholders and related agencies in Kuala Lumpur's development planning.

The effect of the pandemic that has hit the whole world has created and approaches to new norm practices. Therefore, the Draft KLLP2040 also sets the direction of the city to be more liberal in governing Kuala Lumpur as well as addressing strategic issues and handling them effectively.

The proposal implementation of Draft KLLP2040 also emphasizes future projection and targets, considering feedback and surveys conducted throughout the preparation of the local plan.

Feedbacks, sharing and views been received throughout the preparation of Draft KLLP2040 truly reflected the aspiration of KLCH in creating **City for All**. This comprehensive effort is based on a holistic development vision with efficient governance, ensuring the development of Kuala Lumpur is driven by the active citizen engagement. The implementation of Draft KLLP2040 is seen as a comprehensive and balanced developmental stage, able to promote investment opportunities, employment and become a preferred destination in the future.

Lastly, I would like to congratulate the KLCH workforce government agencies, private bodies, NGOs and all of Kuala Lumpur residents who have contributed to the successful preparation of Draft KLLP2040. May KLCH in collaboration with all stakeholders, remain committed to empowering development strategies in Kuala Lumpur, strengthening confidence in carrying out the responsibilities entrusted towards the realisation of Kuala Lumpur, **City for All**.

Thank you.

DATUK SR HJ. KAMARULZAMAN BIN MAT SALLEH
Mayor of Kuala Lumpur

CONTENTS

INTRODUCTION	DRAFT KUALA LUMPUR LOCAL PLAN 2040		PAGES
	INTRODUCTION		B1-1
		Public and Stakeholders Consultation Process in the Preparation of The Draft KLLP2040	B1-2
1.1	KUALA LUMPUR DEVELOPMENT FRAMEWORK		B1-6
		Economic Linkages of Cities Within National Conurbation Region	B1-6
		Transportation Linkages to a Regional Network	B1-7
		Implementation of Rail Based Transport System for Community and Services Movement	B1-7
1.2	THE PERFORMANCE OF KLCP2020		B1-8
1.3	DEVELOPMENT TRENDS		B1-9
		Kuala Lumpur Population 2020	B1-9
		Labour Force, Working Population and Employment	B1-10
		Kuala Lumpur Per Capita Income and Household Income	B1-12
1.4	ASPIRATION FOR KUALA LUMPUR 2040		B1-16
		Global Sustainable Agenda	B1-16
		National Sustainable Agenda	B1-19
		Kuala Lumpur Development Agenda	B1-24
		Agenda Development Related	B1-26
1.5	KUALA LUMPUR 2040		B1-27
		Goals of The Draft KLLP2040	B1-27
1.6	KUALA LUMPUR 2040 SPATIAL DEVELOPMENT CONCEPT		B1-30
		Growth of Spatial Development of Kuala Lumpur	B1-30
1.7	KLSP2040 AND DRAFT KLLP2040		B1-36
		Interpretation of The Draft KLLP2040 Based on KLSP2040	B1-36

GOAL 1	KUALA LUMPUR AS AN INNOVATIVE AND PRODUCTIVE CITY		PAGES
	Encouraging Development of Kuala Lumpur as an Innovative and Productive City		M1-1
	Summary of Planning Strategy and Implementation Proposal		M1-2
PLANNING STRATEGY	SP 1-1	DIVERSIFYING FINANCIAL ACTIVITIES AND COMMERCIAL SERVICES IN KUALA LUMPUR	M1-3
IMPLEMENTATION PROPOSAL	CP1-1.1	Planning Commercial Hierarchy in Kuala Lumpur	M1-6
	CP1-1.2	Establishment of New Commercial Area	M1-10
	CP1-1.3	Strengthening of the Primary Commercial Centre in Kuala Lumpur	M1-13
	CP1-1.4	Establishment of Specific Theme Commercial Activities Zones in Kuala Lumpur City Centre	M1-18
	CP1-1.5	Establishment of Banking and Fintech Focus Zones	M1-21
PLANNING STRATEGY	SP 1-2	BRANDING KUALA LUMPUR AS A URBAN TOURISM DESTINATION WITH SUSTAINABLE TOURISM ACTIVITIES	M1-24
IMPLEMENTATION PROPOSAL	CP1-2.1	Planning Future Tourism Sector	M1-27

GOAL 1	KUALA LUMPUR AS AN INNOVATIVE AND PRODUCTIVE CITY		PAGES
	CP1-2.2	Strengthening Urban Tourism Strategies	M1-30
	CP1-2.3	Strengthening Cultural and Heritage Tourism	M1-34
	CP1-2.4	Strengthening Nature Tourism	M1-36
	CP1-2.5	Improving Tourist Infrastructure and Accessibility	M1-38
PLANNING STRATEGY	SP 1-3	STRENGTHENING CULTURAL AND CREATIVE CITY	M1-40
IMPLEMENTATION PROPOSAL	CP1-3.1	Enhancing Creative and Cultural Districts	M1-42
PLANNING STRATEGY	SP 1-4	DEVELOPING INDUSTRIAL CLUSTERS BASED ON CLEAN TECHNOLOGY AND INDUSTRIAL REVOLUTION 4.0 (4IR) TRANSFORMATION	M1-51
	CP1-4.1	Concentrating Industrial Cluster Development	M1-53
	CP1-4.2	Replanning Industrial Land Use Zone as Mixed Development Land Use Zone (MX)	M1-56
IMPLEMENTATION PROPOSAL	CP1-4.3	Rezoning Industrial Land Use Zone to Mixed Industrial (MXI) Development Land Use Zone	M1-59
	CP1-4.4	Upgrading Retained Industrial (IP) Land Use Zones	M1-62
	CP1-4.5	Upgrading Technology Park (TP) Land Use Zone	M1-65
	CP1-4.6	Allocating Batching Plant Activities	M1-67
	CP1-4.7	Regenerating Industrial Buildings as Centralised Labour Quarters (CLQ)	M1-70
	CP1-4.8	Implementing National Industrial Revolution 4.0 (4IR) Incentive Programme	M1-73
PLANNING STRATEGY	SP 1-5	DRIVING ENTREPRENEURIAL DEVELOPMENT FOR URBAN ECONOMIC GROWTH	M1-75
IMPLEMENTATION PROPOSAL	CP1-5.1	Enhancing Entrepreneurial Potential in Neighbourhood Centres	M1-76
	CP1-5.2	Developing and Modernisation of the Informal Sector	M1-78
	CP1-5.3	Planning of Hawker's Spaces in High Intensity Affordable Housing Areas	M1-80
PLANNING STRATEGY	SP 1-6	REGENERATING EXISTING COMMERCIAL AREAS AS A VIBRANT, ATTRACTIVE AND CONDUCIVE BUSINESS SPACES	M1-82
IMPLEMENTATION PROPOSAL	CP1-6.1	Implementing the Commercial Area Improvement (CAI) Programme	M1-84
THE SUMMARY			M1-90

GOAL 2	KUALA LUMPUR AS AN INCLUSIVE, EQUITABLE AND LIVABLE CITY		PAGES
	Focusing on Development of Kuala Lumpur as an Inclusive, Equitable and Livable City		M2-1
	Summary of Planning Strategy and Implementation Proposal		M2-2
PLANNING STRATEGY	SP 2-1	PROVIDING VARIOUS HOUSING OPTIONS TO MEET THE NEEDS OF POPULATION	M2-3
IMPLEMENTATION PROPOSAL	CP2-1.1	Planning for Multi-income Housing	M2-4
PLANNING STRATEGY	SP 2-2	PROVIDING QUALITY AND CONDUSIVE AFFORDABLE HOUSING	M2-9
IMPLEMENTATION PROPOSAL	CP2-2.1	Planning of Affordable Housing	M2-11
	CP2-2.2	Planning of Livable Housing	M2-13
PLANNING STRATEGY	SP 2-3	ADDRESSING THE NEEDS OF THE HOMELESS	M2-16
IMPLEMENTATION PROPOSAL	CP2-3.1	Improving Welfare of the Homeless	M2-17

GOAL 2	KUALA LUMPUR AS AN INCLUSIVE, EQUITABLE AND LIVABLE CITY		PAGES
PLANNING STRATEGY	SP 2-4	IMPROVING OLD ESTABLISHED RESIDENTIAL AREAS	M2-19
IMPLEMENTATION PROPOSAL	CP2-4.1	Regeneration of Old Residential Areas	M2-21
PLANNING STRATEGY	SP 2-5	PROVIDING ADEQUATE, QUALITY AND INTEGRATED COMMUNITY FACILITIES	M2-24
	CP2-5.1	Providing Integrated and Multi-purpose and Shared Spaces	M2-26
IMPLEMENTATION POROPOSAL	CP2-5.2	Providing Adequate, Quality and Accessible Educational, Health And Safety Facilities	M2-29
	CP2-5.3	Providing Optimal and Managed Cemetery Facilities	M2-38
PLANNING STRATEGY	SP 2-6	PROVIDING INTEGRATED PUBLIC FACILITIES AND COMMUNITY HUB FACILITIES	M2-42
IMPLEMENTATION PROPOSAL	CP2-6.1	Providing Community Hubs and Public Library in Neighbourhood Areas	M2-44
THE SUMMARY			M2-49

GOAL 3	KUALA LUMPUR AS A GREEN,HEALTHY AND VIBRANT CITY		PAGES
	Strengthening Surrounding Development of Kuala Lumpur as a Green, Healthy and Vibrant City		M3-1
	Summary of Planning Strategy and Implementation Proposal		M3-2
PLANNING STRATEGY	SP 3-1	MANAGING KUALA LUMPUR BIODIVERSITY ASSETS	M3-3
	CP3-1.1	Managing Biodiversity Assets	M3-5
IMPLEMENTATION PROPOSAL	CP3-1.2	Implementing River of Life Programme	M3-12
	CP3-1.3	Managing Pollution Control	M3-15
PLANNING STRATEGY	SP 3-2	DIVERSIFYING FUNCTIONS OF GREEN AND BLUE CORRIDORS	M3-20
IMPLEMENTATION	CP3-2.1	Optimising Lakes and Retention Ponds as Recreational Parks	M3-22
PROPOSAL	CP3-2.2	Establishing Ecological Corridors	M3-26
PLANNING STRATEGY	SP 3-3	IMPLEMENTING GREEN DENSITY IN KUALA LUMPUR	M3-29
IMPLEMENTATION	CP3-3.1	Expanding Area of Tree Canopy Coverage	M3-30
PROPOSAL	CP3-3.2	Implementing The Vertical Landscape	M3-34
PLANNING STRATEGY	SP 3-4	DIVERSIFYING THE FUNCTION OF PARKS AND OPEN SPACES (LAND)	M3-36
	CP3-4.1	Strengthening Function of Open Space (Land)	M3-39
IMPLEMENTATION PROPOSAL	CP3-4.2	Strengthening Open Spaces (Land) and Recreational Area as A World-class Park	M3-44
	CP3-4.3	Activating Park and Open Space	M3-47
PLANNING STRATEGY	SP 3-5	STRENGTHENING URBAN SPACE FOR ACTIVE AND CREATIVE ACTIVITIES	M3-50
IMPLEMENTATION	CP3-5.1	Rebranding Kuala Lumpur Old City Centre	M3-51
PROPOSAL	CP3-5.2	Sharing of Street and Public Area for Street Activities	M3-53
	CP3-5.3	Activating Vacant and Abandoned Space to Create Pocket Parks or Plazas	M3-55
	CP3-5.4	Implementing Light-emitting Diode (LED) Zone at City Centre	M3-57
PLANNING STRATEGY	SP 3-6	DEVELOPING PARK CONNECTOR NETWORKS	M3-59
IMPLEMENTATION	C3-6.1	Forming Park Connector Networks	M3-61
PROPOSAL	C3-6.2	Marking Kuala Lumpur City Boundary	M3-72
PLANNING STRATEGY	SP 3-7	CONNECTING THE CITY KEY ACTIVITY CENTRES	M3-77
IMPLEMENTATION PROPOSAL	C3-7.1	Improving The Side Lane, Back Lane and Lane Between Building	M3-78

GOAL 3	KUALA LUMPUR AS A GREEN,HEALTHY AND VIBRANT CITY		PAGES
PLANNING STRATEGY	SP 3-8	IMPLEMENTING KUALA LUMPUR HERITAGE TRAIL	M3-81
IMPLEMENTATION PROPOSAL	C3-8.1	Conserving Heritage Sites And Buildings in Heritage Trail Zones	M3-83
	C3-8.2	Expanding Kuala Lumpur Heritage Trail Zone	M3-94
	C3-8.3	Empowering Intangible Heritage	M3-98
PLANNING STRATEGY	SP 3-9	STRENGTHENING GREEN GOVERNANCE	M3-101
IMPLEMENTATION PROPOSAL	C3-9.1	Managing Systematic Park	M3-102
	C3-9.2	Involving of Non-government and Private Organisations in the Urban Greening Programme	M3-104
THE SUMMARY			M3-106

GOAL 4	KUALA LUMPUR AS A CLIMATE-SMART AND LOW CARBON CITY		PAGES
	Strengthening Development of Kuala Lumpur as a Climate-Smart and Low Carbon City		M4-1
	Summary of Planning Strategy and Implementation Proposal		M4-2
PLANNING STRATEGY	SP 4-1	IMPLEMENTING ADAPTATION AND RESILIENCE ACTION PLAN AGAINST CLIMATE CHANGE AND DISASTER RISK MANAGEMENT PLAN	M4-3
IMPLEMENTATION PROPOSAL	CP4-1.1	Developing an Integrated Database of Climate Change and Disaster Risk	M4-5
	CP4-1.2	Preparing and Implementing the Resilience Adaptation Action Plan Towards Climate Change	M4-10
	CP4-1.3	Implementing the Disaster Risk Action Plan	M4-13
	CP4-1.4	Strengthening the Elements of Climate Change Resilience and Disaster Risk Reduction	M4-21
	CP4-1.5	Managing the Endemic, Epidemic and Pandemic	M4-23
	CP4-1.6	Implementing Campaigns and Awareness Programmes on Towards Climate Change, Disaster Risk and Public Health	M4-25
PLANNING STRATEGY	SP 4-2	EXPANDING APPLICATION OF RENEWABLE ENERGY TECHNOLOGIES	M4-27
IMPLEMENTATION PROPOSAL	CP4-2.1	Expanding Solar Power Generation	M4-28
PLANNING STRATEGY	SP 4-3	STRENGTHENING ENERGY EFFICIENCY SYSTEMS	M4-31
IMPLEMENTATION PROPOSAL	CP4-3.1	Expanding Application of Energy Efficient Building	M4-32
	CP4-3.2	Integrating District Cooling System and Shared Utility Corridor	M4-34
PLANNING STRATEGY	SP 4-4	IMPLEMENTING INTEGRATED AND SUSTAINABLE SOLID WASTE MANAGEMENT	M4-36
IMPLEMENTATION PROPOSAL	CP4-4.1	Improving Sustainable Solid Waste Management Facilities	M4-38
	CP4-4.2	Empowering Roles of Communities and Stakeholders in Recycle Practices	M4-40
	CP4-4.3	Improving Smart and High Technology Solid Waste Management	M4-43
	CP4-4.4	Strengthening Organic Waste Disposal	M4-45
	CP4-4.5	Strengthening Construction Waste Disposal	M4-47

GOAL 4	KUALA LUMPUR AS A CLIMATE-SMART AND LOW CARBON CITY		PAGES
PLANNING STRATEGY	SP 4-5	IMPROVING EFFICIENCY OF WATER AND SEWERAGE MANAGEMENT	M4-49
IMPLEMENTATION PROPOSAL	CP4-5.1	Improving Availability of Non-potable Water Supply Resources	M4-50
	CP4-5.2	Enhancing Elements of Water Saving	M4-52
	CP4-5.3	Developing Project Off River Storage (ORS)	M4-54
	CP4-5.4	Integrating Supply from Langat 2 Water Treatment Plant (WTP) and Upgrade Existing Water Treatment Plant	M4-56
	CP4-5.5	Upgrading Regional Sewage Treatment Plant (RSTP)	M4-58
PLANNING STRATEGY	SP 4-6	ENHANCING SUSTAINABLE DRAINAGE SYSTEMS	M4-61
IMPLEMENTATION PROPOSAL	CP4-6.1	Adopting Eco-friendly Approach in Drainage System	M4-62
PLANNING STRATEGY	SP 4-7	PROMOTING LOW-CARBON DEVELOPMENT	M4-68
IMPLEMENTATION PROPOSAL	CP4-7.1	Encouraging Low-Carbon Green Building	M4-69
	CP4-7.2	Increasing Facilities For Electric and Hybrid Vehicles	M4-72
	CP4-7.3	Implementing Low-Carbon Pilot Zone	M4-74
	CP4-7.4	Developing Low-Carbon, Clean and Green Industry	M4-76
	CP4-7.5	Empowering Community Towards Low-Carbon Practices	M4-78
THE SUMMARY			M4-80

GOAL 5	KUALA LUMPUR AS AN EFFICIENT AND ENVIRONMENTAL-FRIENDLY MOBILITY CITY		PAGES
	Focusing Development of Kuala Lumpur as an Efficient and Environmental-Friendly Mobility City		M5-1
	Summary of Planning Strategy and Implementation Proposal		M5-3
PLANNING STRATEGY	SP 5-1	PROVIDING PUBLIC TRANSPORTATION NETWORK WITH PROVISION OF MULTIPLE TRANSIT OPTIONS	M5-4
IMPLEMENTATION PROPOSAL	CP5-1.1	Strengthening of Transport Infrastructure and Expansion of City Public Rail Network	M5-6
	CP5-1.2	Developing City Commuter System in City Centres	M5-9
	CP5-1.3	Prioritising Development of Public Bus Services	M5-14
	CP5-1.4	Providing Pick-up Points of Taxi and E-hailing Services	M5-22
	CP5-1.5	Developing Technology in Intelligent Transport System	M5-24
PLANNING STRATEGY	SP 5-2	ENCOURAGING ACTIVE MOBILITY MODE WITH IMPROVED ACCESSIBILITY AND SAFETY	M5-26
IMPLEMENTATION PROPOSAL	CP5-2.1	Developing Safe, Seamless And Accessible Pedestrian and Micromobility Vehicle Routes	M5-27
	CP5-2.2	Implementing Bike-sharing System (BSS) Facility	M5-31
	CP5-2.3	Promoting Pedestrian and Use of Micromobility Vehicles Routes	M5-34
PLANNING STRATEGY	SP 5-3	MANAGING TRAFFIC EFFECTIVELY	M5-36
IMPLEMENTATION PROPOSAL	CP5-3.1	Managing Traffic in Kuala Lumpur	M5-37
	CP5-3.2	Planning and Managing of Vehicle Parking Space	M5-41
	CP5-3.3	Providing Roads Connector to Complete the Road Network	M5-44
THE SUMMARY			M5-49

GOAL 6	KUALA LUMPUR AS AN INTEGRATED AND SUSTAINABLE CITY		PAGES
	Empowering Development of Kuala Lumpur as an Integrated and Sustainable City		M6-1
	Summary of Planning Strategy and Implementation Proposal		M6-2
PLANNING STRATEGY	SP 6-1	PLANNING AND COORDINATING LAND DEVELOPMENT EFFECTIVELY	M6-3
IMPLEMENTATION PROPOSAL	CP6-1.1	Strengthening Land Use Zones and Development Intensity	M6-7
	CP6-1.2	Managing Undevelop Land in an Optimum and Productive Approach	M6-18
	CP6-1.3	Regulating Industrial Activities Outside Suitable Land Use Zones	M6-22
PLANNING STRATEGY	SP 6-2	STRENGTHENING URBAN GROWTH CENTRE HIERARCHY	M6-24
IMPLEMENTATION PROPOSAL	CP6-2.1	Strengthening Urban Growth Centres	M6-26
PLANNING STRATEGY	SP 6-3	ENCOURAGING INFILL DEVELOPMENT	M6-45
IMPLEMENTATION PROPOSAL	CP6-3.1	Controlling Infill Development	M6-46
PLANNING STRATEGY	SP 6-4	STRENGTHENING REDEVELOPMENT PLANNING THROUGH SUSTAINABLE CITY CONCEPT	M6-48
IMPLEMENTATION PROPOSAL	CP6-4.1	Redevelopment of Old, Dilapidated and Abandoned Areas or Buildings	M6-49
PLANNING STRATEGY	SP 6-5	REVITALIZING URBAN FUNCTIONS THROUGH THE CONSERVATION OF OLD BUILDINGS	M6-53
	CP6-5.1	Preservation and Conservation of Old Buildings with Heritage Value	M6-56
IMPLEMENTATION PROPOSAL	CP6-5.2	Preparation of Heritage Area Conservation Action Plan	M6-61
	CP6-5.3	Participation and Engagement with Community	M6-69
	CP6-5.4	Implementing Heritage Building Conservation Incentives	M6-73
PLANNING STRATEGY	SP 6-6	INTEGRATING RAIL TRANSPORT AND SPATIAL DEVELOPMENT	M6-76
IMPLEMENTATION PROPOSAL	CP6-6.1	Planning Transit Oriented Development (TOD)	M6-77
	CP6-6.2	Planning Underground and Air Space Development in Main Transit and Infrastructure Areas	M6-83
PLANNING STRATEGY	SP 6-7	REGULATING DEVELOPMENT IN SPECIAL AREA MANAGEMENT (SAM) ZONE	M6-86
IMPLEMENTATION PROPOSAL	CP6-7.1	Classification of Types and Levels of Special Area Management (SAM) Zone	M6-87
PLANNING STRATEGY	SP 6-8	PLANNING QUALITY DEVELOPMENT IN TRADITIONAL AND OTHER VILLAGES	M6-93
IMPLEMENTATION PROPOSAL	CP6-8.1	Empowering Identity of Traditional Village 1 (TV1)	M6-96
	CP6-8.2	Planning Control of Traditional Village 2 (TV2)	M6-99
	CP6-8.3	Empowering Potential Development Village	M6-101
	CP6-8.4	Planning Development of Ordinary Villages	M6-104
THE SUMMARY			M6-106

LIST OF FIGURES

INTRODUCTION	DRAFT KUALA LUMPUR LOCAL PLAN 2040	PAGES
Figure 1.1:	Content of Draft KLLP2040	B1-1
Figure 1.2:	Hierarchy of Kuala Lumpur Development Plans	B1-1
Figure 1.3:	Framework for the Preparation of Draft KLLP2040	B1-1
Figure 1.4:	Session of Focus Group Discussion (FGD)	B1-2
Figure 1.5:	Series of Public Consultation Sessions during the Preparation of Draft KLLP2040	B1-3
Figure 1.6:	Parties Involved in the Public Consultation Session Series for the Preparation of the Draft KLLP2040	B1-4
Figure 1.7:	List of Agencies Involved in Technical Working Group Sessions	B1-5
Figure 1.2.1:	Implementation Achievements of KLCP2020 Proposals	B1-8
Figure 1.2.2:	Evaluation of the Suitability Level of the KLCP2020 Proposal for the Implementation of the Draft KLLP2040	B1-8
Figure 1.3.1:	Labor Force Participation Rate and Unemployment Rate	B1-10
Figure 1.3.2:	Labor Force and Working Population ('000)	B1-10
Figure 1.3.3:	Kuala Lumpur Population by Age Group Between 2020 and 2040	B1-13
Figure 1.3.4:	Plan of Planning Area	B1-14
Figure 1.5.1:	Development Goals of Draft KLLP2040	B1-27
Figure 1.6.1:	The concept of "Ring and Radial" through the change of dependence on roads to rails for the planning of the Draft KLLP2040	B1-31
Figure 1.6.2:	Details of Development Control Zone in Kuala Lumpur's Spatial Development Concept	B1-34
Figure 1.6.3:	Plan of Development Strategy Concept Kuala Lumpur 2024	B1-35

GOAL 1	KUALA LUMPUR AS AN INNOVATIVE AND PRODUCTIVE CITY	PAGES
Figure 1.1:	Criteria for Innovative and Productive City	M1-1
Figure 1.2:	Summary of Planning Strategy and Implementation Proposal	M1-2
Figure 1.1.1:	Implementation Proposals for Planning Strategy 1-1	M1-4
Figure 1.1.2:	Plan of Proposed Commercial Hierachy in Kuala Lumpur	M1-5
Figure 1.1.3:	Plan of Proposed Development of Primary Commercial Centre in Kuala Lumpur	M1-17
Figure 1.1.4:	Plan of Focus Cluster for Fintect and Banking	M1-23
Figure 1.2.1:	Implementation Proposals for Planning Strategy 1-2	M1-24
Figure 1.2.2:	Plan of Proposed Kuala Lumpur Tourism	M1-25
Figure 1.2.3:	Plan of Proposed Tourism Recreational Areas, Parks and Green Areas	M1-26
Figure 1.3.1:	Implementation Proposals of Planning Strategy 1-3	M1-40
Figure 1.3.2:	Plan of Proposed Kuala Lumour Creative and Cultuure District	M1-41
Figure 1.4.1:	Implementation Proposals for Planning Strategy 1-4	M1-51
Figure 1.4.2:	Plan of Proposed Industrial Land Use Zone	M1-52
Figure 1.5.1:	Implementation Proposals for Planning Strategy 1-5	M1-75
Figure 1.5.2:	Implementation Proposals for Open Innovation Labs	M1-77
Figure 1.6.1:	Implementation Proposals for Planning Strategy 1-6	M1-82
Figure 1.6.2:	Plan of Proposed Programme Development Improvement for Commercial Area	M1-83

GOAL 2	KUALA LUMPUR AS AN INCLUSIVE, EQUITABLE AND LIVABLE CITY	PAGES
Figure 2.1:	Criteria for Inclusive, Equitable and Livable City	M2-1
Figure 2.2:	Summary Of Planning Strategy and Implementation Proposal	M2-2
Figure 2.1.1:	Implementation Proposal for Planning Strategy 2-1	M2-3
Figure 2.2.1 :	Implementation Proposals for Planning Strategy 2-2	M2-9
Figure 2.2.2 :	Plan of Proposed for Affordable Housing in Kuala Lumpur	M2-10
Figure 2.3.1 :	Implementation Proposal for Planning Strategy 2-3	M2-16
Figure 2.4.1 :	Implementation Proposal for Planning Strategy 2-4	M2-19
Figure 2.4.2 :	Plan of Proposed for Regeneration Area	M2-20
Figure 2.5.1 :	Implementation Proposals for Planning Strategy 2-5	M2-24
Figure 2.5.2 :	Plan of Proposed for Public Facilities in Kuala Lumpur	M2-25
Figure 2.6.1 :	Implementation Proposal for Planning Strategy 2-6	M2-42
Figure 2.6.2 :	Plan of Existing Multi-purpose Hall in Kuala Lumpur	M2-43

GOAL 3	KUALA LUMPUR AS A GREEN, HEALTHY AND VIBRANT CITY	PAGES
Figure 3.1:	Criteria for Green, Healthy and Vibrant City	M3-1
Figure 3.2:	Summary Of Planning Strategy and Implementation Proposal	M3-2
Figure 3.1.1	Implementation Proposal for Planning Strategy 3-1	M3-3
Figure 3.1.2:	Plan of Kuala Lumpur Biodiversity Asset	M3-4
Figure 3.1.3:	Conceptual Model of Biodiversity Index Application for the Draft KLLP2040	M3-7
Figure 3.1.4:	Hill Area Surrounded by Residential Areas	M3-11
Figure 3.1.5:	Plan of Proposed Development River of Life (RoL) 2, 3 dan 4	M3-14
Figure 3.2.1:	Implementation Proposals for Planning Strategy 3-2	M3-20
Figure 3.2.2:	Plan of Proposed Ecological Corridors	M3-21
Figure 3.2.3:	Proposed Ecological Corridor at Infrastructure Corridor	M3-27
Figure 3.2.4:	Proposed Ecological Corridor at Riverside Corridor	M3-28
Figure 3.2.5:	Urban Tree Planting Layers	M3-28
Figure 3.3.1:	Implementation Proposals for Planning Strategy 3-3	M3-29
Figure 3.3.2:	Proposed Carbon Absorbing Tree Species	M3-31
Figure 3.4.1:	Implementation Proposals for Planning Strategy 3-4	M3-37
Figure 3.4.2:	Plan of Open Space and Green Space Area Distribution 2040	M3-38
Figure 3.5.1:	Implementation Proposals for Planning Strategy 3-5	M3-50
Figure 3.5.2:	Location of Proposed Potential Public Spaces for Improvements	M3-53
Figure 3.6.1:	Implementation Proposals for Planning Strategy 3-6	M3-59
Figure 3.6.2:	Plan of Proposed Park Connector Network	M3-60
Figure 3.6.3:	Plan of Proposed Six (6) Park Connector Network	M3-63
Figure 3.6.4:	Plan of Proposed Kuala Lumpur Boundary Markers	M3-73
Figure 3.7.1:	Implementation Proposal for Planning Strategy 3-7	M3-77
Figure 3.7.2:	Potential Improvement Area of Side Lane, Back Lane and Lane Between Building for Pedestrian and Micromobility Vehicle Routes	M3-79
Figure 3.8.1:	Implementation Proposals for Planning Strategy 3-8	M3-81
Figure 3.8.2:	Plan of Proposed Heritage Trail Zone and Existing Heritage Trail Routes in Kuala Lumpur	M3-82
Figure 3.8.3:	Plan of Kuala Lumpur Heritage Building Distribution in Heritage Trail Zones	M3-85
Figure 3.8.4:	Kuala Lumpur Heritage Zone	M3-87
Figure 3.8.5:	Draft KLLP2040 Heritage Trail Zone Priority Area	M3-87
Figure 3.8.6:	River of Life (RoL) Development Master Plan	M3-91
Figure 3.8.7:	GIS Web-base Development Model With Heritage Tourism Orientation	M3-93
Figure 3.8.8:	Plan of The Expansion Kuala Lumpur Heritage Trail Zone	M3-97
Figure 3.8.9:	Distribution of Intangible Heritage	M3-99
Figure 3.9.1:	Implementation Proposals for Planning Strategy 3-9	M3-101
Figure 3.9.2:	Public Trust Fund for Parks and Green Areas in the Context of PSKL2040	M3-102

GOAL 4	KUALA LUMPUR AS A CLIMATE-SMART AND LOW CARBON CITY	PAGES
Figure 4.1:	Criteria for Climate-Smart and Low-Carbon City	M4-1
Figure 4.2:	Summary Of Planning Strategy and Implementation Proposal	M4-2
Figure 4.1.1:	Annual Temperature Trends in Kuala Lumpur, 2010-2020	M4-3
Figure 4.1.2 :	Rainfall Distribution in Kuala Lumpur (2017-2020)	M4-4
Figure 4.1.3 :	Cases of Flash Floods in Kuala Lumpur, 2011-2020	M4-4
Figure 4.1.4 :	Implementation Proposals for Planning Strategy 4-1	M4-4
Figure 4.1.5 :	Proposed Key Components of the Integrated Climate Change and Disaster Risk Database	M4-6
Figure 4.1.6 :	Components of Disaster Risk Database	M4-8
Figure 4.1.7 :	Climate Action Adaptation Planning Process	M4-12
Figure 4.1.8 :	Contributing Factors to Disaster Risk	M4-13
Figure 4.1.9 :	Key Actions for Disaster Risk Management (Sendai Framework, 2015 - 2030)	M4-14
Figure 4.1.10 :	Key components of Resilience Assessment : Climate Disaster Resilience Index (CDRI)	M4-14
Figure 4.1.11 :	Plan of Multi-Disaster Risk Focus Area	M4-18
Figure 4.1.12 :	Methods of Improving the Development Approval Process with Build Back Better Concept	M4-22
Figure 4.2.1 :	Implementation Proposals for Planning Strategy 4-2	M4-27
Figure 4.3.1 :	Energy Label on Electrical Appliances	M4-31
Figure 4.3.2 :	Implementation Proposal for Strategic Planning 4-3	M4-31
Figure 4.4.1 :	Target for Recycling and Solid Waste Management	M4-36
Figure 4.4.2 :	Kuala Lumpur Sustainable Waste Recycling and Management Target 2040	M4-37
Figure 4.4.3 :	Implementation of Proposals for Planning Strategy 4-4	M4-37
Figure 4.4.4 :	Plan to Upgrade and Diversify the Functions of Existing Transfer Station	M4-39
Figure 4.4.5 :	Smart Solid Waste Management System Proposal	M4-44
Figure 4.5.1 :	Implementation of Proposal for Planning Strategy 4-5	M4-49
Figure 4.6.1 :	Implementation of Proposals for Planning Strategy 4-6	M4-61
Figure 4.7.1 :	Implementation of Proposals for Planning Strategy 4-7	M4-68

GOAL 5	KUALA LUMPUR AS AN EFFICIENT AND ENVIRONMENTAL-FRIENDLY MOBILITY CITY	PAGES
Figure 5.1:	Criteria for Efficient Environmental-friendly Mobility City	M5-1
Figure 5.2:	Scenario of Transport Modal split in Kuala Lumpur by 2040	M5-2
Figure 5.3:	Summary of Planning Strategy And Implementation Proposal	M5-3
Figure 5.1.1 :	Implementation Proposals for Planning Strategy 5-1	M5-4
Figure 5.1.2 :	Plan of Existing and Proposed Future Rail Networks	M5-5
Figure 5.1.3 :	Plan of Proposed Urban Commuter Corridor in the City Centre	M5-11
Figure 5.1.4 :	Plan of Proposed BRT Service Corridor	M5-13
Figure 5.1.5 :	Plan of Proposed BET Service Route	M5-16
Figure 5.1.6 :	Plan of GoKL Service Route	M5-19
Figure 5.1.7 :	Plan of Proposed Dedicated Lane for Bus and Taxi in Kuala Lumpur	M5-21
Figure 5.2.1 :	Implementation Proposals for Planning Strategy 5-2	M5-26
Figure 5.2.2 :	Cross Sections for Pedestrian and Micromobility Vehicle Routes	M5-29
Figure 5.2.3 :	Quick-Win Project Proposals for Facilities and Community Area Infrastructure in Wangsa Maju	M5-29
Figure 5.2.4 :	Plan of Proposed Network and Location of Bike-Sharing System (BSS) Locations in City Centre	M5-33
Figure 5.3.1 :	Implementation Proposals for Planning Strategy 5-3	M5-36
Figure 5.3.2 :	Plan of RUC's proposed on the Access Road to the City Centre	M5-39
Figure 5.3.3 :	Plan of Proposed Strengthening of Kuala Lumpur Park and Ride	M5-43
Figure 5.3.4 :	Plan of Proposed Road Connector for Highway and Main Road Network in Kuala Lumpur.	M5-48

GOAL 6	KUALA LUMPUR AS AN SUSTAINABLE AND INTEGRATED CITY	PAGES
Figure 6.1:	Criteria for Integrated and Sustainable City	M6-1
Figure 6.2:	Summary Of Planning Strategy And Implementation Proposal	M6-2
Figure 6.1.1 :	Implementation Proposals of Planning Strategy 6-1	M6-4
Figure 6.1.2 :	Plan of Current Land Use 2021	M6-5
Figure 6.1.3 :	Plan of Build-up and Non-Build-up Distribution By 2021	M6-6
Figure 6.1.4 :	Plan of Proposed Land Use Zone Draft KLLP2040	M6-9
Figure 6.1.5 :	Plan of Intensity Draft KLLP2040	M6-14
Figure 6.1.6 :	Plan of Undeveloped Land Distribution (Vacant Land), 2021	M6-19
Figure 6.2.1 :	Implementation Proposal for Planning Strategy 6-2	M6-24
Figure 6.2.2 :	Plan of Centre Hierarchy of Urban Growth	M6-25
Figure 6.3.1 :	Implementation Proposal for Planning Strategy 6-3	M6-45
Figure 6.4.1 :	Implementation Proposal for Planning Strategy 6-4	M6-48
Figure 6.4.2:	Plan of Redevelopment Sites Distribution Draft KLLP2040	M6-52
Figure 6.5.1 :	Implementation Proposal for Planning Strategy 6-5	M6-54
Figure 6.5.2 :	Plan of Old Buildings Distribution in the City Centre Area	M6-55
Figure 6.5.3 :	Heritage Area PPK Implementation Process Guide	M6-62
Figure 6.5.5 :	Matching Grant Implementation Process	M6-75
Figure 6.6.1 :	Implementation Proposals of the Planning Strategy 6-6	M6-76
Figure 6.6.2 :	TOD Development Concept	M6-78
Figure 6.6.3 :	Plan of Proposed Potential Transit Stations For Transit-Oriented Development (TOD)	M6-80
Figure 6.7.1 :	Implimentation Proposal for Planning Strategy	M6-86
Figure 6.7.2 :	Plan of Level of Special Area Management (SAM) Zone	M6-89
Figure 6.8.2 :	Plan of Traditional Villages and Ordinary Villages Distribution in Kuala Lumpur	M6-95
Figure 6.8.3 :	Plan of Proposed for Formal Entrance to the Tradition Zone	M6-98
Figure 6.8.4 :	Plan of Proposed Traditional and Partial Traditional Zone Gombak MRV	M6-100

LIST OF TABLES

INTRODUCTION	DRAFT LOCAL PLAN KUALA LUMPUR 2040	PAGES
Table 1.3.1:	Main Employment Sub-sectors of Kuala Lumpur Working Population 2016-2020	B1-10
Table 1.3.2:	Working Population by Occupation Category, Kuala Lumpur 2016-2020	B1-11
Table 1.3.3:	Distribution of the Population Working in the Sub Sector, 2020	B1-11
Table 1.3.4:	Kuala Lumpur Per Capita Income, 2010-2020	B1-12
Table 1.3.5:	Kuala Lumpur Household Income 2016-2019	B1-12
Table 1.3.6:	Kuala Lumpur Gross Household Income 2019	B1-12
Table 1.3.7:	Kuala Lumpur Population 2040 by Area	B1-13
Table 1.3.8:	Working Population Projections, 2020-2040	B1-15
Table 1.3.9:	GDP Projection 2020-2040 (Value in RM Billion)	B1-15
Table 1.3.10:	Per Capita Projections, 2020-2040	B1-15

GOAL 1	KUALA LUMPUR AS AN INNOVATIVE AND PRODUCTIVE CITY	PAGES
Table 1.1.1:	Proposal of Commercial Zone Hierarchy	M1-7
Table 1.1.2:	Implementation Initiative by Integrated Commercial Development Hierarchy	M1-8
Table 1.1.3:	Detailed Comparisons in Area Differences for Commercial Land Use Zones	M1-11
Table 1.1.4:	Development Initiatives for Primary Commercial Centre	M1-14
Table 1.1.5:	Inset Plan of Commercial Activities Theme	M1-19
Table 1.2.1:	Projection of Tourist Accommodation by 2040	M1-28
Table 1.2.2:	Initiative to Increase Tourist Accommodation Offer in Kuala Lumpur	M1-29
Table 1.2.3:	Initiatives to Strengthen Urban Tourism	M1-31
Table 1.2.4:	Specific Initiative and Potential Areas to Strengthen Cultural, Heritage and Creative Tourism	M1-35
Table 1.2.5:	Specific Initiatives and potential areas for Strengthening Recreation Areas, Parks and Green Areas	M1-37
Table 1.2.6:	Initiatives to Improve Tourist Accessibility Facilities	M1-39
Table 1.3.1:	Improvement Initiative for Cultural Zone in the Kuala Lumpur's Creative and Cultural District	M1-44
Table 1.3.2:	Improvement Initiative for Creative Heritage Zone in the Kuala Lumpur's Creative and Cultural District	M1-45
Table 1.3.3:	Improvement Initiative for Creative Youth Zone in the Kuala Lumpur's Creative and Cultural District	M1-48
Table 1.3.4:	Improvement Initiative for Heritage Village and Creative Corporate Zone in the Kuala Lumpur's Creative and Cultural District	M1-49
Table 1.3.5:	Improvement Initiative for Civic and Religious Zone in the Kuala Lumpur's Creative and Cultural District	M1-50
Table 1.4.1:	Proposed Industry Clusters by Industrial Area	M1-54
Table 1.4.2:	Proposed Rezoning of Industrial Land Use Zone (IP) into Mixed Development Land Use Zone (MX)	M1-58
Table 1.4.3:	Criteria for Green Building or Clean Industry	M1-60
Table 1.4.4:	Proposed Land Use Zone Areas for Mixed Industrial Development (MXI) in Kuala Lumpur	M1-61
Table 1.4.5:	Proposed Retained Industrial (IP) Land Use Zone	M1-63
Table 1.4.6:	Industrial Development Planning Criteria for Batching Plant in Kuala Lumpur	M1-68
Table 1.4.7:	Proposed Area for Labour Quarters in Industrial Areas	M1-72
Table 1.6.1:	Summary of Priorities of Initiatives in Commercial Area Improvement Programme	M1-86
Table 1.1:	The summary of Planning Strategy and Implementation Proposals of Goal 1	M1-90

GOAL 2	KUALA LUMPUR AS AN INCLUSIVE, EQUITABLE AND LIVABLE CITY	PAGES
Table 2.1.1:	Micro-Housing Planning Measures in Kuala Lumpur	M2-5
Table 2.1.2:	Types and Criteria of Senior Citizen Housing in Kuala Lumpur	M2-7
Table 2.2.1:	Proposed of Subsidised Rental Public Housing Plan on Land Owned by KLCH	M2-14
Table 2.4.1:	Actions to implement the Regeneration Programme in Old Established Residential Area	M2-22
Table 2.4.2:	Proposed Regeneration Areas	M2-23
Table 2.5.1:	Existing Community Facilities that Need to be Maintained and Improved	M2-27
Table 2.5.2:	Criteria for provision of Early Childhood Educational Facilities	M2-30
Table 2.5.3:	Proposed of New School Development	M2-32
Table 2.5.4:	Proposed of New Health Facility Development	M2-34
Table 2.5.5:	Proposed of New Fire Station Development	M2-37
Table 2.5.6:	Proposed of New Police Station Development	M2-37
Table 2.5.7:	Land Use Zone of Cemetery and Mortuary Management Area Draft KLLP2040	M2-38
Table 2.5.8:	Potential Existing Muslim Cemeteries to be Upgraded	M2-39
Table 2.5.9:	Proposed of New Muslim Cemetery	M2-41
Table 2.6.1	Proposed of Community Hub in Neighborhood Areas	M2-47
Table 2.1	The Summary of Planning Strategy and Implementation Proposal of Goal 2	M2-49

GOAL 3	KUALA LUMPUR AS A GREEN, HEALTHY AND VIBRANT CITY	PAGES
Table 3.1.1 :	Proposed for Digital Application of PFR and Green Coverage	M3-7
Table 3.1.2 :	Proposed Location Corridor of Bird Path	M3-8
Table 3.1.3 :	Proposed Preservation of Permanent Forest Reserve (PFR) area	M3-9
Table 3.1.4 :	Supporting Actions to Improve Quality of Water Bodies Improvement	M3-10
Table 3.1.5 :	Proposed River Reserve in Kuala Lumpur	M3-10
Table 3.1.6 :	Proposed of Priority Area for Water Body Management Programme (Rivers and Ponds) from 2021 to 2030	M3-10
Table 3.1.7 :	Proposed Action in Conserve Hill and Slope Areas	M3-11
Table 3.1.8 :	Actions to Control Pollution from Commercial Activities	M3-17
Table 3.2.1 :	Proposed Flood Retention Pond as a Potential Open Space (Land)	M3-24
Table 3.2.2 :	Proposed Riverside Corridor with Potential to Be Ecological Corridor	M3-28
Table 3.3.1 :	List of Tree Species and Carbon Dioxide Absorption Capacity Per Year	M3-31
Table 3.3.2 :	Actions of Tree Planting in Road Reserves and Open Parking Spaces	M3-32
Table 3.3.3:	Action of Tree Planting in Kuala Lumpur's Open Space (Land) and Boundaries	M3-33
Table 3.3.4:	Implementation Action Vertical Landscape Concept	M3-35
Table 3.4.1:	Status of Open Spaces Provision in Other Countries	M3-36
Table 3.4.2:	Status of Open Space (land) Provision in Malaysia, 2016	M3-37
Table 3.4.3:	Status of Open Space (land) Provision in Klang Valley	M3-37
Table 3.4.4:	Details of the Definition of Open Space in the Context of The Draft KLLP2040	M3-40
Table 3.4.5:	Estimated Contribution of Open Space Requirements in Land Use Zones	M3-41
Table 3.4.6:	Estimated Contribution for Open Space in Land Use Zones	M3-41
Table 3.4.7:	Hierarchy and Function of Open Space (land)	M3-45
Table 3.4.8:	List of Public and Recreational Parks in Kuala Lumpur	M3-48
Table 3.4.9:	Proposed Green Protection and Preservation Areas in Kuala Lumpur	M3-49
Table 3.5.1	Implementation Proposals of Planning Strategy 3-5	M3-50
Table 3.5.1:	Proposed Location of First Construction Marking	M3-52
Table 3.5.2:	Proposed Re-introduce Old Street Names in Kuala Lumpur's Old Town Area	M3-52
Table 3.6.1:	Proposed Six (6) Park Connector Networks	M3-62
Table 3.6.2:	Proposed Wilayah Utara Park Connector Network	M3-64
Table 3.6.3:	Proposed Wangsa Maju and Tasik Titiwangsa Park Connector Network	M3-65
Table 3.6.4:	Proposed Pusat Bandar Raya Kuala Lumpur Park Connector Network	M3-66
Table 3.6.5:	Proposed Pudu Ulu and Alam Damai Park Connector Network	M3-67
Table 3.6.6:	Proposed Taman Bukit Kiara and Kerinchi Connector Network	M3-68
Table 3.6.7:	Proposed Taman Bukit Jalil and Bohol Connector Network	M3-69

GOAL 3	KUALA LUMPUR AS A GREEN, HEALTHY AND VIBRANT CITY	PAGES
Table 3.6.8:	Preparation of Main and Support Facilities for The Park Connector Network	M3-70
Table 3.6.9:	Actions in Kuala Lumpur Boundary Marking	M3-74
Table 3.6.10:	Kuala Lumpur Boundary Marker Matrix	M3-75
Table 3.7.1:	Proposed Locations of Lane Improvement	M3-80
Table 3.8.1:	List of Heritage Buildings in Kuala Lumpur Heritage Trail	M3-88
Table 3.8.2:	Proposed Locations of Religious Activities for Various Races	M3-89
Table 3.8.3:	Proposed Locations of Night Market and Open Bazaar Activities	M3-89
Table 3.8.4:	Proposed Locations of Mini Gallery	M3-89
Table 3.8.5:	Proposed Location of Old Buildings for Focus Activities and Tourist	M3-89
Table 3.8.6:	Proposed Locations of International Arts and Cultural Performances	M3-89
Table 3.8.7:	Proposed Locations of Local and Tradition Food Attraction	M3-90
Table 3.8.8:	Proposed Locations of Planned Open Market Activities	M3-90
Table 3.8.9:	Proposed Locations of Visitor-Friendly Pedestrian Routes	M3-90
Table 3.8.10:	Proposed Location of Pedestrian Crossings	M3-90
Table 3.8.11:	Heritage Trail Area Evaluation Criteria	M3-95
Table 3.8.12:	Proposed Locations of Heritage Site Marker Trails	M3-96
Table 3.8.13:	Major Categories and Proposed Locations of Intangible Heritage in the Heritage Trail Zone	M3-100
Table 3.1:	The Summary of Planning Strategy and Implementation Proposal for Goal 3	M3-106

GOAL 4	KUALA LUMPUR AS A CLIMATE-SMART AND LOW CARBON CITY	PAGES
Table 4.1.1:	Climate Data and Climate Risk	M4-7
Table 4.1.2:	Proposed Data Related to Communities at Risk for Climate Change and Disaster Risk	M4-9
Table 4.1.3	Climate Change Risk Assessment in Kuala Lumpur	M4-11
Table 4.1.4:	Proposed of Focus Areas for Resilience Adaptation Action Plan Towards Climate Change	M4-12
Table 4.1.5 :	Disaster Risk Management according to Disaster Types and Risk Reduction Actions	M4-15
Table 4.1.6 :	Proposed Focus Areas and Multi-Disaster Risk Mitigation Strategies	M4-17
Table 4.1.7:	Implementation Actions to Build Back Better	M4-19
Table 4.1.8:	Aspects and Actions in the Strategic Plan of Endemic, Epidemic and Pandemic Management	M4-24
Table 4.2.1:	Photovoltaic Solar Panels Installation Promotion Programme	M4-29
Table 4.2.2:	List of Potential Ponds and Lakes Proposed as Floating Solar Farm Sites	M4-30
Table 4.3.1:	Incentive and Regulatory Programme Towards Increasing the Number of Energy Efficient Buildings in Kuala Lumpur	M4-33
Table 4.3.2:	Rating Programme of BEI Labelling for Government or Public Buildings	M4-33
Table 4.3.3:	Minimum Criteria for the Feasibility of District Cooling System in a Development	M4-35
Table 4.3.4:	Common Utility Trench Reserve Requirements According to Road Hierarchy	M4-35
Table 4.4.1:	Planning for development Solid Waste Management Facility in Kuala Lumpur	M4-39
Table 4.4.2:	Proposed Incentives to Encourage the Implementation of Smart and High-Tech Solid Waste Management Systems	M4-44
Table 4.5.1:	Measures to Strengthen the Availability of Untreated Water Supply Resources in Kuala Lumpur	M4-51
Table 4.5.2:	Proposed Promoting the Use of Water Saving Systems and Equipment for Buildings	M4-53
Table 4.5.3:	Proposed Construction Location for Off River Storage (ORS)	M4-55
Table 4.5.4:	Proposed Upgrading of Kuala Lumpur Water Treatment Plant	M4-57
Table 4.5.5:	Proposed of Upgrading of Regional Sewage Treatment Plant (RSTP)	M4-59
Table 4.6.1:	List of Drainage System Upgrading in Kuala Lumpur	M4-64
Table 4.7.1:	Features of Low-Carbon Green Building	M4-71
Table 4.7.2:	List of Proposed Low-Carbon Pilot Zone of Kuala Lumpur	M4-75
Table 4.7.3:	Specific Initiatives to Enhance Energy Efficiency and Cleaner Production for Existing and New Industries in Kuala Lumpur	M4-77
Table 4.7.4:	Actions that Could Enhance the Facilities to Encourage the Involvement of the Public In Low- Carbon Community Activities and Programme in Kuala Lumpur	M4-79
Table 4.1	The Summary of Planning Strategy and Implementation Proposal of Goal 4	M4-80

GOAL 5	KUALA LUMPUR AS AN EFFICIENT AND ENVIRONMENTAL-FRIENDLY MOBILITY CITY	PAGES
Table 5.1.1:	Kuala Lumpur BRT Service Corridor	M5-12
Table 5.1.2:	Proposed BET Route	M5-15
Table 5.1.3:	Proposed of BET Bus Stop Station in Kuala Lumpur	M5-15
Table 5.1.4:	Proposed of potential roads for the implementation of dedicated lanes for bus and taxi	M5-20
Table 5.2.1:	Requirement of Pedestrian and Micromobility Vehicle Routes	M5-28
Table 5.3.1:	Proposed Highway Connection in Kuala Lumpur	M5-45
Table 5.3.2:	Proposal of New and Upgraded Main Roads	M5-46
Table 5.1:	The Summary of Planning Strategy and Implementation Implementation Proposal of Goal 5	M5-49

GOAL 6	KUALA LUMPUR AS AN SUSTAINABLE AND INTEGRATED CITY	PAGES
Table 6.1.1:	Land Use Zone of Draft KLLP2040 (Hectares)	M6-8
Table 6.1.2:	Classification Details of Ten (10) Main Land Use	M6-10
Table 6.1.3:	Planning Control Layer	M6-15
Table 6.1.4:	Proposed Land Use Zone and Intensity for Undeveloped Land (Vacant Land)	M6-20
Table 6.1.5:	Proposed Suitable Activities For Space Sharing	M6-21
Table 6.1.6:	Details of Industrial Activities Permissible in Commercial Land Use Zones	M6-23
Table 6.1.7:	Industrial Activities Allowed in Traditional Village Land Use Zones And Special Village CULB	M6-23
Table 6.2.1:	Hierarchy and Main Characteristics of Growth Centres in Kuala Lumpur	M6-27
Table 6.2.2:	Development Planning Initiatives of Urban Growth Centre Hierarchy in Kuala Lumpur	M6-29
Table 6.4.1:	Classification of Main Land Use for Redevelopment Sites, Draft KLLP2040	M6-50
Table 6.5.1:	Proposed PPK Heritage Action Area	M6-63
Table 6.5.2:	Proposed measures Improvement of Heritage PPK Area	M6-67
Table 6.5.3	Proposed Actions for Collaboration Programmes with DNH and Related Government Agencies	M6-68
Table 6.6.1:	Proposed TOD Principles	M6-78
Table 6.6.2:	Station Proposals Based on the TOD Guidelines	M6-81
Table 6.7.1:	Proposed Classification of SAM Zone in Kuala Lumpur	M6-88
Table 6.7.2:	Classification of Type and Level of SAM in Kuala Lumpur	M6-90
Table 6.7.3:	Development Control in Special Area Management Zone According to Levels	M6-91
Table 6.8.1:	List Of Traditional Villages And Other Villages In Kuala Lumpur	M6-94
Table 6.8.2:	Formal Entrance Proposals	M6-98
Table 6.8.3:	Proposed Upgrade of Jalan Sungai Penchala and Jalan Segambut	M6-102
Table 6.8.4 :	Proposed Plan for Development Potential Village	M6-103
Table 6.1:	The Summary of Planning Strategy and Implementation Proposal of Goal 6	M6-106

INTRODUCTION

INTRODUCTION

DRAFT KUALA LUMPUR LOCAL PLAN 2040 (KLLP2040)

Rapid development processes require the main cities of the world to be prepared in dealing with critical issues such as road congestion, impact of the climate change, social inequality, inadequate urban infrastructures and technology. Kuala Lumpur being the main city of Malaysia, also face the same issues that needs comprehensive and practical means of solutions.

The Draft KLLP2040 is a planning document that is intended to address the development issues and to set a new development direction towards a sustainable future. Draft KLLP2040 prepares Kuala Lumpur as a Global City that is able to meet the development agenda at the global, national level and the aspirations of its residents. The Draft KLLP2040 is an official document that translates policies and general proposals contained in the KLSP2040 into detailed physical planning.

The preparation of the Draft conforms with the provisions of Act (Planning) Federal Territory, 1982 (Act 267) and considers the achievements of the gazetted KLCP2020. This document is the basis and justification for the land use zoning proposals and intensity, as prescribed in Volume 1 of the Draft KLLP2040.

Figure 1.1: Content of Draft KLLP2040

VOLUME 1:
MANAGING CITY PLANNING

This document is the basis and justification for the land use zoning proposals and intensity, as prescribed in Volume 1 of the Draft KLLP2040.

VOLUME 2:
PROMOTING CITY DEVELOPMENT

This document focuses on development proposals for implementation through policies, programmes, project, planning control and guidelines as the basis for details in Volume 1.

Figure 1.2: Hierarchy of Kuala Lumpur Development Plans

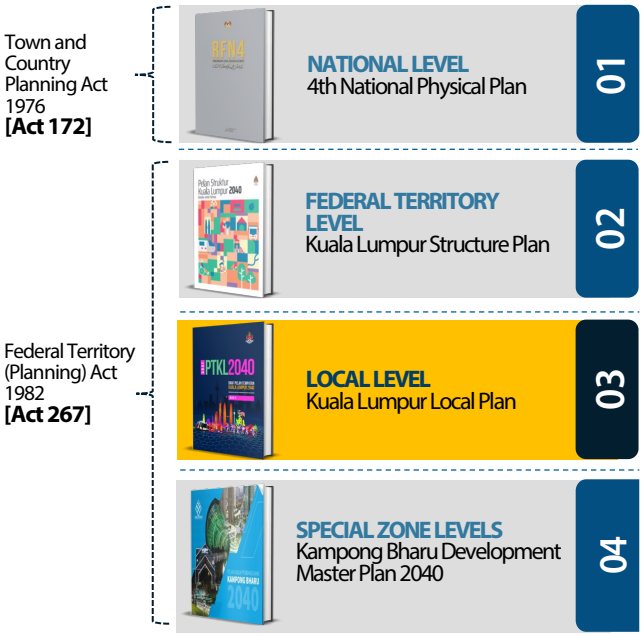


Figure 1.3: Framework for the Preparation of Draft KLLP2040

PUBLIC AND STAKEHOLDERS CONSULTATION PROCESS IN THE PREPARATION OF THE DRAFT KLLP2040

The Draft KLLP2040 had been prepared through a series of consultative process with stakeholders and the general public. The importance of having public consultations is to ensure that the planning of Kuala Lumpur is comprehensive, inclusive and in line with vision of Kuala Lumpur, "City for All".

The process was conducted from the beginning in various forms covering meetings, focus group discussions, technical working group, workshops and briefing sessions. This approach was implemented to get a holistic response towards achieving a complete Draft KLLP2040.

Figure 1.4 shows the consultation sessions with the public during the preparation of the Draft KLLP2040.

Figure 1.4:
Session of Focus Group Discussion (FGD)

Online Focus Group Discussion (FGD) Session of Draft KLLP2040.

Figure 1.5:
Series of Public Consultation Sessions during the Preparation of Draft KLLP2040

Figure 1.6: Parties Involved in the Public Consultation Session Series for the Preparation of the Draft KLLP2040

SESSION 1 — Pre-Consultation Session

Pre-Consultation Workshop Kuala Lumpur Local Plan 2040

PARTIES INVOLVED
Public and Stakeholder Engagement

SESSION 2 AND 6 — Mayor's session with YB Member of Parliament

A discussion to obtain views and aspirations as well as the direction of the development of YB Parliament's Constituency.

MEMBERS OF PARLIAMENT INVOLVED

1. Member of Parliament Lembah Pantai
2. Member of Parliament Cheras
3. Representative Member of Parliament Segambut
4. Representative Member of Parliament Bandar Tun Razak
5. Member of Parliament Bukit Bintang
6. Member of Parliament Batu
7. Member of Parliament Wangsa Maju
8. Member of Parliament Setiawangsa
9. Member of Parliament Kepong
10. Member of Parliament Seputeh

1 — 2

SESSION 4 — Technical Working Group Session

Review Session with Stakeholders

PARTIES INVOLVED
Refer to Figure 1.7

SESSION 3 — Pilot Survey

Online Survey Draft Kuala Lumpur Local Plan 2040

PARTIES INVOLVED
WPKL residents' association

4 — 3

SESSION 5 — Technical Working Group Session

Review Session with Ministries, Departments and Technical Agencies

INVOLVED AGENCIES

1. Department of Law and Prosecution and REDHA (Development Control Tool)
2. Land and Mineral Office
3. Department of Civil Engineering and Drainage
4. Department of Infrastructure
5. Department of Urban Transport
6. Department of Landscape Development and Recreation
7. Wangsa Maju Branch Office

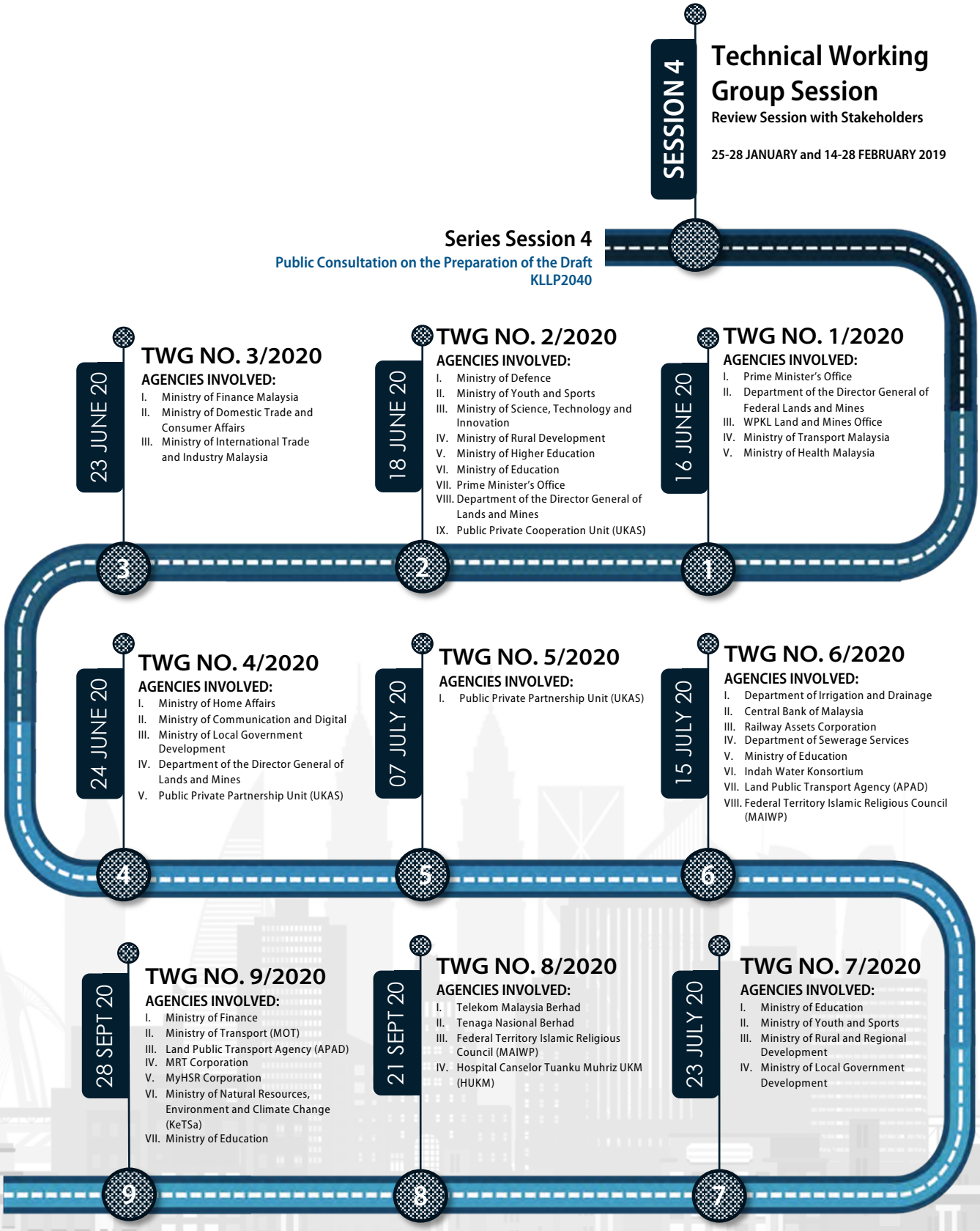
SESSION 7 — Session on Focused Group Discussion (FGD)

Focused Group Discussion (FGD) Session Online with Stakeholders, Technical Agencies and the Public

PARTIES INVOLVED
Technical Agency and Resident Representative

5 — 6

Figure 1.7:
List of Agencies Involved in Technical Working Group Sessions



1.1 KUALA LUMPUR DEVELOPMENT FRAMEWORK

KUALA LUMPUR AS A GLOBAL CITY

Kuala Lumpur is the capital and largest city of Malaysia with an area of 24,289.45 hectares. It is the economic and financial growth centre stimulating the nation's development.

Kuala Lumpur's development growth was initially oriented towards resolving settlement, urban management and environmental issues. As a result of the present rapid development, Kuala Lumpur is facing the issues of traffic congestion, the availability of affordable housing, quality facilities and is prone to disaster risks such as flash floods. Therefore, Kuala Lumpur needs to identify the best method to manage this urban issue, in line with its role as a global city.

The Global Cities Index 2018, ranked Kuala Lumpur as 49th global cities, taking into account several aspects such as business activities, human resources, information exchange, cultural experience and political involvement.

KLSP2040 has determined the direction of Kuala Lumpur's development as a global financial centre. Kuala Lumpur shall use its strength as an international Islamic Financial Centre to spur its position in the world ranking and a robust ecosystem of relevant business support.

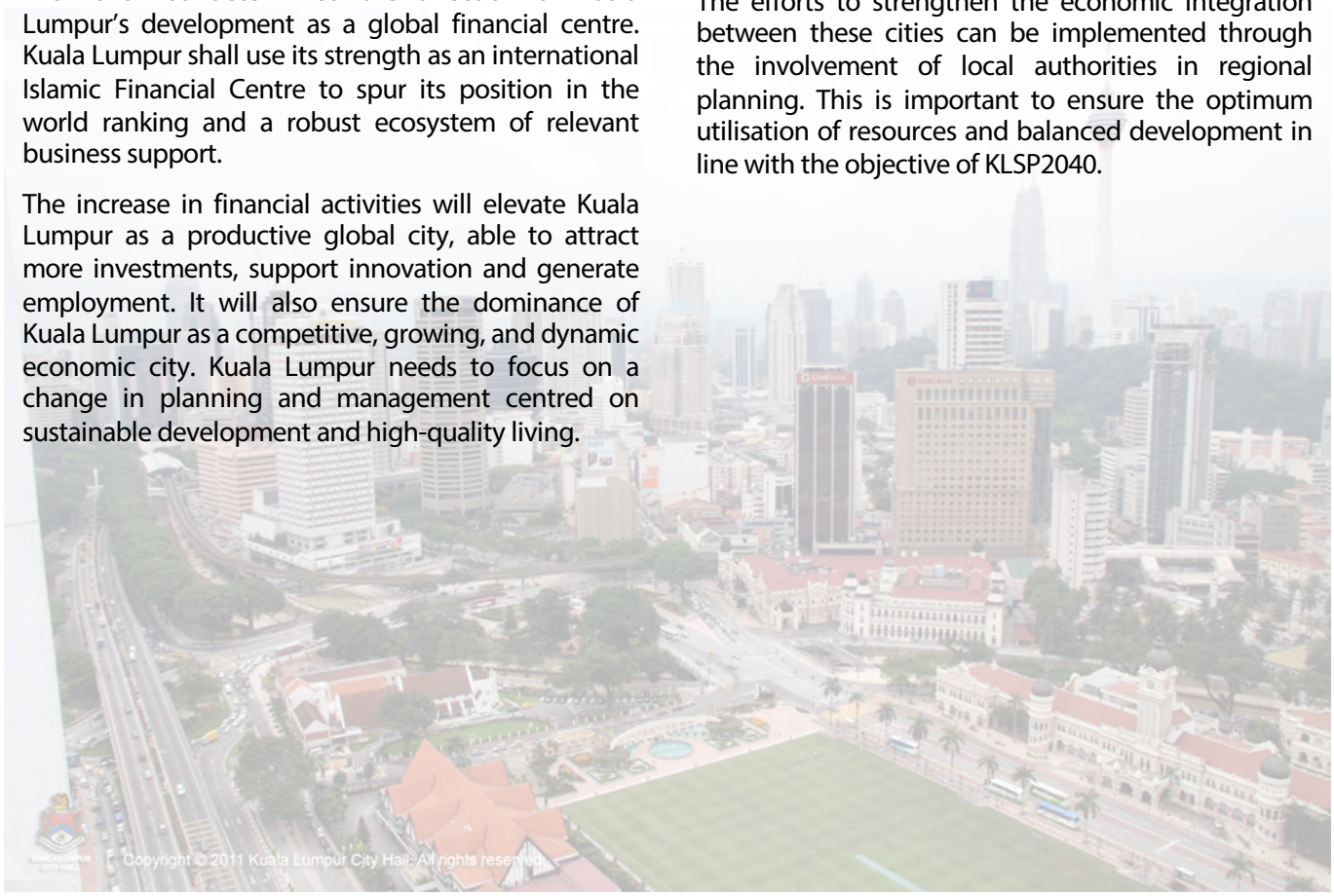
The increase in financial activities will elevate Kuala Lumpur as a productive global city, able to attract more investments, support innovation and generate employment. It will also ensure the dominance of Kuala Lumpur as a competitive, growing, and dynamic economic city. Kuala Lumpur needs to focus on a change in planning and management centred on sustainable development and high-quality living.

ECONOMIC LINKAGES OF CITIES WITHIN NATIONAL CONURBATION REGION

Kuala Lumpur is the prime city of Malaysia and is one of the engines of national economic growth. 75 percent of the Gross Domestic Product (GDP) of Malaysia is concentrated in urban areas located in the National, Northern, Southern and Eastern Conurbations. The development potential of these urban areas must be planned as effectively as possible to obtain the optimum economic benefit.

Kuala Lumpur needs to establish working relationships in terms of policies sharing, spatial planning programmes and initiatives, environmental management and infrastructure readiness, especially with other cities like Cyberjaya, Putrajaya, Shah Alam, Petaling Jaya and Klang. This relationship will also ensure the national conurbation remains robust to cope with the rapid physical and economic growth.

The efforts to strengthen the economic integration between these cities can be implemented through the involvement of local authorities in regional planning. This is important to ensure the optimum utilisation of resources and balanced development in line with the objective of KLSP2040.



TRANSPORTATION LINKAGES TO A REGIONAL NETWORK

The National Transport Policy 2030 (DPN2030) has stipulated that the transportation sector is the main generator of national socioeconomic development. An efficient national transportation system has a direct relation to economic growth and trade activities.

The Logistics and Trade Facilitation Masterplan 2015 has targeted Malaysia as the preferred gateway for logistics. This aspect will be the main spine of all supply chains and is assumed to be the main factor in stimulating trade, facilitating business and spurring regional economic growth.

However, the congestion issues in ports posed challenges when container arrivals from hauliers coincide. Logistics achievements and supply chain management must be enhanced to benefit the economic growth of Kuala Lumpur.

The existence of entry ports at Pelabuhan Klang and KLIA had encouraged agglomeration for industrial activities and services close to the two (2) entry ports. This This agglomeration leads to the generation of investment and employment opportunities. Kuala Lumpur needs to ensure that the regional transport network, which includes logistics hubs, goods transport, and ports of entry, is improved.

IMPLEMENTATION OF RAIL BASED TRANSPORT SYSTEM FOR COMMUNITY AND SERVICES MOVEMENT

The proposal for a high-speed rail terminal in Bandar Malaysia will enhance Kuala Lumpur's role as the main gateway to the country. This proposal will reduce travel time by up to 90 minutes between the Klang Valley and the Southern Region and will open up opportunities for regional economic activities.

The development of the East Coast Rail Link (ECRL) will become one of the new service networks for community and goods movements that will link the east coast and the west coast of Peninsular Malaysia. ECRL line will run through Kelantan, Terengganu, Pahang, and Selangor. It will start from Kota Bharu in Kelantan and ends at Pelabuhan Klang in Selangor. In addition to the states of Kelantan and Selangor, this route will also cross the states of Terengganu and Pahang. Kuala Lumpur should take the opportunity of this project because there is a proposal to link ECRL with the Terminal Bersepadu Gombak that connects to the Light-rail Transit (LRT) network.

The rail transport system in Kuala Lumpur will be more integrated with the completion of the proposed Circle Line (MRT3) that will link with LRT, MRT1, MRT2 and the existing KTM Komuter for Kuala Lumpur. MRT3 will also become a platform to spur competitiveness and stimulate Kuala Lumpur's economy.

A view of Kuala Lumpur City Centre at night.

1.2 THE PERFORMANCE OF KLCP2020 WITHIN IMPLEMENTATION PERIOD

The first Kuala Lumpur Local Plan is known as Kuala Lumpur City Plan 2020 (KLCP2020) and was gazetted on 30th October 2018. It was prepared under the provisions of Section 13 of the Federal Territory (Planning) Act 1982 (Act 267). This plan translates the long-term vision of KLSP2020, Kuala Lumpur as a World Class City.

KLCP2020 outlines eight (8) development thrusts, 24 strategic directions and is supported by 73 main initiatives encompassing all development aspects aimed at encouraging the growth of Kuala Lumpur until 2020.

The performance of KLCP2020 during its implementation period was evaluated to ascertain the level of implementation based on 15 main planning sectors, which are land use and intensity, trade, housing, industrial, public facilities, design, heritage, green and open spaces, environment, disaster risks, infrastructure, transportation, green technology, renewable energy, traditional villages and tourism.

The implementation performance of KLCP2020 is evaluated through two (2) categories, namely the level of implementation and the level of appropriateness of the proposal in the context of the Draft KLLP2040 preparation.

Throughout the gazettement of KLCP2020, 62.20 percent were implemented, 26.83 percent were progressively implemented and 10.98 percent were not implemented, as shown in Figure 1.2.1.

Evaluation of the suitability level of the KLCP2020 proposals for implementation in the Draft KLLP2040 has found that 22.0 percent still relevent, 74.0 percent are still relevant but needs improvement and 4.0 percent should be dropped, as shown in the Figure 1.2.2.

The Draft KLLP2040 will consider the proposals from KLCP2020, which are still suitable for future planning and can be implemented in tune with the current growth of Kuala Lumpur. The selected proposals of KLCP2020 that are being considered in the Draft KLLP2040, need to be in line with the vision of KLSP2040, Kuala Lumpur a City for All.

Figure 1.2.1:
Implementation Achievements of KLCP2020 Proposals

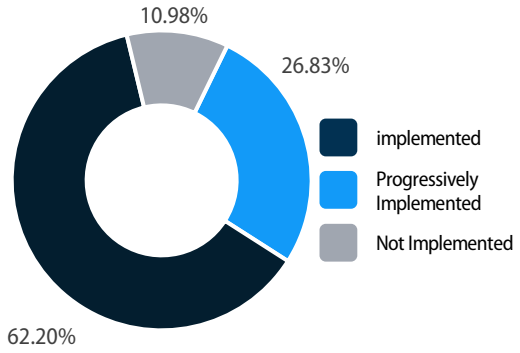
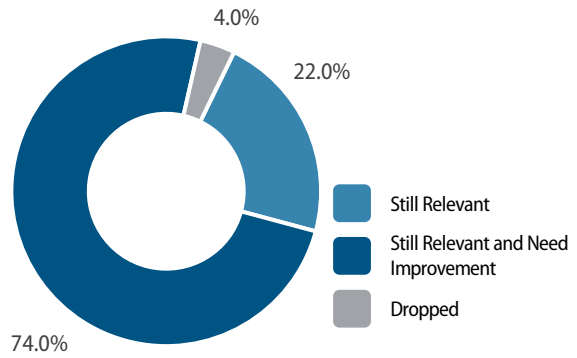


Figure 1.2.2:
Evaluation of the Suitability Level of the KLCP2020 Proposal for the Implementation in the Draft KLLP2040



Note:

Implemented: Planning and proposals in KLCP2020 has been accounted and have been implemented in the proposal of Draft KLLP2040.

Progressively Implemented: Planning and proposals in KLCP2020 has been accounted and have been improved in the proposal of Draft KLLP2040.

Not Implemented: Planning and proposals in KLCP2020 is not accounted and is included in the proposal and planning initiatives of Draft KLLP2040.

Still Relevant: Relevant proposals from KLCP2020 are maintained in the Draft KLLP2040.

Still Relevant and Need Improvement: Appropriate proposals from KLCP2040 that are still in use but improved in the Draft KLLP2040.

Dropped: Inappropriate proposals from KLCP2020 (achieved but no longer suitable with the development of Kuala Lumpur) no longer accounted in the Draft KLLP2040.

1.3 DEVELOPMENT TRENDS

KUALA LUMPUR TOWARDS 2040

Kuala Lumpur has a strong economic foundation and is rapidly developing. The process of its development has undergone a dynamic transformation due to the Kuala Lumpur Strategic Planning Development Plans, which are KLSP2020 and KLCP2020. Through a holistic development strategy framework, KLSP2020, Kuala Lumpur aimed to develop integrated, comprehensive and sustainable socioeconomic and environmental.

The main success of Kuala Lumpur its the rapid economic development in line with the interests and needs of the people comprising of various ethnic groups, including non-citizens. The city has been successful in continuing the goal of becoming a landmark and symbol of the economic development of the country.

KUALA LUMPUR POPULATION 2020

Total population of Kuala Lumpur in 2020 is 1.98 million of which 88.9 percent are citizens and 11.15 percent non-citizens.

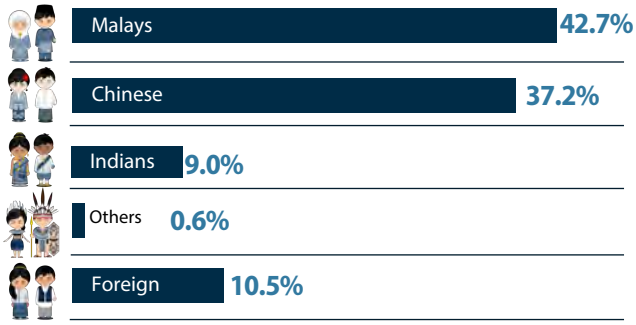
Among the local citizens, Malays remain the largest ethnic group with 42.7 percent, followed by the Chinese second largest with 37.2 percent, Indian 9.0 percent and other 0.6 percent.

Kuala Lumpur recorded a male population outpacing the female population indicated by the gender ratio of 115:100. The size of the male population accounts for 53.4 percent compared to the female population, 46.6 percent.

The size of the working population (15-64 years) has increased and accounts for the largest age group with 73.5 percent. The size of the young population (0-14 years old) has declined to 20.0 percent while the percentage of the senior citizens (65 years and above) has slightly increased to 6.5 percent.

BRIEF INFO

POPULATION OF ETHNIC GROUP 2020



BRIEF INFO

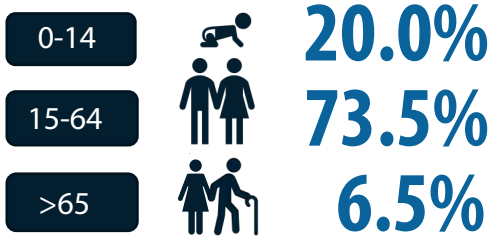
POPULATION OF KUALA LUMPUR 2020

BRIEF INFO

RATIO OF GENDER 2020

BRIEF INFO

SIZE OF POPULATION 2020



Source: My Local Stat Wilayah Persekutuan Kuala Lumpur 2020

LABOUR FORCE, WORKING POPULATION AND EMPLOYMENT

LABOUR FORCE PARTICIPATION RATE

The Labour Force Participation Rate (LFPR) as shown in Figure 1.3.1, recorded significant volatility trends from 2010 to 2020. Between 2010 to 2013, the LFPR recorded a significant increase from 66.2 per cent to 72.1 percent. A similar trend was observed between 2018 and 2020 with LFPR in 2020 was at 72.1 percent. This change is due to the demand for the needs of the workforce, especially the construction sector and the service industry.

Figure 1.3.1 also indicates that Kuala Lumpur's unemployment rate performance between 2010 and 2020 was impacted by changes in employment services, with the unemployment rate also recording a significant fluctuating trend.

Table 1.3.1:
Main Employment Sub-sectors of Kuala Lumpur Working Population 2016-2020

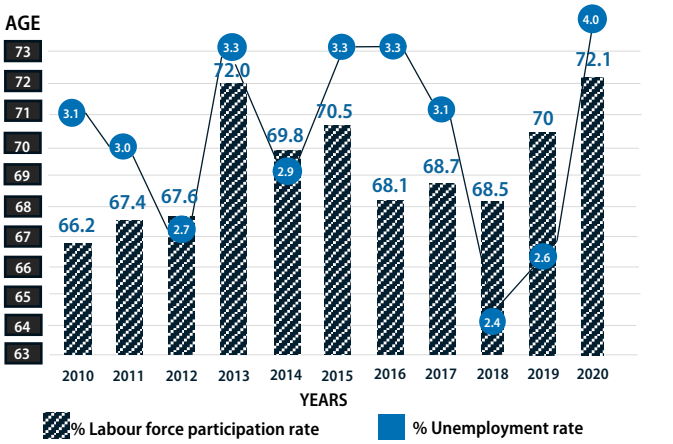
Category	Number ('000)				
	2016	2017	2018	2019	2020
Mining and Quarry	0.1	0.4	1.4	1.1	1.1
Manufacturing	52.1	48.2	44.9	68.9	85.1
Construction	85.2	83.6	82.0	80.1	78.4
Services	699.8	712.1	696.1	690.9	710.0
TOTAL	**837.2**	**844.3**	**824.4**	**841.0**	**874.6**

Source: Socioeconomic Report WP Kuala Lumpur 2020, Department of Statistics Malaysia

WORKING POPULATION

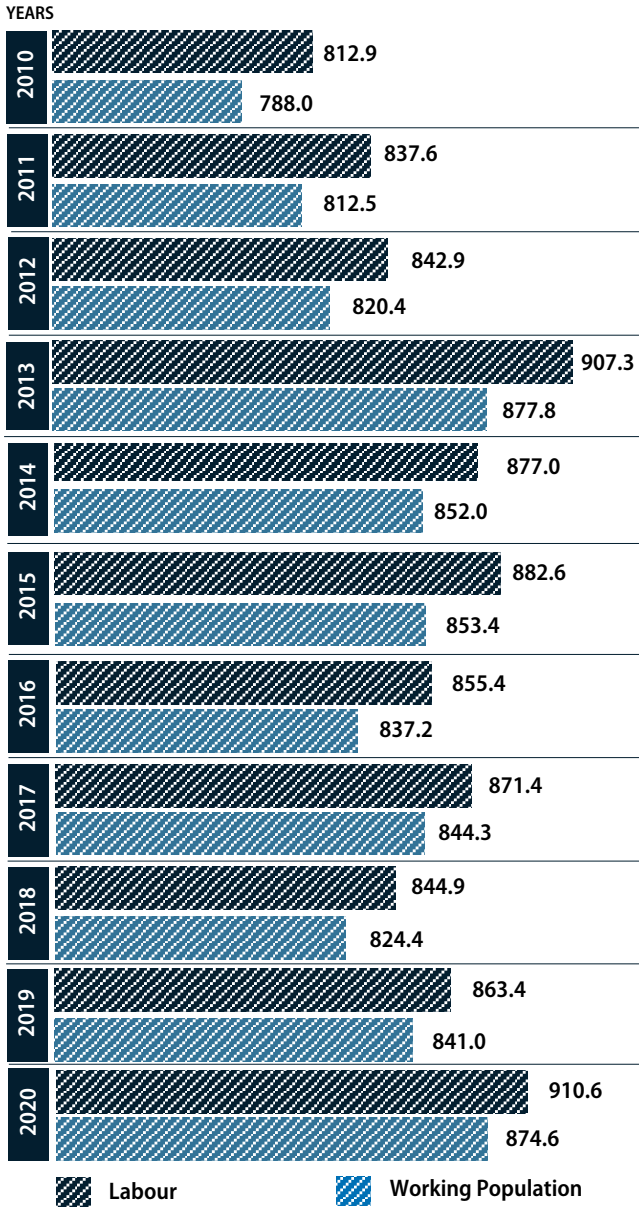
Figure 1.3.2 shows Kuala Lumpur recorded an increasing working population rising from 788.0 thousand in 2010 to 874.6 thousand in 2020. As shown in Figure 1.3.2, Table 1.3.1 recorded the services sector as the main contributor with 710.0 thousand working population (equivalent to 81.2 percent) in 2020. The manufacturing and construction sectors were the second and third contributors with 85.1 thousand (9.7 percent) and 78.4 thousand (9.0 percent) of the working population.

Figure 1.3.1:
Labour Force Participation Rate and Unemployment Rate



Source: My Local Stat WP Kuala Lumpur 2020

Figure 1.3.2:
Labor Force and Working Population ('000)



Source: Socioeconomic Report WP Kuala Lumpur 2020

Table1.3.2 shows that the service and sales worker category dominates the working population in Kuala Lumpur in 2020. Part of the workforce in this sector is non-citizens. This category contributed 24.0 percent, followed by the professional at 18.3 percent and the technician and allied professional categories at 18.3 percent and 12.5 percent respectively. The skilled workers comprising the manager, professional and technician categories and allied professionals accounted for 40.8 percent.

Table 1.3.2:
Working Population by Occupation Category, Kuala Lumpur 2016-2020

Job Category	Number ('000)				
	2016	2017	2018	2019	2020
Manager	73.6	72.0	72.1	74.7	87.8
Professional	168.0	164.3	168.4	165.8	159.9
Technicians / Allied Professionals	120.0	114.2	117.5	112.8	109.1
Clerical Support Staff	97.7	99.1	94.1	88.9	97.7
Sales and Service Staff	194.0	197.9	183.1	200.8	209.7
Skilled Workers Agriculture, Forestry, Livestock, Fisheries	0.6	0.5	1.1	1.8	0.9
Skilled and Carpenter	57.4	57.6	55.4	69.3	65.0
Machine Operators and Assemblies	59.5	59.3	57.2	58.4	66.9
General Workers	66.4	79.5	75.5	68.5	77.6
TOTAL	**837.2**	**844.3**	**824.4**	**841.0**	**874.6**

Source: Adapted from State Socioeconomic Report 2009 and 2020, WP Kuala Lumpur, Department of Statistics Malaysia

The contribution of other sectors is small with the construction sector contributing around 9.0 percent. Table 1.3.3 gives an overview of the main employment sub-sectors of Kuala Lumpur citizens. As the main trading centre of the country, wholesale and retail sub-sectors are the main contributors to Kuala Lumpur's employment.

The size of the working population in the sub-sector is 25.5 percent of the total working population. Main attraction for local tourists and visitors, accommodation, food and beverage sub-sector is in the spotlight with a contribution of 11.2 percent of the working population.

Kuala Lumpur will be the focus of working age residents from all over the country. The same table also shows the contribution of the professional and financial sub-sectors which are becoming more prominent with increasing demand. Administrative requirements on planning services, architecture, built environment, environment, traffic, social impact and even legal services make this sub-sector more focused. Other sub-sectors that have the potential to surge in future services include education, health and transport and storage.

Table 1.3.3:
Distribution of the Population Working in the Sub Sector, 2020

Sub Sector	Year 2020	
	Number	Percent (%)
Electricity and Gas Supply	2,123	0.3
Water Supply	3,539	0.5
Wholesale and Retail	181,197	25.5
Transport and Storage	48,130	6.8
Hotel, Food and Beverage	79,981	11.2
Information and Communication	41,760	5.9
Finance and Insurance	62,286	8.8
Property	21,234	3.0
Professional	70,072	9.8
General Administration and Support Services	50,254	7.1
Public Administration	46,715	6.6
Education	29,728	4.2
Health	32,559	4.6
Arts, Entertainment, and Recreation	9,909	1.4
Other Activities	19,818	2.8
Household Employer	8,494	1.2
Others	2,201	0.3
TOTAL	**710,000**	**100.0**

Source: Adapted from State Socioeconomic Report 2009 and 2020, WP Kuala Lumpur, Department of Statistics Malaysia

KUALA LUMPUR PER CAPITA INCOME AND HOUSEHOLD INCOME

PER CAPITA INCOME, 2010-2020

Kuala Lumpur's per capita income (PCI) in 2019 at RM129,472 records the highest in Malaysia which is 2.7 times the national per capita. The city per capita increased by an average of 7.7 percent annually between 2010 and 2019. However, Kuala Lumpur per capita recorded a negative growth of 6.4 percent due to the COVID-19 pandemic and Movement Control Order (MCO) as shown in Table 1.3.4.

HOUSEHOLD INCOME, 2019

The household income and expenditure survey report indicates the mean and median household income for Kuala Lumpur between 2016 and 2019 for the B40 household category is relatively higher compared to other states in Malaysia. Around 53.9 percent of the households in Kuala Lumpur record a gross income of exceeding RM10,000 a month whilst 30.3 percent of the households record a gross income of between RM6,000 and RM10,000.

A total of 26.5 percent of household gross income is between RM4,000 and RM6,000 and only 3.8 percent of the households take less than RM4,000 as shown in Table 1.3.5.

Table 1.3.4:
Kuala Lumpur Per Capita Income, 2010-2020

Year	Kuala Lumpur (RM)	GDP(%)
2010	64,693	
2011	70,675	9.2
2012	77,073	9.1
2013	82,208	6.7
2014	90,546	10.1
2015	94,964	4.9
2016	101,576	6.7
2017	111,321	9.6
2018	121,444	9.1
2019	129,472	6.6
2020	121,200	-6.4

Source: State Socioeconomic Report 2012-2020 and GDP by State 2020, Department of Statistics Malaysia, June 2021

Table 1.3.5: Kuala Lumpur Household Income 2016-2019

Household Categories by Income		Intermediate (RM)		Average (RM)	
		2016	2019	2016	2019
Lowest	40%	5,344	6,623	5,257	6,480
Middle	40%	10,564	12,068	10,823	12,356
Highest	20%	20,201	22,610	26,306	28,622
OVERALL		**9,073**	**10,549**	**11,692**	**13,257**

Source: Household Expenditure Survey Report 2016 and 2019, Department of Statistics Malaysia

Table 1.3.6: Kuala Lumpur Gross Household Income 2019

Gross Income Categories	Year 2019		
	Household		Income Distribution
	Number	Percent	
Less RM 2,000	969	0.2	
RM 2,000 - RM 4000	17,435	3.6	1.0
RM 4,001 - RM 6,000	58,116	12.0	4.6
RM 6,001 - RM 8,000	70,224	14.5	7.8
RM 8,001 - RM 10,000	76,519	15.8	10.7
RM 10,001 - RM 15,000	134,635	27.8	25.5
RM 15,000 and more	126,402	26.1	50.4
Total	**484,300**	**100.0**	**100.0**

Source: Household Expenditure Survey Report 2019, Department of Statistics Malaysia

POVERTY

The 2019 Poverty Line Income Value (PGK) has been reviewed taking into account two (2) aspects, namely the need for optimal and healthy food consumption and the basic non-food needs of quality. The Poverty Line Income (PLI) for Kuala Lumpur was set at RM2,216 per month in 2019. Meanwhile, the PLI value of food is RM1,110 a month with the average household size of 3.3 person.

Due to the revision, the incidence of absolute poverty in Kuala Lumpur recorded an increase from 0.85 percent in 2016 to 2.0 percent in 2019. The incidence of relative poverty in the city was 10.9 percent in 2019 compared to 13.8 percent in 2016. This rate is also lower than the national rate of 16.9 percent.

KUALA LUMPUR POPULATION 2040

Three (3) areas that are expected to receive the most population in areas such as Bukit Jalil-Seputeh, Sentul-Menjalara and Wangsa Maju-Maluri. Male will continue to be more dominant. By 2040 the gender ratio is estimated at 112:100. The city state is not expected to experience significant change in ethnic composition. The percentage of all three major ethnicities are expected to increase while the population composition of foreigner and non-citizen is expected to be lowered. However, Kuala Lumpur will continue to receive foreign workers as an additional labour force to serve the city state, especially in the construction sector. Kuala Lumpur is also expected to receive more percentage of an old-age group which will increase to 17.3 percent by 2040.

The change in the population age group will be significant among the 20-24 age group due to incoming students from other areas to further their education in numerous Institutes of Higher Learning (IHL) within Kuala Lumpur. The city state IHLs is also expected to receive foreign students venturing for post-graduate education.

Figure 1.3.3 provides an indication of Kuala Lumpur population by age group between 2020 and 2040. The 20-24 and 25-29 age groups are the two large groups. Kuala Lumpur as an international education centre will attract more young people, especially from other states and foreign countries to further their education to the highest level at Kuala Lumpur.

Figure 1.3.3:
Kuala Lumpur Population by Age Group Between 2020 and 2040

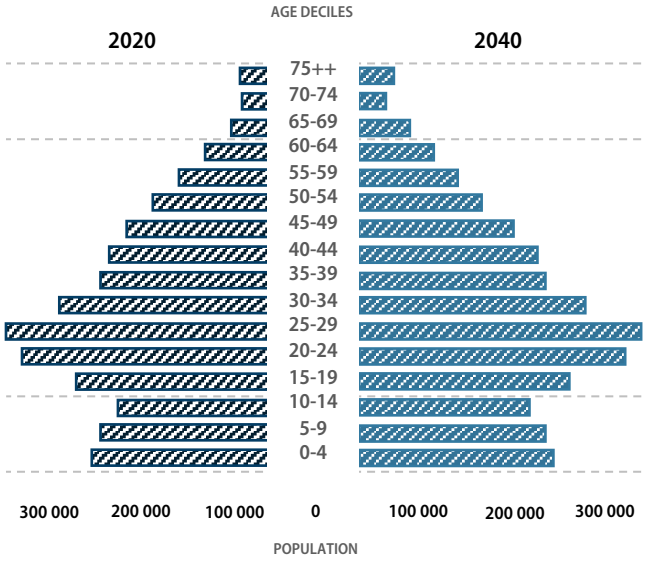


Table 1.3.7: Kuala Lumpur Population 2040 by Area

Area	Years ('000)						AAGR (%) 2020-2040
	2020	2025	2030	2035	2040	% From Σ (2040)	
City Centre	221.3	227.8	241.5	251.1	260.9	11.1	1.40
Damansara – Penchala	232.9	239.7	253.2	265.3	277.3	11.8	1.43
Sentul – Menjalara	401.0	412.7	436.2	464.9	493.5	21.0	1.61
Wangsa Maju – Maluri	399.8	411.5	431.6	450.8	470.0	20.0	1.38
Bandar Tun Razak – Sungai Besi	306.8	315.8	327.2	337.3	347.8	14.8	1.20
Bukit Jalil – Seputeh	420.3	432.5	440.3	470.6	500.5	21.3	1.47
Total	**1,982.1**	**2,040.0**	**2,130.0**	**2,240.0**	**2,350.0**	**100.0**	**1.42**
AAGR (%)	**1.98**	**2.04**	**1.46**	**1.00**	**0.96**		

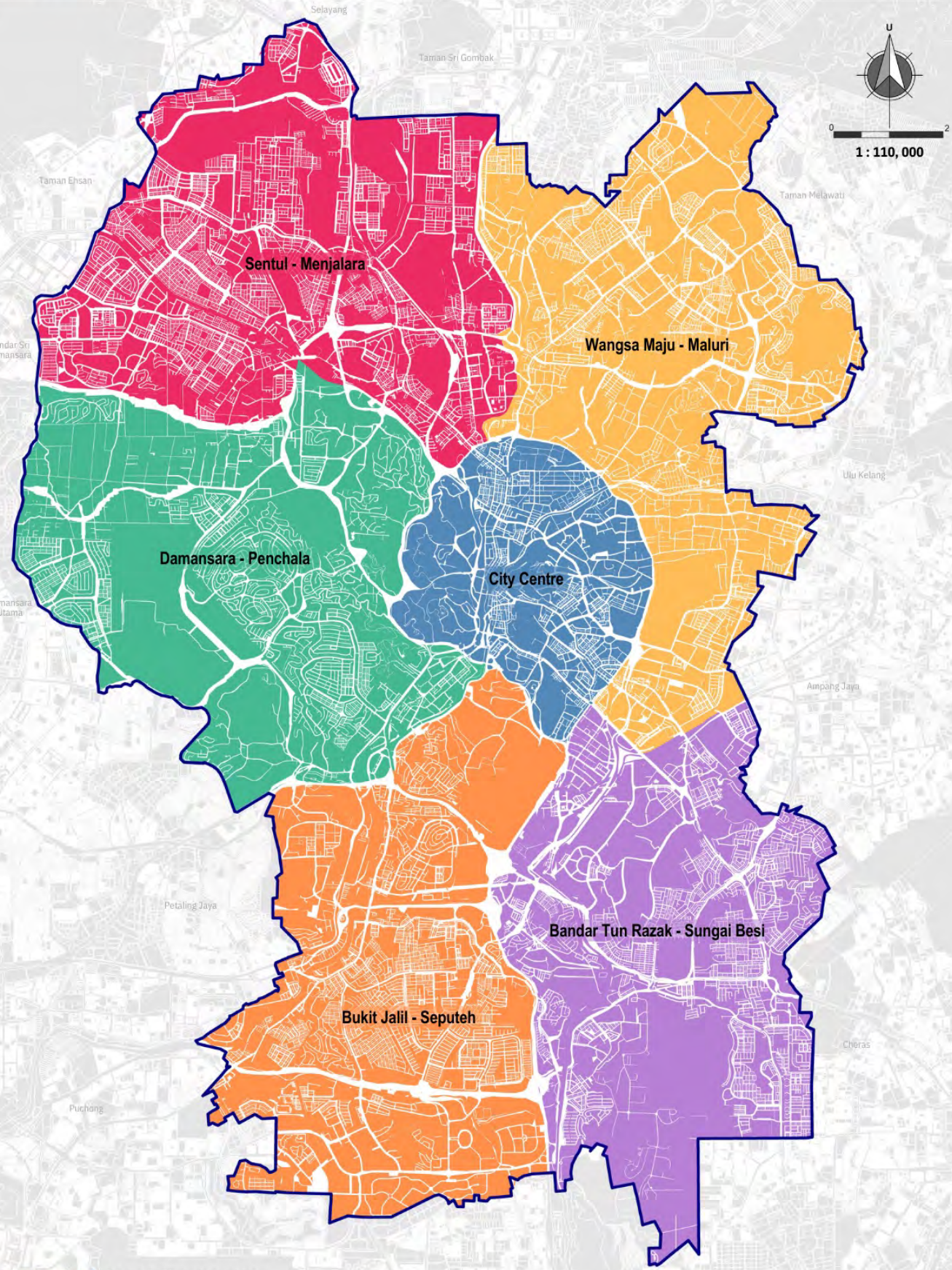


FIGURE 1.3.4 | Plan of Planning Area

Legend :

Main Area :

- City Centre
- Wangsa Maju - Maluri
- Sentul - Menjalara
- Damansara - Penchala
- Bukit Jalil - Seputeh
- Bandar Tun Razak - Sungai Besi

Other

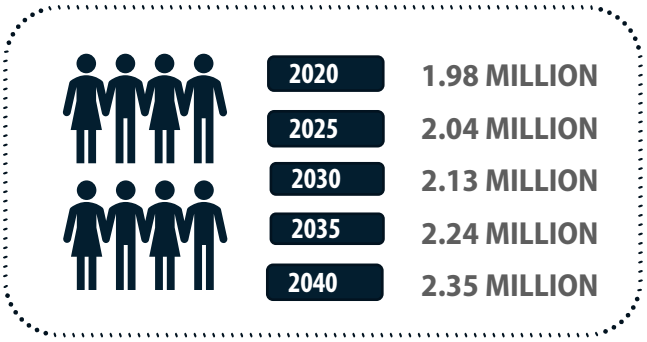
- Kuala Lumpur Boundary

KUALA LUMPUR SOCIOECONOMIC 2040

Table 1.3.7 to Table 1.3.10 are the projected economic base for Kuala Lumpur over the planning period to 2040. These include working population, employment, GDP and per capita. The projection was conducted based on the projected population of 2.35 million determined by KLSP2040.

BRIEF INFO

POPULATION OF KUALA LUMPUR IN 2040



BRIEF INFO

RATIO OF GENDER IN 2040

Table 1.3.8:
Working Population Projections, 2020-2040

Years	Population ('000)	Percent	Working Population ('000)
2020	1,982.1	44.1	874.7
2025	2,040.0	45.1	920.0
2030	2,130.0	45.3	964.9
2035	2,240.0	45.6	1,021.4
2040	2,350.0	45.9	1,080.0

Table 1.3.9:
GDP Projection 2020-2040 (Value in RM Billion)

Years	GDP	AAGR (Percent)
2020	216	
2025	294	6.1
2030	407	6.5
2035	530	5.3
2040	680	5.0
AAGR (2020 – 2040)		5.7

Table 1.3.10:
Per Capita Projections, 2020-2040

Years	GDP (Billion)	Population ('000)	Per Capita (RM '000)
2020	216	1,982.1	122.5
2025	294	2,040.0	148.5
2030	407	2,130.0	191.1
2035	530	2,240.0	236.6
2040	680	2,350.0	289.4

Location: China Town, Kuala Lumpur
Source: https://www.shutterstock.com/g/outcast85

Socioeconomic activities in China Town, Kuala Lumpur

1.4 ASPIRATION FOR KUALA LUMPUR 2040

DEVELOPMENT POLICY FOR GLOBAL, NATIONAL AND FEDERAL TERRITORY OF KUALA LUMPUR

Within the parameters that are relevant to Kuala Lumpur, the strategy and proposal for the Draft KLLP2040 will be based on the structure of the city, as well as national and global development.

GLOBAL SUSTAINABLE AGENDA

Global Sustainability Agenda which incorporates an international development strategy was developed to achieve sustainable and resilient urban planning. The primary agenda in the planning structure for the growth of Kuala Lumpur will be the commitment to economic, social and physical planning. The following shall be included in this development policy:

1. **Sustainable Development Goals (SDGs)**
2. **New Urban Agenda (NUA)**
3. **The Paris Climate Agreement 2015**
4. **Sendai Framework for Disaster Risk Reduction 2015-2030**

Kuala Lumpur Gallery in Jalan Raja, Kuala Lumpur.

1. Sustainable Development Goals (SDGs)

The SDGs lists 17 goals and 169 targets that should be accomplished by 2030. The SDGs are an extension of the Millennium Development Goals, which address all aspects of sustainable development.

The Draft KLLP2040 shall take into account the SDGs, particularly Goal No. 11 "Sustainable Cities and Communities", in order to promote sustainable development.

Two-thirds of the global population will live in cities by 2050. Along with the provision of affordable, safe and comfortable housing, the establishment of a sustainable city will open up business and employment prospects. The Sustainable City will also be realized through inclusive planning and management, a comprehensive public transportation network and adequate open green spaces.

2. New Urban Agenda (NUA)

The New Urban Agenda is an urbanisation action plan for all cities and stakeholders to implement and support Agenda 2030, towards creating a city that is inclusive, safe, durable and sustainable. NUA was adapted by 170 countries during the UN Habitat III Conference held in Quito, Ecuador on 20th October 2016.

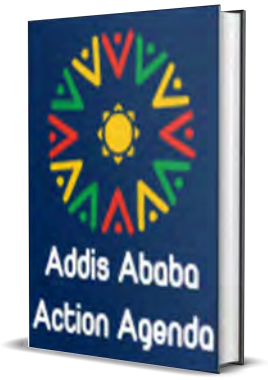
The five (5) main elements of the NUA are administrative structure, social participation, spatial development, a city's well-being (prosperity) and sustainability.

3. Agenda United Nations Convention on the Right of Persons with Disabilities (UNCRPD)

This convention is an international human rights agreement under the UN with an agenda to promote, protect and ensure the equality of human rights, especially for people with disabilities.

The draft KLLP2040 will take into account the eight (8) points underlying the UNCRPD in planning strategies, proposals and relevant implementation initiatives.

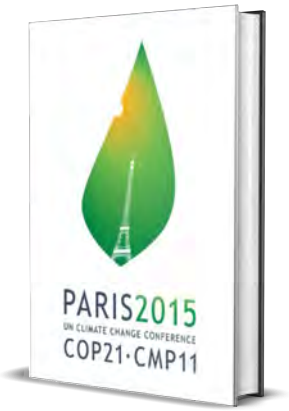
4. Addis Ababa Action Agenda



The Addis Ababa Action Agenda is a global framework for financing sustainable development in line with economic, social and environmental policies.

The draft KLLP2040 will take into account the seven (7) actions found in the document in the planning strategy, proposals and related implementation initiatives.

5. The Paris Climate Agreement 2015



On December 12, 2015, an international convention was developed to address concerns brought on by climate change. This agreement intends to limiting global warming at 1.5 degrees Celsius to achieve a climate that is neutral by the middle of the century. By signing this agreement, Malaysia aspires to reduces its carbon emissions to 45 percent by 2030 compared to 2005. Malaysia has successfully reduced carbon emissions in three (3) different sectors which is energy, waste disposal, and forestry.

Draft KLLP2040 translates these three (3) main sectors into planning strategies, proposals and relevant implementation initiatives.

6. Sendai Framework for Disaster Risk Reduction 2015-2030

This document addresses the reduction of disaster risks. This framework focuses on measures to reduce disaster risks and climate change adaptations. The following four (4) areas of emphasis make up this framework is:

1. Recognising disaster's dangers;

2. Enhancing the oversight and control of disaster risks;

3. Investment in disaster risk reduction for sustainability; and

4. Preparedness for any calamity.

This framework has stipulated seven (7) global targets by 2030, as follows:

1. To drastically reduce fatalities caused by global disasters;

2. To drastically reduce the number of affected people around the world;

3. To reduce the economic losses related to the Gross Domestic Product globally;

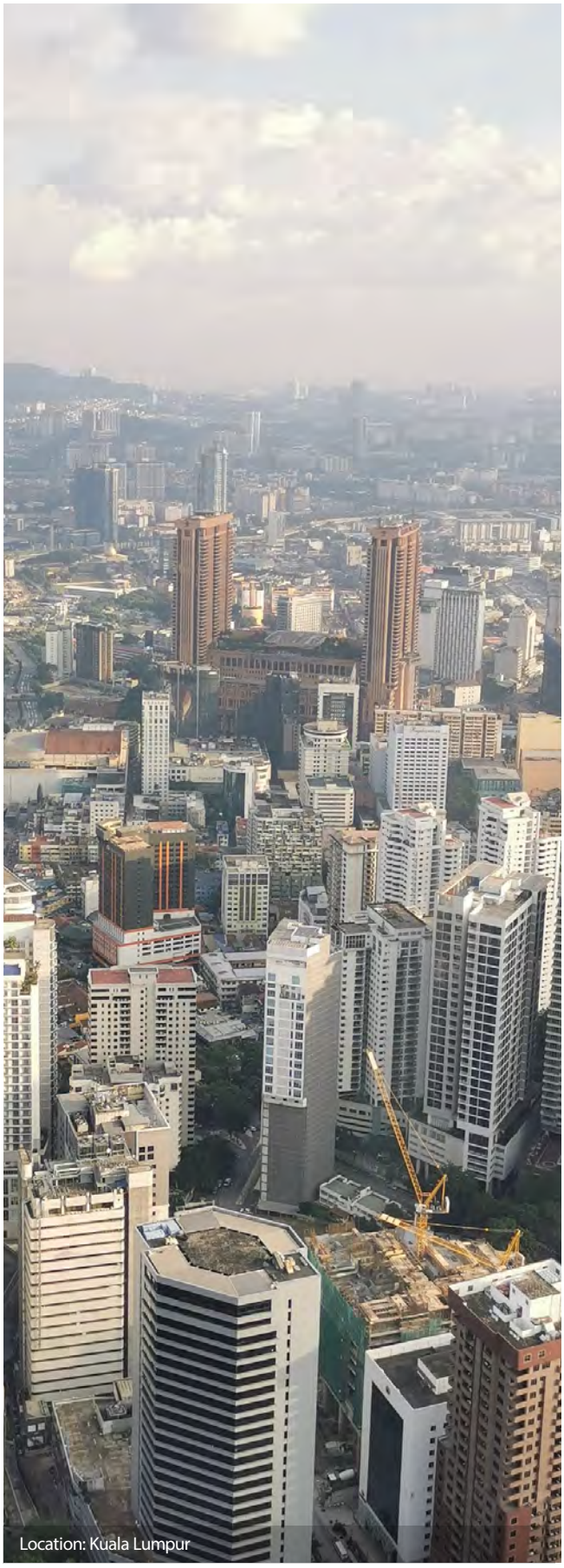
4. To drastically reduce damage caused by disasters to critical infrastructure and interruptions in basic social services like health and education;

5. To drastically increase the number of countries with risk reduction strategies at local and national levels;

6. To improve international cooperation involving developing countries though adequate and sustainable support to enhance the national action of implementing the framework; and

7. To improve preparation and access to an early warning system together with information on disaster risk evaluation to the people.

Draft KLLP2040 outlines planning strategy, proposal and implementation initiatives which focused on two (2) main aspect which is reinforcement of disaster risk management and disaster control preparation.



View of Kuala Lumpur from Kuala Lumpur Tower.

NATIONAL
SUSTAINABLE AGENDA

A national-level development strategy is the National Sustainability Agenda. Achieving urban planning within the context of economic, social, and physical planning is ensured by the formulation of national sustainability. The development policy that was considered includes:

1. **4th National Physical Plan (RFN4)**
2. **2nd National Urban Policy (NUP2)**
3. **Shared Prosperity Vision 2023 (WKB2030)**
4. **National Transport Policy (DPN) 2019-2030**
5. **Malaysia Smart City Framework**
6. **National Industry Policy 4.0**
7. **MySmart Wilayah 2030 Blueprint**
8. **Developing a MADANI Nation**

1. 4th NATIONAL PHYSICAL PLAN (RFN4)

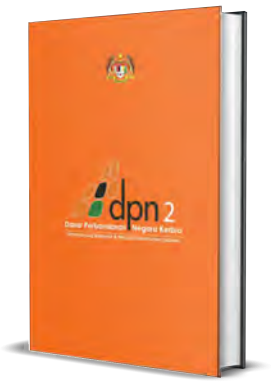
The primary planning document for Malaysia is the 4th National Physical Plan (RFN4). It was created as a planning mandate to lay out a path for physical development. The strategic policies and development actions formulated are translated at the regional, state and local levels to realize holistic, dynamic, resilient and competitive planning.

RFN4 also designated Kuala Lumpur as one of the cities with Global City status in Malaysia in addition to the Federal Territories of Putrajaya, Georgetown and Johor Bahru. Kuala Lumpur is a prime location for multinational companies, a tourist destination and a global employment hub in Malaysia that plays an important role as a world investment and market hub.

The spatial and strategic framework for RFN4 in the Draft KLLP2040 considers the following six (6) strategic directions:

PD2	Sustainable and competitive economic growth
PD3	Strategic and integrated transport network
KI1	Community environment with a living culture
KD2	Sustainable management of natural resources, food resources and heritage
KD3	Implementation of Low-Carbon City approach and alternative energy resources
KI5	Landslide risks

2. 2nd National Urbanisation Policy (NUP2)



NUP2 is set up to guide and coordinate sustainable urban development by emphasizing the balance of physical, environmental, social and economic development of the country.

There are five (5) principles that have been set and detailed through the planning strategy, recommendations and implementation initiatives of the Draft KLLP2040.

PRINCIPLE 1	Good Urban Governance
PRINCIPLE 2	Livable Cities
PRINCIPLE 3	Urban Competitive Economy
PRINCIPLE 4	Inclusive and Equitable Urban Development
PRINCIPLE 5	Green Development and Clean Environment

3. Shared Prosperity Vision 2030 (WKB2030)

WKB2030 is a document that focuses on transforming Malaysia into a nation that develops sustainably by providing equitable and inclusive economic opportunities to all income levels, ethnic groups and the supply chain.

This policy identifies seven (7) strategic pillars for re-structuring the economy to one based on knowledge.

STRATEGIC 1	Restructuring Business and Industry Ecosystem
STRATEGIC 2	Key Economic Growth Activities (KEGA)
STRATEGIC 3	Transforming Human Capital
STRATEGIC 4	Strengthening the Labour Market and Increasing Compensation of Employees
STRATEGIC 5	Social Wellbeing
STRATEGIC 6	Regional Inclusion
STRATEGIC 7	Social Capital

4. National Transport Policy (DPN) 2019-2030

This policy is formulated based on the rapid growth of the national transportation sector and Malaysia's position as one of the major hubs in Southeast Asia. These principles are outlined as follows:

PRINCIPLE 1	To strengthen the governance towards a conducive environment for the transportation sector
PRINCIPLE 2	To build, optimize and maintain infrastructure, services and the transport network in order to maximize efficiency
PRINCIPLE 3	To increase aspects of security, integration, continuity and viability for smooth journeys
PRINCIPLE 4	Moving forward towards a green transport ecosystem
PRINCIPLE 5	To widen the global footprint and promote the internationalisation of the transport services

5. Malaysia Smart City Framework

Malaysia Smart City Framework will be the guidance to all local authorities to expand their administrative regions in an effort to transform Malaysian cities into smart cities. This framework contains seven (7) smart city components, sixteen policy directions, and five (5) city that will become pilot specialized projects namely Kuala Lumpur, Kota Kinabalu, Johor Bahru, Kuching and Kulim.

Draft KLLP2040 has accounted all components of Malaysia Smart City Framework especially pilot specialized projects in Kuala Lumpur and translated into planning strategy, proposal and implementation initiatives.

01	*Smart Economy*
02	*Smart Living*
03	*Smart Environment*
04	*Smart People*
05	*Smart Government*
06	*Smart Mobility*
07	*Smart Digital Infrastructure*

6. National Industry Policy 4.0

This policy aims to transform the manufacturing industry and related services within 2018 until 2025, This policy also referred as Industry4RWD which is being implemented for industrial development to support the adoption of technology usage in businesses.

Draft KLLP2040 has accounted the National Industry Policy 4.0 especially in the context of efficient digital infrastructure and access to smart technologies.

F	Funding and outcome-based incentives
I	Enabling ecosystem and efficient digital infrastructure
R	Regulatory framework and industry adoption
S	Upskilling existing and producing future talents
T	Access to smart technologies and standards

There were 13 strategies and 38 action plans under this policy. The Industry4WRD Readiness Assessment is one of the primary initiatives under this policy, has been designed to assess the level of readiness of each organization for Industry 4.0. These are several elements that are related as follows:

To transform the manufacturing and services sectors to increase efficiency and productivity to 30 percent and contribution to the economy increasing from RM254 million to RM392 million.

To encourage and strengthen innovation ability so that it will remain competitive in both domestic and international levels, especially in the global innovation standing from 35th to 30th place.

To increase skilled labor in the manufacturing sector in line with innovative development from 18 percent to 35 percent.

7. MySmart Wilayah 2030 Blueprint

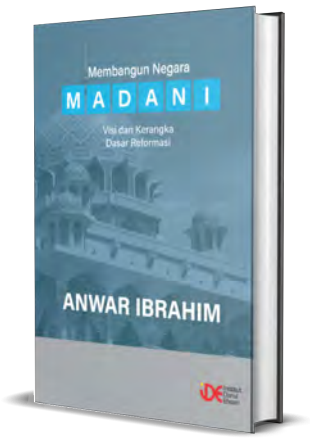
This plan aims to organise and direct the Federal Territory's planning and development of a smart city through the year 2030. The goal is to build a livable, smart and sustainable city.

The Federal Territory Ministry's agencies are instructed to implement the 25 policies, 76 actions, 118 indicators, and 25 key performance indices outlined in this document.

MySmart Wilayah 2030 also focusses on effective administration and management activities. The Federal Territory's inhabitants will benefit from this policy's ease of conducting business, data capacity, faster decision process, and interactive, user-friendly administration. This strategy will stabilise the economy, promote product innovation and enhance services.

The Draft KLLP2040 takes into account the link between MySmart Wilayah 2030 in formulating planning strategies, proposals and implementation initiatives.

8. Developing a MADANI Nation



This document is prepared to develop Malaysia into a people's agenda to build a SCRIPT (MADANI) future, in terms of sustainability, care & compassion, respect, innovation, prosperity and trust. There are eight (8) policies that have been set and detailed through the planning strategy, proposal and implementation initiatives of the Draft KLLP2040.

POLICY 1	Economic/Financial
POLICY 2	Legal
POLICY 3	Institutional
POLICY 4	Educational
POLICY 5	Social
POLICY 6	Cultural
POLICY 7	Urban
POLICY 8	Rural

Sustainability is one of the main cores of developing a MADANI nation vision and development framework that is applied in the development of Kuala Lumpur.

The logo and theme of National Day and Malaysia Day 2023 were launched by the Minister of Communications and Digital

BRIEF INFO

The draft KLLP2040 has taken into account and translated the SCRIPT Malaysia Policy in its preparation. All 6 Malaysian SCRIPT Cores are detailed in the planning strategy, recommendations, and implementation initiatives of the Draft KLLP2040.

MALAYSIA MADANI

S	Sustainability	1. Provision of affordable housing – SCRIPT Housing 2. Preparation and activation of open space 3. Implementation of a low-carbon approach 4. Preservation and restoration of heritage sites and buildings 5. Provision of infrastructure and facilities for pedestrians and micromobility vehicles 6. Encourage the use of public transport and electric vehicles 7. Development and reuse of obsolete buildings
C	Care & Compassion	1. Provision of adequate, quality, and easily accessible education, health, and safety facilities
R	Respect	1. Provision of integrated community facilities, multi-use and shared space
I	Innovation	1. Implementation of the Smart City concept 2. Implementation of the Industrial Revolution 4.0 Promotion Programme 3. Encouraging the use of Nature-based Solutions (NbS), Water Sensitive Urban Design (WSUD), Sponge City and Low Impact Development (LID) concepts
P	Prosperity	1. Encourage development that supports the establishment of start-up companies (startups) for young people in the city centre 2. Improve digital infrastructure to create a balanced work environment and encourage working from home.
T	Trust	1. Implementation of the River of Life programme 2. The use of urban space for active and creative activities 3. Sharing streets and public spaces for street activities

KUALA LUMPUR DEVELOPMENT AGENDA

Kuala Lumpur development agenda which comprises the aspects of social, economy and physical is prepared in multiple planning documents as follows:

.

1. **Kuala Lumpur Structure Plan 2040 (KLSP2040)**
2. **Kuala Lumpur 2030 Low Carbon Society Blueprint (PIMRK KL 2030)**
3. **Kuala Lumpur Competitive City Master Plan (KLCCMP)**
4. **Kuala Lumpur Tourism Master Plan 2015-2025**
5. **Other Development Agenda**

Draft KLLP2040 translates Kuala Lumpur planning agenda in the form of goals, planning strategy, proposals and implementation initiatives to ensure the draft is in line with the Kuala Lumpur planning agenda that has been drafted.

1. Kuala Lumpur Structure Plan 2040 (KLSP2040)

KLSP2040 has defined the vision for Kuala Lumpur as a City for All in the ensuing 20 years. This vision focuses on the future development of Kuala Lumpur in all aspects of balanced planning which include economic, social, quality of life, environment and physical planning.

Kuala Lumpur will give development principles and sustainable planning top priority while putting an emphasis on wellbeing, quality of life, fairness, and sustainability within a competitive economy.

This "City for All" vision is to achieve six (6) goals which are subsequently implemented through 21 strategic directions and 72 actions.

GOAL 1	Kuala Lumpur Innovative and Productive City
GOAL 2	Kuala Lumpur Inclusive, Equitable and Liveable City
GOAL 3	Kuala Lumpur Green, Healthy and Vibrant City
GOAL 4	Kuala Lumpur Climate-Smart and Low Carbon City
GOAL 5	Kuala Lumpur Efficient and Environment-Friendly Mobility City
GOAL 6	Kuala Lumpur Integrated and Sustainable Development City

2. Kuala Lumpur 2030 Low Carbon Society Blueprint 2030 (PIMRK KL 2030)

The Kuala Lumpur 2030 Low Carbon Society Blueprint is a holistic plan that proposes 10 actions, 37 sub-actions, 82 measures and 245 programmes to be implemented.

ACTION 1	Green Growth
ACTION 2	Energy Efficient Spatial Structure
ACTION 3	Green Mobility
ACTION 4	Sustainable Energy System
ACTION 5	Green Community Lifestyle
ACTION 6	Green and Low Carbon Buildings
ACTION 7	Green and Blue Network
ACTION 8	Sustainable Waste Management
ACTION 9	Sustainable Water Management
ACTION 10	Green Administration

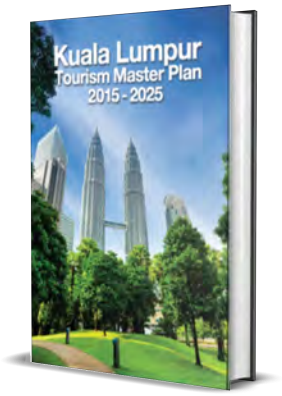
3. Kuala Lumpur Competitive City Master Plan (KLCCMP)

The Kuala Lumpur City Competitiveness Master Plan aims for Kuala Lumpur to become the top 20 world-class competitive cities by 2030.

Kuala Lumpur needs to fulfill the seven (7) principles that have been outlined in an effort to become a competitive Global City, as follows:

PRINCIPLE 1	To increase economic density
PRINCIPLE 2	To widen the development of transit-oriented development
PRINCIPLE 3	To strengthen the knowledge information system
PRINCIPLE 4	To increase the rate of quality life
PRINCIPLE 5	To practice green development
PRINCIPLE 6	To ensure inclusivity among all parties
PRINCIPLE 7	To strengthen the digital infrastructure for smart cities

4. Kuala Lumpur Tourism Master Plan 2015-2025



The Kuala Lumpur Tourism Master Plan 2015-2025 has been produced as an action plan that includes 47 initiatives covering nine (9) tourism segments as follows:

SEGMENT 1	Culture, Heritage, and Diversity of Places
SEGMENT 2	Shopping Centres and Malls
SEGMENT 3	Entertainment
SEGMENT 4	Natural Environment and Explorative Travel
SEGMENT 5	Luxury Travel
SEGMENT 6	Sports
SEGMENT 7	Business and MICE (Meetings, Incentives, Conventions and Exhibitions)
SEGMENT 8	Medical and Health
SEGMENT 9	Education

AGENDA DEVELOPMENT
RELATED

Ensuring the overall development is in accordance with current trends and competitive with other major cities around the world, the Kuala Lumpur development agenda shall address other development aspects, such as social, economic, and physical, which are translated into the form of master plans, development action plans and guidelines. Among the related agendas are as follows:

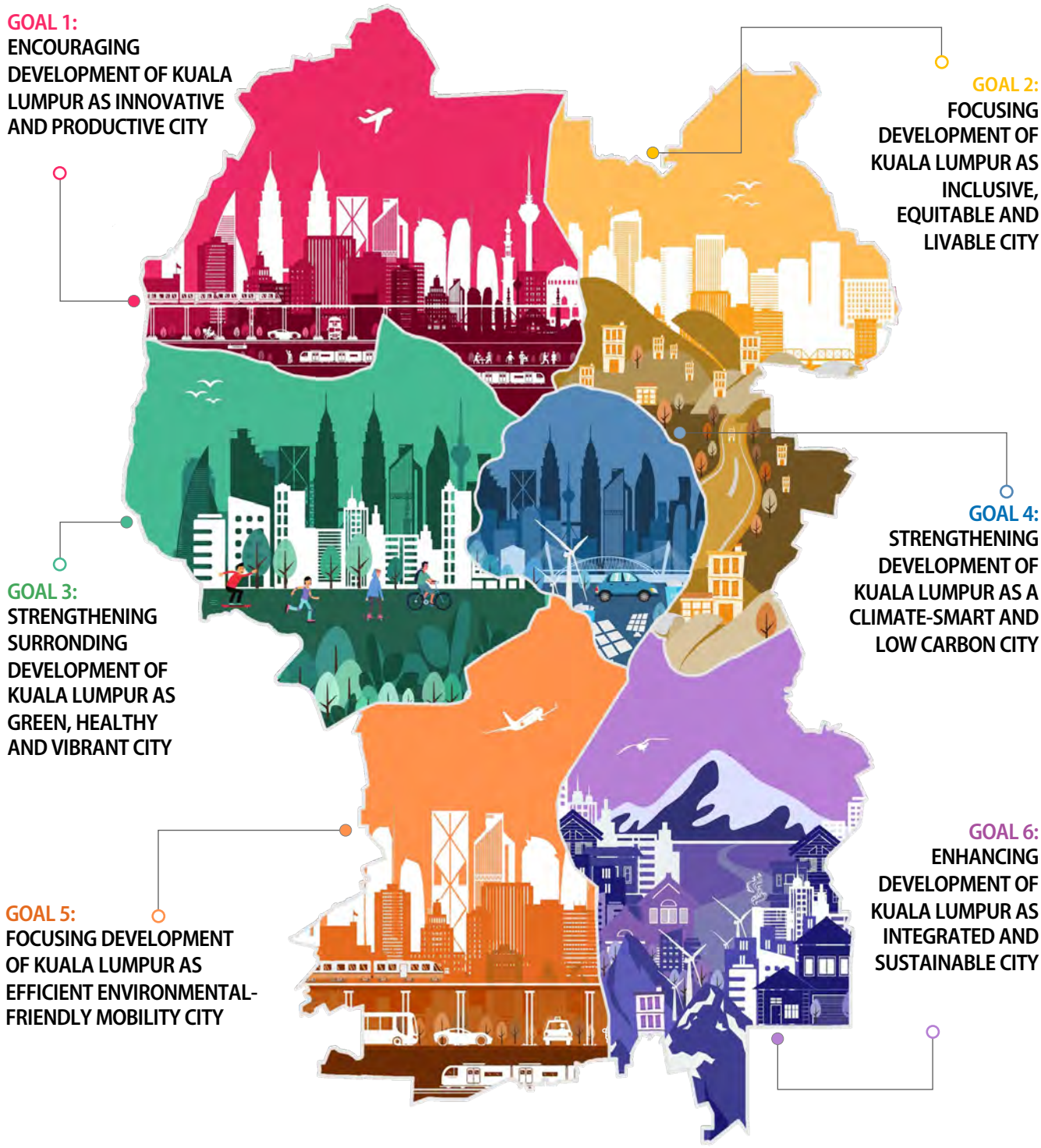
1. Kuala Lumpur Traffic Master Plan 2040;
2. Kuala Lumpur Lighting Master Plan;
3. Kuala Lumpur Pedestrian and Cycling Master Plan 2019-2028;
4. River of Life Master Plan;
5. Kampong Bharu Development Master Plan 2040;
6. Guidelines for Kuala Lumpur City Design; and
7. KLCH Planning Guidelines.

River of Life at Kuala Lumpur.

1.5 KUALA LUMPUR 2040
GOALS OF DRAFT KLLP2040

The six (6) development objectives in the Draft KLLP2040 are derived from the KLSP2040 objectives, as indicated in diagram 1.5.1. **39 planning strategies, 107 implementation proposals**, and **198 implementation initiatives** that result from KLSP2040 will support KLLP2040's goals in order to realize the City for All vision.

Figure 1.5.1: Development Goals of Draft KLLP2040



GOALS

GOAL 1:	GOAL 2:	GOAL 3:
ENCOURAGING DEVELOPMENT OF KUALA LUMPUR AS AN INNOVATIVE AND PRODUCTIVE CITY	FOCUSING DEVELOPMENT OF KUALA LUMPUR AS AN INCLUSIVE, EQUITABLE AND LIVABLE CITY	STRENGTHENING SURRONDING DEVELOPMENT OF KUALA LUMPUR AS GREEN, HEALTHY AND VIBRANT CITY

PLANNING STRATEGIES

PLANNING STRATEGY 1.1 DIVERSIFYING FINANCIAL ACTIVITIES AND COMMERCIAL SERVICES IN KUALA LUMPUR	**PLANNING STRATEGY 2.1** PROVIDING VARIOUS HOUSING OPTIONS TO MEET THE NEEDS OF POPULATION	**PLANNING STRATEGY 3.1** MANAGING KUALA LUMPUR BIODIVERSITY ASSETS
PLANNING STRATEGY 1.2 BRANDING KUALA LUMPUR AS A URBAN TOURISM DESTINATION WITH SUSTAINABLE TOURISM ACTIVITIES	**PLANNING STRATEGY 2.2** PROVIDING QUALITY AND CONDUSIVE AFFORDABLE HOUSING	**PLANNING STRATEGY 3.2** DIVERSIFYING FUNCTIONS OF GREEN AND BLUE CORRIDORS
PLANNING STRATEGY 1.3 STRENGTHENING CULTURAL AND CREATIVE CITY	**PLANNING STRATEGY 2.3** ADDRESSING THE NEEDS OF THE HOMELESS	**PLANNING STRATEGY 3.3** IMPLEMENTING GREEN DENSITY IN KUALA LUMPUR
PLANNING STRATEGY 1.4 DEVELOPING INDUSTRIAL CLUSTERS BASED ON CLEAN TECHNOLOGY AND INDUSTRIAL REVOLUTION 4.0 (4IR) TRANSFORMATION	**PLANNING STRATEGY 2.4** IMPROVING OLD ESTABLISHED HOUSING AREAS	**PLANNING STRATEGY 3.4** DIVERSIFYING THE FUNCTION OF PARKS AND OPEN SPACES (LAND)
PLANNING STRATEGY 1.5 DRIVING ENTREPRENEURIAL DEVELOPMENT FOR URBAN ECONOMIC GROWTH	**PLANNING STRATEGY 2.5** PROVIDING ADEQUATE, QUALITY AND INTEGRATED PUBLIC FACILITIES	**PLANNING STRATEGY 3.5** STRENGTHENING URBAN SPACE FOR ACTIVE AND CREATIVE ACTIVITIES
PLANNING STRATEGY 1.6 REGENERATING EXISTING COMMERCIAL AREAS AS VIBRANT, ATTRACTIVE AND CONDUCIVE BUSINESS SPACES	**PLANNING STRATEGY 2.6** PROVIDING INTEGRATED COMMUNITY HUB FACILITIES	**PLANNING STRATEGY 3.6** DEVELOPING PARK CONNECTOR NETWORKS
		PLANNING STRATEGY 3.7 CONNECTING THE CITY KEY ACTIVITY CENTRES
		PLANNING STRATEGY 3.8 IMPLEMENTING KUALA LUMPUR HERITAGE TRAIL
		PLANNING STRATEGY 3.9 STRENGTHENING GREEN GOVERNANCE

IMPLEMENTATION PROPOSALS		
23	9	22
IMPLEMENTATION INITIATIVES		
27	25	46

GOALS

GOAL 4: STRENGTHENING DEVELOPMENT OF KUALA LUMPUR AS A CLIMATE-SMART AND LOW CARBON CITY	GOAL 5: FOCUSING DEVELOPMENT OF KUALA LUMPUR AS AN EFFICIENTAND ENVIRONMENTAL-FRIENDLY MOBILITY CITY	GOAL 6: EMPOWERING DEVELOPMENT OF KUALA LUMPUR AS AN INTEGRATED AND SUSTAINABLE CITY
PLANNING STRATEGIES		
PLANNING STRATEGY 4.1 IMPLEMENTING ADAPTATION AND RESILIENCE ACTION PLAN AGAINST CLIMATE CHANGE AND DISASTER RISK MANAGEMENT PLAN	**PLANNING STRATEGY 5.1** PROVIDING PUBLIC TRANSPORTATION NETWORK WITH PROVISION OF MULTIPLE TRANSIT OPTIONS	**PLANNING STRATEGY 6.1** PLANNING AND COORDINATING LAND DEVELOPMENT EFFECTIVELY
PLANNING STRATEGY 4.2 EXPANDING APPLICATION OF RENEWABLE ENERGY TECHNOLOGIES	**PLANNING STRATEGY 5.2** ENCOURAGING ACTIVE MOBILITY MODE WITH IMPROVED ACCESSIBILITY AND SAFETY	**PLANNING STRATEGY 6.2** STRENGTHENING URBAN GROWTH CENTRE HIERARCHY
PLANNING STRATEGY 4.3 STRENGTHENING ENERGY EFFICIENCY SYSTEMS	**PLANNING STRATEGY 5.3** MANAGING TRAFFIC EFFECTIVELY	**PLANNING STRATEGY 6.3** ENCOURAGING INFILL DEVELOPMENT
PLANNING STRATEGY 4.4 IMPROVING EFFICIENCY OF WATER AND SEWERAGE MANAGEMENT		**PLANNING STRATEGY 6.4** STRENGTHENING REDEVELOPMENT PLANNING THROUGH SUSTAINABLE CITY CONCEPT
PLANNING STRATEGY 4.5 IMPROVING THE EFFICIENCY OF WATER AND SEWERAGE MANAGEMENT		**PLANNING STRATEGY 6.5** REVITALIZING URBAN FUNCTIONS THROUGH THE CONSERVATION OF OLD BUILDINGS
PLANNING STRATEGY 4.6 ENHANCING SUSTAINABLE DRAINAGE SYSTEMS		**PLANNING STRATEGY 6.6** INTEGRATING RAIL TRANSPORTATION AND SPATIAL DEVELOPMENT
PLANNING STRATEGY 4.7 PROMOTING LOW CARBON DEVELOPMENT		**PLANNING STRATEGY 6.7** REGULATING DEVELOPMENT IN SPECIAL AREA MANAGEMENT (SAM) ZONE
		PLANNING STRATEGY 6.8 PLANNING QUALITY DEVELOPMENT IN TRADITIONAL AND ORDINARY VILLAGES
IMPLEMENTATION PROPOSALS		
25	11	17
IMPLEMENTATION INITIATIVES		
40	22	38

1.6 KUALA LUMPUR 2040

KUALA LUMPUR SPATIAL DEVELOPMENT CONCEPT

GROWTH OF SPATIAL DEVELOPMENT OF KUALA LUMPUR

Spatial development of Kuala Lumpur starts in the confluence of Sungai Klang and Sungai Gombak and then expanded to the area of Jinjang, Setapak, Ampang, Cheras and Bangsar. The development is aligned with a number main roads since the 60s until 70s.

The road and the highway network that were newly built in Kuala Lumpur in the 90s has encouraged a concentration in development that is aligned with the expansion of the road and promotes development outside the city centre.

The spatial development that was influenced by the development of the road and aligned with the main road has shaped the Kuala Lumpur spatial development to be in radial pattern. The implementation of the circle road outside the city centre has changed the structure of the Kuala Lumpur spatial development from radial pattern to ring and radial pattern.

Ring and radial spatial structure that was formed made the city centre to focus on economic activities while the areas outside of the city centre becomes the settlement centre for the people of Kuala Lumpur. This structure also shaped the back and forth travel pattern which raises the congestion issue in Kuala Lumpur.

Rail transportation service started to be planned and enhanced through the Light Rail Transit (LRT) service in the end of 1991, KTM Komuter service in 1995 and Monorail in 2003. It is an effort to reduce the congestion in Kuala Lumpur. Rail service facilities is further expanded through MRT1 and MRT2 routes starting from the year 2016.

All the rail services are in the radial pattern and serve as the spine of public transport in Lembah Klang. The development of the rail route development also affected the spatial development of Kuala Lumpur.

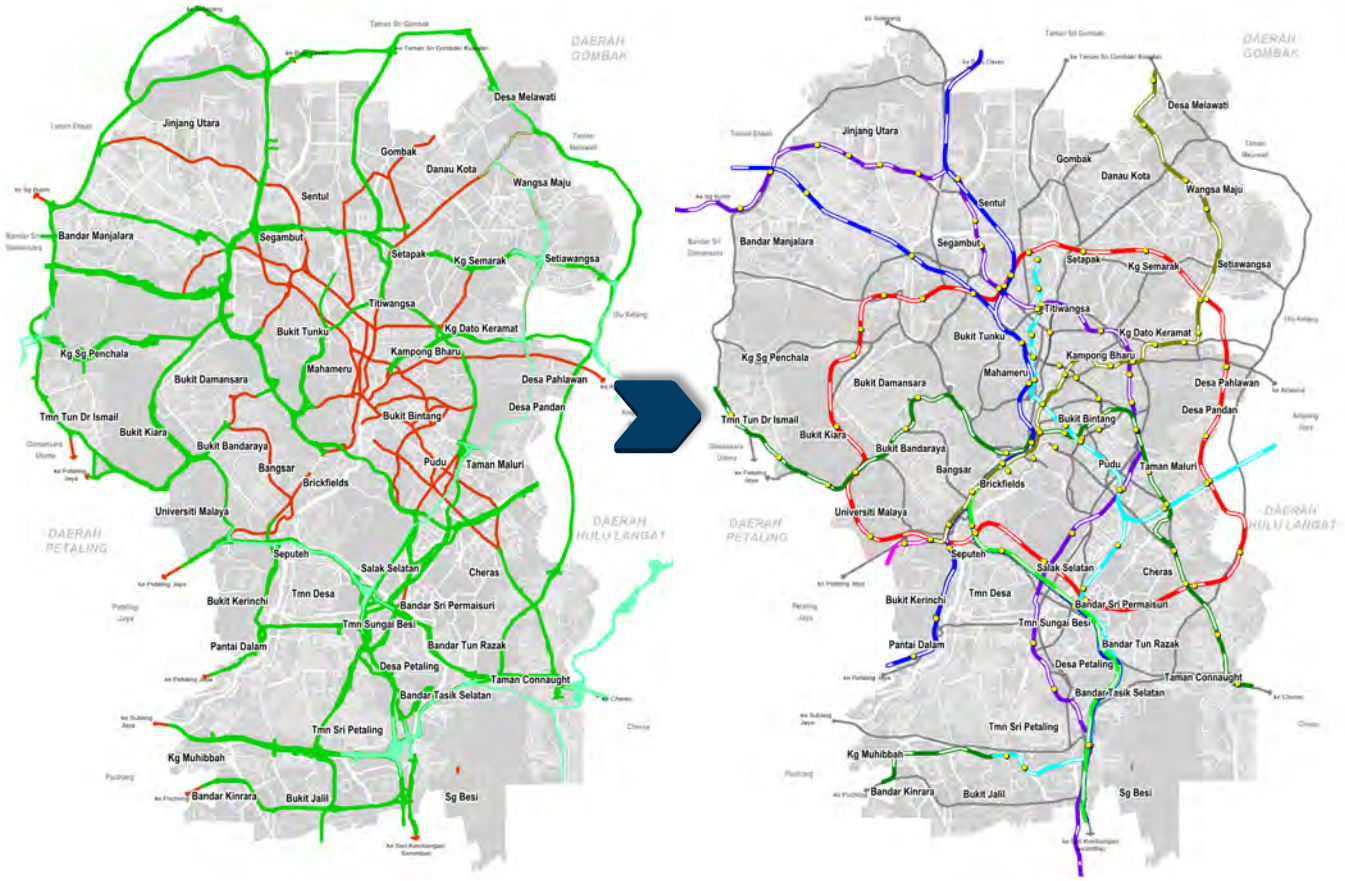
High intensity mixed development started to be focused in areas near the rail stations and to be developed according to the Transit Oriented Development (TOD) concept.

The planning of the Circle route (MRT3) complements the urban rail network in Kuala Lumpur by 2040. MRT3 route will be connected to the existing rail routes which will then form public transport network in the ring and radial pattern. This development will influence the spatial structure of Kuala Lumpur in the future.

Figure 1.6.1 shows the change in ring and radial structure which is based on road network to rail transportation network in Kuala Lumpur.

Rail system service in Kuala Lumpur.

Figure 1.6.1: The concept of "Ring and Radial" through the change of dependence on roads to rails for the planning of the Draft KLLP2040



Jalan Tun Razak - Lebuh Raya Sultan Iskandar (Jalan Pekeliling)		Jalan Tun Razak - Lebuh Raya Sultan Iskandar (Jalan Pekeliling)
MRR (Jalan Tun Razak, Lebuh Raya Sultan Iskandar (Lebuh Raya Mahameru), Jalan Damansara, Jalan Istana and Jalan Lapangan Terbang)	STRATEGIC SHIFT	MRT3
MRR2 (Jalan Sungai Buloh, Lebuh Raya Kepong-Selayang, Jalan Batu Caves, Lebuh Raya Kuala Lumpur – Karak, Jalan Taman Melati, Jalan Ulu Klang, Jalan Pandan Utama, Jalan Cheras Baru, Jalan Midah Utama dan Jalan Bandar Tasik Selatan)		MRR2 (Jalan Sungai Buloh, Lebuh Raya Kepong-Selayang, Jalan Batu Caves, Lebuh Raya Kuala Lumpur – Karak, Jalan Taman Melati, Jalan Ulu Klang, Jalan Pandan Utama, Jalan Cheras Baru, Jalan Midah Utama dan Jalan Bandar Tasik Selatan)
Jalan Kuching – Jalan Ipoh	STRATEGIC SHIFT	MRT1 (Laluan Sungai Buloh - Kajang) MRT2 (Laluan Sungai Buloh - Serdang - Putrajaya)
Jalan Klang Lama		Laluan LRT Ampang
Jalan Ampang		Laluan LRT Sri Petaling
Jalan Ampang		Laluan LRT Kelana Jaya
Jalan Sungai Besi Seremban		KL Monorail
Jalan Genting Klang		ERL
Jalan Gombak – Kuantan		Feeder System
Jalan Syed Putra (Lebuh Raya Persekutuan)		1. Provision of intermediate buses from transit stations located within 2 kilometres of the station 2. Implementation of the concept of active mobility
Jalan Tun Razak – Lebuh Raya Mahameru (Jalan Pekeliling)		a. Pedestrian (400 metres) b. Bicycle (800 metres)

THE CONCEPT OF SPATIAL DEVELOPMENT IN KUALA LUMPUR

Kuala Lumpur spatial development concept is the basis of the drafted spatial development of Kuala Lumpur. Kuala Lumpur spatial development concept accounted five (5) main planning aspects as follows:

1. Planning Control Zone;
2. Distribution of urban growth centres;
3. Public Transport Network (Based on Rail and Transit Station);
4. Green and Blue Corridor; and
5. Special Area Management.

Concept Plan for Development Strategy of Kuala Lumpur 2040 as shown in Figure 1.6.2

1. Development Control Zone

Control zones are established as principles to control development in every proposed zone.

The development control zone is divided into three (3) zones as follows:

a. **CONTROL ZONE 1** : MAIN CENTRE (City Centre);

b. **CONTROL ZONE 2 :** SECONDARY CENTRE (Linking City Boundaries – MRT3); and

c. **CONTROL ZONE 3 :** SUPPORT CENTRE (Outside MRT3 Link Network).

Current Spatial Development of Kuala Lumpur.

2. Centres of Urban Growth

The urban growth centres in Kuala Lumpur are made up of four (4) main hierarchies as follows:

a. **Main Growth Centre** is a growth City Centre located within the boundary with the higher hierarchical position among all growth City Centre;

b. **Support Growth Centre** is an upgraded large scale development area that connects the main Growth Centre and newly developed areas around the Central Business District, linked by a transit railway to the city centre;

c. **District Growth Centre** is a medium scale commercial and employment centre located near a residential zone that are focus of the community. This area also covers main and local government service centres; and

d. **Local Growth Centre** is the community's focus area for obtaining goods and services at the community level.

3. Public Transportation Network (Based On Rail and Transit Station)

The transportation network in Kuala Lumpur is the main planning component which emphasizes the use of public transport as the heart of public transportation by the year 2040. The preparation of transportation network is upgraded through the addition of rail routes which is the proposal routes of MRT3 as well as from LRT, Monorail, Commuter, MRT1 and MRT2.

This transportation network connects local development with higher rate of ease of access as compared to before which is supported by provision of shuttle bus. Meanwhile, transit station which uses the Transit Oriented Development (TOD) in the city centre that serve as the main component in the effort to encourage the use of public transport by the year 2040.

Development pattern around the high intensity transit area shall encouraged mixed development, provision of affordable housing, offering residential facilities, relationships of various types of services and facilities. It is capable on increasing the accessibility through the use of public transportation while prioritising walkable distance in the radius of 400 metres.

4. Green and Blue Corridor

The green and blue corridor in Kuala Lumpur have the potential to be connected to create Urban Ecological Nodes, which serves as an urban biodiverse habitat.

The green and blue corridor will form a green and blue corridor that must be connected to preserve the continuity of the urban ecology network and promote active mobility (pedestrian and micromobility vehicle routes) to reduce reliance on vehicle.

Public parks and open areas consisting of the green corridor, whereas river reserves, drain reserves, and other water bodies contribute to the blue corridor.

Kuala Lumpur will create blue and green corridors, consist of public parks, open spaces, and water bodies which will connect to river reserves, overhead lines reserves, and highway reserves.

5. Special Area Management (SAM)

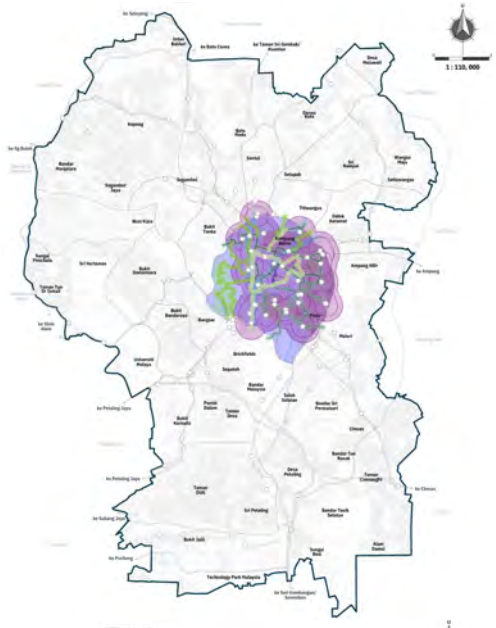
Kuala Lumpur have special area management that needs preservation and conservation for the balance of the ecosystem and to reduce the effect of climate change. The preservation and conservation is also a part of the climate and disaster risk management for Kuala Lumpur to be a resilient city.

Figure 1.6.3 shows the spatial development concept of Kuala Lumpur by 2040 which accounted five (5) main planning aspects.

Figure 1.6.2: Details of Development Control Zone in Kuala Lumpur's Spatial Development Concept

CONTROL ZONE 1: MAIN CENTRE
(City Centre)

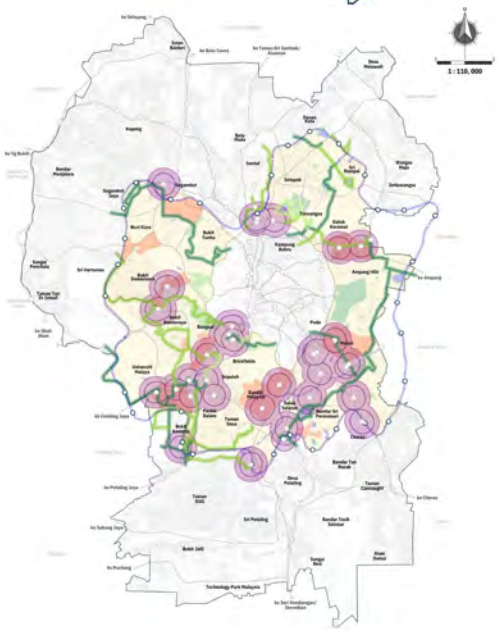
1. Offering international standard development, high-income employment opportunities and Class A buildings to attract high-value investment;
2. The development strategy in this zone is through infill and urban renewal, as well as the implementation of area redevelopment;
3. Focus on improving and enhancing infrastructure, public spaces and active transport system; and
4. Encompasses of 44 transit stations and 31 redevelopment areas.



CONTROL ZONE 1: MAIN CENTRES

CONTROL ZONE 2: SECONDARY CENTRE
(Linking City Boundaries – MRT3)

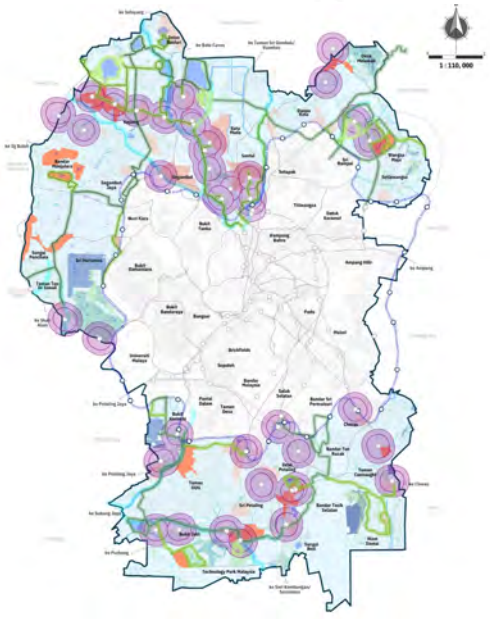
1. This zone is the main residential and services areas in Kuala Lumpur;
2. The development strategy for these areas is to encourage mixed development and high intensity, especially in transit areas;
3. Encourage realignment of hierarchies and improving public housing areas, public services and social;
4. The capacity of this area is expected to increase with the MRT3 services; and
5. Encompasses of 33 transit stations and 35 redevelopment areas.



CONTROL ZONE 2: SECONDARY CENTRES

CONTROL ZONE 3: SUPPORT CENTRE
(Outside MRT3 Link Network)

1. These are Kuala Lumpur's sub-urban centres;
2. The development strategy for these areas is to encourage affordable housing in transit areas which will be supported by adequate and quality public facilities to improve accessibility;
3. This area will be a focus for local service and clean industrial activities; and
4. Encompasses of 26 transit stations and 73 redevelopment areas.



CONTROL ZONE 3: SUPPORT CENTRES

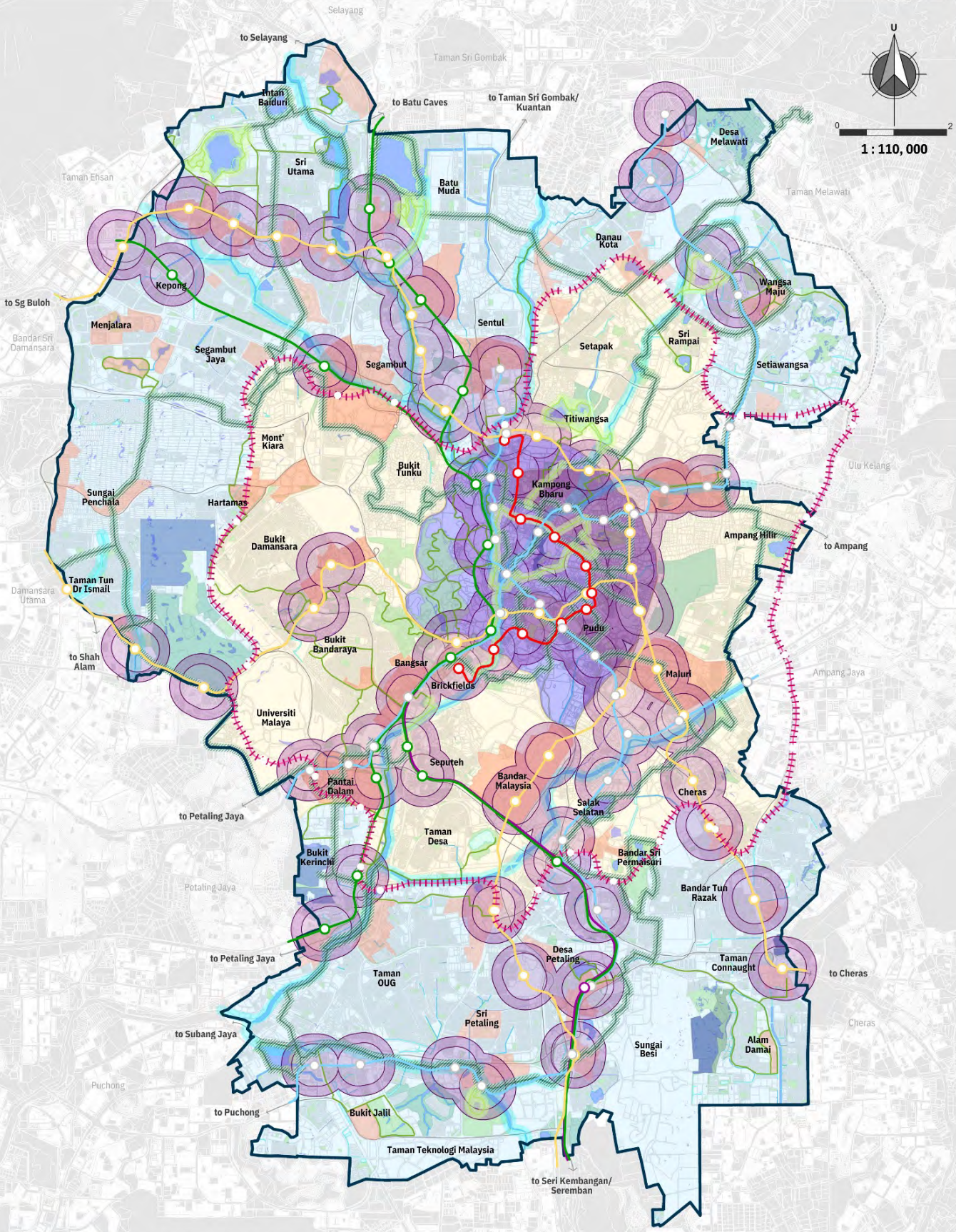


FIGURE 1.6.3 | Plan of Development Strategy Concept Kuala Lumpur 2040

Legend :

Control Zone
- Control Zone 1
- Control Zone 2
- Control Zone 3

Proposal
- Centre for Urban Growth
- Transit Station
- Special Area Management
- Blue Corridor
- Main Park Network
- Secondary Park Network
- Existing Park Network

Public Transport Networks
- MRT Line and Station
- Monorail Line and Station
- KTM Line and Station
- LRT Line and Station
- ERL Line and Station
- MRT Line 3 Corridor and Station (In Planning)

Others
- Main Road
- Kuala Lumpur Boundary

1.7 KLSP2040 AND DRAFT KLLP2040

INTERPRETATION OF THE DRAFT KLLP2040 BASED ON KLSP2040

The Draft KLLP2040 must be read in conjunction with the KLSP2040, from which the interpretation is made via Volume 1 and 2 of the Draft KLLP2040. The focus of Draft KLLP2040 is towards achieving the vision and policy of KLSP2040 through a sustainable growth and land use management approach.

In accordance with the provision of Act 267, the Draft KLLP2040 will be translated into the form of maps and statements to steer the planning and development of Kuala Lumpur for the next 20 years. This translation is accompanied by figure, images, and descriptive materials that are also contained in the Draft KLLP2040.

KLSP2040 has outlined six (6) goals, 21 strategic directions, and 73 planning actions which must be interpreted by Draft KLLP2040 in in the form of six (6) goals, 39 planning strategy, 107 implementation proposals and 198 implementation initiatives. The draft KLLP2040 has coordinated and not repeated the strategic direction of KLSP2040 in order to focus on development control aspect. The translation of KLSP2040 is placed in each proposed implementation of Draft KLLP2040 to ensure clear coordination.

The relation between KLSP2040 and the Draft KLLP2040 is translated through three (3) main items, namely Planning Strategy, Implementation Proposal, and Implementation Initiatives. The KLLP2040 Draft planning strategy is a continuation of the KLSP2040 action statement according to strategic goals and directions.

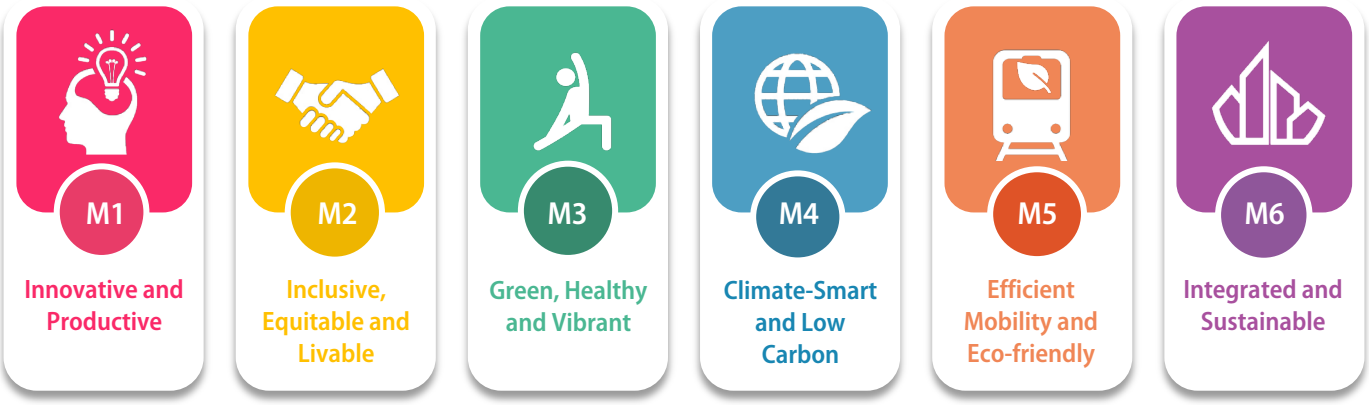
In general, Planning Strategy in the Draft KLLP2040 is the main focus of Strategic Direction and Planning Actions in the KLSP2040. The Draft KLLP2040 Implementation Proposal is a translation of the KLSP2040 actions and supporting actions. While the Implementation Initiatives will outline actions to ensure that the Implementation Proposals in Draft KLLP2040 will be executed effectively.

This implementation proposal of the Draft KLLP2040 is translated into the form of policy, programme, project, planning control and guidelines for the future.

In general, the Draft KLLP2040 has translated all the actions outlined in KLSP2040 in ensuring that the vision of City for All can be successfully achieved.

View of the City Centre from Kuala Lumpur Tower.

THE RELATION BETWEEN KLSP2040 AND DRAFT KLLP2040



KLSP2040					
6 GOALS					
GOAL 1: KUALA LUMPUR INNOVATIVE AND PRODUCTIVE CITY	**GOAL 2:** KUALA LUMPUR INCLUSIVE, EQUITABLE AND LIVABLE CITY	**GOAL 3:** KUALA LUMPUR GREEN, HEALTHY AND VIBRANT CITY	**GOAL 4:** KUALA LUMPUR CLIMATE-SMART AND LOW CARBON CITY	**GOAL 5:** KUALA LUMPUR EFFICIENT ENVIRONMENTAL-FRIENDLY MOBILITY CITY	**GOAL 6:** KUALA LUMPUR INTEGRATED AND SUSTAINABLE CITY
STRATEGIC DIRECTIONS					
3	2	4	4	3	5
ACTIONS					
13	9	12	14	10	15
DRAFT KLLP2040					
6 GOALS					
GOAL 1: ENCOURAGING DEVELOPMENT OF KUALA LUMPUR AS INNOVATIVE AND PRODUCTIVE CITY	**GOAL 2:** FOCUSING DEVELOPMENT OF KUALA LUMPUR AS INCLUSIVE, EQUITABLE AND LIVABLE CITY	**GOAL 3:** STRENGTHENING SURRONDING DEVELOPMENT OF KUALA LUMPUR AS GREEN, HEALTHY AND VIBRANT CITY	**GOAL 4:** STRENGTHENING DEVELOPMENT OF KUALA LUMPUR AS CLIMATE-SMART AND LOW CARBON CITY	**GOAL 5:** FOCUSING DEVELOPMENT OF KUALA LUMPUR AS EFFICIENT ENVIRONMENTAL-FRIENDLY MOBILITY CITY	**GOAL 6:** ENHANCING DEVELOPMENT OF KUALA LUMPUR AS INTEGRATED AND SUSTAINABLE DEVELOPMENT CITY
PLANNING STRATEGIES					
6	6	9	7	3	8
IMPLEMENTATION PROPOSALS					
23	9	22	25	11	17
IMPLEMENTATION INITIATIVES					
27	25	46	40	22	38

GOAL 1

ENCOURAGING THE DEVELOPMENT OF KUALA LUMPUR AS AN INNOVATIVE AND PRODUCTIVE CITY

GOAL 1

ENCOURAGING THE DEVELOPMENT OF KUALA LUMPUR AS AN INNOVATIVE AND PRODUCTIVE CITY

The role of Kuala Lumpur as a primary national commercial and financial centre would be further strengthened to achieve the standard of a Global City.

In relation to the Industrial Revolution 4.0 (4IR) and the development of digital economy, the objective of creating an innovative and productive city would become the core of Kuala Lumpur's development.

The criteria for an innovative city emphasise using and applying smart city components, enhancing the quality of a conducive environment, providing public and private research and development (R&D) centres, expanding the availability of new technology infrastructure and providing the latest manufacturing infrastructure.

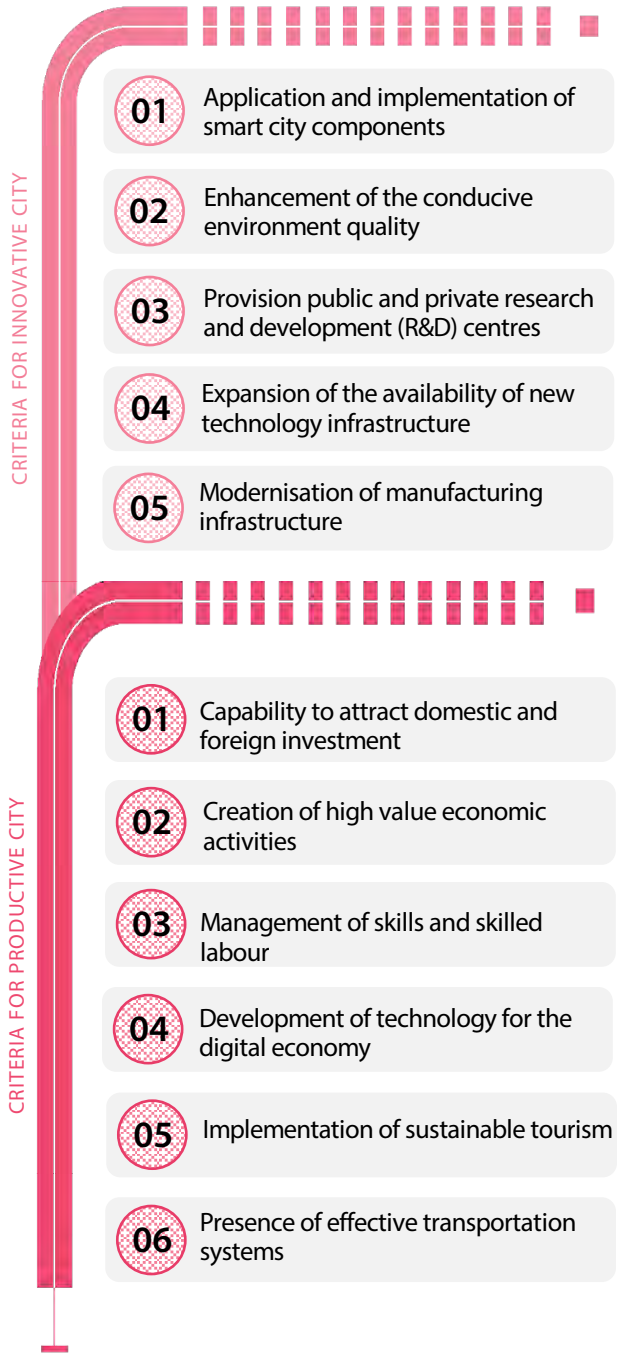
The criteria for a productive city criteria emphasise a city's capacity to draw both domestic and foreign investment, create high- value economic activities, manage skills and skilled labour, develop technology for the digital economy, implement sustainable tourism, and establish effective transportation systems.

As an innovative and productive city, Kuala Lumpur is prepared to attract foreign and domestic investment into its economy, increase the involvement of new entrepreneurs in the economic sectors and to function as a regional tourism destination hub. The objective is to establish Kuala Lumpur as a top 20 world-class competitive city by the year 2030.

The criteria for innovative and productive cities will be translated through the provision of enough land area, the selection of appropriate locations for different economic activities, and the choice of the level of development intensity that is practical and supported by development guidelines and initiatives.

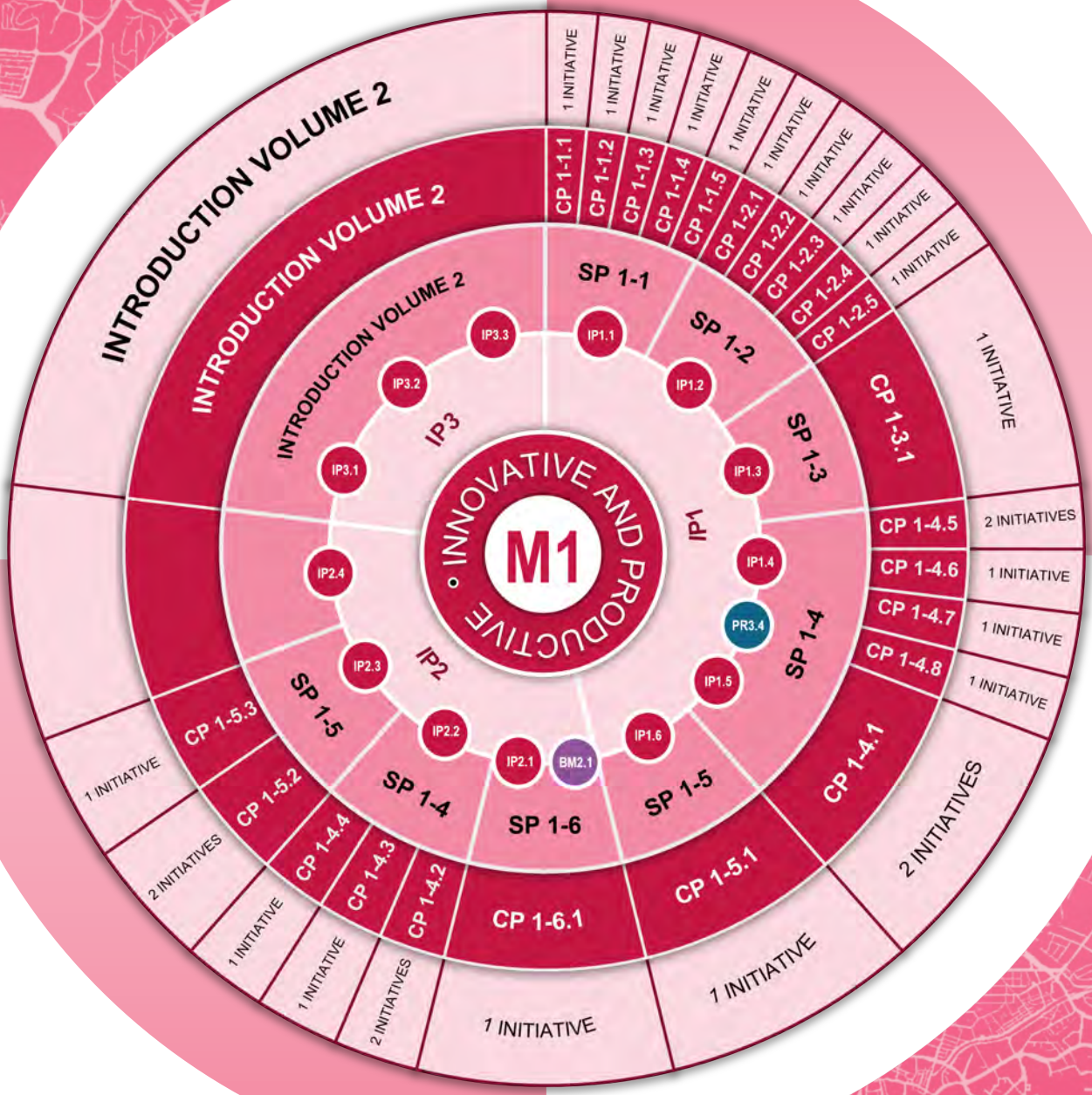
Figure 1.1 lists the main criteria that need to be applied in developing Kuala Lumpur towards an Innovative and Productive City.

Figure 1.1:
Criteria for Innovative and Productive City



KLSP2040
3 STRATEGIC DIRECTIONS
13 ACTIONS

FIGURE 1.2
SUMMARY OF PLANNING STRATEGY AND IMPLEMENTATION PROPOSAL
GOAL 1:
ENCOURAGING THE DEVELOPMENT OF KUALA LUMPUR AS AN INNOVATIVE AND PRODUCTIVE CITY



There are six (6) Planning Strategies (SP), 23 Implementation Proposals (CP) and 27 Implementation Initiatives (IP) drafted as shown in the Figure 1.2.

THE DRAFT KLLP2040
6 PLANNING STRATEGIES
23 IMPLEMENTATION PROPOSALS

PLANNING STRATEGY

SP 1-1: DIVERSIFYING FINANCIAL ACTIVITIES AND COMMERCIAL SERVICES IN KUALA LUMPUR

SCENARIO OF FINANCIAL ACTIVITIES AND COMMERCIAL SERVICES IN KUALA LUMPUR

Kuala Lumpur is the country's main centre for trade, finance and services. Kuala Lumpur's competitiveness and economic prosperity will drive efforts to attract domestic and international investment in this sector.

In line with the role as the main focus of global business, its development planning will prioritise efforts to transform Kuala Lumpur into a place that offers a variety of financial activities and commercial services.

Kuala Lumpur has the potential to become a principal hub among multinational companies. This potential will also help strengthen its position as a global financial centre through fintech finance and business digitisation.

In line with the current development, Kuala Lumpur is capable of providing affordable office space and commercial space for small and new businesses, such as the establishment of start-up companies, especially in the Transit Planning Zone (TPZ).

In addition, the provision of co-working space through building regeneration methods will also develop the sharing economy.

Commercial land use in 2020 was 953.07 hectares including for offices, shopping centres, hotels, shops, serviced apartments, and Small Office Home Office (SOHO). As of December 2021, 937 commercial development projects were recorded in Kuala Lumpur.

The main commercial land use zone for the Draft KLLP2040 consists of five (5) land use zone categories, as follows:

1. City Centre Commercial (CCC);
2. Major Commercial (MC);
3. Commercial (C);
4. Local Commercial (LC); and
5. Mixed Development (MX).

Location: Kuala Lumpur City Centre
Source: https://www.shutterstock.com/g/ESB+Professional

Kuala Lumpur as a Centre for Finance and Commercial Services.

BRIEF INFO

EXISTING AND COMMITTED COMMERCIAL DEVELOPMENT OF THE DRAFT KLLP2040

Area of Kuala Lumpur Existing Commercial, 2020

953.07 hectares

Number of committed Kuala Lumpur commercial development 2000-2021

937 projects

Kuala Lumpur 2040 Commercial Floor Space Capacity

149,422,086.68 million mps

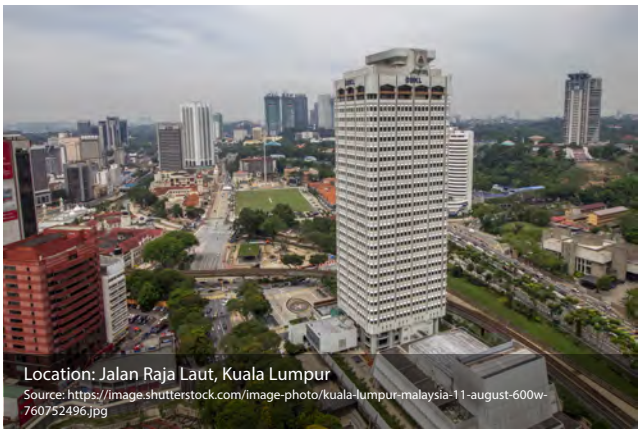
Commercial development as envisaged in the Draft KLLP2040 focuses on strengthening and increasing the value added to the main economic activities of Kuala Lumpur, namely financial services, commercial services and tourism as Kuala Lumpur's economic thrust.

Future commercial development should be geared towards commercial activities by implementing new technologies and creating a dynamic economic environment by adopting Industry 4.0 (4IR) policy. It will enhance new economy concepts such as shared economy, digital economy and creative economy.

In order to realise Kuala Lumpur as an important financial and commercial services centre, five (5) Implementation Proposals are formulated under Planning Strategy 1–1, as shown in Figure 1.1.1.

Location: Sogo, Jalan Tuanku Abdul Rahman
Source: https://image.shutterstock.com/image-photo/kuala-lumpur-malaysia-nov-8-600w-751264312.jpg

Sogo Complex is one of Kuala Lumpur's leading shopping centre attractions.



Location: Jalan Raja Laut, Kuala Lumpur
Source: https://image.shutterstock.com/image-photo/kuala-lumpur-malaysia-11-august-600w-760752496.jpg

A view of the skyline around Jalan Raja Laut.

BRIEF INFO

SHARED ECONOMY

1. Sharing of assets and services, such as e-hailing, shared office, shared accommodation (for example Airbnb) and others;
2. Sharing of intangible assets (time, skills and talent), such as delivery and administrative services;
3. Redistribution of goods, such as buying, selling and delivering goods through the secondary market; and
4. Financial sharing, such as investment and peer to peer (P2P).

DIGITAL ECONOMY

1. Shared economy platform;
2. Financial technology (Fintech);
3. E-commerce;
4. Data centre
5. Big Data and Artificial intelligence (AI);
6. Digital creative content;
7. Islamic digital economy;
8. Blockchain;
9. 3D Printing;
10. Architectural design system or network;
11. Global economy services;
12. Robotic; and
13. Technology, autonomous design.

CREATIVE ECONOMY

1. Heritage;
2. Performing Arts;
3. Craft art;
4. Fashion;
5. Local food;
6. Film; and
7. Writing.

Figure 1.1.1:
Implementation Proposals for Planning Strategy 1-1

SP 1-1 DIVERSIFYING FINANCIAL ACTIVITIES AND COMMERCIAL SERVICES IN KUALA LUMPUR

- **CP 1-1.1** Planning Commercial Hierarchy in Kuala Lumpur
- **CP 1-1.2** Establishment of New Commercial Area
- **CP 1-1.3** Strengthening of Prime Commercial Centre in Kuala Lumpur
- **CP 1-1.4** Establishment of Specific Theme Commercial Activities Zones in Kuala Lumpur City Centre
- **CP 1-1.5** Establishment of Banking and Fintech Focus Zones

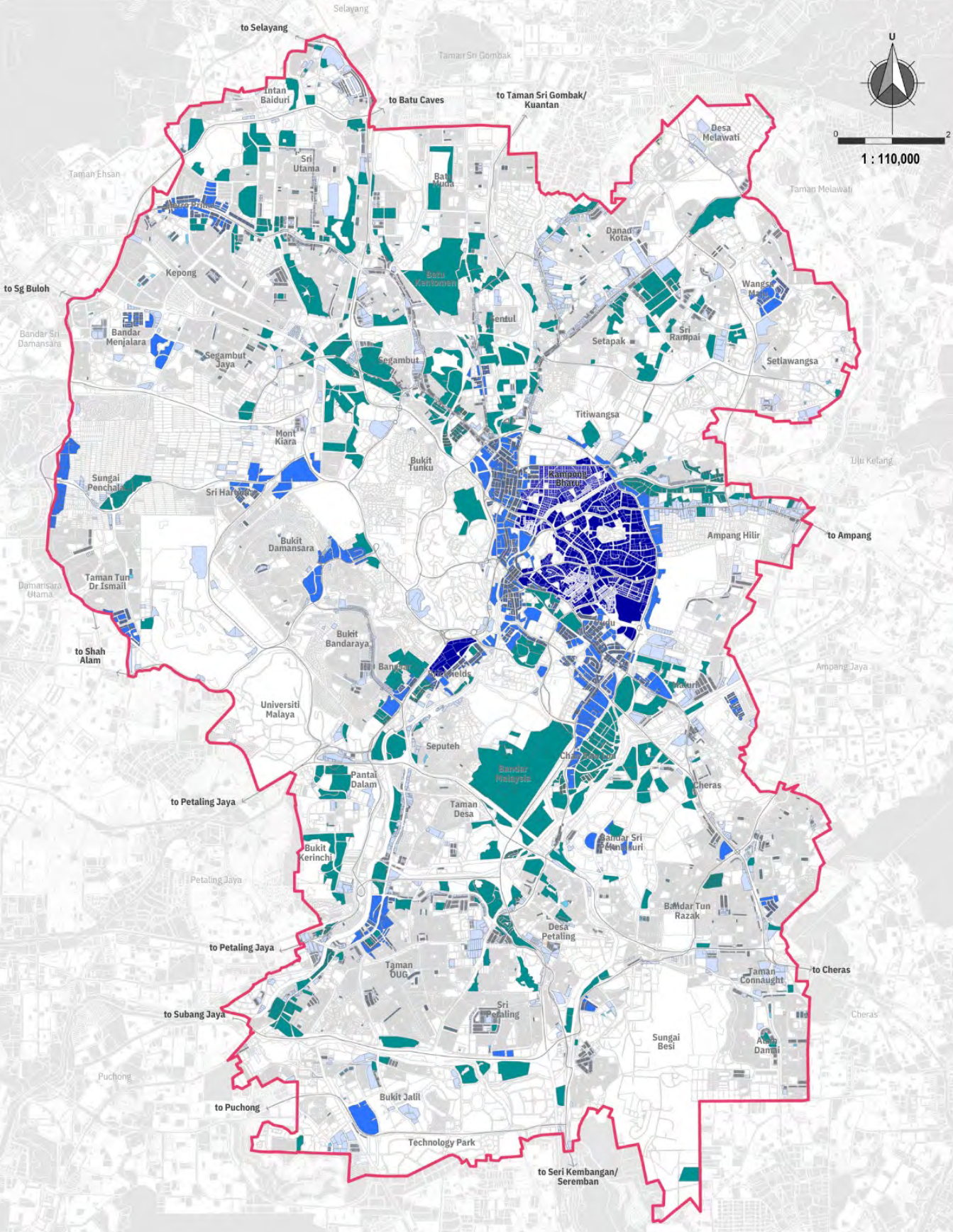


FIGURE 1.1.2 | Plan of Proposed Commercial Hierarchy in Kuala Lumpur

Legend :

- City Centre Commercial (CCC)
- Major Commercial (MC)
- Commercial (C)
- Local Commercial (LC)
- Mixed Development (MX)

Others

- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 1-1.1: PLANNING COMMERCIAL HIERARCHY IN KUALA LUMPUR

Economic growth in Kuala Lumpur is important to create an environment with a comprehensive economic scale and able to meet the needs of all group society.

Planning for competitive urban economic growth is prominent for Kuala Lumpur as the capital of Malaysia that acts as a global financial hub.

The planning of the commercial hierarchy in Kuala Lumpur focuses on strengthening the function of the commercial centre optimally to drive dynamic economic growth, attract new investment and accommodate the demands of society.

The establishment of the commercial hierarchy in Kuala Lumpur refers to the commercial land use zone as shown in Table 1.1.1 and Figure 1.1.2.

The implementation approach of this proposals is through policy and planning control. One (1) initiative is being proposed for the implementation of CP 1-1.1.

Part of skyline view in commercial area of Kuala Lumpur City Centre.

Table 1.1.1:
Proposal of Commercial Zone Hierarchy

Hierarchy	Definition	Location	Area (Hectares)
City Centre Commercial (CCC)	Refers to the highest hierarchy of commercial land use zones that serves as financial centres, premier trade, service and main employment centre.	Pusat Bandar Raya Kuala Lumpur, KL Sentral, Kampong Bharu, TRX, Bukit Bintang and other areas zoned as City Centre Commercial (CCC).	447.33
Major Commercial (MC)	Refers to the commercial land use zone that serves as the major commercial centre that supporting the land use zone of City Centre Commercial (CCC).	Wangsa Maju, Bandar Menjalara, Bandar Sri Permaisuri, Kampung Bukit Lanjan, Desa Sri Hartamas, TTDI, Bandar Tasik Selatan, Bukit Indah, Bukit Jalil and other areas zoned as Major Commercial (MC).	676.40
Commercial (C)	Refers to commercial areas that are generally located on the main streets and in the centres of major neighbourhoods.	Danau Kota, Desa Petaling, Kepong, Titiwangsa, Cheras, Pantai Dalam, Taman Salak Selatan, Maluri, Shamelin and other areas zoned as Commercial (C).	1,046.83
Local Commercial (LC)	Refers to commercial land use zones that serves as service centres in housing areas.	Bandar Tun Razak, Taman Sri Petaling, Kuchai Lama, Taman Desa, Taman Pusat Kepong and other areas zoned as Local Commercial (LC).	52.42
Mixed Development (MX)	Refers to a land use zone that allows the mixing of commercial components to support the basic use of residences in a development. Residential components, including residential units, quarters and serviced apartments, shall not be less than 60 percent of the total gross floor area.	Bandar Malaysia, Bangsar South, Chan Sow Lin, Bukit Kerinchi, Sungai Penchala and other areas zoned as Mixed Development (MX).	1,850.47

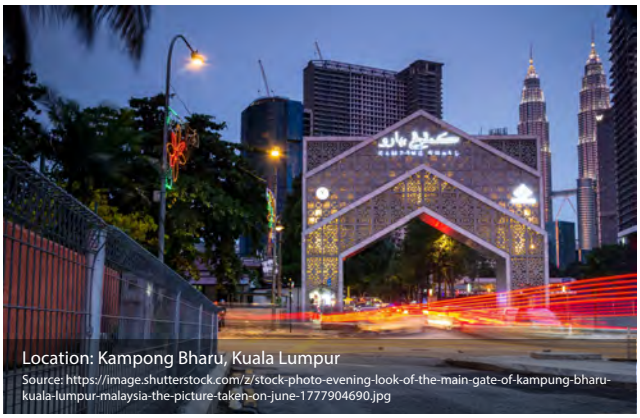
Skyline view of the Commercial Centre in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 1-1.1A

PLAN INTEGRATED COMMERCIAL DEVELOPMENT HIERARCHY

Planning of an integrated commercial hierarchy according to the function and role of land use planning zones is to ensure a dynamic and progressive economic growth in Kuala Lumpur.

The necessary actions to support this initiative are shown in Table 1.1.2.



Kampong Bharu is one of the commercial attraction for food and culture in Kuala Lumpur.

Table 1.1.2:
Implementation Initiative by Integrated Commercial Development Hierarchy

General Initiatives	
1. Encourage the development of Transit-oriented Development (TOD) and active mobility mode through provision of interconnected pedestrian and micromobility vehicles routes; 2. Ensure readiness and maintenance of comprehensive provision of infrastructure and other supporting facilities to cater for the needs of users and visitors; 3. Encourage the development of affordable offices and workspaces; 4. Implement development of sustainable planning concepts such as safe city elements through Crime Prevention Through Environmental Designs (CPTED), universal designs, green buildings, smart technology and Low Carbon City concept; and 5. Ensure continuous maintenance of the surrounding environment and provision of attractive landscapes to create the environment of a conducive and competitive city.	
Land Use Zone	**Specific Initiatives**
1. City Centre Commercial (CCC)	1. Encourage integrated, high-dense and high-value developments; 2. Emphasise on commercial developments that could generate employment opportunities and high-skilled labours; 3. Emphasise on potent commercial developments that could attract domestic and foreign investments; 4. Encourage the development of new tourist attractions and attractive high-valued tourist accommodations; 5. Encourage the development or provision of spaces for Meetings, Incentives, Conferences and Exhibitions (MICE); 6. Emphasise on commercial developments for co-working spaces and shared economy; 7. Encourage developments that could support and locate multinational corporations within the city centre.
2. Major Commercial (MC)	1. Promote integrated, high-intensity and high-value commercial development as an option for the City Centre Commercial Zone (CCC); 2. Emphasise on commercial developments that could generate employment opportunities and high-skilled labours in line with its role in supporting City Centre Commercial (CCC); 3. Permitting entertainment-based activities within commercial growth centre subjected to conditions and appropriate scale of operation; and 4. Encourage the developments of centralised commercial to cater for the needs of the community and visitors.

Table 1.1.2:
Implementation Initiative by Integrated Commercial Development Hierarchy (continued)

Land Use Zone	Specific Initiatives
3. Commercial (C)	1. Encourage commercial developments that cater for the concept of co-working spaces and shared economy; 2. Encourage the developments of training centres and incubators to support the concept of a knowledge-based economy that leads to generating high-skilled labour; 3. Encourage the developments of commercial services and activities to cater the needs of community and visitors; and 4. Ensure adequated provision of public facilities for the residing commercial developments.
4. Local Commercial (LC)	1. Provide services and goods sales that cater for the needs of the local community; 2. Encourage provision and development of incubators and spaces for start-ups; and 3. Encourage provision and development for hawker centres and spaces informal commercial activities.
5. Mixed Development (MX)	1. Ensure adequated provision of public facilities for the residing commercial developments; 2. Encourage integrated, high-dense, high-value commercial and residential developments; 3. Emphasise on commercial developments that could generate diverse employment opportunities and high-skilled labours; 4. Encourage commercial developments that cater for the concept of co-working spaces and shared economy; and 5. Encourage the developments of training centres and incubators to support the concept of a knowledge-based economy that leads to generating high-skilled labour.

IMPLEMENTATION PROPOSAL

CP 1-1.2: ESTABLISHMENT OF NEW COMMERCIAL AREA

The trend of development and increase in commercial floor space in Kuala Lumpur is expected to continue in line with the city's economic growth due to increased demand for commercial areas, reclassification of land use zones and high-intensity development.

The Draft KLLP2040 has proposed an area of 4,073.45 hectares of Land Use Zone of Commercial with an increase of 677.46 hectares compared to the Land Use Zone of Commercial 2020 as shown in Table 1.1.3.

The KLSP2040 has projected commercial floor space requirement of 74.06 million square metres. Considering the aspect of development intensity, the commercial land use zone capacity for the Draft KLLP2040 offers a floor space of 149.42 million square metres. However, this is dependent on market conditions and future demand in Kuala Lumpur including the mega project development phase which is expected to surpass the period of 2040 such as Bandar Malaysia and Tun Razak Exchange (TRX).

The implementation approach of this proposal is through policy and planning control. One (1) initiative is proposed for the implementation of CP 1-1.2.

Location: Tun Razak Exchange, Kuala Lumpur
Source: https://image.shutterstock.com/z/stock-photo-kuala-lumpur-malaysia-jan-the-exchange-from-aerial-view-formerly-known-as-trx-1367318432.jpg

A view of the Tun Razak Exchange Tower as a new commercial landmark in Kuala Lumpur.

Table 1.1.3:
Detailed Comparisons in Area Differences for Commercial Land Use Zones

Commercial Land Use Zones	Area of Commercial Land Use Zones 2020 (Hectares)	Area of Commercial Land Use Zones 2040 (Hectares)	Proposed Area Increase (Hectares)
1. City Centre Commercial (CCC)	373.11	447.33	74.22
2. Major Commercial (MC)	577.31	676.40	99.09
3. Commercial (C)	953.07	1,046.83	93.76
4. Local Commercial (LC)	209.86	52.42	-157.44
5. Mixed Development (MX)	1,282.64	1,850.47	567.83
Total	**3,395.99**	**4,073.45**	**677.46**

Source: Adapted from KLCP2020

The increase in commercial land use area based on the Draft KLLP2040 is due to:

1. Area replanning incorporates infrastructure improvements or the construction of new transit stations;
2. Redevelopment of dilapidated areas; and
3. The setting of the direction and new strategy of an area incorporates the surrounding development.

Commercial capacity is projected at 149,422,086.68 square metres taking into account the ratio of the basic plot and the area of the plot of land involved according to each breakdown of the commercial land use zone of the Draft KLLP2040.

The projected floor space capacity of the Draft KLLP2040 ensures the availability of commercial areas that can meet market demand, flexibility regarding the location of commercial development and committed development.

In addition, the total commercial floor space capacity of the Draft KLLP2040 is seen contributed to commercial development in the form of residential use such as service apartments or Small Office Home Offices (SOHO) in line with the demand trend of Kuala Lumpur residents in the future.

The Draft KLLP2040 also incorporate the intensity incentives introduced in accordance with the current government policies. Focus should be placed on the planning of facilities, infrastructure and utilities to support the implementation of these incentives.

BRIEF INFO

CAPACITY OF COMMERCIAL FLOOR SPACE UNTIL 2040
ZONING VERSION 25

City Centre Commercial (CCC)
This commercial capacity is calculated on the assumption of commercial use of 90 percent of the total commercial land plot area.
37,211,520.97 square metre

Major Commercial (MC)
This commercial capacity is calculated on the assumption of commercial use of 90 percent of the total commercial land plot area.
37,763,973.25 square metre

Commercial (C)
This commercial capacity is calculated on the assumption of commercial use of 90 percent of the total commercial land plot area.
36,254,193.41 square metre

Local Commercial (LC)
This commercial capacity is calculated on the assumption of 100 percent commercial use of the total commercial land plot area.
1,281,928.85 square metre

Mixed Development (MX)
This commercial capacity is calculated on the assumption of commercial use of 40 percent of the total commercial land plot area.
35,393,495.14 square metre

Mixed Industry (MXI)
This commercial capacity is calculated on the assumption of commercial use of 50 percent of the total commercial land plot area.
1,516,975.06 square metre

IMPLEMENTATION INITIATIVES 1-1.2A

ENCOURAGE INTERGRATED COMMERCIAL DEVELOPMENT WITHIN NEW COMMERCIAL AREA

An integrated and conducive commercial development guarantees Kuala Lumpur with a progressive and prosperous economy. This would generate high-value commercial services for its people and community.

This initiative is to drive progressive economic growth that is in line with the principles of integrated trade development in Kuala Lumpur.

The necessary actions to support this initiative are as follows:

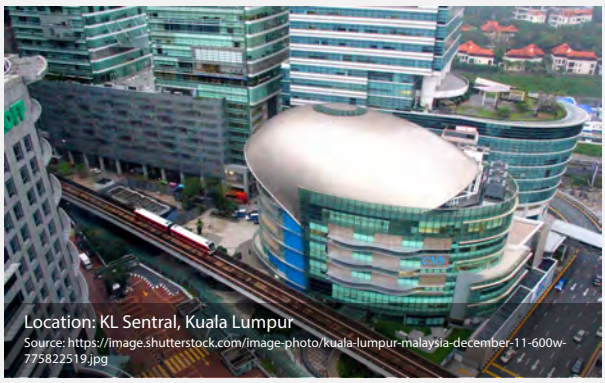
1. Optimisation use of land through integrated commercial development planning;
2. Commercial development that integrates with Transit-oriented Development (TOD) and active mobility mode which includes pedestrian and micromobility vehicle routes;
3. Encourge business start-up programmes through the provision of small office space and incubators centres;
4. Encourage the development of affordable commercial spaces;
5. Plan provision of complete infrastructure and support facilities such as the sharing of parking vehicles facilities in residential buildings for the use of commercial activities for a certain period; and
6. Adopt sustainable and urban planning concept elements such as Crime Prevention Through Environmental Design (CPTED), universal design, green building, smart technology and Low-Carbon City concept.

BEST PRACTICE

INTEGRATED OF COMMERCIAL DEVELOPMENT

There are three (3) types of existing developments in Kuala Lumpur that implement the concept of successful integrated commercial development such as KL Sentral, Pavilion Bukit Bintang and Lalaport:

1. KL Sentral is an integrated commercial area with the availability of a variety of public transport services and the NU Sentral shopping centre;
2. Pavilion Kuala Lumpur is an international commercial development (World Class Award Winning) with the availability of MRT and monorail public transport services; and
3. Lalaport is a new commercial development developed integrated with access to rail transport such as LRT, MRT and monorail.



NU Sentral Shopping Centre has easy access to the public transport hub at KL Sentral.

The Pavilion Shopping Centre is known for its various commercial activities as well as world-class fashion ceremonies.

Lalaport's new Shopping Centre has the potential to become an integrated commercial centre.

IMPLEMENTATION PROPOSAL

CP 1-1.3: STRENGTHENING OF THE PRIMARY COMMERCIAL CENTRE IN KUALA LUMPUR

Primary commercial centres serve as focus areas for high-value commercial activities, including office space, shopping malls, hospitality and the main services sector. In addition, its play a role in supporting and complementing activities in the Banking and Fintech Focus Zone.

Strengthening competitive primary commercial centres is one of the main focuses in making Kuala Lumpur as a global city. Hence Kuala Lumpur benefits an advantage in attracting more new investments while expanding existing investments.

Primary commercial centres enable innovative commercial spaces to be planned and transformed into an advanced and competitive commercial activities. The focus of Primary commercial centres, as shown in the Figure 1.1.3, covers the following areas:

1. Part of City Centre Commercial;
2. KL Sentral and its surroundings;
3. Bangsar South and Media City;
4. Pusat Bandar Damansara;
5. KL Metropolis and its surrounding;
6. Bandar Malaysia; and
7. Pusat Bandar Bukit Jalil.

The primary commercial centre is located in the Land Use Zone of City Centre Commercial (CCC) having a base plot ratio of 1:10, a Land Use Zone of Major Commercial (MC) with a base plot ratio of 1:8 and a Land Use Zone of Mixed Development (MX) with a base plot ratio of 1:8.

The implementation approach of this proposal is through project, policies and programme. One (1) initiative is proposed for the implementation of CP 1-1.3.

IMPLEMENTATION INITIATIVE 1-1.3A

PROGRESIVE GROWTH AND COMPETITIVE DEVELOPMENT OF PRIMARY COMMERCIAL CENTRE

The growth of primary commercial centre should be encouraged so that they become more vibrant and dynamic.

The necessary actions to support this initiative are shown in the Table 1.1.4.

Bangsar South area as a potential area for primary commercial activities.

Table 1.1.4:
Development Initiatives for Primary Commercial Centre

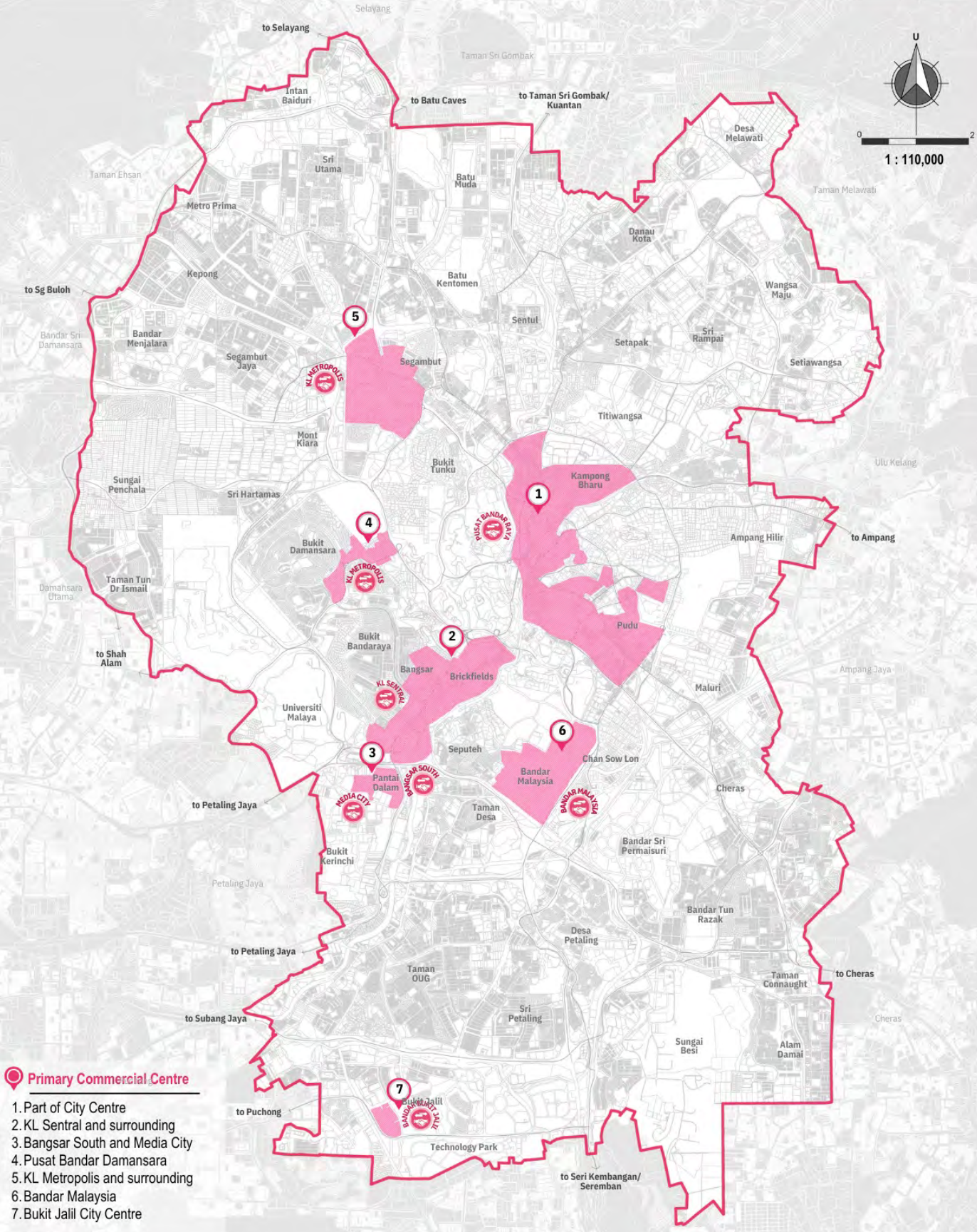
General Initiatives	
1. Encourage the creation of high-value economic activity that complement the development of banking, fintech and primary commercial zones such as hotel, office, shopping complexes, entertainment and services; 2. Ensure readiness and maintenance of comprehensive provision of infrastructure and other supporting facilities with high quality to cater for the needs of users and visitors; 3. Enhance primary and traditional zones for sales of goods through redevelopment or rejuvenation programmes; 4. Provision of spaces for informal commercial activities to generate employment opportunities for all levels of society; 5. High connectivity for active mobility mode through the provision of pedestrian and micromobility vehicle routes connected to the transportation network and transit station; 6. Ensure continuous maintenance and provision of attractive landscapes to create a conducive and competitive environment; and 7. Implement sustainable planning concepts such as safe city elements through Crime Prevention Through Environmental Designs (CPTED), universal designs, green buildings, smart technology and Low-Carbon City concepts.	
Primary Commercial Centre	**Specific Initiatives**
Part of City Centre The City Centre Primary Commercial Centre is the major commercial activity zone of Kuala Lumpur. (Jalan Ampang, Bukit Bintang towards to Jalan Imbi, Jalan Tunku Abdul Rahman, Jalan Raja Bot, Jalan Pudu, Jalan Dang Wangi, Jalan Petaling, Jalan Sultan, Jalan Hang Jebat) **Area: 699.00 hectares**	1. Strengthening the position of KLCC-Bukit Bintang as a major shopping activity precinct by encouraging the growth of a productive and vibrant primary commercial centre; 2. Encouraging the development of high-class commercial and Grade A office space; and 3. Encouraging the redevelopment or regeneration of commercial areas that are less competitive, dilapidated and have the potential to become commercial areas of high value without affecting the surrounding development typology.

Table 1.1.4:
Development Initiatives for Primary Commercial Centre (continued)

Primary Commercial Centre	Specific Initiatives
KL Sentral and its surrounding KL Sentral Primary Commercial Centre is a major integrated transit centre in Malaysia. This development area has corporate office, 5-star hotels, shopping malls and luxury condominiums. Thus, the vicinity surrounding KL Sentral become a potential area for redevelopment and will be the focus of multinational companies (MNC). (Jalan Damansara - Jalan Bangsar - Jalan Syed Putra) **Area: 308.70 hectares**	1. Promoting mixed development that includes shopping activities, office complexes, businesses and residing elements to increase the livability of the city; 2. Encouraging the development of incubators and small office spaces for new entrepreneurs; and 3. Encouraging the development of high-class commercial and Grade A office space.
Bangsar South and Media City Bangsar South is a commercial centre that has a high-tech integrated office complex with the application of smart city components. Meanwhile, Media City located near Bangsar South is a development focused on multimedia and broadcasting which is the National International Broadcasting Centre. (Jalan Pantai Permai - Jalan Kerinchi - Jalan Kerinchi Kiri 2) **Area: 45.82 hectares**	1. Encouraging commercial activities based on a knowledge-based economy that supports function of the commercial centre involved; 2. Encouraging the development of incubators, start-ups and small office spaces for new entrepreneurs; 3. Encouraging creative activities, digital and IT; and 4. Encouraging the provision of supporting facilities for activities and international broadcasting centre's facility.
Pusat Bandar Damansara Pusat Bandar Damansara is the major commercial area for Bukit Damansara and its surroundings. (Jalan Johar - Jalan Semantan - Changkat Semantan - Jalan Beringin) **Area: 62.37 hectares**	1. Encouraging the development of high-class commercial and Grade A office space; and 2. Encouraging the development of incubators and small office spaces for new entrepreneurs.
KL Metropolis and its surrounding Centre commercial area and office complex located at the north city centre area. (Persiaran Dutamas - Jalan Sultan Haji Ahmad Shah - Jalan Kuching, Segambut) **Area: 235.10 hectares**	1. Creating a Digital Free Trade Zone that is a platform to facilitate and prioritise digital commercial activities; 2. Developing Satellite Service Centre known as Kuala Lumpur Internet City (KLIC) to be the main digital hub for global and local companies. Development of the centre as a key player in the internet ecosystem that provides support, networking and knowledge sharing to drive innovation in the internet economy and e-commerce industry; 3. Promoting the development of world-class commercials such as hotels, offices, shopping centres, entertainment and services supported by quality infrastructure; and 4. Increasing the role as a centre of professional development and training.

Table 1.1.4:
Development Initiatives for Primary Commercial Centre (continued)

Primary Commercial Centre	Specific Initiatives
Bandar Malaysia A potential area as an international business and transportation hub as well as a centre for intellectual investment. (Jalan Sungai Besi-Jalan Istana) **Area: 296.10 hectares**	1. Encouraging the development of high-class commercial and Grade A office space; 2. Promoting mixed development that includes shopping activities, office complexes, businesses and residential elements to increase the livability of the city; 3. Encouraging the development of incubators and small office spaces for new entrepreneurs; and 4. Expanding an integrated transport network comprehensive.
Pusat Bandar Bukit Jalil Bukit Jalil Prime Commercial Centre includes the commercial focus area and office complex for the southern area of Kuala Lumpur. (Persiaran Jalil Utama-Lebuh raya Bukit Jalil) **Area: 23.66 hectares**	1. Promoting large-scale trade and retail activities to support the growth of shopping activities; 2. Promoting creative, digital and IT industry activities; and 3. Encouraging the development of incubators and small office spaces for new entrepreneurs.



Primary Commercial Centre

1. Part of City Centre
2. KL Sentral and surrounding
3. Bangsar South and Media City
4. Pusat Bandar Damansara
5. KL Metropolis and surrounding
6. Bandar Malaysia
7. Bukit Jalil City Centre

FIGURE 1.1.3 | Plan of Proposed Development of Primary Commercial Centre in Kuala Lumpur

Legend :

- Primary Commercial Centre Area

Others

- Main Road
- Fintech and Banking Boundary

IMPLEMENTATION PROPOSAL

CP 1-1.4: ESTABLISHMENT OF SPECIFIC THEME COMMERCIAL ACTIVITIES ZONES IN KUALA LUMPUR CITY CENTRE

There are various types of commercial activities in Kuala Lumpur. The rebranding of certain commercial activity zones with specific themes will be a new attraction area for shopping and recreation. The focus area is in the city centre and Brickfields.

The rebranding is based on the identity and special commercial activities performed in these areas including the potential of its expansion. This a proposal will create the area as a special shopping attraction for tourists and local visitors.

The site selected for specific theme commercial area are as shown in Table 1.1.5 and Figure 1.1.4.

The implementation approach of this proposal is through a project. One (1) initiative is proposed for the implementation of CP 1-1.4.

Location: Pasar Seni, Kuala Lumpur
Source: https://www.shutterstock.com/g/AndreSianipar

Kasturi Walk in Pasar Seni is one of the focal commercial areas for local visitors and tourists with trading activities based on food and culture.

IMPLEMENTATION INITIATIVE 1-1.4A

BRAND THEME FOR COMMERCIAL ACTIVITIES CENTRE

The theme for commercial activities centre area must be upgraded with sufficient facilities and infrastructures to cater visitors need.

The necessary actions to support this initiative are as follows:

1. Enhancing the image and identity of area;
2. Provision of public spaces for visitors to shops, rest and interact;
3. Provision for kiosk and food cart;
4. Provision of adequate street furniture, false façade, interconnected pedestrian linkages and signages;
5. Provision of universal design facilities; and
6. Implementing area beautification programme.

The main archway serves as Jalan Petaling's signature feature.

Table 1.1.5:
Inset Plan of Commercial Activities Theme

Commercial Activities Theme	
1. Food and Culture **Focus Areas:** Jalan Petaling (Chinatown), Brickfields (Little India), Kampong Bharu, Jalan Alor, Jalan Masjid India, Pasar Seni	**2. Electronic gadgets and IT Equipment** **Focus Areas:** Plaza Low Yat, Plaza Imbi, Kompleks Pertama and MARA Digital

Table 1.1.5:
Inset Plan of Commercial Activities Theme (continued)

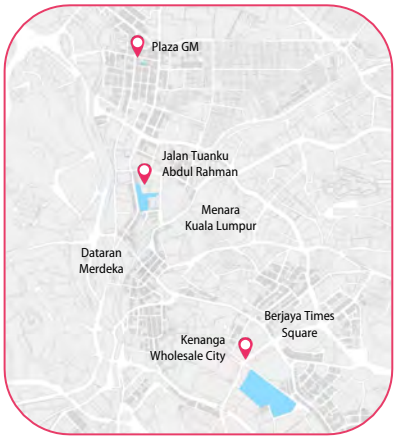
Commercial Activities Theme

3. Night Market

Focus Areas:
Jalan Tuanku Abdul Rahman, Jalan Petaling, Kasturi Walk, Kampong Bharu

4. Wholesale

Focus Areas:
Kenanga Wholesale City, Plaza GM, Jalan Tuanku Abdul Rahman



5. Electrical and Electronics

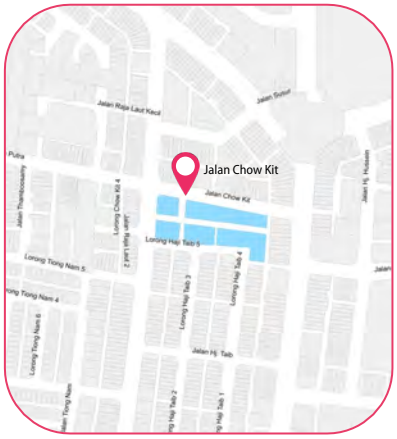
Focus Areas:
Jalan Pasar, Jalan Pudu, Plaza Low Yat

6. Creative Art

Focus Areas:
Pasar Seni, Kompleks Kraf Kuala Lumpur, Jalan Alor, Lorong Panggung, Jalan Gereja, Pusat Pelancongan Malaysia (MATIC)

7. Toys

Focus Areas:
Jalan Chow Kit



8. Jewellery and Accessory

Focus Areas:
Jalan Masjid India, Jalan Bangsar, Jalan Bukit Bintang

IMPLEMENTATION PROPOSAL

CP 1-1.5: ESTABLISHMENT OF BANKING AND FINTECH FOCUS ZONES

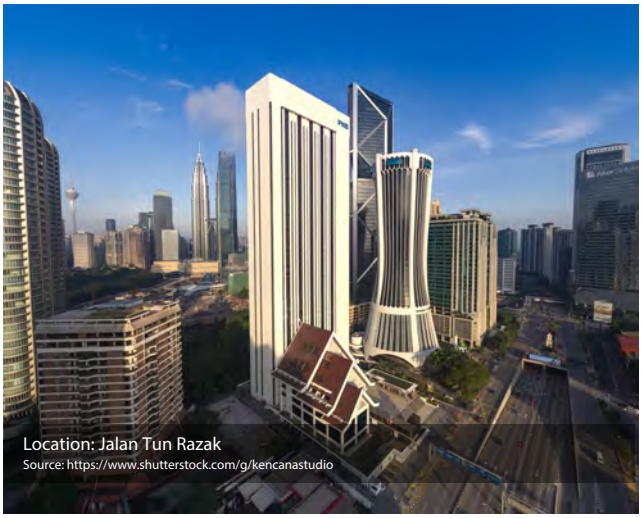
The financial sector has the potential to drive the growth of commercial activities in Kuala Lumpur. Kuala Lumpur is also the main global hub of Islamic finance through its recognition as the internationally Most Advanced Islamic Finance Market (Global Islamic Finance Report, 2019).

This effort must be supported through the provision of world-class digital infrastructure and a conducive commercial ecosystem by strengthening banking and fintech activities in Kuala Lumpur.

This focus zone is proposed to cover the areas of Jalan Sultan Ismail - Jalan Raja Chulan - Jalan Tun Razak, Kuala Lumpur Convention Centre (KLCC) and Tun Razak Exchange (TRX) at Jalan Davis as shown in the Figure 1.1.4. Banking, fintech and sharing economy activities will be encouraged in this zone through the provision of space for banking headquarters, multinational companies (MNCs) and principal hubs for regional business companies to operate. Asset sharing through the use of digital platforms is also encouraged.

These focus zones are generally within the Land Use Zone of City Centre Commercial (CCC) and the Land Use Zone of Major Commercial (MC) with a base plot ratio up to 1:10.

The implementation approach of this proposal is through policies and programme. One (1) initiative is proposed for the implementation of CP 1-1.5.



Buildings with finance activities in Jalan Tun Razak, Kuala Lumpur.

IMPLEMENTATION INITIATIVES 1-1.5A

ENSURE PROGRESSIVE AND COMPETITIVE FINANCIAL ACTIVITIES IN FINTECH AND BANKING ZONES

This initiative encourages the injection of technology into the current banking system to apply the latest fintech systems as well as measures that need to be considered to ensure financial activities thrive in the designated zone.

The necessary actions to support this initiative are as follows:

1. **Progress and Growth of Financial Technology System (Fintech)**
   a. Provision of specific business space to encourage the growth for start-ups and fintech activities;
   b. Encouraging business activities with a cashless payments system using a card or QR code application;
   c. Implementing a fully digitalised banking transactions system;
   d. Priority in using Artificial intelligent (AI) technology;
   e. Adoption of smart city initiatives; and
   f. International collaborations in fintech innovations.

2. **Upgrading Broadband Infrastructure Technology**
   a. Increasing stable broadband capacity with a minimum speed of 500 mbps by 2040.

3. **Upgrading of Banking and Fintech Zones Surroundings**
   a. Encouraging commercial development with the concept of Transit-oriented Development (TOD) and active mobility modes including pedestrian and micromobility vehicle routes;
   b. Provision of sufficient public space, shade areas, kiosks and landscape elements;
   c. Encourage the construction of pedestrian bridge linkages between buildings; and
   d. Application of sustainable planning design concepts such as Crime Prevention Through Environmental Design (CPTED), universal design, green buildings, smart technology and Low-Carbon City concepts.

Location of Primary Financial Activities in the City of Kuala Lumpur

01 **JALAN AMPANG – JALAN TUN RAZAK**

02 **JALAN SULTAN ISMAIL – JALAN RAJA CHULAN**
This existing Kuala Lumpur banking centre area will be more vibrant by improvement of infrastructure and business environment.

03 **JALAN TUN RAZAK - TUN RAZAK EXCHANGE (TRX)**
TRX is a new catalyst for Kuala Lumpur towards the nation's leading financial hub with the integration of three (3) main components, namely a world-class shopping mall, The Exchange TRX, and TRX Residence.

BRIEF INFO

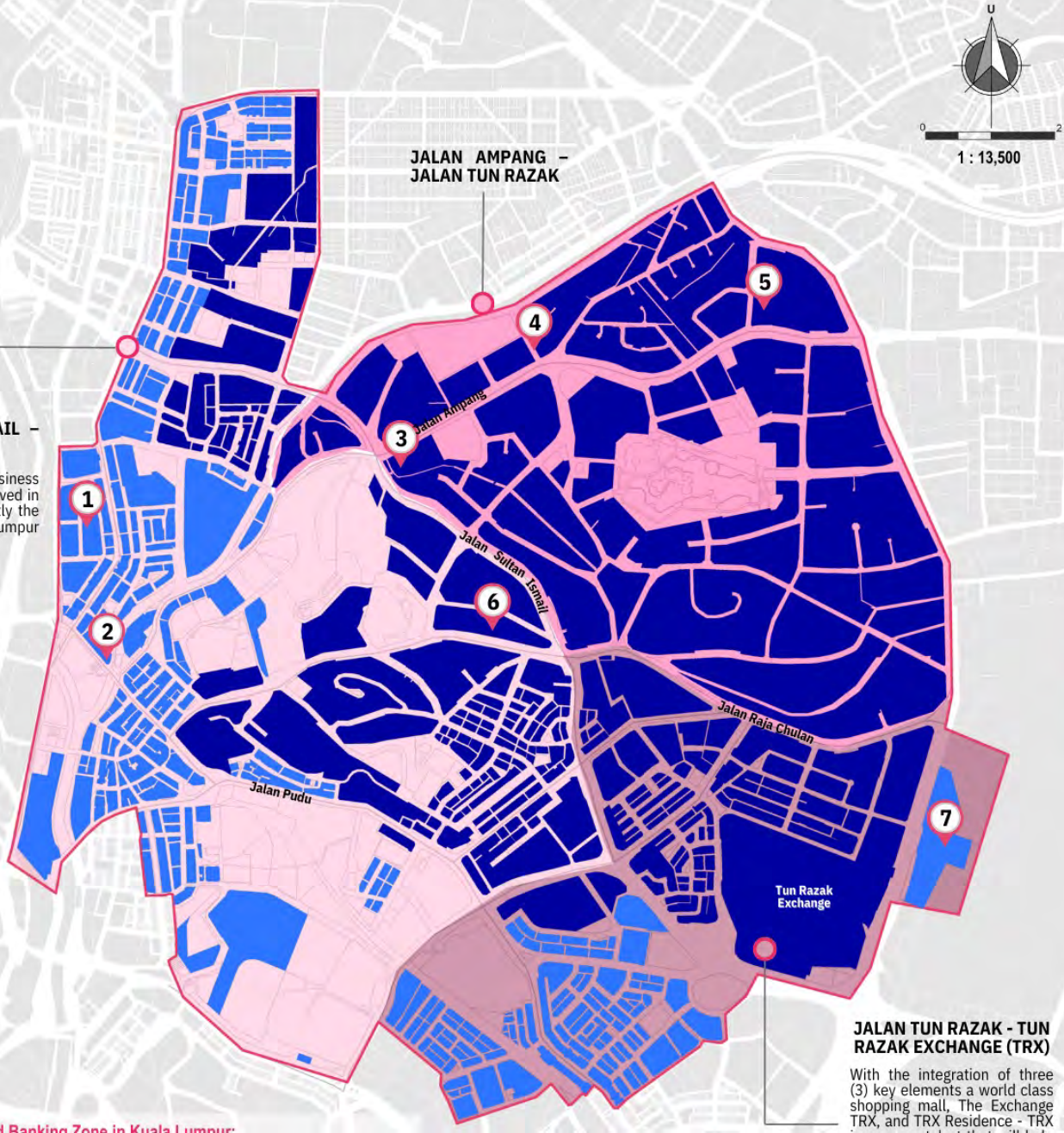
FINTECH

Refers to the use of technology and innovation in financial services activities to offer better and more productive services to users through activities such as banking, assets, property management and other related activities.

Among the fintech innovations that can be considered are:
1. Blockchain;
2. Cashless payment;
3. Services using robotic technology; and
4. Online banking.

Source: https://image.shutterstock.com/image-photo/close-phone-scan-qr-code-600w-2048274335.jpg

The use of payment systems using QR codes should be encouraged among city residents.



Fintech and Banking Zone in Kuala Lumpur:

1. CIMB Ezbank, Alliance Bank Berhad dan Menara United Overseas Bank (UOB)
2. Menara Oversea Chinese Banking Corportion (OCBC), Bank Muamalat, Hongkong and Shanghai Banking Corporation (HSBC), India International Bank, dan Menara Malayan Banking Berhad (Maybank)
3. Menara Bangkok Bank, Deutsche Bank Berhad, Bank of Tokyo dan Hong Leong Bank Berhad
4. Ambank (M) Berhad, Public Bank Berhad, China Construction Bank Berhad, Mizuho Bank, Industrial dan Commercial Bank of China (Malaysia) Berhad
5. BNP Paribas Malaysia, J.P. Morgan Chase Bank Berhad, Bank of China (Malaysia) Berhad dan Citibank Berhad
6. Bank of Nova Scotia, Affin Islamic Bank, Bank of America, Standard Chartered Bank
7. RHB Bank

FIGURE 1.1.4 | Plan of Focus Cluster for Fintech and Banking

Legend :

- City Centre Commercial (CCC)
- Major Commercial (MC)
- Jalan Sultan Ismail - Jalan Raja Chulan
- Jalan Ampang - Jalan Tun Razak
- Jalan Tun Razak - Tun Razak Exchange (TRX)

Others

- Main Road
- Fintech and Banking Boundary

PLANNING STRATEGY

SP 1-2: BRANDING KUALA LUMPUR AS AN URBAN TOURISM DESTINATION WITH SUSTAINABLE TOURISM ACTIVITIES

SCENARIO OF TOURISM DESTINATION IN KUALA LUMPUR

Kuala Lumpur is known as a metropolitan city (Tourism Malaysia, 2019) that offers a variety of attractive locations as well as rich in diverse cultures, nature and being is an attraction for domestic and international tourists.

The country's tourism industry recorded a positive growth in tourist arrivals of 4.8 percent from January to May 2019, (Department of Statistics, 2020). 69.2 percent of the total tourist arrivals were international tourists from ASEAN countries, particularly Indonesia, Singapore and Thailand.

In 2019, Kuala Lumpur received 22.6 million domestic tourists and generated revenue of RM12.1 billion (Department of Statistics, 2020).

The Tourism sector is the country's third most important industry after manufacturing and commodities. This industry creates a high economic spillover effect on the country. In 2019, the sector provided 3.6 million jobs or 23.6 percent of total employment.

Commercial activities such as shopping, medicine, accommodation facilities, education and Meetings, Incentives, Conferences and Exhibitions (MICE) are contributors to the supply and generation of the urban economy in Kuala Lumpur.

The future of this sector will grow and continue to survive despite the competition from other cities in Asia. The urban recreation, sports, heritage and food sectors are still the choice of domestic and international tourists. Specific mechanisms and monitoring need to be developed in eco-tourism and nature destinations to maintain the authenticity and sustainability of those destinations.

In addition, demand for the accommodation sector is still remains and increasing in Kuala Lumpur following the government's new policies and strategies after being affected by the COVID-19 pandemic.

The world-class infrastructure and facilities available in Kuala Lumpur have complemented the provision of tourism products to tourists effectively.

Kuala Lumpur's tourism sector has a bright future and has the potential to compete with other urban destinations globally. Kuala Lumpur products need to be more competitive, creative and different from neighbouring countries in Asia.

Existing tourism assets such as traditional business promenades, heritage and iconic buildings provide new opportunities and potential to give an actual picture of Kuala Lumpur in this rapid development. That potential can be strengthened and rebranded with route connectivity between existing or new tourism assets.

In order to realise Kuala Lumpur as an urban tourism destination with sustainable tourism activities, five (5) implementation proposals are formulated under Planning Strategy 1–2, as shown in Figure 1.2.1.

Figure 1.2.1:
Implementation Proposals for Planning Strategy 1-2

SP 1-2	BRANDING KUALA LUMPUR AS AN URBAN TOURISM DESTINATION WITH SUSTAINABLE TOURISM ACTIVITIES
CP 1-2.1	Planning Future Tourism Sector
CP 1-2.2	Strengthening Urban Tourism Strategy
CP 1-2.3	Strengthening Cultural and Heritage Tourism Strategy
CP 1-2.4	Strengthening Nature Tourism Strategy
CP 1-2.5	Improving Tourist Infrastructure and Accessibility

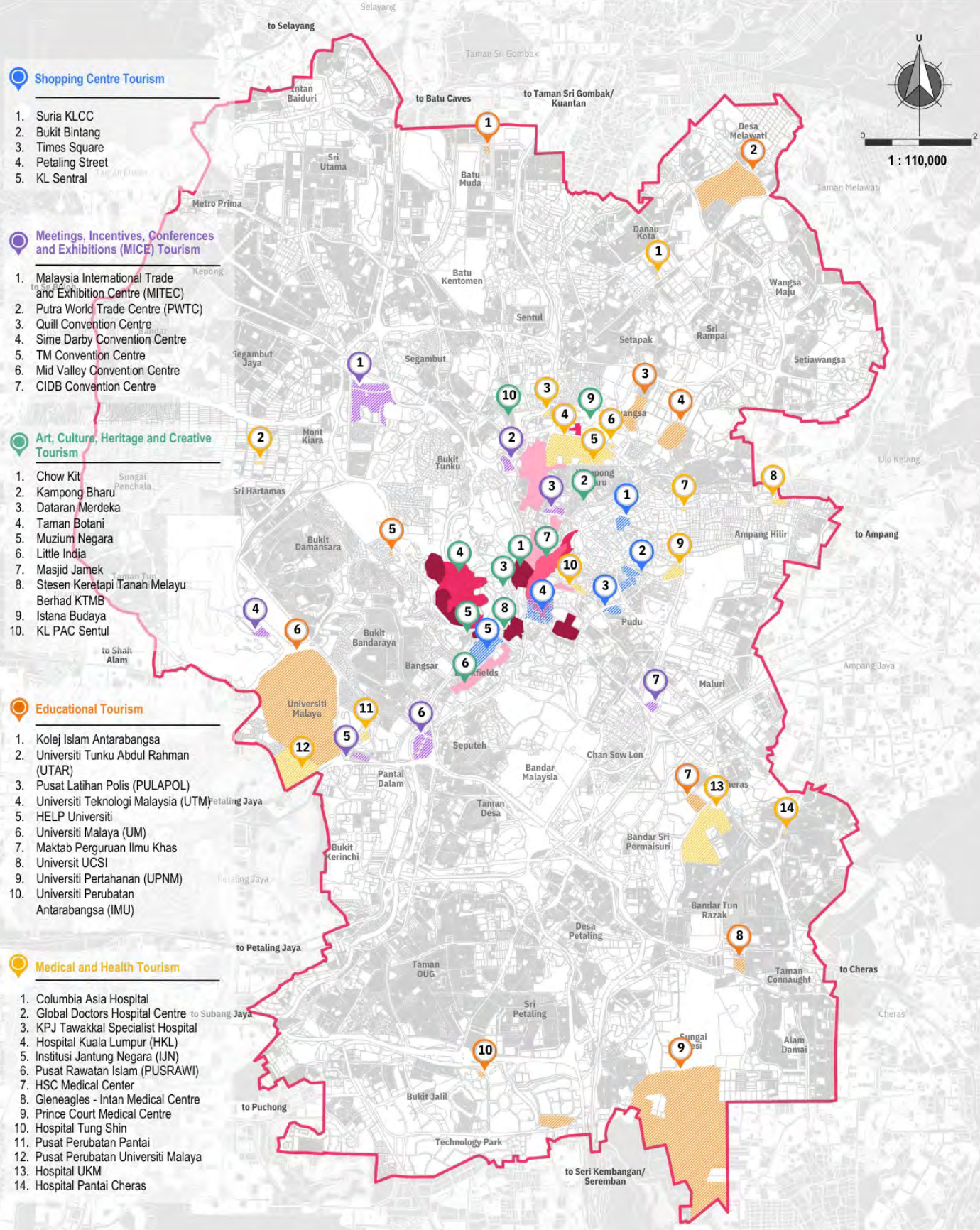


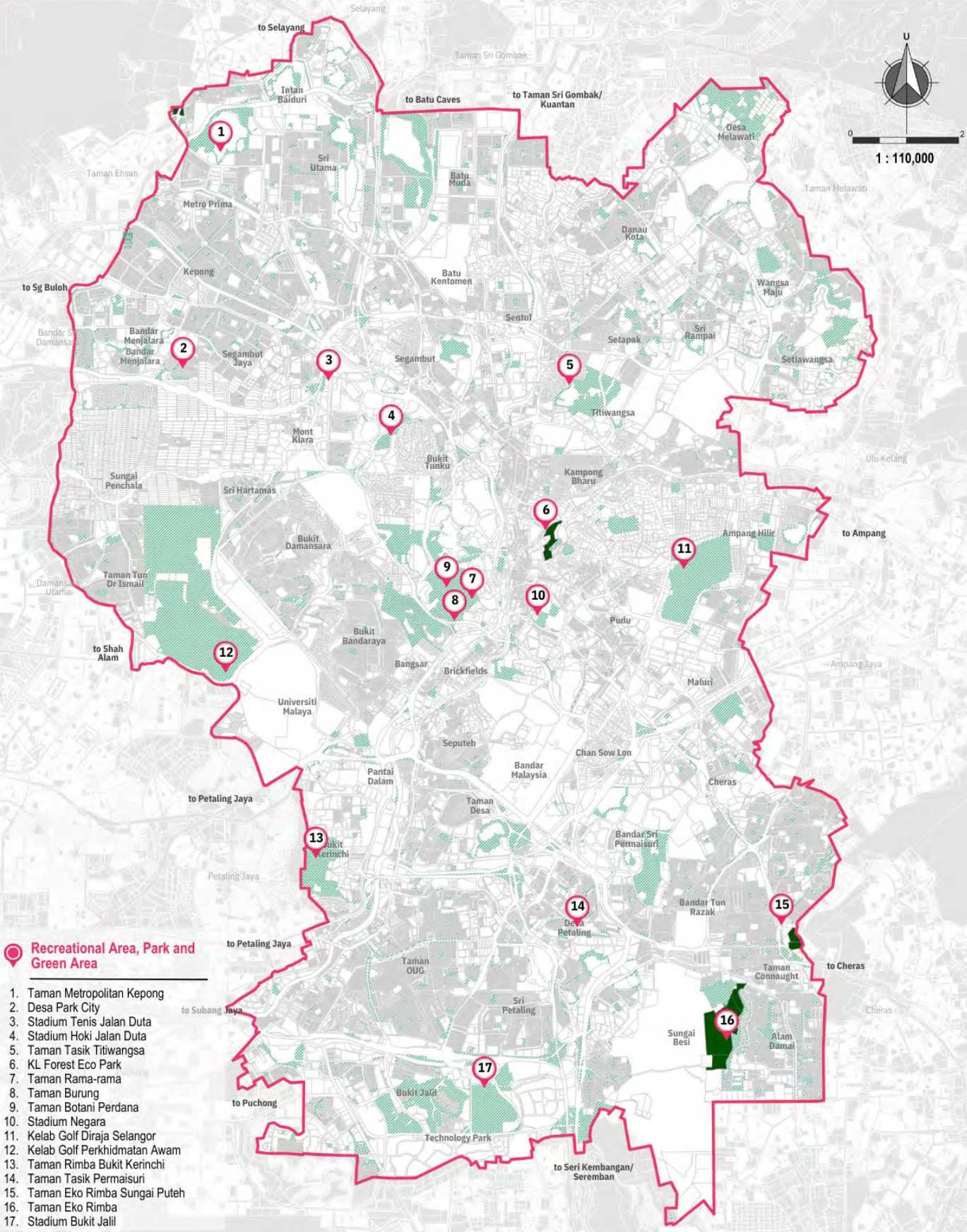
FIGURE 1.2.2 | Plan of Proposed Kuala Lumpur Tourism

Legend :

- Meetings, Incentives, Conferences and Exhibitions (MICE) Tourism
- Shopping Centre Tourism
- Art, Culture, Heritage and Creative Tourism
- Educational Tourism
- Medical and Health Tourism
- Primary Heritage Zone
- Nature Heritage Zone
- Secondary Heritage Zone
- Special Character Heritage Zone

Others

- Main Road
- Kuala Lumpur Boundary



Recreational Area, Park and Green Area

1. Taman Metropolitan Kepong
2. Desa Park City
3. Stadium Tenis Jalan Duta
4. Stadium Hoki Jalan Duta
5. Taman Tasik Titiwangsa
6. KL Forest Eco Park
7. Taman Rama-rama
8. Taman Burung
9. Taman Botani Perdana
10. Stadium Negara
11. Kelab Golf Diraja Selangor
12. Kelab Golf Perkhidmatan Awam
13. Taman Rimba Bukit Kerinchi
14. Taman Tasik Permaisuri
15. Taman Eko Rimba Sungai Puteh
16. Taman Eko Rimba
17. Stadium Bukit Jalil

FIGURE 1.2.3 | Plan of Proposed Tourism Recreational Areas, Parks and Green Areas

Legend :

- Recreational Tourism
- Forest Reserve

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 1-2.1: PLANNING FUTURE TOURISM SECTOR

The planning of Kuala Lumpur's tourism development strongly depends on the diversity of sectors that generate the city's economy. Supporting sectors like accommodation, facilities and transportation are key to ensure that the tourism sector can be enhanced as an efforts to encourage domestic and international tourists to visit Kuala Lumpur.

The provision of various types of accommodation as well as suitable placement areas according to the needs of tourists is the strategy for providing accommodation in Kuala Lumpur. The accommodation industry changed occasionally through decades and also the demands and needs of tourist who seek a distinct and unique atmosphere.

Provision of tourist accommodation in Kuala Lumpur still remains in strategic areas such as Jalan Bukit Bintang, Jalan Tuanku Abdul Rahman, Jalan Petaling, Jalan Tun Perak and Jalan Pudu. These areas have significant attractions such as shopping, recreation, transportation networks and distinctive image identities. Areas outside the city centre such as Cheras, Bukit Jalil, Maluri, Wangsa Maju and Kepong are still relevant as star-rated accommodation. Types of accommodation such as apartments, luxury residential, budget hotels and Airbnb are concentrated in the city centre while homestay types are located outside the city centre.

The latest approach in the hotel industry is to implement comprehensive eco-friendly or green hotel initiatives in terms of concept, design, operation and maintenance as an attraction to customers. Mandarin Oriental Hotel and The Shangri-La Hotel are among the hotels that have started to implement the green hotel concept.

The implementation approach of this proposal is through projects, policies and programmes. One (1) initiative proposed for implementation of CP 1-2.1.

Table 1.2.1:
Projection of Tourist Accommodation by 2040

Hotel Class	2020 (NAPIC)		2025		2030		2035		2040	
	Hotel	Room	Hotel	Room	Hotel	Room	Hotel	Room	Hotel	Room
Luxury (200 rooms)	30	9,388	32	9,488	35	9,700	40	10,012	45	10,324
High (150 rooms)	71	11,234	75	11,334	82	12,975	93	16,716	104	16,457
Medium (100 rooms)	96	8,319	103	8,419	110	9,608	124	10,897	138	12,186
Other classes/ budget (less than 50 rooms)	31	12,972	36	13,072	41	14,982	51	16,992	61	19,002
Total	**226**	**41,913**	**246**	**42,313**	**268**	**47,265**	**308**	**52,617**	**348**	**57,969**

Notes:
1. Projection Basis 2025: As of 30th June 2021, UNWTO Tourism Expert expect that the number of tourism arrivals will not increase until 2023
2. Projection Basis : 3.1% increase per year for budget, medium and high-end hotels (HVS Study),
3.0% increase per year for luxury hotels (Horwath HTL)

Source: National Property Information Centre, 2020 (NAPIC)

BRIEF INFO

BASIC INFORMATION OF TOURIST ACCOMMODATION KUALA LUMPUR, 2020

Trends in domestic tourist arrivals to Kuala Lumpur and spending, 2019

22.6 Million Tourist, RM12.1 Billion/Year

Trends in international tourist arrivals to Kuala Lumpur and spending, 2019

13.8 Million Tourist, RM4.8 Million/Year

Well-known hotel accommodation area in Kuala Lumpur, 2020

7 Locations

Total number of hotels in Kuala Lumpur, 2020

226 Hotels

Total number of accommodation rooms in Kuala Lumpur, 2020

41,913 Rooms

Source: Department of Statistics, June 2021

Location: Taman Tasik KLCC
Source: https://www.shutterstock.com/g/innocent

The construction of 5-star hotels around KLCC has become the main attraction for tourists to stay in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 1-2.1A

INCREASE SUPPLY OF TOURIST ACCOMMODATION IN KUALA LUMPUR

Distribution of tourist accommodation areas are influenced by tourist segmentation, types and locality. The Draft KLLP2040 will focus on existing accommodation areas as well as new areas.

The necessary actions to support this initiative are shown in Table 1.2.2.

Location: Hotel Shangri-La, Kuala Lumpur

Tourism accommodation facilities in Kuala Lumpur needs to be upgraded with trendy interior design to attract tourists and visitors.

Table 1.2.2:
Initiative to Increase Tourist Accommodation Offer in Kuala Lumpur

General Initiatives	
1. In compliance with tourist accommodation activities that are Permissible and Permissible with Conditions in the Classes of Use of Land and Buildings 2024 (CULB2024); 2. Promote active mobility modes which include pedestrian and micromobility vehicle routes associated with continuity, safety and comfort; and 3. Provide and maintain infrastructural facilities and tourism support facilities that are quality and complete.	
Tourism Accommodation Areas by Products	**Specific Initiatives**
1. Star-rated Accommodation Focus Areas: Jalan Bukit Bintang, Damansara, Jalan Ampang, Jalan Tun Razak, Jalan Sultan Ismail and others.	1. Encourage its provision to be in the executive business area as well as close to transportation facilities; and 2. Adhere to the guidelines of providing star-rated accommodation and support facilities as determined by the relevant agency.
2. Homestay Accommodation Focus Areas: Cheras, Dato Keramat, Sentul, Setapak, Kampung Sungai Penchala and others.	1. Encourage its provision to be more focused on areas outside the city centre which are one of the accommodation facilities for local tourists; and 2. Promote tourism activities as well as accommodation design based on Malaysian culture and tradition.
3. Budget Accommodation Focus Areas: Brickfields, Pudu, Petaling Street, Chow Kit, Jalan Tuanku Abdul Rahman, Bangsar, Jalan Bukit Bintang, Kampong Bharu, Cheras, Gombak and surrounding KL Sentral.	1. Encourage its provision to be in tourist hotspots and close to transport facilities; 2. Apply appropriate designs according to the character of the surrounding building (building rhythm); and 3. Promote budget accommodation in tourist hotspots.

IMPLEMENTATION PROPOSAL

CP 1-2.2: STRENGTHENING URBAN TOURISM STRATEGIES

Based on the Kuala Lumpur Tourism Master Plan 2015 – 2025, there are 13 types of tourism products in Kuala Lumpur such as shopping, heritage, recreation, medicine, education and MICE. These products are urban tourism products that continue to contribute towards preserving Kuala Lumpur as an international tourist destination.

Kuala Lumpur's urban tourism much relies on existing assets. The concentration of tourist attraction is only focused on the city centre, especially in heritage and historical areas, open recreation areas and high-end commercial areas.

Apart from that, Kuala Lumpur also has the potential to develop its tourism products which include creative tourism products, arts and culture and urban eco-tourism products particularly in parks, rivers and lakes.

Enhancing existing traditional tourism districts as international tourist attractions such as Jalan Tuanku Abdul Rahman, Jalan Pudu and Jalan Petaling through the rebranding of the district.

Strategies to expand and develop the tourism sector outside the city centre will be able to balance the growth of Kuala Lumpur's tourism economy. The suburbs of the city centre such as Cheras, Petaling, Maluri, Damansara and Bukit Jalil shall be given considering the availability of infrastructures and efficient public transport networks.

The implementation approach of this proposal is through project, policies and programme. One (1) initiative is proposed for the implementation of CP 1-2.2.

BRIEF INFO

13 TYPE OF TOURISM PRODUCTS IN KUALA LUMPUR

1. Heritage Tourism
2. Public Spaces and Open Spaces
3. Food Tourism
4. Sports and Recreation Tourism
5. Educational Tourism
6. Meeting, Incentive, Conference and Exhibition (MICE)
7. Medical Tourism
8. Shopping Tourism
9. Eco and Nature Tourism
10. Travel Tourism
11. Tourist Accommodation Facilities
12. High Class and Luxury Hotel
13. Airbnb Accommodation

Source: Adapted from KLSP2040

IMPLEMENTATION INITIATIVE 1-2.2A

STRENGTHEN URBAN TOURISM

The Draft KLLP2040 has identified tourism products that have potential and need to be strengthened for the purpose of Urban Tourism Products. The Urban Tourist Products that have been identified are shopping mall, art and culture, heritage and creative tourism, Meetings, Incentives, Conferences and Exhibitions (MICE) tourism, medical and health tourism and educational tourism.

The necessary actions to support this initiative are shown in the Table 1.2.3.

Location: Jalan Masjid India, Kuala Lumpur
Source: https://image.shutterstock.com/image-photo/kuala-lumpurmalaysia-july-252019-view-600w-1551746495.jpg

A variety of business activities along Jalan Masjid India.

Table 1.2.3:
Initiatives to Strengthen Urban Tourism

General Initiatives	
1. In compliance with activities that are Permissible and Permissible with the Conditions in the Classes of Use of Land and Buildings 2024 (CULB2024); 2. Provide sufficient tourism infrastructural facilities such as signages or information and pedestrian walkways that are joyful and safe; 3. Promote active mobility modes which include pedestrian and micromobility vehicle routes associated with continuity, safety and comfort; 4. Ensure a continuous environmental maintenance and providing attractive landscapes to create a conducive and competitive environment; and 5. Provide and maintain infrastructural facilities and tourism support facilities that are quality and complete.	
Urban Tourism Products	**Specific Initiatives**
1. Shopping Mall Tourism **a. Premier Shopping Centre** • Targeting fans of luxury and branded goods from around the world; and **Focus Areas:** Suria KLCC, Pavilion, Mid Valley Megamall, Berjaya Times Square, Sungai Wang Plaza, TRX, Jalan Bukit Bintang, Changkat Bukit Bintang, Jalan Sultan Ismail, Jalan Imbi, Jalan Pudu	1. Strengthen well-known and superior shopping malls as premier shopping centres; 2. Control the types of business premises according to exclusive business concepts and themes; and 3. Apply sustainable planning concepts such as safe city elements Crime Prevention Through Environmental Designs (CPTED), universal designs, green buildings, smart technology and Low-Carbon City concepts.
b. Traditional Shopping Centre • Promoting the customs and culture of the local community; **Focus Areas:** Jalan Petaling, Little India (Brickfields), Jalan Masjid India, Jalan Tuanku Abdul Rahman	1. Implement urban design and elements with the concept of Malaysian art and cultures; 2. Improve the image and uniqueness of shopping centres based on Malaysian culture and tradition; 3. Diversify specific tourism products such as textiles, food, clothing and antiques goods; and 4. Implement innovative and attractive marketing of traditional goods with the concept of Malay, Chinese, and Indian culture.

Table 1.2.3:
Initiatives to Strengthen Urban Tourism (continued)

Urban Tourism Products	Specific Initiatives
c. Speciality Shopping Centre **Focus Areas**: Night Market and street market Bukit Bintang, Kampong Bharu, Datuk Keramat, Sungai Penchala and Pantai Dalam.	a. Improve Kuala Lumpur's local tourism image, especially at night such as night markets and also occasionally scheduled Sales Carnival such as at Chiangmai Night Market and Pratunam Night Market, Bangkok Thailand; b. Diversify specific tourism products such as textiles, food, clothing and antique goods; and c. Implement a "Free Traffic Zone" on weekends or certain days.
2. Art, Culture, Heritage and Creative Tourism • Network of small zones that combines the concepts of cultural tourism, heritage and urban eco-tourism; and • Attractions in these zones should have the concept of cultural tourism with distinct charm and uniqueness. **Focus Areas:** Dataran Merdeka, Lebuh Pasar Besar, Jalan Benteng, Jalan Melayu, Jalan Masjid India, Jalan Raja.	a. Identify and strengthen small zones with the concept of arts, culture, heritage and creative tourism; b. Encourage tourism activities that support arts, culture, heritage and creative tourism concepts such as art performances, dances and float parades; and c. Introduce new creative tourism activity such as community sport, traditional games and batik painting at traditional village areas including homestay.
3. Meetings, Incentives, Conferences and Exhibitions (MICE) Tourism • MICE sector is an important component in generating Kuala Lumpur's urban tourism economy; • Provide quality and large-scale MICE facilities; and • Strategic location with shopping, leisure and modern accommodation facilities. **Focus Areas:** MITEC, WTC, KLCC Convention Centre, KL Sentral, Sime Darby Convention Centre (SDCC) and Mid Valley Exhibition Centre (MVEC)	a. Connecting MICE with public transport and support facilities such as shopping malls, restaurants and accommodations; b. Improve the standard of venue for MICE and the quality of surrounding support infrastructure based on international standards for conference centres; and c. Integrates world-class MICE venues and facilities with tourist hotspots and city activity centres.

Table 1.2.3:
Initiatives to Strengthen Urban Tourism (continued)

Urban Tourism Products	Specific Initiatives
4. Medical and Health Tourism • Medical and Health is one of the main sectors contributing to Kuala Lumpur's economy and has potential to shape the image of Medical Smart City; **Focus Areas:** Segambut, Damansara, Titiwangsa, Cheras, Mont Kiara, Lembah Pantai.	1. Develop new medical centres or health facilities in accordance with the guidelines and regulations for the provision of medical facilities and components that meets international standard; 2. Provide accommodation components such as serviced apartments, hostels or hotels around medical and health centres for transit facilities or accommodation of patients, caretaker and employees; and 3. Provides accessibility facilities, recreation areas and shopping malls around the medical centre.
5. Educational Tourism • Integrated implementation can turn Kuala Lumpur into a world-class educational destination; **Focus Areas:** Cheras, Gombak, Kerinchi, Pudu, Bangsar, Brickfields, Bukit Bintang, Bandar Tun Razak, Sri Petaling, Titiwangsa	1. Maintain existing areas through conservation of image and identity of educational tourism clusters with comprehensive and sustainable land use planning; 2. Plan the location of higher education institutions in Kuala Lumpur to focus on strategic areas that have urban characteristics; 3. Offers more opportunities for education in the public and private tertiary levels in Kuala Lumpur; 4. Ensure comprehensive, sufficient and efficient provision of educational infrastructure; and 5. Reuse old, abandoned and deteriorating buildings, especially government-owned, as well as shopping centre space, shophouses, halls and offices as alternatives for the use of education centres.

IMPLEMENTATION PROPOSAL

CP 1-2.3: STRENGTHENING CULTURAL AND HERITAGE TOURISM

The aims to make Kuala Lumpur into a Cultural, Heritage and Creative City is a strategic effort towards a cultural and creative city at a global scale.

The existing heritage sites and cultural lifestyle of Kuala Lumpur that is rich in history, heritage and urban culture have the potential to be tourism products.

The creative industry can also be highlighted as a tourism product with its own image and supported by with well define marketing strategies.

Strategies to enhance the cultural, heritage and creative tourism sector will focus on preserving existing and rebranding potential tourism products. The industry activities involved are as follows:

1. Music, performing arts and visual arts;
2. Museums and archives;
3. Writing and publishing;
4. Handcraft;
5. Textile design and fashion; and
6. Film, broadcasting and digital content.

The implementation approach of this proposal is through projects, policies and programme. One (1) initiative is proposed for the implementation of CP 1-2.3.

BRIEF INFO

CULTURAL, HERITAGE AND CREATIVE OF TOURISM ACTION PROGRAM IN KLSP2040

1. Reactivate Pasar Seni, Medan Pasar, Dataran Merdeka, Stadium Negara and Stadium Merdeka;
2. Upgrading Sin Sze Si Sze Ya Temple Precinct, Jalan Petaling Precinct, Masjid India and Jalan Bunus;
3. Conservation and reuse Bangunan Mahkamah Lama, Bangunan Sultan Abdul Samad, Stesen Kereta Api KL, Masjid Jamek;
4. Preserving historic educational institutions such as St John's Institution, St John's International and Convent Bukit Nanas;
5. Preserving buildings and heritage sites in the area of Stadium Merdeka and Stadium Negara; and
6. Improvements to the Natural Heritage Park.

Source: Adapted from KLSP2040

IMPLEMENTATION INITIATIVE 1-2.3A

STRENGHTHEN CULTURAL, HERITAGE AND CREATIVE TOURISM

Kuala Lumpur has the elements of becoming a Cultural, Heritage and Creative City at the global level. The Draft KLLP2040 has outlined the strengthening of culture, heritage and creative elements that include art performances, music, visual arts, museum and archives, writing and publications, handicrafts, design and fashion textile, film, broadcasting and digital content as shown in Table 1.2.4.

The actions taken to support this initiative is divided into general and specific category. The necessary actions to support this initiative are as follows:

1. Comply with activities that are Permissible or Permissible with the Conditions in Class of Use of Land And Buildings 2024 (CULB2024);
2. Encourage open spaces and information spaces to promote a variety of cultural, arts and heritage activities such as local businesses, social activities and education;
3. Apply retrofit concept for old buildings to stimulate cultural and heritage tourism activities;
4. Encourage involvement and investment from the private sector in developing culture, heritage and creative tourism;
5. Encourage active mobility modes which include pedestrian walkways and micromobility vehicle that are continuous, safe and comfortable;
6. Provide sufficient tourism infrastructure facilities such as signages or information and pedestrian walkways that are pleasant and safe;
7. Ensure continuous environmental maintenance and provide attractive landscapes to create a conducive and competitive environment; and
8. Provide and maintain infrastructural facilities and tourism support facilities that are quality and complete.

Specific Initiatives and potential areas for strengthening Cultural, Heritage and Creative Tourism, are listed as shown in Table 1.2.4:

Table 1.2.4:
Specific Initiative and potential areas to Strengthen Cultural, Heritage and Creative Tourism

Cultural, Heritage and Creative Tourism
1. Music, performing arts and visual arts
• Incorporating a wide variety of creative cultures that include creative performances, art performances; and • Strengthen these areas as the main location for events and festivals based on and promoting Malaysian culture and arts. **Focus Location**: Istana Budaya, Bukit Bintang Cultural Junction (BBJ), Kasturi Walk, Pasar Seni and Medan Pasar.
2. Museum and archives
• Strengthen the function of these buildings as one of the historical sources of Kuala Lumpur for future generations. **Focus Location:** Stesen Kereta Api Kuala Lumpur, Taman Tugu Negara, Bangunan Sultan Abdul Samad and Muzium Negara.
3. Writing and publishing
• Strengthen these areas as main location for events and festivals based on writing and publishing to promote Malaysian culture and arts. **Focus Location:** Masjid Jamek, Dewan Bahasa dan Pustaka, Institusi Terjemahan dan Buku Malaysia (ITBM), Angkasapuri and Media City.
4. Handcraft
• Strengthen these handcrafts products of Malaysian community which is famous for its finesse and uniqueness. **Focus Location:** Jalan Melayu, Pasar Seni and Jalan Masjid India.
5. Textile design and fashion
• Strengthen these areas as major location for textile sales with unique design of old buildings that still remain and structures that are still strong. **Focus Location:** Jalan Tuanku Abdul Rahman (TAR), Petaling Street, Muzium Tekstil Negara.
6. Film, broadcasting and digital content
• Strengthen these areas as prime location for the multimedia creative industry, cultural arts and cultural heritage in Kuala Lumpur. **Focus Location:** Stesen Kereta Api Kuala Lumpur, Kuala Lumpur Performing Art Centre, Media City, KLPAC and Bangunan Sultan Abdul Samad.

IMPLEMENTATION PROPOSAL

CP 1-2.4: STRENGTHENING NATURE TOURISM

Kuala Lumpur has a variety of nature products with a diversity of flora and fauna, forest reserves and water recreation as the nature tourism destination.

Kuala Lumpur is one of the cities in Asia that still maintains its green attraction in the city centre. Recreation areas and parks are active places to visit for city dwellers. Taman Botani Perdana is the heart of green recreation in Kuala Lumpur.

Destinations for hikers and hilly area tourists such as part of Bukit Gasing and Bukit Kerinchi, Taman Rimba Eko Bukit Nanas and Bukit Sungai Putih are well-preserved. Lakes such as Taman Tasik Titiwangsa, Taman Tasik Permaisuri and Taman Tasik Metropolitan Kepong provide Kuala Lumpur's people with active recreation.

The development of water-based tourism projects in the city centre such as ROL along Sungai Klang have changed the pattern and function of the river as a passive recreational area. The world's major cities make rivers as important transportation systems and water tourism attractions such as Menam Chao Praya River in Bangkok, Cheonggyecheon River in Seoul and Amstel River in Amsterdam. The functions, characters and elements of the rivers can be applied to the rivers in Kuala Lumpur.

Adequate, suitable and safe tourism infrastructure and facilities are among the elements that need to be integrated with the hill tourism sector, parks, lakes and rivers. A pedestrian system and efficient public transport are among the strategies proposed to empower nature tourism.

The implementation approach of this proposal is through project, policy and programme. One (1) initiative is proposed for the implementation of CP 1-2.4.

IMPLEMENTATION INITIATIVE1-2.4A

STRENGTHEN RECREATION AREAS, PARKS AND GREEN AREAS

Efforts to strengthen Recreation Areas, Parks and Green Areas as natural tourism products in Kuala Lumpur are important in balancing development with the well-being of urban communities as well as achieving environmental sustainability.

Kuala Lumpur's development planning emphasises the strengthening of the green element through strategic planning that focuses on the quality and design structure of urban green areas in the Draft KLLP2040.

The action taken to support this initiative is divided into general and specific initiatives. The Draft KLLP2040 suggested the general initiatives as follows:

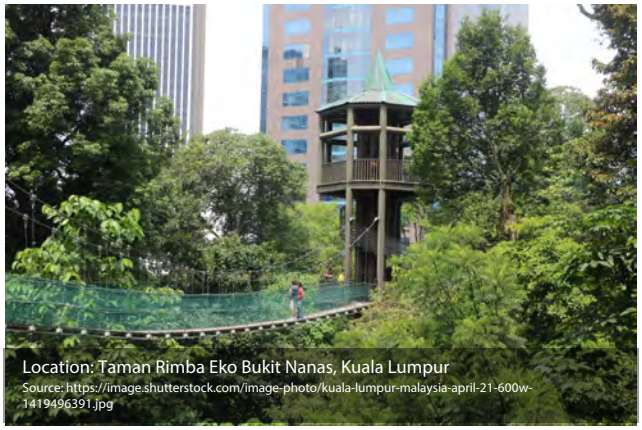
1. Ensure that planning and development in the hilly area and forests follow the Guidelines for Highland Development in order for it to be controlled;
2. Consider environmental, ecological, vegetation, weather, gradient and wildlife factors in planning;
3. Ensure the management and control of tourist behaviour entering the hilly and nature area is enforced;
4. Intensify nature activities such as the Heritage Tree Program and Eco-Natural Hiking Zone;
5. Create night event activities such as the Festival of Lights; and
6. Beautify the area with landscaping and street furniture designed accordingly.

Specific Initiatives and potential areas for strengthening Recreation Areas, Parks and Green Areas are as shown in Table 1.2.5.

Table 1.2.5:
Specific Initiatives and potential areas for Strengthening Recreation Areas, Parks and Green Areas

Cultural, Heritage and Creative Tourism
1. Travel and Hilly Tourism • The concept of Eco Tourism or urban forest can contribute towards balance development intensity and reduce carbon emission. **Focus Area:** Taman Rimba Eko Bukit Nanas and Taman Rimba Bukit Kerinchi
2. Water Based Tourism • Sungai Klang is the lifeline of the Kuala Lumpur River of Life (RoL) project which is becoming increasingly popular as one of its unique tourist attractions. **Focus Area:** Dataran RoL and Koridor Hijau Sungai Klang
3. Lake Park Creative Tourism • Kuala Lumpur River of Life (RoL) which is becoming increasingly popular as one of the unique tourist attractions. **Focus Area:** Taman Tasik Titiwangsa, Taman Rekreasi Bukit Jalil, Taman Botani Perdana and Taman Metropolitan Kepong

Attractive façade design at the Garden Pavilion, Taman Botani Perdana.



The view from the Canopy Walk, Taman Rimba Eko Bukit Nanas.

IMPLEMENTATION PROPOSAL

CP 1-2.5: IMPROVING TOURIST INFRASTRUCTURE AND ACCESSIBILITY

Kuala Lumpur has good accessibility to ensure easy, safe and efficient movement of tourists from one attraction to another. Priority on the movement of tourists through pedestrian and micromobility vehicle routes is an important component in shaping the tourism accessibility network system.

The urban and land use system in Kuala Lumpur has shaped an efficient infrastructure and tourist mobility structure. Special districts for pedestrian walkways and micromobility vehicle were created to make this area a special district that is always preserved and easily monitored.

Apart from pedestrian and micromobility vehicle routes, the spaces on the roadside or open square can be designed as creative spaces for creative and cultural tourism activities.

Strategies to make Kuala Lumpur a creative and cultural city can be achieved by diversifying creative activities in available suitable spaces in the city. These spaces are enlivened with 'nightlife' activities to create more lively activities at night. Square areas such as Dataran KLCC, Dataran Masjid India and Dataran MaTic potentially become a pedestrian focal point.

The Draft KLLP2040 will emphasise the need to provide comfortable and safe pedestrian and micromobility vehicle routes in the city for urban communities and tourists.

The implementation approach of this proposal is through projects, policies, programmes, planning control and guidelines. One (1) initiative proposed for implementation of CP 1-2.5.

IMPLEMENTATION INITIATIVE 1-2.5A

IMPROVE TOURIST ACCESSIBILITY FACILITIES

Accessibility facilities to attraction areas is a catalyst to attract tourists to downtown destinations. Special facilities for pedestrian routes and tourist buses need to be created to make this area a special district that is always preserved and easy to monitor.

The necessary actions to support this initiative are shown in Table 1.2.6.

The Hop On Hop Off bus service is one of the tourist attractions in Kuala Lumpur.

Table 1.2.6:
Initiatives to Improve Tourist Accessibility Facilities

Types of Tourist Accessibility Facilities	Improvement Steps
Strengthening of Tourist Pedestrian Areas **Focus Areas:** Kuala Lumpur tourist attractions	1. Prioritise and improve pedestrian walkways to ensure continuity between tourist attractions; 2. Provide and maintain of infrastructural facilities including quality and complete tourism support facilities; 3. Activate open spaces such as squares, pocket gardens or underutilised spaces for activities such as arts and culture performances, informal businesses and others; and 4. Ensure a consistent environmental maintenance and provide attractive landscapes that are suited for vehicle-free area.
Increase the Use of Hop-On Hop-Off Buses **Focus Areas:** Around Kuala Lumpur City and through tourist attractions	1. Expand the Hop-On Hop-Off bus route to heritage, recreational and shopping tourism destinations; 2. Improve the Hop-on Hop-off service to reduce waiting time for tourists; and 3. Provide sufficient tourism facility infrastructure such as informative signages at every Hop-on Hop-off bus stops.
Promoting the Kuala Lumpur Bicycle Tour **Focus Areas:** Dataran Merdeka, Lebuh Pasar Besar, Medan Pasar, Jalan Benteng, Jalan Melayu, Jalan Masjid India, Jalan Bunus, Jalan Tunku Abdul Rahman, and Dataran Merdeka (such as Cycle Day Rome).	1. Improve and expand bicycle routes to encourage recreational activity in the tourism sector; 2. Develop Periodic Bicycle Routes according to time and schedule; 3. Provide and maintain of infrastructural facilities including quality and complete tourism support facilities; and 4. Ensure a consistent environmental maintenance and provide attractive landscapes that are suited for vehicle-free areas.

PLANNING STRATEGY

SP 1-3: STRENGTHENING CULTURAL AND CREATIVE CITY

SCENARIO OF THE CULTURAL AND CREATIVE CITY IN KUALA LUMPUR

Kuala Lumpur is famous for its heritage, art and local culture elements. The potential of this element can be strengthened by increasing the economy based on Malaysian creative cultural products such as heritage, performing arts, craft arts, fashion, local foods, films, writings and others.

Specific efforts need to be implemented to drive a culture-based and creative economy that should support the development of the cultural and creative hub industry. The development of a Cultural and Creative Hub in Kuala Lumpur needs to include the creative industry in multimedia, art and cultural heritage. This approach has the potential to be the catalyst for local economic and social growth in the future. In addition, there is also a proposal to strengthen the existing creative hub to increase the economic competitiveness of Kuala Lumpur.

KLSP2040 has outlined the Creative and Cultural District as one of the supporting actions towards achieving the direction of Kuala Lumpur as an Innovative and Productive City.

The current challenge is to form a distinctive identity of Kuala Lumpur with a high level of culture and creativity towards a liveable and attractive city.

In order to realise Kuala Lumpur as a cultural and creative city, one (1) implementation proposal has been formulated under Planning Strategy 1–3, as shown in Figure 1.3.1.

Figure 1.3.1:
Implementation Proposals of Planning Strategy 1-3

SP 1-3 STRENGTHENING CULTURAL AND CREATIVE CITY

CP 1-3.1 Enhancing Creative And Cultural Districts

BEST PRACTICE

KYOTO INTERNATIONAL MANGA MUSEUM, JAPAN

The Kyoto International Manga Museum is a cultural museum located in Nakagyo-ku, Kyoto, Japan and has more than 50,000 volumes of manga accessible to tourists and visitors. It is one of Kyoto City's main attractions.

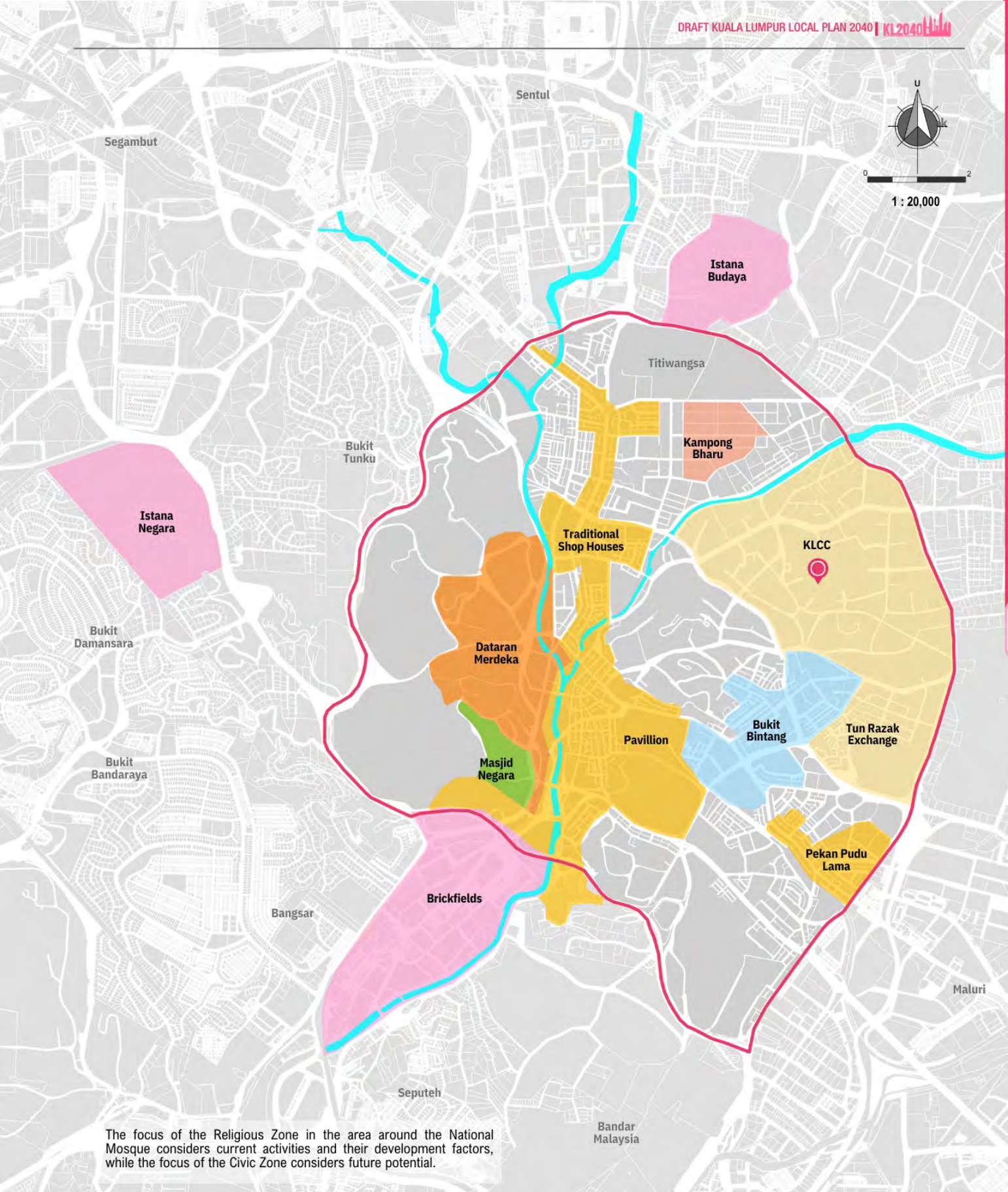
The original building of the Kyoto International Manga Museum was the Tatsuike Elementary School building. However, due to the decrease in the number of children due to most of the service activities being concentrated outside the city centre, Tatsuike Elementary School was merged with other schools. This empty building was later reused and developed as a museum.

It is a joint venture between Kyoto Seika University and Kyoto City. The university plays a role in operating the facility under the supervision of a joint committee. This joint venture has indirectly improved Kyoto City's image and productivity as well as contributed to the city's income.

The museum acts as a manga library and historical resource for the public and serves as a research centre for manga experts who play a role in promoting manga culture in the future.

Source: https://www.kyoto-museums.jp/

The Kyoto International Manga Museum is now one of Kyoto City's main tourist attractions.



The focus of the Religious Zone in the area around the National Mosque considers current activities and their development factors, while the focus of the Civic Zone considers future potential.

FIGURE 1.3.2 | Plan of Proposed Kuala Lumpur Creative and Cultural District

Legend :

- Culture Zone
- Creative Heritage Zone
- Creative Youth Zone
- Heritage Village Zone
- Creative Corporate Zone
- Civic Zone
- Religious Zone

Others

- Kuala Lumpur City Centre Boundary
- Water Bodies

IMPLEMENTATION PROPOSAL

CP 1-3.1: ENHANCING CREATIVE AND CULTURAL DISTRICTS

The Kuala Lumpur Creative and Cultural District is introduced to enhance the local creative industry which involves efforts to conserve, preserve and renew the area including the regeneration of buildings.

There are three (3) main classifications of creative hub industries in Kuala Lumpur which include multimedia, art and cultural heritage. KLSP2040 has identified seven (7) main zones towards the enhancement of the Kuala Lumpur Creative and Cultural District, as follows:

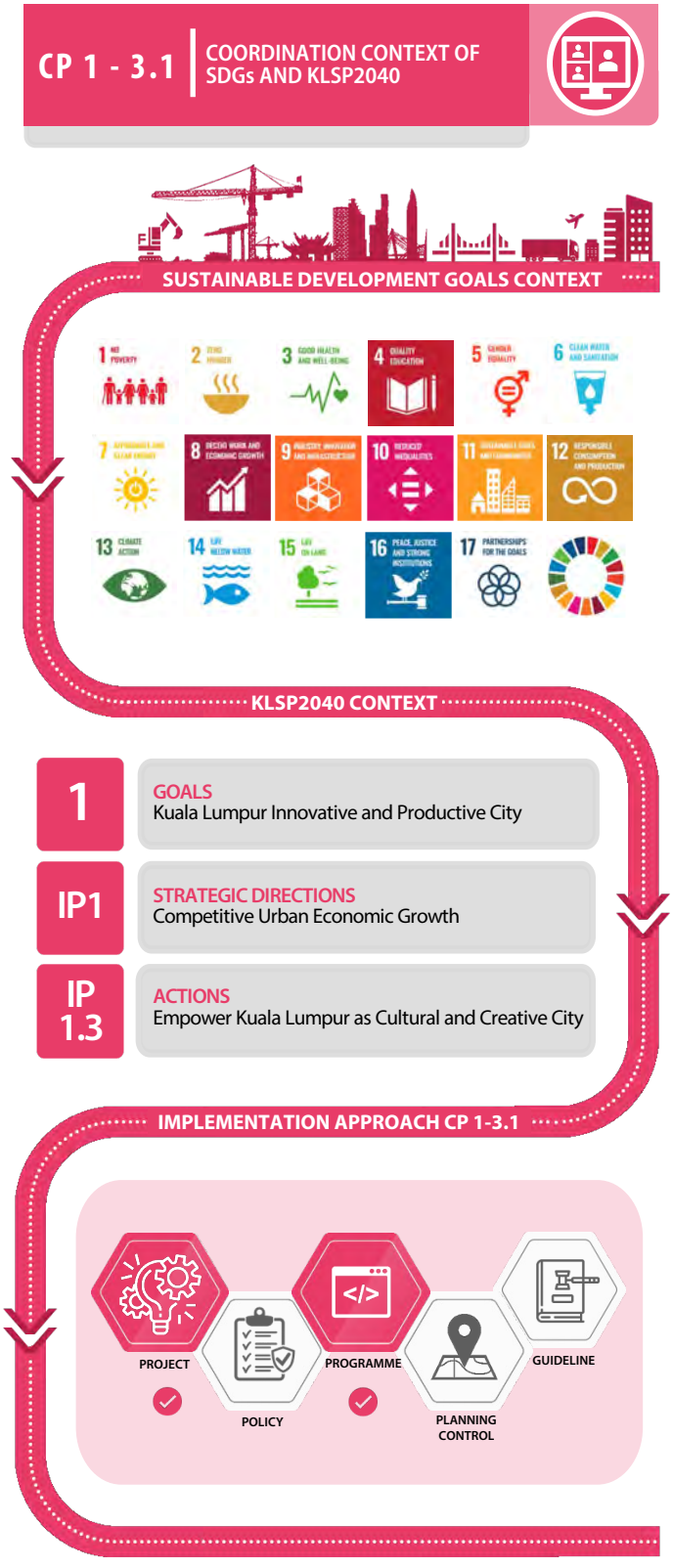
1. Cultural Zone;
2. Creative Heritage Zone;
3. Creative Youth Zone;
4. Heritage Village Zone;
5. Creative Corporate Zone;
6. Civic Zone; and
7. Religious Zone.

The idea of establishing a Creative and Cultural District also contributes towards achieving the direction of Competitive Urban Economic Growth.

The implementation approach of this proposal is through projects and programmes. One (1) initiative being proposed for implementation of CP 1-3.1.

Location: Pasar Seni
Source: https://www.shutterstock.com/g/ESB+Professional

Pasar Seni as one of the shopping centre that introduces Malaysian cultural products.



IMPLEMENTATION INITIATIVE 1-3.1A

IMPROVE ENVIRONMENTAL QUALITY ZONES WITHIN KUALA LUMPUR'S CREATIVE AND CULTURAL DISTRICT

Quality improvement of potential areas within the Kuala Lumpur Creative and Cultural District involves proposals for beautification, upgrading, building conservation as well as the reactivation of areas that require specific initiatives.

The necessary actions to support this initiatives are as follows:

1. Improve the building façade by maintaining the original colour of the building or with bright colour and attractive colours;
2. Improve and encourage vibrant lighting elements to create an attractive environment at night;
3. Conserve and maintain the façade of the building that still preserves the structure of the old shop house;
4. Utilise vacant and abandoned spaces with suitable activities such as art exhibitions for street artists and street bands;
5. Ensure continuous maintenance of the environment and provide attractive landscapes to create a conducive environment;
6. Upgrade pedestrian routes with creative patterns and attractive colours with street furniture;
7. Provide sufficient supporting facilities such as attractive and vibrant signages or information boards; and
8. Apply sustainable planning concepts such as safe city elements Crime Prevention Through Environmental Designs (CPTED), universal designs, smart technology and Low-Carbon City concepts.

The specific initiatives for the Kuala Lumpur Creative and Cultural District Zone are shown in Tables 1.3.1 to 1.3.5.

The proposal encourages improvements to the building facades of old shophouses and the upgrading of pedestrian walkways in front of the shops in Kuala Lumpur's Creative and Culture District Zone.

Vibrant and colorful area identification sign can be applied in Kuala Lumpur's Creative and Cultural District Zone.

Image of digital interactive information kiosk as an interesting supporting facility.

Table 1.3.1:
Improvement Initiative for Cultural Zone in the Kuala Lumpur's Creative and Cultural District

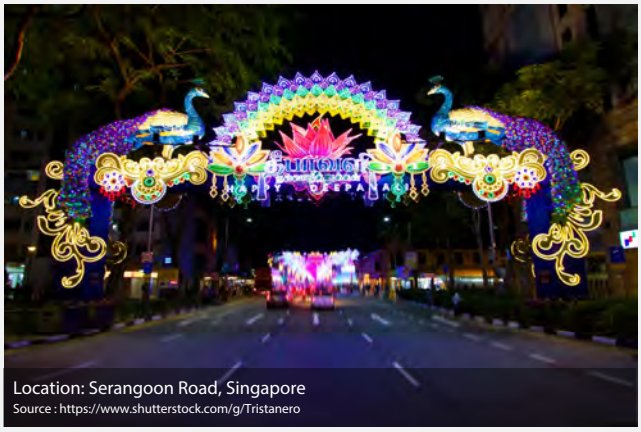
Cultural Zone	
Zone / Location	**Specific Initiative**
1. Istana Budaya	1. Create a space with the concept of outdoor theater within Istana Budaya compound as a performance corner to focus on the musical art performance, visual art and handcrafts; and 2. Building cultural sculptures around the Istana Budaya such as labu sayong, keris or wau bulan.
2. Brickfields	1. Extend the brick pavement area in Jalan Tun Sambanthan up to the junction of Jalan Stesen Sentral 3; and 2. Improve and encourage colorful lighting elements in Jalan Tun Sambanthan, particularly between the intersection of Jalan Sultan Abdul Samad and Jalan Rakyat.

BEST PRACTICE

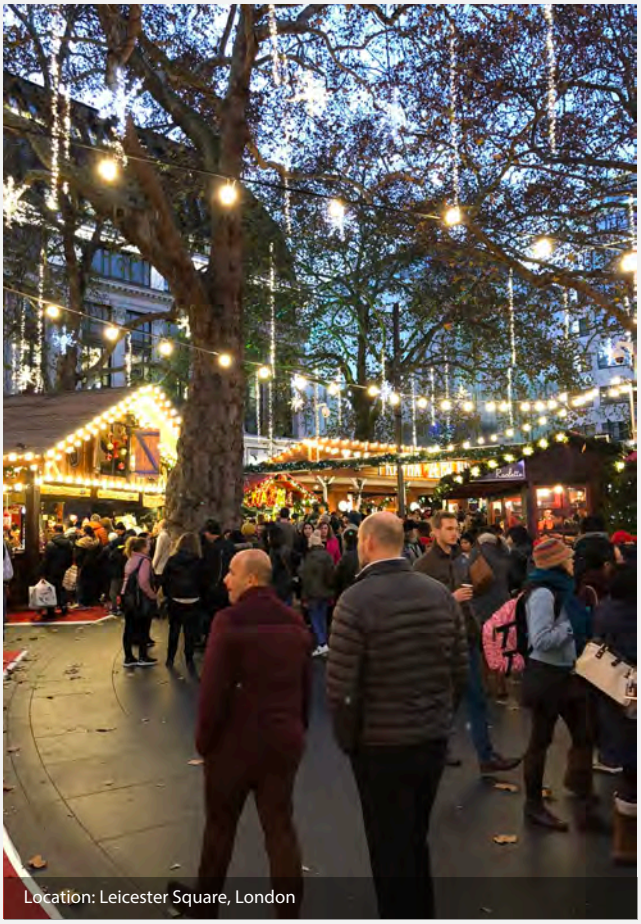
INITIATIVE OF CULTURAL ZONE IN CREATIVE AND CULTURAL DISTRICT

Location: Kamari, Santorini
Source : https://www.shutterstock.com/g/xelyn114

Proposed outdoor theatre in the parking lot in front of Istana Budaya with traditional performance activities, musical arts, visual arts and handicrafts.


Location: Serangoon Road, Singapore
Source : https://www.shutterstock.com/g/Tristanero

Lighting activities during the Diwali Celebration in Serangoon Road, Singapore.


Location: Leicester Square, London

Proposed lighting in festival celebration area in the Cultural Zone to attract visitors to this area.

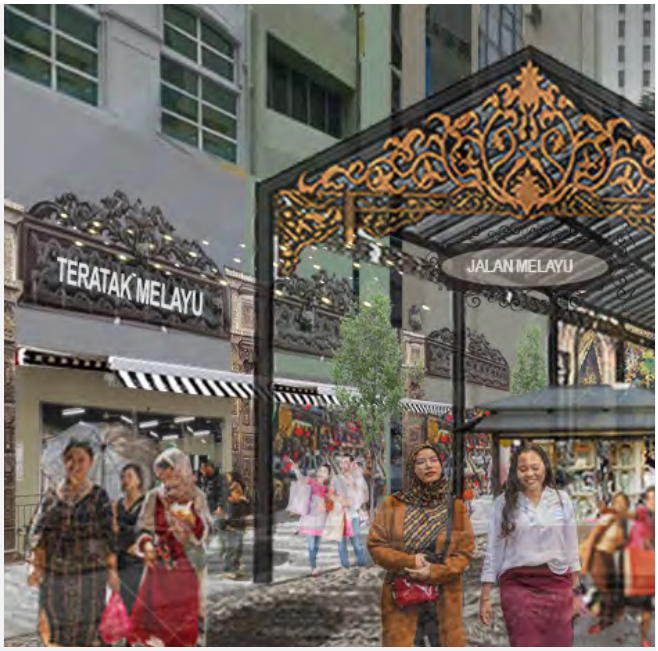
Table 1.3.2:
Improvement Initiative for Creative Heritage Zone in the Kuala Lumpur's Creative and Cultural District

Creative Heritage Zone	
Zone / Location	**Specific Initiative**
1. Medan Pasar and Klang River	1. Reuse the ground and first floor of the building that need to be restorated; 2. Regenerate inactive spaces such as first floor, backyard, and alleys facing the river as a creative cultural square to attract many visitors such as fine dining area; and 3. Encourage appropriate activities such as reusing old shop space in the ground floor or the back area as a hipster cafe, area for buskers activities and selling of souvenirs.
2. Jalan Melayu	1. Upgrade the entrance gateway to Jalan Melayu with a Malay identity design concept; 2. Replace the roof structure of walkways alongside Jalan Melayu by applying Malay architectural elements; and 3. Restructure the street vendors' activities in Jalan Melayu to allow space for business activities related to handicrafts in a more organised and orderly manner.
3. Pasar Seni, Kasturi Walk and Jalan Hang Kasturi	1. Strengthen identification signage of Pasar Seni such as colorful flags; and 2. Control the use, type and design of kiosks in order to form a uniform informal business activities around the area.
4. Jalan Hang Kasturi from GoKL Pasar Seni Bus Station	1. Strengthen the pedestrian walkways connecting GoKL Pasar Seni Bus Station to Pasar Seni through a seamless footpath with the provision of landscape elements; 2. Ensure the safety of pedestrians by installing bollards in appropriate areas to separate pedestrian routes from vehicular lanes; 3. Provide adequate lighting along the walkways to increase the safety of users; and 4. Standardise the material of pedestrian walkways along Jalan Hang Kasturi to enhance the image and identity as the main route to Pasar Seni.

Table 1.3.2:
Improvement Initiative for Creative Heritage Zone in the Kuala Lumpur's Creative and Cultural District (continued)

Creative Heritage Zone	
Zone / Location	**Specific Initiative**
5. Jalan Tun H.S. Lee	1. Upgrade the entrance to Sin Sze Si Ya Temple and preserve the facade of the shophouses in front of the temple as a heritage building; and 2. Proposed a shophouse next to Sin Sze Si Ya Temple as a museum or heritage information centre.
6. Jalan Masjid India	1. Control and allow peddling for small-sized hawkers (mobile cart) only; and 2. Restructure and replace temporary stalls with small and creative kiosk designs in front of existing traditional shops along Jalan Masjid India.
7. Dataran Masjid Jamek	1. Provide digital interactive information kiosks and reading corners around Masjid Jamek.
8. Jalan Petaling	1. Upgrade shop signage with unique signboards of Chinese culture concept;

Illustration of a proposed space projection for Al fresco and fine dining in upperl level to enliven activities on the river bank during the day and night.



Illlustration of a roof structure with latticework depicting Malay art and to use Jawi writing on advertising signboards.

Illustration of a creative ground floor level hipster cafe at Medan Pasar.

Illustration of the entrance gateway improvement at Jalan Melayu.

Location: Winchester Cathedral, Europe
Source : https://www.shutterstock.com/g/PEACE+ECOLOGY

Illustration of an enhanced pedestrian walkway with attractive traditional pattern.

Location: Chinatown, United Kingdom
Source : https://www.shutterstock.com/g/cicerocastro

Illustration of an attractive and vibrant lighting structure at the entrance to Petaling Street.

Table 1.3.3:
Improvement Initiative for Creative Youth Zone in the Kuala Lumpur's Creative and Cultural District

Creative Youth Zone	
Zone/Location	**Specific Initiative**
1. Jalan Alor	1. Combine night market sites at Jalan Alor and Bukit Bintang as a night market district such as Phu Quoc Night Market, in Vietnam; and 2. Provide and improve infrastructure and facilities for night market activities on the aspect of premises, public toilets and information centres.
2. Jalan Bukit Bintang Intersection	1. Enhance the small square at the intersection of Jalan Bukit Bintang/Jalan Sultan Ismail opposite Bukit Bintang Monorail Station, Lot 10 and McDonalds as a space for busking, magic tricks, speech corner, solo music, paintings and artistic activities.

BEST PRACTICE

INITIATIVE OF CREATIVE YOUTH IN VIETNAM AND LONDON

Location: Duong Dong, Vietnam
Source : https://www.shutterstock.com/g/Diego+Fiore

Phu Quoc Market is one of the interesting Night Markets in Vietnam.

Location: Piccadilly, London

Artist exhibit their painting talents in public spaces on the side of the road.

Table 1.3.4:
Improvement Initiative for Heritage Village and Creative Corporate Zone in the Kuala Lumpur's Creative and Cultural District

Heritage Village Zone	
Zone/Location	**Specific Initiative**
1. Jalan Raja Muda Musa	1. Improve shops along Jalan Raja Muda Musa on the aspect of infrastructure and physical structure to be more conducive.
Creative Corporate Zone	
Zone/Location	**Specific Initiative**
1. Malaysian Tourism Centre (MaTic)	1. Improve the area of the square, gate and courtyard in front of MaTic with more attractive lighting; and 2. Improve on hard and soft landscape at the entrance area to the MaTic.

BEST PRACTICE

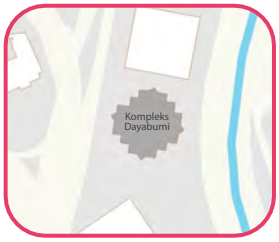
INITIATIVE OF HERITAGE VILLAGE AND CREATIVE CORPORATE IN BOAT QUAY, SINGAPORE

Location: Boat Quay, Singapore
Source : https://www.shutterstock.com/g/xictus77

Location: Boat Quay, Singapore
Source : https://www.shutterstock.com/g/Heorshe

An example of a uniformed shop structure along Boat Quay Road, Singapore

Table 1.3.5:
Improvement Initiative for Civic and Religious Zone in the Kuala Lumpur's Creative and Cultural District

Civic Zone	
Zone/Location	**Specific Initiative**
1. Dayabumi Complex 	1. Improve the Dayabumi Complex building with more effective activities such as hotels and offices through shared space concept.
2. Stesen Keretapi Kuala Lumpur	1. Reuse one of the old train carriages as a Train Café; and 2. Conserve the original architectural structure of the Stesen Keretapi Kuala Lumpur and the station environment as a railway museum and a centre for filming classic stories.
Religious Zone	
Zone/Location	**Specific Initiative**
1. Masjid Negara	1. Propose an entrance gateway to the Religious Zone in Jalan Perdana with an Islamic concept carving design and good lighting; 2. Maintain and beautify the mosque grounds with a soft and hard landscape by emphasising the concept of a mosque in a garden; and 3. Improve the brick pavement at Jalan Perdana and Jalan Lembah with Islamic art patterns from the roundabout to the area in front of the Malaysian Islamic Art Museum.

BEST PRACTICE

INITIATIVE OF CREATIVE YOUTH FOR CIVIC AND RELIGIOUS ZONES

Location: London Transport Museum
Source : https://www.shutterstock.com/g/goga18128

A reuse old railway station space as a railway museum.

Location: Sultan Qaboos Grand Mosque, Muscat, Oman
Source : https://www.shutterstock.com/g/Baiju+Jose

A soft landscape with the concept of a mosque in a garden.

PLANNING STRATEGY

SP 1-4: DEVELOPING INDUSTRIAL CLUSTERS BASED ON CLEAN TECHNOLOGY AND INDUSTRIAL REVOLUTION 4.0 (4IR) TRANSFORMATION

SCENARIO OF INDUSTRIAL DEVELOPMENT IN KUALA LUMPUR

The contribution of the manufacturing sector compared with other economic sectors showed a declining trend from 3.1 per cent in 2010 to 2.6 percent in 2019. This was due to the change in planning policy towards high-tech industries.

The designated size and number of industrial areas in 2040 are 443.77 hectares and involve 21 industrial areas. The 21 industrial areas are divided into three (3) land use zones, namely the Land Use Zone of Industry (IP) involving 13 areas, Land Use Zone of Mixed Industry (MXI) involving seven (7) areas and Technology Park (TP) as shown in Figure 1.4.2.

Industrial activity is an important sector in Kuala Lumpur's economic development, especially in terms of job opportunities, investment incentives and the development of local entrepreneurs, especially Small and Medium Enterprises (SMEs). The planning of these activities must be more in line with current technological evolution.

The approach to clean, high-tech and digital industry and the use of highly skilled labour can reduce emissions and waste materials that pollute the environment. This approach is in line with the goal of transforming the country's industry towards Industrial Revolution 4.0 (4IR) and making Kuala Lumpur Innovative and Productive.

This approach also encourages Kuala Lumpur to become an attractive and viable investment destination, especially in increasing the Domestic Investment Strategic Fund (DISF) and Foreign Direct Investment (FDI) to enable Kuala Lumpur to compete in the global economy.

In order to realise Kuala Lumpur as a city that implements the elements of Industry 4.0, industrial growth with clean technology, and high competitiveness, eight (8) Implementation Proposals have been formulated under Planning Strategy 1–4, as shown in Figure 1.4.1.

Figure 1.4.1:
Implementation Proposals for Planning Strategy 1-4

SP 1-4	DEVELOPING INDUSTRIAL CLUSTERS BASED ON CLEAN TECHNOLOGY AND INDUSTRIAL REVOLUTION 4.0 (4IR) TRANSFORMATION
CP 1-4.1	Concentrating Industrial Cluster Development
CP 1-4.2	Replanning Industrial Land Use Zones as Mixed Development Land Use Zones
CP 1-4.3	Rezoning Industrial Land Use Zone to Mixed Industrial Development Land Use Zone
CP 1-4.4	Upgrading Retained Industrial (IP) Land Use Zones
CP 1-4.5	Upgrading Technology Park (TP) Land Use Zone
CP 1-4.6	Allocating Batching Plant Activities
CP 1-4.7	Regenerating Industrial Buildings as Centralised Labour Quarters (CLQ)
CP 1-4.8	Implementing National Industrial Revolution 4.0 (4IR) Incentive Programme

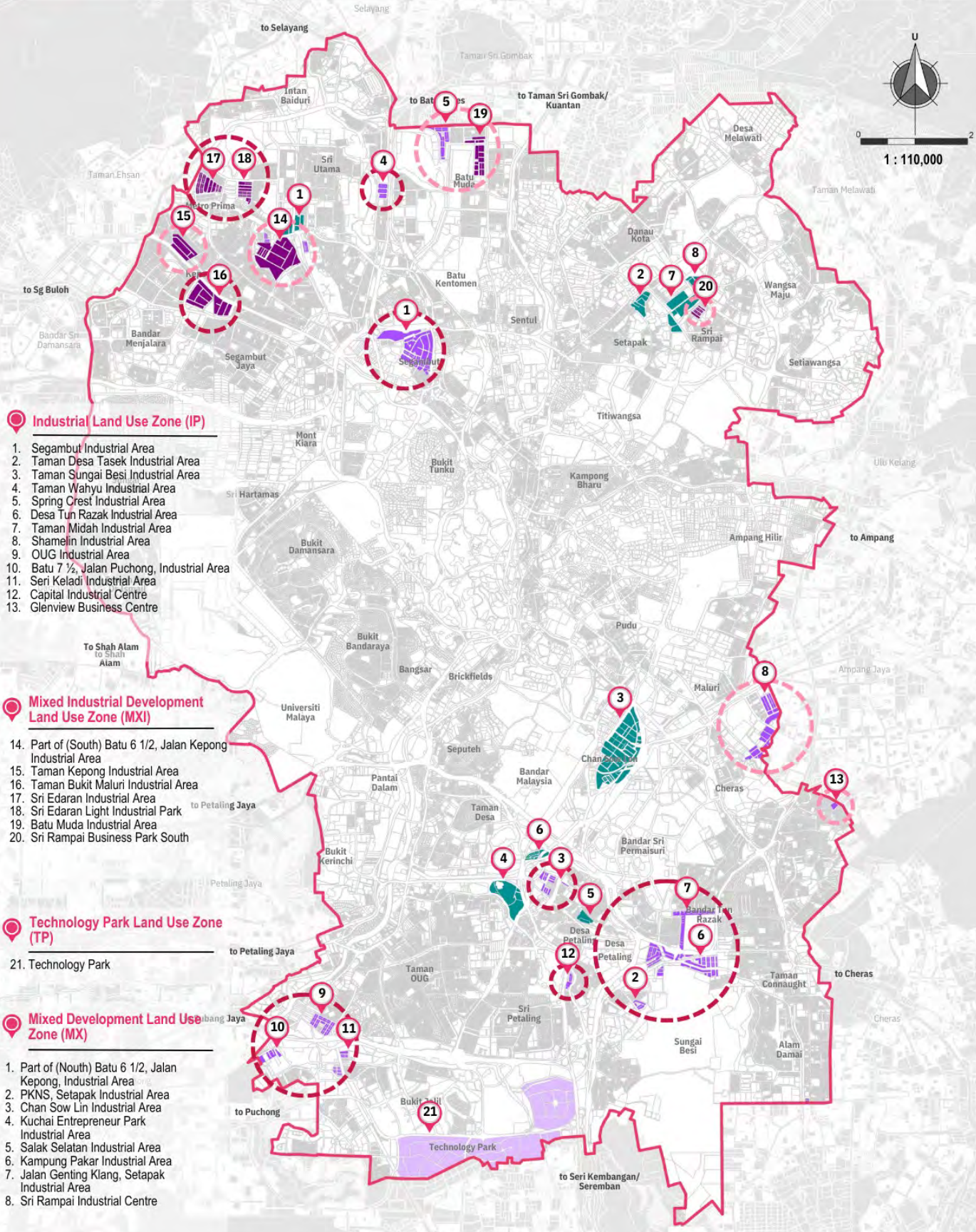


FIGURE 1.4.2 | Plan of Proposed Industrial Land Use Zone

Legend :

Proposed
- Service Industry Cluster
- Trade Industry Cluster

Existing
- Industrial (IP)
- Mixed Industrial Development (MXI)
- Technology Park (TP)
- Mixed Development (MX)

Others
- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 1-4.1: CONCENTRATING INDUSTRIAL CLUSTER DEVELOPMENT

The Draft KLLP2040 also proposes the development of industrial clusters based on clean technology. This will boost and increase productivity develop a network of new innovative partners and open opportunities for entrepreneurial activities.

The cluster industry concept is implemented through the grouping of nearby industrial activities according to specialisation and shared of infrastructure and utilities to reduce production and maintenance costs in maximising the interaction of industrial activities. The planning is in line with the desire to ensure the maintenance of innovative and productive industrial areas in Kuala Lumpur.

The determination of industrial clusters in Kuala Lumpur will consider current industrial activities, trends of economic development hubs and surrounding activities as well as in compliance with the industrial development policies and guidelines.

The proposed industrial clusters will lead to the creation of a clean and green industry with the main focus on services and commerce.

Manufacturing industry activities are allowed in service and commercial industry clusters subject to compliance with planning guidelines to avoid nuisance and control the risk of pollution into the surrounding area. The proposed industrial clusters in Kuala Lumpur are shown in Table 1.4.1.

The implementation approach of this proposal is through projects, policies and programmes. There are two (2) initiatives proposed for implementation of CP 1-4.1.

This industrial cluster concept is also an approach to intensify promotion to attract investment opportunities according to specialisation and further strengthen the industrial economic chain.

Industrial areas in Sentul - Menjalara and Wangsa Maju - Maluri focus more on service-based industrial activities, especially workshops and manufacturing such as food processing activities. The industrial area in Bukit Jalil - Seputeh focuses more on service-based industrial activities that carry out metal and iron work. Meanwhile, the industrial area in Bandar Tun Razak - Sungai Besi is more focused on service activities such as storage and supply due to its location which has greater accessibility from the main road network. The proposed industrial clusters by industrial area are as shown in the Table 1.4.1.

BRIEF INFO

SERVICE INDUSTRIAL CLUSTER

The service industrial cluster has the highest demand in Kuala Lumpur. The industrial can also be encouraged as a clean industry in addition to commercial industry.

COMMERCIAL INDUSTRY CLUSTER

The commercial industry cluster is suitable in an area with dense development due to the low pollution impact on the surrounding development.

Table 1.4.1:
Proposed Industry Clusters by Industrial Area

Industrial Area	Proposed Industrial Cluster
Sentul – Menjalara 1. Segambut Industrial Area 2. Taman Bukit Maluri Industrial Area 3. Taman Wahyu Industrial Area 4. Sri Edaran Industrial Area 5. Sri Edaran Light Industrial Park	Service Industrial Cluster
Sentul – Menjalara 1. Part of (Southern Section) Batu 6 ½ Jalan Kepong, Industrial Area 2. Spring Crest Industrial Area 3. Batu Muda Industrial Area 4. Taman Kepong Industrial Area	Commercial Industrial Cluster
Wangsa Maju – Maluri 1. Sri Rampai Business Park South	Commercial Industrial Cluster
Bandar Tun Razak – Sungai Besi 1. Desa Tun Razak Industrial Area 2. Taman Midah Industrial Area 3. Desa Tasek Industrial Area 4. Taman Sungai Besi Industrial Area	Service Industrial Cluster
Bandar Tun Razak – Sungai Besi 1. Shamelin Industrial Area 2. Glenview Business Centre	Commercial Industrial Cluster
Bukit Jalil – Seputeh 1. Batu 7 ½ Jalan Puchong, Industrial Area 2. Seri Keladi Industrial Area 3. OUG Enterprise Area 4. Capital Industrial Centre	Service Industrial Cluster

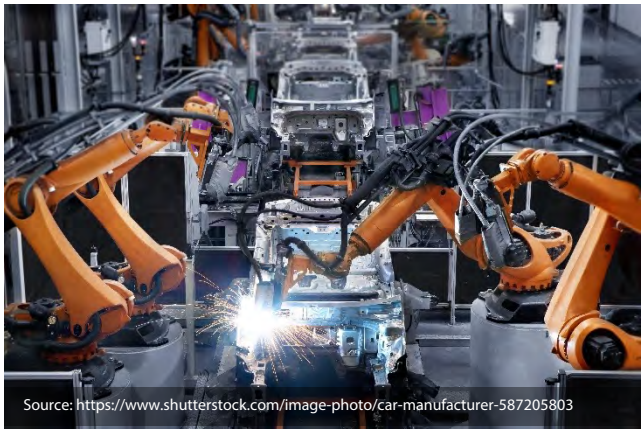
IMPLEMENTATION INITIATIVE 1-4.1A

UPGRADE INDUSTRIAL AREAS IN THE SERVICE INDUSTRIAL CLUSTER

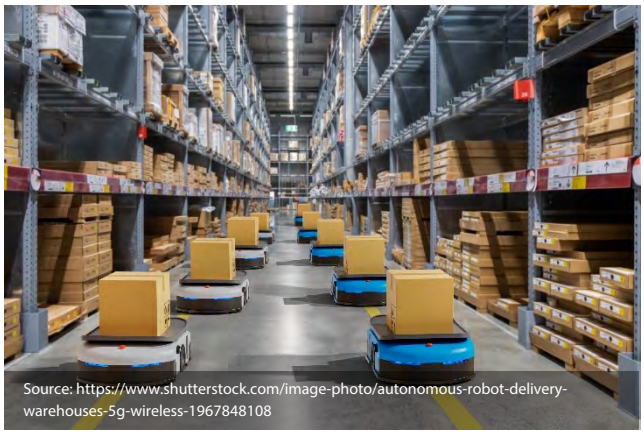
The service industry needs to focus on providing facilities that can support the application of 4IR components and smart technologies.

The necessary actions to support this initiative are as follows:

1. Provide training centres and incubators as centralised facilities;
2. Implement the concept of clean industry and green technology;
3. Encourage the use of robotics and skilled labour;
4. Encourage application of Big Data concepts, Internet of Things (IoT) and other 4IR components in data storage and operation work; and
5. Provide complete industrial support facilities such as parking lots, food centres, waste disposal, connected walkways and others.



Source: https://www.shutterstock.com/image-photo/car-manufacturer-587205803



Source: https://www.shutterstock.com/image-photo/autonomous-robot-delivery-warehouses-5g-wireless-1967848108

Robotics is encouraged in the industrial sector.

IMPLEMENTATION INITIATIVE 1-4.1B

UPGRADE INDUSTRIAL AREA IN THE COMMERCIAL INDUSTRY CLUSTER

The commercial industry needs to focus on providing support facilities that can accommodate visitor demand and not to cause congestion.

The necessary actions to support this initiative are as follows:

1. Provide adequate parking;
2. Provide connected lanes for pedestrian and micromobility vehicle routes with supporting landscape elements;
3. Provide support facilities such as food courts and sports facilities;
4. Provide dedicated loading to avoid traffic congestion; and
5. Ensure the provision of a designated waste disposal centre.

Source: https://www.shutterstock.com/g/Zapp2Photo

Internet of Things (IoT) and Big Data for industrial operations to improve the sector.

Source: https://www.shutterstock.com/g/4774344sean

Provision of space for server systems as a support facility for industrial activities.

IMPLEMENTATION PROPOSAL

CP 1-4.2: REPLANNING INDUSTRIAL LAND USE ZONE AS MIXED DEVELOPMENT LAND USE ZONE (MX)

The proposed rezoning of the industrial area to mixed development takes into account the necessity to replan the area in order to create an economical, optimal and viable land use zone.

Replanning with Land Use Zones of Mixed Development (MX) encourages the mixing of commercial components to support the basic use of residence in a development. The residential component shall not be less than 60 percent of the total floor area.

Eight (8) industrial areas have been proposed for new land use zones taking into account future development potential involving an area of 120.62 hectares. The proposed areas are as follows:

1. Part of (Northern Section) Batu 6 ½ Jalan Kepong, Industrial Area;
2. PKNS Industrial Area, Setapak;
3. Chan Sow Lin Industrial Estate;
4. Kuchai Entrepreneurs' Park Industrial Area;
5. Salak Selatan Industrial Area;
6. Kampung Pakar Industrial Area;
7. Jalan Genting Klang Industrial Area, Setapak; and
8. Sri Rampai Industrial Centre.

Current industrial activities in these industrial areas that have been converted to Land Use Zones of Mixed Development (MX) are allowed as long as there is no comprehensive development application or subject to a period set by KLCH.

The implementation approach of this proposal is through policy and planning control. There are Two (2) initiative are proposed for the implementation of CP 1-4.2.

IMPLEMENTATION INITIATIVE 1-4.2A

ENSURE FEASIABLE CONVERSION OF INDUSTRIAL LAND USE ZONES TO MIXED DEVELOPMENT (MX) LAND USE ZONES

The changes of the existing land use zone to a more economical zone must be based on feasibility and emphasise on creating a new image and urban form of an area through the provision of the latest infrastructure and facilities.

The necessary actions to support this initiative are as follows:

1. Promote sharing, digital and creative economic activities;
2. Focus on the application of clean and green technology elements;
3. Encourage mixed development with 60 percent of the residing element;
4. Provide commercial development to generate job opportunities and drive local economic growth;
5. Promote integrated development and provision of connected micromobility infrastructure;
6. Ensure provision of sufficient community facilities to accommodate development needs;
7. Ensure mixed development that has a TOD concept and access to good public services; and
8. Encourage high-intensity development and optimal use of space.

IMPLEMENTATION INITIATIVE 1-4.2B

CONTROL INDUSTRIAL ACTIVITIES DURING THE TRANSITION DEVELOPMENT PERIOD

The current industrial activities that are allowed are subject to the regulation control of KLCH to ensure that activities are in accordance with planning control compliance.

The necessary actions to support this initiative are as follows:

1. Carry out periodic monitoring to activities and the proposed new development. control and ensure the industrial activities do not cause nuisance and create a risk of pollution to the surrounding area;
2. Ensure management and control of the solid waste disposal system and scheduled wastes are according to the standards set;
3. Ensure the provision of sufficient infrastructure to support and accommodate the industrial operations; and
4. Ensure the provision of an appropriate buffer zone as well as complying with environmental aspects between industrial

BRIEF INFO

THE BASIS OF CHANGING LAND USE ZONE THAT HAS BEEN IMPLEMENTED IS AS FOLLOWS:

1. Takes into account new development trends in the surrounding area;
2. Coordinates current activities that are no longer compatible with the environment;
3. Takes into account the need for replanning due to the current dilapidated condition and the expiring lease period; and
4. Takes into account the increased development of new infrastructure such as the construction of major roads and new transit stations.

Source : https://image.shutterstock.com/image-photo/kuala-lumpur-malaysia-january-14-600w-1305531067.jpg

Wood-based product manufacturing in Kuala Lumpur.

Table 1.4.2:
Proposed Rezoning of Industrial Land Use Zone (IP) into Mixed Development Land Use Zone (MX)

Area and size (hectares)	Inset Plan	Area and size (hectares)	Inset Plan
1. Part of (Northern Section) Batu 6 ½ Jalan Kepong, Industrial Area 10.42 hectares		5. Salak South Industrial Area 2.62 hectares	
2. PKNS Industrial Area, Setapak 7.12 hectares		6. Kampung Pakar Industrial Area 3.55 hectares	
3. Chan Sow Lin Industrial Area 50.83 hectares		7. Jalan Genting Klang Industrial Area, Setapak 19.46 hectares	
4. Kuchai Entrepreneurs' Park Industrial Area 19.46 hectares		8. Sri Rampai Industrial Centre 3.60 hectares	

IMPLEMENTATION PROPOSAL

CP 1-4.3: REZONING INDUSTRIAL LAND USE ZONE TO MIXED INDUSTRIAL (MXI) DEVELOPMENT LAND USE ZONE

Replanning of Mixed Industrial Development (MXI) is proposed in seven (7) existing industrial areas. This is based on the need and demands to provide more space for commercial activities to operate in the Industrial (IP) land use zone. These areas were selected based on the capability of existing industrial activities to be developed further by encouraging new commercial activities.

The determination of intensity for Mixed Industrial Development (MXI) land use zone takes into account development needs and balances the industrial areas that have been changed to other land use zones.

The basis for replanting Mixed Industrial Development (MXI) land use zone is to encourage the development of commercial activities with maximum of 50 percent of the industrial floor area. The combination of industrial and commercial activities can be implemented through mixed land use or mixed building use. Nevertheless, full industrial development is permitted.

Besides considering the industrial activities that are being carried out, good public transport accessibility shall be a factor for upgrading the areas to a Mixed Industrial Development (MXI) land use zone.

Commercial activities are permitted based on the following criteria:

1. Support major industrial land use activities; and
2. Provide value added to industrial areas through the operation of appropriate commercial activities.

The implementation approach of this proposal is through project, policy and planning control. One (1) initiative is proposed for the implementation of CP 1-4.3.

IMPLEMENTATION INITIATIVE 1-4.3A

ENSURE IMPLEMENTATION OF TRANSFORMING EFFECTIVE COMBINATION OF COMMERCIAL AND INDUSTRIAL ACTIVITIES

Mixed Industrial Development (MXI) incorporates the planning principle of 50 percent of commercial development components as an added value to industrial areas. Seven (7) areas as shown in the Table 1.4.4 have been proposed as mixed industrial development areas.

The necessary actions to support this initiative are as follows:

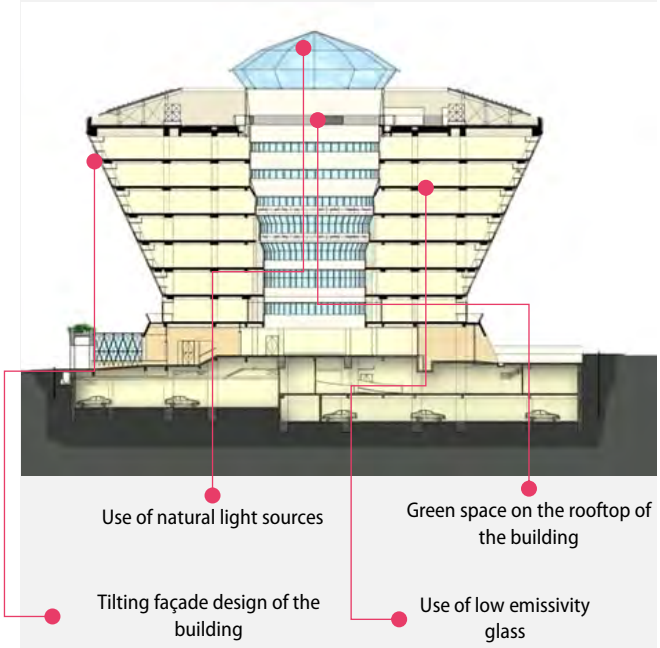
1. Increase optimal land use through compact industrial and commercial development with suitable intensity in strategic areas;
2. Encourage suitable commercial activities in the Mixed Industrial Development (MXI) land use zone;
3. Encourage application of Big Data concepts, Internet of Things (IoT) and other 4IR components in data storage and operations;
4. Ensure adoption of green building components to realise clean industry practices as shown in the Table 1.4.3;
5. Encourage a knowledge-based economy (k-economy) with the development of incubators and R&D activities; and
6. Ensure availability of walkways and green linkages are comprehensive and connected with landscape elements to create an industrial area with an active micromobility network.

BEST PRACTICE

ADOPTION OF APPLICABLE GREEN BUILDING AND ENVIRONMENTAL COMPONENTS TO GENERATE CLEAN INDUSTRIAL AREAS

The adoption of this green building component is important in translating the concept of generating an industrial area with clean industry and low-carbon characteristics, in line with the direction of Kuala Lumpur as a low carbon, clean and sustainable city. An example of a green building design is as follows:

Energy Commission Building



Source: Adapted from the Energy Commission Building Design Strategy

Table 1.4.3:
Criteria for Green Building or Clean Industry

Mixed Industry Development [MXI] Planning Initiative in Kuala Lumpur	
Buildings	
1.	Upgrade the irrigation system in buildings. Use the rainwater harvesting system for industrial activities, cleaning machinery and others.
2.	Encourage the use of rainwater harvesting system to save water consumption.
3.	Use water heating system for workshop or manufacturing industry activities to improve energy efficiency by installing hot water system through solar energy usage.
4.	Use more environmentally friendly ventilation and air conditioning system the displacement of the silo structure to the lot boundary should not be less than 15 metres (50 feet).
5.	Install waste disposal system that capable of separating waste from the existing system.
6.	Encourage the use of photocell systems, and sensors to reduce electricity consumption.
7.	Usage of glass and walls that encourage natural air to ventilate the building.
Environment	
8.	Implement an environmentally friendly drainage design to manage rainwater and control surface runoff.
9.	Implement 5R recycling programme (refuse, reuse, reduce, recycle and repair) on a scheduled and periodic basis.

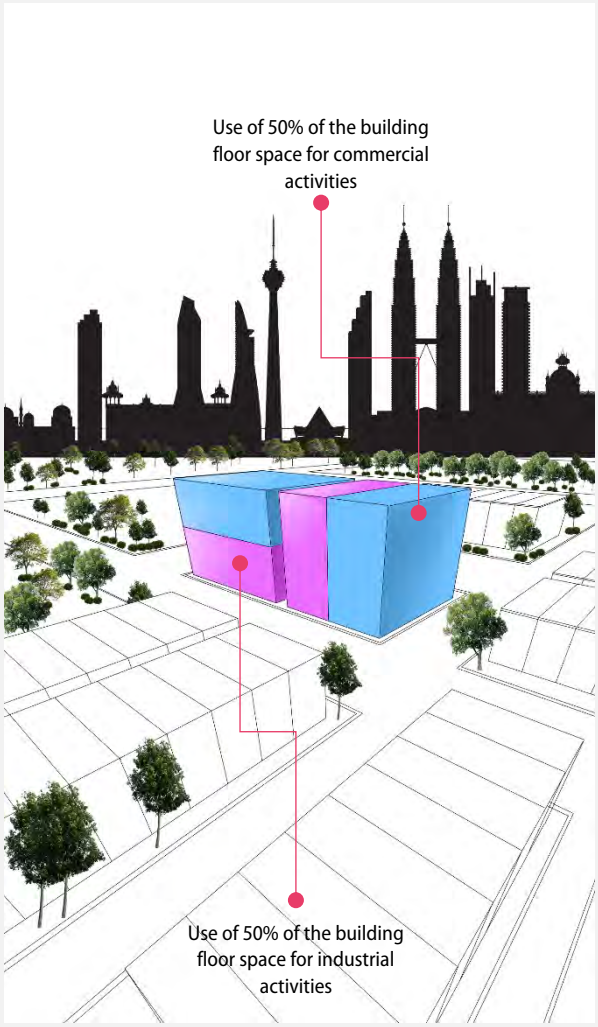
Source: Adapted from Green Neighbourhood Planning Guidelines, Peninsular Malaysia Town and Country Planning Department

Table 1.4.4:
Proposed Land Use Zone Areas for Mixed Industrial Development (MXI) in Kuala Lumpur

Kawasan dan Luas (hektar)	Pelan Sisip
1. Taman Bukit Maluri Industrial Area 28.38 hectares	
2. Sri Edaran Industrial Area 8.24 hectares	
3. Sri Edaran Light Industrial Park 5.35 hectares	
4. Kawasan Perindustrian Taman Kepong Industrial Park 10.69 hectares	
5. Batu Muda Industrial Area 10.50 hectares	
6. Part of (southern section) of Batu 6 ½ Industrial Area, Jalan Kepong 35.43 hectares	
7. Sri Rampai Business Park South 2.08 hectares	

BRIEF INFO

ILLUSTRATION OF MIXED INDUSTRIAL DEVELOPMENT (MXI) CONCEPT



IMPLEMENTATION PROPOSAL

CP 1-4.4: UPGRADING RETAINED INDUSTRIAL (IP) LAND USE ZONES

Upgrading of retained industrial land use zone aims to create a conducive, sustainable and high-productivity industrial area. In total, the proposed upgrade involves 113.13 hectares in 13 industrial areas as follows:

1. Segambut Industrial Area;
2. Desa Tasek Industrial Area;
3. Taman Sungai Besi Industrial Area;
4. Taman Wahyu Industrial Area;
5. Spring Crest Industrial Area;
6. Desa Tun Razak Industrial Area;
7. Taman Midah Industrial Area;
8. Shamelin Industrial Area;
9. OUG Industrial Area;
10. Batu 7 ½, Jalan Puchong Industrial Area;
11. Seri Keladi Industrial Area;
12. Capital Industrial Centre; and
13. Glenview Business Centre

The specialisation of industrial types and activities must be coordinated according to the proposed industrial clusters of CP 1-4.1.

The proposed upgrading of this industrial area involves environmental improvement and maintenance of facilities and infrastructure. Such work includes the improvement of the building façade, the provision of connected walkways equipped with street furniture and green landscaping, the provision of supporting facilities such as food court, recycling centres, waste disposal sites and others.

The implementation approach of this proposal is through projects and programmes. One (1) initiative is proposed for the implementation of CP 1-4.4.

Table 1.4.5:
Proposed Retained Industrial (IP) Land Use Zone

Area and size (hectares)	Inset Plan	Area and size (hectares)	Inset Plan
1. Segambut Industrial Area 35.93 hectares		8. Shamelin Industrial Area 18.00 hectares	
2. Desa Tasek Industrial Area 1.48 hectares		9. OUG Industrial Area 5.84 hectares	
3. Taman Sungai Besi Industrial Area 3.82 hectares		10. Batu 7 ½ Industrial Area, Jalan Puchong 3.69 hectares	
4. Taman Wahyu Industrial Area 3.45 hectares		11. Seri Keladi Industrial Area 2.23 hectares	
5. Spring Crest Industrial Area 5.72 hectares		12. Capital Industrial Centre 1.60 hectares	
6. Desa Tun Razak Industrial Area 20.01 hectares		13. Glenview Business Centre 1.07 hectares	
7. Taman Midah Industrial Area 9.31 hectares			

IMPLEMENTATION INITIATIVE 1-4.4A

UPGRADE INDUSTRIAL AREAS

The upgrading of industrial areas focuses on the work of improving the environment and also improving the facilities. This action is to enhance the function of the industrial areas in consistent with the new trend of industrial development.

The necessary actions to support this initiative are as follows:

1. Encourage area regeneration programme to make it more conducive and competitive;
2. Restructure layout and circulation system for more efficient heavy vehicle access routes;
3. Provide high accessibility especially for active mobility modes including pedestrian and micromobility vehicle routes to public transport networks and transit stations;
4. Ensure continuous environmental maintenance and an attractive landscape to create a conducive and competitive environment;
5. Provide sufficient centralised supporting facilities such as parking facilities, food court, labour quarters or employee quarters in vacant industrial lots and other facilities to meet the needs of employees;
6. Provide a waste disposal sites for vehicle parts, metals, plastics and other wastes; and
7. Apply sustainable planning concepts such as safe city elements Crime Prevention Through Environmental Designs (CPTED), universal designs, smart technology and Low-Carbon City concepts.

BEST PRACTICE

DEVELOPMENT OF INDUSTRY WITH HIGH TECHNOLOGY AND LOW POLLUTION

1. Ensure industrial operations use clean and low pollution technology;
2. Provide innovation centres and incubators equipped with the latest R&D facilities and technologies;
3. Provide operation training and promotion centres as well as digital platforms to attract investment;
4. Provide broadband networks and services capable of implementing 4IR components such as Big Data and the Internet of Things (IoT)n industrial operations;
5. Provide good accessibility to public transport services;
6. Provide centralised supporting facilities such as food court, vehicle parking and prayer rooms for the use of employees;
7. Provide an efficient industrial waste management system; and
8. Ensure industrial activities not creating nuisance to the surrounding area.

Location: Jurong Innovation District, Singapore
Source:https://media.asiaone.com/sites/default/files/styles/article_main_image/public/original_images/Mar2016/jurongpark_JTC.jpg?itok=I49dp5Zi

An industrial area equipped with high-tech consumerism in Jurong, Singapore

Location: China-Singapore International Smart Industry Park, Guangzhou
Source:https://media.asiaone.com/sites/default/files/styles/article_main_image/public/original_images/Mar2016/jurongpark_JTC.jpg?itok=I49dp5Zi

Development of knowledge-based industrial area equipped with high-tech facilities

IMPLEMENTATION PROPOSAL

CP 1-4.5: UPGRADING TECHNOLOGY PARK (TP) LAND USE ZONE

Technology Park is a dedicated area that acts as a high-tech industrial hub based on research and development.

The upgrading initiative must incorporate the application of 4IR components to enhance its function as an innovative and productive smart technology park hub in line with the 4IR policy.

This proposal is important to generate job opportunities for skilled labour and increase the competitiveness of the industrial sector, especially the usage of the latest technology in manufacturing, service and other industrial sectors.

In addition, the upgrading of Technology Park aims to create an industrial area that is conducive, sustainable and highly productive. Indirectly it will expand the application and use of clean and green technology in industrial activities within the Technology Park.

This upgrading must also focus on providing the supporting facilities needed by employees, improving the environment and maintaining existing facilities and infrastructure. The availability of complete supporting facilities in this technology park will further improve the level of liveability.

The implementation approach of this proposal is through projects and policies. There are two (2) initiative are proposed for the implementation of CP 1-4.5.

IMPLEMENTATION INITIATIVE 1-4.5A

IMPROVE PROVISION OF FACILITIES IN KNOWLEDGE-BASED ECONOMY (K-ECONOMY), RESEARCH AND DEVELOPMENT (R&D) ACTIVITIES USING 4IR COMPONENTS

The focus of industrial activities in Technology Park must emphasise upgrading efforts and equipped of supporting facilities through the application of 4IR components and the use of the latest technology.

The necessary actions to support this initiative are as follows:

1. Provide centralised data storage and monitoring centre using Big Data and the Internet of Things (IoT) to control the level of pollution, the rate of energy resource use, security control and others;
2. Provide dedicated space or building for product exhibitions, expos and research and development;
3. Provide the latest broadband infrastructure;
4. Encourage the use of a robotic workforce through automation or autonomous technology, Artificial intelligence (AI);
5. Provide connected pedestrian routes and the necessary supporting landscape elements; and
6. Provide complete support facilities required by employees and visitors.

IMPLEMENTATION INITIATIVE 1-4.5B

IMPLEMENT UPGRADING WORK FOR TECHNOLOGY PARK

The upgrading of Technology Park aims to create a conducive, sustainable and highly productive industrial area.

The necessary actions to support this initiative are as follows:

1. Comply with technology, research and development activities that are Permissible and Permissible with the Conditions in the Classes of Use of Land and Buildings 2024 (CULB2024);
2. Ensure the availability of infrastructure and supporting facilities that are capable of supporting the implementation of a high-tech industrial park;
3. Provide high accessibility especially active mobility modes including pedestrian walkways and micromobility vehicles to public transport networks and transit stations;
4. Ensure continuous environmental maintenance and an attractive landscape to create a conducive and competitive environment;
5. Provide sufficient centralised supporting facilities such as parking facilities, food court, and other facilities to meet the needs of employees; and
6. Apply sustainable planning concepts such as safe city elements Crime Prevention Through Environmental Designs (CPTED), universal designs, smart technology and Low-Carbon City concepts.

IMPLEMENTATION PROPOSAL

CP 1-4.6: ALLOCATING BATCHING PLANT ACTIVITIES

Environmental impact management control requirements have been proposed for batching plant activities in accordance with the Industrial (IP) land use zone in Kuala Lumpur. Indirectly these can support actions and directions to create a low carbon and clean urban environment.

The proposed location shall fulfil the requirements for faster distribution and orderly supplies of concrete supplies throughout Kuala Lumpur in compliance with the set guidelines. Hence, this guarantees the sustainability of the construction industry in Kuala Lumpur.

Allocation of specific locations will be able to mitigate environmental pollution, public safety and traffic congestion which are often associated with batching plant activities.

Chan Sow Lin Industrial Area which is zoned as a Land Use Zone of Mixed Development (MX), has been identified for batching plant activities with are condition of an appropriate period or a period determined by KLCH. This activity should cease upon the commencement of the Chan Sow Lin industrial area redevelopment.

Batching plant activities are allowed within construction sites or any undeveloped areas located farther from focus areas provided within an appropriate distance main road. Operation of this activity must be carried out in-situ and if supply beyond the operation area should be controlled and limited to a certain distance only.

The implementation approach of this proposal is through policy, planning control and guidelines. One (1) initiative is proposed for the implementation of CP 1-4.6.

IMPLEMENTATION INITIATIVE 1-4.6A

IMPLEMENT AND MONITOR THE APPLICATION OF BATCHING PLANT PLANNING GUIDELINES IN KUALA LUMPUR

The provision of a batching plant must be consistent with the Planning Guidelines for Batching Plant in the Federal Territory of Kuala Lumpur by KLCH and subject to other relevant guidelines.

The necessary actions to support this initiative are shown in Table 1.4.6.

Table 1.4.6:
Industrial Development Planning Criteria for Batching Plant in Kuala Lumpur

INDUSTRIAL DEVELOPMENT PLANNING CRITERIA FOR BATCHING PLANT, KUALA LUMPUR
Specification of Site Planning
1. The site of the proposed batching plant is not less than 0.4 hectares (1 acre).
2. Setback of the building structure: a. The setback of the building structure to the front lot boundary shall not be less than 9 metres (30 feet) and the setback of the building on the right, left and rear to the lot boundary shall not be less than 6 metres (20 feet); and b. The setback of the silo structure to the lot boundary shall not be less than 15 metres (50 feet).
3. A buffer zone of at least 3 metres (10 feet) must be provided from the batching plant site boundary.
Provision of Facilities and Infrastructure
4. The provision of lorry parking depends on the size of the batching plant site or at least four (4) lorry parking spaces should be allocated within the batching plant site.
5. Road size: a. Service road : 20 metres (66 feet); b. Side lane/firebreak: 12 metres (40 feet); and c. Back lane : 12 metres (40 feet).
6. Provision of green areas/green landscape such as green landscape, walkways and others should be at least 5 percent of the proposed site.
Ensuring the Technical Aspects of Closed Concrete Batching Plant Construction
7. The height of the building structure depends on the height of silo;
8. Provision of interlocking pavers on the road/entrance;
9. Ramp or hump construction (gradient of 8 degrees);
10. Provision of wash bay;
11. Provision of slurry pit;
12. Provision of centralised dust collector or on top of the silo;
13. Provision of wastewater silt trap prior to discharging into drainage system;
14. Installation of polystyrene sheet insulation on the batching apron;
15. Provision of sprinkler system in the plant area;
16. Provision of sedimentation pond;
17. Installation of concrete lorry weighing equipment (before and after);
18. Provision of concrete waste sites (excess concrete dump sites);
19. Provision of spillage box approved by KLCH and JPJ on each concrete lorry; and
20. Usage of rubber seals on concrete mixer lorry to prevent leakage of cement, in line with the approval of KLCH and JPJ.

Table 1.4.6:
Industrial Development Planning Criteria for Batching Plant in Kuala Lumpur (continued)

INDUSTRIAL DEVELOPMENT PLANNING CRITERIA FOR BATCHING PLANT, KUALA LUMPUR
Ensuring the Technical Aspects of Construction of Semi-Enclosed Concrete Batching Plant
21. Only silos are allowed to be open;
22. Provision of interlocking pavers on the road/entrance;
23. Construction of a ramp or hump (gradient of 8 degrees);
24. Provision of wash bay;
25. Provision of centralized dust collector or on top of the silo;
26. Provision of wastewater silt trap prior to discharging into drainage system;
27. Installation of polystyrene sheet insulation on the batching apron;
28. Provision of sprinkler system in the plant area;
29. Installation of concrete lorry weighing equipment (before and after);
30. Provision of concrete waste sites (excess concrete dump sites);
31. Provision of spillage box approved by KLCH and JPJ on each concrete lorry; and
32. Usage of rubber seals on concrete mixer lorry to prevent leakage of cement, in line with the approval of KLCH and JPJ.

Source:
i. Adapted from the Planning Guidelines for Batching Plant in the Federal Territory of Kuala Lumpur
ii. Adapted from the Guidelines and General Standards of Selangor State Industrial Area Planning
iii. Adapted from the Kuala Lumpur Local Plan Study 2040, 2020

Location: Chan Sow Lin Industrial Estate, Kuala Lumpur

Concrete batching plant in Chan Sow Lin Industrial Area

BRIEF INFO

CRITERIA OF PLANNING AREA SELECTION

The main criteria for selecting an industrial area for batching plant activities are as follows:

1. Ensure catchment areas encompass three (3) main zones, namely the northern, central and southern zones;
2. Ensure direct accessibility to the main road without passing through residential, commercial or facility areas;
3. Propose a site with a minimum area of 0.4 hectare (1 acre);
4. Ensure that the estimated travel distance of the proposed area is within 15 to 45 minutes of the city centre and surrounding development areas within Kuala Lumpur;
5. Only two (2) batching plant operators are recommended for an industrial area to reduce the risk of pollution to the environment; and
6. Ensure that the site of the batching plant is provided with a buffer zone in accordance with the set guidelines.

IMPLEMENTATION PROPOSAL

CP 1-4.7: REGENERATING INDUSTRIAL BUILDINGS AS CENTRALISED LABOUR QUARTERS (CLQ)

The provision of labour quarters is a supporting facility for workers in the construction, manufacturing and service sectors. This proposal is an approach to diversify employee accommodation in line with the Guidelines for the Provision of Housing, Accommodation and Employee Facilities by the Department of Labour of Peninsular Malaysia (JTKSM).

Based on the low utilisation rate of industrial buildings, the proposed regeneration of the buildings is an approach to resolve dilapidated or abandoned building issues.

The concept of retrofitting is one of the methods that can be applied to vacant and abandoned industrial buildings. The provision of supporting facilities such as prayer rooms, multipurpose rooms and warden's room should also be a priority to prevent social issues from arising.

The Draft KLLP2040 has identified ten (10) potential industrial areas for regeneration as labour quarters or centralised labour quarters as follows:

1. Taman Bukit Maluri Industrial Area;
2. Sri Edaran Industrial Area;
3. Sri Edaran Light Industrial Park;
4. Taman Kepong Industrial Area;
5. Batu Muda Industrial Area;
6. Part of (the southern section) of Batu 6 ½ Industrial Area, Jalan Kepong;
7. Shamelin Industrial Area;
8. Desa Tun Razak Industrial Area;
9. OUG Industrial Area; and
10. Seri Keladi Industrial Area

The implementation approach of this proposal is are through project and policy. One (1) initiative is proposed for the implementation of CP 1-4.7.

IMPLEMENTATION INITIATIVE 1-4.7A

IMPLEMENT PROGRAMME TO REGENERATE INDUSTRIAL BUILDINGS AS LABOUR QUARTERS AND CENTRALISED LABOUR QUARTERS (CLQ)

The implementation of the programme to regenerate industrial buildings as labour quarters in identified industrial areas is an effort to accommodate workers as well as facilitate control of social problems and disease outbreaks.

The necessary actions to support this initiative are as follows:

1. Implement regeneration of labour quarters facilities by individuals or organisations;
2. Identify companies or appropriate parties interested in rent according to the specified period;
3. Ensure workers residing in the labour quarters are placed according to the job category and job location in line with unit size and building of labour quarters;
4. Ensure conducive labour quarters space and environment;
5. Ensure provision of complete supporting facilities such as prayer rooms, multipurpose rooms, dining rooms and warden's room; and
6. Ensure full control of labour quarters by the operator to prevent nuisance for the local community.

BEST PRACTICE

PROVISION OF PORTABLE BUILDINGS, RUSSIA

Portable buildings as alternative to building regeneration for employee accommodation.

BRIEF INFO

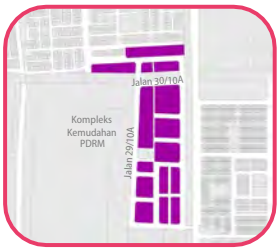
GUIDELINES OF MINIMUM STANDARDS FOR FOREIGN WORKERS' ACCOMMODATION 2018:

The Ministry of Human Resources has imposed the Minimum Standards for Employee Accommodation which include:

1. Labour space requirements;
   a. Provision of a space of at least 4.5 square metres for one employee; or
   b. The area of the sleeping room or restroom is not less than 3 square metres.
2. Provide sanitary facilities for labour accommodation which are at least:
   a. One (1) toilet and one (1) bathroom for every 15 employees; or
   b. One (1) toilet and one separate bathroom with a urinal for every 25 employees.
3. Provide gas stove, clean water supply and electricity supply;
4. Provide minimum basic facilities for each employee that cannot be shared:
5. Provide a bed that measures no less than 1.7 square metres. If bunk beds are provided, the space between the two (2) beds should not be less than 0.7 metres; and
6. Locked wardrobe measuring no less than 0.35 metres long, 0.35 metres wide and 0.9 metres high; and
7. Other facilities deemed necessary by the Director General Department of Labour Peninsular Malaysia.

Source:
Guidelines for Setting the Minimum Standard of Accommodation for Foreign Workers 2018, Department of Labour Peninsular Malaysia .

Table 1.4.7:
Proposed Area for Labour Quarters in Industrial Areas

Area and size (hectares)	Inset Plan	Area and size (hectares)	Inset Plan
1. Taman Bukit Maluri Industrial Area 21.99 hectares		6. Sebahagian Kawasan (Bahagian Selatan) Perindustrian Batu 6 ½, Jalan Kepong 35.43 hectares	
2. Sri Edaran Industrial Area 8.24 hectares		7. Kawasan Perindustrian Shamelin 18.00 hectares	
3. Sri Edaran Light Industrial Park 5.35 hectares		8. Kawasan Perindustrian Desa Tun Razak 20.01 hectares	
4. Kawasan Perindustrian Taman Kepong 10.69 hectares		9. Kawasan Perusahaan OUG 5.84 hectares	
5. Kawasan Perindustrian Batu Muda 10.50 hectares		10. Kawasan Perindustrian Seri Keladi 2.23 hectares	

IMPLEMENTATION RECOMMENDATIONS

CP 1-4.8: IMPLEMENTING NATIONAL INDUSTRIAL REVOLUTION 4.0 (4IR) INCENTIVE PROGRAMME

The National Industrial Revolution 4.0 (4IR) policy has outlined nine (9) components that can be applied to the manufacturing and service industry sectors. Its application can drive and ensure a more progressive and highly productive industrial sector. The implementation of 4IR policy includes dynamic automation technology that will bring new challenges to all economic sectors in this country. This application will transform operational work in line with digital transformation to ensure competitiveness in addressing future challenges.

The 4IR programme is a coordination of the country's efforts to develop a broader smart economy sector platform and create a pool of highly skilled talent in the manufacturing sector. Innovation involves technology used in the industrial sector that has a significant impact on generating a more productive industrial economy in Kuala Lumpur.

The implementation of 4IR is capable of having an impact on economic growth, especially the generation of more job opportunities for skilled workers. This programme implementation must ensure the availability of the latest broadband network to accommodate.

The implementation approach of this proposal is through programme. One (1) initiative is proposed for the implementation of CP 1-4.8.

Source: 4IR Policy, Economic Planning Unit, Prime Minister's Department, 2021

The National Fourth Industrial Revolution (4IR) Policy is implemented to generate the national economy.

IMPLEMENTATION INITIATIVE 1-4.8A

ENCOURAGE AND PROMOTE THE IMPLEMENTATION OF 4IR

The 4IR policy will encourage inovative development in the manufacturing and service sectors that are highly technology-based.

The necessary actions to support this initiative are as follows:

1. Enhance a conducive industrial ecosystem to attract more progressive investment;
2. Provide infrastructure facilities and high-tech supporting facilities for the industrial sector;
3. Promote robotics and automation in production and manufacturing activities;
4. Promote integration of data storage using Big Data, Internet of Things (IoT), cloud computing and system integration;
5. Improve aspects of cyber security for data and information protection purposes; and
6. Encourage the operation of 4IR in the suitable service industry cluster area.

BRIEF INFO

09
COMPONENTS OF INDUSTRIAL 4.0

- Internet of Things (IoT)
- Autonomous Robots
- Cyber Security
- Augmented Reality (AR)
- Big Data
- Simulation
- Cloud Computing
- System Integration
- Additive Manufacturing
- Digital Twin

Source: Adapted from 4IR Policy, Economic Planning Unit, Prime Minister's Department, 2021

Source : https://www.shutterstock.com/g/PopTika

Use of autonomous robotics technology, cloud computing and the Internet of Things (IoT) can be implemented especially in the manufacturing sector.

PLANNING STRATEGY

SP 1-5: DRIVING ENTREPRENEURIAL DEVELOPMENT FOR URBAN ECONOMIC GROWTH

SCENARIO OF ENTREPRENEURSHIP DEVELOPMENT IN KUALA LUMPUR

The entrepreneurial sector plays an important role in the city's economic growth. The skills and competence of entrepreneurs promote the competitiveness of urban communities in domestic and international economic activities.

Entrepreneurial activities in Kuala Lumpur include business, production and service of food and beverage products, souvenirs and handicrafts, digital equipment, fashion and jewellery, cosmetic products, franchise businesses, small-scale businesses and others.

The use of the latest digital technology for entrepreneurial activities can expand the marketing network of products, research programmes and services in addition to minimising business costs.

Entrepreneurship development is also capable of generating job opportunities through the increased involvement of young entrepreneurs. It is estimated that 120,000 informal sector job opportunities will be generated by 2040.

In order to realise Kuala Lumpur as a city that drives entrepreneurial development and a centre of competitive economic growth, three (3) Implementation Proposals are formulated under Planning Strategy 1–5, as shown in Figure 1.5.1.

Figure 1.5.1:
Implementation Proposals for Planning Strategy 1-5

SP 1-5 DRIVING ENTREPRENEURIAL DEVELOPMENT FOR URBAN ECONOMIC GROWTH

- **CP 1-5.1** Enhancing Entrepreneurial Potential In Neighbourhood Centres
- **CP 1-5.2** Development and Modernization of the Informal Sector
- **CP 1-5.3** Planning of Hawker Spaces In High Intensity Affordable Housing Areas

BRIEF INFO

DEVELOPMENT OF INFORMAL SECTOR IN KUALA LUMPUR

Total informal sector, Kuala Lumpur, 2020
32,119 units

Number of jobs in the informal sector, Kuala Lumpur, 2019
57,700 jobs

Source: Socioeconomic Report of the Federal Territory of Kuala Lumpur and Department of Statistics, 2019

Number of jobs in the informal sector, Kuala Lumpur, 2040
120,000 jobs

Source: KLSP2040

Location: Urban street eatery site, Kuala Lumpur
Source: https://image.shutterstock.com/image-photo/kualalumpurmalaysiafebruary-22-2018tapak-one-600w-1032171994.jpg

Food truck activities at TAPAK, Jalan Ampang, Kuala Lumpur.

IMPLEMENTATION PROPOSAL

CP 1-5.1: ENHANCING ENTREPRENEURIAL POTENTIAL IN NEIGHBOURHOOD CENTRES

The neighbourhood centre has the potential for entrepreneurial activities among the local community. The purposes of setting up an entrepreneurship centre are as follows:

1. Encourage entrepreneurial activities, especially the sharing economy and creative arts among the community;
2. Apply entrepreneurial knowledge in the courses or programmes offered;
3. Increase and identify the potential of entrepreneurial talent among the local community; and
4. Provide opportunities for all levels of society to be involved in entrepreneurship activities.

This implementation proposal shall focus on 139 community centres in Kuala Lumpur covering an area of 40.01 hectares to strengthen the entrepreneurial potential in neighbourhood centres.

The implementation approach of this proposal is through project and policy. One (1) initiative is proposed for the implementation of CP 1-5.1.

Jalan Tunku Abdul Rahman (TAR) is a famous shopping hub and tourist destination.

IMPLEMENTATION INITIATIVE 1-5.1A

ESTABLISH AN OPEN INNOVATION LAB CENTRE

Entrepreneurial potential in the neighbourhood centre will be promoted through the establishment of an open innovation lab which encourages entrepreneurial activities among the local community as shown in the Figure 1.5.2.

The necessary actions to support this initiative are as follows:

1. Establish centre for entrepreneurship management and research among the community;
2. Provide specific spaces for talks and training centres especially to discuss business start-up ideas, online product presentations and training opportunities for young entrepreneurs;
3. Provide an internet centre with collective internet access facilities for the local community, especially low-income group;
4. Provide information and communication technology (ICT) and entrepreneurship training for all ages;
5. Provide a suitable space for entrepreneurial activities as start-ups especially product and service promotion carried out in the local community.

BRIEF INFO

FUNCTIONS OF OPEN INNOVATION LAB

1. A place to promote products and services carried out within the local community. Among the activities that promote the entrepreneurship programme are discussion on business start-up ideas, online product presentations and training opportunities for young entrepreneurs;
2. Centre for community management and research; and
3. Local community centre that provides service facilities such as the use of Information Technology (IT) equipment, internet and training of computer software.

Location: Setiawangsa Community Centre

The Setiawangsa Community Centre can be used as an open innovation lab.

Figure 1.5.2:
Implementation Proposals for Open Innovation Labs

OPEN INNOVATION LABS

Innovation
Cultivating the spirit of competitiveness and nurturing highly innovative entrepreneurs in the product development process.

Learning
Becoming a centre for the generation and exchange of knowledge among partners on future innovations.

Urban sustainability
Establishing a centre that focuses on finding solutions to improve urban sustainability.

Development
Involving joint ventures of entrepreneurs or non-entrepreneurs in the innovation development process.

Joint venture
Involving all participants in the development process through co-creation.

Improvements
Extensive studying and evaluation of the product development process based on user feedback for the product improvement process

Cooperation
Fostering and encouraging cooperation and potential collaboration between entrepreneurs, investors and related agencies for the development of more extensive entrepreneurial activities

Realistic context
Enabling entrepreneurs to research and study product development in the context of realistic product use with users or product buyers

Source: Adapted from the Amsterdam Institute for Advanced Metropolitan Solutions

IMPLEMENTATION PROPOSAL

CP 1-5.2: DEVELOPING AND MODERNISATION OF THE INFORMAL SECTOR

The informal sector, especially hawker activities, deserves attention as it contributes to the increase in household income, especially among the B40 group and part of the M40 group. In general, this sector generated 57,700 job opportunities in Kuala Lumpur until 2019.

Informal sector activities in Kuala Lumpur consist of micro-businesses such as hawker, roadside stalls, kiosks, markets and hawker centres. This sector can be further strengthened through training in the basic skills of informal business activities as well as effective marketing methods.

The implementation approach of this proposal is through a programme. There are two (2) initiative are proposed for the implementation of CP 1-5.2.

BRIEF INFO

DEFINITION OF THE INFORMAL SECTOR

The informal sector is an organisation that is not registered with the Companies Commission of Malaysia or any professional body including the local authorities. The number of employees is less than ten (10).

TYPE OF INFORMAL SECTOR

1. Entrepreneurs who run small businesses;
2. Petty hawker's;
3. Traders who conduct business from home (home-based business) or on the move (mobile business);
4. Entrepreneurs running online businesses; and
5. Delivery service business.

Source:
i. National Enterpreneur Group Economic Fund (TEKUN Nasional)
ii. Department of Statistics

IMPLEMENTATION INITIATIVE 1-5.2A

PROVIDE MECHANISM FOR INFORMAL SECTOR INCUBATION PROGRAMME

The Incubation Programme of the informal sector must be encourage and prepare skills, marketing and product preparation as well as capital assistance to informal entrepreneurs. This initiative may ease the burden of petty traders while helping to improve the living standard of the people in Kuala Lumpur.

The necessary actions to support this initiative are as follows:

1. Offer courses and guidance related to managing, marketing and manufacturing techniques of products which focus on the e-commerce sector and digital skills;
2. Improve capacity for information and database of eligible target groups;
3. Collaborate in programme implementation with related agencies such as the National Entrepreneur Group Economic Fund (TEKUN), National Institute of Entrepreneurship (INSKEN), Malaysian Cooperative Societies Commission (SKM), Cooperative Institute of Malaysia (IKM) and Malaysian Small and Medium Enterprise Corporation (SMECORP);
4. Identify potential spaces either existing or new that are comfortable and with sufficient equipment for activities especially for hawker's; and
5. Conduct a hawker incubation programme that includes capital injection and skill training for selected hawkers, focused particularly on petty traders who need assistance such as single mothers, low-income groups, age and disabled-friendly groups, as well as groups in need, including youth who are new to the informal sector.

IMPLEMENTATION INITIATIVE 1-5.2B

PROPOSE MODERNISATION OF THE INFORMAL SECTOR

The informal sector must be in line with current trends, especially the creation of a more conducive environment as well as an emphasis on more effective payment methods, marketing and product delivery.

The ideal approach must be identified through the informal business concept in order to increase the sales rate in addition to improving the image of the hawker.

The necessary actions to support this initiative are as follows:

1. Adopt an e-commerce system through the use of applications in food ordering and delivery methods, self-payment kiosks, cashless payments, digital menu board applications as well as marketing and promotion through ~~the~~ social media;
2. Adopt a modern, comfortable and attractive design for the informal sector operation centre to ensure durability;
3. Provide adequate facilities and support the diversity of business activities in the area; and
4. Provide fast product services such as "self-pickup", "drive-thru", "same-day delivery" and "mobile stall" to increase the efficiency of the informal sector in addition to creating a more efficient business environment.

IMPLEMENTATION PROPOSAL

CP 1-5.3: PLANNING OF HAWKER SPACES IN HIGH INTENSITY AFFORDABLE HOUSING AREAS

An approach to provide affordable hawker spaces is essential to support micro-economic growth in local communities. The planning of the hawkers spaces must be prioritised in high-density housing areas, including affordable housing schemes. The informal sector, including hawkings is an economic activity that generates job opportunities in Kuala Lumpur, especially among the B40 group and part of the M40 group.

The proposal to provide hawker sites or spaces in high-density residential areas is in response to hawking activities in unsuitable areas such as road reserves, river reserves, and other infrastructure facilities.

The implementation approach of this proposals is through policy and programme. One (1) initiative is being proposed for the implementation of CP 1-5.3.

Location: Pasar Chow Kit, Jalan Raja Bot
Source: https://image.shutterstock.com/z/stock-photo-kuala-lumpur-malaysia-kampung-baru-food-market-1947163999.jpg

The informal sector in Pasar Chow Kit, Jalan Raja Bot.

IMPLEMENTATION INITIATIVE 1-5.3A

PROVIDE HAWKER SPACES IN HIGH-INTENSITY AFFORDABLE HOUSING AREAS

Providing hawker spaces or centres as supporting facilities in high-intensity housing areas, especially affordable housing areas, is very important. This proposal must also be considered in the targeted development of affordable housing until 2040.

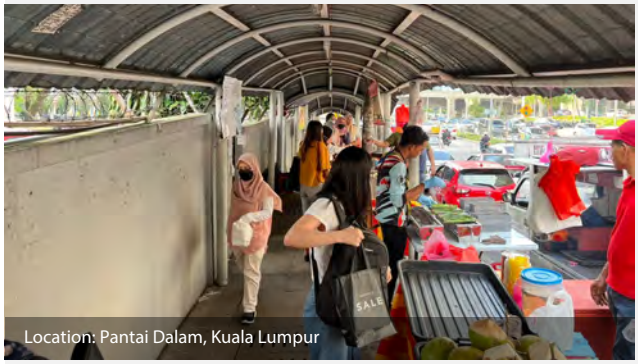
The necessary actions to support this initiative are as follows:

1. Identify and provide a suitable hawker spaces for existing affordable housing areas without hawker facilites;
2. Use of public parking spaces or suitable open spaces in existing affordable housing schemes, such as Prihatin Residency, Wilayah Residency and subsidised public housing, without affecting the original function of these spaces if no specific spaces are available;
3. Propose the provision of a hawker space as a requirement for community facilities in planning permission applications of affordable housing projects; and
4. Ensure the number, size and design of hawker's spaces are subject to current guidelines.

BEST PRACTICE

PROVISION OF HAWKER SPACES

1. Schedule the use of parking spaces or sites for informal business activities such as night markets on weekends;
2. Ensure the availability of access to public transport services to reduce visitor parking issues;
3. Ensure that these activities do not cause a nuisance to local residents; and
4. Ensure that the sites are monitored and maintained as scheduled, especially in relation to waste management and cleanliness.



Location: Pantai Dalam, Kuala Lumpur

Illustration of the hawker activities in residential areas.

Location: Jalan Alor, Kuala Lumpur
Source: https://image.shutterstock.com/image-photo/kuala-lumpur-malaysia-27-january-600w-1011564877.jpg

Hawker's activities at Jalan Alor.

PLANNING STRATEGY

SP 1-6: REGENERATING EXISTING COMMERCIAL AREAS AS A VIBRANT, ATTRACTIVE AND CONDUCIVE BUSINESS SPACES

SCENARIO OF EXISTING COMMERCIAL AREAS IN KUALA LUMPUR

An active and comfortable environment is crucial for the growth of a commercial area. However, some commercial areas are no longer attractive due to a deteriorating environment and physical condition.

This approach aims to rejuvenate old commercial areas and potentially improve the local economy. Urban economic development must be supported by the provision of various up-to-date facilities within a complete and conducive environment.

Efficient land use can reduce excess development and land wastage. The reuse of old buildings and area improvement is an effective initiative to enhance the quality and environment of commercial areas.

In order to realise Kuala Lumpur as a conducive employment and business centre, one (1) Implementation Proposal have been formulated under Planning Strategy 1–6, as shown in Figure 1.6.1.

Brickfields is one of the commercial destinations highlighting an interesting culture in Kuala Lumpur.

Figure 1.6.1:
Implementation of Proposal for Planning Strategy 1-6

SP 1-6 REGENERATING EXISTING COMMERCIAL AREAS AS A VIBRANT, ATTRACTIVE AND CONDUCIVE BUSINESS SPACES

CP 1-6.1 Implementing The Commercial Area Improvement (CAI) Programme

BEST PRACTICE

PROVISION OF VIBRANT BUSINESS SPACE

1. Use of the space between buildings or plazas for commercial activities with the concept of stalls or kiosks;
2. Provision of connected and continuous pedestrian walkways and micromobility vehicles;
3. Provision of landscaping and complete street furniture as user-supporting facilities; and
4. Provision of access to public transport services.

A commercial area with a pedestrian mall concept at the Phuket Weekend Night Market (Naka Market).

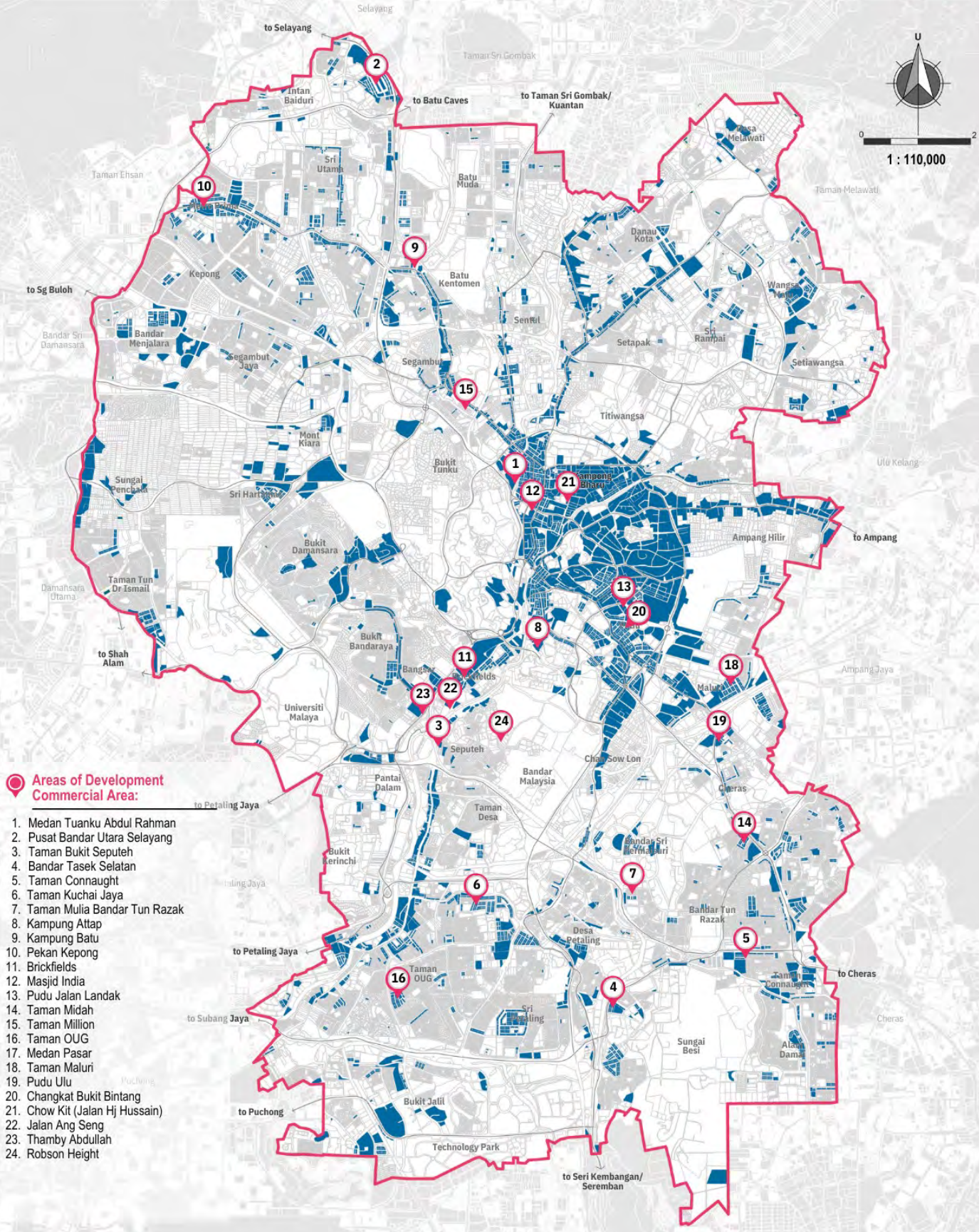


FIGURE 1.6.2 | Plan of Proposed Programme Development Improvement for Commercial Area

Legend :

- Commercial Area Programme Development Improvement

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 1-6.1: IMPLEMENTING THE COMMERCIAL AREA IMPROVEMENT (CAI) PROGRAMME

Existing commercial areas that have become dilapidated require improvements to create a higher-quality environment and to be equipped with various supporting facilities to remain competitive.

The commercial area improvement programme includes the following:

1. Regenerate commercial areas in line with new trend activities to make them more vibrant and attractive to visit;
2. Enhance the visual quality of the areas and their surroundings; and
3. Provide new facilities such as pedestrian and micromobility vehicle routes, along with beautification of the landscape and the provision of smart kiosks to enhance the attractiveness for visiting.

The Draft KLLP2040 has identified 24 existing commercial areas for upgrading through specific action programmes according to each area.

The proposed implementation approach for this proposal is through a project. One (1) initiative is proposed for the implementation of CP 1-6.1.

Location: Chinatown, Jalan Petaling
Source: https://image.shutterstock.com/z/stock-photo-kuala-lumpur-malaysia-jan-chinese-new-year-decoration-of-the-chinatown-in-kuala-lumpur-697067455.jpg

Chinatown is one of the sites for the Commercial Area Improvement programme.

IMPLEMENTATION INITIATIVE 1-6.1A

IMPROVE AND PROVIDE FACILITIES IN COMMERCIAL AREAS IMPROVEMENT (CAI)

Conducive commercial development with the provision of complete supporting facilities would make a commercial focal point more vibrant in attracting visitors.

The necessary actions to support this initiative are as follows:

1. Introduce commercial activities in public transport transit station areas to attact users and tourists;
2. Adopt the concept of Malaysian heritage and culture, especially those with high heritage value;
3. Enhance and upgrade the facades dilapidated buildings;
4. Refurbish and reuse old or underutilised buildings building regeneration with new uses;
5. Provide an attractive "place-making" space as a public focal point;
6. Improve and maintain necessary supporting infrastructure facilities, such as parking, the latest broadband network, and other amenities, to support the commercial centre;
7. Enhance vibrancy and beautify the area with landscaping, green elements, street furniture, signage and wayfinding;
8. Manage the existing traffic circulation system by prioritising the concept of active micromobility;
9. Ensure the provision of connected pedestrian walkways and promote the concept of active micromobility; and
10. Apply sustainable planning concepts, such as safe city elements like Crime Prevention Through Environmental Designs (CPTED), universal designs, smart technology and Low-Carbon City concepts.

BRIEF INFO

24 PROPOSALS FOR IMPROVEMENT OF EXISTING COMMERCIAL AREAS IN KUALA LUMPUR

1. Medan Tuanku Abdul Rahman;
2. Pusat Bandar Utara Selayang;
3. Taman Bukit Seputeh;
4. Bandar Tasek Selatan;
5. Taman Connaught;
6. Taman Kuchai Jaya;
7. Taman Mulia Bandar Tun Razak;
8. Kampung Attap;
9. Kampung Batu;
10. Pekan Kepong;
11. Brickfields;
12. Masjid India;
13. Jalan Landak Pudu;
14. Taman Midah;
15. Taman Million;
16. Taman OUG;
17. Medan Pasar;
18. Taman Maluri;
19. Pudu Ulu;
20. Changkat Bukit Bintang;
21. Chow Kit (Jalan Hj Hussain);
22. Jalan Ang Seng;
23. Thamby Abdullah; and
24. Robson Heights.

Illustration of landscaping and street furniture on walkway in a Commercial Area Improvement (CAI).

Table 1.6.1:
Summary of Priorities of Initiatives in Commercial Area Improvement Programme

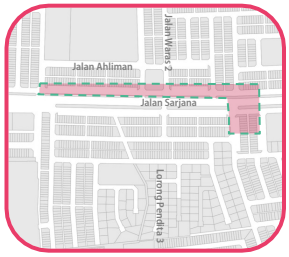
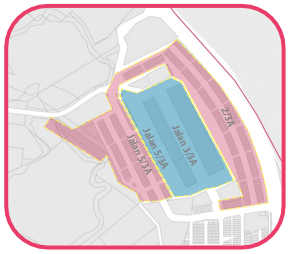
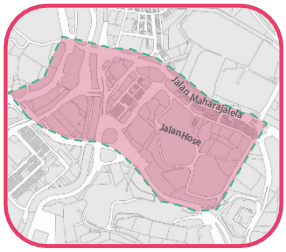
Area and size (hectares)	Insert Plan	Area and size (hectares)	Insert Plan
1. Medan Tuanku Abdul Rahman Proposed pedestrian mall zone Proposed landscape beautification and connected pedestrian walkways Proposed adoption of CPTED elements and smart city components		5. Taman Connaught Proposed landscape beautification Proposed adoption of CPTED elements and smart city components	
2. Pusat Bandar Utara Selayang Proposed improvements to building façades and provision of centralised parking Proposed traffic system circulation management		6. Taman Kuchai Jaya Proposed landscape beautification and infrastructure maintenance Proposed adoption of CPTED elements and smart city components	
3. Taman Bukit Seputeh Proposed landscape beautification and infrastructure maintenance Proposed adoption of CPTED elements and smart city components		7. Taman Mulia Bandar Tun Razak Proposed landscape beautification Proposed adoption of CPTED elements and smart city components	
4. Bandar Tasek Selatan Proposed landscape beautification, infrastructure maintenance and traffic system circulation management Proposed provision of centralised parking Proposed adoption of CPTED elements and smart city components		8. Kampung Attap Proposed landscape beautification and provision of pedestrian walkways Proposed adoption of CPTED elements and smart city components	

Table 1.6.1:
Summary of Priorities of Initiatives in Commercial Area Improvement Programme (continued)

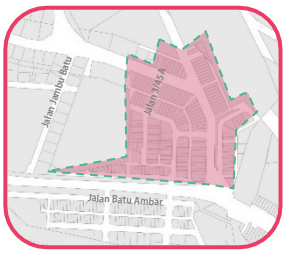
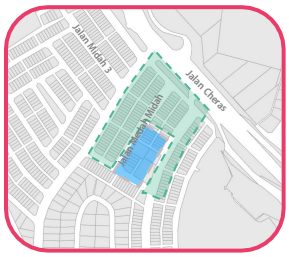
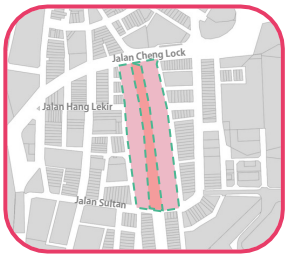
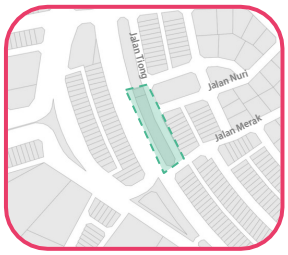
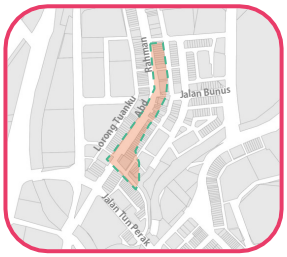
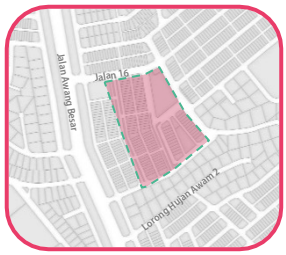
Area and size (hectares)	Insert Plan	Area and size (hectares)	Pelan Sisip
9. Kampung Batu Proposed landscape beautification and infrastructure maintenance Proposed adoption of CPTED elements and smart city components		13. Jalan Landak Pudu Proposed landscape beautification, infrastructure maintenance, traffic circulation system management and provision of centralized parking Proposed adoption of CPTED elements and smart city components	
10. Pekan Kepong Proposed landscape beautification and infrastructure maintenance Proposed adoption of CPTED elements and smart city components		14. Taman Midah Proposed landscape beautification, infrastructure maintenance, traffic circulation system management Proposed provision of centralized parking Proposed adoption of CPTED elements and smart city components	
11. Brickfields Proposed landscape beautification, infrastructure maintenance and cleanliness of the surrounding area Proposed to intensify cultural activities Proposed adoption of CPTED elements and smart city components		15. Taman Million Proposed landscape beautification, infrastructure maintenance, traffic circulation system management and provision of centralized parking Proposed application of CPTED elements and smart city components	
12. Masjid India Proposed landscape beautification Proposed adoption of CPTED elements and smart city components		16. Taman OUG Proposed landscape beautification and infrastructure maintenance Proposed adoption of CPTED elements and smart city components	

Table 1.6.1:
Summary of Priorities of Initiatives in Commercial Area Improvement Programme (continued)

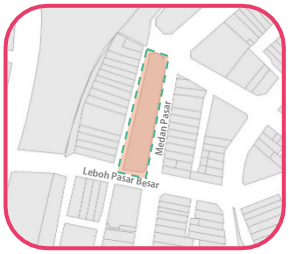
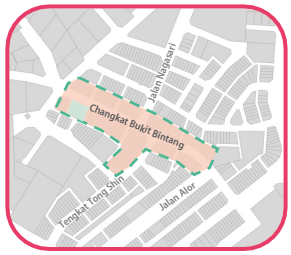
Area and size (hectares)	Insert Plan	Area and size (hectares)	Pelan Sisip
17. Medan Pasar Proposed landscape beautification Proposed adoption of CPTED elements and smart city components		21. Chow Kit (Jalan Hj Hussain) Proposed landscape beautification, infrastructure maintenance and cleanliness of the surrounding area Proposed application of CPTED elements and smart city components	
18. Taman Maluri Proposed landscape beautification, infrastructure maintenance, traffic circulation system management and provision of centralized parking Proposed adoption of CPTED elements and smart city components		22. Jalan Ang Seng Proposed landscape beautification, infrastructure maintenance and cleanliness of the surrounding area Proposed application of CPTED elements and smart city components Proposed improvements to building facades	
19. Pudu Ulu Proposed landscape beautification Proposed application of CPTED elements and smart city components		23. Thamby Abdullah Proposed landscape beautification, infrastructure maintenance and cleanliness of the surrounding area Proposed application of CPTED elements and smart city components Proposed improvements to building facades	
20. Changkat Bukit Bintang Proposed landscape beautification, infrastructure maintenance and cleanliness of the surrounding area Proposed traffic circulation system management and provision of centralized parking Proposed application of CPTED elements and smart city components		24. Robson Heights Proposed landscape beautification, infrastructure maintenance and cleanliness of the surrounding area	

Illustration of commercial areas with pedestrian mall concept.

Illustration of landscape beautification as well as provision of pedestrian walkways and micromobility vehicle.

Illustration of the landscape beautification and creation of an active mobility mode environment.

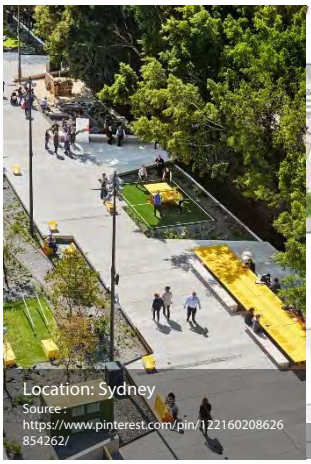


Illustration of the landscape beautification and provision of pedestrian routes complete with street furniture.

THE SUMMARY

GOAL 1 : ENCOURAGING THE DEVELOPMENT OF KUALA LUMPUR AS AN INNOVATIVE AND PRODUCTIVE CITY

Various initiatives and implementation approaches have been proposed to realise Goal 1, which aims to encourage the development of Kuala Lumpur as an Innovative and Productive City.

The planning and implementation of Goal 1 in the Draft KLLP2040 considers the SDGs, the proposal of KLSP2040 and other national development policies. These considerations are detailed through projects, policies, programmes, planning controls and guidelines.

The proposed strategies, initiatives and implementation approaches emphasise diversifying financial activities and commercial services, branding Kuala Lumpur as a urban tourism destination, strengthening the cultural and creative city, developing industrial clusters, driving entrepreneurial development as well as regenerating existing commercial areas into vibrant, attractive and conducive business spaces.

Table 1.1 provides shows a summary of the planning strategy and implementation proposal for Goal 1.

Table 1.1:
The summary of Planning Strategy and Implementation Proposals of Goal 1

Planning Strategy	Implementation Proposal	Implementation Approach				
		Project	Policy	Programme	Planning Control	Guideline
SP 1-1	CP 1-1.1	-	1	-	1	-
	CP 1-1.2	-	1	-	1	-
	CP 1-1.3	1	1	1	-	-
	CP 1-1.4	1	-	-	-	-
	CP 1-1.5	-	1	1	-	-
SP 1-2	CP 1-2.1	1	1	1	-	-
	CP 1-2.2	1	1	1	-	-
	CP 1-2.3	1	1	1	-	-
	CP 1-2.4	1	1	1	-	-
	CP 1-2.5	1	1	1	1	1
SP 1-3	CP 1-3.1	1	-	1	-	-
SP 1-4	CP 1-4.1	1	1	1	-	-
	CP 1-4.2	-	1	-	1	-
	CP 1-4.3	1	1	-	1	-
	CP 1-4.4	1	-	1	-	-
	CP 1-4.5	1	1	-	-	-
	CP 1-4.6	-	1	-	1	1
	CP 1-4.7	1	1	-	-	-
	CP 1-4.8	-	-	1	-	-
SP 1-5	CP 1-5.1	1	1	-	-	-
	CP 1-5.2	-	-	1	-	-
	CP 1-5.3	-	1	1	-	-
SP 1-6	CP 1-6.1	1	-	-	-	-
TOTAL		15	17	13	6	2

FOCUSING ON THE DEVELOPMENT OF KUALA LUMPUR AS AN INCLUSIVE, EQUITABLE AND LIVABLE CITY

GOAL 2

GOAL 2

FOCUSING ON THE DEVELOPMENT OF KUALA LUMPUR AS AN INCLUSIVE, EQUITABLE AND LIVABLE CITY

As a global city, Kuala Lumpur is the focus of various economic activities and national growth nodes that support the diversity of urban activities.

Housing and public facilities planning in Kuala Lumpur must be inclusive, equitable and livable to all groups. Priority should be given towards the lower and middle-income groups, youth, senior citizens, disabled as well as non-citizens in line with the vision of a City for All.

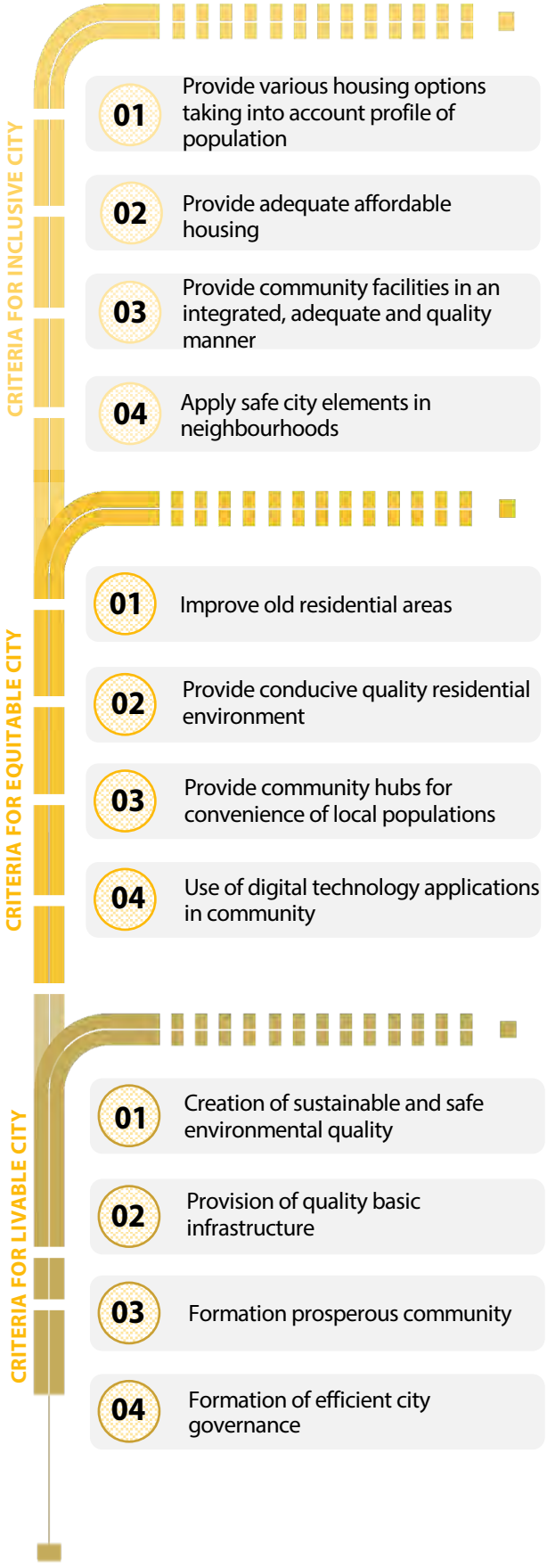
The inclusive city criteria emphasise on provide various housing options taking into account the profile of the population, providing adequate affordable housing, providing community facilities in an integrated, adequate and quality manner as well as application of safe city elements in neighbourhoods.

The equitable city criteria emphasise improving old residential areas, providing conducive quality residential environment, providing a community hubs for the convenience of local populations and use of digital technology applications in the community.

The livable city criteria emphasize the creation of sustainable and safe environmental quality, the provision of quality basic infrastructure, the formation of a prosperous community, and efficient city governance.

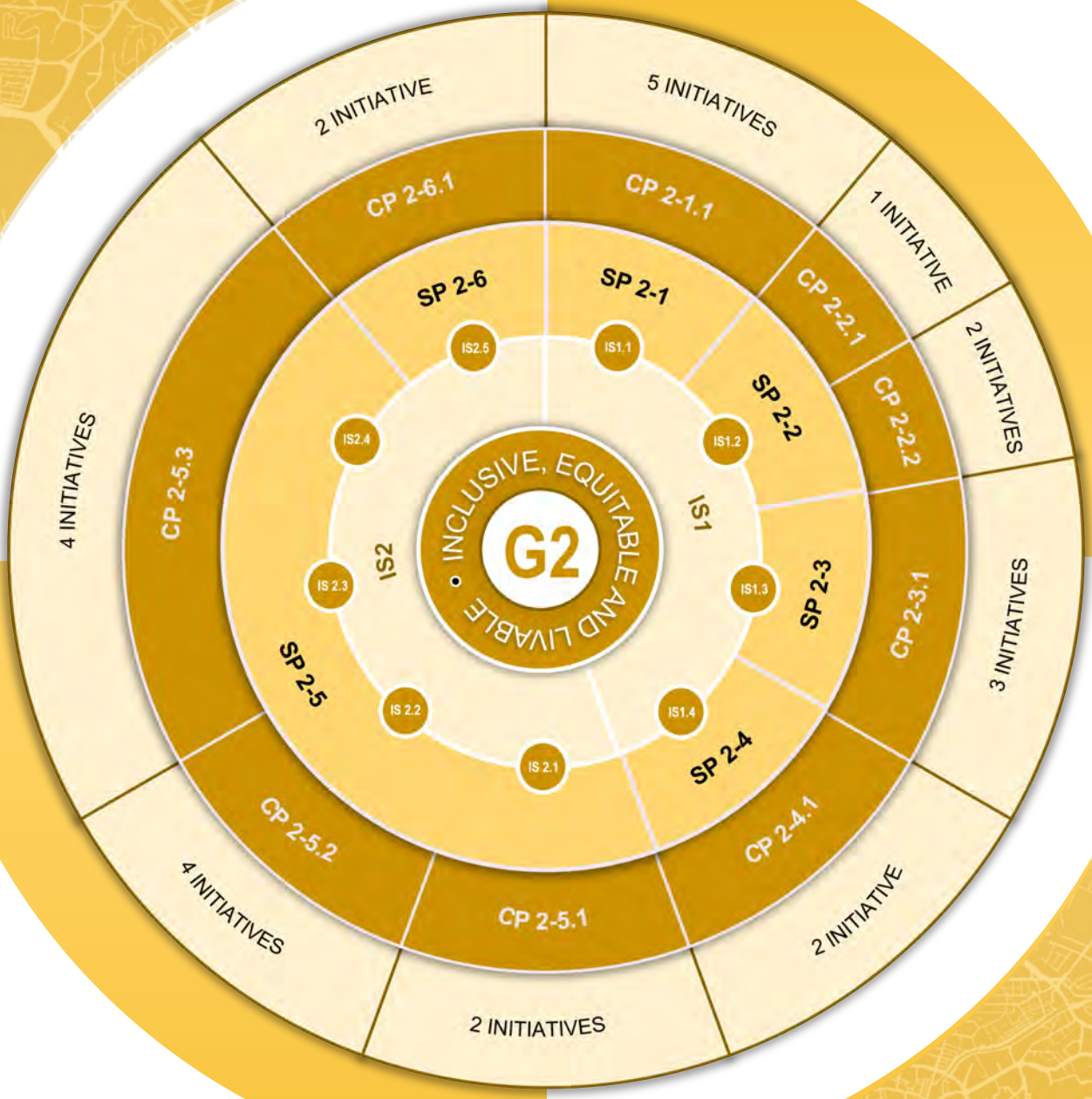
Figure 2.1 lists the main criteria that need to be implemented to focus the development of Kuala Lumpur as an Inclusive, Equitable and Livable City.

Figure 2.1:
Criteria for Inclusive, Equitable and Livable City



KLSP2040
2 STRATEGIC DIRECTIONS
9 ACTIONS

FIGURE 2.2
SUMMARY OF PLANNING STRATEGY AND IMPLEMENTATION PROPOSAL
GOAL 2:
FOCUSING ON DEVELOPMENT OF KUALA LUMPUR AS AN INCLUSIVE, EQUITABLE AND LIVABLE CITY



There are six (6) Planning Strategies (SP), nine (9) Implementation Proposals (CP) and 25 Implementation Initiatives (IP) that are formulated in line with KLSP2040 as summarized in Figure 2.2.

DRAFT KLLP2040
6 PLANNING STRATEGIES
9 IMPLEMENTATION PROPOSALS

PLANNING STRATEGY

SP 2-1: PROVIDING VARIOUS HOUSING OPTIONS TO MEET THE NEEDS OF POPULATION

SCENARIO OF HOUSING DEVELOPMENT IN KUALA LUMPUR

Kuala Lumpur is one of the main housing centres for all groups of society in Malaysia. The provision of various housing options equipped with community facilities to meet the needs of the population, especially the lower and middle-income groups is very important to ensure a comfortable and high quality of life can be attained.

The current housing stock in Kuala Lumpur is 500,803 units. The housing development trend in Kuala Lumpur over the past decade has been more focused on condominiums and multi-story apartments.

The main issue for housing development in Kuala Lumpur is the mismatch between house prices and the income of the population.

The way forward in housing development is through the provision of adequate affordable housing, the provision of housing units of various sizes for the needs of all groups of society and the provision of housing in redevelopment areas that have been identified in the Draft KLLP2040.

Housing unit projection is based on population growth and household size by 2040. Other factors such as committed housing, backlog estimates, an immediate and regular replacement are also considered in housing projections.

In order to realise Kuala Lumpur as a city with offer various housing options to meet the needs of the population, one (1) Implementation Proposal is formulated under Planning Strategy 2–1, as shown in Figure 2.1.1.

BRIEF INFO

HOUSING REQUIREMENT IN KUALA LUMPUR BY 2040

Housing Stock, 2020

500,803 units

Projected Housing Units in 2040

762,500 units

Additional Housing Requirements in 2040

261,697 units

Average Annual Growth Rate (AAGR)

2.13%

Source: Adapted from KLSP2040

Figure 2.1.1:
Implementation Proposals for Planning Strategy 2-1

SP 2-1	**PROVIDING VARIOUS HOUSING OPTIONS TO MEET THE NEEDS OF POPULATION**
CP 2-1.1	Planning for Multi-Income Housing

IMPLEMENTATION PROPOSAL

CP 2-1.1: PLANNING FOR MULTI-INCOME HOUSING

Planning and management for future housing provision should consider the changes in population profile and households size.

Kuala Lumpur is expected to experience a change in population profile in the future in which household size will decrease from 3.2 in 2025 to 3.0 in 2040.

The number of senior citizens is projected to be higher at 17.3 percent in 2040 compared to 6.6 percent in 2020. Meanwhile, the youth will comprise almost one-third of the total population of Kuala Lumpur by 2040.

Planning of housing in Kuala Lumpur needs to be well managed and balanced, especially in ensuring multi-income housing development can be implemented.

The implementation approach of this proposal is through projects, policies, programmes, planning control and guidelines. There are five (5) initiatives proposed for the implementation of CP 2-1.1.

Multi-storey residential development has the potential to provide multi-income housing.

IMPLEMENTATION INITIATIVE 2-1.1A

PROVIDE MICRO-HOUSING

Micro-housing is one of the residential development concepts aimed at meeting the needs of target groups such as newly employed singles, young entrepreneurs and professional expatriates.

The concept of this development is an encouragement to the target groups to live in the city centre thus reducing traffic congestion problems caused by the movement of vehicles by entering and exiting of Kuala Lumpur City Centre.

Micro-housing provision proposes to adopt the concept of adaptive building reuse and does not involve new development.

The purpose of this micro-housing is to revitalise existing buildings that are no longer feasible or uneconomically viable as well as buildings that are over ten (10) years old in the Kuala Lumpur City Centre and Transit Planning Zone (TPZ) and Transit Influence Zone (TIZ) areas.

Communal living facilities such as a laundry area, reading room and community space or hall should be provided to save space and encourage social interaction.

The necessary actions to support this initiative are as shown in Table 2.1.1:

Table 2.1.1:
Micro-Housing Planning Measures in Kuala Lumpur

Subject	Planning Guidelines
1. Permitted location	Kuala Lumpur City Centre and TPZ and TIZ area only.
2. Type of building	Existing commercial structures that are no longer feasible or uneconomically viable and over ten (10) years old.
3. Minimum size	200 square feet up to 450 square feet.
4. Ownership	a. Single ownership (only for rental or lease); and b. Strata ownership (sale of units) managed by the Management Corporation (MC).
5. Facilities	a. Prayer room b. Management Office c. Multi-purpose hall or meeting room; d. Laundry; and e. Convenience store.
6. Requirements of car parking and motorcycle parking	a. Maintain the car parking and motorcycle parking according to the original approval plan of the existing building and cannot be change for other uses; b. Car parking lot cannot be used as an accessory parcel; c. Visitor parking : ten (10) percent of the number of residential units; and d. Disable parking : two (2) percent of the total visitor car parking.

Note: Any changes to the Micro-Housing Planning Guidelines are subject to current planning policies and requirements.

IMPLEMENTATION INITIATIVE 2-1.1B

PLAN FOR SMALL-SIZED HOUSING UNITS

The housing development pattern in Kuala Lumpur will be affected by the changes in development control from density to plot ratio for land use zones of residential. However, the Land Use Zone of Residential 1 (R1) and the Land Use Zone of Traditional Village 1 (TV1) will use height control.

Plot ratio is used as a tool to control the intensity that aims to increase the viability of the development. This change also provides opportunities to provide more house units of various sizes in line with future population needs.

Future population trends in Kuala Lumpur show that there is a demand for smaller house sizes for certain groups such as Dual Income No Kids (DINK) and Young Urban Professionals (YUPPIES).

The planning of small-sized house units is encouraged in the four (4) locations as follows:

1. Kuala Lumpur City Centre area;
2. TPZ and TIZ area;
3. District Growth Centre Areas such as in land use zones of Major Commercial (MC) that allow residing elements; and
4. Other areas that are appropriate and their implementation should be subjected to the guidelines set by KLCH.

Location: PPR Sg Bunus

Provision of PPR to accommodate low-income group.

IMPLEMENTATION INITIATIVE 2-1.1C

DEVELOP TRANSIT HOUSING

Transit housing is a housing concept that is rented out to the following target groups as follows:

1. Newly employed youth;
2. Newly married couple; and
3. New families immigrating to Kuala Lumpur do not exceed four (4) people per households.

These groups can rent at the Transit Housing for a certain period of time. The rental limit is suggested to be three (3) to five (5) years before they have the ability to buy and own their own home.

Transit housing can be provided in the form of shared houses, such as hostel-type housing or through adaptive reuse of existing buildings. This housing should be provided with facilities such as a gymnasium, lounge, reading room and other suitable facilities.

Provision of Transit Housing is encouraged in six (6) locations as follows:

1. Redevelopment areas;
2. TPZ and TIZ area;
3. Land Use Zones of Commercial areas such as City Centre Commercial (CCC), Major Commercial (MC) and Commercial (C) that allow residing elements;
4. Land Use Zone of Mixed Development (MX);
5. Stratified housing zones areas such as Residential 2 (R2), Residential 3 (R3) and Residential 4 (R4); and
6. Land Use Zone of Institutional (INT).

The provision of transit housing needs to comply with the standards that are and should be subjected to the land use zone of the proposed lot.

Location: Rumah Transit Bukit Jalil

Bukit Jalil Transit Housing Programme introduced by the Ministry of Housing and Local Government.

IMPLEMENTATION INITIATIVE 2-1.1D

PROVIDE HOUSING FOR THE ELDERLY

National Elderly Policy expects the ageing status of Malaysia to be in the year 2030. This status will reach when the population aged 60 years and above constitute 15 percent of the total population.

KLSP2040 stated that the elderly group aged 65 years old recorded 6.6 percent of the current population in 2020 and is expected to increase to 17.3 percent by 2040.

KLSP2040 suggests detailed guidelines for retirement homes to be prepared.

The proposal on the development of special housing for the elderly in Kuala Lumpur is to enable them to live independently with the provision of special facilities.

The Draft KLLP2040 proposed various suitable forms of housing for the elderly in Kuala Lumpur as follows:

1. Existing housing retrofit with a senior-friendly concept;
2. Special housing for the elderly with the concept of a retirement villages;
3. Open-market senior-friendly housing with a dual-key concept; and
4. Senior-friendly affordable housing.

The necessary actions to support this initiative are as shown in Table 2.1.2:

Table 2.1.2:
Types and Criteria of Senior Citizen Housing in Kuala Lumpur

Type of Housing	Housing Criteria
1. Existing housing retrofit with senior-friendly concept	The interior and exterior design of the existing house is retrofitted to incorporate senior-friendly elements and features. Interior design retrofit elements that can be applied are lower placement of electrical switches, larger door openings, provision of ramps and handrails at entrances and stairs. The application of such policies and concepts is suitable for private residences and seniors who are able to be independent in carrying out daily activities including working, managing themselves, participating in community social activities and others.
2. Special housing for the elderly with the concept of a retirement homes	Retirement homes is defined as a new area planned with residing elements, having facilities and support services for the elderly. Residents in this special housing can choose to live here permanently or for a certain period. Home ownership is encouraged on a rental or lease basis. An example of a special housing project for retirement homes is Kampung Admiralty in Singapore, a building complex consisting of housing units, a medical centre, commercial space and green areas. Provision of retirement homes is encouraged in three (3) locations as follows: 1. Land Use Zones consisting of Commercial (C), Mixed Development (MX), Residential 1 (R1), Residential 2 (R2), Residential 3 (R3), Residential 4 (R4) and Institutional (INT) with certain conditions; 2. Other areas such as redevelopment areas, TPZ and TIZ; and 3. Catchment area of health facilities.
3. Open market senior-friendly housing with dual-key concept	A dual-key concept house is a house that has two (2) different living spaces. This concept is suitable to be implemented in all types of houses, whether new houses or renovated houses such as terraced, semi-detached, single or multi-storey houses. The dual-key concept is intended to allow children or immediate family to live next to the elderly to provide support to carry out their daily activities.
4. Senior-friendly affordable housing.	Developers are encouraged to provide at least five (5) percent of the affordable housing as senior-friendly housing complete with facilities for elderly.

IMPLEMENTATION INITIATIVE 2-1.1E

PROVIDE HOUSING FOR WORKERS

The provision of housing for workers in the construction, manufacturing and service sectors is necessary to ensure a better quality of life in line with the vision of City for All. This accommodation facility is provided to the majority of workers consisting of local citizens and foreign workers.

KLCH has prepared guidelines for the temporary accommodation of foreign workers. The provision of accommodation for these workers is through:

1. New construction or retrofit of Centralised Worker's Quarters (CLQ)

The provision of CLQ facilities is based on the concept of dormitory rooms through building regeneration or new development. The Land Use Zone allowed for the provision of this accommodation is Commercial (C), Mixed Development (MX), Industrial (IP) and Mixed Industrial Development (MXI).

2. Temporary accommodation on construction sites

The provision of temporary accommodation for workers is also suggested at appropriate construction sites in accordance with the Buku Panduan Penginapan Pekerja di bawah Akta Standard Minimum Perumahan, Penginapan dan Kemudahan Pekerja 1990, Department of Labour Peninsular Malaysia (JTKSM). The criteria that qualify the construction of temporary accommodation at the construction site are as follows:

1. Sites located far from existing CLQ provided at a distance of more than ten (10) kilometres;
2. Less than three (3) years construction period; and
3. Provide adequate space to accommodate employee facilities in accordance with the guidelines set by JTKSM.

BRIEF INFO

BUKU PANDUAN PENGINAPAN PEKERJA DI BAWAH AKTA STANDARD MINIMUM PERUMAHAN, PENGINAPAN DAN KEMUDAHAN PEKERJA 1990 (AKTA 446), 2021

1. Enclosed space area for one worker;
   a. Provision not less than three (3) square metres for sleeping room or rest room.
   b. Provide sanitary facilities for employee's accommodation which is at least:
      - One (1) toilet and one (1) bathroom for every 15 workers.
2. Provide gas stove, dustbin, clean water and electricity supply;
3. Provide minimum basic facilities for each employee that cannot be shared:
4. Provide a bed that measures not less than 1.7 square metres. If bunk beds are provided, the space between the two (2) beds should not be less than 0.7 metres of mattress and pillow; and
5. Locked wardrobe measuring not less than 0.35 metres long, 0.35 metres wide and 0.9 metres high; and
6. Other facilities deemed necessary by the Deputy Director General of Department of Labour Peninsular Malaysia (JTKSM).

Source: Adapted from Buku Panduan Penginapan Pekerja di bawah Akta Standard Minimum Perumahan, Penginapan dan Kemudahan Pekerja (Akta 446), 2021, Department of Labour Peninsular Malaysia (JTKSM).

BEST PRACTICE

PROVISION OF WORKERS HOUSING AT BULIM SQUARE DORMITORY, SINGAPORE

Bulim Square Dormitory is a new foreign worker dormitory located in Singapore and has the capacity to accommodate a total of 948 people. This dormitory complex on a 1.67 hectares site consists of seven (7) blocks of 2-storey residential buildings and 1 block dedicated to various facilities such as canteen, laundry, recreation space, lounge, cooking space, TV room and reading room. This project is part of the Singapore Government's programme to provide better and more spacious worker dormitories to prevent the spread of the COVID-19 pandemic through higher standards.

Bulim Square Dormitory, Singapore.

PLANNING STRATEGY

SP 2-2: PROVIDING QUALITY AND CONDUSIVE AFFORDABLE HOUSING

SCENARIO OF AFFORDABLE HOUSING DEVELOPMENT IN KUALA LUMPUR

The provision of affordable housing that is targeted according to income category is a proactive approach in line with Strategic Core 6: Regional Inclusion, Shared Prosperity Vision 2030 (WKB 2030). This is to achieve the goal of providing adequate and affordable housing.

Provision of this affordable housing should consider several factors such as affordable prices, safe living environment, innovative house design and proximity to public transport facilities. This provision enables Kuala Lumpur residents especially B40 and some M40 groups to buy and own a house.

Insufficient supply of affordable housing is the main issue for the provision of housing in Kuala Lumpur. This is due to land scarcity as well as increasing and high real estate value.

Some old housing areas have the potential to be redeveloped and turned into quality and conducive affordable housing sites. This can be implemented by increasing development intensity and provision of appropriate incentives. The number of affordable housing units in Kuala Lumpur by 2020 is 40,022 units.

KLSP2040 projects a total of 762,500 housing units until 2040 and sets target of 40 percent for affordable housing which is 305,000 units. This target is to meet the needs of B40 and some M40 groups to achieve the goal of one house for one household in line with the National Housing Policy.

In order to realise Kuala Lumpur as a city with offer the affordable housing to meet the needs of population, two (2) Implementation Proposals are formulated under Planning Strategy 2–2, as shown in Figure 2.2.1.

BRIEF INFO

AFFORDABLE HOUSING TARGET IN KUALA LUMPUR BY 2040

Affordable Housing Units in 2020

40,022 units

Projected Housing Units in 2040

762,500 units

40 Percent Affordable Housing Units Targeted in 2040

305,000 units

Existing Public Housing Units and People's Housing Programme in 2020

61,618 units

Source: Adapted from KLSP2040

Figure 2.2.1:
Implementation Proposals for Planning Strategy 2-2

SP 2-2 **PROVIDING QUALITY AND CONDUSIVE AFFORDABLE HOUSING**

- CP 2-2.1 Planning of Affordable Housing
- CP 2-2.2 Planning Of Livable Housing

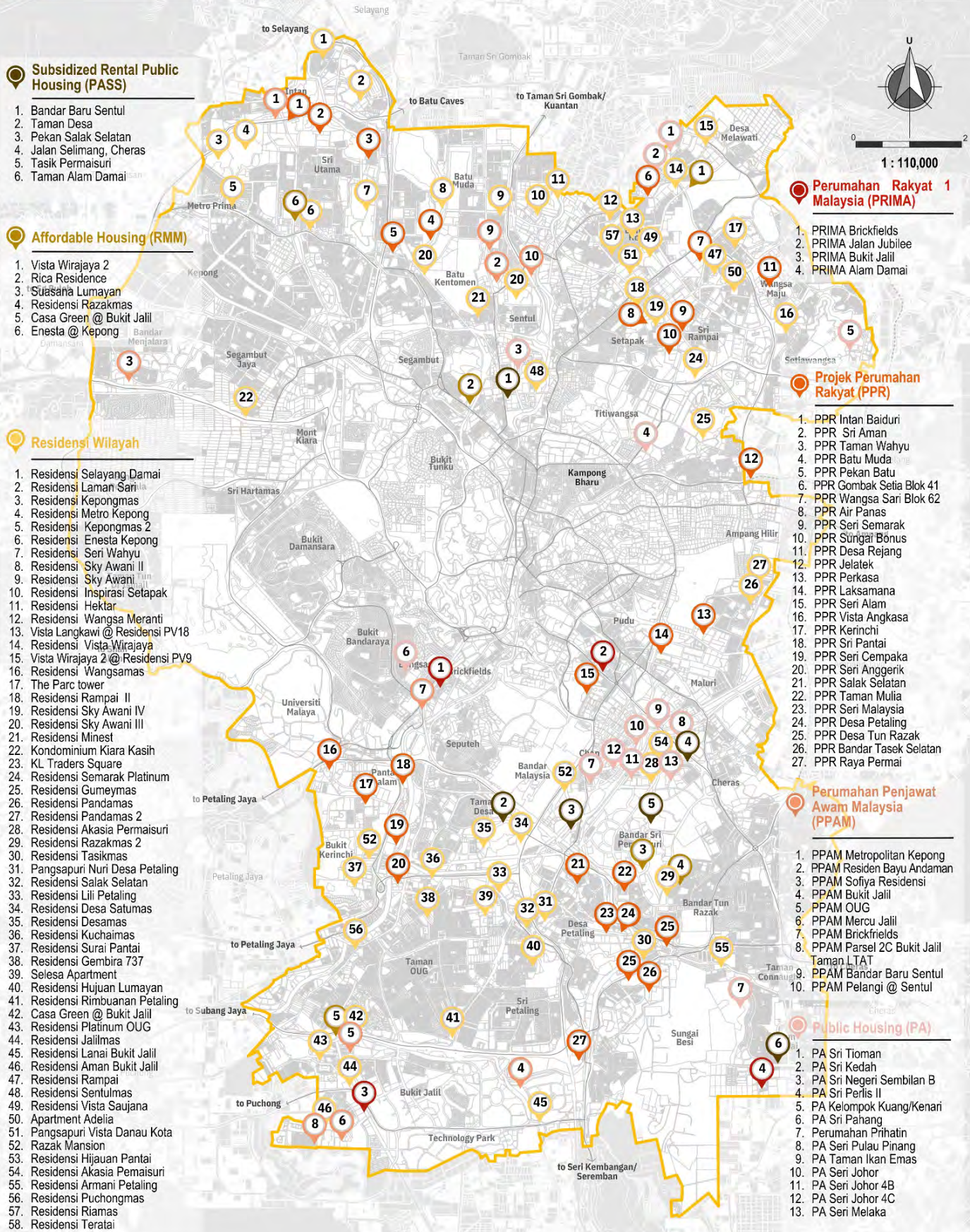


FIGURE 2.2.2 | Plan of Proposed for Affordable Housing In Kuala Lumpur

Legend :

Proposed for Affordable Housing

Others

Main Road

Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 2-2.1: PLANNING OF AFFORDABLE HOUSING

Quality and conducive is the main agenda in the development of affordable housing in Kuala Lumpur by 2040. It needs to consider affordable prices, suitable sizes, strategic locations, good public transport network and equipped with public facilities.

The Draft KLLP2040 proposed to increase the number of affordable housing through the implementation of actions as follows:

1. Continue existing affordable housing programmes such as Perumahan Rakyat 1 Malaysia (PR1MA), Perumahan Penjawat Awam (PPAM), Residensi Wilayah Keluarga Malaysia, Residensi Keluarga Malaysia and Residensi Madani. Potential areas for affordable housing are as follows:
    a. Appropriate government and privately owned lands;
    b. Selected redevelopment areas zoned as Land Use Zones of Mixed Development (MX) such as Bandar Malaysia and Kem Batu Kentonmen; and
    c. Appropriate TPZ and TIZ area.
2. Develop high-intensity affordable housing in land use zones of Residential 3 (R3), Residential 4 (R4) and Mixed Development (MX) that can be integrated with open market housing.
3. Encourage private developers to develop housing projects with affordable housing units.

The implementation approach of this proposal is through projects, policies, planning controls and guidelines. One (1) initiative is proposed for the implementation of CP 2-2.1.

IMPLEMENTATION INITIATIVE 2-2.1A

CONTINUATION EXISTING AFFORDABLE HOUSING PROGRAMME

The existing affordable housing programmes in Kuala Lumpur needs to be continued to enable the low-income group to have comfortable and quality house.

The necessary actions to support this initiative are as follows:

1. Develop affordable housing on government or private land with a selling price of up to RM300,000 per unit;
2. Use of plot ratio incentives for development with an affordable housing component. This incentive applies to sites that can be considered for affordable housing development;
3. A set base plot ratio up to 1:6.0 is proposed to encourage the development of affordable housing. Coordination needs to be made regarding the allocation of intensity in line with the affordable housing policy by the Department of Federal Territory (JWP); and
4. Affordable housing planning needs to emphasise on the provision of adequate and quality community facilities.

Location: PPAM Metropolitan Kepong

PPAM programme helps civil servants to own houses in Kuala Lumpur.

Location: Residensi Wilayah - Residensi Kepongmas

Existing affordable housing programme in Kuala Lumpur offered comfortable and quality house.

IMPLEMENTATION PROPOSAL

CP 2-2.2: PLANNING OF LIVABLE HOUSING

Affordable housing planning means housing built and provided by KLCH for the B40 group who have low incomes and cannot afford to buy a house. This group will be given the opportunity to rent with a fixed rental rate and period. A total of 33 Public Housing Projects (PA) and 32 People's Housing Projects (PPR) have been built in Kuala Lumpur with a total of 61,618 units. PA planning requires improvements in terms of the environment as well as infrastructure such as landscaping, footpaths and public facilities.

KLCH also provides a housing programme for rental by the M40 group through the building of Subsidized Public Housing for Rent (PASS) in Sungai Udang, Segambut. Facilities being provided are 24-hour security control with closed circuit camera (CCTV) recording, swimming pool, hall and surau.

The implementation approach of this proposal is through projects, policy, programmes and planning controls. There are two (2) initiatives proposed for the implementation of CP 2-2.2.

Location: Residensi Sungai Udang, Segambut

Provision of Subsidised Rental Public Housing in Segambut.

IMPLEMENTATION INITIATIVE 2-2.2A

PROVIDE SUBSIDISED RENTAL PUBLIC HOUSING (PASS)

PASS is one of KLCH's efforts to provide housing for the B40 and some M40 groups to live in the city. Through PASS project, KLCH will provide housing facilities that will be rented to the target group for a certain period. This initiative is among the approaches taken by JWP to alleviate urban poverty in Kuala Lumpur.

PASS is proposed to be rented for a period of three (3) to five (5) years. After the rental period end, the tenant must find a new residence and be replaced by a new tenant. PASS need to be equipped with community facilities to ensure the comfort of residents.

There is one (1) PASS project which is the Residensi Sungai Udang in Segambut that has been completed in 2021. The project comprise of 1,251 units with an area of 807 square feet for each unit and is equipped with three (3) rooms and two (2) bathroom.

There are six (6) sites that have been identified as suitable to be developed as PASS on land owned by KLCH as shown in Table 2.2.1 and Figure 2.2.2.

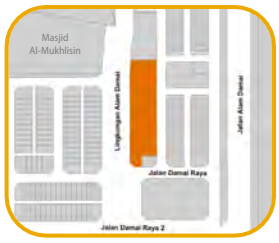
BEST PRACTICE

PROVISON OF ENFIELD COUNCIL, UNITED KINGDOM

Council Housing is provided by Enfield Council located at Edmonton N9. This housing scheme can be implemented through a grant that has been given by the Greater London Authorities (GLA) to Enfield Council in meeting the demand of residents for the provision of good and quality family housing. This Council Housing scheme consists of 12 new units for family homes and ten (10) council flats for the elderly.

Design of Council Homes at Enfield Council, United Kingdom

Table 2.2.1:
Proposed of Subsidised Rental Public Housing Plan on Land Owned by KLCH

Area and size (hectares)	Inset Plan
1. Bandar Baru Sentul 0.57 hectares	
2. Taman Desa 8.98 hectares	
3. Pekan Salak Selatan 3.83 hectares	
4. Jalan Selimang, Cheras 1.36 hectares	
5. Tasik Permaisuri 0.41 hectares	
6. Taman Alam Damai 0.45 hectares	

Note: Any amendments subject to KLCH's policies and plans from time to time.

IMPLEMENTATION INITIATIVE 2-2.2B

MAINTAIN PUBLIC HOUSING (PA) AND PROGRAM PERUMAHAN RAKYAT (PPR)

The initiative to maintain the number of PA and PPR units is one of KLCH's efforts to provide housing for low-income people who are unable to own house. 2021 data shows that there are 22,591 PA units and 39,027 PPR units in Kuala Lumpur. PA and PPR have been zoned as land use zones of Residential 4 (R4) in the Draft KLLP2040 with a base plot ratio up to 1:6.0.

The Draft KLLP2040 proposes PA and PPR be involved in the redevelopment programme to increase the number of units by 20 percent of the existing units.

Most PAs are more than 30 years old and no longer suitable for the current environment such as PA Seri Selangor in Pudu and PA Sri Pahang in Jalan Bukit Bangsar which was completed in 1975 and is now over 45 years old. These PA units are between 530 square feet and 560 square feet, which are no longer suitable for family households today.

The redevelopment of the PA in Kuala Lumpur will provide an opportunity for the provision of more affordable housing units that are needed. The redevelopment enables the improvement of the provision of community facilities, green space and a variety of mixed activities to support the current and future needs of local residents, such as Residensi Kerinchi and 1 Razak Mansion.

Location: PPR Seri Semarak

Residential areas that implement the Program Perumahan Rakyat (PPR).

BRIEF INFO

NUMBER OF AVAILABLE PA AND PPR UNITS IN KUALA LUMPUR

Public Housing (PA)
22,591 units

Program Perumahan Rakyat (PPR)
39,027 units

Source: Department of Community Development and Urban Wellbeing, KLCH, 2022.

Location: PPR Wahyu, Taman Wahyu, Kuala Lumpur

Provision of PPR to accommodate low-income group.

PLANNING STRATEGY

SP 2-3: ADDRESSING THE NEEDS OF THE HOMELESS

SCENARIO OF HOMELESSNESS IN KUALA LUMPUR

The homeless are people without permanent place to live. The number of homeless people is now increasing due to the many people who have lost their jobs and livelihoods following the spread of the COVID-19 pandemic.

Homelessness issue in Kuala Lumpur is often linked to the problems of cleanliness, safety and city image. A preliminary survey conducted in 2019 found that 63 percent of the 73 respondents who were homeless stated that one of the reasons they became homeless was due to unemployment while another 37 percent was due to low income.

Cooperation between KLCH and various responsible agencies is needed to address and meet the needs of the homeless in an effort to ensure the well-being of this group.

In order to realise Kuala Lumpur as a city with realize and address the needs of the homeless, one (1) Implementation Proposal is formulated under Planning Strategy 2–3, as shown in Figure 2.3.1.

Figure 2.3.1:
Implementation Proposal for Planning Strategy 2-3

SP 2-3	**ADDRESSING THE NEEDS OF THE HOMELESS**
CP 2-3.1	Improving Welfare of The Homeless

Location: Pusat Transit Gelandangan Kuala Lumpur (Jalan Pahang)
Source: Facebook Pusat Transit Gelandangan Kuala Lumpur

The Pusat Transit Gelandangan Kuala Lumpur was built to help and train the homeless to be independent.

Location: Homeless Service Centre (Jalan Medan Tuanku)

Various programmes implemented to meet the needs of the homeless.

IMPLEMENTATION PROPOSAL

CP 2-3.1: IMPROVING WELFARE OF THE HOMELESS

KLCH as an agency under JWP is always committed to dealing with homelessness issues within Kuala Lumpur. Homeless people need to be managed and controlled to avoid negative impacts on the well-being of Kuala Lumpur.

Areas where the homeless are concentrated are around:

1. Jalan Tuanku Abdul Rahman;
2. Jalan Tiong Nam (Chow Kit);
3. Masjid Jamek;
4. Masjid Negara;
5. Menara Maybank;
6. Mydin Kotaraya;
7. Pasar Seni (Central Market);
8. Dataran Merdeka;
9. Jalan Masjid India; and
10. Jalan Silang.

The implementation approach of this proposal is through policies, programmes and guidelines. There are three (3) initiatives proposed for the implementation of CP 2-3.1.

Anjung Singgah is a facility provided for homeless in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 2-3.1A

FACILITATE PROVISION OF TRANSIT CENTRE FOR HOMELESS

Provision of Homeless Transit Centre is a temporary accommodation facility that is equipped with basic facilities such as beds, toilets, bathrooms, prayer rooms and dining rooms.

Homeless transit centres have been provided in three (3) locations as follows:

1. Pusat Transit Gelandangan Kuala Lumpur (Jalan Pahang)
2. Pusat Khidmat Gelandangan (Jalan Medan Tuanku); and
3. Anjung Singgah (Jalan Hang Lekiu).

The necessary actions to support this initiative are as follows:

1. Identify suitable sites or buildings for homeless transit centre;
2. Determine appropriate land use classification for the homeless transit centre; and
3. Provide logistical and operational assistance to agencies involved.

IMPLEMENTATION INITIATIVE 2-3.1B

DEVELOPE HOMELESS TRANSFORMATION CENTRE

The Homeless Transformation Centre is an initiative by JWP and KLCH to provide temporary accommodation and skills training to the homeless. The development of this transformation centre can assist the homeless towards a more positive life. The current programme being implemented is known as Hijrah Warrior.

Anjung Kelana is one of the existing homeless transformation centres in Taman Danau Desa. This transformation centre provides training and guidance in implementing urban farming projects, business management training and appropriate skills. The training is a preparation for the group to live independently.

Proposals to develop Homeless Transformation Centres in other areas can also be implemented in appropriate commercial and industrial buildings.

IMPLEMENTATION INITIATIVE 2-3.1C

FACILITATE PROVISION OF TEMPORARY HOMELESS CENTRES (PSG)

The spread of COVID-19 pandemic in Kuala Lumpur has caused several existing Community Centres and Multi-Purpose Halls to be converted into Temporary Homeless Centres (PSG).

PSG can provide temporary accommodation for this group which tends to increase due to the spreading of the pandemic. In the event of future pandemic, crisis or disaster, this PSG approach can be implemented in collaboration with relevant agencies.

Ten (10) PSGs that have been identified are as follows:

1. PSG Sentul Perdana;
2. PSG Ampang Hilir;
3. PSG Desa Tasik;
4. PSG Setiawangsa;
5. PSG Bukit Bandaraya;
6. PSG Seri Delima;
7. PSG Alam Damai;
8. PSG Bukit Damansara;
9. PSG PT80; and
10. PSG Melati Impian.

Location: Anjung Kelana, Taman Danau Desa
Source: Facebook Wilayahku

Urban farming management training project carried out at Anjung Kelana.

PLANNING STRATEGY

SP 2-4: IMPROVING OLD ESTABLISHED RESIDENTIAL AREAS

SCENARIO OF ESTABLISHED RESIDENTIAL IN KUALA LUMPUR

Development trends in Kuala Lumpur have caused existing, established residential areas to be subjected to constant development pressure. The old established residential area in Kuala Lumpur refers to landed and landed-strata housing that has been over 30 years old and experienced changes in terms of population profile. The provision of infrastructure and facilities in this area is mostly outdated and needs to be replaced or upgraded considering the current needs of the residents.

The Draft KLLP2040 has classified this housing area as a land use zone of Established Residential (EH). Among the areas included are Taman OUG, Bukit Jalil, Taman Connaught, Alam Damai, Batu Muda, Kepong, Bandar Menjalara, Segambut Jaya, Bukit Damansara, Seputeh, Bangsar, Taman Desa and Sri Petaling.

In order to realise Kuala Lumpur as a city with improvement of the old established residential area, one (1) Implementation Proposal is formulated under Planning Strategy 2–4, as shown in Figure 2.4.1.

BRIEF INFO

DEFINITION OF ESTABLISHED RESIDENTIAL

Established residential has been identified as low-density housing areas that are still new or landed housing which are expected to remain until 2040, throughout the application period of this plan. Established residential refers to single, twin, terrace or landed strata. Improvements will be implemented in the aspects of infrastructure, facilities and environment.

Source: Adapted from KLSP2040

Figure 2.4.1:
Implementation Proposal for Planning Strategy 2-4

SP 2-4 **IMPROVING OLD ESTABLISHED RESIDENTIAL AREAS**

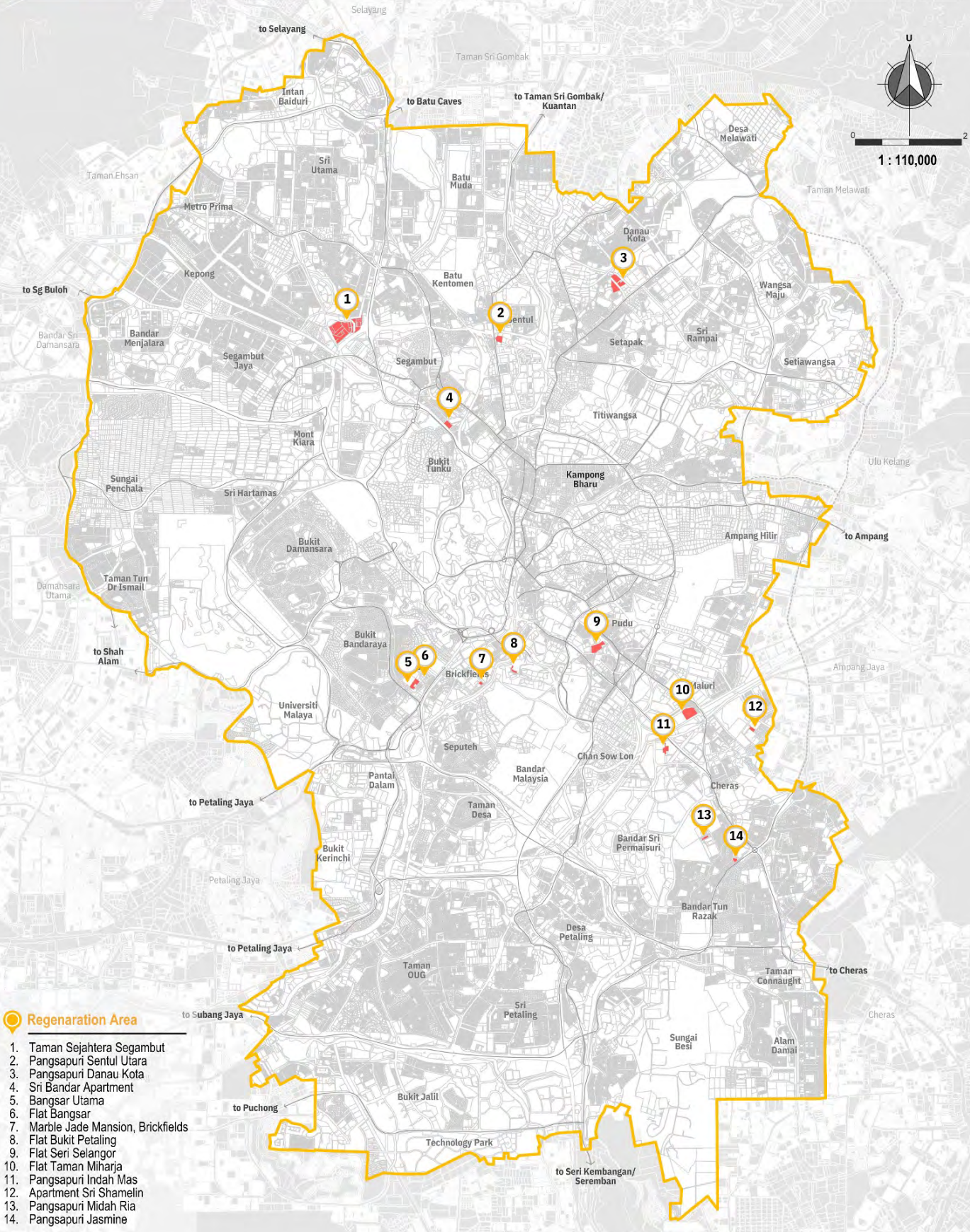
CP 2-4.1 Regeneration of Old Residential Areas

Location: Flat Badak, Pudu

Residential Area proposed for Regeneration Programme.

Location: Kepong, Kuala Lumpur
Source: https://www.shutterstock.com/RoslanR

View of residential area in Kuala Lumpur.



Regenaration Area

1. Taman Sejahtera Segambut
2. Pangsapuri Sentul Utara
3. Pangsapuri Danau Kota
4. Sri Bandar Apartment
5. Bangsar Utama
6. Flat Bangsar
7. Marble Jade Mansion, Brickfields
8. Flat Bukit Petaling
9. Flat Seri Selangor
10. Flat Taman Miharja
11. Pangsapuri Indah Mas
12. Apartment Sri Shamelin
13. Pangsapuri Midah Ria
14. Pangsapuri Jasmine

FIGURE 2.4.2 | Plan of Proposed For Regeneration Area

Legend :

- Regeneration Area

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 2-4.1: REGENERATION OF OLD RESIDENTIAL AREAS

The regeneration programme will involve an Area Improvement Programme (AIP) in the old residential areas that have been identified in KLSP2040. AIP will be implemented through beautification work as well as improvement of area and building. AIP does not involve any demolition or new construction at the identified location. Physically, this residential area needs improvement on the existing building structure, level of infrastructure and local facilities.

The implementation of AIP will involve private sectors and premises owners through collective responsibility to ensure their areas remain viable. Financial resources for the implementation of AIP are through funding and contributions from corporate bodies, stakeholders and the government.

AIP for established and high-rise housing is to upgrade the activities and quality of urban areas. AIP will activate and improve the quality of old and dilapidated residential areas throughout Kuala Lumpur. It needs to be carried out comprehensively and inclusively between KLCH with the involvement of all homeowners.

The implementation approach of this proposal is through projects, policies, programme and guidelines. There are two (2) initiatives proposed for the implementation of CP 2-4.1.

IMPLEMENTATION INITIATIVE 2-4.1A

IMPLEMENT REGENERATION OF OLD HIGH-RISE RESIDENTIAL AREAS

Regeneration initiatives through AIP can improve the quality of the appearance and image of a city by improving the visual value of an area with new elements that suit its environment.

AIP can also re-create livable urban elements in old residential areas through appropriate implementation actions as shown in Table 2.4.1 for Kuala Lumpur residents to live, work, socialise, worship and leisure.

The Draft KLLP2040 has identified 14 areas that are potentially suitable for regeneration programmes, as follows:

1. Taman Sejahtera Segambut;
2. Pangsapuri Sentul Utara;
3. Pangsapuri Danau Kota;
4. Apartment Sri Bandar;
5. Bangsar Utama;
6. Flat Bangsar;
7. Marble Jade Mansion;
8. Flat Bukit Petaling;
9. Flat Seri Selangor;
10. Flat Taman Miharja;
11. Pangsapuri Indah Mas;
12. Apartment Sri Shamelin;
13. Pangsapuri Midah Ria; and
14. Pangsapuri Jasmine.

Other suitable areas can also be considered for the implementation of the regeneration programme. The regeneration programme of old residential areas can also be implemented before the redevelopment programme is carried out.

IMPLEMENTATION INITIATIVE 2-4.1B

IMPLEMENT REGENERATION OF OLD ESTABLISHED RESIDENTIAL AREA

There are some old, established residential areas that are no longer able to accommodate the current needs and trends for community facilities and existing infrastructure. The regeneration program of the old, established residential areas is suitable to be implemented to meet the needs of their population.

The implementation of AIP should consider the suitability of location, physical condition and capacity of infrastructure as well as facilities in accordance to the profile and needs of the population.

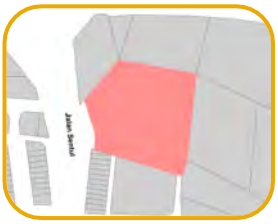
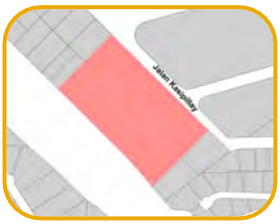
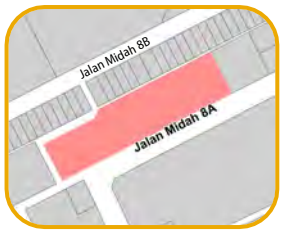
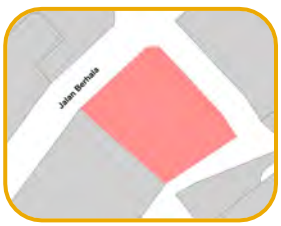
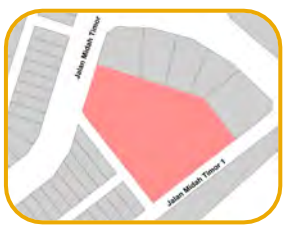
The implementation approach of AIP for old established residential areas as shown in Table 2.4.1.

Table 2.4.1:
Actions to implement the Regeneration Programme in Old Established Residential Area

Implementation Actions
1. Upgrade public spaces by KLCH in regeneration area which involves the following components: a. Street furniture; b. Landscape; c. Infrastructure and community facilities; d. Pedestrian; e. Bicycle path; and f. Other related components
2. Beautification and improvement works as well as restoration of areas including building, facility and landscape.
3. Provide assistance and logistic facilities for implementation of AIP.
4. Implement Community Improvement Districts (CIDs) programme.
5. Promote Concept of Crime Prevention Through Environmental Design (CPTED).
6. Apply Concept of Green Building and Low Carbon City to reduce maintenance costs.

Source: Adapted from Panduan Pelaksanaan Pembaharuan Semula Kuala Lumpur, 2021

Table 2.4.2:
Proposed Regeneration Areas

Area and size (hectares)	Inset Plan	Area and size (hectares)	Inset Plan
1. Taman Sejahtera Segambut 12.37 hektar		8. Flat Bukit Petaling 0.55 hektar	
2. Pangsapuri Sentul Utara 1.37 hektar		9. Flat Seri Selangor 3.05 hektar	
3. Pangsapuri Danau Kota 4.52 hektar		10. Flat Taman Miharja 4.39 hektar	
4. Apartmen Sri Bandar 1.22 hektar		11. Pangsapuri Indah Mas 1.24 hektar	
5. Bangsar Utama 0.64 hektar		12. Apartmen Sri Shamelin 0.55 hektar	
6. Flat Bangsar 0.95 hektar		13. Pangsapuri Midah Ria 0.42 hektar	
7. Marble Jade Mansion, Brickfields 0.31 hektar		14. Pangsapuri Jasmine 0.40 hektar	

PLANNING STRATEGY

SP 2-5: PROVIDING ADEQUATE, QUALITY AND INTEGRATED COMMUNITY FACILITIES

SCENARIO OF COMMUNITY FACILITIES PROVISION IN KUALA LUMPUR

The provision of community facilities is important in meeting the social needs of local residents. Currently, there are six (6) categories of community facilities being provided as follows:

1. Educational Facilities;
2. Health Facilities;
3. Safety Facilities;
4. Religious Facilities;
5. Community Facilities; and
6. Cemetery Facilities.

Existing community facilities in Kuala Lumpur need to be increased in numbers, upgraded and improved in quality to accommodate its population growth. Most of the existing community facilities in neighbourhoods are in the form of free-standing buildings and are not centrally located. The provision of community facilities in a decentralised manner with uncomfortable locations causes the facilities to be underutilised. Among the community facilities that are insufficient to meet the needs of the current population are clinics, kindergartens and schools.

There are existing community facilities that are underutilized when the population profile changes, such as kindergarten facilities in areas dominated by the elderly population. The location of the facility was also found to be unsuitable due to changes in development and traffic congestion.

The challenges of providing new facilities in Kuala Lumpur are as follows:

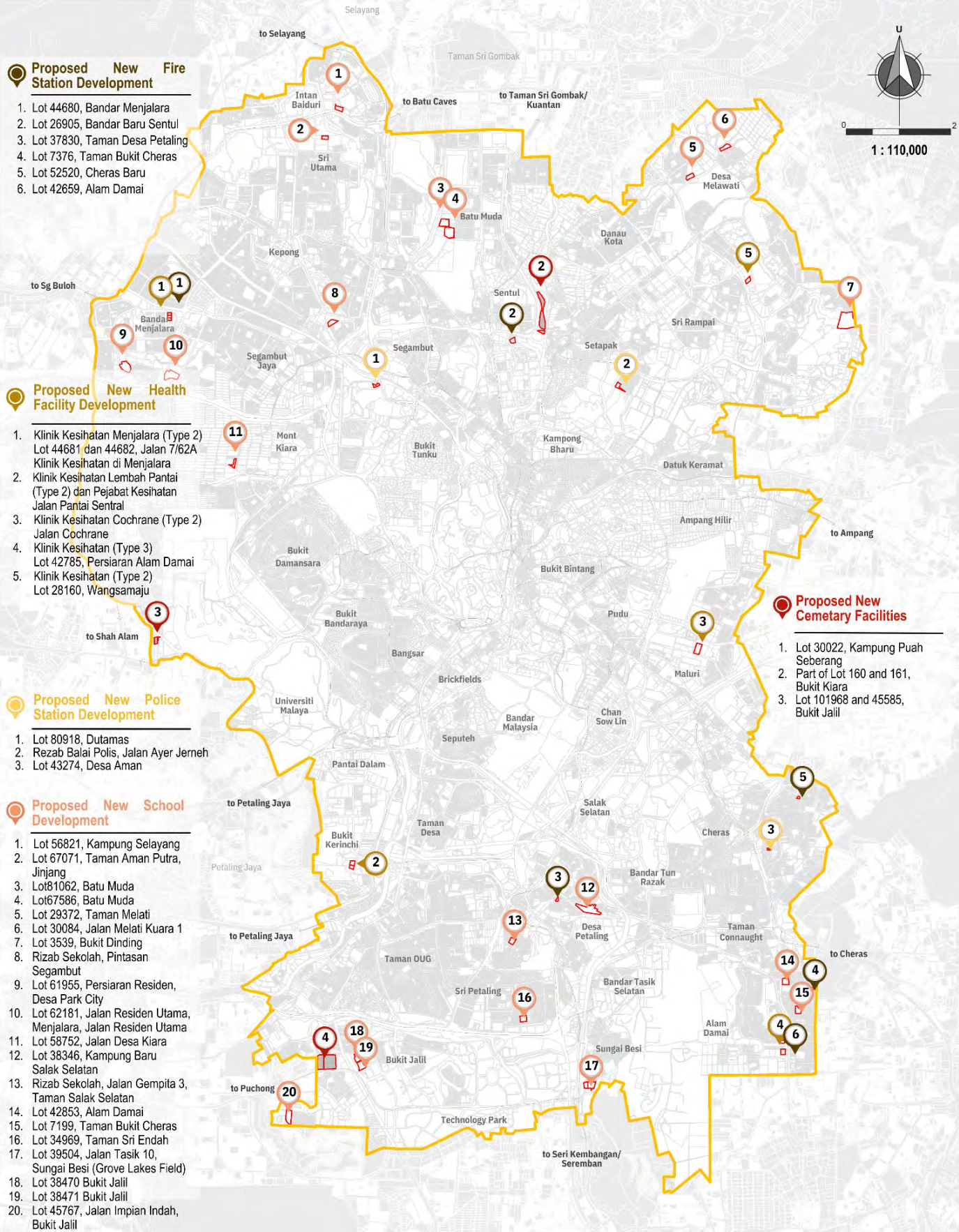
1. Lack of land that causes the facilities provided to be insufficient;
2. Location that is far from the neighbourhood;
3. Vacant public facility sites are converted for other uses such as housing;
4. Not in line with the needs and demands of the local population; and
5. The pace of technology and changes in society's lifestyle.

The provision of community facilities should use a new approach that is integrated, multi-purpose and can be developed in a stratified manner. The location of the public facility should be easily accessible by the public and within walking distance to pedestrian and micromobility vehicle routes. Relevant guidelines need to be prepared to support the provision of quality and sufficient community facilities.

In order to realise Kuala Lumpur as a city with provision of adequate, quality and integrated community facilities, one (1) Implementation Proposal is formulated under Planning Strategy 2–5, as shown in Figure 2.5.1.

Figure 2.5.1:
Implementation Proposals for Planning Strategy 2-5.

SP 2-5	PROVIDING ADEQUATE, QUALITY AND INTEGRATED COMMUNITY FACILITIES
CP 2-5.1	Providing Integrated and Multi-purpose Community Facilities
CP 2-5.2	Providing Adequate, Quality and Accessible Educational, Health and Safety Facilities
CP 2-5.3	Providing Integrated and Multi-purpose Community Facilities



Proposed New Fire Station Development

1. Lot 44680, Bandar Menjalara
2. Lot 26905, Bandar Baru Sentul
3. Lot 37830, Taman Desa Petaling
4. Lot 7376, Taman Bukit Cheras
5. Lot 52520, Cheras Baru
6. Lot 42659, Alam Damai

Proposed New Health Facility Development

1. Klinik Kesihatan Menjalara (Type 2) Lot 44681 dan 44682, Jalan 7/62A Klinik Kesihatan di Menjalara
2. Klinik Kesihatan Lembah Pantai (Type 2) dan Pejabat Kesihatan Jalan Pantai Sentral
3. Klinik Kesihatan Cochrane (Type 2) Jalan Cochrane
4. Klinik Kesihatan (Type 3) Lot 42785, Persiaran Alam Damai
5. Klinik Kesihatan (Type 2) Lot 28160, Wangsamaju

Proposed New Police Station Development

1. Lot 80918, Dutamas
2. Rezab Balai Polis, Jalan Ayer Jerneh
3. Lot 43274, Desa Aman

Proposed New School Development

1. Lot 56821, Kampung Selayang
2. Lot 67071, Taman Aman Putra, Jinjang
3. Lot81062, Batu Muda
4. Lot67586, Batu Muda
5. Lot 29372, Taman Melati
6. Lot 30084, Jalan Melati Kuara 1
7. Lot 3539, Bukit Dinding
8. Rizab Sekolah, Pintasan Segambut
9. Lot 61955, Persiaran Residen, Desa Park City
10. Lot 62181, Jalan Residen Utama, Menjalara, Jalan Residen Utama
11. Lot 58752, Jalan Desa Kiara
12. Lot 38346, Kampung Baru Salak Selatan
13. Rizab Sekolah, Jalan Gempita 3, Taman Salak Selatan
14. Lot 42853, Alam Damai
15. Lot 7199, Taman Bukit Cheras
16. Lot 34969, Taman Sri Endah
17. Lot 39504, Jalan Tasik 10, Sungai Besi (Grove Lakes Field)
18. Lot 38470 Bukit Jalil
19. Lot 38471 Bukit Jalil
20. Lot 45767, Jalan Impian Indah, Bukit Jalil

Proposed New Cemetary Facilities

1. Lot 30022, Kampung Puah Seberang
2. Part of Lot 160 and 161, Bukit Kiara
3. Lot 101968 and 45585, Bukit Jalil

FIGURE 2.5.2 | Plan of Proposed for Public Facilities in Kuala Lumpur

Legend :

- Public Facilities (PF1)
- Cemetary and Mortuary Management (CE)

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 2-5.1: PROVIDING INTEGRATED COMMUNITY FACILITIES, MULTIPURPOSE AND SHARED SPACES

The distribution of community facilities needs to be expanded in terms of number and appropriate location to ensure sufficient accessibility to the local population. New development including redevelopment needs to consider population increase, location of nearby facilities and good accessibility in determining the needs and distribution of community facilities in the development and surrounding areas.

The concept of the provision of integrated and shared community facilities in the new development would optimize land use. Locating facilities centrally and stratifying them would facilitate access to facilities for residents. Planning for the development of community facilities until 2040 is based on the availability and capacity of existing facilities and additional development components based on residing elements.

The implementation approach of this proposal is through policies, planning controls and guidelines. There are two (2) initiatives proposed for the implementation of CP 2-5.1.

Location: Kompleks Komuniti Muhibbah in Seputeh.

Location: Kompleks Komuniti Muhibbah in Seputeh.

Kompleks Komuniti Muhibbah integrates community hall, health clinic, kindergarten and an activity centre for the elderly.

IMPLEMENTATION INITIATIVE 2-5.1A

DEVELOP INTEGRATED COMMUNITY FACILITIES FOR PUBLIC HOUSING (PA) REDEVELOPMENT

The Draft KLLP2040 has identified 13 PA sites that will be redeveloped. This redevelopment will increase the number of housing units and provide opportunities for the provision of adequate, centralised and multi-purpose new community facilities.

Redevelopment of PA needs to ensure that existing community facilities are maintained. Additional numbers and capacity of new community facilities should meet future needs.

The existing community facilities that need to be maintained and improved in line with the proposed redevelopment requirements are shown in Table 2.5.1.

Planning and development for these community facilities should consider safe and friendly elements for all community groups, especially in the aspects of accessibility, safety as well as comfort.

Table 2.5.1:
Existing Community Facilities That Need To Be Maintained And Improved

Public Housing Involved With Redevelopment	Existing Community Facilities												
	Madrasah	Preschool	Library	Internet Centre	Surau (S) / Tokong (T) / Temple (K)	Police station	Multi-purpose Hall / Community Hall	Community Centre	Elderly Centre	Community Clinic	Community Rehabilitation Centre	Court / Playground	Business space
1. PA Seri Tioman		✓		✓	S		✓					✓	
2. PA Seri Langkawi	✓	✓					✓					✓	✓
3. PA Setapak Jaya 1							✓					✓	
4. PA Seri Kelantan	✓	✓			S					✓		✓	✓
5. PA Bandar Baru Sentul													
6. PA Seri Negeri Sembilan		✓						✓				✓	
7. PA Seri Perak	✓	✓					✓				✓	✓	
8. PA Seri Perlis 2		✓			S		✓	✓	✓				✓
9. PA Seri Perlis 1					S		✓					✓	
10. PA Hang Tuah					T K								✓
11. PA Loke Yew							✓						✓
12. PA Seri Sarawak		✓	✓	✓	S								✓
13. PA Seri Selangor		✓				✓		✓				✓	✓

IMPLEMENTATION INITIATIVE 2-5.1B

PROVIDE INTEGRATED COMMUNITY FACILITIES IN STRATIFIED DEVELOPMENT

The provision of community facilities in stratified development should be integrated and centralised under one (1) roof. This concept involves the provision of dedicated spaces for community facilities that can be accessed by the public or restricted to residents of stratified development.

This approach can optimise land use, integrate community activities and ensure efficient management of community facilities in stratified development.

The Draft KLLP2040 proposes the provision of community facilities in three (3) types of implementation, as follows:

1. Community facilities in one building;
2. Community facilities integrate with housing and commercial components; and
3. Community facilities integrate with other suitable facilities.

The community facilities provided should comply with KLCH's Planning Guidelines that have been set. The proposed community facilities are as follows:

1. Multi-purpose Hall;
2. Surau and other religious facilities;
3. Kindergartens and Nurseries;
4. Hawker's space or Food Court;
5. Elderly Centre ;
6. Community Clinic;
7. Police Bit;
8. Community Library or IT Centre; and
9. Recycling Centre.

BRIEF INFO

INTEGRATION OF COMMUNITY FACILITIES IN STRATIFIED DEVELOPMENT

Illustration of the integration of community facilities in stratified development.

IMPLEMENTATION PROPOSAL

CP 2-5.2: PROVIDING ADEQUATE, QUALITY AND ACCESSIBLE EDUCATIONAL, HEALTH AND SAFETY FACILITIES

The provision of adequate, quality and integrated educational facilities is to ensure that is accessible to all levels of society in line with population growth by 2040.

Health facilities in Kuala Lumpur need to be improved by 2040 to accommodate population growth so that quality health services can be delivered and uplift the well-being of local populations.

Improvement of safety facilities in Kuala Lumpur should also be given priority. Security measures and a quick level of service delivery must be provided to ensure a safe living environment can be achieved in line with the Crime Prevention Through Environmental Design (CPTED) Implementation Guide.

The implementation approach of this proposal is through projects, planning controls and guidelines. There are four (4) initiatives proposed for the implementation of CP 2-5.2.

Source: https://www.planmalaysia.gov.my/

Crime Prevention Through Environmental Design (CPTED) Implementation Guide is prepared in ensuring a comfortable living environment.

IMPLEMENTATION INITIATIVE 2-5.2A

INCREASE ACCESS TO CHILDREN'S EARLY EDUCATION

Early educational facilities including kindergartens and nurseries provide a foundation of knowledge for children. Kindergarten is defined as preschool education for children between the ages of four (4) to six (6) years. A nursery is defined as a premise that accepts four (4) children or more under four (4) years of age to be looked after for a fee.

Kindergartens and nurseries will be provided in affordable housing areas, community centres, shop lot buildings and government offices to increase the level of accessibility to these facilities.

Provision of kindergartens and nurseries in accordance with the KLCH Planning Guidelines is important to ensure that facilities are provided effectively and conveniently and can ensure children's safety.

There are two (2) types of early childhood educational facilities as follows:

1. Provision of kindergartens and nurseries in residential areas; and
2. Provision of kindergartens and nurseries in integrated office, commercial and institutional buildings.

The necessary actions to support this initiative are as shown in Table 2.5.2.

Early childhood education with playschool concept.

Table 2.5.2:
Criteria for provision of Early Childhood Educational Facilities

Type of Facility	Provision Criteria
1. Provision of kindergartens and nurseries in residential areas	1. Corner lot bungalow house. 2. Intermediate lot bungalow houses can be considered if: • Access road to lot area is from side road and not directly from the main road • Has a large enough lot area with a width frontage that less than 60 feet. 3. Corner lot semi-detached house. 4. Corner lot terrace house. 5. Flats/ apartments/ serviced apartments/ SOHO (provided space is not a residential unit). 6. Height limit up to 2nd floor
2. Provision of kindergartens and nurseries in non-residential buildings (free standing buildings)	1. Shopping complex building 2. Office building 3. Mosque/surau/madrasah/non-muslim house of worship building.* 4. Institution Building. * 5. Public hall building/multi-purpose hall. 6. Specialised buildings in industrial areas 7. Height limit up to 5th floor **Separate planning approval is not required to run Kindergarten since this activity is a support activity (ancillary) to religious/institutional use.
3. Provision of kindergartens and nurseries in office shops or shophouses	1. Permitted in land use zones are as follows: • Land use zone of Commercial • Land use zone of Local Commercial • Provide a second safety ladder within the lot boundary. 2. Provide two (2) dedicated parking spaces in front of premises for the purpose of dropping off and picking up children. 3. Height limit up to 2nd floor.

Source: Guidelines for Planning the Establishment of Kindergarten in WPKL (Edition 2020)

IMPLEMENTATION INITIATIVE 2-5.2B

PROVIDE QUALITY PRIMARY AND SECONDARY SCHOOL FACILITIES

The provision of educational facilities should be of high quality and accessible to local populations. In addition, it also needs to be provided according to the catchment area and be within walking distance.

Population growth by 2040 shows that the school-age population group will increase. Therefore, the provision of primary and secondary school education facilities should be adequate and of quality to meet future needs.

The Draft KLLP2040 proposes several actions in the provision of primary and secondary school facilities as follows:

1. Upgrade and promote vertical development to increase classroom capacity without expansion of school area;
2. Encourage common usage of school facilities between adjacent schools such as fields and other related facilities;
3. Maintain sites that have been reserved for school development and have not been developed as future requirements of the school site; and
4. Provide school facilities to cater for the needs of new populations, especially for large-scale and high-intensity redevelopment.

There are 20 sites owned by the Malaysian Ministry of Education (KPM) and school reserve that have been identified and proposed to be developed as primary and secondary schools as shown in Figure 2.5.2 and Table 2.5.3.

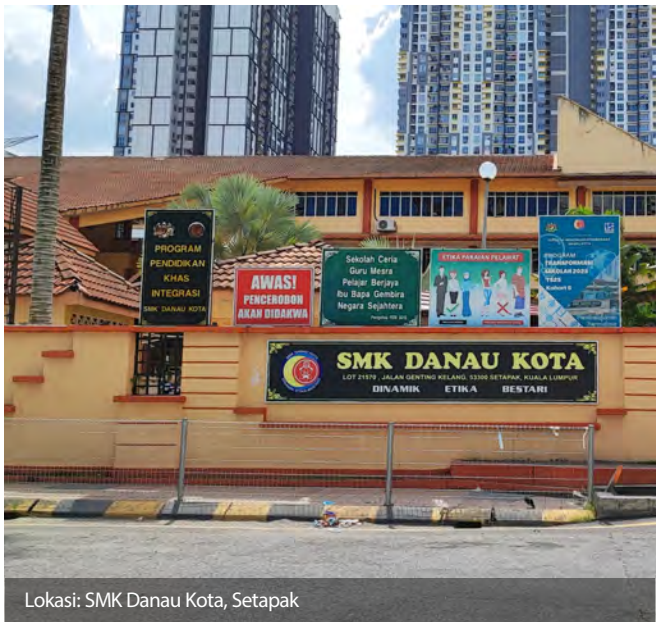
BRIEF INFO

CRITERIA OF EDUCATIONAL FACILITY SITE LOCATIONS

1. Proximity to residential areas and public transport services such as buses, LRT and so on;
2. Proximity to existing roads with less traffic such as small collector roads;
3. Availability of utility supply such as water supply, electricity and communication system; and
4. Distant from industrial areas, airports, mining, quarries and highways.

Source: Adapted from Community Facilities Planning Guidelines Study, PLANMalaysia

Location: St. John's Institution



Lokasi: SMK Danau Kota, Setapak

The provision of adequate and quality educational facilities to meet the future needs of the people in Kuala Lumpur.

Table 2.5.3:
Proposed of New School Development

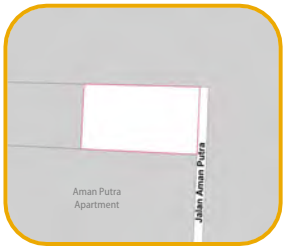
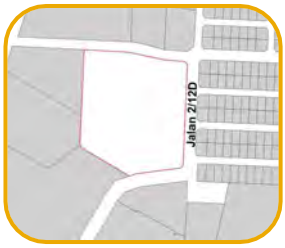
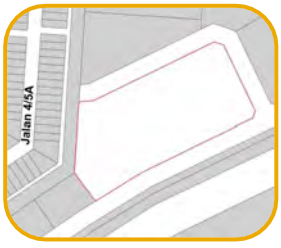
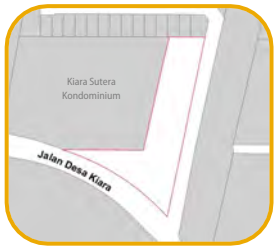
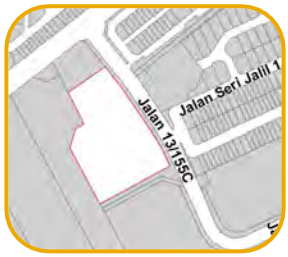
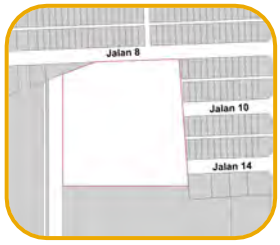
Area and size (hectares)	Inset Plan	Area and size (hectares)	Inset Plan
1. Lot 56821, Kampung Selayang 1.22 hectares		6. Lot 30084, Jalan Melati Kuara 1 1.45 hectares	
2. Lot 67071, Taman Aman Putra, Jinjang 0.94 hectares		7. Lot 3539, Bukit Dinding 9.60 hectares	
3. Lot 81062, Batu Muda 2.65 hectares		8. Rizab Sekolah Pintasan Segambut 1.50 hectares	
4. Lot 67586, Batu Muda 3.74 hectares		9. Lot 61955, Persiaran Residen, Desa Park City 3.33 hectares	
5. Lot 29372, Taman Melati 1.23 hectares		10. Lot 62181, Jalan Residen Utama, Menjalara, Jalan Residen Utama 4.06 hectares	

Table 2.5.3:
Proposed of New School Development (continued)

Area and size (hectares)	Inset Plan	Area and size (hectares)	Inset Plan
11. Lot 58752, Jalan Desa Kiara 0.83 hectares		16. Lot 34969, Taman Sri Endah 1.55 hectares	
12. Lot 38346, Kampung Baru Salak Selatan 5.35 hectares		17. Lot 39504, Jalan Tasik 10, Sungai Besi (Grove Lakes Field) 1.90 hektar	
13. Rizab Sekolah, Jalan Gempita 3, Taman Salak Selatan 1.20 hectares		18. Lot 38470 Bukit Jalil 1.67 hectares	
14. Lot 42853, Alam Damai 1.69 hectares		19. Lot 38471, Bukit Jalil 2.01 hectares	
15. Lot 7199, Taman Bukit Cheras 1.38 hectares		20. Lot 45767, Jalan Impian Indah, Bukit Jalil 2.75 hectares	

IMPLEMENTATION INITIATIVE 2-5.2C

IMPROVE ACCESS TO HEALTH FACILITIES

Planning of health facilities is necessary to provide convenience services and easy access to the community. An adequate health facility needs to be developed in a suitable location so it can be fully utilised by local populations and generate a quality living environment.

The acceptable catchment area for health clinics including dental as well as maternal and child health clinics is 0.8 kilometres to 1.6 kilometres in considering pedestrian and cycling distance according to Community Facility Planning Guidelines, PLANMalaysia.

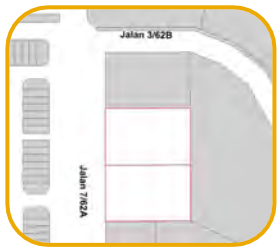
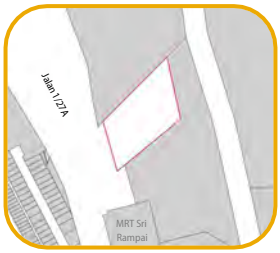
Provision of health clinics needs to accommodate increasing number of patients and long waiting period to receive treatment raised by most Kuala Lumpur residents. The COVID-19 pandemic and various other possible health crisis make the provision of health facilities increasingly more important and need to be planned comprehensively.

The Draft KLLP2040 proposes several actions that can be implemented in the provision of health facilities as follows;

1. Upgrade existing health clinics to further improve the quality of services to residents;
2. Expedite development of new health clinic on land owned by the Ministry of Health Malaysia (KKM);
3. Develop public health clinic within large scale redevelopment area;
4. Establish community clinics in potential and suitable locations; and
5. Improve public health clinic services with the support of services provided by private clinics.

The Draft KLLP2040 has identified and proposed five (5) sites owned by Ministry of Health Malaysia (KKM) to be developed as health clinics, as shown in Figure 2.5.2 and Table 2.5.4.

Table 2.5.4:
Proposed of New Health Facility Development

Area and size (hectares)	Inset Plan
1. Klinik Kesihatan Menjalara (Type 2), Lot 44681 and 44682, Jalan 7/62A 0.83 hectares	
2. Klinik Kesihatan Lembah Pantai (Type 2) and Pejabat Kesihatan Jalan Pantai Sentral 0.84 hectares	
3. Klinik Kesihatan Cochrane (Type 2), Jalan Cochrane 2.30 hectares	
4. Klinik Kesihatan (Type 3), Lot 42785, Persiaran Alam Damai 0.46 hectares	
5. Klinik Kesihatan (Type 2), Lot 28160, Wangsa Maju 0.81 hectares	

BRIEF INFO

TYPES OF HEALTH CLINICS

Type 1, 2 and 3 Health Clinics	1. Provided within a Global City or Region or State area; 2. The total population catchment is the highest which is 30,001 populations and above; and 3. The estimated arrival of patients per day is 301 patients and above.
Type 4 and 5 Health Clinics	1. Provided in Main City and Local areas; 2. The total population catchment is moderate which is 10,001 to 30,000 populations; and 3. Estimated daily patient arrivals are 101 to 300 patients.
Type 6 and 7 Health Clinics	1. Provided in Town and Village areas; 2. The total population catchment is the lowest which is between 5000 to 10,000 populations; and 3. Estimated daily patient arrivals are 51 to 100 patients.
Community Clinic	1. Primary health facility that provides outpatient services with medical and pharmacy services for areas with a population catchment of less than 5,000 populations; and 2. Preparation in the form of shop house lots.

Note:
1. *The implementation is subject to appropriateness set by agencies at Kuala Lumpur*
2. *These guidelines should be referred together with the latest Ministry of Health Guidelines*

Source: GPP Kemudahan Masyarakat, PLANMalaysia

HEALTH CLINIC

The site of the health clinic proposed by the Draft KLLP2040

5 sites

The acceptable catchment area for health clinics including dental as well as maternal and child health clinics

0.8 km to 1.6 km

Location: Klinik Kesihatan Kuala Lumpur

Klinik Kesihatan Kuala Lumpur is equipped with various types of health facilities to provide the best service.

Location: Klinik Kesihatan Batu Muda

Klinik Kesihatan Batu Muda is a newly built type 2 health clinic to cater the needs of the surrounding populations.

IMPLEMENTATION INITIATIVE 2-5.2D

PROVIDE COMPREHENSIVE SAFETY FACILITIES

Safety facilities need to be adequately provided in line with the increase in population by 2040. The provision of safety facilities needs to be upgraded and improved in appropriate locations to ensure the safety and well-being of the population. The provision of safety facilities is divided into two (2) categories as follows:

1. Fire Station; and
2. Police Station.

The selection of a strategic location within the main settlement area is important to control the safety of the local population. The number of firemen and police personnel also needs to be increased to improve security control in Kuala Lumpur.

The Draft KLLP2040 suggests several actions to be implemented in the provision of safety facilities as follows:

1. Upgrade existing fire stations and police stations to further improve the quality of services to residents;
2. Maintain and develop designated sites for fire station and police station facilities; and
3. Provide community fire facilities, community police stations and police bits for areas with low population density to help control local safety.

The Draft KLLP2040 has identified several sites that have been designated and zoned as reserves for the proposed new fire station and police station, as shown in Figure 2.5.2, Table 2.5.5 and Table 2.5.6.

BRIEF INFO

CATEGORY OF FIRE STATION

Category A	1. Provided in major cities, state capitals, regional cities, major industrial centres, high risk industrial centres, major commercial centres and strategic government centres; and 2. This facility needs to be provided for catchment population of 100,000 people.
Category B	1. Provided in state urban areas, major cities in port areas, major airports and major state borders; and 2. Minimum population of catchment is 50,000 to 100,000 people.
Category C	1. Provided in local urban areas, royal cities, islands, resort mountains, towns and new administrative districts; and 2. Minimum population of catchment is 50,000 people.

Source: GPP Kemudahan Masyarakat, PLANMalaysia

CATEGORY OF POLICE STATION

Category A (City area)	Required for every city or major city area, international border area, major industrial areas and also areas that far from IPD.
Category B (City area)	Located in every major residential or residential centre or major urban or suburban area with a population of over 40,000 people.
Category C (Semi-Urban Area)	Provided in areas surrounding large cities, settlement centres or semi-urban areas with a population of over 30,000 people.

Note:
1. *The implementation is subject to appropriateness set by agencies at Kuala Lumpur*
2. *These guidelines should be referred together with the latest Ministry of Home Affairs Guidelines*

Source: GPP Kemudahan Masyarakat, PLANMalaysia

Location: Balai Bomba dan Penyelamat Bukit Jalil

Location: Sentul Police Station, Royal Malaysian Police (PDRM)

Provision of security facilities such as Police Stations and Fire Stations to ensure the well-being of Kuala Lumpur's citizen.

Table 2.5.5:
Proposed of New Fire Station Development

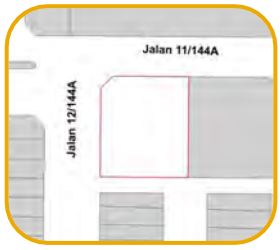
Area and size (hectares)	Inset Plan	Area and size (hectares)	Inset Plan
1. Lot 44680, Bandar Menjalara 0.41 hectares		4. Lot 7376, Taman Bukit Cheras 0.13 hectares	
2. Lot 26905, Bandar Baru Sentul 0.93 hectares		5. Lot 52520, Cheras Baru 0.22 hectares	
3. Lot 37830, Taman Desa Petaling 0.33 hectares		6. Lot 42659, Alam Damai 1.02 hectares	

Table 2.5.6:
Proposed of New Police Station Development

Area and size (hectares)	Inset Plan	Area and size (hectares)	Inset Plan
1. Lot 80918, Dutamas 0.61 hectares		3. Lot 43274, Desa Aman 0.18 hectares	
2. Rezab Balai Polis, Jalan Ayer Jerneh 0.99 hectares			

IMPLEMENTATION PROPOSAL

CP 2-5.3: PROVIDING OPTIMAL AND MANAGED CEMETERY FACILITIES

The provision of cemetery facilities in Kuala Lumpur by 2040 needs to be improved so that it will be efficiently planned and managed, as well as to ensure optimal use of cemetery land.

Table 2.5.7 shows the area of Land Use Zone of Cemetery and Mortuary Management .

Table 2.5.7:
Land Use Zone of Cemetery and Mortuary Management Area Draft KLLP2040

Type of Cemetery	Area (hectares)	Percent
Muslim	93.43	25.50
Chinese	231.96	63.32
Hindu	6.21	1.70
Christian	24.24	6.62
Others	10.50	2.86
Total	**366.34**	**100.00**

The Chinese Cemetery recorded the largest area of 231.96 hectares (63.32 percent) followed by the Islamic Cemetery of 93.43 hectares (25.50 percent) as shown in Table 2.5.7.

The implementation approach of this proposal is through projects, planning controls and guidelines. There are four (4) initiatives proposed for the implementation of CP 2-5.3.

IMPLEMENTATION INITIATIVE 2-5.3A

UPGRADE EXISTING MUSLIM CEMETERY (TPI) WITH RAUDHATUL SAKINAH CONCEPT

Existing Muslim cemeteries need to be upgraded using the Raudhatul Sakinah concept to increase the capacity of grave plots and beautification of cemeteries.

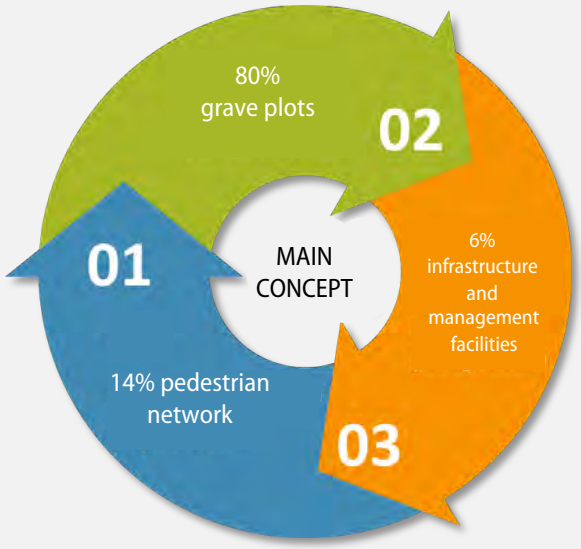
This concept emphasises on optimal and systematic layout of grave plots. In addition, the cleaning of the area, improvement and maintenance of public facilities, prevention of intrusion as well as uniform design for grave enclosers can be implemented.

Cemetery management can also be improved with the use of a comprehensive e-cemetery application for all Muslim cemeteries in Kuala Lumpur to make it easier to identify the location of the grave plot.

The Draft KLLP2040 has identified 11 existing Muslim cemeteries that need to be upgraded as shown in Table 2.5.8.

BRIEF INFO

CONCEPT OF RAUDHATUL SAKINAH CEMETERY



Example of e-Pusara website in Cemetery Management System

Source: http://www.epusara.jawi.gov.my/epusara/webV5/index.php

Table 2.5.8:
Potential Existing Muslim Cemeteries to be Upgraded

Muslim Cemetery (TPI)
1. TPI Jalan Ampang;
2. TPI Kampung Puah;
3. TPI Bandar Tun Hussein Onn;
4. TPI Kampung Selayang Lama;
5. TPI Kampung Batu 5;
6. TPI Segambut Luar;
7. TPI Taman Sri Sinar;
8. TPI Jalan Ang Seng;
9. TPI Salak Selatan;
10. TPI Kampung Kerinchi; and
11. TPI Jalan Kuari.

Source: Federal Territory Islamic Religious Department (JAWI), 2021

Muslim cemetery based on Raudhatul Sakinah concept at TPI Raudhatul Sakinah KL-Karak.

Provision of information board for the convenience of visitors.

IMPLEMENTATION INITIATIVE 2-5.3B

REDEVELOP MUSLIM AND NON-MUSLIM CEMETERY

Muslim and non-Muslim cemeteries that have reached capacity and are abandoned are proposed to be redeveloped. This approach can increase the provision of grave plots and necessary facilities for cemeteries in Kuala Lumpur by 2040.

This initiative proposes 30 percent of the cemetery area to be maintained as a cemetery resettlement area while the remaining 70 percent will be used to accommodate new capacity.

This proposal needs in-depth study considering fatwas or religious beliefs, customs and stakeholder consent. This proposal also needs the agreement of an organization or agency that regulates the cemetery.

IMPLEMENTATION INITIATIVE 2-5.3C

DEVELOP MUSLIM CEMETERY LAND THAT HAVE BEEN RESERVED

The provision of cemetery land to meet future needs involves the designation of certain areas as reserved for Muslim cemeteries .

Development of these reserved Muslim cemeteries should include the following components as follows:

1. Grave plot;
2. Management Office;
3. Parking lot;
4. Storage for tools or equipment used in the funeral process; and
5. Waqf hut.

The Draft KLLP2040 has identified three (3) reserved Muslim cemetery sites to be developed by 2040 as shown in Table 2.5.9.

Location: TPI Raudhatul Sakinah KL - Karak

Areas of Muslim cemeteries that have been reserved according to guidelines.

Table 2.5.9:
Proposed of New Muslim Cemetery

Area and size (hectares)	Inset Plan
1. Lot 30022, Kampung Puah Seberang 6.23 hectares	
2. Part of Lot 160 and 161, Bukit Kiara 1.23 hectares	
3. Lot 101968 and 45585, Bukit Jalil 10.50 hectares	

IMPLEMENTATION INITIATIVE 2-5.3D

PROVIDE CREMATORIUM (CREMATION) AND COLUMBARIUM (ASH STORAGE) FACILITIES

The cremation ceremony has been practiced by non-Muslims for funeral purposes. The ashes will be kept in a special container and placed in a columbarium depending on religious and individual needs.

Proposal for the provision of a crematorium can be considered and implemented by private sector to meet the demand of non-Muslim.

These facilities are proposed in suitable areas such as within existing non-Muslim cemeteries and in accordance with designated land use class. Provision of these facilities must follow the standards used in order not to cause social and environmental issues. The provision of the crematorium building must have facilities as follows:

1. Ventilation requirements;
2. Fuel storage;
3. Cremation chamber;
4. Space for storing and receiving ashes;
5. Supporting facilities for family members and visitors;
6. Staff room;
7. Landscape reserve; and
8. Provision of vehicle parking spaces.

PLANNING STRATEGY

SP 2-6: PROVIDING INTEGRATED PUBLIC FACILITIES AND COMMUNITY HUB FACILITIES

SCENARIO OF COMMUNITY HUB AND PUBLIC FACILITIES PROVISION IN KUALA LUMPUR

A community hub is a centre that offers space for social interaction, educational activities and community programmes for local community .

Multi-purpose hall is one of the most provided public facilities, especially in high-density areas. Data in 2020 shows that Kuala Lumpur has a total of 81 multi-purpose halls as shown in Figure 2.6.2.

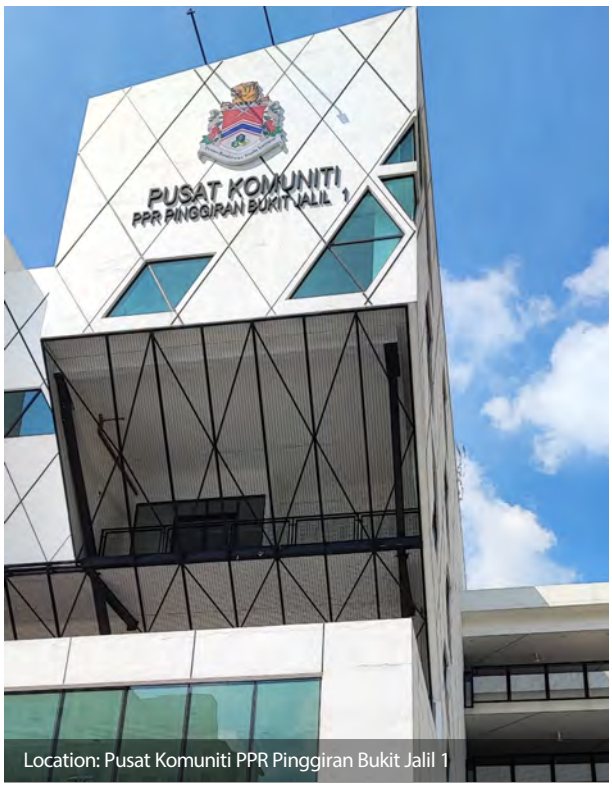
16 existing multi-purpose halls are proposed to be upgraded or reused as community hubs to allow community hold discussions and implement local social development programmes.

In order to realise Kuala Lumpur as a city with provision of a quality and integrated community hub, one (1) Implementation Proposal is formulated under Planning Strategy 2–6, as shown in Figure 2.6.1.

Figure 2.6.1:
Implementation Proposal for Planning Strategy 2-6.

SP 2-6 **PROVIDING INTEGRATED PUBLIC FACILITIES AND COMMUNITY HUB FACILITIES**

CP 2-6.1 Providing Community Hubs and Public Library in Neighbourhood Areas



Location: Pusat Komuniti PPR Pinggiran Bukit Jalil 1

Location: Pusat Komuniti PPR Pinggiran Bukit Jalil 2

Provision of multi-purpose community hub allows local populations to carry out various activities.

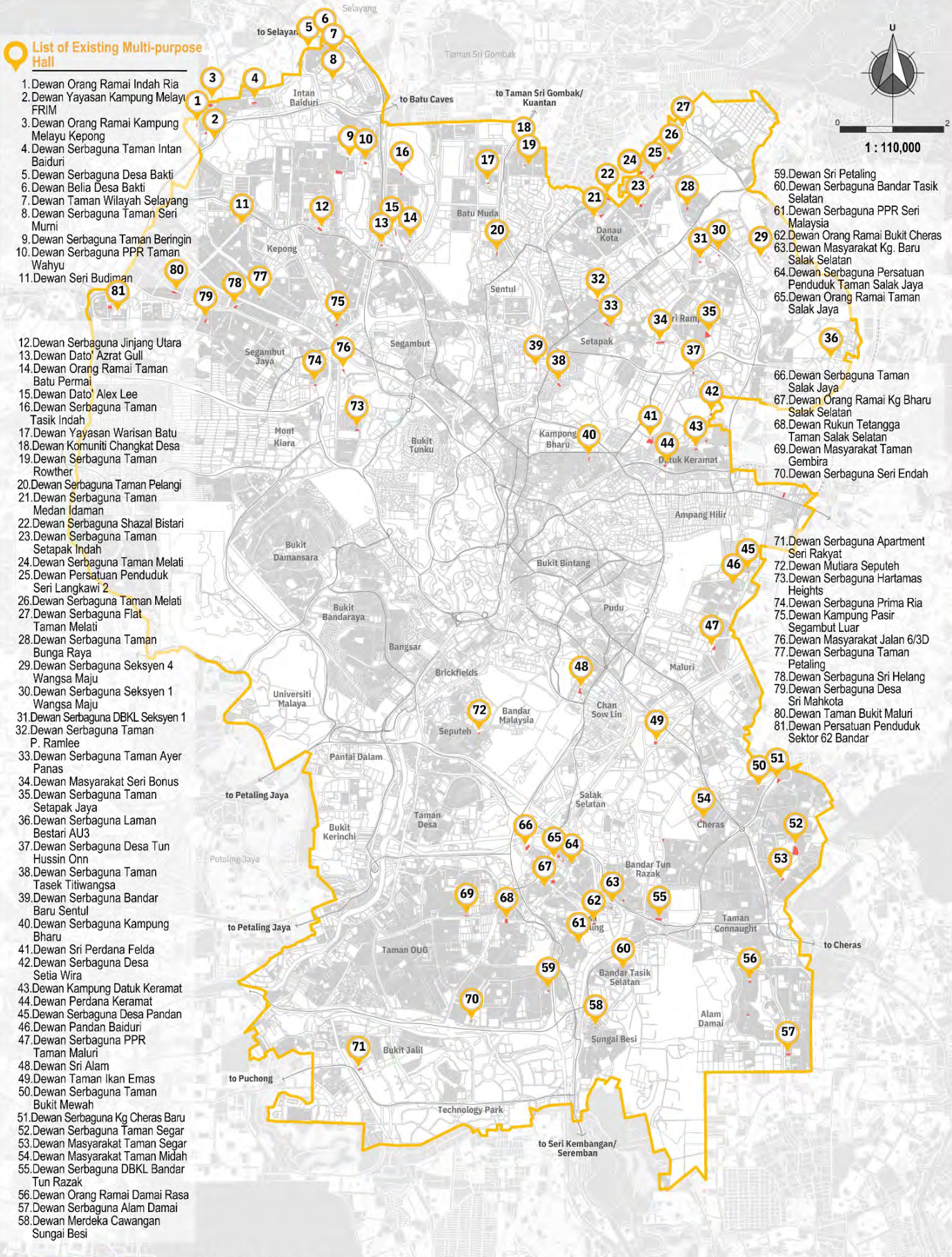


FIGURE 2.6.2 | Plan of Existing Multi-purpose Hall in Kuala Lumpur

Legend :

- Existing Multi-purpose Hall

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 2-6.1: PROVIDING COMMUNITY HUBS AND PUBLIC LIBRARY IN NEIGHBOURHOOD AREAS

A community hubs and public library act as facilities that connect individuals, organizations, community groups and government and private agencies for the purpose of service, discussion, sharing, learning and the implementation of local social development programs.

The provision of these facilities also encourages interaction within the community which will build a tighter community and a strong sense of ownership in their neighbourhoods.

The provision of community hubs and public library needs to be implemented to accommodate the needs of residents in an area. It can be provided through the upgrading of existing halls and libraries in neighbourhoods and redevelopment areas.

The provision of community hubs and public library in an integrated manner can reduce the cost of infrastructure development and maintenance which can be shared with related agencies. It can also increase the effectiveness of building use through renovation and sharing space in an integrated manner.

The implementation approach of this proposal is through policies, planning controls and guidelines. There are two (2) initiative proposed for the implementation of CP 2-6.1.

Location: Pusat Komuniti PPR Penggiran Bukit Jalil 2

Provision of community hub helps to encourage residents social interaction in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 2-6.1A

PROVIDE A COMMUNITY HUB IN THE NEIGHBOURHOOD

Public facilities such as existing multi-purpose halls have the potential to be upgraded as community hubs in Kuala Lumpur. This proposal is in line with the input and feedback from an online survey conducted with the Resident Representative Council (MPP) and representatives of the Resident Association.

16 existing multi-purpose hall has been identified to be upgraded into a community hub that allows active involvement of local populations are as follows:

1. Dewan Serba Guna Kampung Melayu Kepong;
2. Dewan Serba Guna Taman Wilayah Selayang;
3. Dewan Serba Guna Taman Seri Murni;
4. Dewan Serba Guna Taman Melati;
5. Dewan Serba Guna Seri Wangsa 1;
6. Dewan Serba Guna DBKL, Cawangan Setiawangsa (Kondominium Sri Kinabalu);
7. Dewan Serba Guna Kampung Pasir, Segambut;
8. Dewan Serba Guna Sektor 62 Bandar Menjalara;
9. Dewan Serba Guna Taman Segambut SPPK;
10. Dewan Serba Guna Taman Makmur;
11. Dewan Serba Guna Kampung Bharu Salak Selatan;
12. Dewan Serba Guna Seri Endah;
13. Dewan Serba Guna Jinjang Utara;
14. Dewan Serba Guna Kampung Cheras Baru;
15. Dewan Serba Guna Bandar Tun Razak; and
16. Dewan Serba Guna Taman Sungai Besi.

The Draft KLLP2040 has identified 16 existing multi-purpose halls that need to be upgraded into community hubs as shown in Table 2.6.1.

BRIEF INFO

ELEMENTS OF MULTI-PURPOSE COMMUNITY HUB

A total of 11 community hub elements were identified, as follows:

1. Information and communication technology (ICT);
2. Mother and children health services;
3. Sports and Recretional centre;
4. One stop payment centre;
5. Mini Library / Reading;
6. Parents, family and youth support centre;
7. Cafeteria;
8. Neighbourhood Garden;
9. Multi-purpose centre and community activity focus area;
10. Recycling Centre; and
11. Neighborhood Watch.

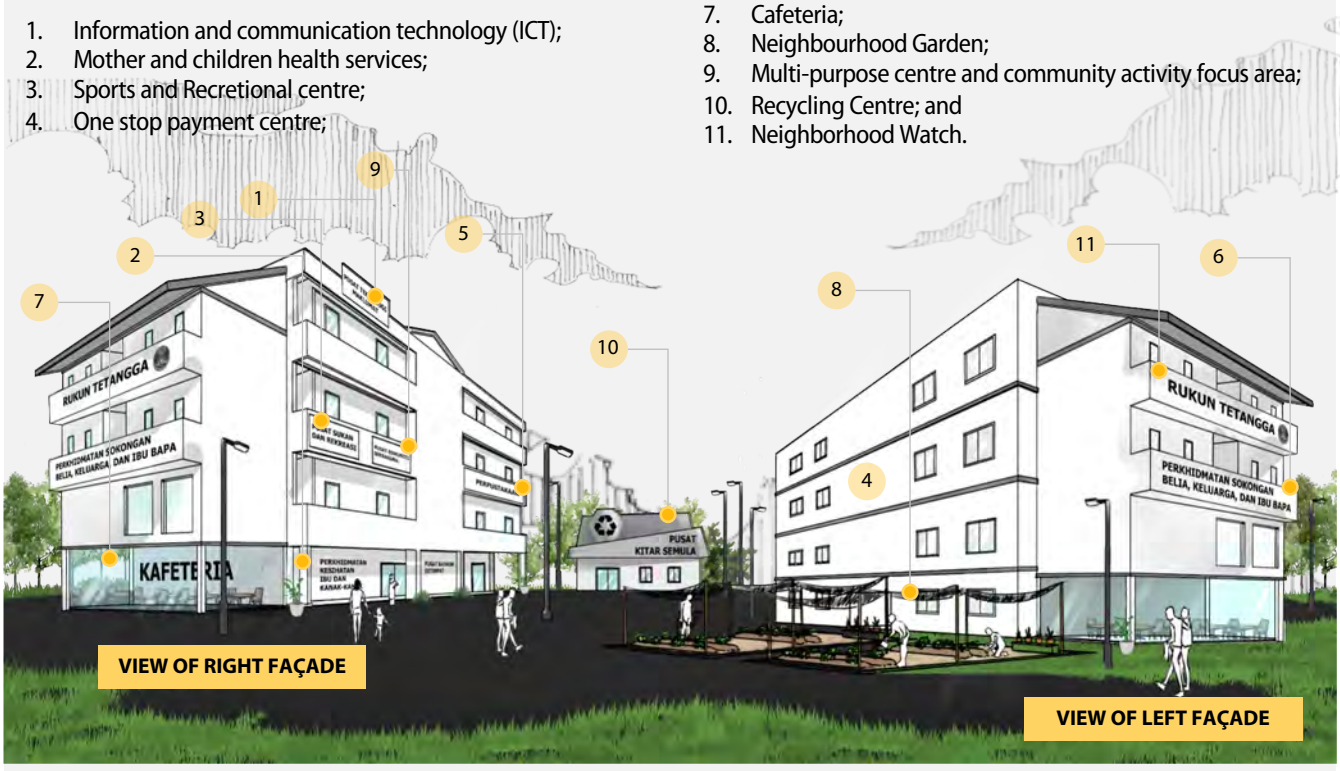


Illustration of a community hub elements for the convenience of local populations.

IMPLEMENTATION INITIATIVE 2-6.1B

IMPLEMENT EASY ACCESS PUBLIC LIBRARY FACILITIES

The concept of an easily accessible public library is the use of space in community facilities such as mosques, suraus, multi-purpose halls, community hubs and health clinics located in the neighbourhood.

Easy-access public library aim to encourage community involvement using digital or conventional reading facilities.

Existing library in Kuala Lumpur are equipped with interactive library facilities such as reading rooms, learning rooms and technology and information rooms. There are 14 existing library locations that operate using the same space in community facility buildings or separate buildings as follows:

1. Pustaka KL @ Bandar Baru Sentul;
2. Pustaka KL @ Setiawangsa;
3. Pustaka KL @ Lembah Pantai;
4. Pustaka KL @ Medan Idaman;
5. Pustaka KL @ Bandar Tun Razak;
6. Pustaka KL @ Gombak Setia;
7. Pustaka KL @ Sri Sabah;
8. Pustaka KL @ Desa Tun Razak;
9. Pustaka KL @ Sri Pantai;
10. Pustaka KL @ Muhibbah;
11. Pustaka KL @ Jelatek;
12. Pustaka KL @ Pudu Sentral;
13. Pustaka KL @ Taman Tun Dr Ismail; and
14. Pustaka KL @ Keramat.

The necessary actions to support this initiative are as follows:

1. Encourage common use of space in community facilities for library purposes such as mosques, suraus and health clinics;
2. Apply conducive and creative design in the provision of reading spaces in community facilities; and
3. Provide comprehensive digital and information technology facilities such as high-speed broadband facilities and equipment for public library use as well as access in community facility buildings.

BEST PRACTICES

DIGITAL LIBRARY PULAU PINANG

Penang Digital Library – an initiative by the Penang State Government in collaboration with Keysight Technologies and Eastern and Oriental Berhad (E&O) and supported by TIME which aims to redesign the way information is organized and used in today's digitally driven world and bring back the "human" Aspect " in social cooperation.

The Penang Digital Library aims to change this by utilizing a variety of interactive information displays to push the latest content on concepts and technological revolutions to users.

The Penang Digital Library is also a bookless library that only relies on a digital-based network to access a variety of information. The interior of the building is also equipped with good natural sunlight flow and green landscaping to create a contemporary atmosphere. These spaces are well connected with facilities designed to encourage face-to-face discussions and sharing sessions.

Digital Library Pulau Pinang

Table 2.6.1:
Proposed of Community Hub in Neighbourhood Areas

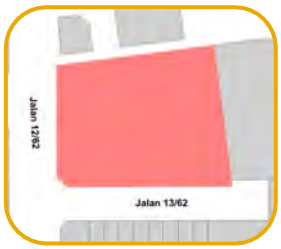
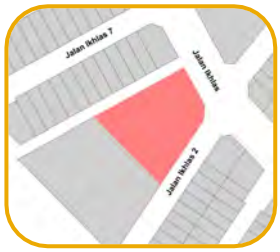
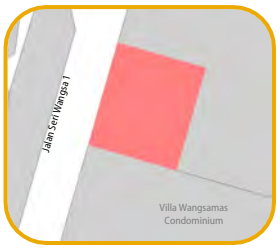
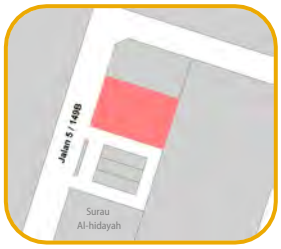
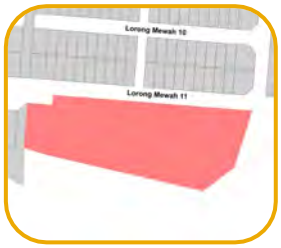
Area and size (hectares)	Inset Plan	Area and size (hectares)	Inset Plan
1. Dewan Serba Guna Kampung Melayu Kepong Lot 59506, Jalan 2/1 0.42 hektar		7. Dewan Serba Guna Kampung Pasir, Segambut Lot 10370, Jalan Umbut 0.16 hektar	
2. Dewan Serba Guna Taman Wilayah Selayang Lot 55598, Jalan 19/2B 0.23 hectares		8. Dewan Serba Guna Sektor 62, Bandar Menjalara Lot 44690, Jalan 13/62 0.45 hectares	
3. Dewan Serba Guna Taman Seri Murni Lot 53990, Jalan 9/3A 0.41 hectares		9. Dewan Serba Guna Taman Segambut (SPPK) Lot 55267, Jalan Dutamas Raya 0.16 hectares	
4. Dewan Serba Guna Taman Melati Lot 25389, Jalan Taman Melati 6 0.31 hectares		10. Dewan Serba Guna Taman Makmur, Bandar Tun Razak Lot 52937, Jalan Ikhlas 2 0.19 hectares	
5. Dewan Serba Guna Seri Wangsa 1 Lot 30356, Jalan Seri Wangsa 1 0.20 hectares		11. Dewan Serba Guna Kampung Bharu Salak Selatan 0.22 hectares	
6. Dewan Serba Guna DBKL, Cawangan Setiawangsa Lot 28336, Jalan 4/27E 0.17 hectares		12. Dewan Serba Guna Seri Endah Lot 35077, Jalan 5/149B 0.09 hectares	

Table 2.6.1:
Proposed of Community Hub in Neighbourhood Areas (continued)

Area and size (hectares)	Inset Plan	Area and size (hectares)	Inset Plan
13. Dewan Serba Guna Jinjang Utara, Lot 58068, Jalan Jinjang 0.27 hectares		15. Dewan Serba Guna Bandar Tun Razak Lot 51529, Lorong Mewah 11 0.56 hectares	
14. Dewan Serba Guna Kampung Cheras Baru Lot 51017, Jalan 22 0.41 hectares		16. Dewan Serba Guna Taman Sungai Besi Lot 49509, Jalan 1/108C 0.58 hectares	

THE SUMMARY

GOAL 2 : FOCUSING ON DEVELOPMENT OF KUALA LUMPUR AS AN INCLUSIVE, EQUITABLE AND LIVABLE CITY

Various initiatives and implementation approaches have been proposed so that Goal 2 towards focusing on the development of Kuala Lumpur as an Inclusive, Equitable and Livable City can be realized.

The planning and implementation of Goal 2 in the Draft KLLP2040 considers the SDGs, proposal of KLSP2040 and other national development policies which are detailed through projects, policies, programmes, planning controls and guidelines.

The proposed strategies, initiatives and implementation approaches emphasise on the providing various housing options to meet the needs of population, providing quality and conducive affordable housing, addressing the needs of the homeless, improving old established residential areas, providing adequate, quality and integrated community facilities as well as providing integrated community hub facilities.

Table 2.1 shows a summary of the planning strategy and implementation proposal for Goal 2.

Table 2.1:
The Summary of Planning Strategy and Implementation Proposal of Goal 2

Planning Strategy	Implementation Proposal	Implementation Approach				
		Project	Policy	Programme	Planning Control	Guideline
SP 2-1	CP 2-1.1	1	1	1	1	1
SP 2-2	CP 2-2.1	1	1	-	1	1
	CP 2-2.2	1	1	1	1	-
SP 2-3	CP 2-3.1	-	1	1	-	1
SP 2-4	CP 2-4.1	1	1	1	-	1
SP 2-5	CP 2-5.1	-	1	-	1	1
	CP 2-5.2	1	-	-	1	1
	CP 2-5.3	1	-	-	1	1
SP 2-6	CP 2-6.1	-	1	-	1	1
TOTAL		**6**	**7**	**4**	**7**	**8**

GOAL 3

STRENGTHENING SURROUNDING DEVELOPMENT OF KUALA LUMPUR AS A GREEN, HEALTHY AND VIBRANT CITY

GOAL 3

STRENGTHENING SURROUNDING DEVELOPMENT OF KUALA LUMPUR AS A GREEN, HEALTHY AND VIBRANT CITY

Kuala Lumpur is Malaysia's capital and main focus area centre. Planning and development of Kuala Lumpur will focus on healthy, social development and a sustainable environment that creates good quality of life for the population.

An attractive urban environment must be planned to create a conducive environment for all. Developing Kuala Lumpur as a green, healthy and vibrant city will be strengthened to fulfil current needs without compromising future generation capacity and needs.

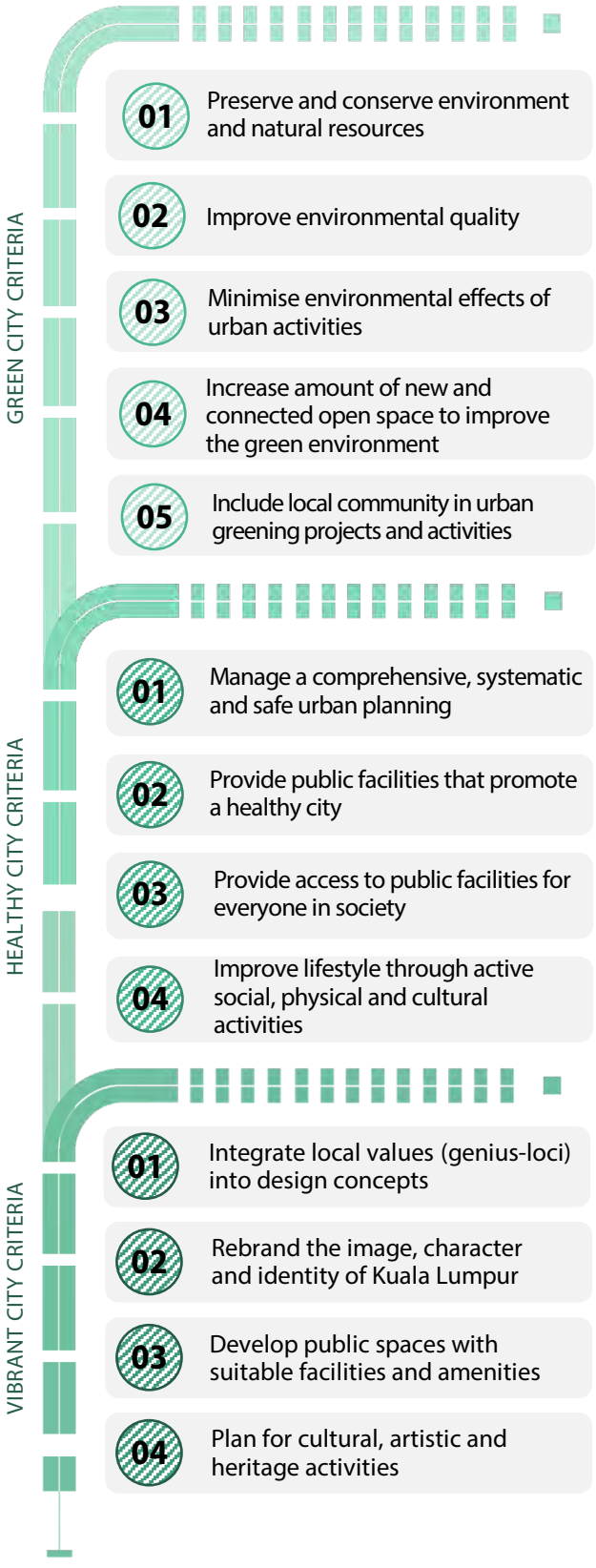
The green city criteria emphasise on the preserve and conserving the environment and natural resources, improving environmental quality, minimising the environmental effects of urban activities, increasing the amount of new and connected open space to improve the green environment as well as including the local community in urban greening projects and activities.

The healthy city criteria emphasise on managing comprehensive, systematic and safe urban planning, providing public facilities that promote a healthy city, providing access to public facilities for everyone in society as well as improving lifestyle through active social, physical and cultural activities.

The vibrant city criteria emphasise on integrating local values (genius-loci) into design concepts, rebranding the image, character and identity of Kuala Lumpur, developing public spaces with suitable facilities and amenities as well as planning for cultural, artistic and heritage activities.

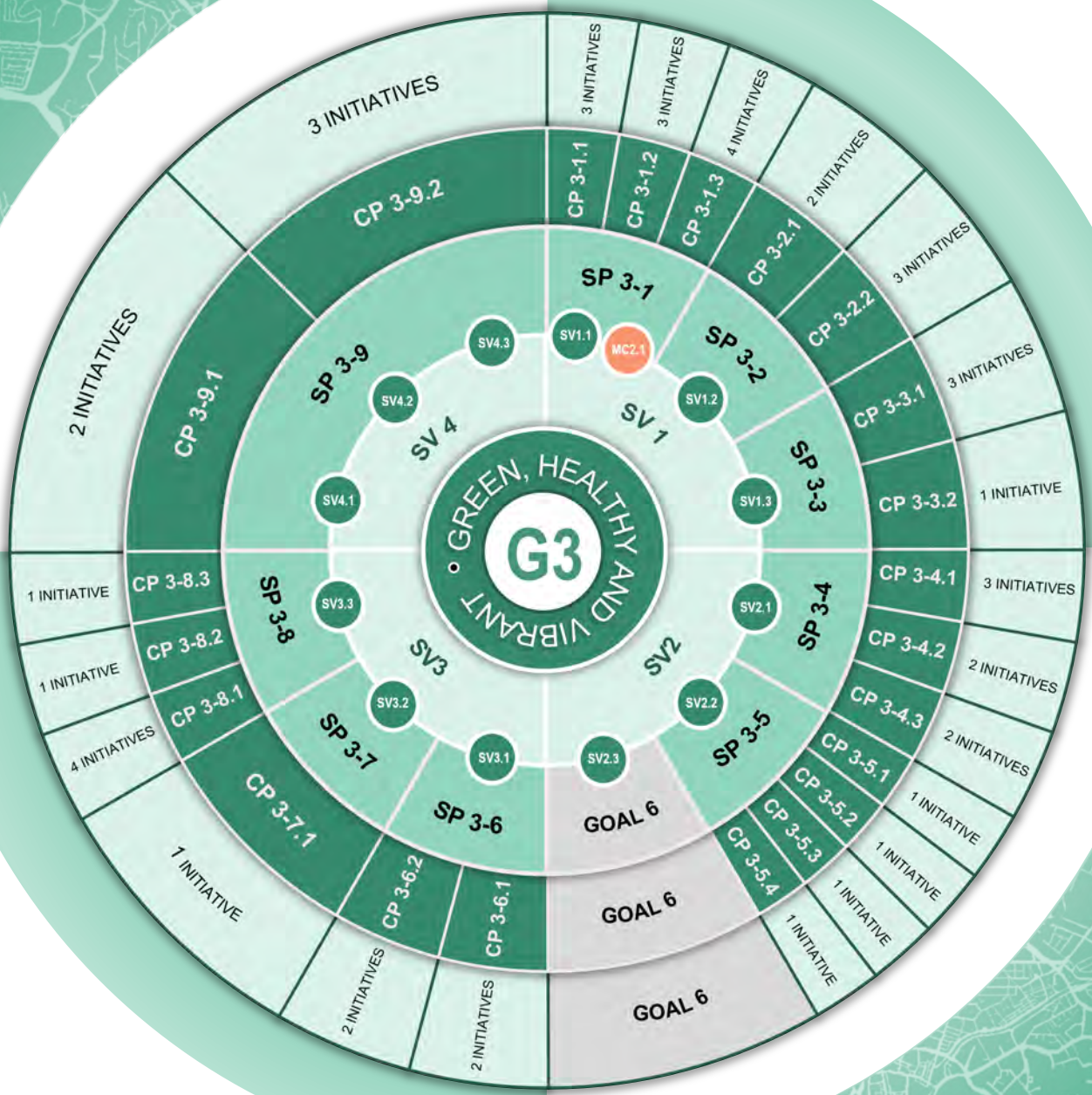
Figure 3.1 lists the main criteria that need to be implemented as a strengthen surrounding development of Kuala Lumpur as a Green, Healthy, and Vibrant City.

Figure 3.1:
Criteria for Green, Healthy and Vibrant City



KLSP2040
4 STRATEGIC DIRECTIONS
12 ACTIONS*
*** Coordination 2 action involve Goal 5 and Goal 6**

FIGURE 3.2
SUMMARY OF PLANNING STRATEGY AND IMPLEMENTATION PROPOSAL
GOAL 3:
STRENGTHENING SURRONDING DEVELOPMENT OF KUALA LUMPUR AS A GREEN, HEALTHY AND VIBRANT CITY



There are nine (9) Planning Strategies (SP), 22 Implementation Proposals (CP) and 46 Implementation Initiatives (IP) that are formulated in line with KLCP2040, as summarized in Figure 3.2.

DRAFT KLLP2040

9 PLANNING STRATEGIES
22 IMPLEMENTATION PROPOSALS

PLANNING STRATEGY

SP 3-1: MANAGING KUALA LUMPUR BIODIVERSITY ASSETS

SCENARIO OF BIODIVERSITY ASSETS IN KUALA LUMPUR

Kuala Lumpur's biodiversity assets which contribute to ecosystem services include forest areas, green cover, flora and fauna, natural hilly areas and water bodies. Permanent Forest Reserves (PFR), open areas and other green coverage are expected to have an area of 4,727.70 hectares by 2040.

The PFR area, under the supervision of the Department of Forestry, Federal Territory of Kuala Lumpur, has an area of 84.62 hectares. The Urban Forest Park comprises Taman Persekutuan Bukit Kiara, Taman Rimba Bukit Kerinchi and part of Bukit Dinding, which cover an area of 243.78 hectares.

There are 43 ponds or flood retention areas are water bodies that need to be maintained and preserved. The Draft KLLP2040 has identified hilly areas with a slope of more than 35 degree (Class IV) encompassing an area of 153.80 hectares are disaster-risk and sensitive to development.

The current scenario of this biodiversity asset record shows a need to protect and conserve biodiversity to achieve a green, healthy and vibrant environment for city residents.

Kuala Lumpur's management strategy focuses on the need to protect the supply of biodiversity assets in maintaining the stability and survival of the community in a sustainable manner. Rapid development in Kuala Lumpur will impact the quality of the environment and affect biodiversity assets which offer various forms of goodness to the community.

These biodiversity assets need to be conserved, restored, and sustainably managed to contribute towards the stability of the assets.

In order to realise Kuala Lumpur as a city that can protect the biodiversity assets, three (3) Implementation Proposals are formulated under Planning Strategy 3–1, as shown in Figure 3.1.1.

BRIEF INFO

BIODIVERSITY ASSETS OF KUALA LUMPUR

PFR Sungai Besi (66.12 hectares)
PFR Bukit Sungai Puteh (7.03 hectares)
PFR Bukit Nanas (9.37 hectares)
PFR Bukit Lagong (Tambahan) (2.10 hectares)
Green cover OS1, OS2, OS3 and OS4 (2,390.10 hectares)
Other green cover areas (2,401.47 hectares)

4,727.70 hectares Forest and Green Cover

43 pond or flood retention areas (381.44 hectares)
3 main rivers, 9 big rivers and 13 small rivers (429.69 hectares)

819.20 hectares Water Bodies

Hills and Slopes

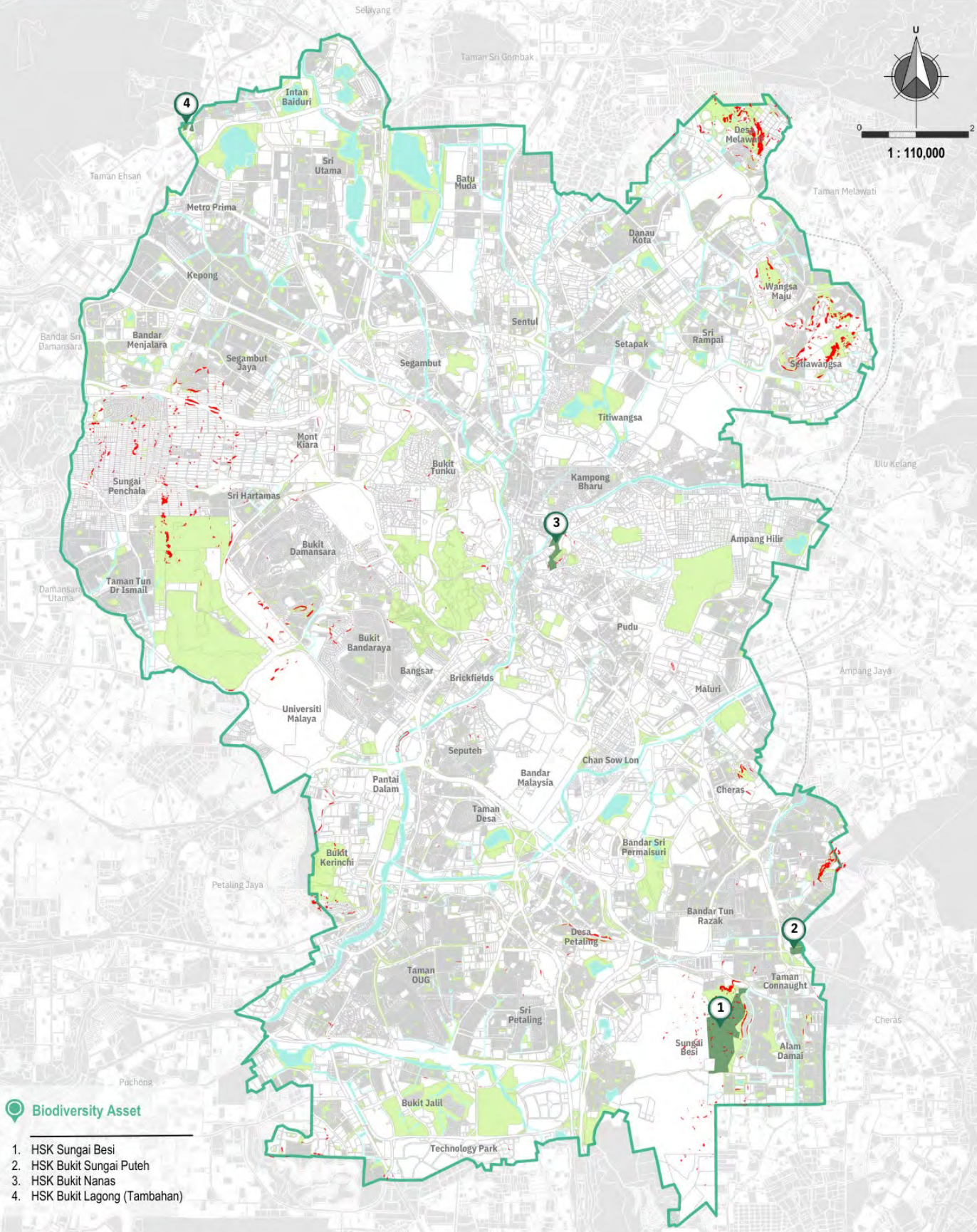
153.80 hectares Hills and Slopes

Source: Department of Forestry, Federal Territory of Kuala Lumpur

Figure 3.1.1:
Implementation Proposals for Planning Strategy 3-1

SP 3-1 MANAGING KUALA LUMPUR BIODIVERSITY ASSETS

CP 3-1.1	Managing Biodiversity Assets
CP 3-1.2	Implementing River of Life Programme
CP 3-1.3	Managing Pollution Control



Biodiversity Asset

1. HSK Sungai Besi
2. HSK Bukit Sungai Puteh
3. HSK Bukit Nanas
4. HSK Bukit Lagong (Tambahan)

FIGURE 3.1.2 | Plan of Kuala Lumpur Biodiversity Asset

Legend :

- Gradient Classification IV
- Open Space
- Forest Reserve (FR)
- Water Bodies (BDA)

Others

- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 3-1.1: MANAGING BIODIVERSITY ASSETS

In general, biodiversity assets are important to conserve and preserve for Kuala Lumpur, which is experiencing rapid physical, economic and social development which puts pressure on environmental protection.

These development challenges need to be dealt with efficiently through the involvement of all relevant stakeholders in line with the intention of sustainable development. Preservation of biodiversity assets is necessary to ensure sustainable development is achieved.

The availability of limited biodiversity assets in Kuala Lumpur needs to be emphasised in land use planning to balance economic growth and quality of life. These emphasise on managing forest areas and green coverage, rivers and water bodies as well as hilly and slope areas. It is in line with the 4th National Physical Plan (RFN4) regarding the importance of sustainable and resilient environmental management.

The implementation approach of this proposal is through policies, programmes and planning controls. There are three (3) initiatives proposed for the implementation of CP 3-1.1.

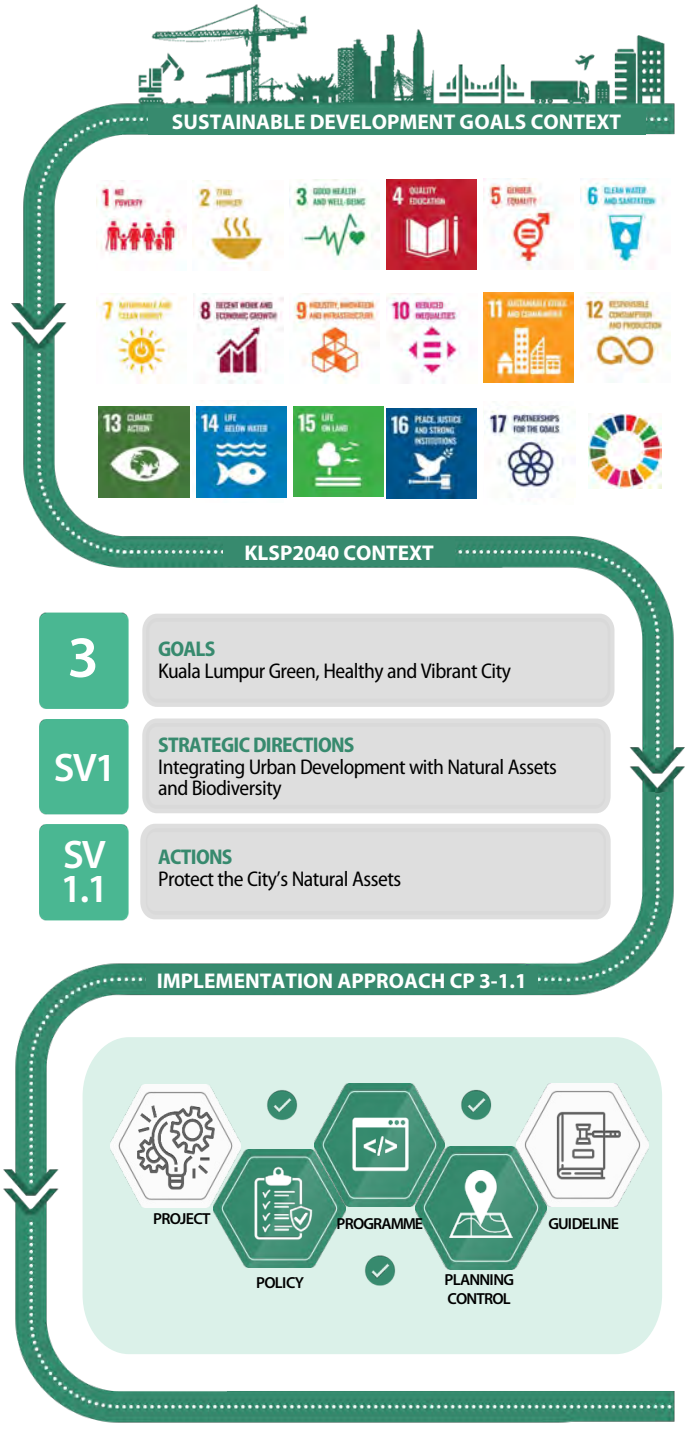
BRIEF INFO

THE IMPORTANCE OF ENVIRONMENT IN 4TH NATIONAL PHYSICAL PLAN (NPP4) RELATED TO DRAFT KLLP2040

KD 2.1	• Preserve and conserve the country's ecological assets
KD 2.2	• Manage and regulate development in environmentally sensitive areas
KD 2.3	• Maintain sustainability of water resources

Source: 4th National Physical Plan (NPP4)

CP 3- 1.1 | COORDINATION CONTEXT OF SDGs AND KLSP2040



IMPLEMENTATION INITIATIVE 3-1.1A

CONSERVE PERMANENT FOREST RESERVE (PFR) AND GREEN COVERAGE

Forest areas and green coverage will contribute to the community's quality of life such as oxygen production, sound and carbon absorption, local temperature stabilisation and natural habitat provision. This proposal maintains the gazettement of four (4) Permanent Forest Reserves (PFR), including all Public Open Space 1 (OS1), Public Open Space 2 (OS2), Private Open Space (OS3) and Public Open Space within Private Development Scheme (OS4) as biodiversity asset areas in Kuala Lumpur.

According to the National Forestry Act 1984, the provision of a buffer zone with an appropriate distance from the PFR boundary is required, depending on the types of development on the neighbouring land.

By 2040, forest areas and green coverage will cover 19.46 percent of Kuala Lumpur's land area. It is a good achievement as the capital of a rapidly developing country.

Taman Rimba Bukit Nanas is the best example of maintaining green areas in Kuala Lumpur.

Water birds like cranes are part of bird species can be seen around Sungai Gombak.

BRIEF INFO

PFR AND GREEN COVERAGE IN SELECTED CITIES

KUALA LUMPUR	• 19.46 percent
JOHOR BHARU	• 25.30 percent
SHAH ALAM	• 26.50 percent

CATEGORIES OF BIODIVERSITY ASSETS

PFR, Urban Forest Park, open space and other green coverage

Forest Area and Green Coverage

Rivers, ponds and flood retention area

Water Bodies

Hills and slopes

Hills and Slopes Areas

More than 40 bird species including birds of prey in Taman Persekutuan Bukit Kiara and Taman Rimba Bukit Kerinchi.

There are two (2) main bird species in the Urban Forest Park such as Eurasian Cicada (Passer montanus) and Tiung Gembala Kerbau.

Birds

Source :Institute of Biological Sciences

There are more than 60 species of butterflies in Kuala Lumpur out of a total of 1,000 in Peninsular Malaysia.

Insects

Source: UM 2016

There are 425 main species, 16 endemic species (for example: *Tarenna rudis*) and 16 species of Damar (*Dipterocarpaceae*) in PFR Bukit Nanas

Plants

Source: Institute of Biological Sciences

The necessary actions to support this initiative are as follows:

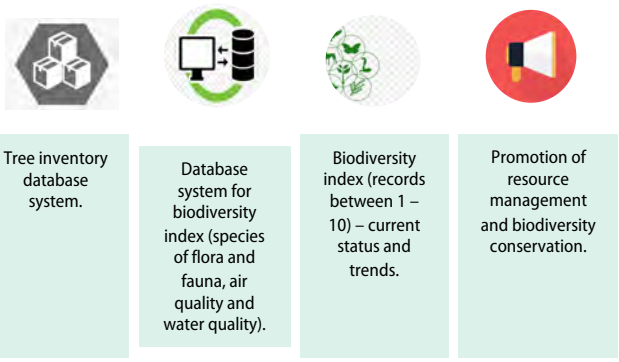
1. Develop a digital application of PFR area and green coverage as shown in Table 3.1.1 based on four (4) components, as follows:
   a. Tree inventory database system;
   b. Database system for biodiversity index;
   c. Oxygen emission data; and
   d. Carbon dioxide sink data.

The system contains timeline data to generate biodiversity status in index measurements such as index readings of 1 to 10 set different status levels from poor, moderate, and excellent status. The usage of this application should be in line with the Draft KLLP2040 and can be accessed and updated by the coordinator or system administrator.

Table 3.1.1:
Proposed for Digital Application of PFR and Green Coverage

Proposed Location
a. Four (4) PFR as follows: • PFR Sungai Besi; • PFR Bukit Sungai Puteh; • PFR Bukit Nanas; and • PFR Bukit Lagong (Tambahan). b. Three (3) Urban Forest Park as follows; • Taman Rimba Bukit Kerinchi; • Taman Persekutuan Bukit Kiara; and • Part of Bukit Dinding. c. Other open spaces: OS1, OS2, OS3 dan OS4.

Figure 3.1.3:
Conceptual Model of Biodiversity Index Application for The Draft KLLP2040



Scientific research is needed to provide an integrated database system to develop this digital application. Several countries, such as Singapore, Sweden and New Zealand, have provided this application.

BRIEF INFO

EXAMPLES OF CITY BIODIVERSITY INDEX APPLICATION

Environmental Performance Index	• Developed by Yale University, United States of America
City Biodiversity Index	• Developed by European Space Agency

Source:
Adapted from
1. https://eo4society.esa.int/projects/due-innovator-iii-eo4cbi-earth-observation-for-city-biodiversity-index/
2. https://epi.yale.edu/epi-results/2022/component/epi

COORDINATOR OR ADMINISTRATOR OF PFR DATABASE SYSTEM AND GREEN COVERAGE

KLCH	• Department of Information Management • Department of Landscape Development and Recreation
External agencies	• Department of Forestry, Federal Territory of Kuala Lumpur • Forest Research Institute Malaysia (FRIM) • Department of Wildlife and National Parks (DWNP) • Department of Environment

2. Preserve the corridor of bird paths (Taman Bukit Persekutuan - Taman Botani Perdana - Taman Tugu) as shown in Table 3.1.2, as follows:
   a. Identify the corridors of bird paths that cover the green areas at Taman Bukit Persekutuan, Taman Botani Perdana and Taman Tugu;
   b. Preserve green coverage with a canopy of fruiting and flowering trees as part of the city's ecological corridor and support the eco-tourism industry; and
   c. Protect bird habitats in wide and dense canopy areas with large silara trees.

3. Preserve habitats for other fauna (mammals, birds, and insects) by maintaining habitats involving green coverage areas to preserve biodiversity assets that are in line with sustainable development:
   a. The presence of fauna such as beavers and squirrels shows various biodiversity in Kuala Lumpur.

Table 3.1.2:
Proposed Location for Corridor of Bird Path

Proposed Location Taman Bukit Persekutuan - Taman Botani Perdana – Taman Tugu
1. Taman Bukit Persekutuan; 2. Taman Botani Perdana; and 3. Taman Tugu.

Location: Taman Botani Perdana

The Superb Starling is among the birds that inhabit the Taman Botani Perdana.

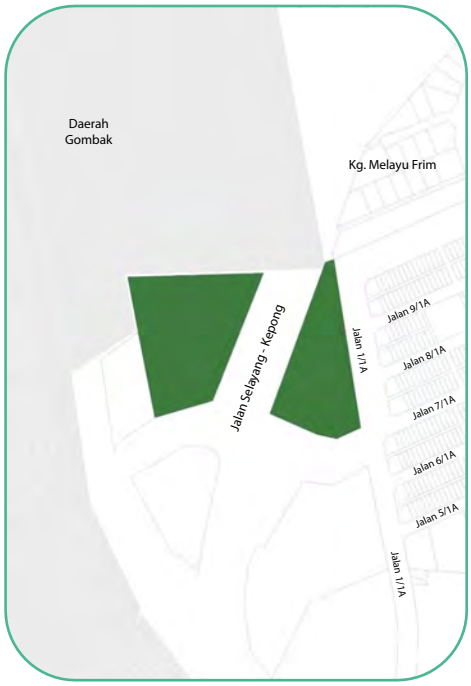
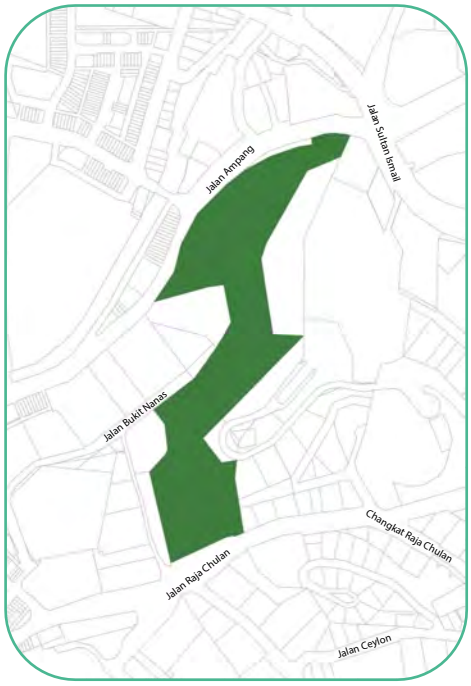
Location: Taman Tugu

Taman Tugu as an area that offers bird watching activities.

Location: Taman Rimba Bukit Kerinchi
Source: https://www.shutterstock.com/William Barton

Taman Rimba Bukit Kerinchi as focus area of residents especially on weekends.

Table 3.1.3:
Proposed Preservation of Permanent Forest Reserve (PFR) Area

Area and Acreage (hectares)	Inset Plan	Area and Acreage (hectares)	Inset Plan
1. PFR Bukit Lagong (Additional) 2.10 hectares		3. PFR Bukit Sungai Puteh 7.03 hectares	
2. PFR Bukit Nanas 9.37 hectares		4. PFR Sungai Besi 66.12 hectares	

IMPLEMENTATION INITIATIVE 3-1.1B

INCREASE INTEGRATED RIVER WATER QUALITY

Water bodies (rivers, lakes, and ponds) are important blue corridors with various functions such as lowering the surrounding temperature, supporting elements of urban design, becoming a habitat for aquatic life and as recreational areas.

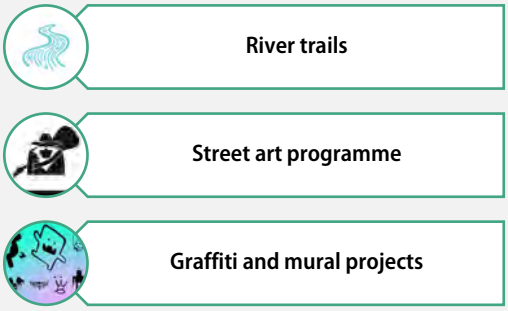
The main action is to gazette the potential water body area as a biodiversity asset under the administration of KLCH and DID, with an area of 819.90 hectares. In addition, river reserves can be used for public comfort zones, such as pedestrian and micromobility vehicle routes to be integrated with RoL proposal.

The necessary actions to support this initiative are as shown in Tables 3.1.4, 3.1.5 and 3.1.6.

In addition, the Flood Forecasting and Warning Programme Phase 2 (DID) should go hand in hand to deal with the issue of flash floods.

BEST PRACTICE

COMPONENTS OF INTEGRATED RIVERSIDE MANAGEMENT IN THE DELAWARE RIVER, UNITED STATES OF AMERICA



The Delaware Riverside project in the United States uses the river as an urban design element and serves as flood mitigation using a hydrological approach and a sustainable urban drainage system.

Table 3.1.4:
Supporting Actions to Improve Quality of Water Bodies

Supporting Actions
1. Integrated river basin management programme through: a. Land use studies; b. Monitor of floodplain areas; c. Provide of green buffer zone areas; d. River watershed management (source: Jalan Ipoh) and water quality of rivers, lakes, retention pond for Sungai Klang River Basin and Sungai Gombak.
2. Compliance with the 2005 Riverfront Development Guidelines.
3. Addition of 93 telemetry stations is in line with the planning of the Department of Irrigation and Drainage.
4. Addition of river water quality stations.
5. Addition of litter trap and log boom.

Table 3.1.5:
Proposed River Reserve in Kuala Lumpur

The Width of River between Banks (metre)	Reserve from Both Banks (metre)	Recommended Reserve Width * (Public Comfort Zone) (metre)
10-20	20	10
5-10	10	7-10
< 5	5	5

Note: **Less than this width is allowed considering the nature of the river which is tied to the physical condition of the development on riverbank.*

Source: Adapted from DID, 2021

Table 3.1.6:
Proposed of Priority Area for Water Body Management Programme (Rivers and Ponds) from 2021 to 2030

River	Pond
1. Sungai Klang	1. Kolam Batu
2. Sungai Gombak	2. Kolam Taman Wahyu
3. Sungai Kerayong	3. Kolam Benteng
4. Sungai Batu	4. Kolam Kampung Puah
5. Sungai Bunus	5. Kolam Midah
6. Sungai Kuyoh	6. Kolam Ampang
7. Sungai Keroh	7. Kolam Sri Segambut
8. Sungai Jinjang	8. Kolam Taman Desa
9. Sungai Kayu Ara	9. Kolam Sri Johor
10. Sungai Penchala	10. Kolam Bohol

Source: Adapted from DID, 2021
Note: Recommendation from the flood mitigation programme by DID need to be integrated in this programme.

IMPLEMENTATION INITIATIVE 3-1.1C

CONSERVE HILL AND SLOPE AREAS

There are four (4) hilly areas in Kuala Lumpur, which are located in the northeast area (Bukit Batu Tabor, Bukit Wangsa Maju, and Bukit Dinding), in the western area (Bukit Lanjan and Bukit Kiara), in the central area (Bukit Arang) and in the southern area (Bukit Gasing, Bukit Pudu and Bukit Sungai Besi).

The highest peak of the hill area is Bukit Batu Tabor, at a height of 320.00 metres above sea level. A part of this area is planned as a Residential 2 (R2) land use zone located in Kampung Sungai Penchala. This area still allowed for development purposes through an environmentally friendly hydraulic engineering approaches.

Proposed guidelines for Level 3 Special Area Management that involve Class IV hillside and slope areas (above 35 degree) should be provided. These guidelines consist of permissible activities and development controls.

The necessary actions to support this initiative are as shown in Table 3.1.7.

Table 3.1.7:
Proposed Action in Conserve Hill and Slope Areas

Stage	Action
Identify hill and slopes areas	1. Data collection of slope geological mapping attributes; and 2. Slope geological mapping field studies.
Record hill and slope areas with mapping methods	1. Slope classification mapping; and 2. Engineering geological mapping.
Intensify Enforcement	1. Periodic inspection of dangerous slopes; and 2. Slope monitoring through an early warning system.
Perform maintenance	1. Slope maintenance and mitigation.

BRIEF INFO

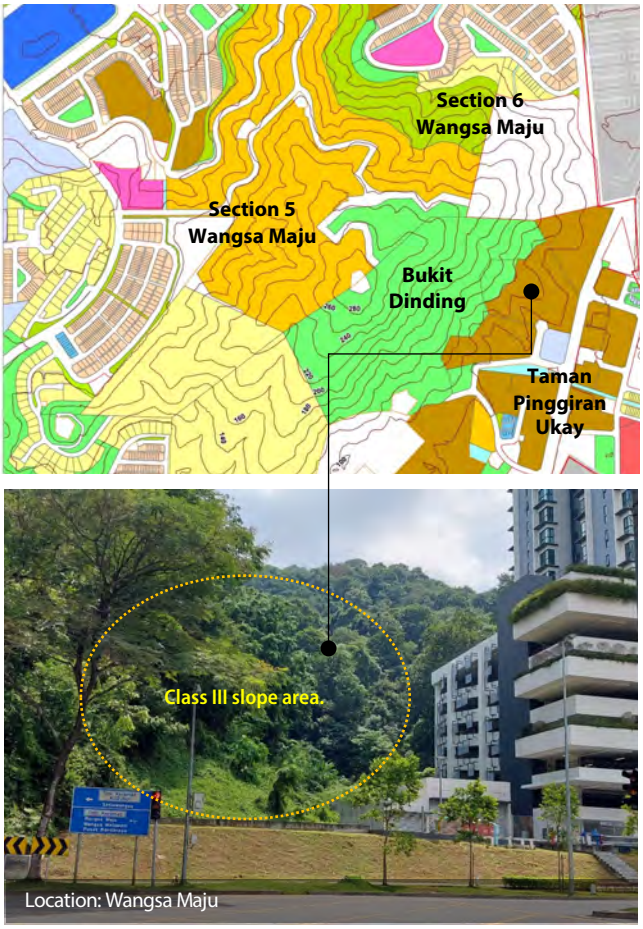
CLASSIFICATION OF GRADIENT

2,215 danger points and **1,694** risk points (2013)

Class	Description
Class I	Less than 15°: Low geotechnical constraints.
Class II	15° to 25°: Simple geotechnical restrictions.
Class III	25° to 35°: High geotechnical limitations.
Class IV	Above 35°: Extreme geotechnical constraints.

Source: Slope Unit, Department of Engineering and Urban Transport, KLCH

Figure 3.1.5:
Hill area Surrounded by Residential Areas



Bukit Dinding is Class III slope area that bordering the Kaleidoscope residential development in Wangsa Maju, requires maintenance to prevent landslide issues in the future.

IMPLEMENTATION PROPOSAL

CP 3-1.2: IMPLEMENTING RIVER OF LIFE PROGRAMME

KLSP2040 has identified three (3) main rivers for upgrading and continuance of the River of Life (RoL) project which consist of Sungai Bunus (RoL 2 programme), Sungai Keroh (RoL 3 programme) and Sungai Kuyoh (RoL 4 programme).

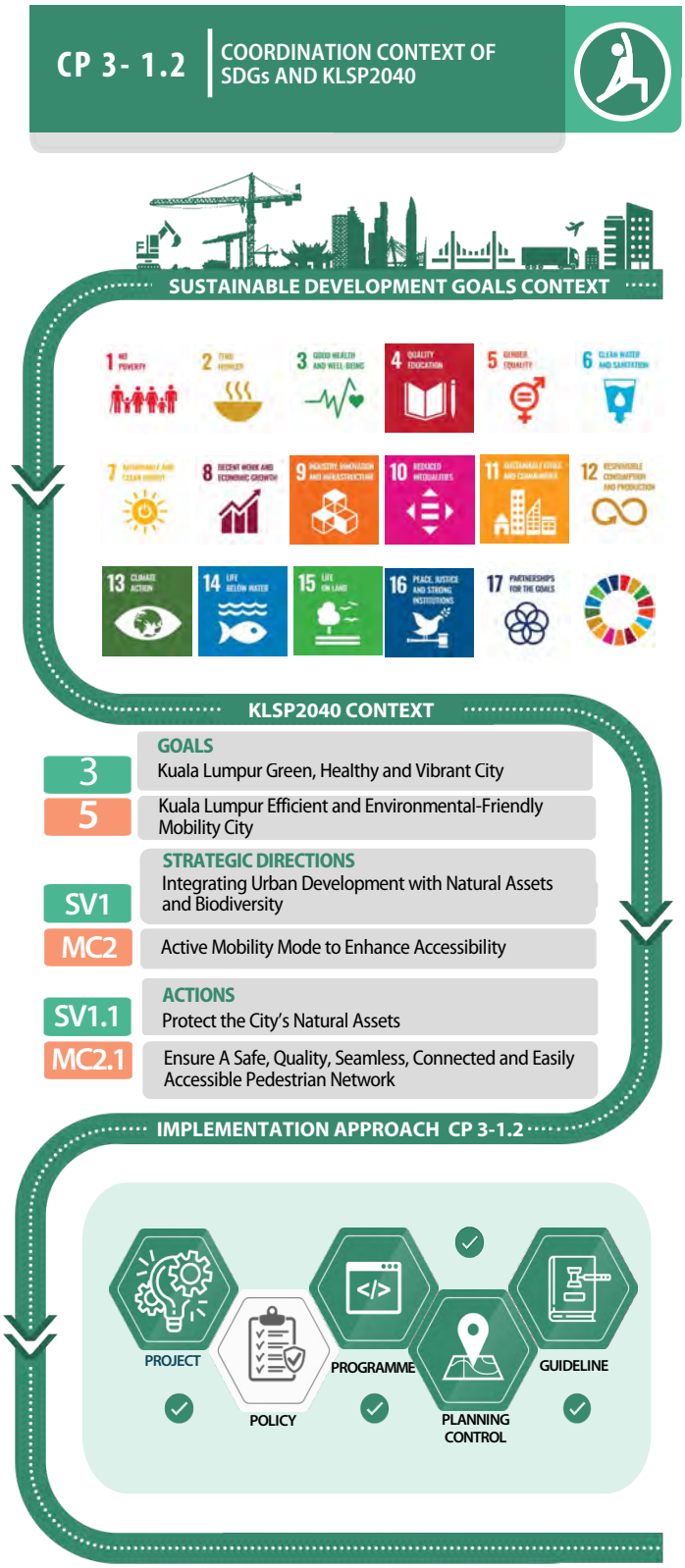
This improvement involves cleaning and beautifying the rivers and their surroundings. This initiative is an effort to protect biodiversity assets and create a more vibrant green environment in Kuala Lumpur.

Pedestrian and micromobility vehicle routes is the main access connecting green areas in Kuala Lumpur through the green corridor and blue corridor. The proposed programme is according to suitability at the implementation level based on the initiatives that have been outlined.

The implementation approach of this proposal is through projects, programmes, planning controls and guidelines. There are three (3) initiatives proposed for the implementation of CP 3-1.2.

Location: Sungai Klang (Masjid Jamek Sultan Abdul Samad)

Sungai Klang is RoL Phase 1 project that has been implemented in Kuala Lumpur.



IMPLEMENTATION INITIATIVE 3-1.2A

IMPLEMENT RIVER CLEANING AND SURROUNDING

Cleaning the river and surrounding which consist of Sungai Bunus, Sungai Keroh and Sungai Kuyoh along 26.80 kilometres is to conserve and preserve as well as to improve the current status of river water quality.

The necessary actions to support this initiative are as follows:

1. Implement cleaning of river and premises areas that are close to riverbanks from solid waste and pollutants;
2. Implement segregation activities of recyclable items from solid waste and scrap items to reduce delivery to landfill sites;
3. Identify action control to allocate main sources of pollution such as discharge of sewage and industrial substances as well as solid waste disposal into river system; and
4. Improve water quality through science and technology approaches such as biofiltration methods.

IMPLEMENTATION INITIATIVE 3-1.2B

BEAUTIFY RIVER ENVIRONMENT

Beautification of a river is intended to make the river as a focal point that will attract visitors to carry out various leisure activities.

The necessary actions to support this initiative are as follows:

1. Build a network of pedestrian and micromobility vehicle routes along the river corridor;
2. Plant trees such as Saraca thaipingensis, Melaleuca cajuputi and Dillenia excelsa along the river to form riparian areas that can improve the river's natural habitat; and
3. Propose hard landscape elements to highlight local identity.

Melaleuca cajuputi
Gelam

Dillenia indica
Simpoh air

Saraca thaipingensis
Gapis

IMPLEMENTATION INITIATIVE 3-1.2C

MANAGE A LINEAR RECREATION PARK TO SUPPORTS LOCAL ECONOMY

Effective river management will make the river and its surroundings a safe and attractive place to visit. The proposal to upgrade the potential river corridor as a recreational park that offers a variety of recreational activities will give benefits from the aspects of health, economy and quality of lifestyle.

The necessary actions to support this initiative are as follows:

1. Prepare a master plan for the proposal of RoL 2, 3 and 4;
2. Control development located next to RoL river by taking into account alignment of the river in future development proposals; and
3. Encourage participation of public, private or corporate bodies through related programmes or projects.

BRIEF INFO

PROPOSAL OF RoL 2, RoL 3 AND RoL 4

RoL 2	• Sungai Bunus (9.60 kilometres)
RoL 3	• Sungai Keroh (8.60 kilometres)
RoL 4	• Sungai Kuyoh (8.60 kilometres)

Locations: Sungai Kuyoh

Sungai Kuyoh which is located near the Kompleks Sukan Bukit Jalil has the potential to be upgraded as part of RoL project.

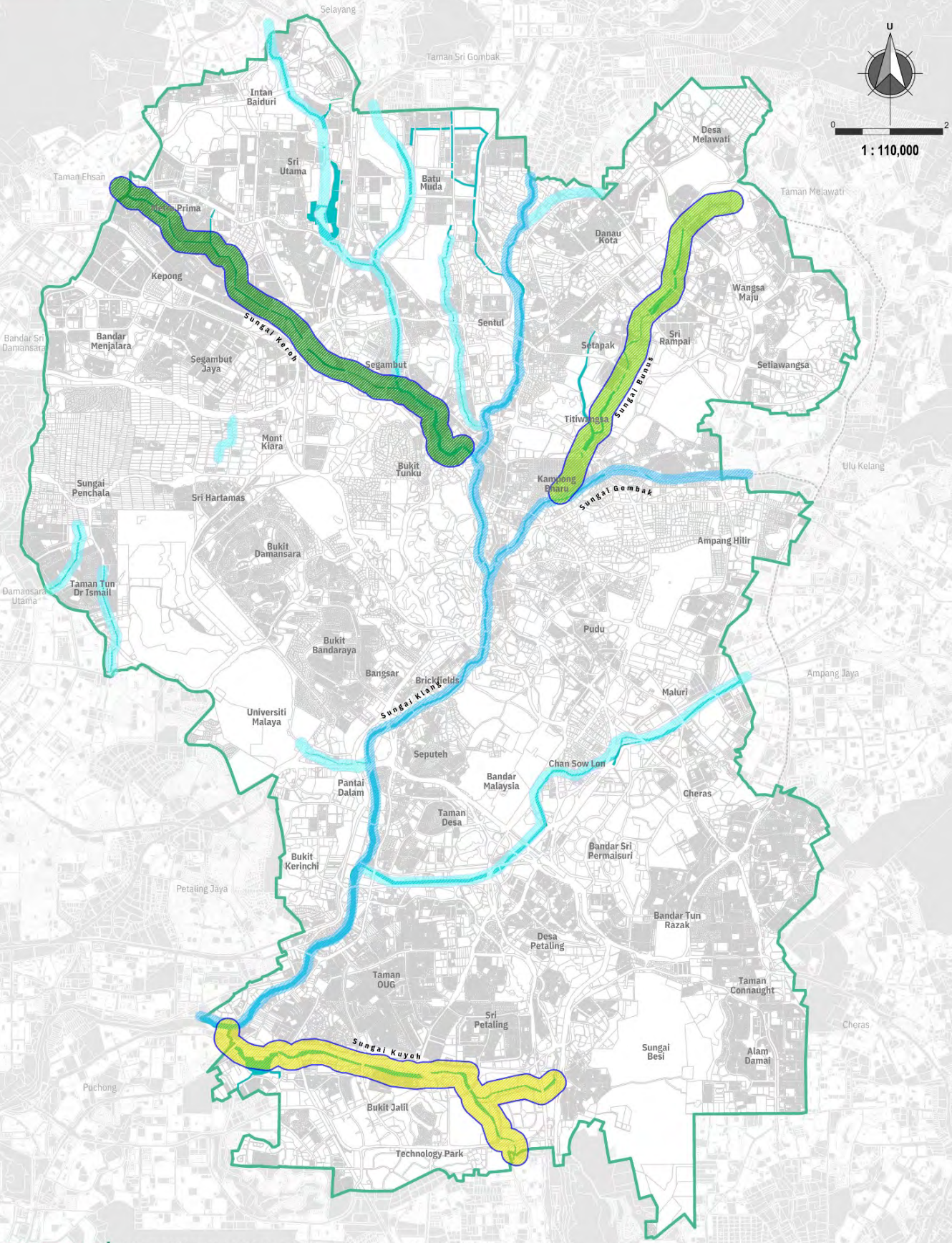


FIGURE 3.1.5 | Plan of Proposed Development River of Life (RoL) 2, 3 and 4

Legend :

Existing
- Water Bodies (BDA)

Proposed
- Cleaning River and Surrounding
- RoL 2 : Sungai Keroh
- RoL 3 : Sungai Bunus
- RoL 4 : Sungai Kuyoh

Others
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 3-1.3: MANAGING POLLUTION CONTROL

The rapid development of housing, commercial, and industrial sectors in Kuala Lumpur significantly impacts the quality of the environment such as water, air, noise and nuisance pollution. Periodic data from the Department of Environment shows that water, air and noise quality indicators can affect the community's quality of life.

In general, the level of water quality in Kuala Lumpur is in Class III and IV. In 2018, Sungai Kerayong and Sungai Bunus recorded a Water Quality Index (WQI) indicator in Class IV, which is only allowed for irrigation purposes. The RoL project in Sungai Klang and Sungai Gombak aims to improve the water quality to Class IIB, which is suitable for recreational purposes. Air Pollution Index (API) readings show moderate AIP levels (51-100) at two (2) air quality monitoring stations which are in Cheras and Batu Muda.

Noise pollution is caused by vehicles, business areas, construction sites and social activities such as entertainment. These areas and activities recorded 75 dBA noise readings exceeding the permissible standard of 65 dBA during the day.

The implementation approach of this proposal is through policies and programmes. There are four (4) initiatives proposed for the implementation of CP 3-1.3.

BRIEF INFO

CLASSIFICATION OF WATER QUALITY INDEX (WQI)

Class	Description
Class I	WQI more than 92.7: Very clean
Class IIA	WQI 85.0 – 92.7: Clean
Class IIB	WQI 76.5 – 85.0: Moderate clean
Class III	WQI 51.9 - 76.5: Slightly polluted
Class IV	WQI 31.0- 51.9: Moderate polluted
Class V	WQI less than 31.0: Very polluted

Source: Indeks-Kualiti-Air-Sungai.pdf/https://www.doe.gov.my

IMPLEMENTATION INITIATIVE 3-1.3A

CONTROL AND MONITOR POLLUTION FROM INDUSTRIAL ACTIVITIES

Operation of the industrial area in Kuala Lumpur has the potential to pollute the quality of the environment. There is a need to control and monitor industrial activities in an area involved which is the environment is not polluted.

The necessary actions to support this initiative are as follows:

1. Enforce individual industrial sewage treatment plants in existing and new factory premises;
2. Encourage the use of green technology that can be used such as solar technology, rainwater collection and reuse systems, application of the Green Building Index (GBI) as well as others the in operation of industrial activities;
3. Encourage the use of air and noise pollution control devices in industrial premises as well as using environmentally friendly fuel;
4. Provide supporting facilities such as car parking, truck parking and temporary solid waste collection sites as needed;
5. Ensure sufficient infrastructure and utility facilities such as treated water supply, periodic disposal system for toxic waste and waste materials, drainage system, electricity supply, telecommunication facilities and other facilities;
6. Improve green landscape around industrial areas to reduce carbon emissions in the air. Pocket parks can also be provided in existing industrial areas;
7. Monitor and enforce of pollution control in industrial areas; and
8. Upgrade the industrial area's sewage system near the river and the main drain from the retention pond to the treatment plant.

BEST PRACTICE

JTC CLEANTECH ONE OF SINGAPORE

JTC CleanTech One is the pilot building in Singapore's first eco park. The two-tower building houses companies and research centres that provide world-class clean technology solutions.

Unique design feature of JTC CleanTech One is Living Atrium at its centre. Living Atrium features landscaped walkways, vertical landscaping and green façades in an open environment for public interaction as a semi-shaded open space.

Source: https://www.jtc.gov.sg/find-space

IMPLEMENTATION INITIATIVE 3-1.3B

CONTROL AND MONITOR POLLUTION FROM COMMERCIAL ACTIVITIES

Commercial activities include shopping, hospitality, offices and informal commercial activities such as hawkers. Commercial activities can affect the quality of the environment if not effectively controlled.

Control and monitor of pollution from commercial activities located in:

1. Land Use Zone of City Centre Commercial (CCC);
2. Land Use Zone of Major Commercial (MC);
3. Land Use Zone of Commercial (C);
4. Land Use Zone of Local Commercial (LC);
5. Land Use Zone of Mixed Development (MX).

There are 1,361 units at KLCH hawker centres and 32,119 units of other forms of informal commercial activities operating in Kuala Lumpur. This activity also affects the environment's quality which needs to be controlled and monitored. Failure to adhere to good practices will pollute the quality of river water due to the discharge of untreated waste.

The necessary actions to support this initiative are as shown in Table 3.1.8:

Night market is among the informal commercial activities that have an impact in terms of solid waste disposal.

BRIEF INFO

DATA OF VENDOR AND OUTLET IN KUALA LUMPUR

1,361 unit Hawker centres

32,119 unit
Other informal commercial activities

Table 3.1.8:
Actions to Control Pollution from Commercial Activities

Actions
Type of Commercial: Formal Commercial Activities
1. Use a green technology sewage treatment plant; 2. Adopt the concept of environmentally friendly buildings. For example, the Green Building Index (GBI); 3. Control release of sewage from point sources as pollution from commercial activities; 4. Create renewable energy use centres and practice the 4R programme reuse, reduce, recycle and recovery especially in manufacturing and commercial sectors; 5. Promote energy-efficient practices and green infrastructure in all development sectors covering design and technology; 6. Provide dustbins and recycling bins in suitable places; 7. Control of commercial activities such as workshops and restaurants that can have an impact on the environment in terms of solid waste management and noise; and 8. Provide control of garbage traps, oil filters and sources of pollution before wastewater and sewage are released into rivers or waterways, especially for new licenses and business permit renewal.
Type of Commercial: Informal Commercial Activities
1. Enforce Kuala Lumpur Hawker Licensing By-laws 2016 and the WPKL Food Placement Licensing By-law 2016 will be carried out to control the operation of these hawker activities; 2. Identify types of hawker activities that can have an impact on the environment from the aspect of waste placement and management; 3. Ensure construction and placement of stalls or bazaars, kiosks, hawkers and food trucks. It should be located in an area that does not interfere with traffic flow; 4. Evaluate the production of grease and oil from food sales is not thrown into drains or waterways; and 5. Provide dustbins and recycling bins in suitable places to promote a culture of recycling.

IMPLEMENTATION INITIATIVE 3-1.3C

CONTROL AND MONITOR POLLUTION FROM RESIDENTIAL ACTIVITIES

Provision supply of housing units in Kuala Lumpur offers various types including multi-story houses, terraced houses, semi-detached houses, detached houses in housing areas, traditional villages and established residential areas.

This area affects the quality of the environment, especially in terms of quality of water, air and noise. Continuous control is necessary to ensure that the quality of the environment is at the permissible standards.

Control and monitor of pollution from residential activities located in:

1. Land Use Zone of Residential 1 (R1);
2. Land Use Zone of Residential 2 (R2);
3. Land Use Zone of Residential 3 (R3);
4. Land Use Zone of Residential 4 (R4);
5. Land Use Zone of Traditional Village 1 (TV1);
6. Land Use Zone of Traditional Village 2 (TV2); and
7. Land Use Zone of Established Residential (EH).

The necessary actions to support this initiative are as follows:

1. Increase green areas such as urban forest parks, pocket parks, neighbourhood parks or green circles to trap dust and improve air quality;
2. Provide a safe public space and practice social interaction between local populations;
3. Implement segregation activities of recyclable items from solid waste and scrap items to reduce delivery.
4. Control the noise limit for motor vehicles at an acceptable level (55 - 65 dBA) through periodic enforcement operations by the Road Transport Department;
5. Provide pedestrian and micromobility vehicle routes in residential areas;
6. Practice the Rainwater Collection and Reuse System (SPAH), which consists of two (2) main functions such as On-Site Retention and rainwater harvesting;
7. Encourage the practice of using solar energy to reduce dependence on electricity sources;
8. Provide communal bins in suitable locations; and
9. Provide garbage trap facilities for outlets or drainage systems in the housing area.

BEST PRACTICE

TAISUGAR CIRCULAR VILLAGE OF TAIWAN

Taisugar Circular Village in Shalun, Tainan, one of the cities in Taiwan, is the first residential project to apply the Circular Economy concept. The residence is equipped with an environmental management system for security control, a grid, smart water metres and a compost waste programme through smart applications and green technology. This initiative also offers the community in residence a micromobility, low-carbon transport network and encourages the use of green vehicles.

Source: https://www.taisugar.com.tw/circular

IMPLEMENTATION INITIATIVE 3-1.3D

CONTROL AND MONITOR POLLUTION FROM OTHER LAND USE ZONE

Other land use zone activities such as Land Use Zone of Institutional (INT), Land Use Zone of Public Facilities (PF), and Land Use Zone of Transportation (TR) also have the potential pollute the quality of the environment if not controlled and monitored effectively.

Operations from activities in the land use zone usually produce waste, wastewater and noise.

The necessary actions to support this initiative are as follows:

1. Increase green areas and green circles to trap dust and noise and improve air quality;
2. Implement segregation activities of recyclable items from solid waste and scrap items to reduce delivery;
3. Encourage the practice of using solar energy to reduce dependence on electricity sources;
4. Practice the Rainwater Collection and Reuse System, which consists of two (2) main functions such as On-Site Retention and rainwater harvesting;
5. Provide pedestrian and micromobility vehicle routes that are connected in urban areas;
6. Provide noise absorption panels on main roads and highways near the catchment areas; and
7. Control the noise limit for motor vehicles at an acceptable level (55 - 65 dBA) through periodic enforcement operations by the Road Transport Department.

BEST PRACTICE

INITIATIVE OF GREEN CAMPUS IN SUNWAY UNIVERSITY

KLCH officers have conducted a technical visit to Sunway University to see the university's initiatives towards a green campus such as implementing recycling practices and using renewable energy.

Location: Sunway University

Recycling bins are placed strategically on campus to make it easier for students to promote a culture of recycling.

Location: Sunway University

Solar panels are installed on the top floor of a building to absorb sunlight. Solar energy is a clean and renewable energy source. Solar energy usage can reduce carbon footprint and lessen the impact of environmental pollution.

PLANNING STRATEGY

SP 3-2: DIVERSIFYING FUNCTIONS OF GREEN AND BLUE CORRIDORS

SCENARIO OF EXISTING GREEN AND BLUE CORRIDORS IN KUALA LUMPUR

The post-pandemic situation has shown a positive effect on the use of recreational parks and natural green areas, especially in urban areas. Department of National Landscape reported a four (4) fold increase in the use of Taman Persekutuan Bukit Kiara from 2018 to 2021. Visitor turnout increased after the country entered the National Recovery Plan (NRP) with 682,272 visitors compared with 218,832 visitors during the Movement Control Order (MCO).

The planning strategy is supporting the vision of National Urban Policy (NUP2) which is the formation of sustainable cities for the well-being of people. The strategy can be achieved through the preservation and improvement quality of the existing green environment in Kuala Lumpur. A conducive green environment is important to promote the generation of recreational, health, educational and economic activities. Encouragement of these activities must be in line with the pace of development and increase the number of people in order to make Kuala Lumpur a liveable and sustainable city.

Strategy emphasises is provision of more open space that can be accessed for a variety of active and passive activities. This helps Kuala Lumpur to become a city that has a functional, attractive, visitor-friendly environment with interconnecting areas through comprehensive green and blue corridors.

These green and blue corridors are habitats for urban biodiversity that are connected through a network of urban ecological nodes such as river corridors and infrastructure reserves. They prioritise the protection and enrichment of the city's biodiversity assets.

In order to realise Kuala Lumpur as a city with diversify the functions of green and blue corridors, two (2) Implementation Proposals are formulated under Planning Strategy 3–2, as shown in Figure 3.2.1.

Rivers as blue corridors form main network in enhancing urban ecological nodes.

Figure 3.2.1:
Implementation Proposals for Planning Strategy 3-2

SP 3-2	**DIVERSIFYING FUNCTIONS OF GREEN AND BLUE CORRIDORS**
CP 3-2.1	Optimising Lakes and Retention Ponds As Recreational Parks
CP 3-2.2	Establishing Ecological Corridors

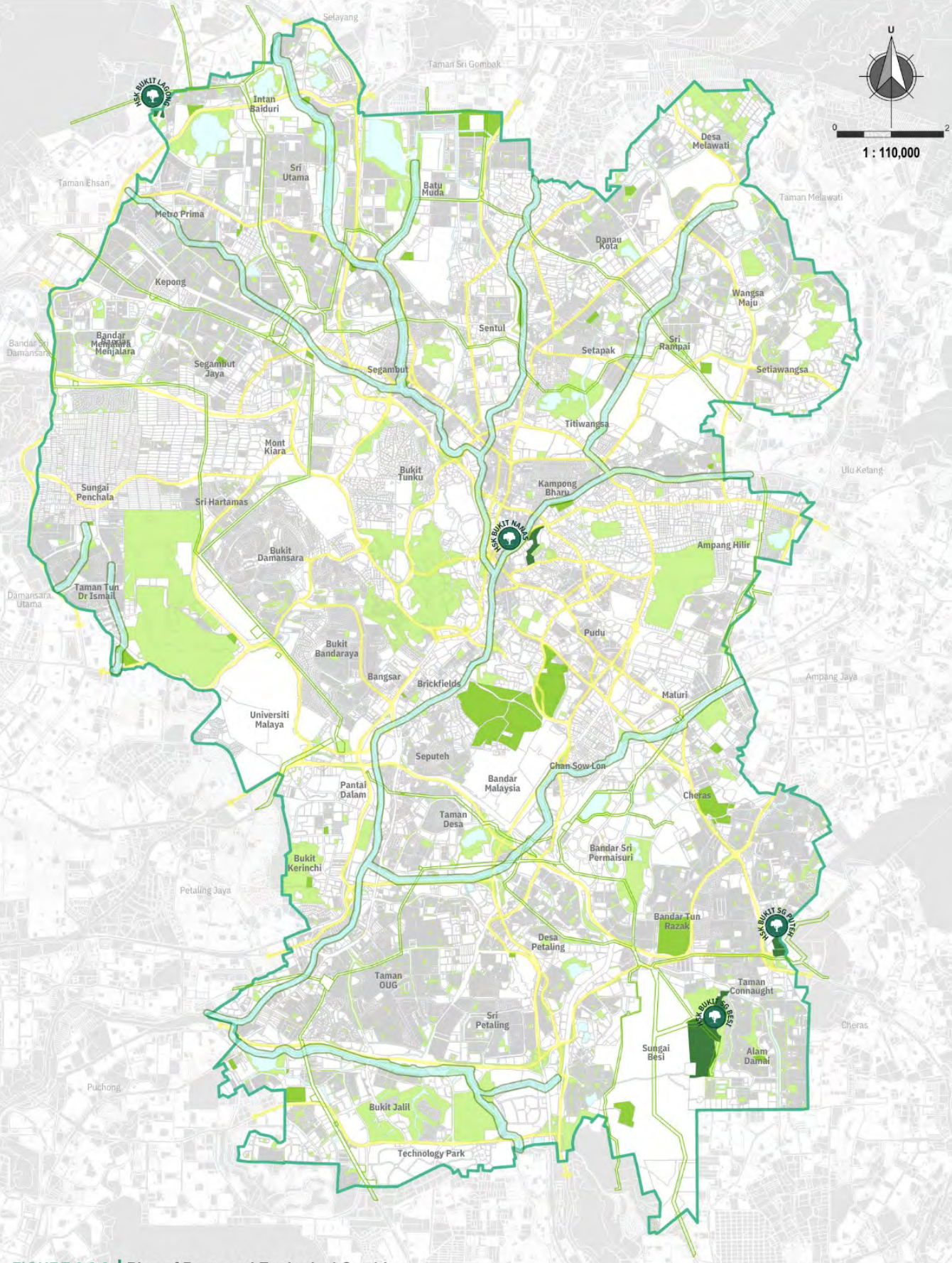


FIGURE 3.2.2 | Plan of Proposed Ecological Corridors

Legend :

- Transmission Corridor
- Open Space
- Green Area
- Forest Reserve (FR)
- Water Bodies (BDA)
- River Green Corridor

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 3-2.1: OPTIMISING LAKES AND RETENTION PONDS AS RECREATIONAL PARKS

The function of blue corridor can be diversified by utilising lakes and retention ponds as recreational parks. This contributes to preserving lakes and retention ponds in Kuala Lumpur as well as to avoiding development pressure on them.

KLSP2040 has identified lakes and retention ponds for improvement through landscape beautification as well as increasing new recreational activities. Optimisation of lakes and retention ponds should emphasise on recreational, educational, conservation and preservation elements of natural resources.

The implementation approach of this proposal is through a projects. There are two (2) initiative proposed for the implementation of CP 3-2.1.

BRIEF INFO

MAIN RECREATIONAL PARK OF KUALA LUMPUR

Community Zone

Location: Taman Tasik Permaisuri

Location: Taman Rekreasi Ayer Panas

Recreational Zone

Location: Taman Tasik Titiwangsa

Location: Taman Botani Perdana

Conservation Zone

Location: Taman Tasik Permaisuri

Location: Taman Botani Perdana

CP 3- 2.1 COORDINATION CONTEXT OF SDGs AND KLSP2040

SUSTAINABLE DEVELOPMENT GOALS CONTEXT

KLSP2040 CONTEXT

3	GOALS Kuala Lumpur Green, Healthy and Vibrant City
SV1	STRATEGIC DIRECTIONS Integrating Urban Development with Natural Assets and Biodiversity
SV 1.2	ACTIONS Connect Green Areas and Blue Corridors as Urban Ecology Nodes

IMPLEMENTATION APPROACH CP 3-2.1

IMPLEMENTATION INITIATIVE 3-2.1A

IDENTIFY LAKES AND FLOOD RETENTION PONDS FOR UPGRADING

The step in identifying and upgrading of lakes and flood retention ponds as recreational parks can preserve the function of flood retention ponds. This effort indirectly increases the size of green areas in Kuala Lumpur. Identification of lakes and flood retention ponds as recreational areas is based on the following criteria;

1. Flood retention ponds are under the supervision of KLCH;
2. Area with more than 0.80 hectares (neighbourhood field hierarchy); and
3. Located within the local neighbourhood.

The Draft KLLP2040 has identified four (4) potential flood retention ponds as recreational areas, as follows:

1. Kolam Takungan Banjir Intan Baiduri;
2. Kolam Takungan Banjir Pasar Borong Selayang;
3. Kolam Takungan Banjir Kampung Cheras Baru; and
4. Kolam Takungan Banjir Kampung Bohol.

The necessary actions to support this initiative are as follows:

1. Proposed Community Zone as an active public space for community integration with the following recommendations:
   a. Centralised public facilities;
   b. Recreational, game lots and sports facilities;
   c. Community gardens;
   d. Softscape and hardscape elements; and
   e. Security and lighting elements.
2. Proposed Recreation Zone as a semi-active open space that provides various support facilities for the following activities:
   a. Lake shore stabilisation;
   b. Recreational facilities;
   c. Softscape and hardscape elements; and
   d. Security and lighting elements.
3. Proposed Conservation Zone as a passive area that conserves and preserves lakeside ecology to encourage interaction between visitors and nature through the following activities:
   a. Tree replanting;
   b. Lake shore stabilisation;
   c. Educational activities;
   d. Hardscape elements; and
   e. Security and lighting elements.

IMPLEMENTATION INITIATIVE 3-2.1B

ENSURE RECREATIONAL ACTIVITIES RESERVED ORIGINAL FUNCTION OF THE FLOOD RETENTION POND

Flood retention ponds retain water runoff before it is discharged to the drainage system and river. It can also control the problem of flooding in Kuala Lumpur.

The proposed establishment of a recreational park at the pond area must preserve its function and increase the size of open space (land) in Kuala Lumpur.

The necessary actions to support this initiative are as follows:

1. Conserve and preserve lakeside corridor through establishment of ten (10) metres corridor along the lake shores and retention ponds; and
2. Prepare a development and management plan through the following aspects:
   a. Effective accessibility elements that allow visitors to enjoy the facilities provided;
   b. Suitable activities according to zones such as community zones, recreational zones and conservation zones; and
   c. Safe, quality and well-functioning recreational facilities.

The proposed flood retention pond development plan is shown in Table 3.2.1.

Table 3.2.1:
Proposed Flood Retention Pond as a Potential Open Space (Land)

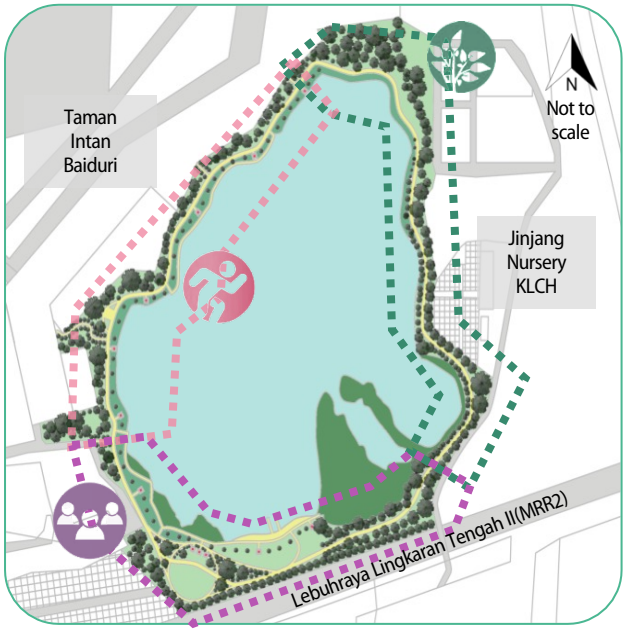
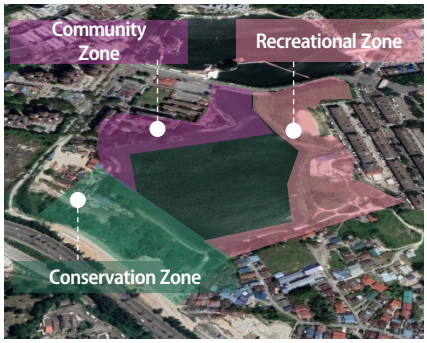
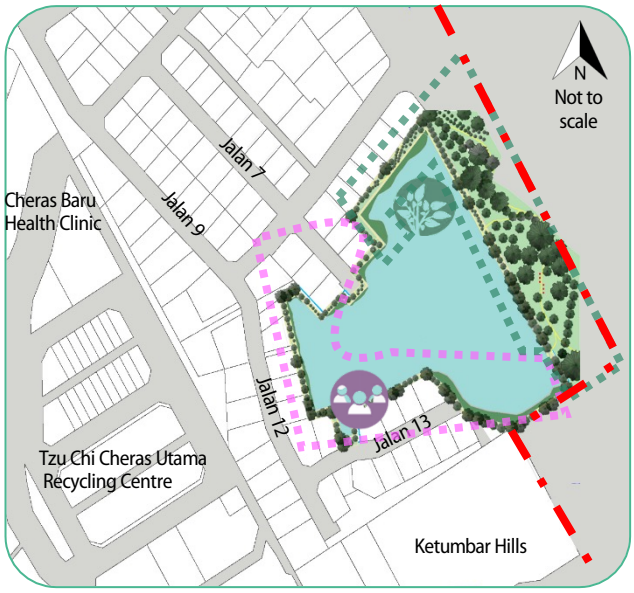
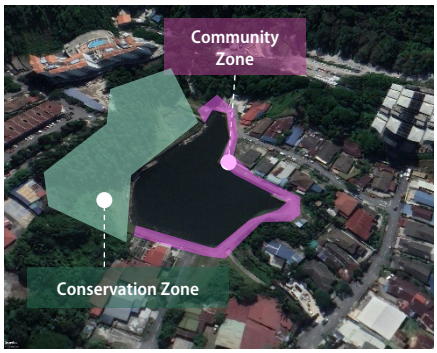
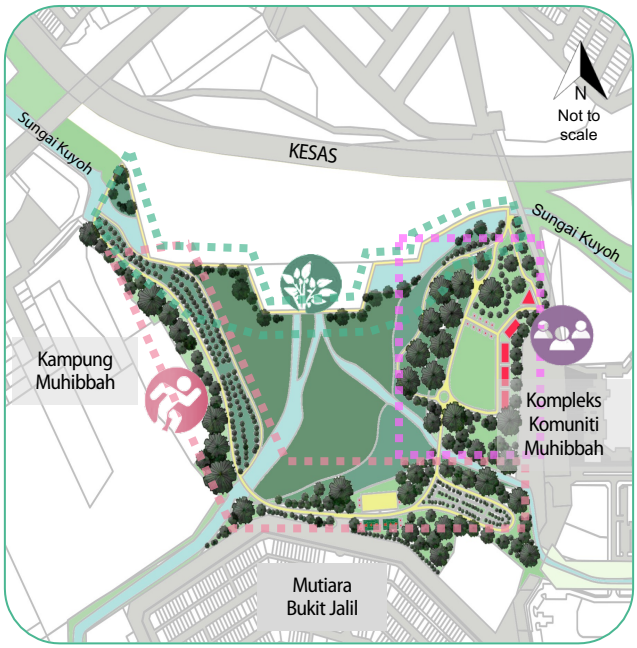
Area and size (hectares)	Inset Plan
1. Kolam Takungan Banjir Intan Baiduri 25.36 hectares	 Legend Main road Pedestrian Routes Water body Community Zone Recreational Zone Conservation Zone **Current conditions:** Basic recreational facilities such as pedestrian routes and gazebos are available at Kolam Takungan Banjir Intan Baiduri.
2. Kolam Takungan Banjir Pasar Borong Selayang 12.18 hectares	 Legend Main road Pedestrian Routes Water body Community Zone Recreational Zone Conservation Zone  **Current conditions:** The service roads around this lake can be upgraded.

Table 3.2.1:
Proposed Flood Retention Pond Area as Potential Open Space (Land) (continued)

Area and size (hectares)	Inset Plan
3. Kolam Takungan Banjir Kampung Cheras Baru 2.35 hectares	 **Legend** Main road Pedestrian Routes Water body Community Zone Recreational Zone Conservation Zone  **Current conditions:** Pond area has the potential to be upgraded.
4. Kolam Takungan Banjir Kampung Bohol 26.14 hectares	 **Legend** Main road Pedestrian Routes Water body Community Zone Recreational Zone Conservation Zone **Current conditions:** The flood retention pond has the potential to be developed for recreation with public facilities.

IMPLEMENTATION PROPOSAL

CP 3-2.2: ESTABLISHING ECOLOGICAL CORRIDORS

Green and blue corridors that make up ecological corridors can become habitats for urban biodiversity. These are connected through a network of urban ecological nodes such as river corridors and infrastructure reserves. These corridors prioritise to protect and enrich the city's biodiversity assets.

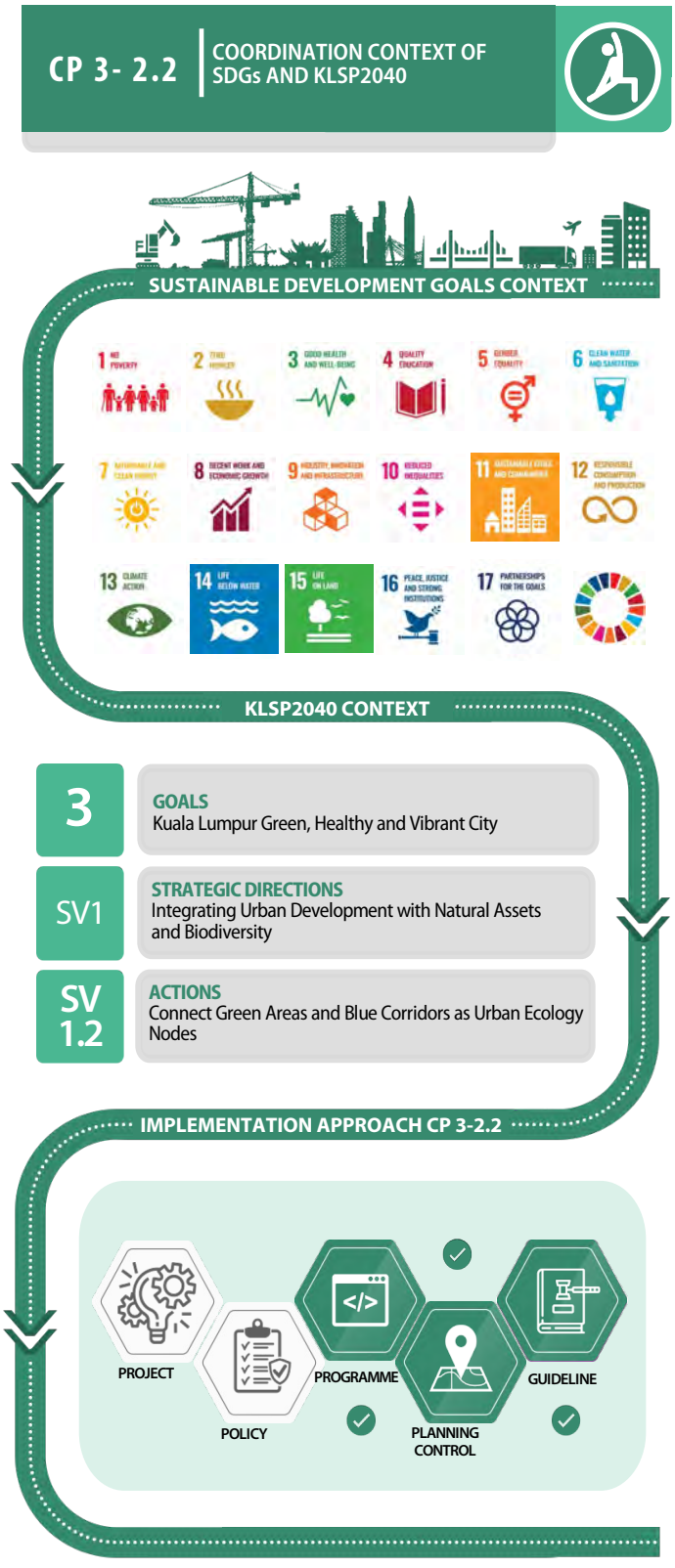
Ecological corridors can be formed by planting suitable trees as well as upgrading landscape elements in existing infrastructure and river corridors.

The Draft KLLP2040 stipulates that ecological corridors can be implemented at two (2) main corridors, as follows:

1. Infrastructure corridors which include highways, roads, rail lines, utility line reserves, linear green areas and slopes areas; and
2. River corridors which include river reserves and drainage.

The implementation approach of this proposal is through programmes, planning controls and guidelines. There are three (3) initiatives proposed for the implementation of CP 3-2.2.

The river corridor has potential to increase its function as an urban ecological node and attractive recreational area.



IMPLEMENTATION INITIATIVE 3-2.2A

ESTABLISH INFRASTRUCTURE CORRIDOR AS AN ECOLOGICAL CORRIDOR

The Draft KLLP2040 has identified five (5) main road reserves where ecological corridors in Kuala Lumpur could be implemented. Part of the appropriate segment of road reserve will be upgraded with tree planting, pedestrian and micromobility vehicle routes.

The necessary actions to support this initiative are as follows:

1. Provide adequate and suitable planting space; and
2. Ensure continuity of planting space and interconnected with other ecological corridors.

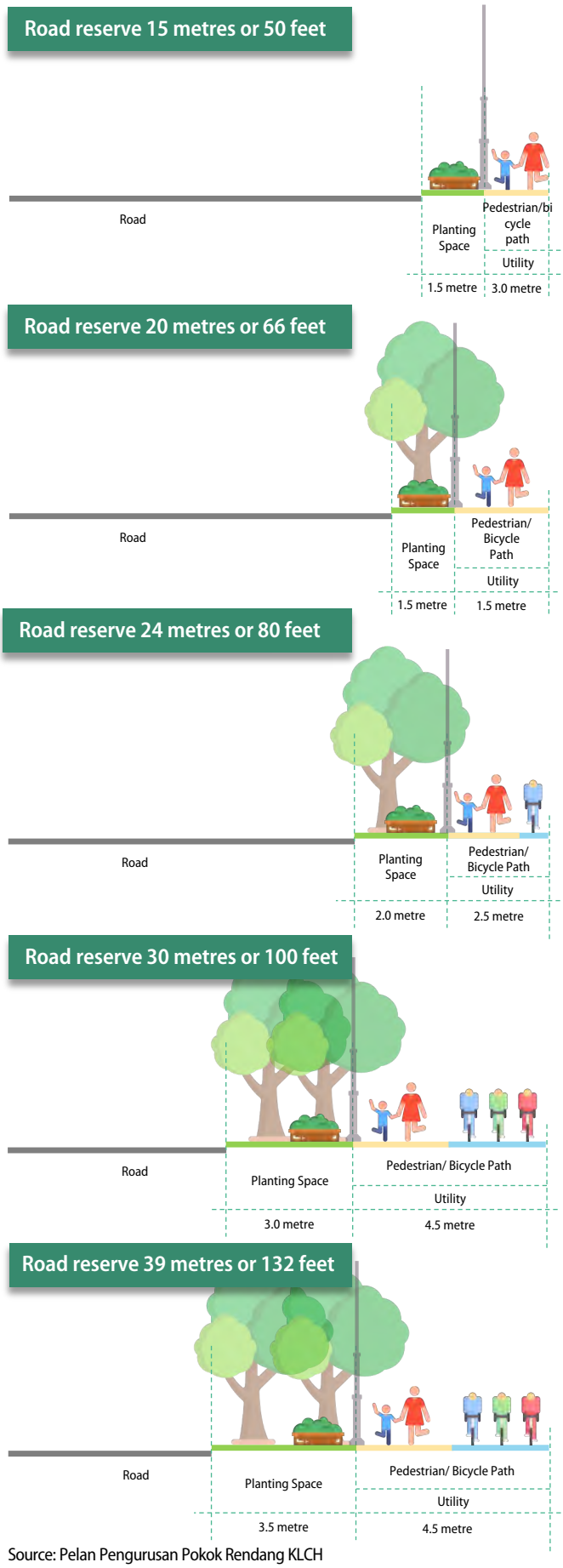
The implementation of this ecological corridor will focus on five (5) road reserves, as follows;

1. Road reserve of 15 metres or 50 feet;
2. Road reserve of 20 metres or 66 feet;
3. Road reserve of 24 metres or 80 feet;
4. Road reserve 30 metres or 100 feet; and
5. Road reserve 39 metres or 132 feet.

Figure 3.2.3 shows the minimum green space requirements to be provided based on the width of the road reserve. This implementation is also subject to detailed planning.

Road reserve segment suitable for upgrading with trees (ecological corridor) and pedestrian and micromobility vehicle routes.

Figure 3.2.3:
Proposed Ecological Corridor at Infrastructure Corridor



Source: Pelan Pengurusan Pokok Rendang KLCH

IMPLEMENTATION INITIATIVE 3-2.2B

ESTABLISH RIVERSIDE CORRIDOR AS AN ECOLOGICAL CORRIDOR

The establishment of the riverside corridor as the city's ecological corridor is to improve the quality of the environment and promote preservation and ecological conservation along the river. The widths of the riverside corridor are as shown in Figure 3.2.4, based on the potential and suitability of space for the following river categories:

1. Categories I (main river) and II (large river): ten (10) metres; and
2. Category III (small river): seven (7) metres.

The Draft KLLP2040 has identified 16 main rivers to be coordinated as riverside corridors as shown in Table 3.2.2.

Table 3.2.2:
Proposed Riverside Corridor with Potential to Be Ecological Corridor

River	Length (kilometres)
Category I: Main River	
1. Sungai Klang	16.50
2. Sungai Gombak	8.20
3. Sungai Batu	8.10
Category II: Large River	
1. Sungai Kerayong	9.37
2. Sungai Kuyoh	6.82
3. Sungai Bohol	0.80
4. Sungai Midah	1.74
5. Sungai Penchala	3.00
6. Sungai Jinjang	5.37
7. Sungai Keroh	6.90
8. Sungai Kemunsing	4.30
9. Sungai Belankong	3.50
Category III: Small River	
1. Sungai Bunus	9.60
2. Sungai Toba	4.20
3. Sungai Kayu Ara	3.60
4. Sungai Untut	3.70

IMPLEMENTATION INITIATIVE 3-2.2C

PLANT MULTI-LAYER SILARA TREE SPECIES

Conservation and preservation of ecological corridors in Kuala Lumpur aim to connect biodiversity assets and create urban biodiversity habitats.

The necessary actions to support the initiative are as follows:

1. Plant tree species that have various layers of urban tree height as shown in Figure 3.2.5; and
2. Plant trees of local species and species that can attract small fauna.

Figure 3.2.4:
Proposed Ecological Corridor at Riverside Corridor

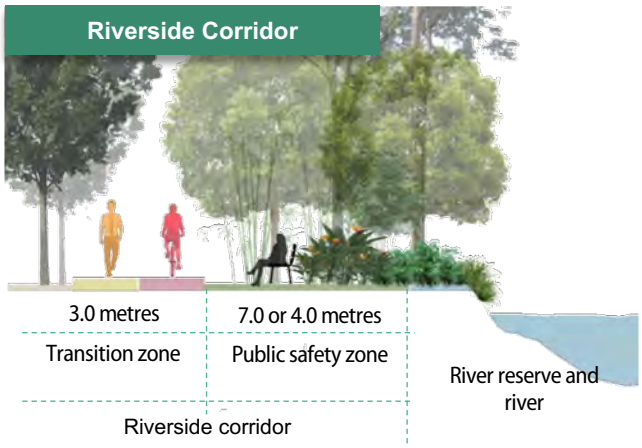


Figure 3.2.5:
Urban Tree Planting Layers

Sources:
1. https://www.mybis.gov.my/one/
2. https://www.nparks.gov.sg

PLANNING STRATEGY

SP 3-3: IMPLEMENTING GREEN DENSITY IN KUALA LUMPUR

SCENARIO OF EXISTING GREEN DENSITY IN KUALA LUMPUR

The ministry of Energy and Natural Resources is implementing the Malaysian Greening Programme through the 100 Million Tree Planting Campaign over a period of five (5) years from 2021 to 2025 in Kuala Lumpur.

The campaign aims to raise awareness and foster a love of nature among the people on the importance of green areas and forests for the well-being and quality of life of city dwellers.

Efforts to improve the country's ecosystem and biodiversity require the involvement of all levels of society. This can be done through planting various types of trees in support of the commitment to maintain the coverage of forested areas and green areas in Malaysia, especially Kuala Lumpur.

The proposal to implement Kuala Lumpur's green density is formulated as one of the strategies to support the country's commitment to maintaining at least 50 percent of the country's land area covered with trees and forested areas. This increase in green density can reduce the effect of heat islands, especially in urban areas.

Canopy covered areas can reduce heat by 11 to 25 degrees Celsius compared to uncovered areas. Limited land availability is the main constraint in increasing the level of greenery in Kuala Lumpur.

This green density proposal will focus on potential areas for tree planting in car parks, road reserves and spaces between buildings as well as on buildings. The trees planted must have a high carbon absorption capacity and a large crown.

In order to realise Kuala Lumpur as a city with implement green density, two (2) Implementation Proposals are formulated under Planning Strategy 3–3, as shown in Figure 3.3.1.

BRIEF INFO

SCENARIO OF GREEN DENSITY IN KUALA LUMPUR

Planting of 100 million trees within 5 years period from 2021 to 2025

Malaysia Greening Programme

Production of 117 tons of oxygen and reduction of 22 tons of carbon dioxide per year

1 Million Trees

- Target of 30 percent canopy cover and planting of 5 million trees
- 60 square kilometres of low-impact development and 25 percent permeability or absorption rate

2050 Climate Action Plan

Kuala Lumpur is expected to experience an increase in temperature of 1.5 degrees Celsius between 2030 and 2052

Kuala Lumpur Climate Change

The number of trees planted in Kuala Lumpur in the period 2010 to 2019

600 Thousand Trees

Sources:
1. 1. Action Plan of Climate 2050
2. 2. https://www.100jutapokok.gov.my

Figure 3.3.1:
Implementation Proposals for Planning Strategy 3-3

SP 3-3	**IMPLEMENTING GREEN DENSITY IN KUALA LUMPUR**
CP 3-3.1	Expanding Area of Tree Canopy Coverage
CP 3-3.2	Implementing The Vertical Landscape

IMPLEMENTATION PROPOSAL

CP 3-3.1: EXPANDING AREA OF TREE CANOPY COVERAGE

Planting shade trees of various species is the main landscape element in urban areas that has an impact on the green environment and can absorb light reflection from skyscrapers.

Shade trees can also balance the temperature and climate of an area, filter heat, produce oxygen naturally and absorb polluting gases such as carbon dioxide through the process of photosynthesis. These trees can function as strong wind buffers, especially in highway areas and control soil erosion through tree root structure.

This implementation proposal encourages the planting of shade tree species and plants with a high carbon absorption capacity, especially in road reserves and parking lots. These tree planting can help to reduce the urban heat island effect.

The implementation approach of this proposal is through projects and programmes. There are three (3) initiatives proposed for the implementation of CP 3-3.1.

The rebranding of Jalan Tuanku Abdul Rahman through tree planting makes this a more attractive area to visit.

IMPLEMENTATION INITIATIVE 3-3.1A

PLANT CARBON ABSORBING TREE SPECIES

Planting shade tree species with a high carbon absorption capacity can help reduce the urban heat island effect, balance the temperature and climate of a place, filter heat and contribute oxygen naturally.

Selection of tree species with wide crowns as well as tall can increase the green space in urban areas and form urban green corridors.

The Draft KLLP2040 has identified suitable tree species to support this initiative, as shown in Table 3.3.1.

Table 3.3.1:
List of Tree Species and Carbon Dioxide Absorption Capacity Per Year

	Scientific Name	Carbon Dioxide Absorption Capacity/ Tree (kilogramme/ year)	Mature Height (metre)
1.	*Khaya senegalensis* (Khaya)	72,119.00	30
2.	*Samanea saman* (Hujan-hujan)	28,488.40	20-30
3.	*Syzygium grande* (Jambu Laut)	32,740.00	25-45
4.	*Hopea odorata* (Merawan siput jantan)	11,878.00	25-30
5.	*Pongamia pinnata* (Mempari)	8,990.00	15-25
6.	*Mimusops elengi* (Tanjung)	8,289.00	15
7.	*Syzygium polyanthum* (Salam)	6,748.00	36
8.	*Sandoricum koetjape* (Sentul)	5,060.00	50
9.	*Fagraea fragrans* (Tembusu)	1,488.00	30
10.	*Garcinia griffithii* (Kandis)	1,211.00	30
11.	*Cananga odorata* (Kenanga)	756.59	10-20
12.	*Delonix regia* (Semarak api)	729.00	9-20
13.	*Ficus benjamina* (Beringin)	535.90	20
14.	*Filicium decipiens* (Kiara payung)	404.80	30
15.	*Pometia pinnata* (Kasai)	329.80	20-50
16.	*Swietenia mahagoni* (Mahogani)	295.70	40
17.	*Michelia champaca* (Cempaka)	207.90	50
18.	*Lagerstroemia speciosa* (Bungor)	160.14	30
19.	*Melaleuca cajaputi* (Gelam)	87.60	40

Figure 3.3.2:
Proposed Carbon Absorbing Tree Species

Khaya senegalensis
Khaya

Samanea saman
Hujan-hujan

Delonix regia
Semarak api

Syzygium grande
Jambu laut

Hopea odorata
Merawan siput jantan

Pongamia pinnata
Mempari

Mimusops elengii
Tanjung

Syzygium polyanthum
Salam

Sandoricum koetjape
Sentul

Fagraea fragrans
Tembusu

Sources:
1. https://www.mybis.gov.my/one/
2. https://www.nparks.gov.sg

IMPLEMENTATION INITIATIVE 3-3.1B

ENCOURAGE TREE PLANTING IN ROAD RESERVES AND OPEN PARKING SPACES

Shade trees in suburban areas and road reserves can provide shade for road users. They can also provide a comfortable space for pedestrian and micromobility vehicle routes.

The area involved can form a green corridor that is capable of improving the urban ecosystem, strong wind buffer, especially along highways and controlling soil erosion.

The selection of suitable species that are suited to the planting location depends on the appropriateness of the growth character of the species.

The necessary actions to support this initiative are as shown in Table 3.3.2.

Table 3.3.2:
Actions of Tree Planting in Road Reserves and Open Parking Spaces

Proposed Area	Planting Actions
1. Main road reserve a. Road Reserve 15 metre or 50 feet; b. Road Reserve 20 metre or 66 feet; c. Road Reserve 24 metre or 80 feet; d. Road Reserve 30 metre or 100 feet; and e. Road Reserve 39 metre or 132 feet.	**Planting Method** 1. Plant shade trees in areas that have the following criteria: a. Roadside trees that do not provide shade; and b. Replace existing trees that are unhealthy and dangerous. 2. Plant trees in layered, mixed trees and naturally form in the wide and extensive reserves are encouraged to support urban biodiversity habitats; 3. Plant shrubs will serve as a safety divider between the vehicle path and the pedestrian routes on existing roads that do not have a dedicated tree planting area; 4. Plant shade trees at intersections, roundabouts and elevated road areas should take into account drivers' view and serve as direction indicators; and 5. Encouraged installation root barriers around transport infrastructure poles and curb. **Selection of tree species** The necessary actions in the selection of tree species are as follows: 1. Tree species with thick flowering and fragrant are planted in protocol and main road reserve areas for attractiveness and highlight the area's identity; 2. Main tree species with a straight or upright trunk and have fast growth rate as well as a wide crown to provide shade; 3. Tree species suitable for stabilisation, conservation and preservation of slopes such as those with taproots and a firm grip; 4. Tree species that are easy to maintain such as those with branches that are not easily broken or fragile, low leaf fall rate and pollution resistant; 5. Tree species capable of attracting urban life such as birds, squirrels and butterflies; and 6. Tree species with a minimum clear trunk height of 2.0 metres from ground level;
2. Open Parking Spaces: a. Identifying parking or public spaces that are suitable to be used as parklets	

IMPLEMENTATION INITIATIVE 3-3.1C

PROMOTE TREE PLANTATION IN OPEN SPACES (LAND)

Green cover areas can be improved by increasing the number of trees in Kuala Lumpur's open spaces. Shade trees can increase biodiversity in green areas and support efforts to connect environmental sustainability with communities.

Planting of unique and endangered tree species can raise awareness of the importance of conserving tropical tree species which are valuable national assets. This can also foster a love for natural landscapes with tropical characteristics among the community and remain for future generations' appreciation.

The necessary actions to support this initiative are as follows:

1. Planting method

a. Plant shade trees in areas that have the following criteria:
- Roadside trees that do not provide shade; and
- Replace existing trees that are unhealthy and dangerous.

b. Plant trees in layered, mixed trees and naturally form in the wide and extensive reserves are encouraged to support urban biodiversity habitats;

c. Plant shrubs will serve as a safety divider between the vehicle path and the pedestrian routes on existing roads that do not have a dedicated tree planting area;

d. Plant shade trees at intersections, roundabouts and elevated road areas should take into account drivers' views and serve as direction indicators; and

e. Encouraged installation of root barriers around transport infrastructure poles and curbs.

2. Selection of tree species

The necessary actions in the selection of tree species are as follows:

a. Tree species with thick flowering and fragrant are planted in protocol and main road reserve areas for attractiveness and highlight the area's identity;

b. Main tree species with a straight or upright trunk and have fast growth rate as well as a wide crown to provide shade;

c. Tree species suitable for stabilisation, conservation and preservation of slopes such as those with taproots and a firm grip;

d. Tree species that are easy to maintain such as those with branches that are not easily broken or fragile, low leaf fall rate and pollution resistant;

e. Tree species capable of attracting urban life such as birds, squirrels and butterflies; and

f. Tree species with a minimum clear trunk height of 2.0 metres from ground level;

Specific initiatives for tree planting in Kuala Lumpur open spaces (land) and boundaries are as shown in Table 3.3.3.

Table 3.3.3:
Action of Tree Planting in Kuala Lumpur's Open Space (Land) and Boundaries

Location	Specific Initiatives
1. Open Area (Land)	1. Main trees should be given priority as softscape elements because more significant in providing shade in improving the quality of the environment; and 2. Combination of different types of plants can create a harmonious and functional environment, apart from aesthetic purposes.
2. Kuala Lumpur Boundaries	1. Existing boundaries areas that still have green space, the proposed 10-metre wide reserve and can be used as a boundaries network throughout Kuala Lumpur.
3. Lakes and Retention Ponds	1. Provide a continuous green network that link lakes and flood retention ponds, rivers, community areas and local centres.

IMPLEMENTATION PROPOSAL

CP 3-3.2: IMPLEMENTING THE VERTICAL LANDSCAPE

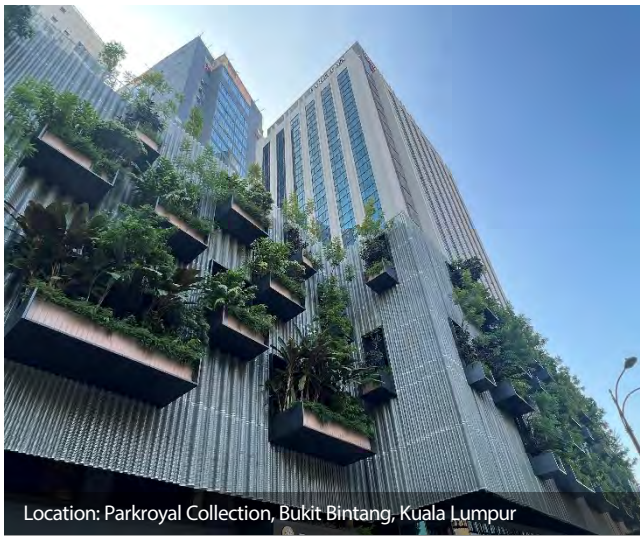
Vertical landscape serves as an alternative approach to encourage the provision of green elements in dense neighbourhoods and townships. This can increase the green density of an area and act as thermal insulation by protecting a building from direct sunlight.

The form of the insulation layer is able to cool the surface of the building and promote energy efficiency in the building.

The application of vertical landscape is a main feature in the concept of the Sponge City concept. This concept focuses on a comprehensive approach to managing the water cycle in urban areas and helps in mitigating the risk of flash floods.

Vertical landscape can be implemented in high-density developments such as mixed developments, multi-storey housing, or commercial developments. The emphasis should be on new development areas, redevelopment or improved regeneration areas.

The implementation approach of this proposal is through planning controls and guidelines. One (1) initiative is proposed for the implementation of CP 3-3.2.



Vertical landscape at Hotel Parkroyal Collection.

IMPLEMENTATION INITIATIVE 3-3.2A

IMPLEMENT THE VERTICAL LANDSCAPE CONCEPT

The concept of vertical landscape can contribute to the greening of the sustainable urban environment. It can increase value added to the building and its environment through the improvement of the visual quality of the softscapes planted.

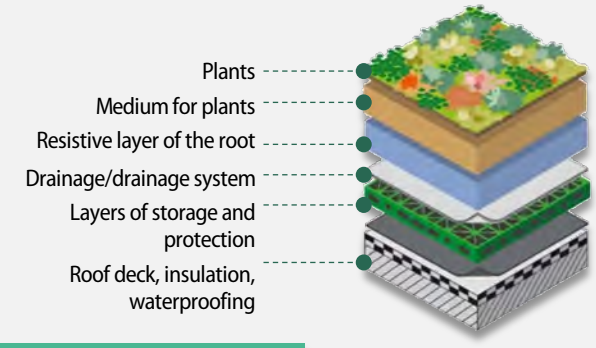
Plants covering the building can reduce the internal temperature and save energy consumption which will contribute to improving the quality of the urban ecosystem.

Implementation of this concept is one of the strategies to achieve the target of providing 20 square metres of open space for each resident and an effort to increase the area of green cover.

The necessary actions to support this initiative are as shown in Table 3.3.4.

BRIEF INFO

LAYER OF VERTICAL LANDSCAPE PLANTING



Extensive

- Has a light garden load, low construction cost or capital and minimal maintenance
- The thickness of soil medium layer is between 50 millimetre and 200 millimetre.

Intensive

- Characterised by heavy park loads, high construction costs or capital and frequent maintenance requirements
- The thickness of soil medium layer is between 200 millimetre and 2000 millimetre.

Source: Adapted from Roof Garden Planning Guidelines, 2012

Table 3.3.4:
Implementation Action Vertical Landscape Concept

Location	Implementation Actions
1. **Roof Level** Garden located on the roof of a building. 2. **Building Facade** Plants that are planted vertically on building façades either on building walls or on separate structures. 3. **Terraced Garden** Garden located on the intermediate floor level, balcony and podium deck. 4. **Community Site** Located either on the lobby level or on the ground and accessible to the public and building users as common areas such as plazas, children's playgrounds, water landscapes and others.	1. The vertical landscape concept is encouraged in high-density development areas such as; a. City centre; b. New development area; c. Redevelopment area; and d. Regeneration area. 2. 50 percent of this greenery is provided through two (2) methods as follows; a. Ten (10) percent is provided at the ground level of the building and 40 percent vertically (multi-level landscape); or b. Eight (8) percent is provided at ground level and 42 percent vertically of which 16 percent is a covered green area. 3. The suggested planting actions are as follows; a. The vertical garden irrigation system must be well planned as well as rainwater collection and reuse are encouraged; b. The orientation of the garden, wind directions and the sun's rays must be taken into account in designing the garden; and c. Drainage systems such as drains, ditches, downspouts, sub-soil drains, discharge outlets, scupper drains and barriers to prevent blocked drainage systems must be provided and approved. 4. The necessary actions in the selection of plant types are as follows: a. Extensive vertical landscape area – small, climbing and creeping plants, ground cover plants or grasses, cacti and hardy plants; and b. Intensive vertical landscape area – medium-sized trees, shrubs, palms, ferns, bamboos, herbs and other suitable plants.

PLANNING STRATEGY

SP 3-4: DIVERSIFYING THE FUNCTION OF PARKS AND OPEN SPACES (LAND)

SCENARIO OF CURRENT OPEN SPACES (LAND) IN KUALA LUMPUR

An adequate provision, high-quality and well maintained open space will support towards creating a healthy and vibrant city. High-quality green spaces are capable to balance the urbanisation negative impacts such as urban heat islands, climate change, pollution and the loss of urban biodiversity.

The Planning Guidelines for Provision of Open Spaces (KLCH) requires each development to provide a minimum of ten (10) percent for public open space. A high-quality open space will balance green spaces and development as well as increase the community's quality of life.

KLSP2040 targets to achieve the provision of 20 square metres of open space per person in Kuala Lumpur by 2040. This target will support the increase and requirements of present and future populations. Apart from that, efforts to gazzette open spaces in Kuala Lumpur needs to be enhanced.

Generally, major Asian countries have open spaces less than 20 square metres per population as shown in Table 3.4.1.

Table 3.4.1:
Status of Open Spaces Provision in Other Countries

City/Country	Square Metres per Person
1. Los Angeles (2012)	48.50
2. Washington (2012)	38.00
3. Greater London (2012)	40.00
4. Seoul (2010)	6.10
5. Tokyo (2013)	5.80
6. Hong Kong (2012)	2.70
7. Singapore (2015)	7.50
8. Bangkok (2020)	5.40

Note: Interpretation of open space provision differs between countries.
Sources:

Adapted from:
1. PLANMalaysia (Research and Development Division), 2016
2. Open Space Handbook - A guide for journalists in Hong Kong (2018)

BRIEF INFO

REQUIREMENTS OF OPEN SPACE (LAND)

National Physical Plan 4 (NPP4)
Utilised of green landscape in urbanised areas to support and improve habitat continuity

Biodiversity Concept

Emphasised on preserving green landscape in urbanised areas

National Biodiversity Policy 2016-2025

WHO Targets
Nine (9) square metres per person

World Health Organization

2040 Target
Kuala Lumpur 2021: 10.61 square metres per person
Kuala Lumpur 2040: 20.00 square metres per person

Kuala Lumpur Structure Plan 2040

Location: Taman Tasik Titiwangsa
Source: https://www.shutterstock.com/shutterspeakstudio

Lakeside area including water body a main asset of open space (land) in Kuala Lumpur.

The level of open space (land) provision in Kuala Lumpur when compared to other states and major towns in Malaysia is moderate as shown in Tables 3.4.2 and 3.4.3. The requirements for its provision need to be enhanced through various additional initiatives and re-definitions of open space (land) that include open space and green area to meet the target of 20 square metres of open area per person.

In order to realise Kuala Lumpur as a city with a variety of parks and open areas functions, three (3) Implementation Proposals are formulated under Planning Strategy 3–4, as shown in Figure 3.4.1.

Table 3.4.2:
Status of Open Space (land) Provision in Malaysia, 2016

State	Square Metres per Person
1. Wilayah Persekutuan Putrajaya	206.00
2. Melaka	70.50
3. Negeri Sembilan	36.50
4. Wilayah Persekutuan Labuan	32.70
5. Terengganu	29.90
6. Pahang	24.20
7. Selangor	22.20

Source: PLANMalaysia (Research and Development Division)

Table 3.4.3:
Status of Open Space (land) Provision in Klang Valley

City/Town	Square Metres per Person
1. Petaling Jaya (2016)	26.80
2. Shah Alam (2016)	58.10
3. Subang Jaya (2016)	36.70
4. Klang (2016)	19.40
5. Sabak Bernam (2016)	19.80
6. Kuala Lumpur (2021)	**10.61**

Source: Seksyen Makro dan Penswastaan, UPEN

BRIEF INFO

OPEN SPACE (LAND) IN CONTEXT OF KUALA LUMPUR

Open Space

1. **Public Open Space 1 (OS1)**
2. **Public Open Space 2 (OS2)**
3. **Private Open Space (OS3)**
4. **Public Open Spaces within Private Development Schemes (OS4)**
5. **Forest Reserve (FR)**

Green Area

1. **Cemetery and Mortuary Management (CE)**
2. **Part of Infrastructure and Utilities reserve (IU)**
3. **Part of Transportation reserve (TR)**

Figure 3.4.1:
Implementation Proposals for Planning Strategy 3-4

SP 3-4 **DIVERSIFYING FUNCTION OF PARKS AND OPEN SPACES (LAND)**

- **CP 3-4.1** Strengthening The Function Of Open Space (Land)
- **CP 3-4.2** Strengthening Open Spaces (Land) And Recreational Area As A World-class Park
- **CP 3-4.3** Activating Park and Open Space

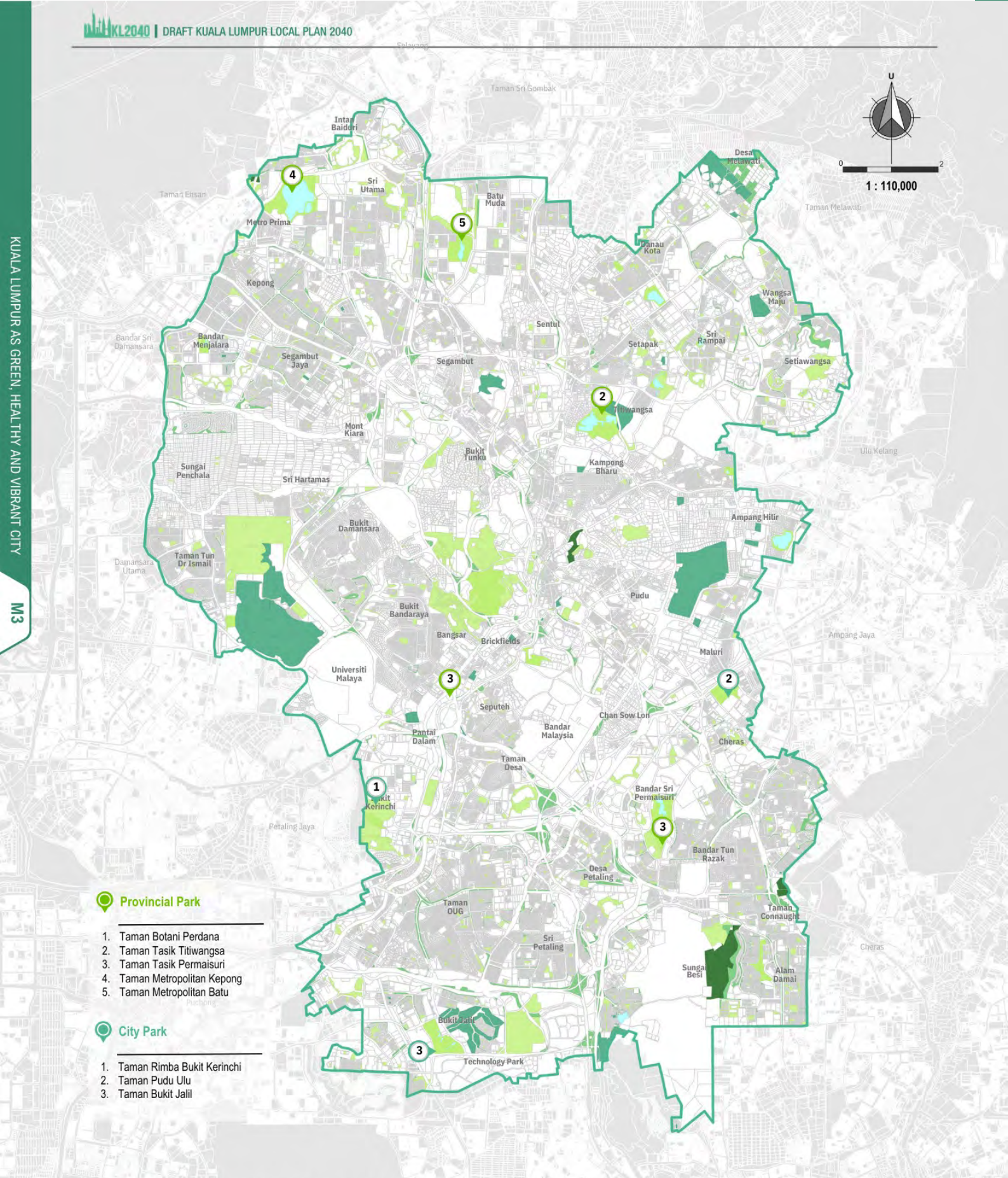


FIGURE 3.4.2 | Plan of Open Space and Green Area Distribution 2040

Legend :

- Public Open Space 1 (OS1)
- Public Open Space 2 (OS2)
- Private Open Space (OS3)
- Forest Reserve (FR)

Others

- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 3-4.1: STRENGTHENING THE FUNCTION OF OPEN SPACE (LAND)

Sustainable Cities and Communities is one of the agenda outlined by the United Nations (UN) in the Sustainable Development Goals (SDGs) 2030 to ensure cities and human settlements are inclusive, safe, resilient and sustainable.

The 4th National Physical Plan (NPP4), through Action KI 3.3B, lists several measures to bolster green areas. Among the measures is to protect and preserve open spaces including urban parks through gazettement of open space to prohibit any change of land use activities.

The Initiatives to bolster the provision of open space will increase urban resilience and make Kuala Lumpur a liveable city with a high-quality and conducive green environment.

The implementation approach of this proposal is through planning controls. There are three (3) initiatives proposed for the implementation of CP 3-4.1.

BRIEF INFO

NATIONAL PHYSICAL PLAN 4 (NPP4)

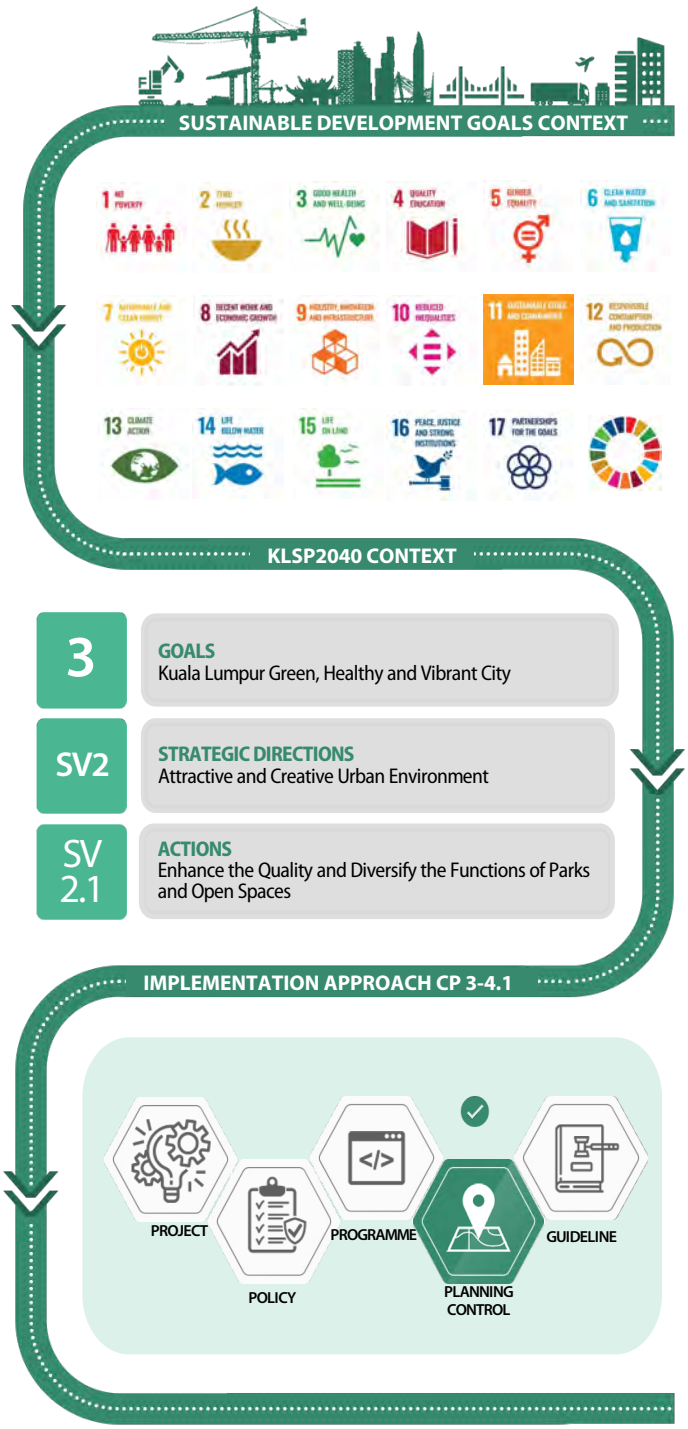
Liveable Environment and Inclusive Community
Thrust 3

Mainstreaming Clean, Healthy and Safe Lifestyles in Planning and Development
Strategy KI 3.3

Increasing Green Areas and Improving Their Functions as Beneficial Space for Social Interaction
Action KI 3.3B

Source: National Physical Plan 4

CP 3- 4.1 | COORDINATION CONTEXT OF SDGs AND KLSP2040



IMPLEMENTATION INITIATIVE 3-4.1A

STRENGTHEN INTERPRETATION OF OPEN SPACE IN LAND USE ZONE

The Draft KLLP2040 strengthen the interpretation of open space within the context of development in Kuala Lumpur. This initiative is to support the strategy of dealing with the phenomena of urban heat islands and low water permeability in urban areas.

Open space (land) in Kuala Lumpur consists of open space and green area. The categories and details are as shown in Table 3.4.4.

Table 3.4.4:
Details of the Definition of Open Space in the Context of The Draft KLLP2040

THE DRAFT KLLP2040 An open area is made up of open space and green area based on the following definitions:	
Open Space	Green Area
The Entire Land Use Zone of Public Open Area 1 (OS1), Public Open Area 2 (OS2), Private Open Area (OS3), Public Open Space within Private Development Schemes (OS4) and Forest Reserve (FR). 1. Public Open Space 1 (OS1): Refers to the open land use zone for recreational activities such as leisure, games, sports or cultural activities. OS1 includes recreational parks and areas handed over by private development or the government for the public as open spaces managed or maintained by KLCH or other relevant entities for public usage; 2. Public Open Space 2 (OS2): Refers to open space land use zones for various purposes such as nature recreational activities, buffer zones, suitable roundabout or traffic island, linear green areas, including development excess areas that is turned into green areas such as slop and small lands spaces between developments, including those surrender by private parties. OS2 is managed and maintained by KLCH or other relevant entities ; 3. Private Open Space (OS3): Refers to the land use zone of open space for recreational activities such as park, playground, recreation ground, golf course or cultural activities that are privately owned or privately managed, wherein the public has limited access except with authorization usage; 4. Public Open Space within Private Development Schemes (OS4): Refers to a multipurpose public open space located at ground level or podium and accessible to the public. The area of OS4 is not counted in the calculation of land use zones but is considered in the preparation of open space requirements; and 5. Forest Reserve (FR): Refers to gazetted forest reserve land use zones and forested areas managed or maintained by the relevant public authorities. Activities or structure such as gazebo, kiosk and ancillary facilities need to be designed with suitable scale without affecting flora and fauna.	Part of Land Use Zone of Cemetery and Mortuary Management (CE), Infrastructure and Utility (IU) and Transportation (TR). 1. Cemetery and Mortuary Management (CE): Refers to the land use zone designated for the burials management of Muslim and non-Muslim. The cemetery area includes Muslim, Chinese, Hindu and Christian and other cemeteries; 2. Infrastructure and Utilities (IU): In the context of open land, only utility lines or transmission lines or utility corridors (10 percent), rivers and lakes (10 percent) and river corridors (7 or 4 metres) shall be considered; and Definition: Refers to the land use zone set for the provision of infrastructure and utilities such as water supply, energy supply (electricity, gas, cooling systems and others), sewerage, telecommunications, drainage (irrigations, rivers lakes and detention or retention pond), solid waste disposal and other related infrastructure and utilities. 3. Transportation (TR): In the context of open space, only road reserves shall be considered (15 percent). Definition: Refers to the land use zone designated for the provision of transportation facilities including public transport terminals, public transportation stations, park and ride facilities, parking facilities, transportation depots, road reserves, rail lines and other related facilities permissible to support the transport infrastructure system and services.

IMPLEMENTATION INITIATIVE 3-4

IMPOSE OPEN SPACE REQUIREMENTS IN LAND USE ZONES

The requirement of open space (land) for development schemes in various land use zones must be regulated and implemented to ensure the well-being and quality of life for Kuala Lumpur citizens by 2040.

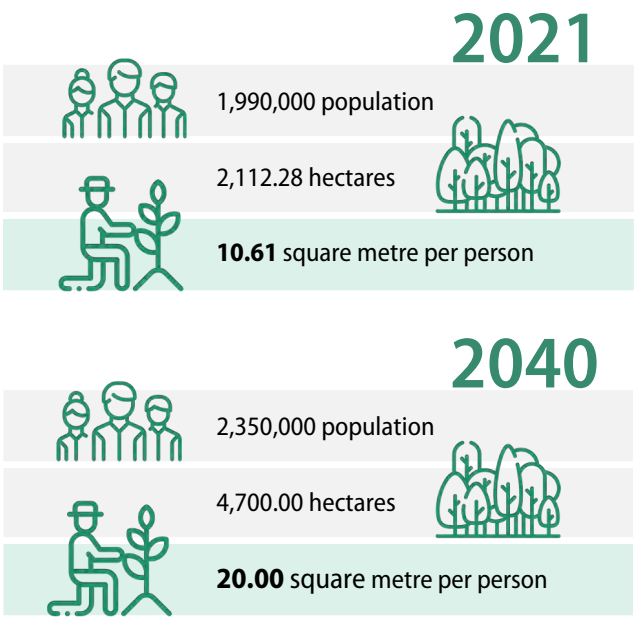
The land use zone requirements for open space (land) are as shown in Tables 3.4.5 and 3.4.6.

Table 3.4.5:
Estimated Contribution of Open Space Requirements in Land Use Zones

Estimated Contribution for Green Space
Cemetery and Mortuary Management (CE)
1. 20 percent of the total area.
Transportation (TR)
1. 15 percent of the total road reserve area.
Infrastructure and Utilities (IU)
1. Ten (10) percent of the total area of the utility route, transmission line or utility corridor; and 2. Ten (10) percent of the total area of rivers and lakes.

BRIEF INFO

PROJECTION OF OPEN SPACE (LAND) 2040



Source: KLSP2040

Table 3.4.6:
Estimated Contribution for Open Space in Land Use Zones

Estimated Contribution for Open Space
Public Open Space 1 (OS1)
1. 100 percent of the total area for public recreation parks; 2. Ten (10) percent from the total area of the Residential 2 (R2), Residential 3 (R3) dan Residential 4 (R4) Land Use Zones; 3. Five (5) percent from the total area of the Traditional Village 1 (TV1) and Traditional Village 2 (TV2) Land Use Zones; 4. Five (5) percent from the total area of the City Centre Commercial (CCC), Major Commercial (MC) and Commercial (C) Land Use Zones; 5. Five (5) percent from the total area of the Mixed Development (MX) Land Use Zones; 6. Five (5) percent from the total area of the Public Facilities (PF) Land Use Zone; and 7. 20 percent from the total area of the Institutional (INT) Land Use Zone; and 8. Five (5) percent from total area of the Industry (IP) Land Use Zone, which is Technology Park (TP).
Public Open Space 2 (OS2)
1. 100 percent of the buffer zone area, linear green area and left-over development area that is dedicated as green space.
Private Open Space (OS3)
1. 100 percent from the total area.
Public Open Space within Private Development Schemes (OS4)
Determining the replacement of open space through the provision of green plot ratio guidelines. 1. Provision of 50 percent of open space: a. An area of less than two (2) hectares: Ten (10) percent is provided at the ground level of the building and 40 per cent as vertical landscape; or b. An area over two (2) hectares: Eight (8) percent is provided at ground level and 42 per cent as vertical landscape.
Forest Reserve (FR)
1. 100 percent of the total area.

BRIEF INFO

OPEN SPACE (LAND) PERCENTAGE DETERMINANTS

Main Land Use	Land Use Zone	Area (hectares)	Estimated Contribution Percentage of Open Space	Open Space (hectares)
Open Space				
Commercial	City Centre Commercial (CCC)	447.33	5%	22.37
	Major Commercial (MC)	676.40	5%	33.82
	Commercial (C)	1,046.83	5%	52.34
Mixed Development	Mixed Development (MX)	1,850.47	5%	92.52
Industry	Technology Park (TP)	230.37	5%	11.52
Residential	Residential 2 (R2)	707.11	10%	70.71
	Residential 3 (R3)	1,904.73	10%	190.47
	Residential 4 (R4)	364.70	10%	36.47
	Traditional Village 1 (TV1)	41.23	5%	2.06
	Traditional Village 2 (TV2)	133.83	5%	6.69
Institutional	Institutional (INT)	2,284.67	25%	571.17
Public Facilities	Public Facilities (PF 1)	1,037.87	5%	51.89
	Private Facilities (PF2)	51.33	5%	2.57
Open Space	Public Open Space 1 (OS1)	1,411.83	100%	1,411.83
	Public Open Space 2 (OS2)	392.41	100%	392.41
	Private Open Space (OS3)	585.86	100%	585.86
	Public Open Space within Private Development Schemes (OS4)	11.37	100%	11.37
	Forest Reserve (FR)	84.62	100%	84.62
Green Area				
Cemetery and Mortuary Management	Cemetery and Mortuary Management (CE)	366.34	20%	73.27
Infrastructure and Utilities	Infrastructure and Utilities (IU)	1,430.50	10%	143.05
Transportation	Transportation (TR)	120.45	15%	18.07
Kuala Lumpur Road Area		5,416.92	15%	812.54
Riverside Corridor *- Seven (7) metres wide for river Category I and II* *- Four (4) metres wide for river Category III*	*Refer to Volume 1 (4-2: Planning Control Layers for River, Lake and Pond Corridors)*	121.32	100%	121.32
		TOTAL OPEN SPACE		**4,798.94**

2,350,000	Population Projection 2040
4,798.94	Total Open Area (hectares)
47,989,382	Total Open Area (square metre)
20.42	**Square meters of open area per person**

IMPLEMENTATION INITIATIVE 3-4.1C

IMPROVE EXISTING OPEN SPACE (LAND)

The rapid urbanisation process causes urban areas to become saturated and creates constraints in the provision of new open spaces (land) due to limited land availability. Existing open spaces (land) will be maintained to prevent it from being converted to other land use activities. Functions and usage of existing open spaces (land) require improvement to enable the local population will use high-quality and comfortable public recreational facilities.

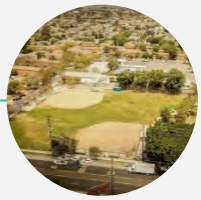
The necessary actions to support this initiative are as follows:

1. Gazetted open spaces (land) that have been identified as potential public recreational areas;
2. Determine a hierarchy of open spaces (land) based on function, area and population catchment;
3. Activated usage of gazetted open spaces (land) to prevent encroachment and misuse;
4. Ensure developers comply with the requirements of open spaces (land) in the development scheme with suitable recreational facilities;
5. Identify and upgrade of potential pocket parks and plazas especially in strategic areas and focused areas to the public;
6. Ensure continuous maintenance of open spaces (land) for the comfort of local populations and users; and
7. Periodical monitoring of open spaces (land) to ensure the facilities provided are in good condition and safe and continue to benefit local populations and users.

BEST PRACTICE

IMPROVEMENT OF RECREATIONAL PARKS AND LOCAL COMMUNITIES

Recreational parks offer facilities to every level of society regardless of background or status. Local communities and recreational park users also receive positive effects and impacts through recreational park development and enhancement programmes.

PARK PROGRAMMES AND EXAMPLES	THEME	
Playground Urbandale Park | City of Dallas	***Destination of Joy***	
Nature Play Nay Aug Avenue/ Lackawanna Heritage Valley Authority | Scranton	***Earth's Wonderla***	
Sports Fields Lou Costello, Jr. Recreation Centre | City of Los Angeles	***Game On!***	
Community Gardens Skinner Park | City of Chicago	***Putting Down Roots***	
Gathering Places Joe Kneip Park | City of North Las Vegas	***Everyone Is There!***	
Fitness Labour Street Park | City of San Antonio	***Working It Out***	

IMPLEMENTATION PROPOSAL

CP 3-4.2: STRENGTHENING OPEN SPACES (LAND) AND RECREATIONAL AREA AS A WORLD-CLASS PARK

Quality open space (land) and recreational facilities play an important role in improving the surroundings of Kuala Lumpur as well as an attraction for local and international tourists. The quality of open spaces (land) and recreation areas is influenced by the design concept of the park, the types of activities and supporting facilities offered by the respective recreation areas.

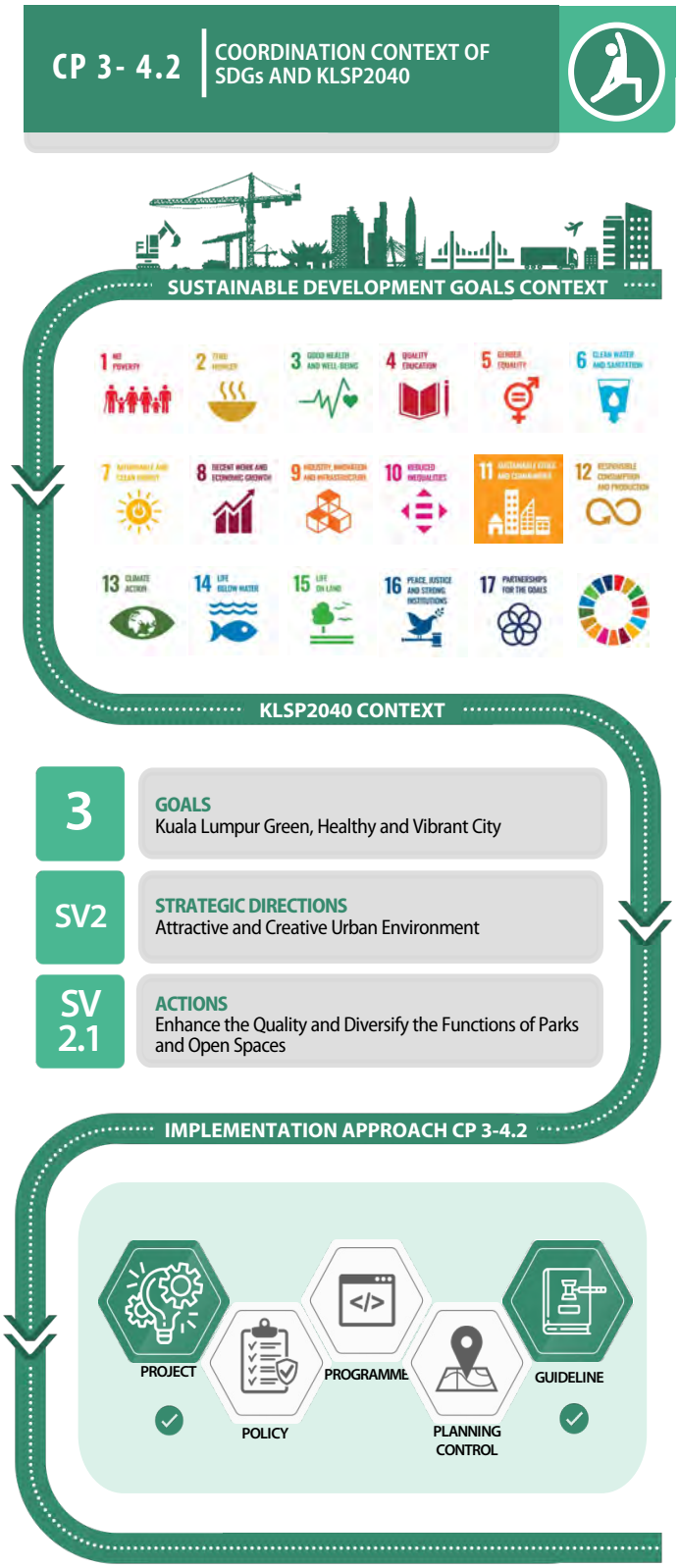
The main goal of bolstering and upgrading open and recreational areas is to offer high-quality facilities and a green environment. It also makes Kuala Lumpur as the node of the city's green corridor and an attraction to its neighbouring cities. The purpose of this bolstering and upgrading is to maintain green areas, upgrade supporting facilities for recreation activities and provide spaces for learning about the environment.

The Draft KLLP2040 identify various categorised of parks in Kuala Lumpur according to the type and hierarchy of parks.

The implementation approach of this proposal is through projects and guidelines. There are two (2) initiatives proposed for the implementation of CP 3-4.2.

Location: Taman Tasik Permaisuri

An attractive environment in a public recreational park can attract visitors.



IMPLEMENTATION INITIATIVE 3-4.2A

SYNCHRONISE HIERARCHY AND FUNCTION OF KUALA LUMPUR OPEN SPACE (LAND)

The provision of open space (land) needs to take into account the macro and micro aspects of development through inclusive planning principles, functional, accessible and safe. These principles can ensure the goal of providing quality open spaces as well as playing a role in economic, social, educational and heritage development.

The necessary actions to support this initiative are as shown in Table 3.4.7.

Table 3.4.7:
Hierarchy and Function of Open Space (land)

Hierarchy and Function
Urban Parks 1. Urban park is the highest main hierarchy of park in Kuala Lumpur that provide facilities to the residents of KL and around the National Conurbation.
District Parks 1. Large parks located in several major areas of Kuala Lumpur to cater to the needs of 200,000 population catchment. The park is provided with integrated recreational and sports facilities such as stadiums and playgrounds with optimal use of land.
Neighbourhood Parks 1. Park located in a neighbourhood to cater to the needs of 50,000 population catchment. The facilities provided can accommodate large-scale activities and sports events.
Local Parks 1. Park is located in a residential area locally accessible to 10,000 population catchment. The park provides daily recreational facilities within walking and cycling distance.
Local Playground and Pocket Parks 1. Parks in residential areas and urban centres located within walking distance of users.

Source: KLSP2040

BEST PRACTICE

EXAMPLES OF WORLD-CLASS RECREATIONAL PARKS

1. Central Park, New York

Central Park, New York is a tourist attraction and generates an economy that has impacts on the level of physical and mental health, social, economic, environmental and cultural of the surrounding population.

2. Vondelpark, Amsterdam

Vondelpark is a public town park with a total area of 47 hectares (120 acres) and is visited by almost 10 million visitors each year. The park is designed with an open theatre, playground and several food service facilities. The uniqueness of this park is its strategic location, comprehensive access, activities and facilities provided and safe as well as comfortable park areas for visitors.

3. Ibirapuera Park, Brazil

Ibirapuera Park was built by the world famous Landscape Architect Roberto Burle Marx. The park is planted with more than 500 species of vegetation and offers a variety of facilities such as museums, galleries within the park, children's playgrounds, bike and jogging paths as well as natural landscape elements.

IMPLEMENTATION INITIATIVE 3-4.2B

UPGRADE MAIN RECREATIONAL AREA AS WORLD-CLASS PARK

Recreational parks play an important role in building a clean and comfortable environment for the well-being of humans and others. These areas can improve the quality of the design and image of the urban landscape.

Planning and development of a world-class recreational park in Kuala Lumpur can be implemented based on case studies of public parks abroad through the preparation of a matrix of best practices. The purpose of preparing this matrix is as follows;

1. Guidelines and standards to ensure the objectives and level of development can be materialised for the development of the local community;
2. Planning requirements and design of the development master plan; and
3. References for park planning and design such as the preparation of a list for softscape species, recreational facilities and requirements as well as management and maintenance.

KLSP2040 has identified nine (9) major parks in Kuala Lumpur that have the potential to be upgraded as world-class parks as follows;

1. Taman Warisan Tun Abdul Razak;
2. Taman Botani Perdana;
3. Taman Antarabangsa Bukit Jalil;
4. Taman Tugu;
5. Taman KLCC;
6. Taman Metropolitan Batu;
7. Taman Tasik Metropolitan Kepong;
8. Taman Tasik Titiwangsa; and
9. Taman Persekutuan Bukit Kiara.

The necessary actions to support this initiative are as follows:

1. **Park management:**
   a. Plan sustainable park management through specific action plans;
   b. Form a network of strategic partners with major parks around the world; and
   c. Establish a special committee to monitor the development, upgrading and maintenance programme of the park.
2. **Green application:**
   a. Provide environmentally friendly drainage such as rain garden, bioswale, retention pond, damp soil and water permeable surface;
   b. Promote application of rainwater collection and harvesting systems, irrigation and usage of renewable energy; and
   c. Provide a recycling centre for producing organic plant fertilizer through dry leaf and grass composting.
3. **Image and character:**
   a. Ensure priority and focus are given to multi-functional and well-connected public spaces;
   b. Develop mega structures or landmarks as the park's identity; and
   c. Provide visitor hotspots such as amphitheatres, squares, plazas, herbariums, theme parks and galleries.
4. **A park environment suitable for all levels of society :**
   a. Provide a variety of facilities that are inclusive, age-friendly and disabled-friendly; and
   b. Ensure the provision of comprehensive safety elements such as panic buttons and assembly areas during an emergency.
5. **Connectivity:**
   a. Provide a network of interconnected pedestrian and micromobility vehicle routes within and outside the park area; and
   b. Ensure the location of the park entrance is strategic and nearby to parking lot.
6. **Support and preservation of urban biodiversity:**
   a. Create natural habitats through the preservation and conservation of the park's biodiversity assets; and
   b. Introduce interesting and unique softscape elements such as planting local and endangered species.

IMPLEMENTATION PROPOSAL

CP 3-4.3: ACTIVATING PARK AND OPEN SPACE

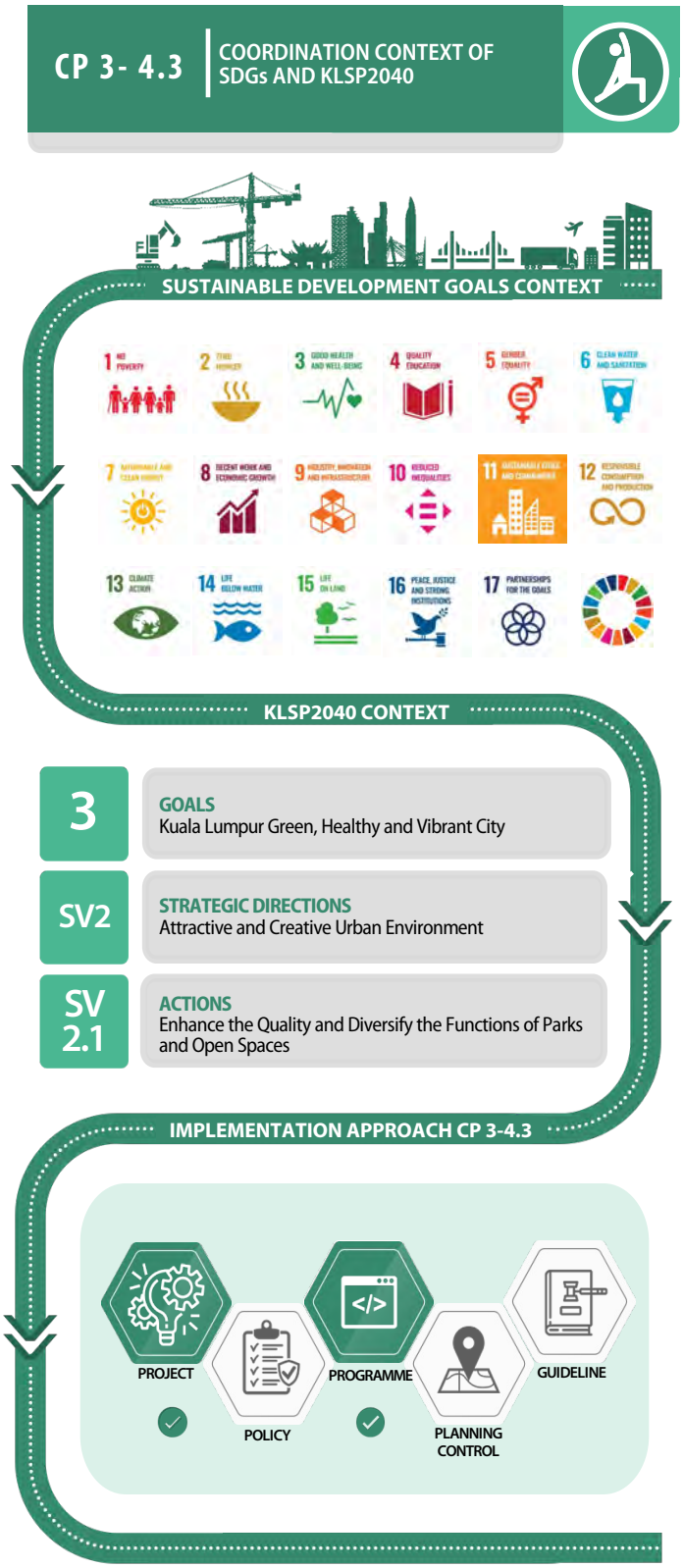
The initiative to activate parks and open spaces focuses on zones and activities that can be carried out in an area. Existing open spaces and recreational areas need to be given a new lease of life to ensure that the spaces and recreational facilities provided are safe. Open spaces need to be upgraded in line with the demands and changes of the local community as well as the provision of facilities for age-friendly and disabled-friendly groups.

Activities in provincial parks and urban parks must be more focused on passive recreation to preserve and increase the biodiversity of these open spaces (land). Local parks and neighbourhood parks need to improve the provided facilities and recreation to encourage active community activities. In addition, environmental education programmes can be carried out to promote awareness and exposure to the importance of nature to all ages.

The implementation approach of this proposal is through projects and programmes. There are two (2) initiatives proposed for implementation of CP 3-4.3.

Location: Taman Tasik Titiwangsa

The rebranding of Taman Tasik Titiwangsa is an excellent example of landscape upgrading.



IMPLEMENTATION INITIATIVE 3-4.3A

UPGRADE EXISTING RECREATIONAL PARKS

The addition of interesting facilities and elements of recreation are intended to activate and upgrade existing recreational parks.

The Draft KLLP2040 has identified 11 out of 19 public parks under the supervision of the KLCH that could potentially be upgraded as shown in Table 3.4.8.

The necessary actions to support this initiative are as follows:

1. Intensify themed programmes and activities for sports and games, festivals and events as well as art and design;
2. Increase awareness programme of and exposure on the importance of nature through the following implementation actions:
   a. Preserve and conserve biodiversity assets of the park;
   b. Carry out environmental educational programmes;
   c. Encourage activities of community work among locals; and
   d. Implement sustainable park elements such as rainwater collection and reuse systems in public toilets and for watering purposes.
3. Improve the implementation of upgrading programme for public facility elements through the following actions:
   a. Ensure all facilities are safe, age-friendly and disabled-friendly;
   b. Provide access and a continuous network of pedestrian and micromobility vehicle routes;
   c. Provide parking that is suited to the needs of the local community; and
   d. Upgrade other infrastructural facilities to support activities that are being provided.

Table 3.4.8:
List of Public and Recreational Parks in Kuala Lumpur

Public and Recreational Parks	
1.	Taman Rimba Bukit Kerinchi
2.	Taman Tasik Datuk Keramat
3.	Taman Tasik Ampang Hilir
4.	Taman Tasik Menjalara
5.	Taman Tasik Danau Kota
6.	Taman Tasik Sri Rampai
7.	Taman Alam Damai
8.	Taman Dusun Bandar
9.	Taman Medan Idaman
10.	Taman Rekreasi Ayer Panas
11.	Taman Lake Field

BRIEF INFO

PROGRAMMES AND ACTIVITIES OF PUBLIC RECREATIONAL PARK

Lively Activities: Optimum activation of open space as an active space for community integration

Semi-Lively Activities: Activation of open spaces through provision of various physical recreational activity facilities

Passive Activities: Preservation and conservation of open spaces to encourage interaction between visitors and nature

Source: https://www.shutterstock.com/search/isometric-park/BigMouse

IMPLEMENTATION INITIATIVE 3-4.3B

IDENTIFY OPEN SPACES (LAND) AS GREEN PRESERVATION AREAS

The identification of open spaces (land) as green preservation areas is among the measures to safeguard the environment as a natural heritage. It can also potentially become an area for natural research in Kuala Lumpur. This green preservation area is under the category of a provincial park based on the function and hierarchy of open space.

The Draft KLLP2040 has identified several open spaces as potential green preservation areas as follows:

1. Taman Wilayah:
   a. Taman Botani Perdana;
   b. Taman Tasik Titiwangsa;
   c. Taman Tasik Permaisuri;
   d. Taman Metropolitan Kepong; and
   e. Taman Metropolitan Batu.
2. Taman Bandaran:
   a. Taman Rimba Bukit Kerinchi;
   b. Taman Pudu Ulu; and
   c. Taman Bukit Jalil.

The actions to support this implementation initiative should be based on the International Union for Conservation of Nature (IUCN) Green List which involves three (3) aspects of development as follows:

1. Good governance;
2. Eco-friendly design; and
3. Effective management.

BRIEF INFO

PROGRAMME OF IUCN GREEN LIST

Protected and Conserved Areas

- Maintain at least 60 percent green cover area
- Encourage, achieve and promote effective, equitable and successful protected areas among national partners and authorities
- Provide a global reference benchmark for protected and conserved areas to assess whether successful conservation outcomes through effective and equitable governance and management have been achieved

Green List
Protected | Conserved Areas

Table 3.4.9:
Proposed Green Protection and Preservation Areas in Kuala Lumpur

Area and Acreage (hectares)	Inset Plan
Taman Wilayah	
1. Taman Botani Perdana 74.78 hektar	
2. Taman Tasik Titiwangsa 46.27 hektar	
3. Taman Tasik Permaisuri 55.42 hektar	
4. Taman Metropolitan Kepong 80.28 hektar	
5. Taman Metropolitan Batu 27.74 hektar	
Taman Bandaran	
1. Taman Rimba Bukit Kerinchi 64.06 hektar	
2. Taman Pudu Ulu 22.97 hektar	
3. Taman Bukit Jalil 33.20 hektar	

PLANNING STRATEGY

SP 3-5: STRENGTHENING URBAN SPACE FOR ACTIVE AND CREATIVE ACTIVITIES

SCENARIO OF CURRENT ACTIVE AND CREATIVE USE OF URBAN SPACE IN KUALA LUMPUR

Kuala Lumpur as a rapidly developing city needs to emphasise active and creative usage of urban spaces. KLCH has carried out various efforts to ensure that the use of urban space becomes more vibrant and attractive, especially in the city centre. Elements of urban design and heritage that are harmoniously intertwined will form Kuala Lumpur's distinctive image and identity.

However, the COVID-19 pandemic has greatly affected the lifestyle of urban communities and indirectly has made the use of urban public spaces less optimum. The challenge nowadays is to strengthen the existing urban space by optimising the use of urban space in line with the current lifestyle of society.

The main aspiration of the Draft KLLP2040 is to transform Kuala Lumpur as a green, healthy and vibrant city. It can be achieved through the revitalisation of neglected urban spaces by improving the quality of natural environment, preserving the heritage and historical values of Kuala Lumpur. The emphasis is also given on efforts to improve the sense of place in the urban space by proposing active and creative activities.

In order to realise Kuala Lumpur as a city with strengthening urban space for active and creative activities, four (4) Implementation Proposals are formulated under Planning Strategy 3–5, as shown in Figure 3.5.1.

The renewal of shop-house back lane area around Jalan Lebuh Pudu has attracts tourists visit.

Figure 3.5.1:
Implementation Proposals of Planning Strategy 3-5

SP 3-5 **STRENGTHENING URBAN SPACE FOR ACTIVE AND CREATIVE ACTIVITIES**

CP 3-5.1	Rebranding Kuala Lumpur Old City Centre
CP 3-5.2	Sharing Of Street And Public Area For Street Activities
CP 3-5.3	Activating Vacant And Abandoned Space To Create Pocket Parks or Plazas
CP 3-5.4	Implementing Light-emitting Diode (LED) Zone At City Centre

IMPLEMENTATION PROPOSAL

CP 3-5.1: REBRANDING KUALA LUMPUR OLD CITY CENTRE

Kuala Lumpur has experienced rapid development from a tin mining town to a metropolis. This development has greatly changed the urban character of the old city of Kuala Lumpur.

The proposed rebranding through an urban design perspective is seen to be able to upgrade and revive the old city of Kuala Lumpur. It is also to ensure that the history and value of the original formation of Kuala Lumpur can be preserved and appreciated by all generations.

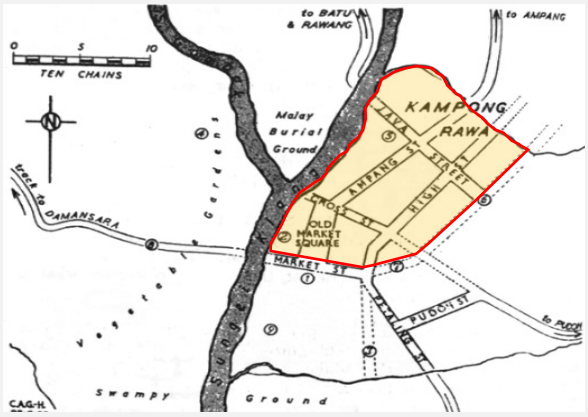
Conservation of environmental area, activation of space and placement of a signposting system can re-emphasise the identity of Kuala Lumpur as it once was. This implementation proposal is seen as support for the 'KL Dulu' Project which has been carried out by KLCH.

The implementation approach of this proposal is through projects and programmes. One (1) initiative is proposed for the implementation of CP 3-5.1.

BRIEF INFO

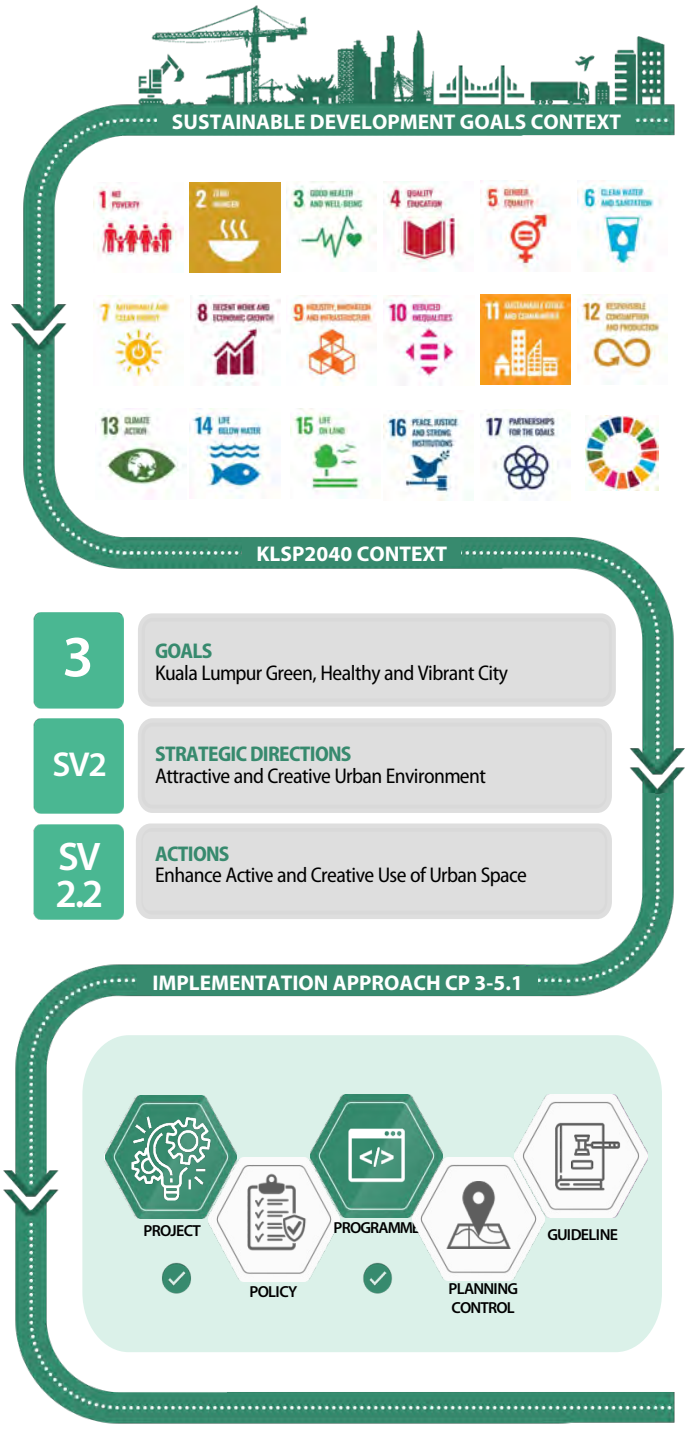
FORMATION OF KUALA LUMPUR OLD CITY FROM THE YEAR 1875 TO 1878

Kuala Lumpur began to form around 1875. Development in previous time was limited to the area on the east bank of the Sungai Klang which is located between Market Street (Lebuh Pasar Besar) and Java Street (Jalan Tun Perak).



Source: Kuala Lumpur 1880-1895, A City in The Making, J.M. Gullick

CP 3- 5.1 COORDINATION CONTEXT OF SDGs AND KLSP2040



IMPLEMENTATION INITIATIVE 3-5.1A

RE-INTRODUCE THE OLD CITY OF KUALA LUMPUR

Urban elements in the old city of Kuala Lumpur are proposed to be renewed and improved from the aspect of urban design. It is seen as the best effort in recreating the characteristics and character of the old city in Kuala Lumpur. This initiative can re-introduce the old city area of Kuala Lumpur to the community.

The necessary actions to support this initiative are as follows:

1. Conserve and maintain the structure, façade, character, height and design of old shop buildings;
2. Place identification marks and place markers (entry statement) to early buildings in the old Kuala Lumpur city area as shown in Table 3.5.1;
3. Propose a floor sculpture (marker) that shows the old city area in Kuala Lumpur;
4. Display original old name on road signs in Kuala Lumpur. The proposed location is the wall of building at intersection of main road in the old city of Kuala Lumpur as shown in Table 3.5.2;
5. Synchronise design, writing and color of signs to reflect the image of old city of Kuala Lumpur;
6. Introduce and improve streetlights, bollards, direction signs with a vintage concept; and
7. Introduce digital interactive information kiosk that displays the history and development of Kuala Lumpur.

Table 3.5.1:
Proposed Location of First Construction Marking

Location of First Construction Marking
1. Kuala Lumpur Early Malay School at Jalan Raja
2. The site of Kuala Lumpur's Old Mosque (Masjid Kampung Rawa) at Jalan Tun Perak
3. Kuala Lumpur Main Bridge in Leboh Pasar Besar
4. Kuala Lumpur Early Chinese School at Jalan Hang Lekir
5. Kuala Lumpur Early English School at Jalan Tun H.S. Lee

Illustration of structure as identification marks to the Kuala Lumpur Main Bridge in Leboh Pasar Besar.

Table 3.5.2:
Proposed Re-introduce Old Street Names in Kuala Lumpur's Old Town Area

Current Name and Old Street Name
Leboh Pasar Besar - Market Street
Medan Pasar - Old Market Square
Jalan Tun H.S. Lee - High Street
Lebuh Ampang - Ampang Street
Jalan Tun Tan Siew Sin - Cross Street
Jalan Tun Perak - Java Street, Mountbatten Road

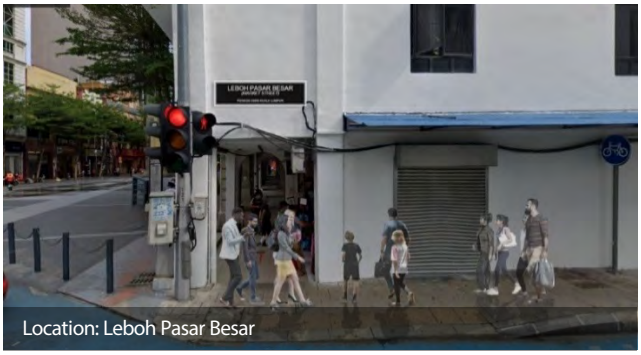


Illustration of proposed street sign board with current and old name placed on the wall of the building.

IMPLEMENTATION PROPOSAL

CP 3-5.2: SHARING OF STREET AND PUBLIC AREA FOR STREET ACTIVITIES

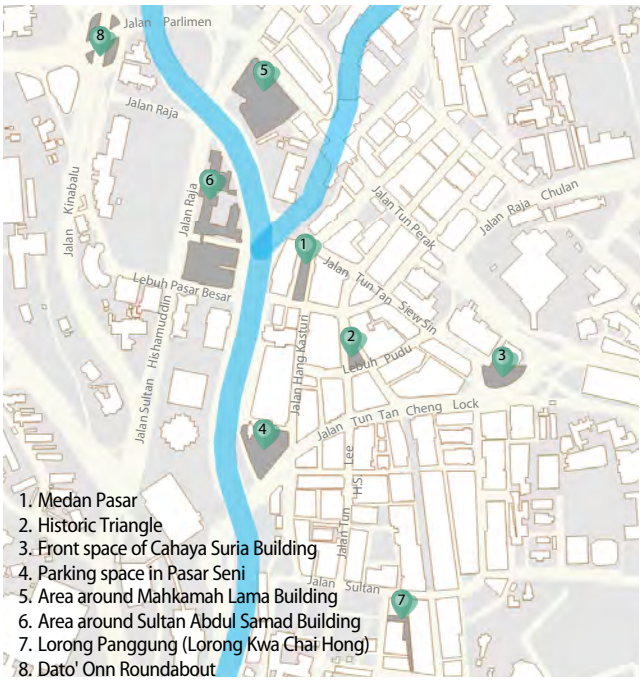
Art shows and open galleries such as performances from street artists, dance performances or speaker corners need to be given a place on the street and in an appropriate public space. Determination of location needs to consider the ability of an area to carry out the proposed activity as well as to increase the use of space and safety aspect of the area.

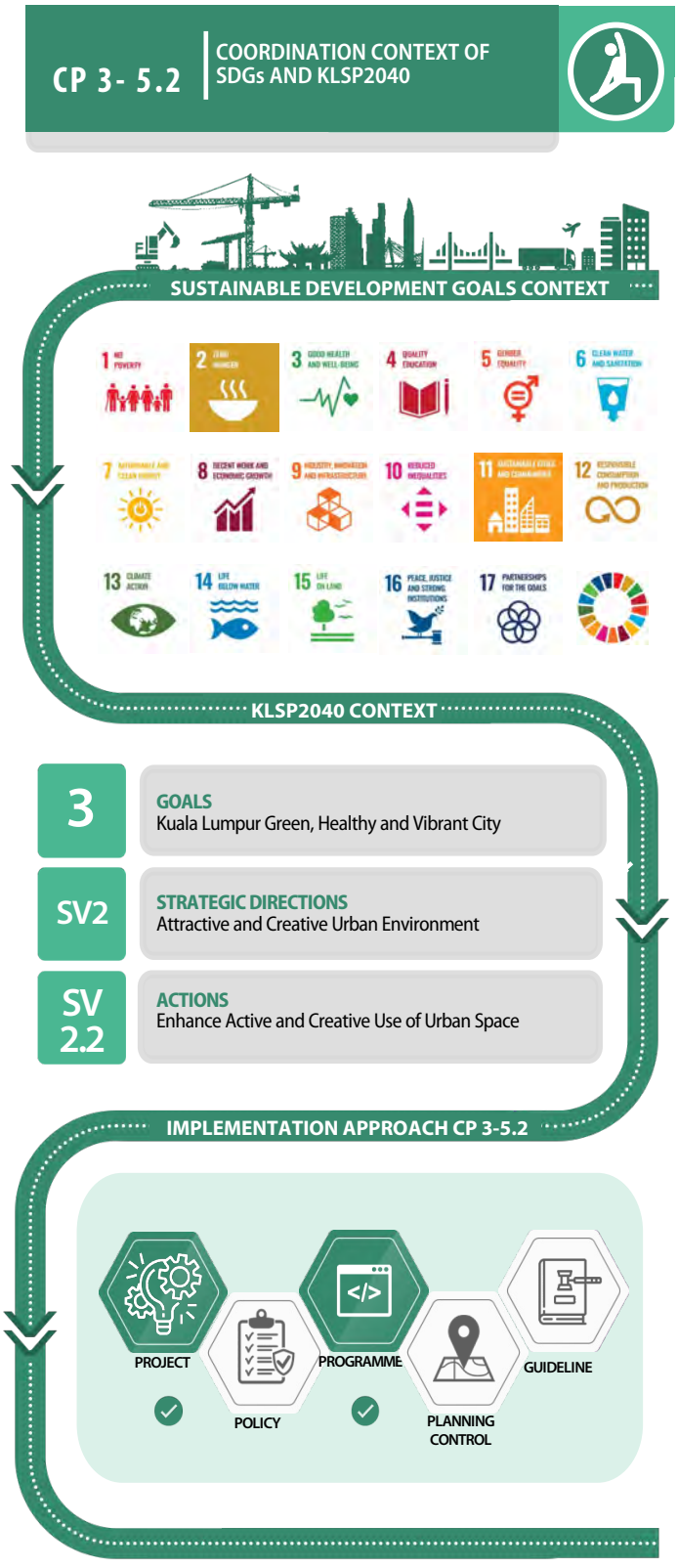
The content of performances must be suitable to the selection of space and will not cause a nuisance to the environment and daily activities of the area. The proposed activities are held periodically and involve environmental as well as urban design improvement.

The Draft KLLP2040 has identified eight (8) potential locations as art show spaces and open galleries as shown in Figure 3.5.2.

The implementation approach of this proposal is through projects and programmes. One (1) initiative is proposed for the implementation of CP 3-5.2.

Figure 3.5.2:
Location of Proposed Potential Public Spaces for Improvements





IMPLEMENTATION INITIATIVE 3-5.2A

IMPROVE ENVIRONMENTAL DESIGN ELEMENTS OF THE IDENTIFIED AREA

Improve urban design elements in the environment of identified areas with a high frequency of pedestrian interaction. The improvements are essential to optimised and increased use of existing space. This initiative proposed improvements in aspects of shading, pedestrian and micromobility vehicle routes, lighting, supporting facilities as well as other design elements. The Draft KLLP2040 has identified eight (8) roads or public spaces that have the potential to implement this initiative as follows:

1. Historic Triangle (Jalan Bandar);
2. Space in front of Bangunan Cahaya Suria;
3. Medan Pasar;
4. Pasar Seni parking space;
5. Area surrounding the Bangunan Mahkamah Lama;
6. Area surrounding the Bangunan Sultan Abdul Samad;
7. Lorong Panggung (Lorong Kwa Chai Hong); and
8. Bulatan Dato' Onn.

The necessary actions to support this initiative are as follows:

1. Provide safe and comfortable pedestrian and micromobility vehicle routes;
2. Beautify shaded areas with more practical landscape and street furniture to create a conducive environment;
3. Improve elements and encourage colourful lighting activities to create a cheerful, attractive and safe environment, especially at night such as creative lighting on suitable buildings;
4. Provide supporting facilities such as wayfinding signages or information in the focus area;
5. Re-activate old and unused buildings through adaptive reuse with suitable activities such as cafés, co-working spaces, galleries and student training centres for cultural and arts institutions; and
6. Activate the back lane and empty spaces with suitable themed activities such as buskers or held periodically of cultural performances.

Illustration of buskers performing in the Historic Triangle.

Illustration of proposed shaded area in order to improve comfort and attract more artists and visitors to this area.

Illustration before and after condition of back lane spaces at Bangunan Mahkamah Lama has been upgraded in River of Life Project that used as a space for buskers to perform.

IMPLEMENTATION PROPOSAL

CP 3-5.3: ACTIVATING VACANT AND ABANDONED SPACE TO CREATE POCKET PARKS OR PLAZAS

The city centre has several vacant and abandoned spaces that have the potential to be proposed as pocket parks or plazas. This area is not fully utilised and is only used as a parking space as well as small food stalls.

Activities within a space, play an important role in forming the characters and functions of an area. Most of big cities are focused on commercial activities and have a low awareness of the importance of social activities and urban aesthetics.

This proposal involves improving urban elements and upgrading supporting facilities to create an effective and quality pocket park. The Draft KLLP2040 has identified potential locations to be proposed as pocket parks or plazas in strategic and public concentrated areas.

The implementation approach of this proposal is through projects and programmes. One (1) initiative is proposed for the implementation of CP 3-5.3.

Illustration of proposed pocket park that can be implemented in Jalan Gading.

IMPLEMENTATION INITIATIVE 3-5.3A

IMPROVE QUALITY OF POCKET PARKS OR PLAZAS EFFECTIVELY

The quality of pocket parks or plazas can be improved by considering three (3) main basic qualities which are easily accessible, encourage public involvement and have a comfortable and suitable space.

The Draft KLLP2040 has identified seven (7) pocket parks or plazas that have the potential to be effectively improved as follows;

1. Plaza Masjid India;
2. Lot 227 at Jalan Bukit Nanas in front of Muzium Telekom;
3. Space at Jalan Gading;
4. Space at Persimpangan Jalan Inai;
5. Plaza at Jalan Jati;
6. Lot 716 at Medan Imbi; and
7. Lot 743 at Jalan Khoo Teik Ee.

The necessary actions to support this initiative are as follows:

1. Provide and encourage active mobility modes around pocket parks or plazas including pedestrian and micromobility vehicle routes that are safe as well as comfortable;
2. Design pedestrian and micromobility vehicle routes with traffic calming elements especially in areas with a high frequency of pedestrian users such as roads near school areas and main focus areas;
3. Ensure maintenance of the environment and the provision of continuous supporting facilities with an attractive landscape to create a conducive and competitive environment;
4. Beautify and enhance the image of the current parking area with attractive and more practical urban landscape and street furniture to create a vibrant environment;
5. Improve and encourage colourful lighting activities to create a cheerful, attractive and safe environment; and
6. Activate vacant space by diversifying the use of the space for informal activities such as art exhibitions for artists and buskers.

BEST PRACTICE

STREET ACTIVITIES OF LA RAMBLA, BARCELONA

La Rambla is a 1.2 kilometer-long tree-lined pedestrian routes in downtown Barcelona with a 60-foot-wide pedestrian promenade. La Rambla is renowned for its artistic activities in the form of unique human statues. In addition, this route is also supported by business activities, street performances, political demonstrations and festive parades.

Location: La Rambla, Barcelona
Source: https://www.shutterstock.com/Mistervlad

La Rambla shows the identity of an active pedestrian routes and is filled with shade trees.

PEDESTRIANISE OF JALAN MASJID INDIA AND JALAN TUANKU ABDUL RAHMAN (TAR)

Jalan Masjid India and Jalan Tuanku Abdul Rahman (TAR) is one of the main shopping centres in Kuala Lumpur city centre. Upgrading efforts have been carried out by KLCH to make Jalan TAR more pedestrian-friendly such as reducing vehicular lanes from three (3) to two (2) or one (1) lanes in order to widen the pedestrian routes and shaded landscape.

Location : Jalan Masjid India

Location : Jalan Tuanku Abdul Rahman

KLCH has been upgrading and improving Jalan Masjid India and Jalan TAR commercial centre to be a vibrant, green and pedestrian friendly.

IMPLEMENTATION PROPOSAL

CP 3-5.4: IMPLEMENTING LIGHT-EMITTING DIODE (LED) ZONE AT CITY CENTRE

Road intersection areas can be used as a space for interaction between people and urban spaces. The night lighting can bring scenes to life as in Shibuya City in Tokyo and Fifth Avenue in New York. The city has used digital advertising in combination with creative lighting. This approach can provide a lively atmosphere for night activities in the city.

This concept is proposed to be a focal point for visitors at night. The improvement proposal will also focus on the existing area to have a greater impact at night.

Kuala Lumpur City Lighting Master Plan has identified lighting strategies according to area, building characteristics, land use and appropriate use of lighting types. The implementation of this recommendation should be read together with the master plan.

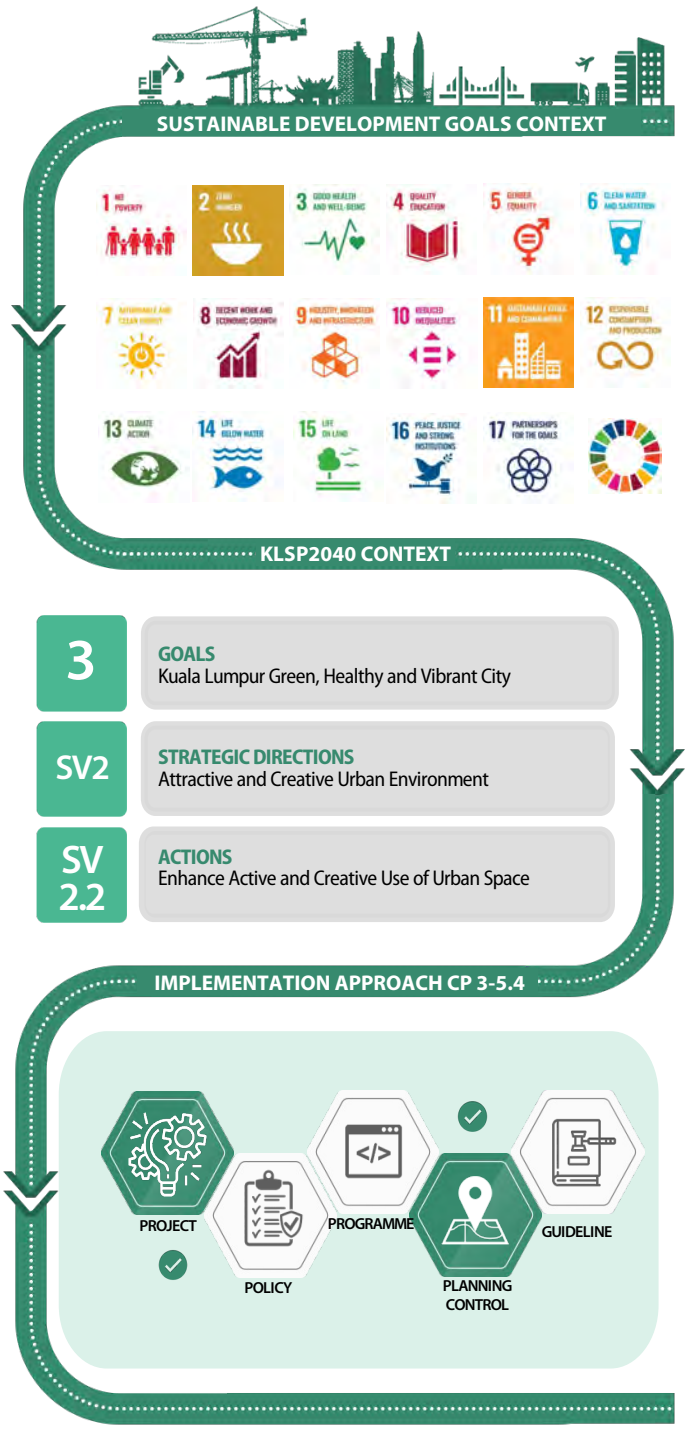
The implementation approach of this proposal is through projects and planning controls. One (1) initiative is proposed for the implementation of CP 3-5.4.

BEST PRACTICE

LED ADVERTISING BOARD

Fifth Avenue, New York has various digital advertising spaces with LED lighting and has become the focal point of international business tourism.

CP 3- 5.4 | COORDINATION CONTEXT OF SDGs AND KLSP2040



IMPLEMENTATION INITIATIVE 3-5.4A

USED LIGHT-EMITTING DIODE (LED) FOR URBAN LIGHTING

The use of LED provides lighting of urban spaces and is able to increase safety, and comfort as well as become an attraction for visitors at night. The approach of using LED lights is suitable to be applied in shopping centres, areas with attractive views and areas with a high frequency of pedestrian use.

The Draft KLLP2040 has identified four (4) potential locations to use LED for urban lighting as follows:

1. Plaza Low Yat and MARA Digital;
2. Pavillion Shopping Centre area up to Tun Razak Exchange (TRX);
3. Jalan Bukit Bintang; and
4. River of Life corridor (RoL).

The necessary actions to support this initiative are as follows:

1. Ensure implementation of urban lighting in accordance with the Kuala Lumpur Lighting Master Plan;
2. Encourage the use of LED billboards to replace conventional billboards;
3. Improve the image of buildings and surrounding areas through the use of LED billboards in key business areas such as Pavilion and MARA Digital; and
4. Encourage the provision of LED billboards on pedestrian and micromobility vehicle routes with high-frequency usage.

Illustration of an LED billboard that provide lighting in surrounding area and improves safety features of an area.

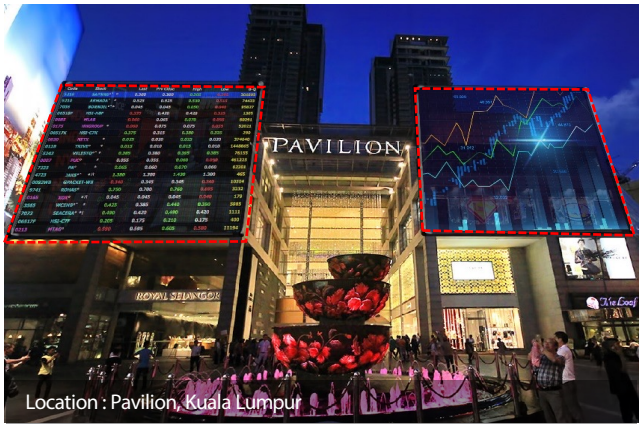


Illustration of LED advertising boards based on financial and stock exchange activities can be implemented in main attraction buildings in Kuala Lumpur.

Illustration of LED billboards in shopping mall buildings around Bukit Bintang.

Illustration of the use of LED Curtain Wall screens around the Muamalat Bank Tower, OCBC Tower and UAB Tower which can become an attraction for international and local tourists.

PLANNING STRATEGY

SP 3-6: DEVELOPING PARK CONNECTOR NETWORKS

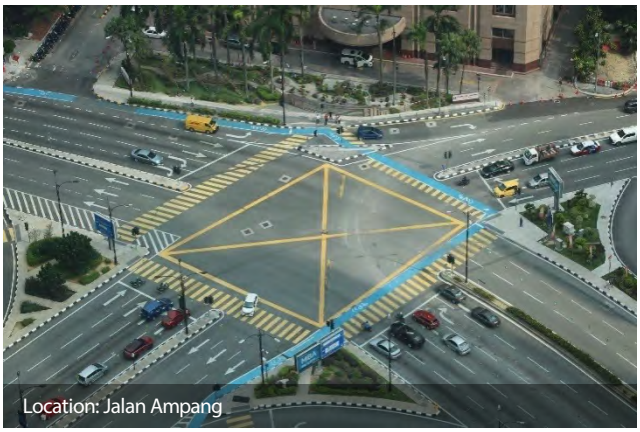
SCENARIO OF CURRENT PARK CONNECTOR NETWORKS IN KUALA LUMPUR

The Twelfth Malaysia Plan (12MP) focuses on active mobility planning and infrastructure development for pedestrians and cyclists. This emphasis on development that requires the provision of integrated and user-friendly infrastructure, sheltered, safe and comfortable to use. Efforts to continuously develop green networks had previously been outlined through local plans. The green network consisting of the connection of open spaces (land) and green areas in Kuala Lumpur must be improved so it is more friendly to users and the local population.

The park connector network will promote the concept of linkages between open spaces (land) and green areas throughout Kuala Lumpur. It can also increase the amenity value of green areas, blue corridors, infrastructure buffer reserves and the greening of border areas. This network can help preserve ecosystems by reducing the fragmentation of green areas as a result of rapid urban development. The beautification and restoration measures along the park connector network can create more focal areas for social and recreational activities.

The development of the park connector network can guarantee easy access and proximity to the local population to encourage a healthier lifestyle and continued physical activity. It provides comfort for visitors to carry out recreational activities as well as increases urban mobility between areas. The development of this network will stimulate social and economic activities and increase the liveability of the city. This also supports the strategy to increase green density and open land area in the future.

In order to realise Kuala Lumpur as a city that can develop park connector networks, two (2) Implementation Proposals are formulated under Planning Strategy 3–6, as shown in Figure 3.6.1.



Existing cycling routes in Kuala Lumpur City Centre.

BRIEF INFO

CYCLING ROUTE OF KUALA LUMPUR

- Pusat Bandar Raya Kuala Lumpur
- Wangsa Maju
- Kampung Batu
- Taman Tun Dr Ismail

Existing Cycling Route

Source: Kuala Lumpur Pedestrian and Cycling Master Plan 2019-2028

- Six (6) main networks of 254.40 kilometres length

Draft KLLP 2040 Proposal

Figure 3.6.1:
Implementation Proposals for Planning Strategy 3-6

SP 3-6 DEVELOPING PARK CONNECTOR NETWORKS

CP 3-6.1	Determine Park Connector Networks
CP 3-6.2	Marking Kuala Lumpur City Boundary

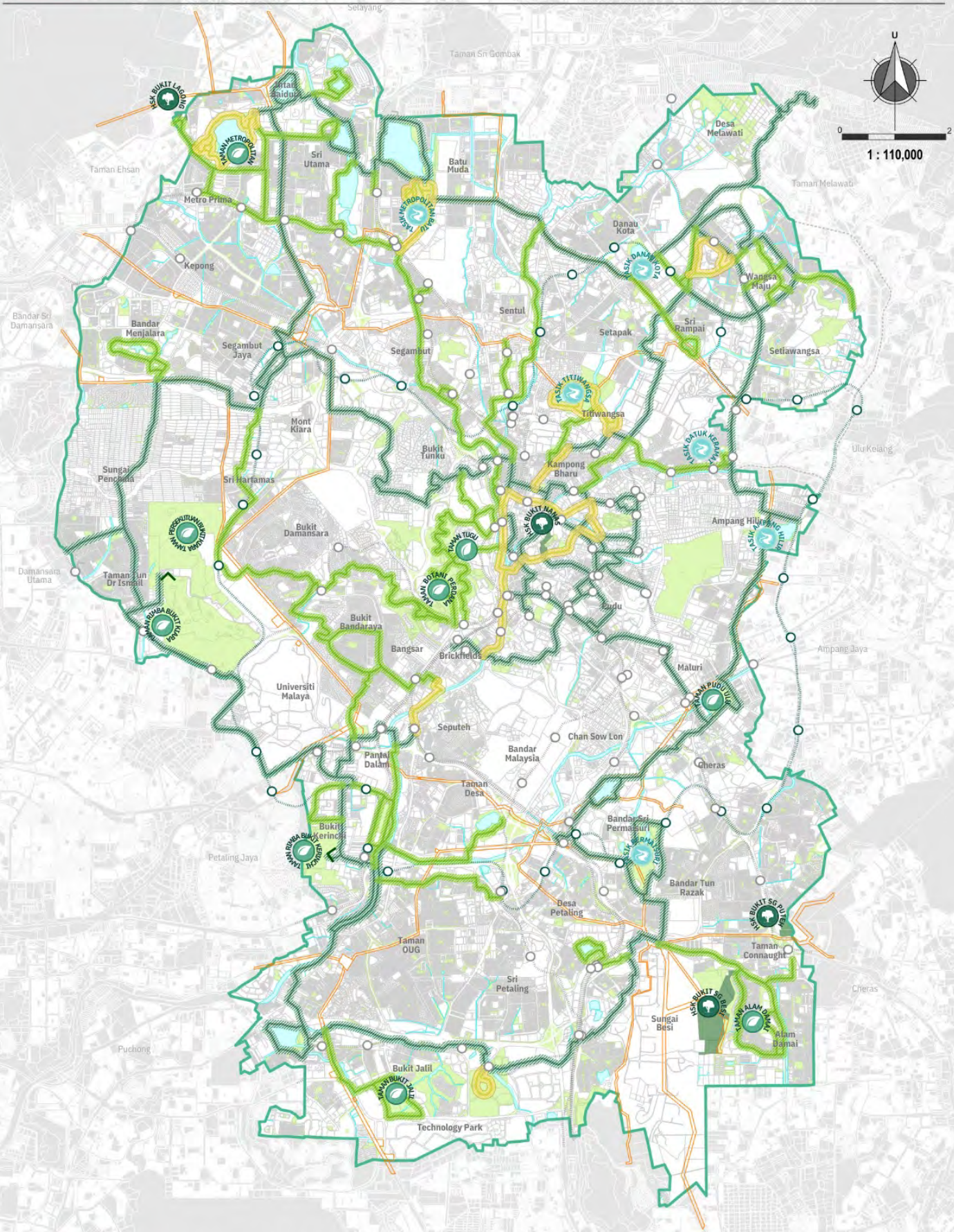


FIGURE 3.6.2 | Plan of Proposed Park Connector Network

Legend :

Existing
- Transmission Line
- Open Space
- Forest Reserve (FR)
- Water Bodies (BDA)

Proposed
- Main Park Connector
- Secondary Park Connector
- Existing Park Connector

Public Transportation Line
- Transportation Lines and Stations
- Proposed MRT Line 3 and Station

Others
- Kuala Lumpur Boundary
- Open Space
- Forest Reserve
- Open Space and Lake

IMPLEMENTATION PROPOSAL

CP 3-6.1: FORMING PARK CONNECTOR NETWORKS

A Healthy City must be planned and equipped with infrastructure and health-supporting facilities for the city population. These facilities will create an environment that promotes a healthy lifestyle. This approach also supports the Healthy Walkable City policies through a healthy lifestyle among city populations by providing facilities to support walking and cycling as daily activities.

The development of the park connector network need to identify potential network locations for implementation. It needs to consider the formation of more functional space that can integrate various activities such as pedestrian and micromobility vehicle routes in line with the goal of making Kuala Lumpur as a green, healthy and vibrant city.

The implementation approach of this proposal is through projects and guidelines. There are two (2) initiatives proposed for the implementation of CP 3-6.1.

BRIEF INFO

GUIDELINES OF HEALTHY WALKABLE CITY

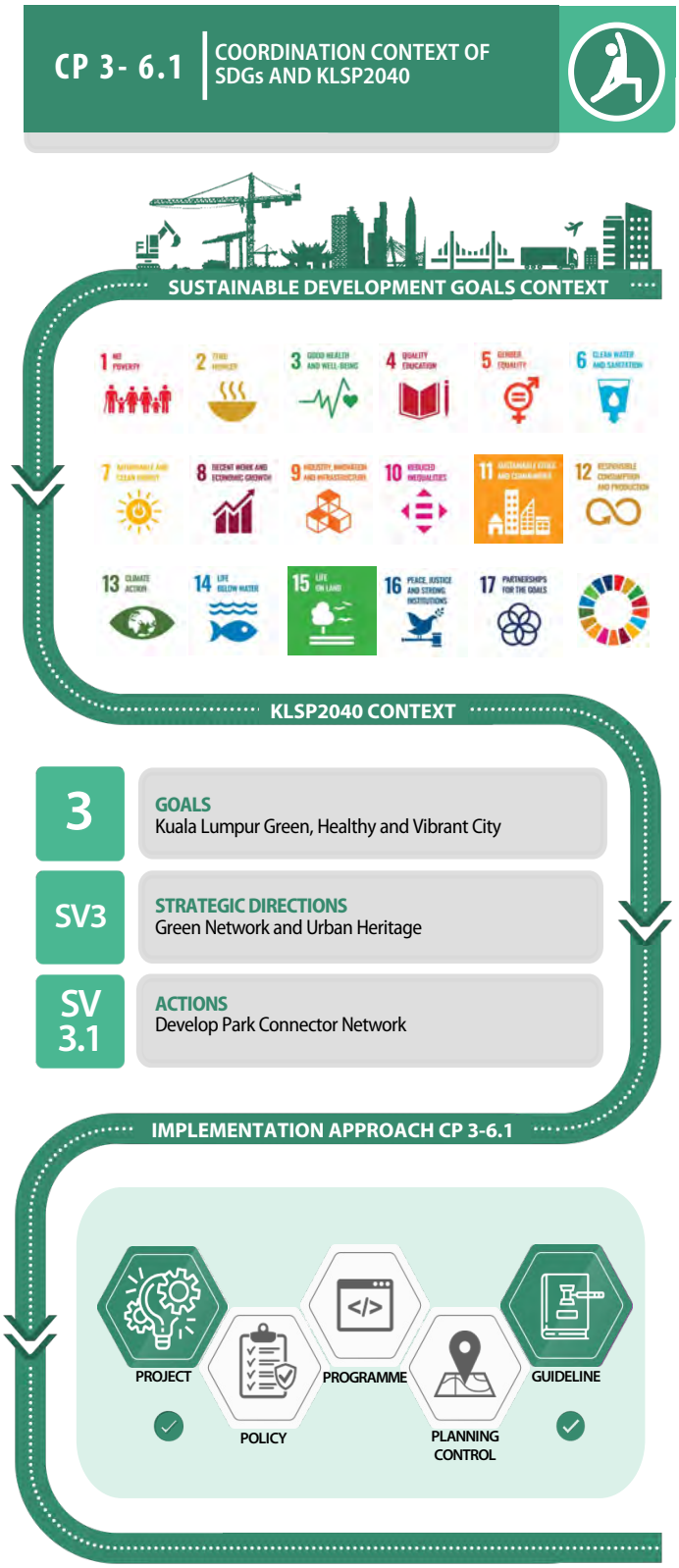
Definition

A city with a connected pedestrian and bicycle environment that is user-friendly, comfortable, safe and sustainable that promotes healthy and active lifestyles

Five (5) Main Principles

1. Connectivity
2. User-friendly
3. Comfortable
4. Safe
5. Sustainable

Source: Garis Panduan Pelaksanaan Bandar Sihat Mesra Pejalan Kaki (Healthy Walkable City) (2017), PLANMalaysia



IMPLEMENTATION INITIATIVE 3-6.1A

IDENTIFY PARK CONNECTOR NETWORKS

The Draft KLLP2040 has identified six (6) potential main park connector networks with a length of 254.40 kilometres as shown in Table 3.6.1. The details of these six (6) main park connector networks are as shown in Table 3.6.2 to Table 3.6.7.

The necessary actions to support this initiative are as follows:

1. Connect open spaces (land) through active mobility (pedestrian and micromobility vehicle routes); and
2. Identify potential networks for implementation such as utility corridors, riverside corridors, main road reserves, back lanes and parks as well as existing open spaces (land).

Table 3.6.1:
Proposed Six (6) Park Connector Networks

Proposed Park Connector Network
1. Wilayah Utara Park Connector Network: a. Covering Sentul – Menjalara (SM) area; and b. Six (6) main segments.
2. Wangsa Maju and Tasik Titiwangsa Park Connector Network: a. Covering Sentul - Menjalara (SM) area; and b. Nine (9) main segments.
3. Pusat Bandar Raya Kuala Lumpur Park Connector Network: a. Covering Pusat Bandar Raya area; and b. Ten (10) main segments.
4. Pudu Ulu and Alam Damai Park Connector Network: a. Covering Bandar Tun Razak - Sungai Besi (BTRRS) area; and b. Nine (9) main segments.
5. Bukit Jalil and Bohol Park Connector Network: a. Covering Bukit Jalil – Seputeh (BJS) area; and b. Four (4) main segments.
6. Bukit Kiara and Kerinchi Park Connector Network: a. Covering Damansara – Penchala (DP) area; and b. Six (6) main segments.

BEST PRACTICE

BIKE FRIENDLY CITY OF COPENHAGEN

The use of bicycle by people of all ages in Copenhagen is driven by the provision of infrastructure and safety features which consist of four (4) basic factors as follows:

1. Provision of traffic calming elements;
2. Painted bike lanes;
3. Separated cycling paths from roadway; and
4. Interconnected green path.

Source: https://www.shutterstock.com/Steve Heap

Inderhavnsbroen is a 180 metres (590 feet) bridge spans across Copenhagen harbour and specifically built for pedestrians and cyclists.

Source: https://www.shutterstock.com/Mollebjerg

Among the safety facilities provided are traffic lights, signs and road dividers that separate cycling lanes and roads.

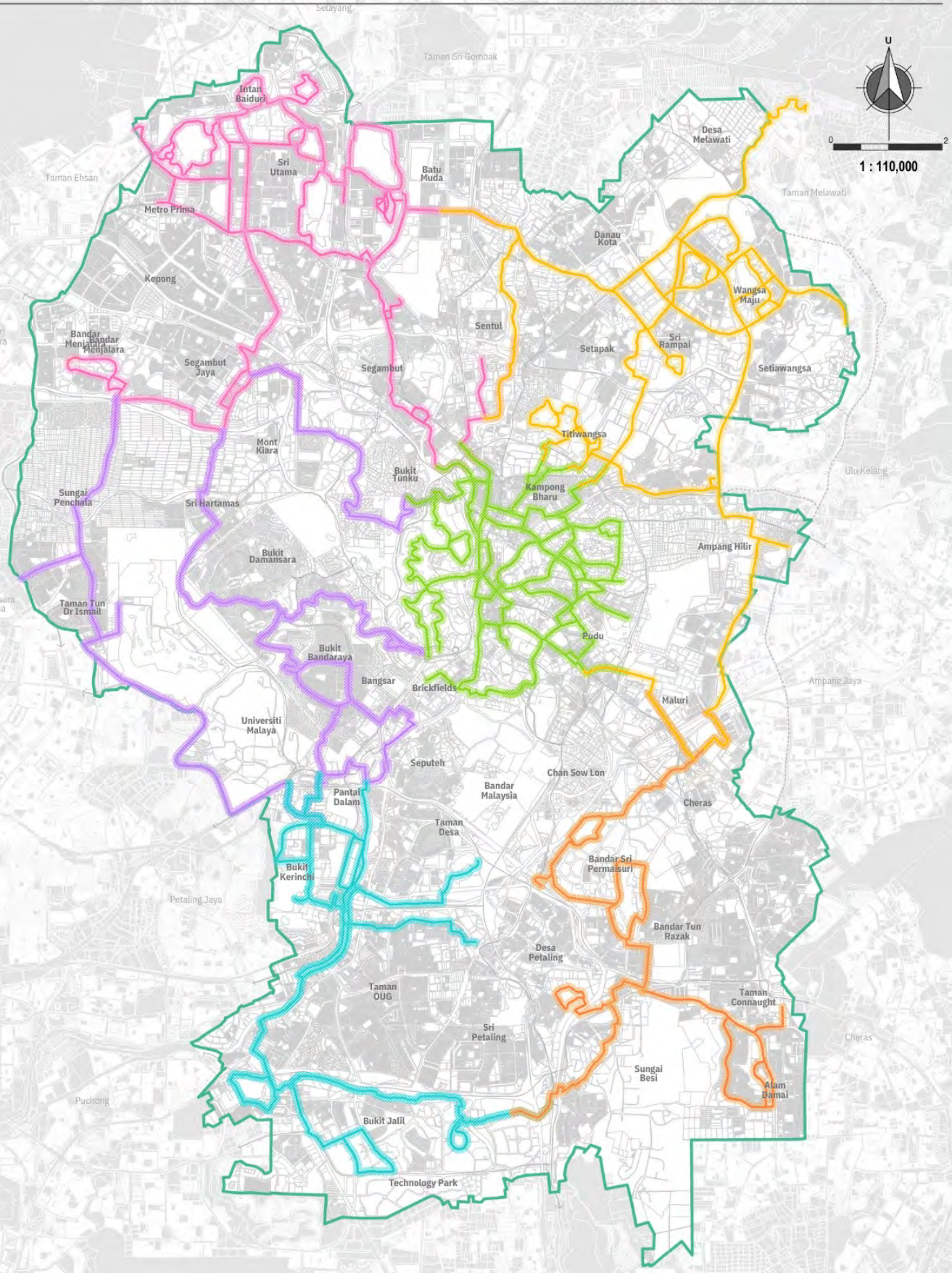


FIGURE 3.6.3 | Plan of Proposed Six (6) Park Connector Network

Legend :

- Wilayah Utara Park Connector Network
- Wangsa Maju Park and Titiwangsa Park Connector Network
- Pusat Bandar Raya Kuala Lumpur Park Connector Network
- Pudu Ulu Park and Alam Damai Park Connector Network
- Bukit Jalil and Bohol Park Connector Network
- Bukit Kiara and Kerinchi Park Connector Network

Others

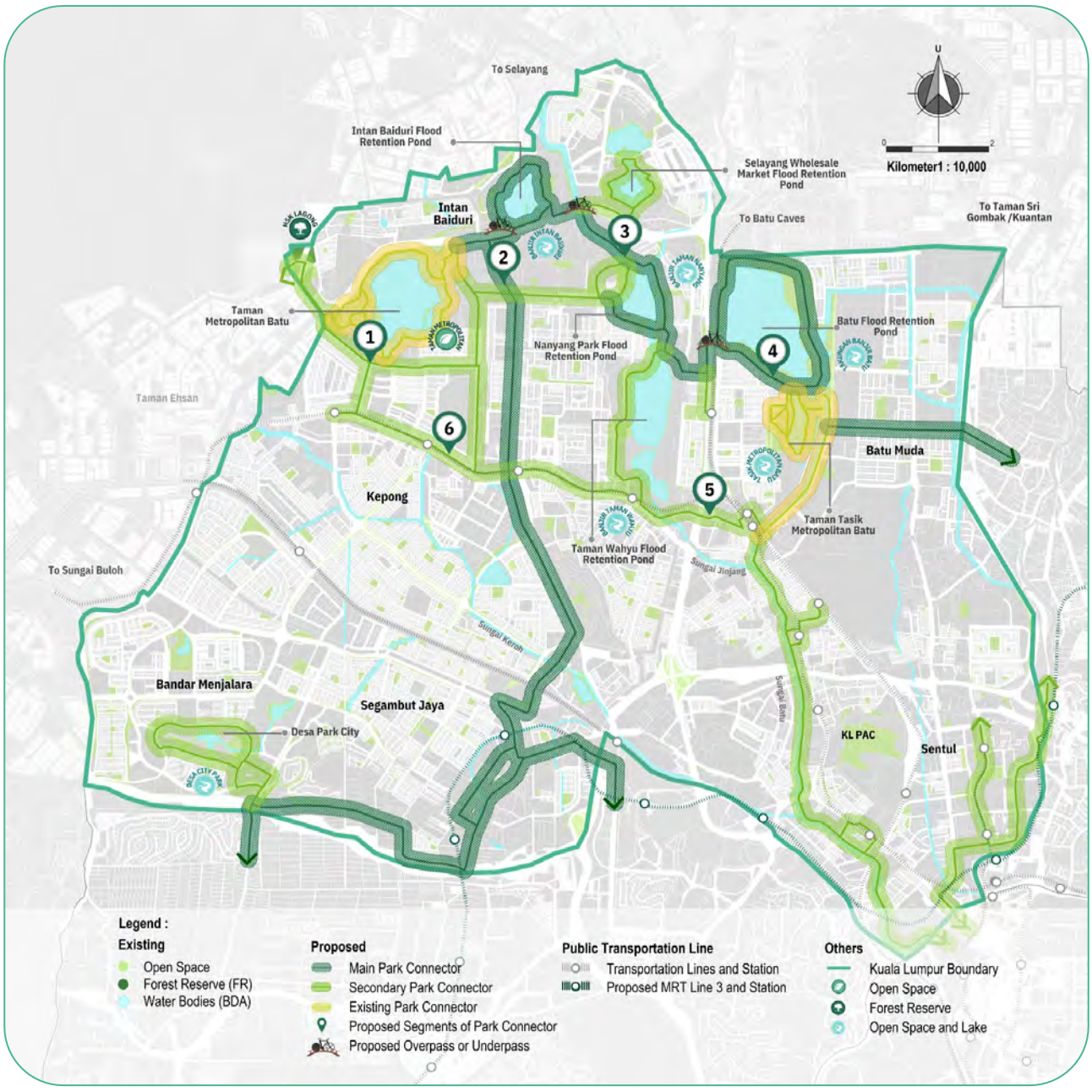
- Main Road
- Kuala Lumpur Boundary

Table 3.6.2:
Proposed Wilayah Utara Park Connector Network

1. Wilayah Utara Park Connector Network

There are six (6) main segments, as follows:

a. **Segment 1** (5.1 kilometres): Jalan Selayang-Lebuhraya Kepong, Kawasan Taman Metropolitan Kepong, Jalan Metro Perdana Barat and Jalan 15/34C;
b. **Segment 2** (4.8 kilometres): Taman Metropolitan Kepong, Lebuhraya Lingkaran Tengah II (MRR2), Kolam Takungan Banjir Intan Baiduri and Kolam Takungan Banjir Pasar Borong Selayang;
c. **Segment 3** (6.2 kilometres): Sungai Batu, Kolam Takungan Banjir Taman Nanyang, Jalan Jinjang Setia, Kolam Takungan Banjir Taman Wahyu and Jalan 15/34C;
d. **Segment 4** (4.8 kilometres): Jalan Kuching, Kolam Takungan Banjir Batu, Taman Metropolitan Batu and Sungai Batu;
e. **Segment 5** (4.6 kilometres): Jalan Besar Kepong, Jalan Kepong Lama, Jalan 1/18B and Sungai Batu; and
f. **Segment 6** (2.3 kilometres): Lebuhraya Lingkaran Tengah II (MRR2), Jalan Jinjang Setia and Jalan Besar Kepong.



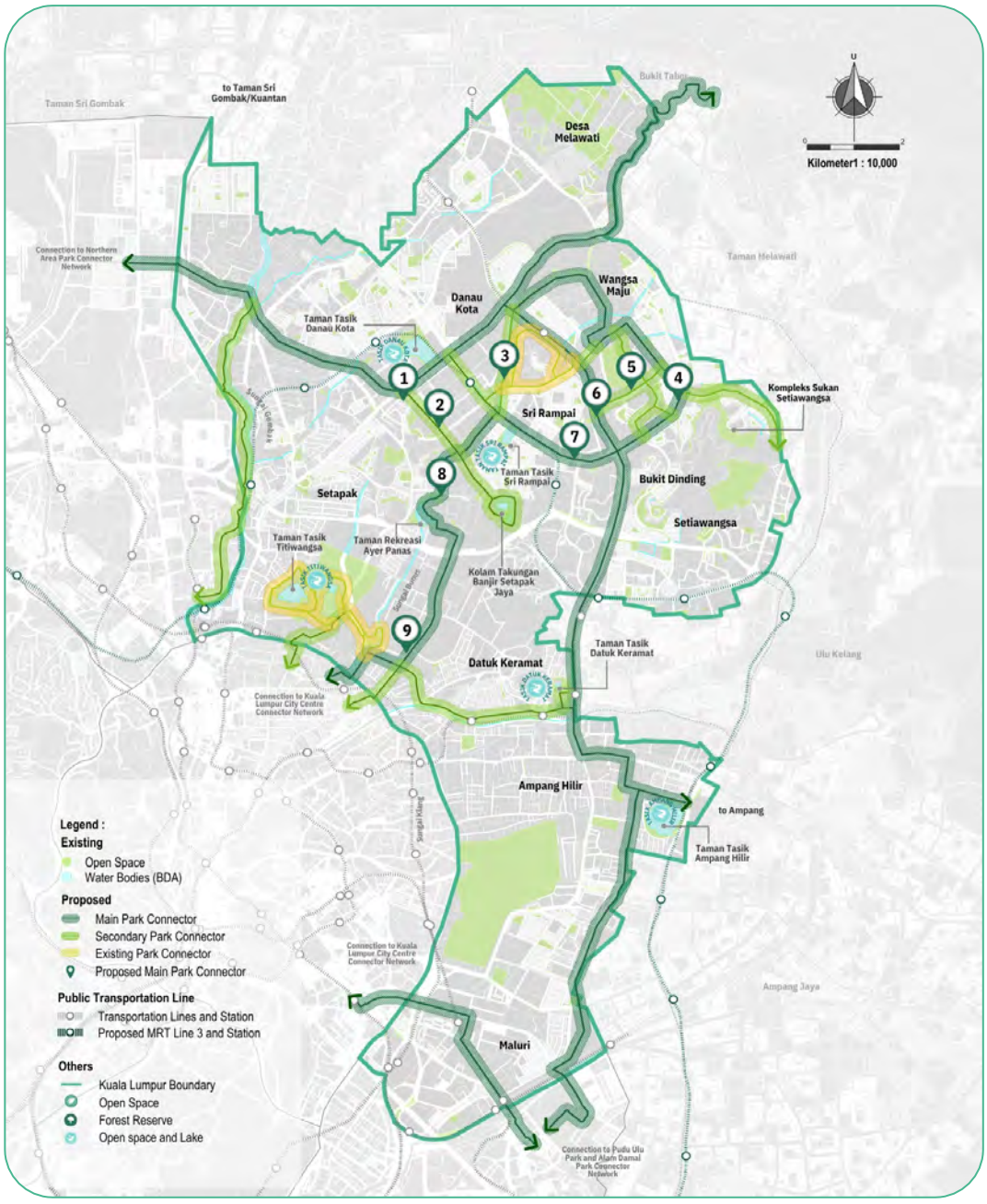
* Proposal is subject to a detailed study.

Table 3.6.3:
Proposed Wangsa Maju and Tasik Titiwangsa Park Connector Network

2. Wangsa Maju and Tasik Titiwangsa Park Connector Network

There are nine (9) main segments, as follows:

a. **Segment 1** (1.7 kilometres): Laluan Rentis, Taman Tasik Danau Kota and Jalan Genting Klang;
b. **Segment 2** (2.8 kilometres): Laluan Rentis, Sungai Bunus and Kolam Takungan Banjir Setapak Jaya;
c. **Segment 3** (2.0 kilometres): Sungai Bunus, Jalan 4/27A and Jalan 2/27A;
d. **Segment 4** (1.0 kilometres): Jalan 6/27A, Kompleks Sukan Setiawangsa and Bukit Dinding;
e. **Segment 5** (5.3 kilometres): Jalan 2/27A, Jalan Wangsa Perdana 3, Jalan 6/27A, Jalan Wangsa Perdana 1, Jalan Wangsa Delima and Jalan 34/26;
f. **Segment 6** (2.3 kilometres): Jalan 1/27A and Jalan Mohd Yatim Yahya;
g. **Segment 7** (2.5 kilometres): Jalan 34/26, Sungai Bunus, and Taman Tasik Sri Rampai;
h. **Segment 8** (3.5 kilometres): Sungai Bunus dan Taman Rekreasi Ayer Panas; and
i. **Segment 9** (2.2 kilometres): Jalan Sultan Yahya Petra, Lorong Gurney and Taman Tasik Titiwangsa.



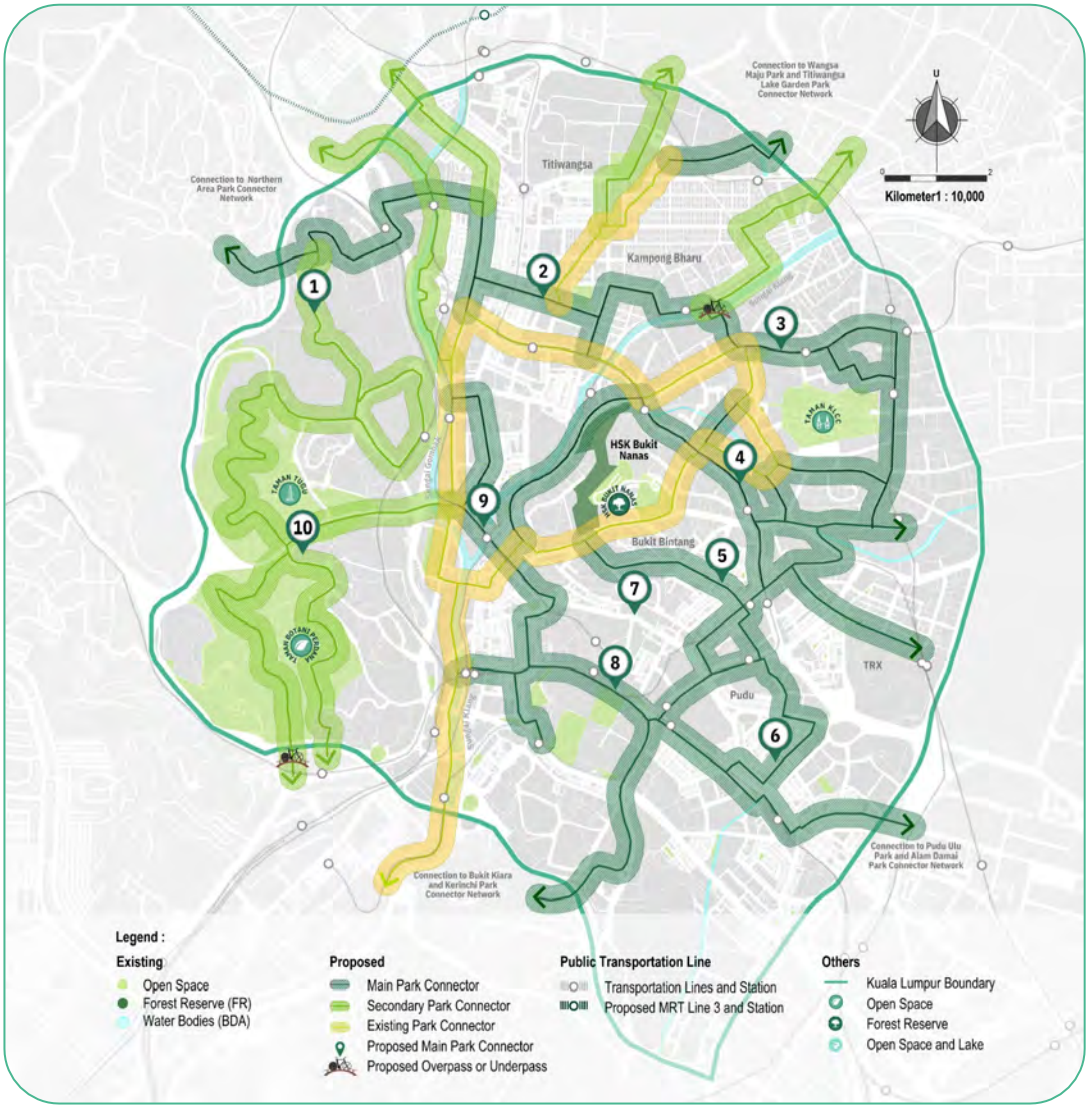
* The proposal is subject to a detailed study.

Table 3.6.4:
Proposed Pusat Bandar Raya Kuala Lumpur Park Connector Network

3. Pusat Bandar Raya Kuala Lumpur Park Connector Network

There are ten (10) main segments, as follows:

a. **Segment 1** (4.9 kilometres): Jalan Dato Onn, Jalan Sultan Salahuddin, Jalan Tun Ismail, Jalan Tunku, Jalan Putra and Jalan Raja Laut;
b. **Segment 2** (2.2 kilometres): Jalan Sri Amar, Jalan Dewan Sultan Ismail, Jalan Raja Abdullah, Jalan Raja Muda Musa, Jalan Hassan Salleh, Pintasan Saloma and Jalan Saloma;
c. **Segment 3** (4.4 kilometres): Jalan Ampang, Jalan 1/68B, Jalan Binjai, Persiaran KLCC, Jalan Stonor, Jalan Conlay, Jalan Kia Peng and Jalan Perak;
d. **Segment 4** (2.4 kilometres): Jalan Sultan Ismail, Jalan Ampang and Jalan Gereja;
e. **Segment 5** (1.1 kilometres): Jalan Bukit Bintang, Changkat Bukit Bintang, Jalan Ceylon and Jalan Raja Chulan;
f. **Segment 6** (7.3 kilometres): Jalan Sultan Ismail, Jalan Bukit Bintang, Jalan Gading, Jalan Utara, Jalan Barat, Jalan Harley, Jalan Kampung Pandan, Jalan Imbi, Jalan Khoo Teik Ee, Jalan Walter Granier, Jalan Sultan Ismail, Jalan Bulan 2, Jalan Bulan 1, Jalan 1/77B, Jalan Changkat Thambi Dollah, Jalan Brunei and Jalan Pudu;
g. **Segment 7** (0.9 kilometres): Jalan Bukit Bintang, Jalan Pudu and Jalan Tun Perak;
h. **Segment 8** (1.4 kilometres): Jalan Merlimau, Lorong Meranti, Jalan Hang Jebat and Jalan Sultan;
i. **Segment 9** (2.8 kilometres): Jalan Tun Perak, Jalan Pudu, Jalan Sultan, Jalan Petaling, Jalan Sultan Mohamed, Lebuh Pasar Besar, Jalan Hang Kasturi and Jalan Tun Sambathan; and
j. **Segment 10** (7.1 kilometres): Jalan Sultan Salahuddin, Jalan Parlimen, Jalan Tanglin, Jalan Tembusu and Taman Botani Perdana.



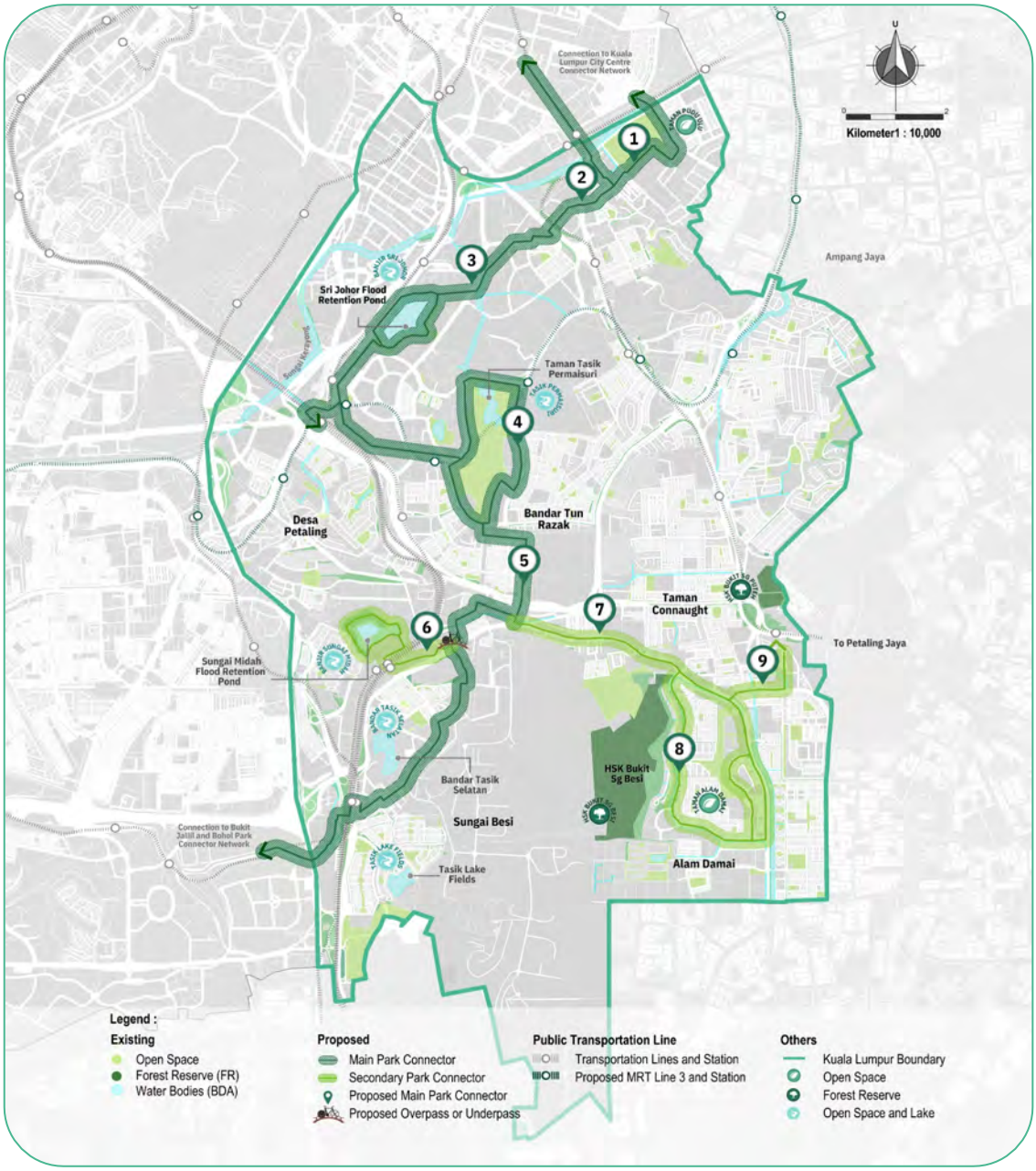
* The proposal is subject to a detailed study.

Table 3.6.5:
Proposed Taman Pudu Ulu and Alam Damai Park Connector Network

4. Taman Pudu Ulu and Alam Damai Park Connector Network

There are nine (9) main segments, as follows:

a. **Segment 1** (1.3 kilometres): Jalan 4/91, Taman Pudu Ulu, Jalan 3/91A and Jalan Pudu Perdana;
b. **Segment 2** (1.5 kilometres): Jalan Pudu Perdana, Jalan 1/92B, Jalan 2/92B, Jalan Ikan Ayu and Jalan Sekilau;
c. **Segment 3** (6.0 kilometres): Laluan Rentis, Kolam Takungan Banjir Sri Johor, Laluan rentis, Jalan Sri Permaisuri 6, Laluan Rentis and Taman Tasik Permaisuri;
d. **Segment 4** (3.9 kilometres): Jalan Budiman, Jalan Tasik Permaisuri 2, Taman Tasik Permaisuri, Stadium Cheras Kuala Lumpur, Jalan Yaacob Latif, Jalan Bakti and Jalan Adil;
e. **Segment 5** (2.3 kilometres): Jalan Jujur, Persiaran Mewah, Jalan 2/118B, Jalan 12/118B and Jalan 9/118B;
f. **Segment 6** (2.4 kilometres): Lebuhraya Lingkaran Tengah II (MRR2), Terminal Bersepadu Selatan and Kolam Takungan Banjir Sungai Midah;
g. **Segment 7** (1.8 kilometres): Jalan 3/118B and Persiaran Alam Damai;
h. **Segment 8** (5.6 kilometres): Lingkungan Alam Damai and Taman Alam Damai; and
i. **Segment 9** (1.1 kilometres): Jalan 1/144A and Jalan 3/144A.



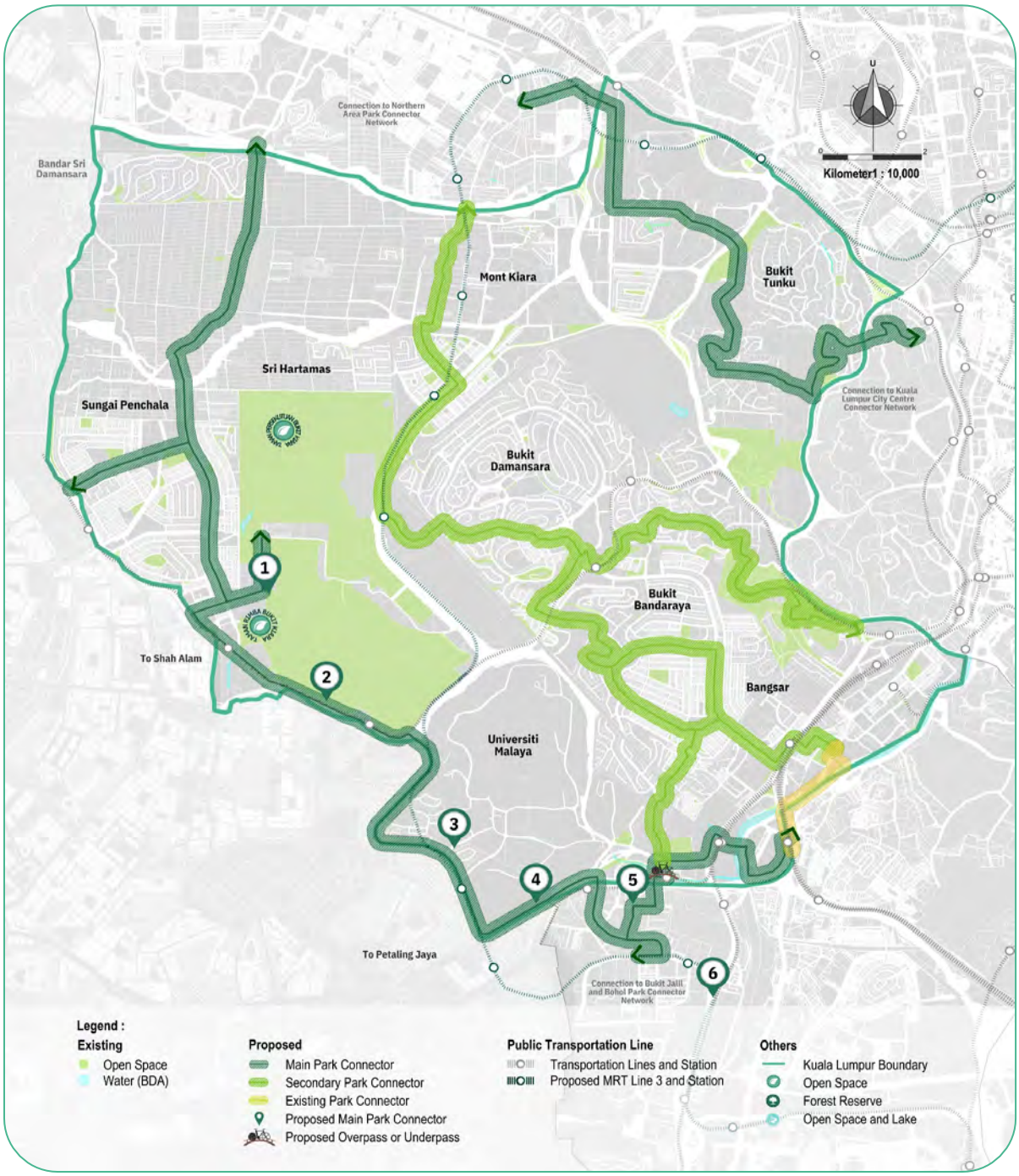
* The proposal is subject to a detailed study.

Table 3.6.6
Proposed Taman Bukit Kiara and Kerinchi Connector Network

5. Taman Bukit Kiara and Kerinchi Connector Network

There are six (6) main segments, as follows:

a. **Segment 1 (**1.3 kilometres): Taman Persekutuan Bukit Kiara, Jalan Datuk Sulaiman, Jalan Tun Mohd Fuad 3 and Taman Awam Bukit Kiara;
b. **Segment 2** (2.5 kilometres): Jalan Damansara;
c. **Segment 3** (3.0 kilometres): Jalan 16/1 and Jalan Profesor DiRaja Ungku Aziz;
d. **Segment 4** (1.2 kilometres): Lebuh Raya Persekutuan (Motorcycle Line);
e. **Segment 5** (1.3 kilometres): Jalan Kerinchi; and
f. **Segment 6** (4.6 kilometres): Jalan Pantai Permai, Jalan Pantai Murni, Lorong 17/122E and Taman Rimba Bukit Kerinchi.



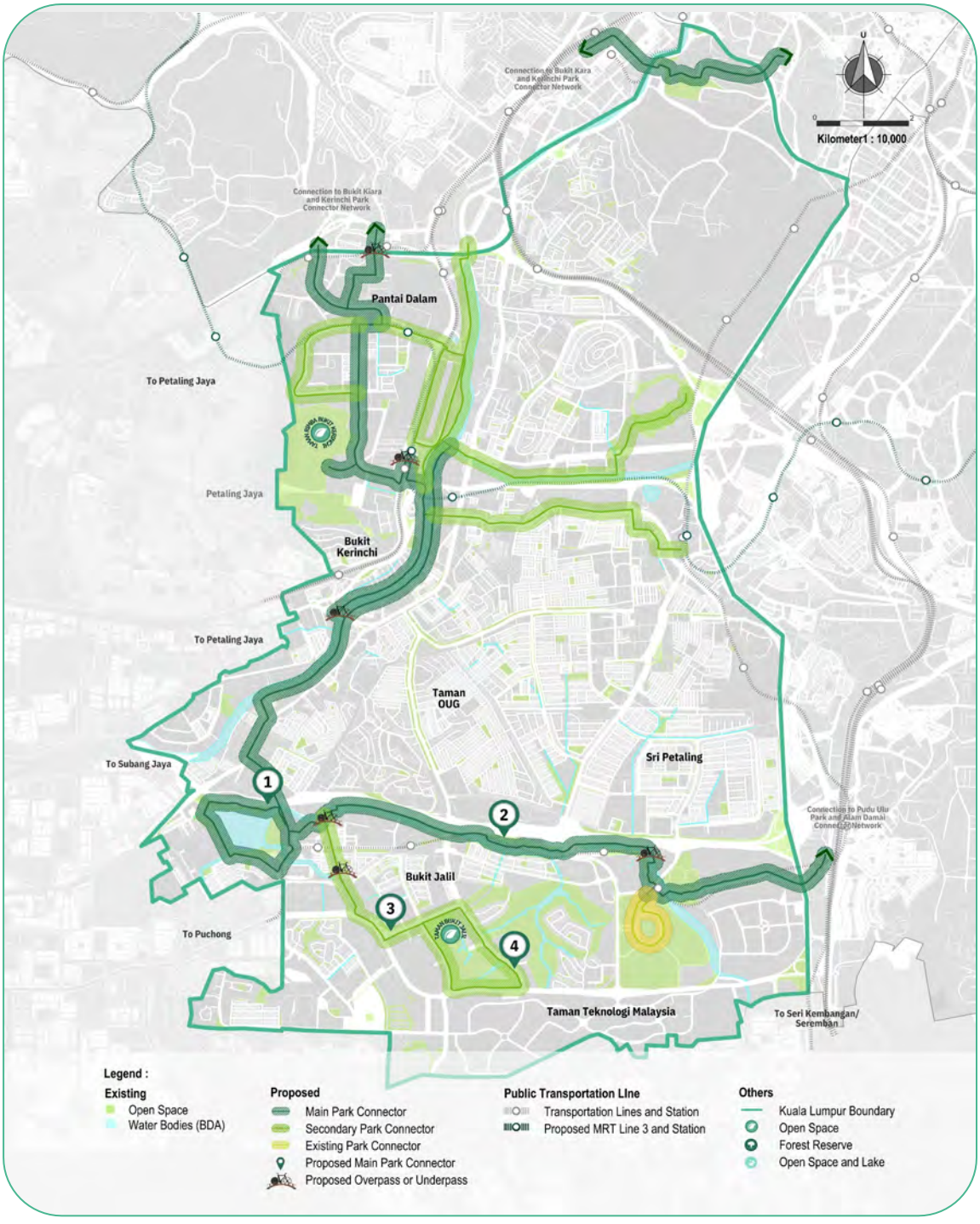
* The proposal is subject to a detailed study.

Table 3.6.7
Proposed Taman Bukit Jalil and Bohol Connector Network

6. Taman Bukit Jalil and Bohol Connector Network

There are four (4) main segments, as follows:

a. **Segment 1** (2.5 kilometres): Jalan 1/152, Tasik Kampung Bohol, Jalan Tiara, Jalan 4/155 and Jalan 1/152;
b. **Segment 2** (4.4 kilometres): Jalan 1/152, Sungai Kuyoh, Jalan Merah Caga, LRT Bukit Jalil and Stadium Nasional Bukit Jalil;
c. **Segment 3** (1.5 kilometres): Jalan 16/1, Sungai Kuyoh, Laluan rentis, Jalan 4/155, Laluan Rentis, Lebuhraya Bukit Jalil and Jalan 13/155c; and
d. **Segment 4** (3.2 kilometres): Lebuhraya Bukit Jalil, Jalan 13/155C, Jalan Jalil Perkasa 1, Lebuhraya Bukit Jalil, Persiaran Jalil Utama and Jalan 13/155C.



* The proposal is subject to a detailed study.

IMPLEMENTATION INITIATIVE 3-6.1B

PROVIDE MAIN AND SUPPORT FACILITIES

The provision of infrastructure facilities for the park connector network must be adapted to the needs of users, taking into account the principles of connectivity, comfort, age-friendly and disabled-friendly, safety and sustainability.

Emphasis on these needs can help to facilitate and improve the accessibility of the park connector network to users.

The necessary actions to support this initiative are as shown in Table 3.6.8.

Table 3.6.8:
Preparation of Main and Support Facilities for The Park Connector Network

Type of Facility	Details
Main Facility	1. Pedestrian and micromobility vehicle routes: a. Has a non-slip surface: • The surface is clean and free of obstacles such as the provision of the channel to prevent water from pooling on the surface of the pathway; b. Ensure safe and comfortable network routes taking into account the type of cycling route to be implemented: • **Controlled lanes:** isolated or roadside lanes with dividers such as road medians and landscaped areas; and • **Shared lane:** a lane on the surface of the road that separates bicycles and motor vehicles using road markings such as bollards and road barriers. c. Provide cycling paths with a minimum width of 1.5 metres: • Bicycle paths must be provided adjacent to pedestrian routes with a width of not less than 1.2 metres for low-usage two-way paths or 1.5 metres for high-usage two-way paths. 2. Linking structures such as overpasses and bridges: a. Ensure a network route that is connected and not interrupted by railways and rivers; and b. Provision of pedestrian and cycle bridges if crossings at road level cannot be provided due to high traffic volume. Location: Kolam Takungan Banjir Batu Illustration of pedestrian and cycle bridge on Jalan Kuching that connects Kolam Takungan Banjir Taman Wahyu and Kolam Takungan Banjir Batu. Location: Jalan Lingkaran Tengah (Kepong) Illustration of pedestrian and cycle bridge at Sungai Batu that connects Kolam Takungan Banjir Intan Baiduri and Kolam Takungan Banjir Pasar Borong Selayang.

Table 3.6.8:
Preparation of Main and Support Facilities for The Park Connector Network (continued)

Type of Facility	Details
Supporting Facilities	1. Comfort: a. Ensure appropriate size and width, unobstructed paths and maintain the cleanliness of network paths; b. Provide shade, soft and hard landscaping as well as supporting facilities such as benches, dustbins, lights and others; and c. Provide public spaces such as pocket parks along network path as an element of attraction and to serve as meeting points or nodes for users. 2. Age-friendly and Disabled-friendly: a. Apply Universal Design elements and easily accessible to all levels of society especially elderly, disabled and children. 3. Safety: a. Guarantees the safety of users from accident and crime risks by applying elements of Crime Prevention Through Environmental Design (CPTED) as follows; • Accident risk: Separation of bicycle and pedestrian routes from motorised lanes by creating buffer zones or placing street furniture such as road bollards, guard rails and landscaping plants; and • Crime risk: Installation of closed circuit cameras (CCTV) and panic buttons in public or protected areas. Illustration of the provision of supporting facilities for the park connector network A Cycling or pedestrian routes B Signs or direction signs C Cycle parking D Handrail and footrest E Road crossing F Road bollards or guard rails G Age-friendly and disabled-friendly elements H Traffic light I Pocket park J Green canopy K Security elements (CCTV + panic button + fence) L Lighting elements

IMPLEMENTATION PROPOSAL

CP 3-6.2: MARKING KUALA LUMPUR CITY BOUNDARY

Edge is one of the urban design elements that form the image and identity of a city. A boundary mark serves as a physical and administrative separator of an area. Kuala Lumpur being a rapidly developing city is experiencing an overflow of development to surrounding areas and not limited by the boundary line.

The boundary between Kuala Lumpur and its neighbouring cities is not clearly marked. The purpose of Kuala Lumpur's physical mark is to further enhance the city's identity and act as an element of a sense of welcome. The Draft KLLP2040 has identified 70 potential areas for boundary marking as shown in Figure 3.6.4.

The implementation approach of this proposal is through a projects. There are two (2) initiatives proposed for the implementation of CP 3-6.2.

BRIEF INFO

CATEGORY AND AREA OF CITY BOUNDARY

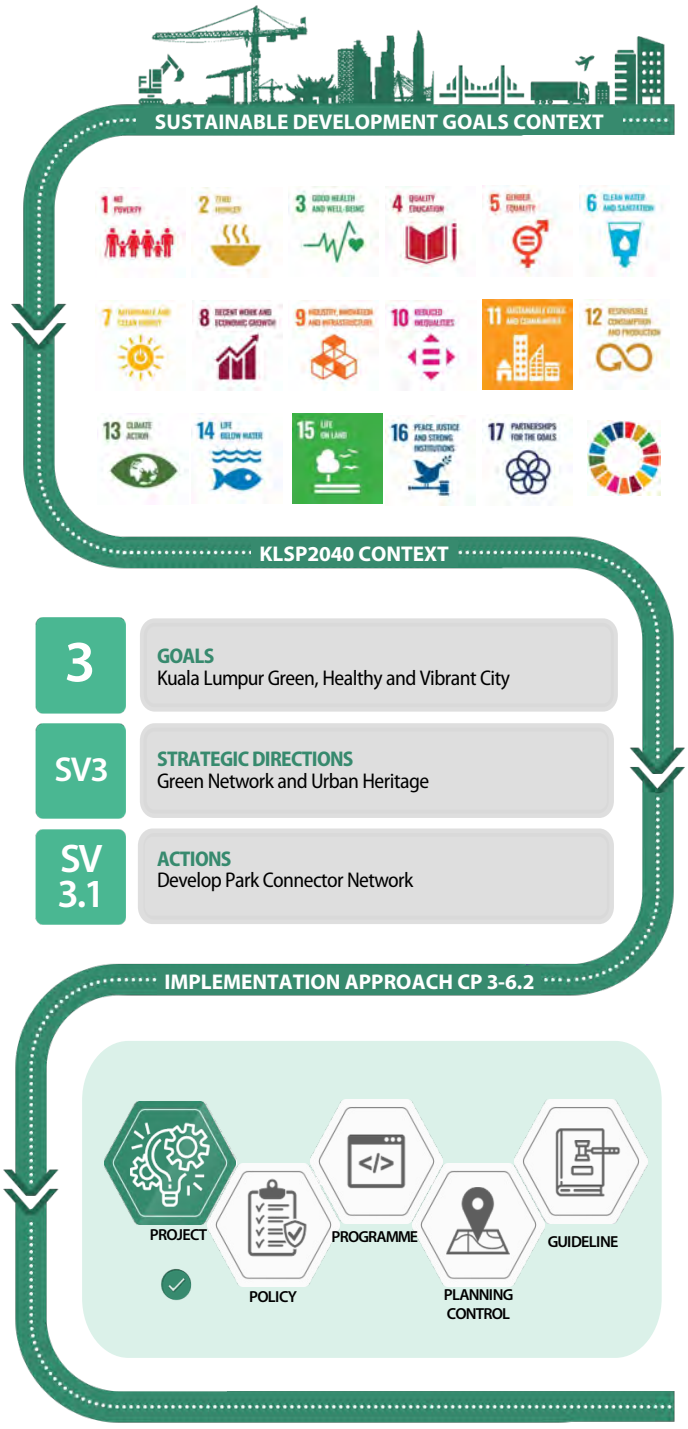
Crossing or Parallel Road Boundary
51 Areas

Railway boundary
4 Areas

Utility corridor boundary (trails)
4 Areas

River boundary
11 Areas

CP 3- 6.2 | COORDINATION CONTEXT OF SDGs AND KLSP2040



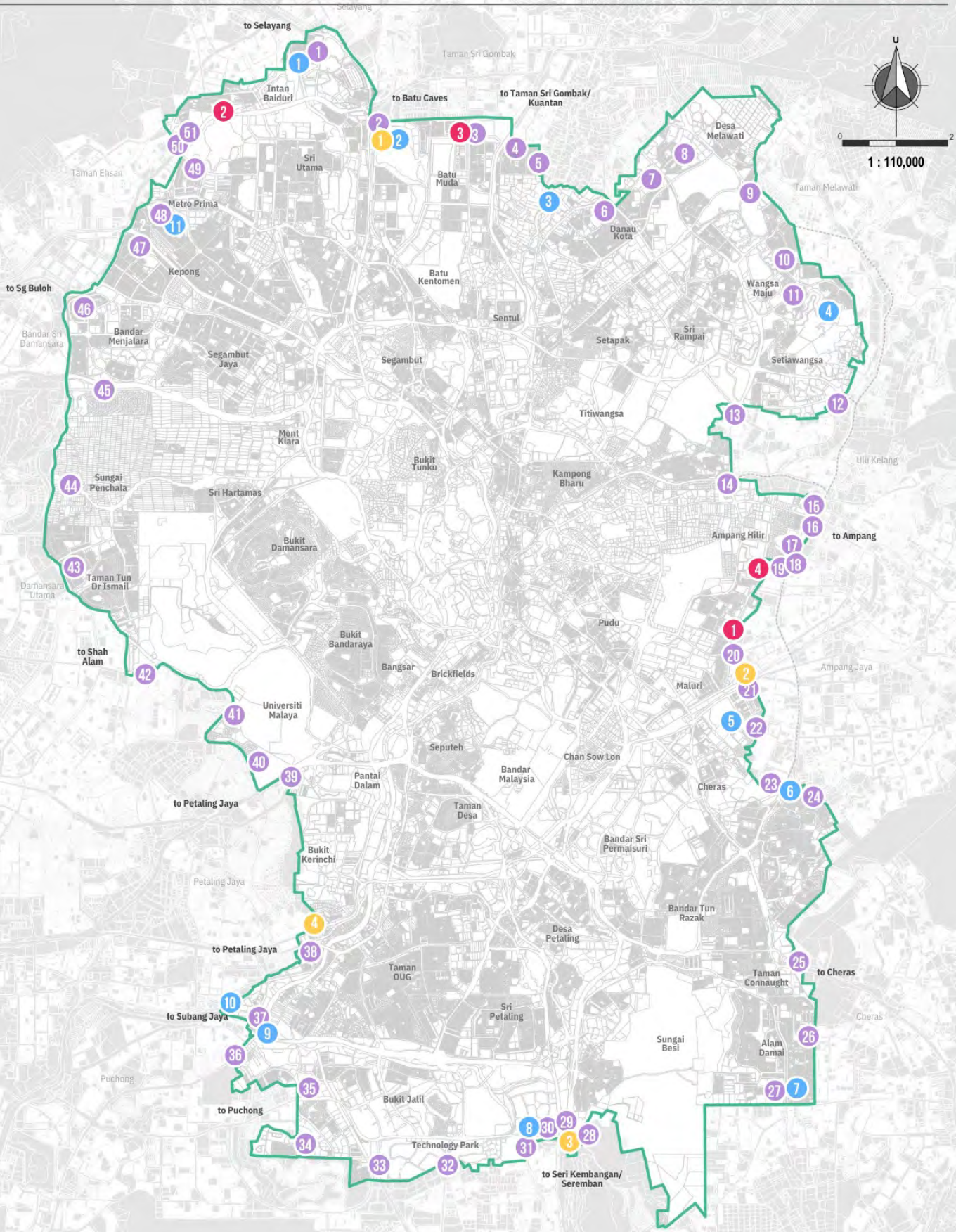


FIGURE 3.6.4 | Plan of Proposed Kuala Lumpur Boundary Markers

Legend :

- Utility Corridor Boundary
- River Boundary
- Crossing or Parallel Road Boundary
- Railway Boundary

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION INITIATIVE 3-6.2A

IDENTIFY BOUNDARY MARKING ELEMENTS

The elements of boundary marking are determined according to boundary categories with the aim of creating a clear boundary image. It also forms the welcoming element at the boundary of Kuala Lumpur.

The necessary actions to support this initiative are as shown in Table 3.6.9.

Table 3.6.9:
Actions in Kuala Lumpur Boundary Marking

Proposed Area	Details
1. Crossing or parallel road boundary; 2. Railway boundary; 3. Utility corridor boundary (trails); and 4. River boundary	Appropriate and potential boundary marker elements based on site conditions: 1. **Road markings**: Horizontal marker elements on the road such as lines or marking plaques; 2. **Boundary post:** vertical marker element at a boundary such as a boundary stone, post or gate; 3. **Signboard:** Welcome elements such as 3D signs and Light-Emitting Diode (LED) lightboxes on transport infrastructure or overpasses; 4. **Murals:** Marker elements in the form of sketches that are related to the image and identity of Kuala Lumpur such as on transport infrastructure pillars, footpaths or road barriers; and 5. **Vertical green:** Vertical green elements through the planting of suitable and easy-to-maintain species in separate structures on transport infrastructure poles or border posts.

BEST PRACTICES

EXAMPLES OF BOUNDARY MARKERS

1. Road markings

Location: Virginia – Tennessee

Location: Netherland – Belgium

2. Boundary post

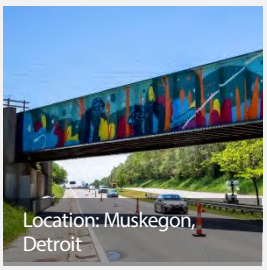
Location: Lloydminster – Saskatchewan

3. Signboard

Location: Seoul, Korea

4. Murals

Location: Cleveland, Ohio


Location: Muskegon, Detroit

5. Vertical green

Location: Mexico City

IMPLEMENTATION INITIATIVE 3-6.2B

PREPARE MATRIX BOUNDARY MARKING ELEMENTS

The matrix of boundary marker elements is a reference in the preparation of appropriate boundary marking elements at identified areas. The necessary actions to support this initiative are as shown in Table 3.6.10.

Table 3.6.10:
Kuala Lumpur Boundary Marker Matrix

Location		Boundary Marking Proposal				
		Road marking	Boundary post	Signboard	Mural	Vertical green
Crossing or Parallel Road Boundary (refer to location in Figure 3.6.4)						
1.	Jalan Kuching (Selayang) – existing arch	✓		✓		
2.	Lebuhraya Lingkaran Tengah II (MRR2) (Batu Caves roundabout)	✓				
3.	Jalan Sri Batu Caves (Batu Muda)	✓		✓		
4.	Lebuhraya DUKE Gombak – existing arch	✓	✓	✓	✓	
5.	Taman Melewar				✓	
6.	Jalan Gombak (Intersection of Jalan Ibu Kota)		✓			
7.	Jalan Taman Melati			✓	✓	✓
8.	Lebuhraya Lingkaran Tengah II (MRR2) (Gombak LRT)	✓		✓	✓	
9.	Jalan Kolam Air (Taman Melawati)	✓	✓			✓
10.	Lebuhraya Lingkaran Tengah II (MRR2) (Taman Melawati)	✓	✓			
11.	Jalan AU5d/1 (Lembah Keramat)	✓	✓			
12.	Lebuhraya DUKE (Setiawangsa)	✓		✓	✓	
13.	Jalan Jelatek Setiawangsa	✓	✓		✓	
14.	Lebuhraya AKLEH (Datuk Keramat)	✓		✓		
15.	Jalan Lingkaran Tengah 2 (KPJ Ampang)	✓	✓		✓	
16.	Jalan Ampang (Ampang Point)	✓		✓		
17.	Lebuhraya Lingkaran Tengah II (MRR2) (Taman Tasik Ampang Hilir)	✓	✓	✓		✓
18.	Jalan Ampang Putra	✓	✓			
19.	Lebuhraya Lingkaran Tengah II (MRR2) (Masjid Nurul Islam)		✓	✓	✓	
20.	Jalan Perkasa (Pandan Jaya)	✓		✓		
21.	Lebuhraya Sungai Besi (Taman Shamelin)	✓		✓		
22.	Jalan Perdana Utama	✓	✓	✓	✓	
23.	Lebuhraya Lingkaran Tengah II (MRR2) (Pandan Perdana)	✓	✓	✓		
24.	Jalan Kuari	✓	✓	✓	✓	
25.	Lebuhraya Cheras-Kajang (Cheras)	✓		✓	✓	
26.	Jalan 8/154 (Alam Damai)	✓	✓		✓	
27.	Jalan Desa Cheras (Alam Damai)	✓	✓	✓		
28.	Lebuhraya BESRAYA (Seri Kembangan)		✓	✓	✓	✓
29.	Lebuhraya PLUS (Sungai Besi) – existing arch			✓	✓	
30.	Jalan Serdang Raya	✓	✓	✓	✓	✓
31.	Jalan PBS 14/1 (TPM)	✓	✓			
32.	Lebuhraya Maju Expressway (MEX)	✓	✓			
33.	Persiaran Puncak Jalil	✓	✓	✓		
34.	Jalan Impian Indah (Bukit Jalil)	✓	✓			

Table 3.6.10:
Kuala Lumpur Boundary Marker Matrix (continued)

Location		Boundary Marking Proposal				
		Road marking	Boundary post	Signboard	Mural	Vertical green
35.	Lebuhraya Bukit Jalil	✓	✓	✓	✓	✓
36.	Jalan Puchong (Taman Kinrara)	✓	✓	✓	✓	
37.	Lebuhraya KESAS (Kuyoh River)	✓	✓	✓		✓
38.	Jalan Kelang Lama and Lebuh raya NPE	✓		✓	✓	
39.	Lebuhraya Persekutuan existing arch		✓	✓	✓	
40.	Jalan Prof Diraja Ungku Aziz (UMMC)			✓	✓	
41.	Jalan 16/1 (UM)	✓	✓	✓		
42.	Damansara Link - Lebuh raya SPRINT	✓		✓	✓	
43.	Jalan Burhanuddin Helmi (TTDI)	✓		✓	✓	
44.	Penchala Link			✓	✓	
45.	Lebuhraya NKVE – existing arch	✓		✓	✓	
46.	Lebuhraya LDP - Lebuhraya Lingkaran Tengah II (MRR2)	✓	✓	✓	✓	
47.	Lebuhraya Lingkaran Tengah II (MRR2) (Kepong Sentral)			✓	✓	
48.	Jalan Besar Kepong	✓		✓		
49.	Lebuhraya Lingkaran Tengah II (MRR2) (Simpang Selayang)	✓		✓	✓	
50.	Persimpangan FRIM		✓			
51.	Selayang Kepong Bypass (Kampung Melayu)		✓	✓	✓	
Railway Boundary (refer Figure 3.6.4)						
1.	Laluan KTMB (Batu Caves roundabout)	✓		✓	✓	
2.	Laluan KTMB (Pandan Jaya)	✓		✓		
3.	Laluan KTMB/ERL (Sungai Kembangan)	✓		✓	✓	
4.	Laluan KTMB (Jalan Templer)	✓	✓			
Utility Corridor Boundary (refer to the location in Figure 3.6.4)						
1.	Transmission Line (Pandan Jaya)			✓		
2.	Kampung Melayu Kepong			✓		
3.	Jalan Taman Batu Muda			✓		
4.	Jalan Tujuh (Ampang Hilir)		✓	✓		
River Boundary (refer to the location in Figure 3.6.4)						
1.	Sungai Jinjang (Selayang)	✓			✓	✓
2.	Sungai Batu		✓	✓		✓
3.	Sungai Gombak (Padang Balang)		✓			✓
4.	Sungai Klang (Kompleks Sukan Setiawangsa)	✓	✓			✓
5.	Sungai Kerayong (LRT Pandan Jaya)	✓		✓	✓	✓
6.	Sungai Kerayong (Cheras Baru)	✓	✓	✓	✓	✓
7.	Sungai (Alam Damai)	✓		✓	✓	✓
8.	Sungai Kuyoh (TPM)	✓	✓	✓	✓	✓
9.	Sungai Kuyoh (Tasik Kampung Bohol)		✓			✓
10.	Sungai Klang (Sri Manja/KESAS)		✓	✓		✓
11.	Sungai Keroh (Kepong)		✓	✓	✓	✓

PLANNING STRATEGY

SP 3-7: CONNECTING THE CITY KEY ACTIVITY CENTRES

SCENARIO OF CURRENT KEY ACTIVITY CENTRES CONNECTIVITY IN KUALA LUMPUR

The interconnected network of pedestrian and micromobility vehicle routes of key activity areas in Kuala Lumpur is at a satisfactory level. The newly completed Pintasan Saloma is an initiative to connect the City Centre with other focal areas such as the KLCC area to the Kampong Bharu area and the Bukit Bintang elevated walkway.

These existing pedestrian and micromobility vehicle routes need to be constantly improved from the aspect of road design, seamless access and compatibility with surrounding development activities. The objective of improving these pedestrian and micromobility vehicles routes is to continuously link the areas within the City Centre and to increase the usage of pedestrian and micromobility vehicle routes.

In order to realise Kuala Lumpur as a city that can connect the city's key activity centres, one (1) Implementation Proposal is formulated under Planning Strategy 3–7, as shown in Figure 3.7.1.

BRIEF INFO

CHARACTERISTICS OF AN EFFECTIVE PEDESTRIAN NETWORK

- Located in the key activity area
- Age-friendly and disable-friendly
- Clear directional signboard
- Continuous (seamless) and free of barrier
- Connected to a pocket park or art gallery
- Inobtrusive change of path level

Figure 3.7.1:
Implementation Proposal for Planning Strategy 3-7

SP 3-7 CONNECTING THE CITY KEY ACTIVITY CENTRES

CP 3-7.1 Improving The Side Lane, Back Lane and Lane Between Building

Location: Pintasan Saloma, Kampong Bharu
Source: https://www.shutterstock.com/William Barton

Pintasan Saloma connecting Kampong Bharu to KLCC.

IMPLEMENTATION PROPOSAL

CP 3-7.1: IMPROVING THE SIDE LANE, BACK LANE AND LANE BETWEEN BUILDING

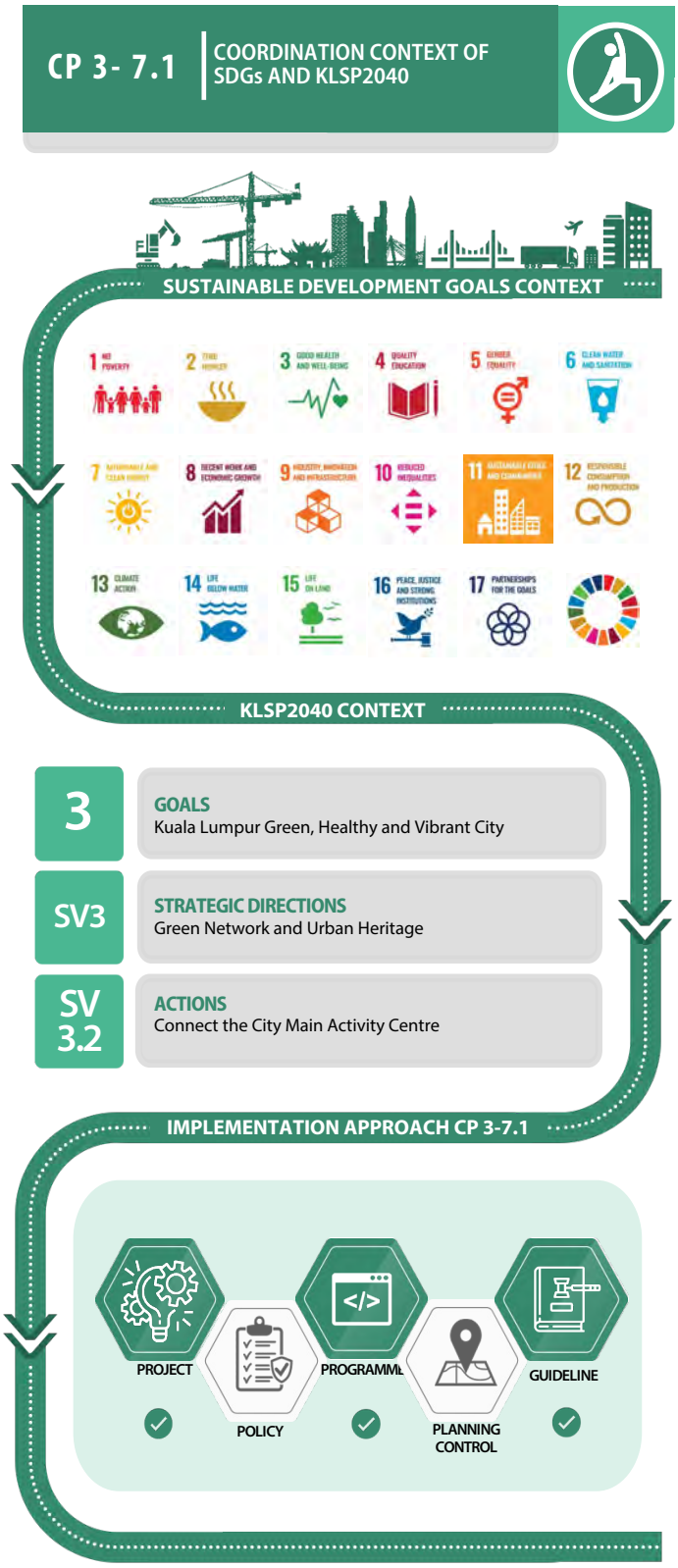
The main focus of the provision of good pedestrian and micromobility vehicle routes is to prevent users from getting involved in any road accidents involving motor vehicles and incidents of street crimes. A seamless and safe pedestrian and micromobility vehicle routes will be a preferred choice for users to get to the focal area in the City Centre.

The side lane, back lane and lane between building lanes are seen to have the potential to be used as one of the mediums that connect the main pedestrian routes in Kuala Lumpur. It also created a new pedestrian network in Kuala Lumpur.

The implementation approach of this proposal is through projects, programmes and guidelines. One (1) initiative proposed for the implementation of CP 3-7.1.

Location: LRT Pudu

Back lane with potential to improve pedestrian routes.



IMPLEMENTATION INITIATIVE 3-7.1A

UPGRADE SIDE LANE, BACK LANE AND BETWEEN BUILDING

The use of a side lane, back lane and lane between buildings will be an additional path to the main pedestrian network. This path serves as an alternative pathway, protected from sunlight and involves motor vehicles even though usually neglected and poorly maintained.

The design of this path must focus on the attraction, safety and comfort of users. KLCH has taken proactive actions to reactivate the side lanes, back lanes and lanes between buildings by lane upgrading through place-making with the concept of wall murals or sculptures.

The characteristics of lanes that have the potential to be upgraded include location in active commercial areas, high level of pedestrian use, and narrow and low level of natural surveillance.

The Draft KLLP2040 has identified 14 potential lanes within the City Centre for the implementation of this initiative as follows:

1. Lorong Bunus 1 and 2;
2. Lorong Jalan Tuanku Abdul Rahman;
3. Lorong Petaling;
4. Lorong Madras;
5. Lorong Bandar 21;
6. Lorong Jalan Tun Sambanthan;
7. Lorong Vivekananda;
8. Back lane at Jalan Alor;
9. Side lane at Jalan Walter Garnier;
10. Side lane at Changkat Bukit Bintang;
11. Back lane at Jalan Merbau;
12. Side lane at Jalan Kenanga;
13. Side lane or back lane at Jalan Meranti; and
14. Side lane or back lane at Jalan Meranti 2.

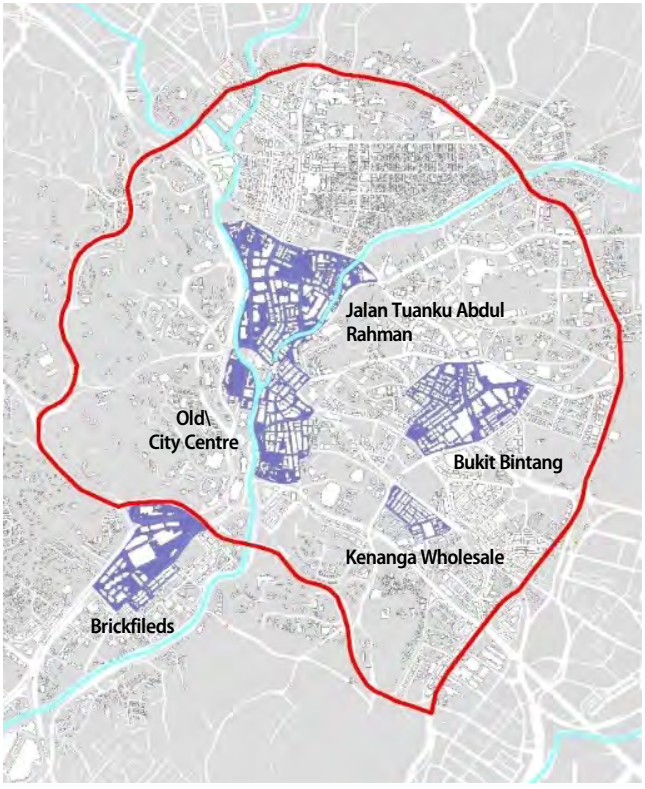
BEST PRACTICE

BACK LANE OF JALAN ALOR

The back lane at Jalan Alor is one of the lane transformation projects implemented by KLCH. Upgrading works carried out include road pavement, lighting, camera surveillance system, drain closure and mural art on the walls of the building have succeeded in activating the lane and increasing the level of usage. Today, Back Lane of Jalan Alor is one of the hotspots for photography.

Location: Lorong Belakang Jalan Alor

Figure 3.7.2:
Potential Improvement Area of Side Lane, Back Lane and Lane Between Building for Pedestrian and Micromobility Vehicle Routes



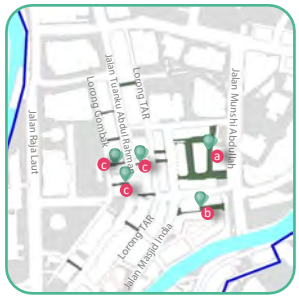
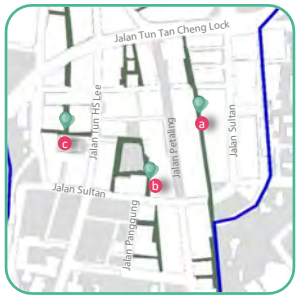
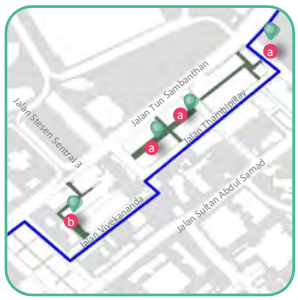
Source : PBRKL 2020

The necessary actions to support this initiative are as follows:

1. Provide seamless, safe and comfortable pedestrian and micromobility vehicle routes;
2. Ensure continuous maintenance of lane including its surroundings and provision of attractive landscapes as well as street furniture to create a conducive environment;
3. Improve lighting elements and implement safe city elements such as CCTV;
4. Incorporate universal design elements in the provision of facilities to ensure that they are age-friendly and disabled-friendly;
5. Encourage activation of dual façades buildings through the beautification of building walls with mural art; and
6. Reactivate lanes with commercial activities such as café, kiosks and other informal activities such as art exhibitions for artists and street music bands.

Illustration of lane between buildings through upgrading of pavements and café activities.

Table 3.7.1:
Proposed Locations of Lane Improvement

Location	Inset Plan
1. Jalan Tuanku Abdul Rahman Area a. Lorong Bunus 1 and 2; and b. Lorong Jalan Tuanku Abdul Rahman.	
2. Old City Centre Area a. Lorong Petaling; b. Lorong Madras; and c. Lorong Bandar 21.	
3. Brickfields area a. Lorong Jalan Tun Sambanthan; and b. Lorong Vivekananda.	
4. Bukit Bintang Area a. Back lane at Jalan Alor; b. Side lane at Jalan Walter Garnier; and c. Side lane at Jalan Changkat Bukit Bintang.	
5. Kenanga Wholesale Area a. Back lane at Jalan Merbau; b. Side lane at Jalan Kenanga; c. Side lane or back lane at Jalan Meranti; and d. Side lane or back lane at Jalan Meranti 2.	

PLANNING STRATEGY

SP 3-8: IMPLEMENTING KUALA LUMPUR HERITAGE TRAIL

SCENARIO OF CURRENT HERITAGE TRAIL IN KUALA LUMPUR

The Heritage Trail Master Plan (HTMP) integrates areas and buildings of heritage and historical value with pedestrian routes to create a comprehensive heritage trail network.

HTMP considers aspects of heritage and implementation comprehensively including historical, cultural and natural heritage in line with the policy outlined by KLSP2040. The master plan also focuses more broadly on historical heritage resources and cultural heritage through heritage tourism activities, thereby having a positive impact on a sustainable economy.

The preparation of HTMP becomes a reference and a control mechanism in shaping the identity, character and culture in the heritage tourism area. It will enhance the visitor experience through a variety of old building designs, cultural arts, activities and community lifestyles. In addition, this master plan also focuses on the improvement of infrastructure facilities in potential heritage zones.

The implementation of the Kuala Lumpur Heritage Trail needs to take into account current issues such as the provision and maintenance of tourism-supporting facilities, increased access and accessibility, focus on Intangible Heritage, additional cultural activities and other suitable activities to attract visitors to the heritage trail area.

In order to realise Kuala Lumpur as a city that can implement a comprehensive heritage trail, three (3) Implementation Proposals are formulated under Planning Strategy 3–8, as shown in Figure 3.8.1.

BRIEF INFO

HERITAGE TRAIL ZONE OF KUALA LUMPUR

Kuala Lumpu Heritage Trail Zone

13 Zones

Total of Existing Heritage Trails

8 Trails

Number of historical areas identified related to Kuala Lumpur Heritage Zone

353 Areas

Source: Kuala Lumpur Heritage Trail Master Plan

EXISTING HERITAGE TRAILS

Heritage Trail	Trail Zone	Year Completed
Heritage Trail 1	• Independence Trail • Civic District Trail • Tin trading Town Trail	2011-2014
Heritage Trail 2	• Tin trading Town Trail • Urban Forest Trail	2011-2014
Heritage Trail 3	• Tin trading Town Trail	2011-2014
Heritage Trail 5	• Patriot's Trail	2021
Heritage Trail 6	• Urban Forest Trail	2014-2019
Heritage Trail 7	• Tin trading Town Trail	2014-2019
Heritage Trail 8	• Tin trading Town Trail	2014-2019

Figure 3.8.1:
Implementation Proposals for Planning Strategy 3-8

SP 3-8 IMPLEMENTING KUALA LUMPUR HERITAGE TRAIL

- CP 3-8.1 Conserving Heritage Sites and Buildings In Heritage Trail Zones
- CP 3-8.2 Expanding Kuala Lumpur Heritage Trail Zone
- CP 3-8.3 Empowering Intangible Heritage

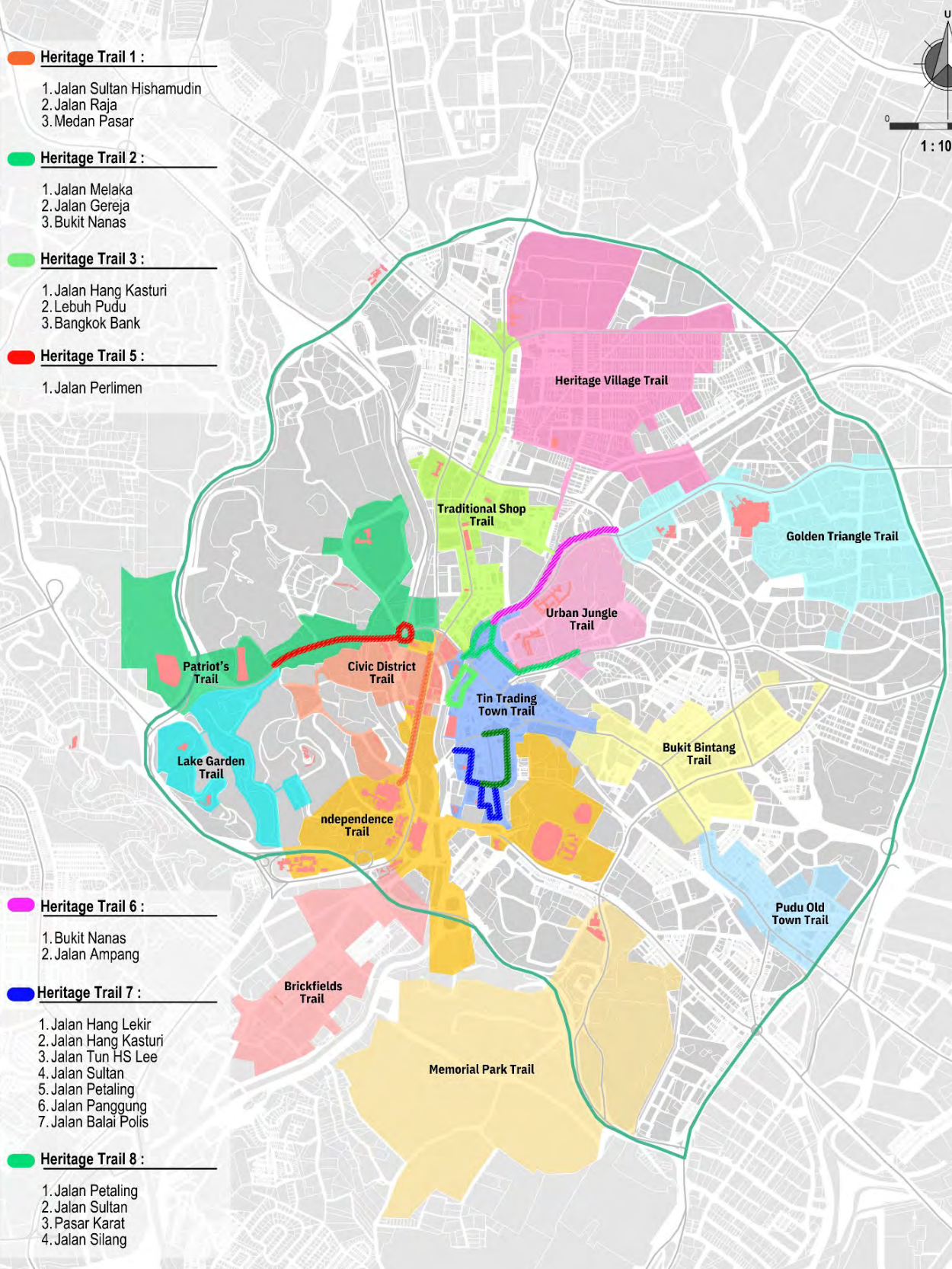


FIGURE 3.8.2 | Plan of Proposed Heritage Trail Zone and Existing Heritage Trail Routes in Kuala Lumpur

Legend:

- Heritage Village Trail
- Golden Triangle Trail
- Urban Forest Trail
- Traditional Shop Trail
- Bukit Bintang Trail
- Tin Trading Town Trail
- Patriot's Trail
- Independence Trail
- Brickfields Trail
- Memorial Park Trail
- Pudu Old Town Trail
- Civic District Trail
- Lake Garden Trail

Others

- Main Road
- Kuala Lumpur City Centre Boundary

IMPLEMENTATION PROPOSAL

CP 3-8.1: CONSERVING HERITAGE SITES AND BUILDINGS IN HERITAGE TRAIL ZONES

Conservation of Heritage Buildings is important to make its surroundings a primary node for visitors. The HTMP identifies 13 trail zones in which each trail zone has a primary node that serves as a focus area. There are 66 heritage buildings located within Kuala Lumpur's Heritage Trail Zone.

Heritage sites and buildings in all primary nodes need to be conserved in order to be passed down from one generation to another and able to attract international and local tourists.

The implementation approach of this proposal is through projects and programmes. There are four (4) initiatives proposed for the implementation of CP 3-8.1.

BRIEF INFO

HERITAGE BUILDINGS IN THE HERITAGE TRAIL ZONE OF KUALA LUMPUR

Number heritage buildings gazetted under the National Heritage Act 2005

National Heritage: 25
Heritage: 11

Number of heritage buildings in the Gazetteing Process by Department of National Heritage

3

Number of heritage buildings in Department of National Heritage Gazetteer Planning (Inventory)

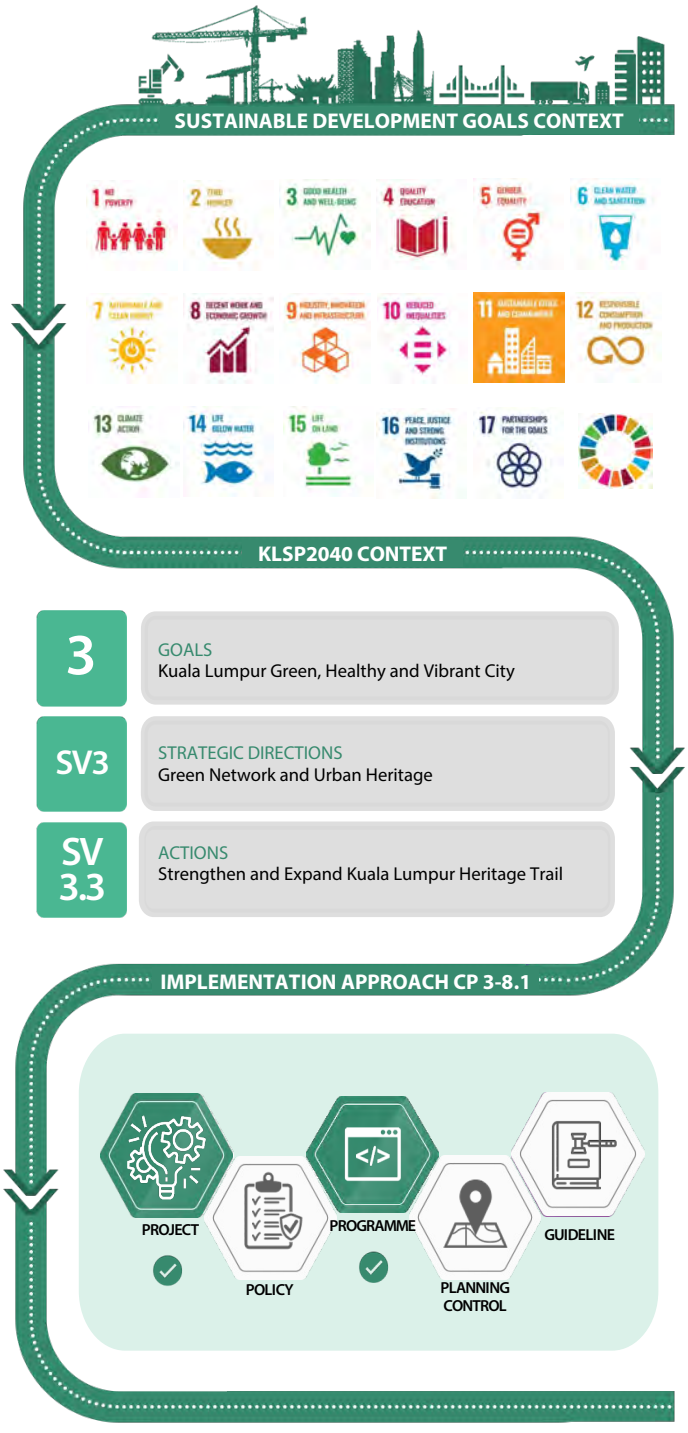
27

Total number of heritage buildings in the Heritage Trail Zone

66

Source :
1. Department of National Heritage, 2022
2. Kuala Lumpur Heritage Trail Master Plan

CP 3- 8.1 | COORDINATION CONTEXT OF SDGs AND KLSP2040



IIMPLEMENTATION INITIATIVE 3-8.1A

EMPOWER PRIMARY NODE CHARACTERISTICS OF HERITAGE TRAIL

Node is a strategic point or location in the city area that is the focus of the public. Physically important characteristics of a node are as a meeting place for people such as a road intersection and also as an enclosed square.

The primary nodes in Kuala Lumpur are such as Dataran Merdeka, Taman KLCC including the plaza area in front of the KLCC building, Masjid Jamek Kuala Lumpur, Kasturi Walk Pasar Seni, KL Sentral, Lot 10 Bukit Bintang and Pudu Sentral.

Kuala Lumpur also has small nodes as the focus for public and tourists such as Pasar Seni, Pasar Raja Bot (Chow Kit), Pasar Pudu, Dataran DBKL, Plaza Pavilion Bukit Bintang, Masjid Jamek LRT Station, Pasar Seni LRT Station, Hang Tuah LRT Station, square in front of SOGO Complex, Masjid India, Wisma Yakin and Pertama Complex.

Existing node areas are greatly influenced by the character of their surroundings, location, function and importance as well as activities in an area. The surroundings and space that make up a node must be empowered to ensure it remains a node and tourist attraction.

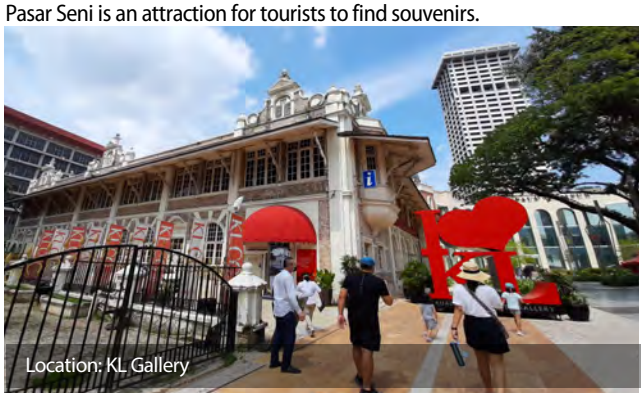
The Draft KLLP2040 has identified the primary nodes that need empowerment as follows:

1. Primary Heritage Zone - Parlimen, Carcosa Seri Negara and Taman Warisan Tun Abdul Razak;
2. Primary Heritage Zone - Dataran Merdeka, Stesen Keretapi Kuala Lumpur, Masjid Negara dan Stadium Merdeka;
3. Secondary Heritage Zone - Jalan Petaling - Bukit Nanas;
4. Secondary Heritage Zone - Pekan Sungai Besi;
5. Special Character Zone - Jalan Raja Laut and Jalan Sultan Azlan Shah (Jalan Ipoh);
6. Special Character Zone - Jalan Tuanku Abdul Rahman, Jalan Doraisamy and Jalan Dang Wangi;
7. Special Character Zone - Jalan Pudu; and
8. Special Character Zone - Brickfields.

Location of the primary nodes of Kuala Lumpur's Heritage Trail Zone as shown in Figure 3.8.3 .

Masjid Negara is a heritage status building that become the primary node for tourists and public.

Pasar Seni is an attraction for tourists to find souvenirs.

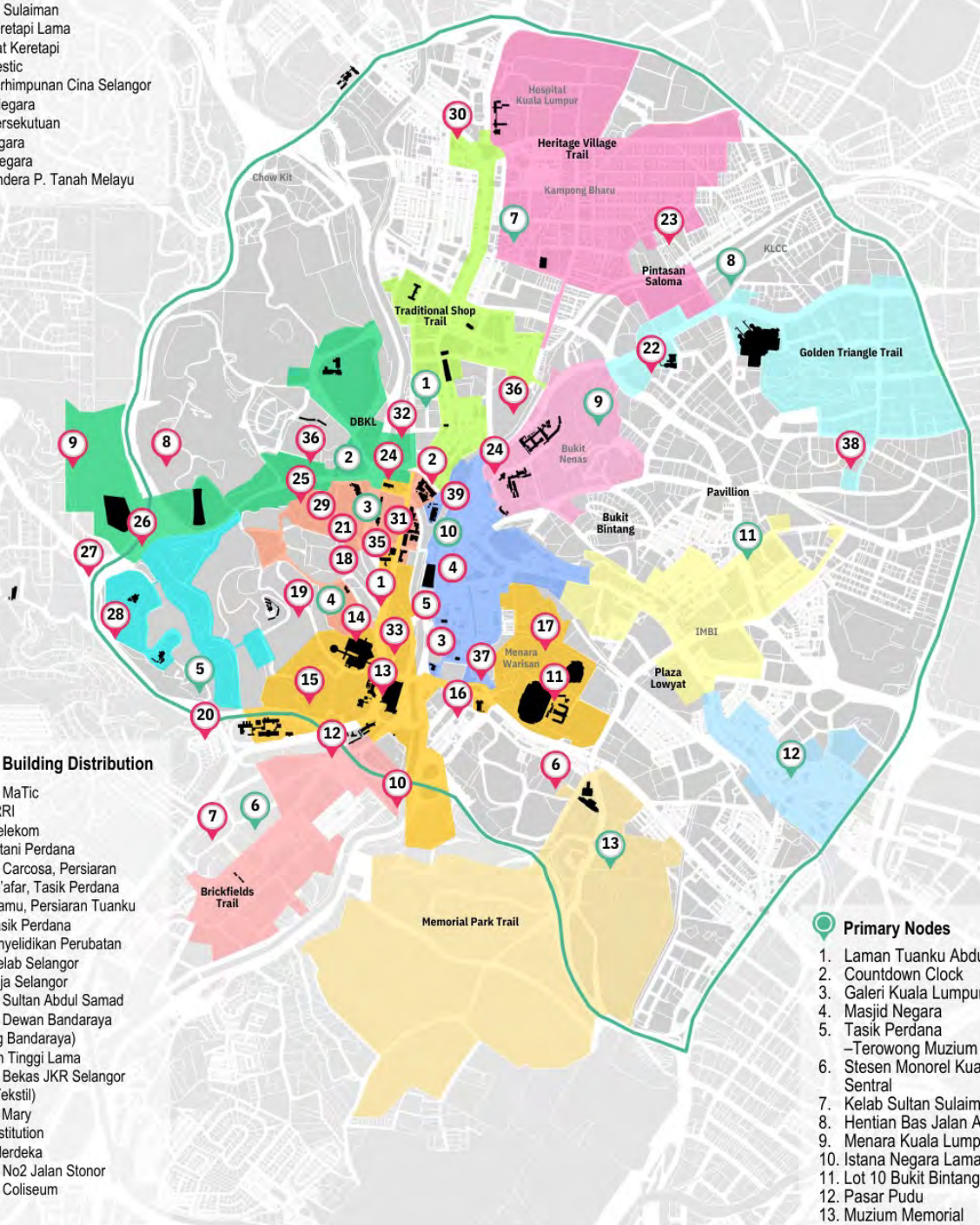


Kuala Lumpur Gallery is one of the building where information on the history of Kuala Lumpur and souvenir items can be obtained. This building is an important node for Civic District Trail.

Dataran Merdeka is a historical place as the primary and iconic node surrounded by heritage buildings in Kuala Lumpur.

Heritage Building Distribution

1. Bangunan Pejabat Pos Besar Lama
2. Masjid Jamek Sultan Abdul Samad
3. Kuil Seri Maha Mariaman
4. Tokong Sin Sze Si Ya
5. Bangunan Pasar Seni
6. Bangunan lama Dewan Bahasa dan Pustaka
7. Bangunan Vivekananda Ashrama
8. Tugu Negara
9. Bangunan Parlimen
10. Istana Negara Lama
11. Victoria Institution
12. Bangunan Sulaiman
13. Stesen Keretapi Lama
14. Ibu Pejabat Keretapi
15. Hotel Majestic
16. Dewan Perhimpunan Cina Selangor
17. Stadium Negara
18. Rumah Persekutuan
19. Masjid Negara
20. Muzium Negara
21. Tapak Bendera P. Tanah Melayu



Heritage Building Distribution

22. Bangunan MaTic
23. Kuarters RRI
24. Muzium Telekom
25. Taman Botani Perdana
26. Bangunan Carcosa, Persiaran Tuanku Ja'afar, Tasik Perdana
27. Istana Tetamu, Persiaran Tuanku Ja'afar, Tasik Perdana
28. Institut Penyelidikan Perubatan
29. Padang Kelab Selangor
30. Kelab Diraja Selangor
31. Bangunan Sultan Abdul Samad
32. Bangunan Dewan Bandaraya (Panggung Bandaraya)
33. Mahkamah Tinggi Lama
34. Bangunan Bekas JKR Selangor (Muzium Tekstil)
35. Gereja St. Mary
36. St John Institution
37. Stadium Merdeka
38. Bangunan No2 Jalan Stonor
39. Panggung Coliseum

Primary Nodes

1. Laman Tuanku Abdul Rahman
2. Countdown Clock
3. Galeri Kuala Lumpur
4. Masjid Negara
5. Tasik Perdana –Terowong Muzium Negara
6. Stesen Monorel Kuala Lumpur Sentral
7. Kelab Sultan Sulaiman
8. Hentian Bas Jalan Ampang
9. Menara Kuala Lumpur
10. Istana Negara Lama
11. Lot 10 Bukit Bintang
12. Pasar Pudu
13. Muzium Memorial

FIGURE 3.8.3 | Plan of Kuala Lumpur Heritage Building Distribution in Heritage Trail Zones

Legend :

- Heritage Village Trail
- Golden Triangle Trail
- Urban Forest Trail
- Traditional Shop Trail
- Bukit Bintang Trail
- Tin Trading Town Trail
- Patriot's Trail
- Independence Trail
- Brickfields Trail
- Memorial Park Trail
- Pudu Old Town Trail
- Civic District Trail
- Lake Garden Trail

Others

- Main Road
- Kuala Lumpur City Centre Boundary

The necessary actions to support this initiative are as follows:

1. Improve the conservation of heritage buildings by preserving the character of old buildings:
2. Enhance the image and character through the design of street furniture, materials, colours, lighting, and organising activities that reflect the character and support the heritage trail theme;
3. Improving tourism supporting facilities through the provision of street furniture in node areas and strategic locations;
4. Improve accessibility through the provision of pedestrian and micromobility vehicle routes, as well as efficient public transport services;
5. Encourage lighting elements to highlight the building façade and increase the safety of the Heritage Trail as well as old building areas at night;
6. Apply concepts and elements of a Safe City such as CCTV and security booths to overcome crime incidents especially in the hidden space between buildings; and
7. Diversify activities of primary nodes that involve the public and intangible heritage such as:
   a. Cultural and artistic, including periodical activities that can create a special character and image; and
   b. Activities that are compatible with and support the Heritage Trail area.

BEST PRACTICE

TRAFALGAR SQUARE OF LONDON

Source: pinterest.com

Trafalgar Square is a public square in Westminster in the centre of the City of London built in the early 19th century. The site around Trafalgar Square has been an important landmark since the 1200s. Since ancient times this area has served as an important landmark for the city of London. The square has been used for public gatherings and large-scale celebrations that attract millions of tourists from around the world every year.

Illustration of activities and souvenir kiosk facilities in tourist hotspots and primary nodes of the heritage trail.

IMPLEMENTATION INITIATIVE 3-8.1B

PRIORITISE HERITAGE BUILDING CONSERVATION ZONE

The Draft KLLP2040 has identified seven (7) trail zones located within the Kuala Lumpur Heritage Zone to be priority areas for the conservation of heritage buildings in Kuala Lumpur City Centre as shown in Figure 3.8.5;

1. Traditional Shop Trail Zone;
2. Urban Forest Trail Zone;
3. Independence Trail Zone;
4. Tin trading Town Trail Zone;
5. Civic District Trail Zone;
6. Patriot's Trail Zone; and
7. Lake Garden Trail Zone.

The selection of heritage building preservation zones takes into account the following aspects:

1. Distribution in the main group of historic buildings and heritage building status as shown in Table 3.8.1;
2. An important primary node area in the Heritage Trail Zone and a focal point for the public and tourists in Kuala Lumpur; and
3. Primary Heritage Zones and Secondary Heritage Zones that have high historical significance include heritage buildings and the history of the area as shown in Figure 3.8.4.

Buildings with heritage status, rows of old shop buildings in the Traditional Shops Trail Zone, Tin Trading Town Trail Zone and areas along the River of Life that have heritage significance are also given priority for conservation and beautification.

BRIEF INFO

PRIORITY ZONE OF HERITAGE CONSERVATION

Kuala Lumpur Heritage Trail Zone

13 Zones

39 Heritage Buildings

Heritage Trail Zone in the Kuala Lumpur Heritage Zone

7 Zones

33 Heritage Buildings

Figure 3.8.4:
Kuala Lumpur Heritage Zone

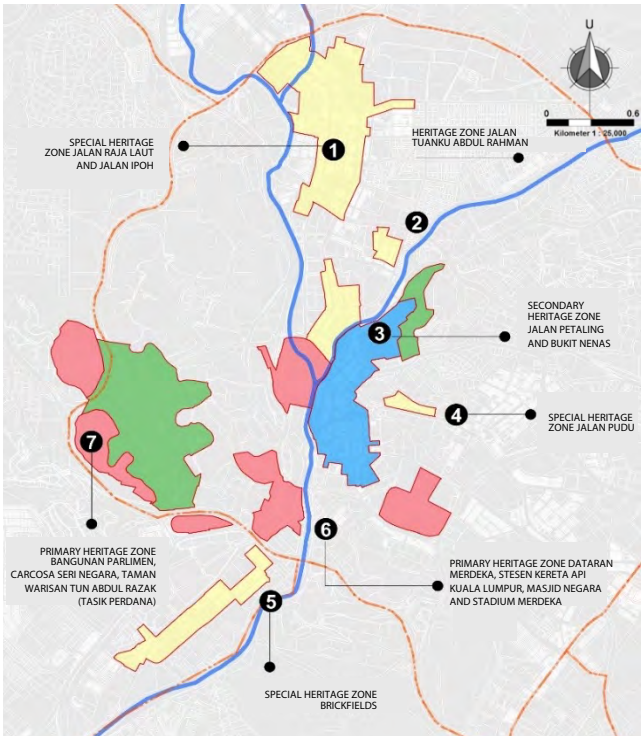


Figure 3.8.5:
Draft KLLP2040 Heritage Trail Zone Priority Area

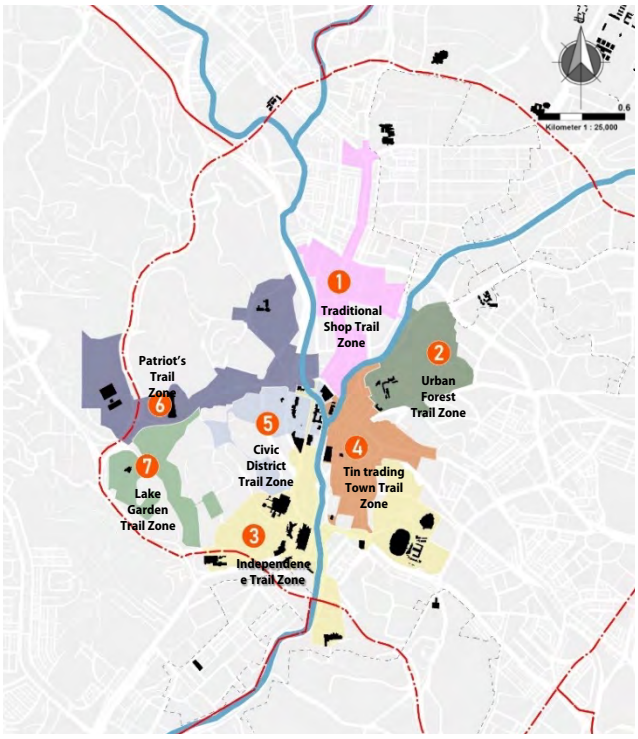


Table 3.8.1:
List of Heritage Buildings in Kuala Lumpur Heritage Trail

Heritage Trail Zone	List of Heritage Buildings	Gazette Status
Kuala Lumpur Heritage Zone		
1. Traditional Shop Trail	1. Coliseum Theater, Jalan Tuanku Abdul Rahman	Gazetteing Process
2. Urban Forest Trail	2. St John's Institution Building, Jalan Bukit Nanas 3. Telekom Museum, Jalan Raja Chulan	National Heritage Heritage
3. Independence Trail	4. Old National Palace Building (Royal Museum) 5. Sulaiman Building, Jalan Sultan Hishamuddin 6. Old Railway Station Building, Jalan Sultan Hishamuddin 7. Railway Headquarters Building, Jalan Sultan Hishamuddin 8. Majestic Hotel, Jalan Sultan Hishamuddin 9. Selangor Chinese Assembly Hall 10. National Mosque, Jalan Perdana 11. National Museum, Jalan Damansara 12. Federation of Malaya Flag Waving Site 13. Victoria Institution, Jalan Hang Tuah 14. Merdeka Stadium, Jalan Stadium 15. Federal House, Jalan Sultan Hishamuddin 16. National Stadium, Jalan Stadium	National Heritage National Heritage National Heritage National Heritage National Heritage National Heritage National Heritage National Heritage National Heritage National Heritage National Heritage Heritage Heritage
4. Tin Trading Town Trail	17. Sultan Abdul Samad Jamek Mosque, Jalan Tun Perak 18. Sin Sze Si Ya Temple, Jalan Tun H.S Lee 19. Pasar Seni, Jalan Hang Kasturi 20. Sri Maha Mariaman Temple, Jalan Bandar	Heritage Heritage Heritage Gazetteing Process
5. Civic District Trail	21. Sultan Abdul Samad Building, Jalan Raja 22. Dewan Bandaraya Building, Jalan Raja 23. General Post Office Building (former), Jalan Raja 24. Old High Court Buildin, Jalan Raja 25. Selangor JKR Former Building (Textile Museum) Jalan Sultan Hishamuddin 26. St. Mary Church, Jalan Raja 27. Padang Kelab Selangor,(Dataran Merdeka) 28. Kelab Diraja Selangor, Jalan Raja	National Heritage National Heritage National Heritage National Heritage National Heritage National Heritage National Heritage
6. Patriot's Trail	29. National Monument, Jalan Parlimen 30. Parliament Building, Jalan Parlimen	National Heritage National Heritage
7. Lake Garden Trail	31. Perdana Botanical Garden, Jalan Kebun Bunga 32. Carcosa Building, Tuanku Ja'afar Parade, Tasik Perdana 33. Istana Tetamu (Guest Palace), Persiaran Tuanku Ja'afar, Tasik Perdana	National Heritage National Heritage Heritage
Outside Kuala Lumpur Heritage Zone		
8. Bukit Bintang Trail	None	
9. Memorial Park Trail	34. Old Building of Dewan Bahasa dan Pustaka, Jalan Dewan Bahasa	National Heritage
10. Brickfields Trail	35. Vivekananda Ashrama Building, Jalan Tun Sambanthan,	Heritage
11. Golden Triangle Trail	36. Dewan Tunku Abdul Rahman (MATIC), Jalan Ampang 37. Rubber Research Institute of Malaysia Building, Jalan Ampang 38. Building No.2 Jalan Stonor (Badan Warisan),	National Heritage National Heritage Gazetteing Process
12. Heritage Village Trail	39. Institute of Medical Research Building, Jalan Pahang	Heritage
13. Pudu Old Town Trail	None	

Source: Department of National Heritage, 2022

The necessary actions to support this initiative at the heritage trail zone are as follows:

1. Improve tourism-supporting facilities such as street furniture, identification signs and place markers (entry statement), information boards, and digital explanatory maps along the heritage trail;
2. Diversify activities that involve the public and intangible heritage activities such as place-making activities, religious activities, and celebration of multi-racial festivals as shown in Table 3.8.2 and informal business activities such as night markets and open bazaars as shown in Table 3.8.3;
3. Encourage new sources and potential of heritage that become tourist attractions such as historical galleries, mural paintings, nature, old historical buildings, art events, and cultural performances, local or traditional food and open market activities as shown in Tables 3.3.4 to Table 3.8.8.
4. Preserve and conserve heritage buildings taking into account the original history of buildings in the attraction area;
5. Enhance the image and character through the design of street furniture, materials, colours, lighting, and organising activities that reflect the character and support the heritage trail theme;
6. Improve accessibility through the pedestrian and micromobility vehicle routes , as well as efficient public transport services as shown in Table 3.8.9;
7. Encourage lighting elements to highlight the design of building facades and as a safety element on the Heritage Trail and old building areas at night;
8. Apply the concept and elements of a Safe City such as providing CCTV, security booths, and lighting elements;
9. Designing pedestrian and micromobility vehicle routes with traffic calming elements especially in areas with a high frequency of pedestrian users as shown in Table 3.8.10; and
10. Ensure the continuous maintenance of the environment and the provision of an attractive landscape.

Table 3.8.2:
Proposed Locations of Religious Activities for Various Races

Proposed Locations or Activities
a. Muslim Religious Activities: Masjid Negara, Masjid Jamek Sultan Abdul Samad, Masjid India and Masjid Kampong Bharu as;
b. Buddhist Religious Activities: Kwong Tong Chinese Cemetery and Sin Sze Si Ya Temple; and
c. Hindu Religious Activities: Little India, Brickfields.

Table 3.8.3:
Proposed Locations of Night Market and Open Bazaar Activities

Proposed Locations or Activities
a. Jalan Raja Uda and Raja Bot;
b. Jalan Petaling, Jalan Hang Kasturi and Jalan Panggung;
c. Jalan Tuanku Abdul Rahman; and
d. Jalan Melayu and Jalan Masjid India.

Table 3.8.4:
Proposed Locations of Mini Gallery

Proposed Locations or Activities
a. Independence History Collection Exhibition; near Countdown Clock; and
b. The early history exhibition of Kampong Bharu at Padang Kelab Sultan Sulaiman.

Table 3.8.5:
Proposed Location of Old Buildings for Focus Activities and Tourist

Proposed Locations or Activities
a. Bangunan Wisma Yakin, Selangor Mansion and KL Mansion;
b. Bangunan Carcosa and Istana Tetamu; and
c. Bangunan Pejabat Agama Islam wilayah Persekutuan, Bangunan Jabatan Penerangan Blok D, Bangunan bekas Mahkamah Tinggi Blok C and Bangunan Auditorium Bandaraya.

Table 3.8.6:
Proposed Locations of International Arts and Cultural Performances

Proposed Locations or Activities
a. Auditorium Dewan Bandaraya Kuala Lumpur;
b. Panggung Aniversari, Taman Tasik Perdana; and
c. Bangunan Sultan Abdul Samad.

Table 3.8.7:
Proposed Locations of Local and Tradition Food Attraction

Proposed Locations or Activities
a. Medan Ikan Bakar at Jalan Bellamy;
b. Street Food at Jalan Petaling and Jalan Panggung;
c. Street Food at Jalan Alor and Changkat Bukit Bintang;
d. Traditional Malay food on Jalan Raja Alang - Raja Muda Musa - Raja Abdullah in Kampong Bharu;
e. Traditional Indian food in the Little India area, Brickfields; and
f. India Muslim food along Jalan Tuanku Abdul Rahman and Jalan Masjid India.

Table 3.8.8:
Proposed Locations of Planned Open Market Activities

Proposed Locations
a. Jalan Pasar, Pudu; and
b. Pasar Raja Bot.

Table 3.8.9:
Proposed Locations of Visitor-Friendly Pedestrian Routes

Proposed Locations
a. Jalan Bukit Bintang - Persimpangan Jalan Imbi - Jalan Pudu - Jalan Sultan Ismail;
b. Jalan Pasar, Pudu;
c. Jalan Dr Latif - Lorong Angkut – Jalan Utama Hospital (from Jalan Raja Muda Stadium towards Hospital Kuala Lumpur; dan
d. Jalan Gereja - Jalan Ampang to Bukit Nanas.

Table 3.8.10:
Proposed Location of Pedestrian Crossings

Proposed Locations
a. In front of Kuala Lumpur KTM Station;
b. Jalan Tuanku Abdul Rahman - Jalan Masjid India - Chow Kit - Jalan Dang Wangi;
c. Kampong Bharu - Masjid Jamek Kampong Bharu - Gerbang Kampong Bharu - Kelab Sultan Sulaiman;
d. Jalan Tun Perak - Jalan Benteng - Medan Pasar - Jalan Hang Lekir; and
e. LRT line Hang Tuah - LRT line Pudu.

BEST PRACTICE

PORTOBELO MARKET OF LONDON

Portobelo Market is located in the famous Notting Hill area of London and is the location of the most iconic and famous outdoor market area in the world. The variety of daily activities and its multi-cultural image make this area a must visit destination for tourists to the City of London.

IMPLEMENTATION INITIATIVE 3-8.1C

ENHANCE POTENTIAL OF RIVER AND OLD BUILDINGS IN THE HERITAGE ZONE

Sungai Gombak and Sungai Klang are the two (2) main rivers where the confluence of the rivers meets in which the early history of Kuala Lumpur began.

The buildings located around the area and along the rivers have a variety of architectural patterns and styles that are capable of enhancing the potential and identity of Kuala Lumpur's urban form. The initiative to make the river and historical heritage as the backbone of the formation of Kuala Lumpur's identity is necessary are as follows:

1. Create a sense of place at the river area and its surroundings;
2. Create visual connections as well as pathways between river areas and to adjacent heritage trail sites; and
3. Create the river as a public space that acts as a dominant pedestrian link in the heritage trail area.

River of Life (RoL) Development is an important link to the Kuala Lumpur Heritage Trail where Kuala Lumpur's early history began. Activities related to heritage tourism in this area need to be revived and considered as potential for tourists main attraction to Kuala Lumpur.

BRIEF INFO

HERITAGE TRAIL ZONE OF KUALA LUMPUR

Existing Heritage Trail Zones located within the RoL Development

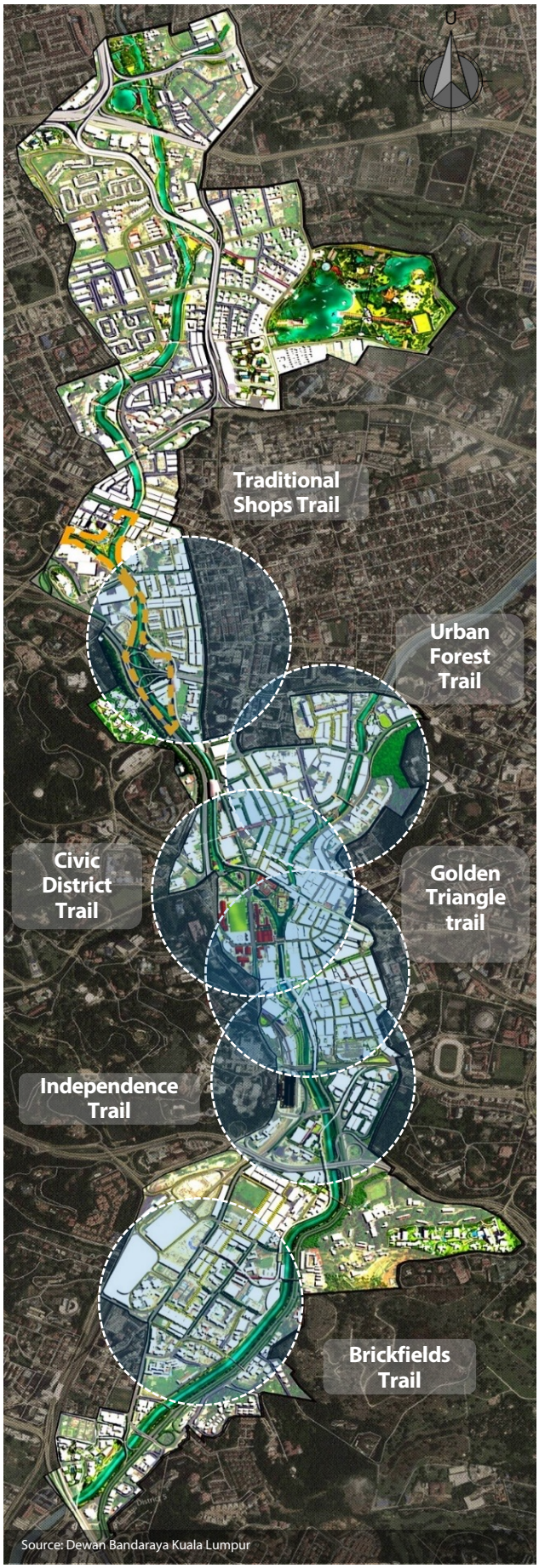
6 Trail Zones

- Traditional Shops Trail
- Urban Forest Trail
- Civic District Trail
- Golden Triangle trail
- Independence Trail
- Brickfields Trail

Number of old buildings in this area

146 Old Buildings

Figure 3.8.6:
River of Life (RoL) Development Master Plan



Source: Dewan Bandaraya Kuala Lumpur

The Draft KLLP2040 has identified 146 old buildings along the RoL development as the potential for heritage tourism attractions and most of them are located within the Kuala Lumpur Heritage Zone.

The necessary actions to support this initiative are as follows:

1. Preserve and conserve heritage buildings such as building facades by taking into account the history and appearance of the original form of the building;
2. Encourage various activities to revitalise old buildings and riverside areas such as cultural and artistic activities and business activities;
3. Encourage lighting elements to highlight the design of the building facade as well as as a safety element in old building areas at night;
4. Improve accessibility through pedestrian and micromobility vehicle routes, as well as efficient public transport services;
5. Improve tourism-supporting facilities such as street furniture, identification signs and place markers (entry statement), information boards, and digital information maps along the heritage trail;
6. Enhance image and character through landscape design, street furniture, materials, colour, lighting, and organising activities that reflect the character and support the heritage trail theme; and
7. Control new development height from obstructing views toward heritage buildings.

A cluster of heritage buildings along the River of Life development.

Heritage buildings along the development of the River of Life must be maintained as main focus for tourists.

IMPLEMENTATION INITIATIVE 3-8.1D

DEVELOP WEB-BASE HERITAGE TOURISM GIS ORIENTATION AND DIGITAL APPLICATION

The development of a GIS database with a heritage tourism orientation is one of the alternatives for the empowerment of heritage tourism in Kuala Lumpur.

A dedicated website is an important promotional platform for more formal, up-to-date and efficient information sharing as well as as a reference platform for the implementation of Kuala Lumpur Heritage Trail. This can be implemented by development of a GIS Web-based with a heritage tourism orientation that is aimed at promoting heritage tourism in Kuala Lumpur. This action has been widely implemented in many countries and has attracted millions of tourists worldwide.

Production of a digital application that contains information about the heritage trail also needs to be implemented. Users of this application will get detailed information in terms of location, travel distance, and various other interesting additional information.

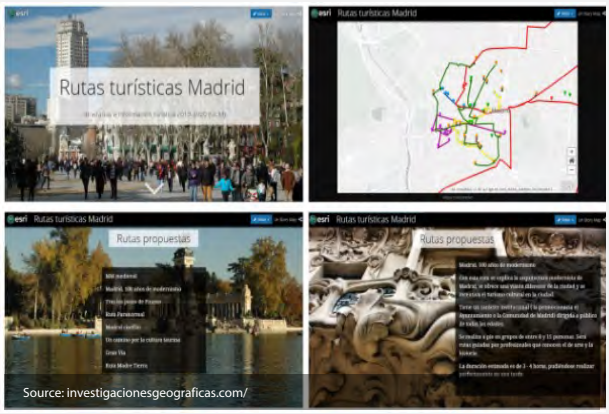
Internet surfers will be taken to see each heritage trail area in a fly-through video and get a real picture of heritage tourism and Kuala Lumpur Heritage Trail more closely. The contents of the website should include the following details as follows:

1. Complete information on each Heritage Trail;
2. Schedule of events or annual calendar;
3. Location map and trail;
4. Virtual tour of the Heritage Trail area;
5. Itinerary of activities offered (e-brochure);
6. Communication platform between industry players; and
7. Audio download facility for each storyboard in the Heritage Trail area.

Figure 3.8.7:
GIS Web-base Development Model With Heritage Tourism Orientation

BEST PRACTICE

WEB-BASE GIS WITH HERITAGE TOURISM ORIENTATION OF SPAIN



The use of Web-base GIS with tourism heritage orientation has helped a lot in promoting tourism in Madrid, Spain.

IMPLEMENTATION PROPOSAL

CP 3-8.2: EXPANDING KUALA LUMPUR HERITAGE TRAIL ZONE

The proposed expansion of the Heritage Trail Zone focuses on interesting places of heritage value including tangible and intangible heritage such as traditional villages, nature, historical sites, and cultural arts activities. The aims of expanding the zone are as follows:

1. **Expand the potential of existing heritage tourism resources**

   Value added to existing heritage tourism products;

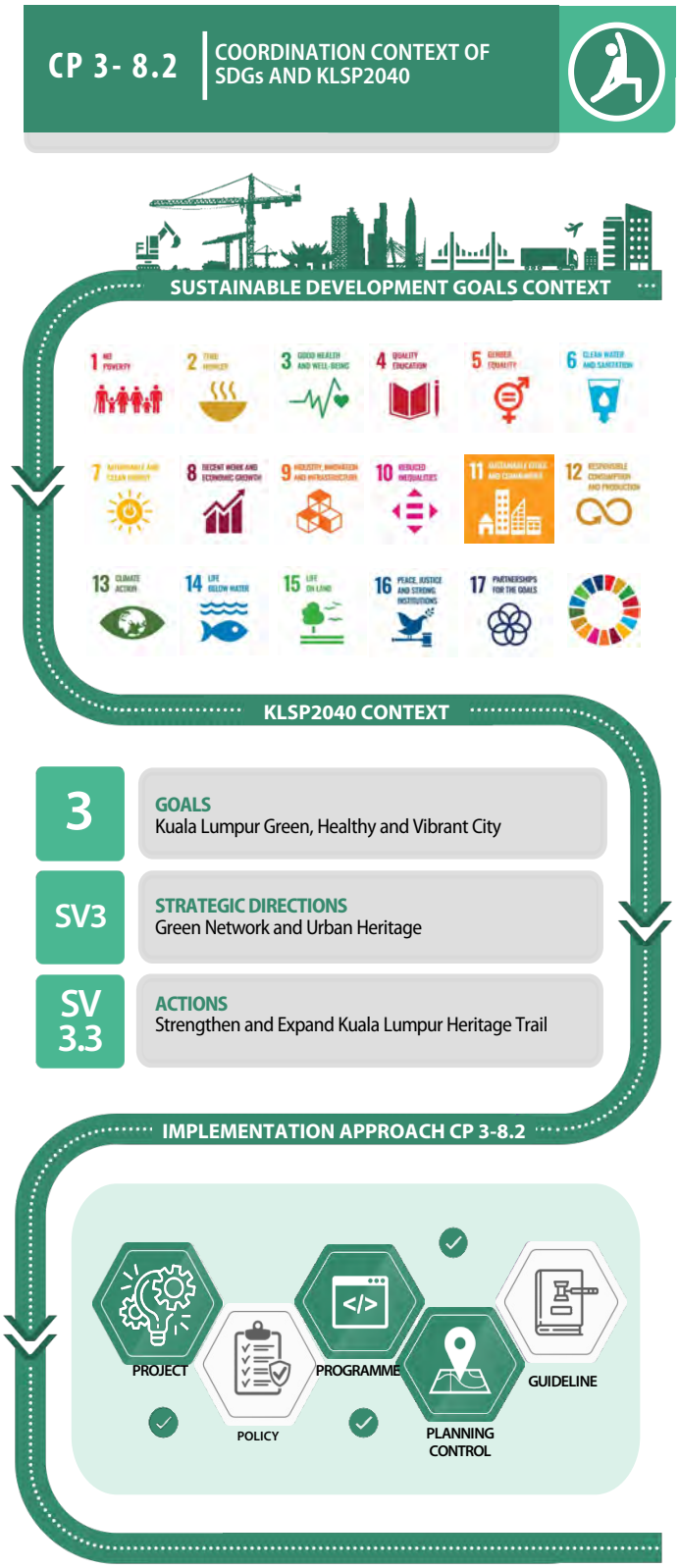
2. **Increase economic opportunities based on historical and cultural heritage**

   Economic benefits through community involvement in the heritage tourism sector such as homestay programmes, traditional products, and cultural arts performances; and

3. **Improve existing tourism infrastructure**

   Provision of tourism infrastructures such as accessibility and other supporting facilities that encourage new heritage tourism activities.

The implementation approach of this proposal is through projects, programmes and planning controls. One (1) initiative is proposed for the implementation of CP 3-8.2.



IMPLEMENTATION INITIATIVE 3-8.2A

IDENTIFY NEW HERITAGE TRAIL ZONES

Planning and proposal of Heritage Trail Zones must take into account the potential of the buildings and sites listed in the Department of National Heritage's inventory including their importance to Kuala Lumpur's heritage.

Eight (8) specific criteria are considered to determine the appropriate components and elements in the Kuala Lumpur Heritage Trail as shown in Table 3.8.11.

The Draft KLLP2040 has identified the proposed new Heritage Trail Zone, an extension to the existing Heritage Trail Master Plan (HTMP), and key landmarks based on Heritage Trail Area evaluation criteria as follows:

1. Proposed Heritage Site Landmarks:
   a. Sungai Besi Old Airport.
2. Proposed New Heritage Trail:
   a. City Heritage Forest Trail (Bukit Persekutuan);
   b. Traditional Shop Trail Extension;
   c. Istana Budaya Trail; and
   d. Gombak Malay Traditional Village Trail.
3. Proposed Linking a New Heritage Trail Network.

Table 3.8.11:
Heritage Trail Area Evaluation Criteria

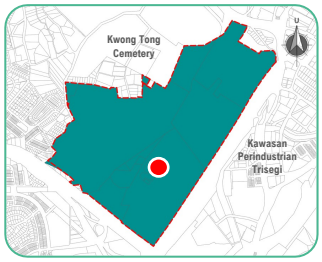
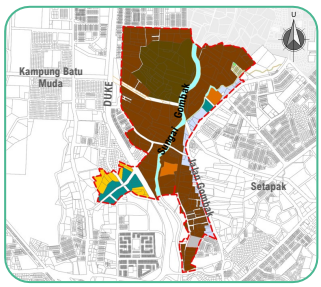
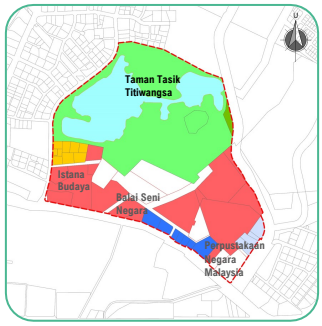
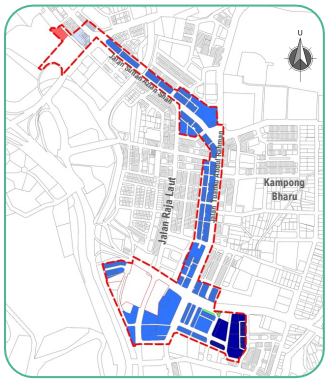
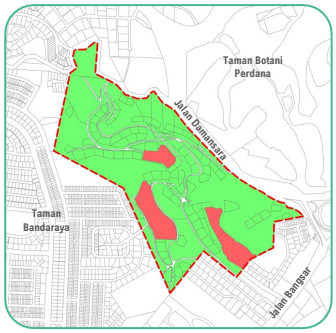
SPECIFIC CRITERIA
CRITERIA 1 Reflect the appearance of the original form or culture or the early history of Kuala Lumpur.
CRITERIA 2 Showcase distinctive and unique features and achievements of architecture, technology, art and landscape in the context of Kuala Lumpur's history.
CRITERIA 3 Landmark that represents a stage in the history of the growth of Kuala Lumpur.
CRITERIA 4 Relate to important events in the history of Kuala Lumpur or the formation of Malaysia.
CRITERIA 5 Connect with figures, individuals, groups or organizations that have played an important role in the history of the formation of Kuala Lumpur or the country.
CRITERIA 6 Involve traditional activities, art, food, culture, religion, and spirituality that are still permanent and are becoming extinct.
CRITERIA 7 Portray elements of landscape or natural greenery that are special to Kuala Lumpur compared to other areas.
CRITERIA 8 Potential as a focal point of learning and enlightenment such as museums and galleries.

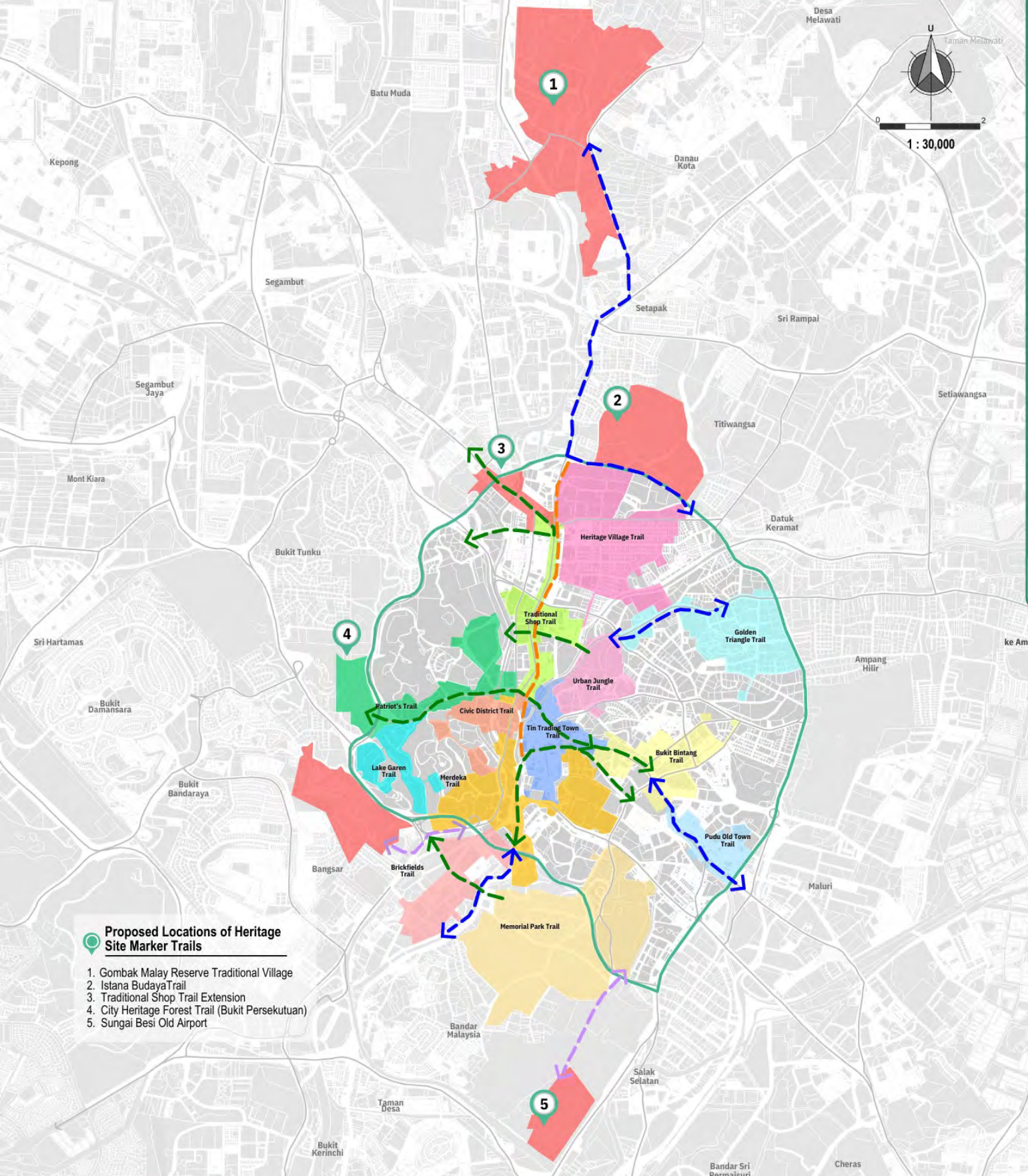
Kuala Lumpur City Hall is very committed to promoting Kuala Lumpur Heritage Trail and developing heritage trail areas in potential areas.

The necessary actions to support this initiative are as follows:

1. Preserve and conserve heritage elements such as traditional houses by taking into account the history and appearance of the original form of the building;
2. Enhance the image and character through landscape design, street furniture, materials, and colors that support the heritage trail theme;
3. Encourage various activities to create a vibrant environment such as accommodation, business, recreation, education, and activities related to culture and art;
4. Ensure harmonious new development around the Heritage Trail Zone to avoid shadowing effects on heritage buildings;
5. Provide tourism supporting facilities such as information centres, street furniture, gates, identification signs and place markers (entry statement), information boards, and digital information maps;
6. Improve accessibility through pedestrian and micromobility vehicle routes that meet age-friendly and disable-friendly standards, efficient as well as safe;
7. Apply concept and elements of a Safe City such as providing CCTV, security booths and lighting elements; and
8. Encourage lighting elements to highlight the design of the building façade as well as a safety element.

Table 3.8.12:
Proposed Locations of Heritage Site Marker Trails

Location	Inset Plan
1. Sungai Besi Old Airport	
2. Gombak Malay Reserve Traditional Village	
3. Istana Budaya Trail	
4. Extension of the Traditional Shop Trail	
5. City Heritage Forest Trail (Bukit Persekutuan)	



Proposed Locations of Heritage Site Marker Trails

1. Gombak Malay Reserve Traditional Village
2. Istana BudayaTrail
3. Traditional Shop Trail Extension
4. City Heritage Forest Trail (Bukit Persekutuan)
5. Sungai Besi Old Airport

FIGURE 3.8.8 | Plan of The Expansion Kuala Lumpur Heritage Trail Zone

Legend :

- Heritage Village Trail
- Golden Triangle Trail
- Urban Forest Trail
- Traditional Shop Trail
- Bukit Bintang Trail
- Tin Trading Town Trail
- Patriot's Trail
- Independence Trail
- Brickfields Trail
- Memorial Park Trail
- Pudu Old Town Trail
- Civic District Trail
- Lake Garden Trail
- Public Transportation Route
- Main Connecting Route (RoL)
- Pedestrian Route
- Pedestrian Walkway and Micromobility Vehicle

Others

- Main Road
- Kuala Lumpur City Centre Boundary

IMPLEMENTATION PROPOSAL

CP 3-8.3: EMPOWERING INTANGIBLE HERITAGE

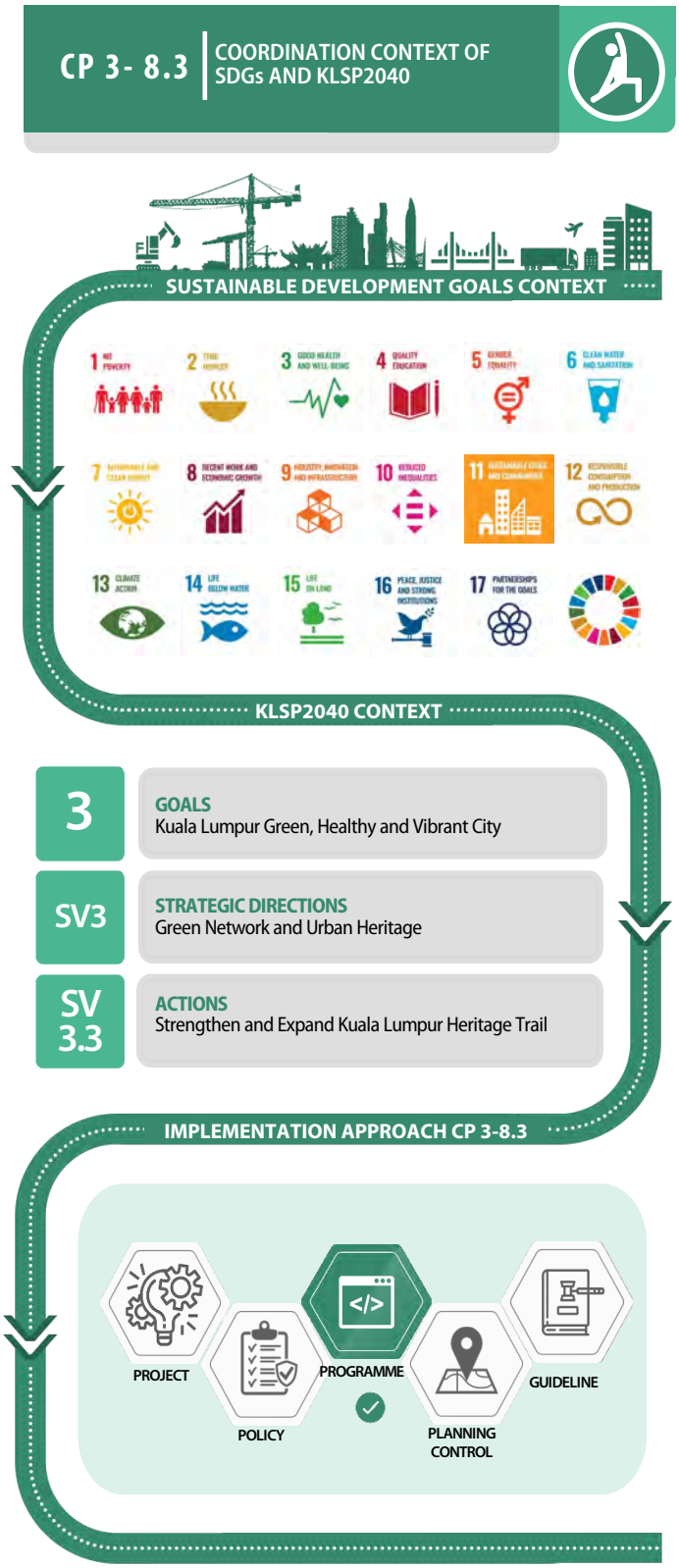
Intangible Heritage can be interpreted as heritage and cultural values such as knowledge and expertise interpreted through oral tradition, customary and cultural values as well as language and literature.

The uniqueness of Malaysia is through the diversity of races and ethnic that practice different ways of life, customs and beliefs which are interesting to preserve. The unique culture is an intangible heritage and can be an attraction for foreign tourists to this country.

Department of National Heritage has prepared a Conservation Management Plan in 2017 to protect the authenticity of all intangible heritage. The Conservation Management Plan has identified 331 intangible heritage such as fashion, food and performing arts including the customs and culture of the Malaysian community. The intangible heritage has been gazetted under the National Heritage Act 2005. This management plan is important to ensure that the country's original heritage can be maintained even if it has been mixed or assimilated with other cultures and places.

Empowering intangible heritage aims to preserve and secure the identity of the Malaysian community. It also can revive the art and cultural heritage that is increasingly being eroded among the younger generation. Intangible heritage has the potential to attract more foreign tourists to the country to experience local culture and heritage.

The implementation approach of this proposal is through programmes. One (1) initiative is proposed for the implementation of CP 3-8.3.



IMPLEMENTATION INITIATIVE 3-8.3A

EMPOWER THE POTENTIAL OF EXISTING INTANGIBLE HERITAGE

Intangible heritage covers various aspects of society's culture and traditions that are less highlighted. Intangible heritage is also always an attraction for tourists and has the potential to contribute towards sustainable development.

Activities that have the potential and ability to attract international and local tourists are such as the celebration of multi-ethnic festivals, performing arts, traditional skills, and local food. The arts, culture, customs and traditional skills of various races are intangible heritage privileges that can shape the image and character of local races and communities.

The Draft KLLP2040 has identified five (5) main categories as shown in Figure 3.8.9 to be empowered as intangible heritage, as follows:

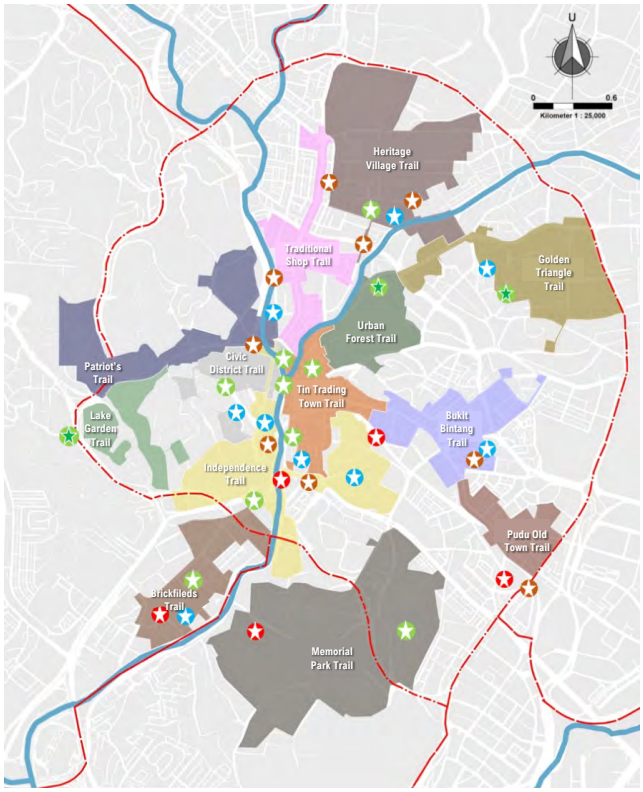
1. Religion and culture;
2. Traditional food and drinks;
3. Traditional skills;
4. Local activities such as business, night market, open market, Ramadhan bazaar and others; and
5. Nature and landscape.

The necessary actions to support this initiative are as follows:

1. Preserve main components of intangible heritage which include religious and cultural activities, traditional food and drinks, traditional skills, local activities and nature, and landscape;
2. Identify new intangible heritage through research and documentation by collaborating with relevant agencies;
3. Promote intangible heritage as a component of the Heritage Trail through various activities, programmes and heritage tourism packages;
4. Increase awareness of the preservation of intangible heritage through appropriate outreach programmes to educate the public about the importance of national culture and heritage; and
5. Provide tourism-supporting facilities such as information centres, street furniture, gates, identification signs and place markers (entry statements), information boards, and digital information maps.

Major categories and proposed locations of intangible heritage in the Heritage Trail Zone of Kuala Lumpur are as shown in Table 3.8.13.

Figure 3.8.9:
Distribution of Intangible Heritage



LEGEND:

- Religion and culture;
- Traditional food and drinks;
- Traditional skills;
- Local activities such as business, night market, open market. Ramadhan bazaar and others; and
- Nature and landscape.

Source: Adapted from Kuala Lumpur Heritage Trail Master Plan

The gotong-royong programme of stirring dodol is a traditional event leading up to Hari Raya Aidilfitri.

Table 3.8.13:
Major Categories and Proposed Locations of Intangible Heritage in the Heritage Trail Zone

Heritage Trail Zone	Main Categories and Suggested Locations of Intangible Heritage
1. Traditional Shop Trail	• Religious activities of Muslims and Indian Muslims: Masjid Indian; • Performance of street artists: Jalan Tuanku Abdul Rahman; • Arts and crafts: Jalan Tuanku Abdul Rahman and Jalan Masjid India; • Night market and street bazaar activities: Jalan Tuanku Abdul Rahman and Jalan Masjid India; and • Local traditional food at Jalan Tuanku Abdul Rahman Hawker Centre and Kudu Restaurant at Jalan Tuanku Abdul Rahman.
2. Urban Forest Trail	• Religion and Culture: Presbyterian Church; and • Nature and Landscape: Taman Eko Rimba Bukit Nanas
3. Independence Trail	• Religious activities for Muslims: Masjid Negara; • Large-scale and international cultural and artistic performances: Stadium Negara; • Historical heritage, culture and customs: Muzium Negara; and • Traditional and local food: Nasi Lemak Tanglin, Jalan Cenderasari.
4. Tin Trading Town Trail	• Religion and Culture: Masjid Jamek Sultan Abdul Samad, Sin Sze Ya Temple and Sri Maha Mariammam Temple; • Local Activities: Medan Pasar, Jalan Tuanku Abdul Rahman, Jalan Petaling and Jalan Panggung; and • Traditional Food and Drinks: Open bazaar activities and local food at Kasturi Walk, Jalan Petaling, Jalan Hang Lekir, Jalan Sultan and Jalan Panggung.
5. Civic District Trail	• Culture, arts or theater arts: Auditorium Bandaraya and Panggung Bandaraya; and • Cultural and artistic performances at Dataran Merdeka and Jalan Raja.
6. Patriot's Trail	• Religion and Culture: Auditorium Bandaraya, Panggung Bandaraya and Dataran Merdeka.
7. Lake Garden Trail	• Nature and Landscape: Taman Botani Perdana • Religion and Culture: Panggung Anniversari
8. Bukit Bintang Trail	• Local Activities: Jalan Bukit Bintang; and • Traditional Food and Drink: Jalan Alor and Changkat Bukit Bintang.
9. Memorial Park Trail	• Religion and Culture: Kwang Tung Memorial Museum; and • Local Activities: Traditional Sports; and
10. Brickfileds Trail	• Religion and Culture: Followers of Buddhism and Hinduism; and • Traditional Food and Drinks: Little India on Jalan Tun Sambanthan
11. Golden Triangle Trail	• Religion and Culture: Malaysia Tourism Information Centre (MaTic) and Petronas Phiharmonic Hall.
12. Heritage Village Trail	• Traditional Food: Masjid Kampong Bharu (lambuk porridge), Jalan Raja Alang, Jalan Raja Abdullah and Jalan Raja Muda Musa; • Local Activities: Jalan Raja Uda and Raja Bot Night Market; and • Religion and Culture: Masjid Jamek Kampong Bharu and Masjid Pakistan.
13. Pudu Old Town Trail	• Local Activities: Open market at Jalan Pasar Baharu and Jalan Landak; and • Traditional Food and Drinks: Sek Yuen Restaurant, Jalan Pudu, Sin Hiap Kee Restaurant in Brunei Arch.

PLANNING STRATEGY

SP 3-9: STRENGTHENING GREEN GOVERNANCE

SCENARIO OF CURRENT GREEN GOVERNANCE IN KUALA LUMPUR

Environmentally friendly development or sustainable development is often used in a country's green development process. This is due to increased awareness among society of the importance of a balance between the development process and environmental protection.

Systematic and effective planning must be applied to guarantee a conducive environment. Development without clear goals, ad-hoc and territorial affects the potential of the environment and the use of existing resources. This shortcoming also has a negative impact on the connectivity between urban growth centres which are part of the thrust to build Kuala Lumpur's image and identity.

Strengthening of the main image and character of an area can be achieved through landscape elements. An attractive urban green environment can highlight and improve the image quality of the area's environment. A quality urban green environment is also important and linked to liveable townships and cities.

Cultivating effective governance with best management practices is important as the driving force behind any development to create a sustainable, quality and safe green environment in Kuala Lumpur. Such governance needs to evolve and keep up with the times, the latest policies and guidelines and consider the latest technological developments.

In order to realise Kuala Lumpur as a city that can improve the green governance, two (2) Implementation Proposals are formulated under Planning Strategy 3–9, as shown in Figure 3.9.1.

BRIEF INFO

CHARACTERISTICS OF GOOD URBAN GOVERNANCE

1. Based on religious principles;
2. Honesty and sincerity;
3. Teamwork;
4. Wisdom and vision;
5. Stakeholder oriented;
6. Responsibility
7. Knowledgeable and good at communicating;
8. Responsiveness;
9. Equality and inclusiveness;
10. Effectiveness and efficiency;
11. Compliance with the law; and
12. Integrity and transparency.

Source: National Urbanisation Policy 2 (DPN2)

BRIEF INFO

MASTER PLAN FOR A LOW-CARBON SOCIETY KUALA LUMPUR 2030 (MPLCS KL 2030)

This report targets Kuala Lumpur as a sustainable world-class city by 2030 that emphasises a healthy, creative, knowledgeable, and inclusive society.

The relevant action is **Action 10 - Green City Governance** which includes the following:

10.1 Creating understanding

10.2 Collaboration with communities and non-governmental organizations (NGOs)

Source: Kuala Lumpur Low-Carbon Society Master Plan 2030 (PIMRK KL 2030)

Figure 3.9.1:
Implementation Proposals for Planning Strategy 3-9

IMPLEMENTATION PROPOSAL

CP 3-9.1: MANAGING SYSTEMATIC PARK

Awareness is increasing among society on the importance of a balance between the development process and environmental protection. This is a good opportunity to involve all parties in more systematic park management.

Development that is not well planned and ignores aspects of effective park management will create an unattractive and unconducive environment. Effective park management is also important to create a harmonious and comfortable urban environment.

The main things that must be attended to the park management system are management organisation, facilities provided, maintenance, design, security and financial resources.

The implementation approach of this proposal is through a programme. There are two (2) initiatives proposed for the implementation of CP 3-9.2.

Figure 3.9.2:
Public Trust Fund for Parks and Green Areas in the Context of PSKL2040

Project management

- Implementation of project monitoring of the park connector network; and
- Trail and Adopt-a-Park Programmes.

Trust Fund

- Established by KLCH and managed independently; and
- Engagement of donors and strategic partners.

Community and Private

- Programmes, activities and community involvement; and
- Maintenance activities or periodic communal work (volunteer) programmes.

Source: Adapted from KLSP2040

IMPLEMENTATION INITIATIVE 3-9.1A

ESTABLISH TRUST FUND ALLOCATIONS AND CONTRIBUTIONS

The trust fund established by KLCH is a financial mechanism and approach that allows various parties to work together to achieve the goal of green governance in the city of Kuala Lumpur.

Funds collected will be channelled systematically and integrated to finance and support programmes and projects related to urban green management.

The necessary actions to support this initiative are as follows:

1. Management and maintenance of open spaces and green areas;
2. Implementation of public and local community education activities;
3. Preservation and conservation of the environment and biodiversity; and
4. Innovative solutions by any agency and non-governmental organisation (NGO).

BEST PRACTICE

TRUST FUND OF MySDG

This fund applies a whole-of-nation approach that allows the Malaysian Government and the United Nations to work with the private sector, NGOs, academia, the public and various other parties to realise the achievement of the SDGs and aims to:

1. Bridging the funding gap and facilitating joint initiatives by various stakeholders to translate SDGs aspirations into practical action; and
2. Cultivating and strengthening consultation at various levels and sectors including involvement in decision making.

OUTCOME TARGET

Mobilise SDGs delivery resources through the fund and catalyse other SDGs opportunities

Strengthen collaboration with various stakeholders to promote synergy, collaboration and impact across all 17 SDGs

Achieve SDGs priorities in Malaysia to ensure that no one is left behind

Source: Ministry of Finance Malaysia

IMPLEMENTATION INITIATIVE 3-9.1B

EMPOWER GREEN MUNICIPALITY BEST MANAGEMENT PRACTICES

Best management practice is an approach through an organised structure that promotes high efficiency through enhanced best practice standards and quality control in sustaining urban green management.

The necessary actions to support this initiative are as follows:

1. Implement strategic management through vision and mission as well as action plans of long, medium and short-term;
2. Management of financial funds from the following sources:
   a. Corporate social responsibility (CSR);
   b. Smart partnerships: collaboration and consultation; and
   c. Development charges.
3. Enhancement of aspects of social responsibility through the involvement of the community and non-governmental organisations (volunteers), private parties and related agencies.

BEST PRACTICE

ROSA SINENSIS AWARD GOVERNANCE OF PUBLIC PARKS AND GREEN AREAS

Ministry of Housing and Local Government has introduced the Rosa Sinensis Award as a rating initiative for public parks and green areas that are comprehensively planned, developed and managed and that fulfil their development function.

The five (5) star Rosa-Sinensis rating award was received from the 9th Prime Minister of Malaysia for two (2) KLCH public parks, namely Taman Botani Perdana and Taman Tasik Titiwangsa.

IMPLEMENTATION PROPOSAL

CP 3-9.2: INVOLVING OF NON-GOVERNMENT AND PRIVATE ORGANISATIONS IN THE URBAN GREENING PROGRAMME

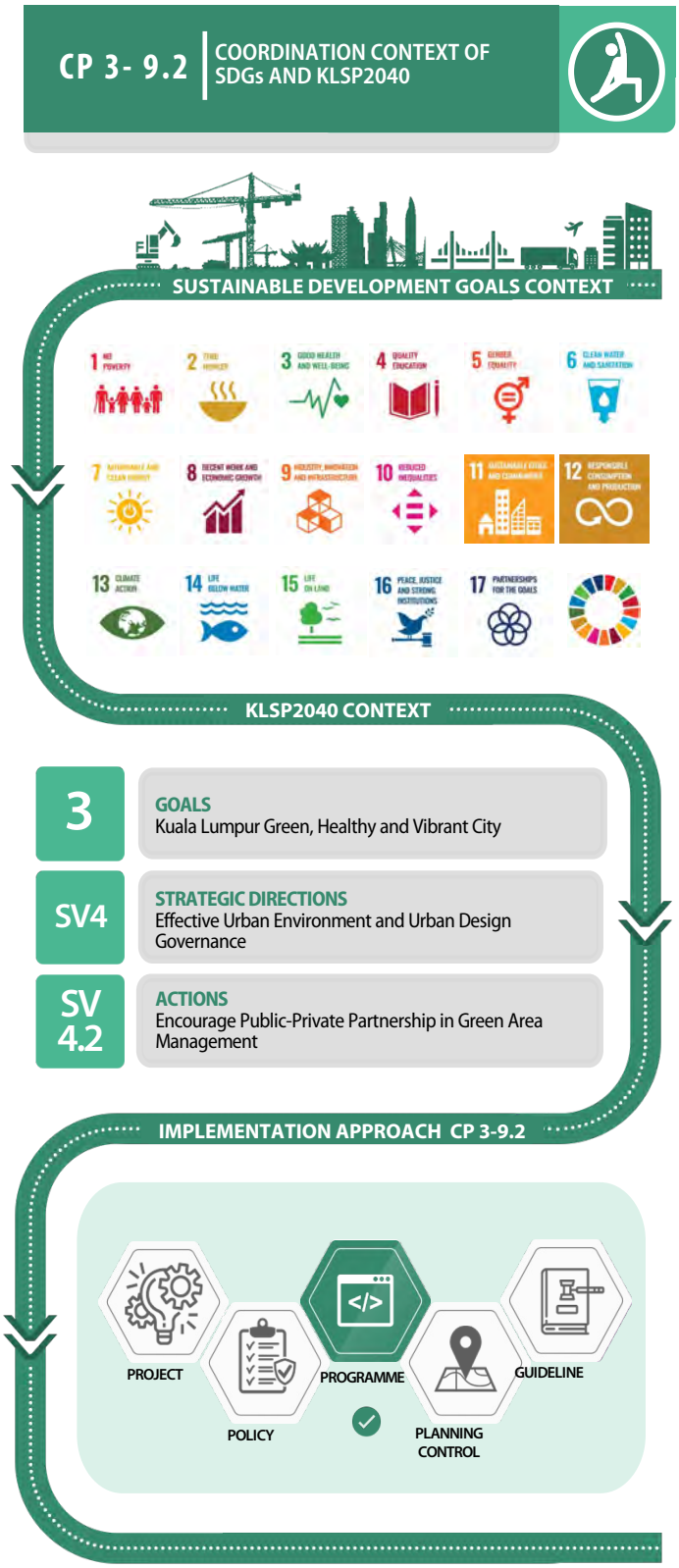
Programmes related to urban greening must be enhanced to encourage the participation of Federal Government agencies, private companies, corporate bodies, non-governmental organisations, educational and research institutions as well as the public. This is in line with the national agenda to foster the commitment and spirit of maintaining green cover areas among in the community.

Awareness programmes must also be improved because preservation and conservation activities usually receive less attention, cooperation and commitment from public and private agencies. These programmes can also be carried out to increase community understanding and involvement.

Advertising and training programmes can also be used as modules to be applied to the community on the importance of preserving and conserving the green environment around them, especially those who live in urban areas.

The implementation approach of this proposal is through a programmes. There are three (3) initiatives proposed for the implementation of CP 3-9.2.

Efforts to preserve greenery in Kampong Bharu by planting trees along the road.



IMPLEMENTATION INITIATIVE 3-9.2A

ENCOURAGE ESTABLISHMENT OF ENVIRONMENTAL TEAMS

The level of awareness of the importance of protecting the environment must continue to be applied at all levels of society. All community-based organisations (CBOs) and non-governmental organisations (NGOs) related to environmental conservation are encouraged to hold collectively coordinated activities, programmes and campaigns.

The necessary actions to support this initiative are as follows:

1. Involve of various organisations through environmentally themed programmes that suit community groups such as school students, youth and adolescent groups;
2. Promote the CEPA (conservation, education, participation and awareness) programme approach;
3. Create relevant sustainable awards to recognize and encourage the involvement of all; and
4. Form KLCH environmental team to coordinate activities and programmes with the residents of the city and the local community.

IMPLEMENTATION INITIATIVE 3-9.2B

STRENGTHEN RIVER PRESERVATION PROGRAMME

The river preservation programme must be improved to ensure that rivers are preserved from pollution. The implementation of this programme can create a sense of shared responsibility among various parties. It can also foster and increase awareness of river caring towards the preservation of river sustainability.

The necessary actions to support this initiative are as follows:

1. Identify locations and river's neighbourhood communities involved;
2. Encourage participation of other stakeholders such as non-governmental organisations, corporate bodies and educational institutions as strategic partners of the programme; and
3. Design a suitable programme such as adopt-a-river with a focus on beautification activities, cleaning and monitoring from any pollution activities.

IMPLEMENTATION INITIATIVE 3-9.2C

IMPLEMENT ADOPT-A-PARK PROGRAMME

The implementation of the adopt-a-park programme can encourage the involvement of the local community and park users to care for, beautify and maintain green areas in Kuala Lumpur. It can improve the quality of life, and protect and preserve the environment for local communities and future populations.

The necessary actions to support this initiative are as follows:

1. Identify suitable park locations to be adopted
2. Encourage participation of other stakeholders such as non-governmental organisations, corporate bodies and educational institutions as strategic partners of the programme; and
3. Design suitable programmes such as park maintenance and beautification activities.

BEST PRACTICE

COMMUNITY PROGRAMMES OF KLCH

Cuci@KL Programme - A weekly programme that aims to make Kuala Lumpur a cleaner and more cheerful city.

1 Community 1 Recycling Programme- Gives the city residents the opportunity to bring recycled items to be exchanged for daily necessities.

THE SUMMARY

GOAL 3: STRENGTHENING ON THE SURROUNDING DEVELOPMENT OF KUALA LUMPUR AS GREEN, HEALTHY AND VIBRANT CITY

Various initiatives and implementation approaches have been proposed so that Goal 3 towards strengthening on the surrounding development of Kuala Lumpur as a Green, Healthy and Vibrant City can be realised.

The planning and implementation of Goal 3 in the Draft KLLP2040 considers the SDGs, proposal of KLSP2040 and other national development policies which are detailed through projects, policies, programmes, planning controls and guidelines.

The proposed strategies, initiatives and implementation approaches emphasise on the diversifying functions of green, and blue corridors and the function of parks and open spaces (land), developing park connector networks, connecting the city's key activity centres, implementing Kuala Lumpur heritage trail and green density as well as strengthening urban space and green governance.

Table 3.1 shows a summary of the planning strategy and implementation proposal for Goal 3.

Table 3.1:
The Summary of Planning Strategy and Implementation Proposal for Goal 3

Planning Strategy	Implementation Proposal	Implementation Approach				
		Project	Policy	Programme	Planning Control	Guideline
SP 3-1	CP 3-1.1	-	1	1	1	-
	CP 3-1.2	1	-	1	1	1
	CP 3-1.3	-	1	1	-	-
SP 3-2	CP 3-2.1	1	-	-	-	-
	CP 3-2.2	-	-	1	1	1
SP 3-3	CP 3-3.1	1	-	1	-	-
	CP 3-3.2	-	-	-	1	1
SP 3-4	CP 3-4.1	-	-	-	1	-
	CP 3-4.2	1	-	-	-	1
	CP 3-4.3	1	-	1	-	-
SP 3-5	CP 3-5.1	1	-	1	-	-
	CP 3-5.2	1	-	1	-	-
	CP 3-5.3	1	-	1	-	-
	CP 3-5.4	1	-	-	1	-
SP 3-6	CP 3-6.1	1	-	-	-	1
	CP 3-6.2	1	-	-	-	-
SP 3-7	CP 3-7.1	1	-	1	-	1
SP 3-8	CP 3-8.1	1	-	1	-	-
	CP 3-8.2	1	-	1	1	-
	CP 3-8.3	-	-	1	-	-
SP 3-9	CP 3-9.1	-	-	1	-	-
	CP 3-9.2	-	-	1	-	-
TOTAL		**14**	**2**	**15**	**7**	**6**

STRENGTHENING DEVELOPMENT OF KUALA LUMPUR AS A CLIMATE-SMART AND LOW-CARBON CITY

GOAL 4

GOAL 4

STRENGTHENING DEVELOPMENT OF KUALA LUMPUR AS A CLIMATE-SMART AND LOW-CARBON CITY

Efficient management of risk disaster and resource as well as carbon emissions reduction can minimise the effects of climate change and natural disasters. Kuala Lumpur aims to be a Climate-Smart and Low-Carbon City that emphasised on efficient planning, development, and urban management as well as resilient to the effects of climate change and risk disaster risk.

The global temperature has reached 2 degree Celsius above pre-industrial levels due to the increase of greenhouse gas (GHG) emissions into the atmosphere. As a result of the high global temperature increase, it will cause climate change and natural disasters.

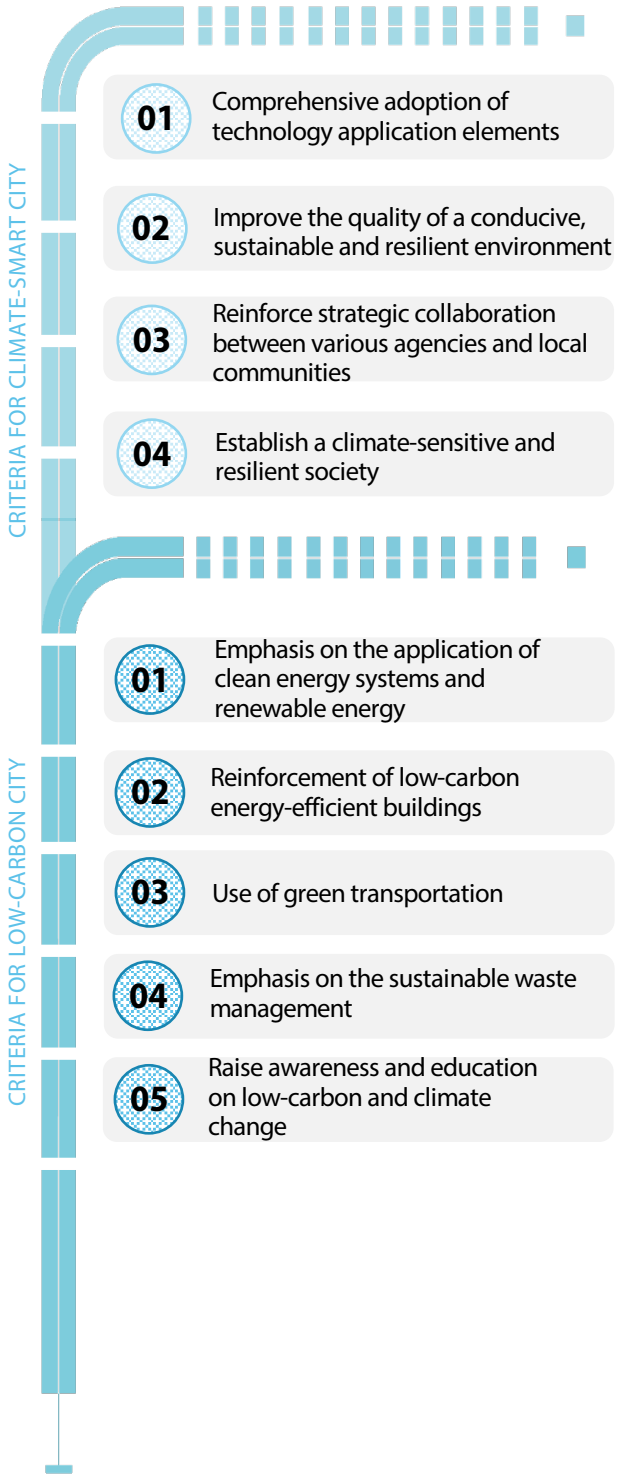
Malaysia's commitment through the 2015 Paris Climate Agreement pledge to limit the increase in global temperatures below 2 degree Celsius to 1.5 degree Celsius in 2030. Kuala Lumpur as a responsive and resilient city needs to combat climate change in line with the commitment agreed.

The climate smart city criteria emphasis on comprehensive adoption of technology application elements, improvement the quality of a conducive, sustainable and resilient environment, reinforce strategic collaboration between various agencies and local communities as well as establish a climate-sensitive and resilient society.

The low-carbon city criteria emphasis on application of clean energy systems and renewable energy, reinforcement of low-carbon energy-efficient buildings, use of green transportation, enhancement of green and blue networks, emphasis on the sustainable waste management as well as raise awareness and education on low-carbon and climate change.

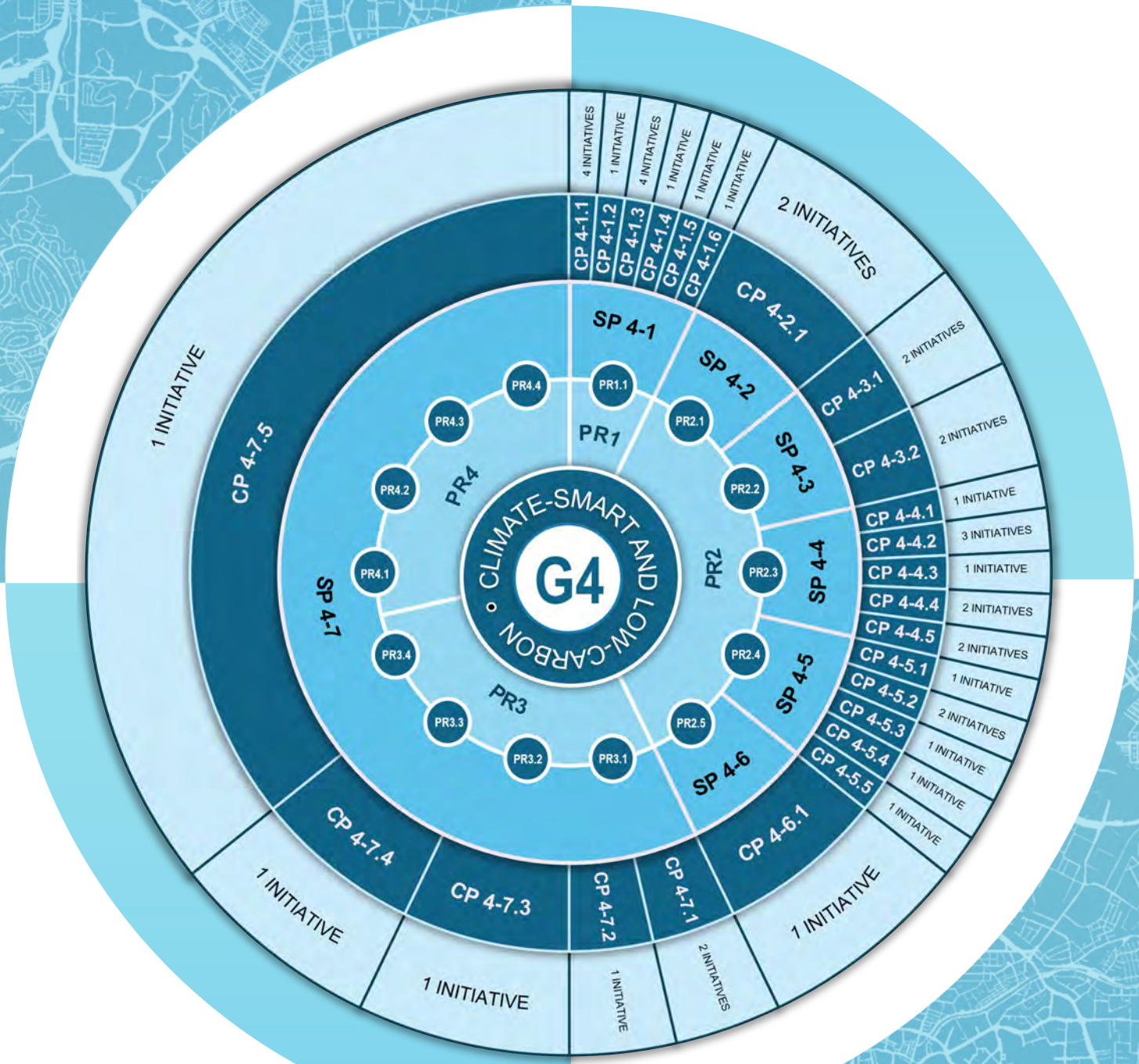
Figure 4.1 lists the main criteria that need to be implemented as a focus to strengthen development of Kuala Lumpur as a Climate-Smart and Low-Carbon City.

Figure 4.1:
Criteria for Climate-Smart and Low-Carbon City



KLSP2040
4 STRATEGIC DIRECTIONS
14 ACTIONS

FIGURE 4.2
SUMMARY OF PLANNING STRATEGY AND IMPLEMENTATION PROPOSAL
GOAL 4:
STRENGTHENING DEVELOPMENT OF KUALA LUMPUR AS A CLIMATE-SMART AND LOW-CARBON CITY



There are seven (7) Planning Strategies (SP), 25 Implementation Proposals (CP) and 40 Implementation Initiatives (IP) that are formulated in line with KLCP2040 as summarized in Figure 4.2.

DRAFT KLLP2040
7 PLANNING STRATEGIES
25 IMPLEMENTATION PROPOSALS

PLANNING STRATEGY

SP 4-1: IMPLEMENTING ADAPTATION AND RESILIENCE ACTION PLAN AGAINST CLIMATE CHANGE AND DISASTER RISK MANAGEMENT PLAN

SCENARIO OF CLIMATE CHANGE AND DISASTER RISK IN KUALA LUMPUR

The level of resilience to climate change and disaster in Kuala Lumpur, needs to be continuously improved through the implementation of innovative and adaptive interventions. The integration of strategies and actions on Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in development planning should be given priority in line with KLSP2040.

The strategy for the implementation of the Climate Change Adaptation and Resilience Action Plan and Disaster Risk Management plan is in line with the National Policy on Climate Change (NPCC), Climate Action Plan Kuala Lumpur 2050 (CAPKL 2050) which are aimed at addressing the impacts of climate change. It is also parallel to the efforts of the Global Policy of Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR).

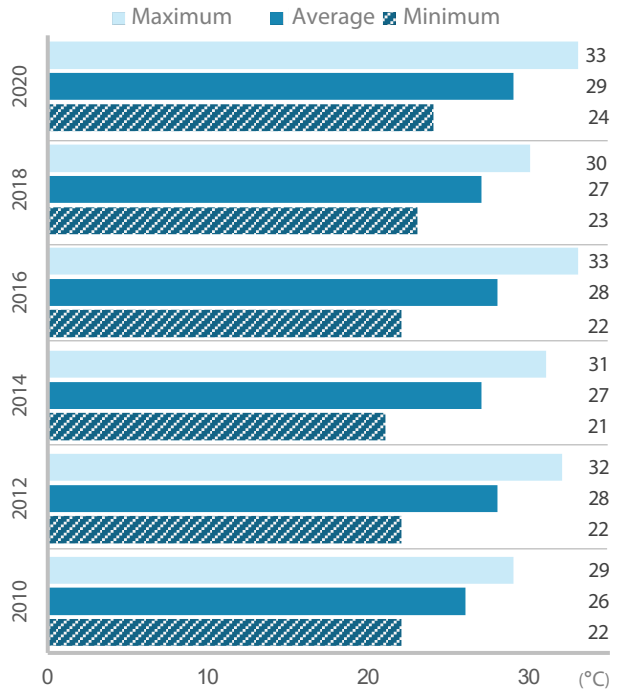
Based on the Kuala Lumpur Qualitative Climate Risk Assessment (2020) study and the annual temperature trend in Kuala Lumpur by the Environmental Department, the temperature has shown an increase since 2012 as shown in the Figure 4.1.1.

The annual temperature increase trend is caused by the El Niño phenomenon which hits this country in addition to the impact of climate change. A significant rise of built-up area in Kuala Lumpur is also a main contributors to the increase in average temperature from 26 degrees Celsius in 2010 to 29 degrees Celsius in 2020.

Urban surfaces, especially commercial and high-intensity industrial areas consists of building materials such as concrete, bricks, glasses and paved surfaces which are able to store heat that can increase the minimum temperature of the city.

This situation leads to the occurrence of urban heat island effect which is closely related to high energy consumption and greenhouse gas emission.

Figure 4.1.1:
Annual Temperature Trends in Kuala Lumpur, 2010-2020



Source: Department of Environment (Air Section), 2020

BRIEF INFO

CLIMATE OF KUALA LUMPUR, 2020

Average Daily Temperature
29°C

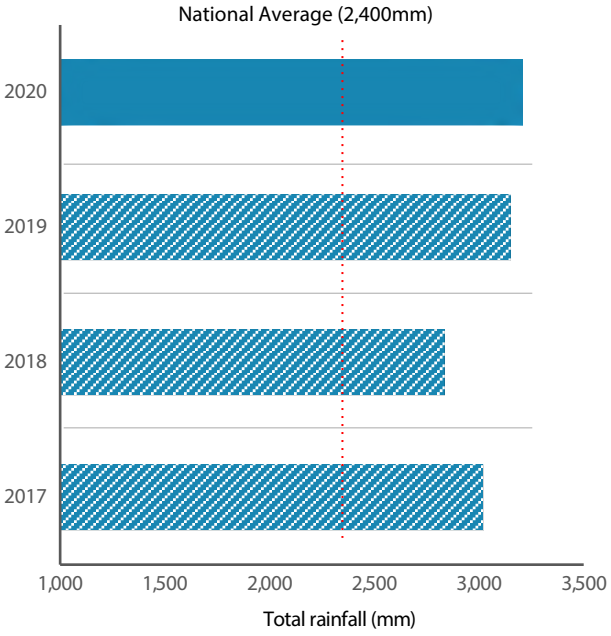
Average Annual Rainfall
3,207 mm

Source: Department of Environment and Department of Irrigation and Drainage, 2021

FLASH FLOOD AND LANDSLIDE DISASTER

The national average annual rainfall is 2,400 millimetres. However, the average annual rainfall in Kuala Lumpur has exceeded the national average annual rainfall from 2017 to 2020 as recorded by the Department of Irrigation and Drainage, as shown in the Figure 4.1.2.The trend of increasing rainfall is influenced by the Southwest Monsoon wind (from June to September), Transitional Monsoon (from April to May and October to November) and Northeast Monsoon (from November to March).

Figure 4.1.2 :
Rainfall Distribution in Kuala Lumpur (2017-2020)



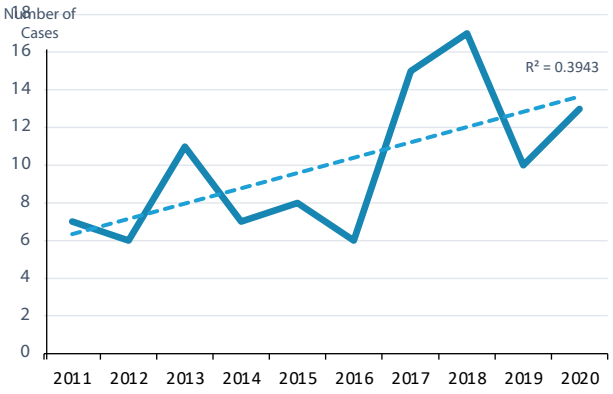
Note: Rainfall records from 16 Network Stations (RHN), DID in Kuala Lumpur

Source: Adapted from the Department of Irrigation and Drainage, 2020

In general, Kuala Lumpur is located at the confluence of Sungai Gombak and Sungai Klang basins. Flood disasters in Kuala Lumpur are concentrated in low-lying areas. Built-up areas such as Dataran Merdeka, Pantai Dalam and Ampang Hilir are among the flash flood prone areas based on KLSP2040.

The flash floods that occur are caused by the intensity of rainfall exceeding the normal level in saturated build-up areas. In addition, poor maintenance of roadside drainage system inefficient waste management and poor monitoring of works at construction sites cause frequent flash floods as shown in the Figure 4.1.3.

Figure 4.1.3 :
Cases of Flash Floods in Kuala Lumpur, 2011-2020



Source: Department of Irrigation and Drainage, 2011-2020

As of 2017, a total of 3,299 slopes have been identified in Kuala Lumpur with 19 percent categorised as very high risk and 34 percent as high risk. Based on data generated by the Kuala Lumpur Slope Information System (KULSIS), some slopes in hilly areas such as Bukit Tabur, Bukit Kiara and Bukit Lanjan need continuous monitoring on the level of exposure to landslides risk.

In order to realise Kuala Lumpur as a resilient city in facing climate change and disaster risk, six (6) Implementation Proposals are formulated under Planning Strategy 4–1, as shown in Figure 4.1.1.

Figure 4.1.4:
Implementation Proposals for Planning Strategy 4.1

SP 4-1	IMPLEMENTING ADAPTATION AND RESILIENCE ACTION PLAN AGAINST CLIMATE CHANGE AND DISASTER RISK MANAGEMENT PLAN
CP 4-1.1	Developing An Integrated Database of Climate Change and Disaster Risk
CP 4-1.2	Preparing and Implementing The Resilience Adaptation Action Plan Towards Climate Change
CP 4-1.3	Implementing The Disaster Risk Action Plan
CP 4-1.4	Strengthening The Elements of Climate Change Resilience and Disaster Risk Reduction
CP 4-1.5	Managing the Endemic, Epidemic and Pandemic
CP 4-1.6	Implementing Campaigns and Awareness Programmes Towards Climate Change, Disaster Risk and Public Health

IMPLEMENTATION PROPOSAL

CP 4-1.1: DEVELOPING AN INTEGRATED DATABASE OF CLIMATE CHANGE AND DISASTER RISK

The development of an integrated Climate Change and Disaster Risk Database aims to collect data from various related technical agencies and provide a platform for data sharing to all members of the public and stakeholders in Kuala Lumpur.

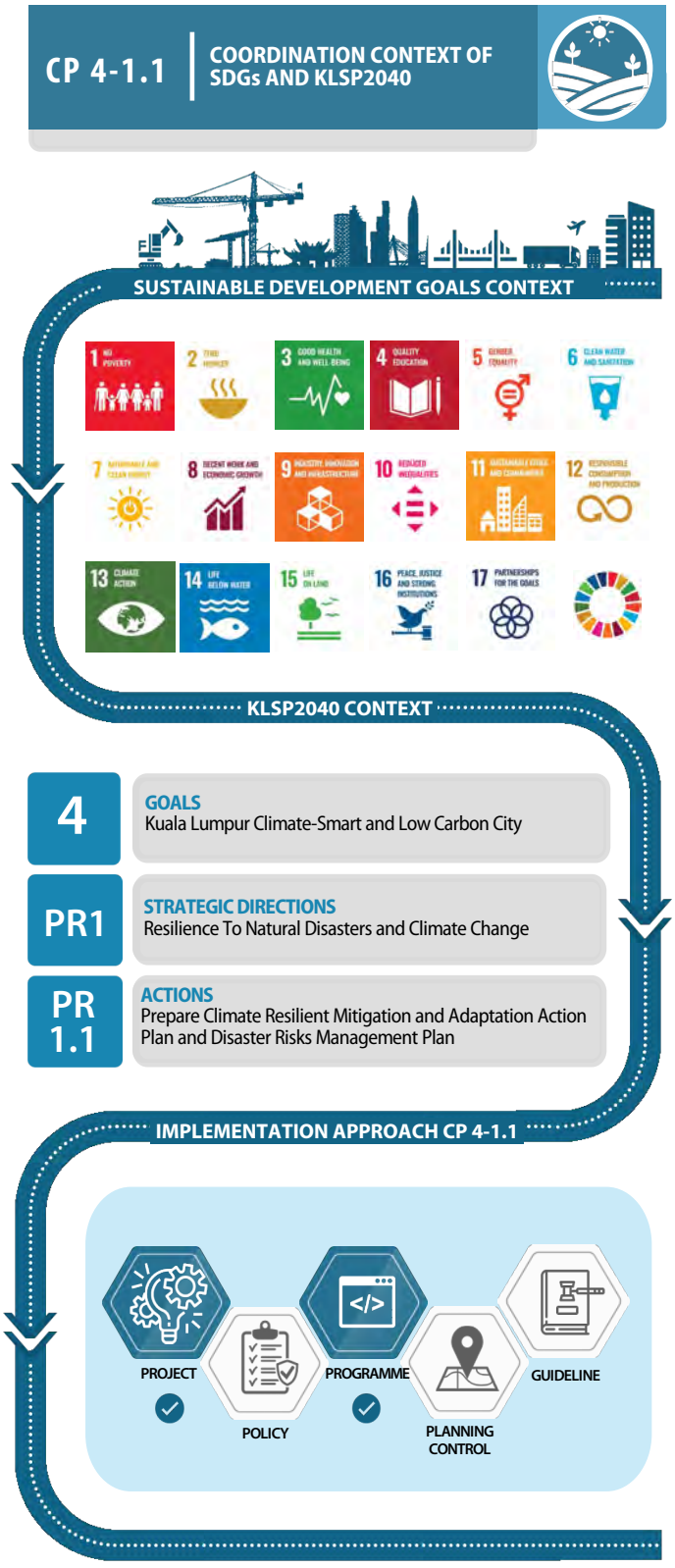
The developed open database containing the latest information related to climate change, disaster risk, and communities exposed to or affected by the impact of climate change and disaster risks.

The open data allows the public and stakeholders to access climate trends and current disaster risks as the latest information for disaster preparedness. The information on this database can also be used as a reference to assess the impact of climate change and disasters on development planning and future activities.

The implementation approach of this proposal is through projects and programmes. There are four (4) initiatives proposed for the implementation of CP 4-1.1.

Location: City Centre, Kuala Lumpur

Early information to disaster risk may increase the level of preparedness of locrelatedal communities to face disasters.



IMPLEMENTATION INITIATIVE 4-1.1A

DEVELOP AN INTEGRATED DATABASE ON THE IMPACT OF CLIMATE CHANGE AND DISASTER RISK

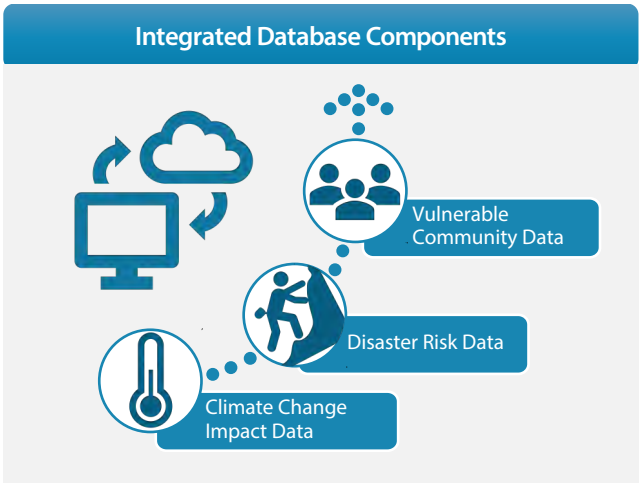
The establishment of an integrated database is an approach for storing and managing data related to climate change and disaster risk.

The database can be accessed openly to make it easier for the public to get information related to climate change and disaster risk in Kuala Lumpur.

The necessary actions to support this initiative are as follows:

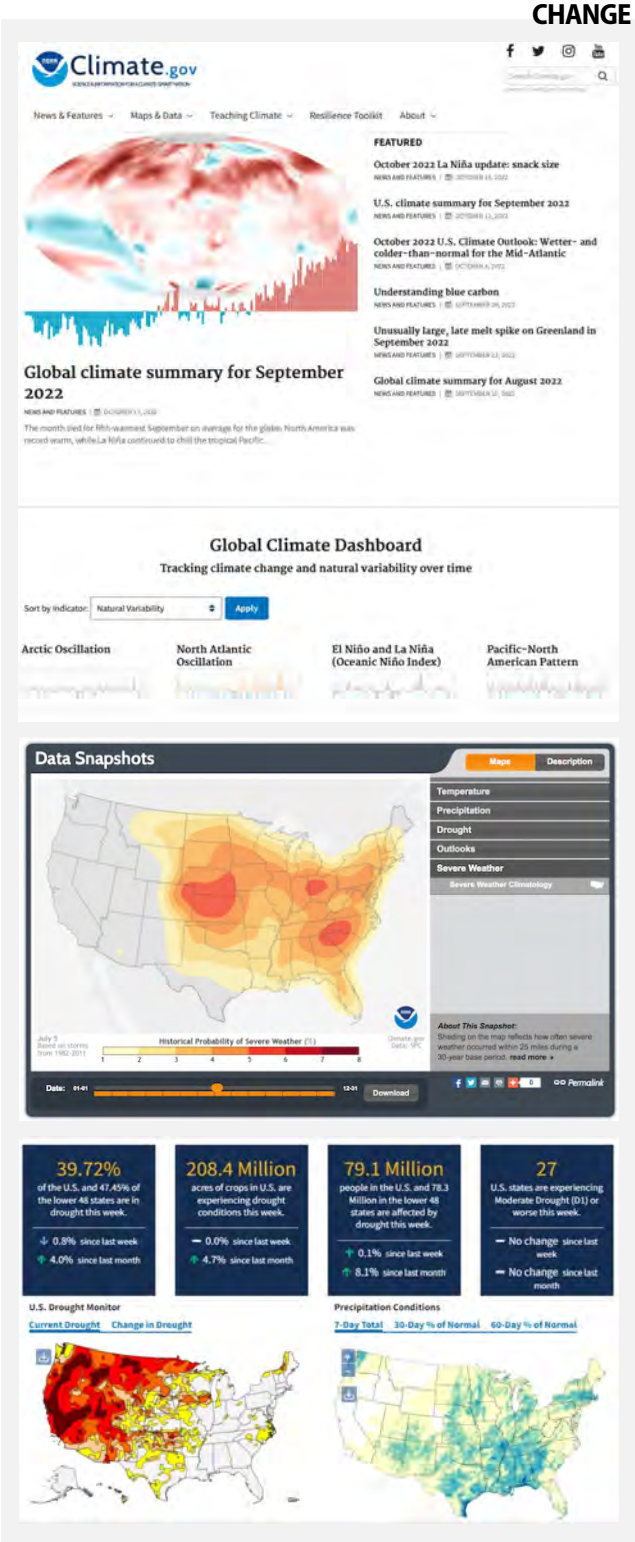
1. Identify key components of integrated database such as Climate Change Impact Data, Disaster Risk Data and Risky and Vulnerable Society Data, as shown in Figure 4.1.5;
2. Establish cooperation between KLCH and relevant technical agencies to avoid any issues related to the security of information and data;
3. Develop a database that can be integrated with climate change and disaster risk information in Kuala Lumpur;
4. Control the duplication of climate change and disaster risk data between relevant agencies; and
5. Reinforce and update climate change and disaster risk data in Kuala Lumpur between KLCH and relevant agencies.

Figure 4.1.5:
Proposed Key Components of the Integrated Climate Change and Disaster Risk Database



BEST PRACTICE

EXAMPLE OF DATABASE RELATED TO CLIMATE CHANGE



Source: https://www.climate.gov

IMPLEMENTATION INITIATIVE 4-1.1B

INTEGRATE CLIMATE CHANGE IMPACT DATA

Data on climate and climate risks such as temperature, rainfall, flash floods, droughts and other related impacts for a certain period of time from various technical agencies such as the Department of Meteorology, the Department of the Environment and the Department of Irrigation and Drainage should be centrally integrated.

The necessary actions to support this initiative are as follows:

1. Specify the climate and climate risk data that are required in forming a database related to the impact of climate change as shown in Table 4.1.1;
2. Summarise climate and climate risk data for the purpose of reporting and data collection by relevant agencies; and
3. Display potential information in the form of a dashboard and to be updated directly by the agencies involved.

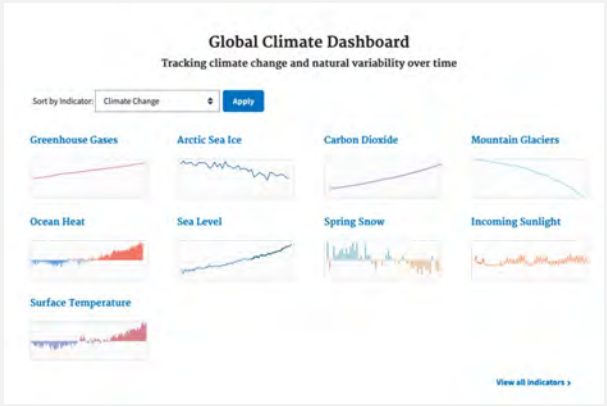
Table 4.1.1 :
Climate Data and Climate Risk

Aspect	Suggested Data Required
Climate	Temperature (average, minimum and maximum by year/month)
	Rainfall (minimum and maximum annual/monthly average)
	Relative Humidity/ Absolute Humidity
Climate Risk	Changes in soil surface temperature
	History of climate change-related disasters: 1. Extreme heavy rain and storm; 2. Flash flood; 3. Drought; 4. Heatwave; 5. Sinkhole; and 6. Land and Forest Degradation.

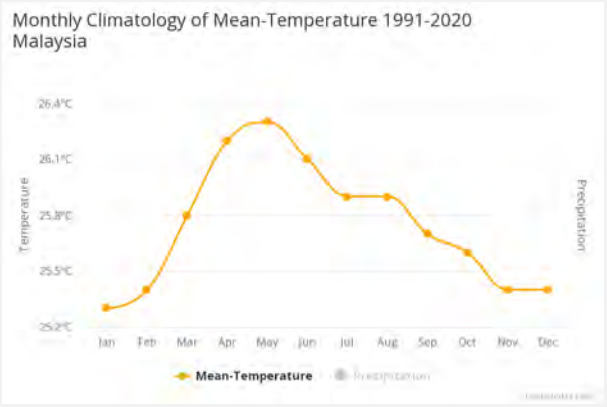
BRIEF INFO

INTEGRATION OF CLIMATE AND CLIMATE RISKS DATA

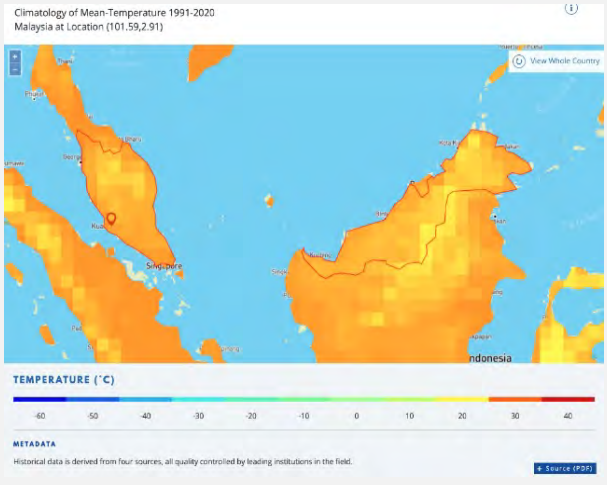
Examples of Climate and Climate Risk Data Dashboards



Examples of temperature trends



Examples of weather data trends



Source: Climate Risk Country Profile: Malaysia (2021) The World Bank Group and the Asian Development Bank

IMPLEMENTATION INITIATIVE 4-1.1C

INTEGRATE DATA RELATED TO DISASTER RISK FROM VARIOUS AGENCIES

According to Directive No. 20, Policy and Mechanism of National Disaster Management and Relief issued by National Security Council, the term 'disaster' is interpreted as an event that causes loss of life, damage to property, economic loss and environmental destruction that goes beyond the ability of the community to overcome it. Data on disaster risk for an area is the main information for the preparation of Kuala Lumpur Disaster Risk Resilience Action Plan.

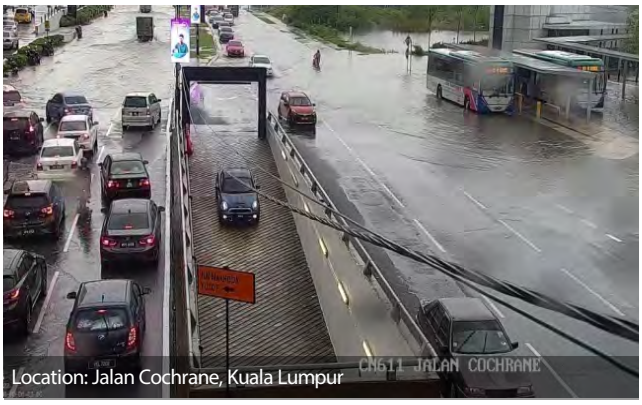
The necessary actions to support this initiative are as follows:

1. Identify the disaster risk database such as type of disaster, location, history of disaster events and agencies involved as shown in the Figure 4.1.6;

2. Integrate the disaster risk database from various technical agencies involved, and

3. Create the database as the main reference source for preparation of Kuala Lumpur Disaster Risk Resilience Action Plan.

This information can improve the accuracy of risk assessment as well as lead to more effective measures of preventing, reducing risk and strengthening preparedness efforts in facing local risks.



Location: Jalan Cochrane, Kuala Lumpur

Flood situation in Jalan Cochrane Kuala Lumpur.

BRIEF INFO

INTERPRETATION OF DISASTER

> "Disaster is defined as an event that causes disruption to community activities and state affairs, involving loss of life, property damage, economic loss and environmental destruction that exceeds the community's ability to overcome it and requires the mobilization of resources that exceed existing capacity."

Source: Directive No. 20, Policy and Mechanism of National Disaster Management and Relief, National Security Council

Figure 4.1.6 :
Components of Disaster Risk Database

TYPE OF DISASTER
- Flood
- Hurricanes
- Landslide
- Sinkhole
- Biological Disaster (COVID-19)
- Other disaster

LOCATION
- Specific Area
- Lot

HISTORY OF DISASTERS
- Trend
- Intensity
- Magnitude
- Frequency

AGENCIES
- Department of Irrigation and Drainage (DID)
- Department of Environmental
- Department of Meteorology

IMPLEMENTATION INITIATIVE 4-1.1D

GATHER DATA RELATED TO COMMUNITIES AT RISK TO THE EFFECTS OF CLIMATE CHANGE AND DISASTER RISK

The rapid growth of development in Kuala Lumpur with the existence of various physical, economic and social activities has indirectly affected the lives of the local community.

This urban development has had both positive and negative impacts on some vulnerable groups such as the homeless and B40 community in high-density areas. These areas are often associated with risk of flooding or landslides caused by climate change, thus making these groups more exposed to various disaster threats including pandemics.

According to the World Health Organization (WHO), there are five (5) community vulnerability factors, as follows:

1. Demographic;
2. Geographical;
3. Biological or Health status;
4. Sociopolitical; and
5. Socioeconomic.

The necessary actions to support this initiative are as follows:

1. Identify the risk and vulnerable groups taking into account the factors outlined by the WHO and the Principles of the New Urban Agenda (NUA), 'No One Left Behind'; and
2. Integrate the data of at-risk and vulnerable groups with the implemented database to formulate community strategies that are more resilient to the effects of climate change, various disasters including any pandemic and endemic situations.

Location: Jalan Raja Laut, Kuala Lumpur

Location: City Centre, Kuala Lumpur

Location: City Centre, Kuala Lumpur

Efforts towards empowering the local community.

Table 4.1.2 :
Proposed Data Related to Communities at Risk for Climate Change and Disaster Risk

Agencies	Proposed of Related Data
Department of Social Welfare	People with Disabilities, the Poor, Single Mothers, Children, Elderly
Ministry of Health Malaysia	Chronic patients
Department of Federal Territories	Poor or homeless people

IMPLEMENTATION PROPOSAL

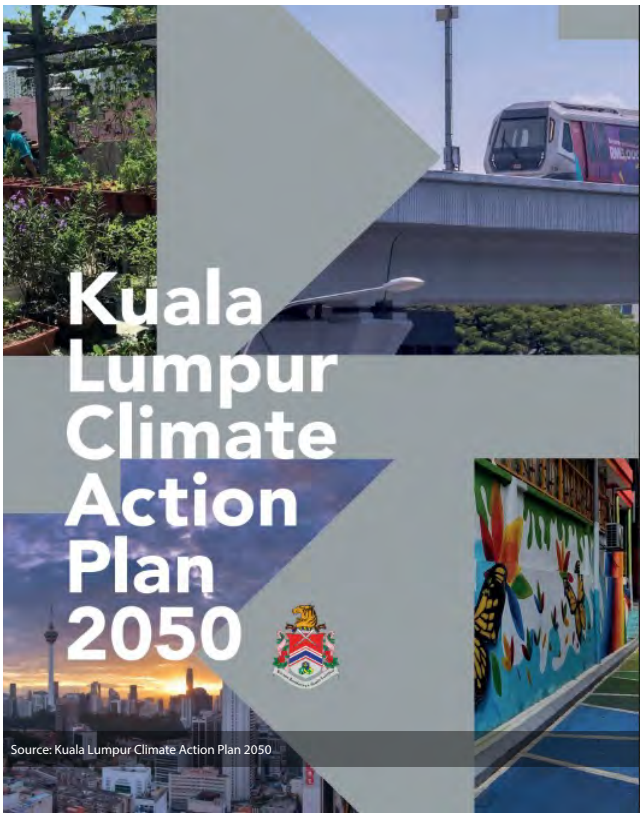
CP 4-1.2: PREPARING AND IMPLEMENTING THE RESILIENCE ADAPTATION ACTION PLAN TOWARDS CLIMATE CHANGE

The preparation of this Resilience Adaption Action Plan Against Climate Change is to ensure that climate change aspects are integrated with land use planning and development control. The sources of information from the Integrated Database of Climate Change and Disaster Risk need to be considered during preparation and implementation of Climate Change Adaption Plan.

The implementation of this proposal has the potential to enhance resilience adaptation to climate change in the planning and development process.

This proposal will translate current documents such as the Kuala Lumpur Climate Action Plan 2050 (KLCAP2050), the Kuala Lumpur Low Carbon Society Master Plan 2030, and other documents related to aspects of Climate Change.

The implementation approach of this proposal is through projects and programmes. One (1) initiative is proposed for the implementation of CP 4-1.2.



Kuala Lumpur Climate Action Plan 2050 (KLCAP 2050).

IMPLEMENTATION INITIATIVE 4-1.2A

MANAGEMENT OF RESILIENCE ADAPTATION ACTION PLAN TOWARDS CLIMATE CHANGE

Resilience Adaptation Management Against Climate Change is a necessity to increase the level of preparedness of the local population and the resilience of Kuala Lumpur in facing future risks.

The implementation of this management requires commitment and cooperation from various stakeholders including public agencies, industrial player, academician and local community to obtain an accurate and detailed information.

The necessary actions to support this initiative are as follows:

1. Establish a comprehensive Resilience Adaptation Action Plan Against Climate Change;
2. Conduct an assessment on the effects of climate change to produce mapping of areas based on priority risk as shown in the Table 4.1.3;
3. Implement the Climate Action Adaptation planning process as shown in the Figure 4.1.7 in accordance with climate change risk assessment result; and
4. Improve current infrastructure, design and maintenance for built-up areas in climate change adaptation focus areas.

The Draft KLLP2040 has identified criteria of selected areas to implement climate change resilience adaptation measures as follows:

1. High intensity of current or future land use zones and urban activities that require infrastructure improvements towards the impact of climate change;
2. Low permeable surface area; and
3. Built-up areas with high surface temperature distribution.

There are four (4) focus areas for the implementation of resilience adaptation action plan towards climate change, as shown in Table 4.1.4.

Table 4.1.3:
Climate Change Risk Assessment in Kuala Lumpur

Climate Change and Hazardous Effects
Hot weather • Heat Wave • Temperature Increase
Drought • Prolonged drought • Lack of water resources • Groundwater reduction • Sinkhole
Floods and storms • Frequency of sinkhole occurrence • Impact of the increase in sea level and storms • Landslides caused by heavy rains • Flash flood • Water ponding

Priority of Climate Change Risks
Social • Heat-related illnesses • Comfort and quality of life • Increase air pollution • Lack of clean water • Health problem
Environment • Weather changes • Increased landslides and erosion
Economic • Increased demand for energy and water resources • Traffic Congestion • Disruption of economic activities • Damage to buildings and infrastructure • Maintenance cost • Road accident

Proposed Resilience Adaptation Action Plan Towards Climate Change in the Commercial Area of Jalan Tunku Abdul Rahman.

Figure 4.1.7:
Climate Action Adaptation Planning Process

STEP 1	Resilience Mapping
STEP 2	Setting Priorities
STEP 3	Formulate an Action Plan
STEP 4	Action Plan Implementation
STEP 5	Evaluate Results
STEP 6	Updating the Action Plan

Table 4.1.4:
Proposed of Focus Areas for Resilience Adaptation Action Plan Towards Climate Change

Area and size (hectares)	Inset Plan
1. Kepong Industrial Area 12.97 hectares	
2. Batu Muda Industrial Area 14.82 hectares	
3. Jalan Tuanku Abdul Rahman Commercial Area 2.38 hectares	
4. Kampong Bharu area 110.00 hectares	

IMPLEMENTATION PROPOSAL

CP 4-1.3: IMPLEMENTING THE DISASTER RISK ACTION PLAN

The Disaster Risk Action Plan will specify the suitable strategy for each disaster and location. The proposed strategy includes elements of mitigation and adaptation to increase local preparedness in facing the risk of future disasters. A comprehensive understanding of risk contributing factors as shown in the Figure 4.1.8 is important in preparing the action plan.

The implementation approach to this proposal is through projects and programmes. There are four (4) initiatives proposed for the implementation of CP 4-1.3.

Figure 4.1.8 :
Contributing Factors to Disaster Risk

Source: Global Facility for Disaster Reduction and Recovery (GFDR), 2014

Views of the area affected by flash floods from a high building in Ampang, Kuala Lumpur on March 8, 2012

IMPLEMENTATION INITIATIVE 4-1.3A

CONDUCT DISASTER RISK RESILIENCE ASSESSMENT

The importance of conducting the Disaster Risk Resilience assessment is in line with four (4) main actions in the Sendai Framework for Disaster Risk Management 2015 until 2030 as shown in the Figure 4.1.9.

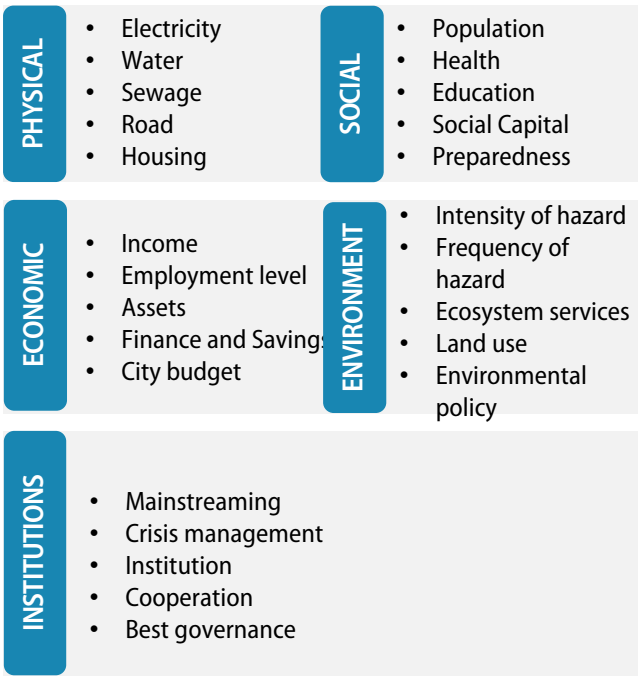
The necessary actions to support this initiative are as follows:

1. Conduct a Disaster Risk Resilience assessment that incorporates physical, social, economic, institutional and environmental aspects. The Climate Disaster Resilience Index (CDRI) assessment method as shown in the Figure 4.1.10 is appropriate to be used as it provides a more comprehensive view on the resilience level of the assessed area;
2. Encourage the involvement of communities, departments and agencies which are directly responsible in management of Kuala Lumpur by assessing the resilience and disaster risk area; and
3. Conduct a CDRI assessment every three (3) years to monitor and evaluate the effectiveness of current strategies and actions to increase level of disaster risk resilience and impact of climate change in Kuala Lumpur.

Figure 4.1.9:
Key Actions for Disaster Risk Management (Sendai Framework, 2015-2030)

Source: Adapted from Sendai Framework for Disaster Risk Reduction 2015-2030

Figure 4.1.10 :
Key components of Resilience Assessment : Climate Disaster Resilience Index (CDRI)



Source : CDRI Capacity-building Programme, 2010-2013;
Guidelines for Geodisaster Geo Risk Management in the preparation of Local Plans, PLANMalaysia, 2022

IMPLEMENTATION INITIATIVE 4-1.3B

STRENGTHEN DISASTER RISK MANAGEMENT AND REDUCTION

Strengthening management and reduction of disaster risk in risky areas is crucial towards increasing the level of preparedness in facing future disasters.

The Draft KLLP2040 has identified two (2) disaster risk reduction actions which are structural and non-structural methods. The action depends on the type of disaster risks and identified climate change impact as well as the suitable form of infrastructure development to strengthen management and reduction of disaster risk.

The necessary actions to support the initiative are as shown in the Table 4.1.5.

Kuala Lumpur area is exposed to the risks and impacts of urban heat island.

Table 4.1.5 : Disaster Risk Management according to Disaster Types and Risk Reduction Actions

Location	Types of Disaster Risk and Climate Change Impact	Risk Reduction Actions	
		Structural	Non-Structural
1. Pusat Bandar Raya; 2. Ampang Hilir; 3. Sungai Klang; 4. Sungai Gombak; 5. Sungai Kerayong; 6. Sungai Bunus; 7. Sungai Keroh; 8. Sungai Penchala; and 9. Sungai Toba.	Flash flood	1. Improve flood mitigation; and 2. Improve drainage system.	1. Establish Database development and related information; 2. Develop of an early warning system*; 3. Map the risk area by using a GIS system; 4. Monitor of high-risk areas; and 5. Implement public awareness campaigns related to disaster risk.
1. Bukit Tabur; 2. Bukit Wangsa Maju; 3. Bukit Dinding; 4. Bukit Kiara; 5. Bukit Lanjan; 6. Bukit Gasing; 7. Bukit Sungai Besi; and 8. Bukit Kerinchi.	Landslide	1. Strengthen slope stability; and 2. Plant trees and ground cover crops.	
1. Pusat Bandar Raya;	Urban heat island	1. Plant suitable trees in open areas; 2. Replace impervious surfaces to water-permeable surfaces such as sidewalks, vehicle parking lots; and 3. Conserve water bodies as an element.	1. Establish Database development and related information; 2. Map the risk area by using GIS system; 3. Monitor of high-risk areas; and 4. Implement public awareness campaigns related to disaster risk.
1. Batu Muda Industrial Area; and 2. Kepong Industrial Area.	Drought and the El Nino phenomenon		

*Development of an early warning system that supports the National Flood Warning Forecasting Programme (PRAB), DID. The City of Kuala Lumpur is involved in PRAB Phase 2 (2019-2025).

BRIEF INFO

DEFINATION OF DRR MITIGATION ACTION

Structural Mitigation: Physical engineering works such as flood mitigation projects, slope stabilisation or reinforcement structures such as embankment construction, flood-proof building construction, retaining walls and others.

Non-Structural Mitigation: Knowledge, regulations, practices, guidance, mapping, development of early warning applications, training, public awareness programmes, incentives and education.

Source: UNDRR.
https://www.undrr.org/terminology/structural-and-non-structural-measures

The need to increase the mitigation of slope stabilising structures in sloping areas around Kuala Lumpur.

BEST PRACTICE

METHODS OF SLOPE REINFORCEMENT AND STABILISATION

Malaysia

Methods of Slope Reinforcement and Stabilisation

Methods of Slope Reinforcement (Structural Mitigation)

Japan
Non-frame Slope Stabilisation

This technique stabilises the slope through the combination of natural approach and dan structural frame using plants and trees at the slope and the installation of several bolt stones (rod type of frame) along the identified slope areas.

Source : Nippon Steel & Sumikin Metal Products Co.

IMPLEMENTATION INITIATIVE 4-1.3C

STRENGTHEN DISASTER RISK MANAGEMENT AND REDUCTION IN MULTI-DISASTER RISK FOCUS AREAS

Multi-disaster focus areas involve disaster risk areas 1, 2, 3 and 4 and their surroundings. Disaster Risk Management for multi-disaster risk focused areas must be prioritised to ensure the area's level of resilience can be enhanced.

The necessary actions to support the initiative are as shown in Table 4.1.6 by focusing on multi-disaster area as shown in Figure 4.1.11.

Bukit Tabur area has a high-risk of multiple disasters.

Table 4.1.6: Proposed Focus Areas and Multi-Disaster Risk Mitigation Strategies

Focus Areas	Description/Summary	Mitigation Strategy (Structure)
Risk of Landslide and Flash Flood Disaster 1. Disaster Risk Focus Area 1 (Bukit Tabur); and 2. Disaster Risk Focus Area 2 (Sungai Penchala).	Disaster risk focus areas 1 and 2 involve the risk of landslides and flash floods in Bukit Tabur and Sungai Penchala areas. Disaster risk management involves a structural mitigation strategy as a risk mitigation mechanism as well as risk reduction to the occurrence of disasters in the future.	1. Reinforce slope stability; 2. Plant trees and ground cover plants; 3. Improve flood mitigation; 4. Improve drainage system, provide bioretention in appropriate places; and 5. Implement concept of MSMA 2.0 (control-at-source).
Risk of Landslide, El Nino and Drought Disasters 1. Disaster Risk Focus Area 3 (Wangsa Maju – Bukit Dinding).	Focus area 3 involves Wangsa Maju - Bukit Dinding area which is exposed to the risk of landslides, El Nino and drought. The proposal involves structural mitigation to reinforce the stability of the slope at Bukit Dinding and application of the Nature-Based Solution (NbS) concept.	1. Reinforce slope with construction of concrete walls; 2. Plant trees and ground cover plants (NbS); 3. Develop an early warning system; 4. Expand the use of bio-swale and green cover (Nature-based solutions-NbS); 5. Preserve and conserve water bodies; and 6. Convert impervious surfaces to permeable surfaces such as sidewalks and vehicle parking lots.
Risk of Flash Flood, El Nino and Drought Disasters 1. Disaster Risk Focus Area 4 (Pusat Bandar Raya).	Focus area 4 involves Pusat Bandar Raya area which is experiencing a real acceleration of urbanisation. The rapid development in this area has caused high-risk of flash floods, El Nino and drought to face the effects of significant climate change.	1. Improve flood mitigation; 2. Improve drainage system; 3. Provide bioretention in appropriate places; 4. Implement concept of MSMA 2.0 (control-at-source); 5. Expand the use of Bio-ecological (BIO-ECODS) and green cover; 6. Convert impervious surfaces to permeable surfaces such as sidewalks and vehicle parking lots; and 7. Preserve and conserve water bodies.

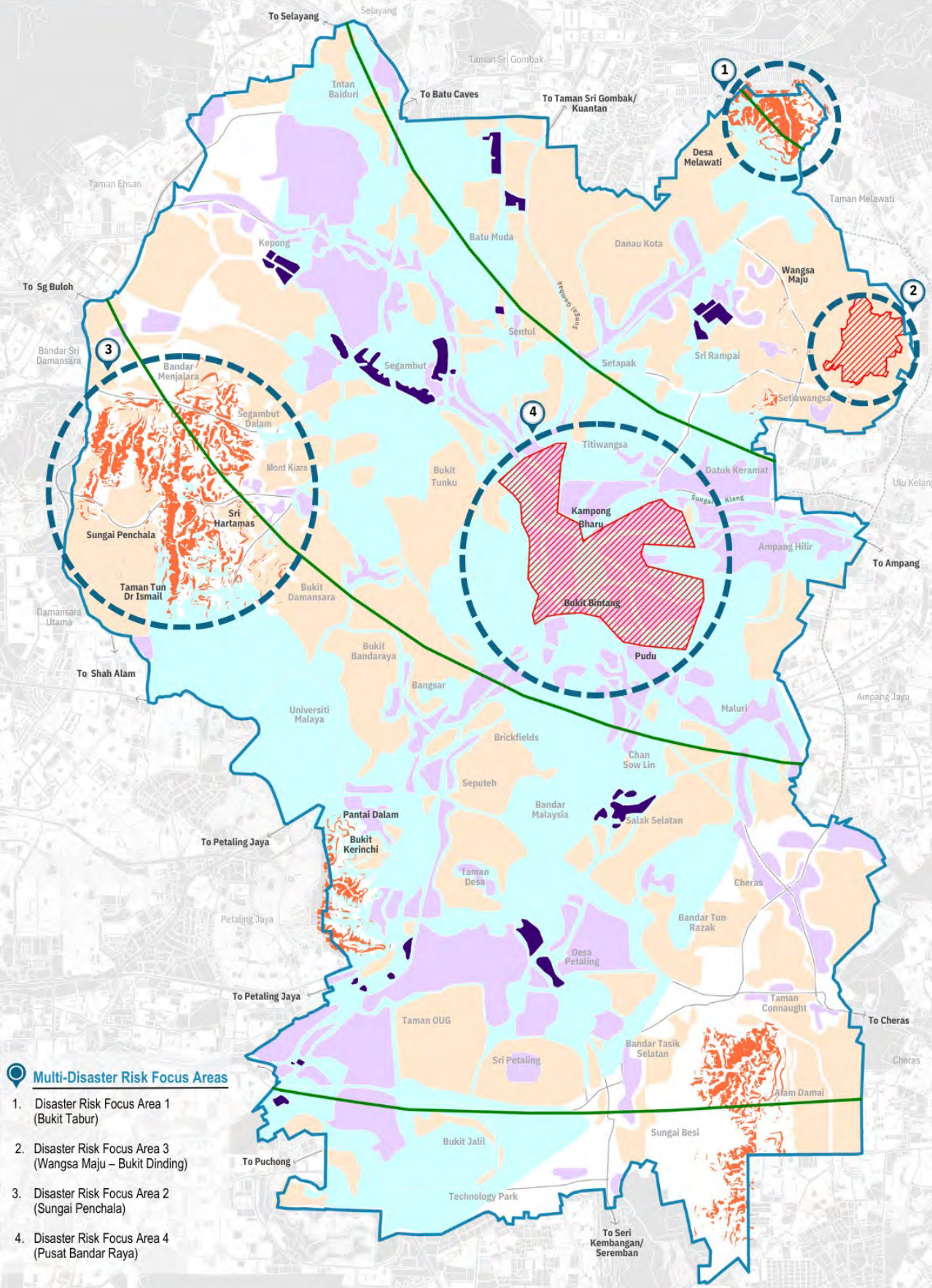


FIGURE 4.1.11 | Plan of Multi-Disaster Risk Focus Areas

Legend :

- Highlands Area
- Low-Moderate Impact
- Medium High Impact
- Flood Potential Areas
- Areas of Potential Pollution from Industrial Activities
- Flash Flood Hotspot

Others

- Main Road
- Kuala Lumpur Boundary
- Fault Lines

IMPLEMENTATION INITIATIVE 4-1.3D

IMPLEMENT BUILD BACK BETTER CONCEPT

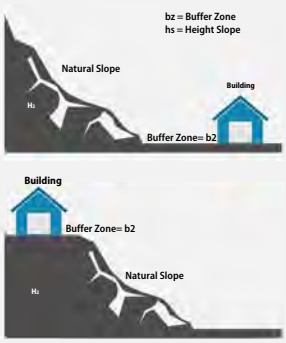
The priority for nature-based development is in line with Kuala Lumpur Low Carbon Society Master Plan 2030 and Kuala Lumpur Climate Action Plan 2050 KLCAP2050).

The main requirement is to reinforce development control in Special Area Management which is hilly and sloping areas class 3 and 4 in compliance with Guidelines for Planning and Development in Hilly and Slope Areas for the Federal Territory of Kuala Lumpur 2010 (GPWPKL, 2010).

The necessary actions to support this initiative are as shown in the Table 4.1.7.

BRIEF INFO

CONCEPT OF NATURE-BASED SOLUTION (NbS)



Referring to a nature-based approach through actions to protect, sustainably manage or restore natural ecosystems, with the aim of addressing urban challenges such as the impact of climate change, human health, food and water security, effective and adaptive reduction of disaster risk.

Source: Guidelines for Planning and Development in Hilly and Slope Areas for the Federal Territory of Kuala Lumpur 2010 (GPWPKL, 2010).

Table 4.1.7:
Implementation Actions to Build Back Better

Actions	Flood Risk	Landslide Risk
1. Maximise green, open and recreational areas as well as reduce the percentage of impervious surfaces in line with the Kuala Lumpur Low Carbon Society Master Plan 2030;	✓	✓
2. Provide appropriate buffer zones according to the guidelines and conditions set (Guidelines for Planning and Development in Hilly and Slope Areas for the Federal Territory of Kuala Lumpur 2010 (GPWPKL, 2010);		✓
3. Strengthen development control in Environmental Control Areas by applying the Guidelines for Planning and Development in Hilly and Slope Areas for the Federal Territory of Kuala Lumpur 2010 (GPWPKL, 2010);		✓
4. Comply with MSMA 2.0 requirements in controlling peak flows to ensure surface flow rates before and after development;	✓	
5. Apply flood control system to reduce level of destruction during floods;	✓	
6. Integrate building design that considers the need for resilience to disasters and the selection type of material should be corrosion resistant; and	✓	✓
7. Encourage the use of Nature-based Solutions (Nbs), Water Sensitive Urban Design (WSUD), Sponge City and Low Impact Development (LID) concepts to reduce the impact of urban heat island, risk of flash floods, drought and environmental pollution.	✓	✓

BEST PRACTICE

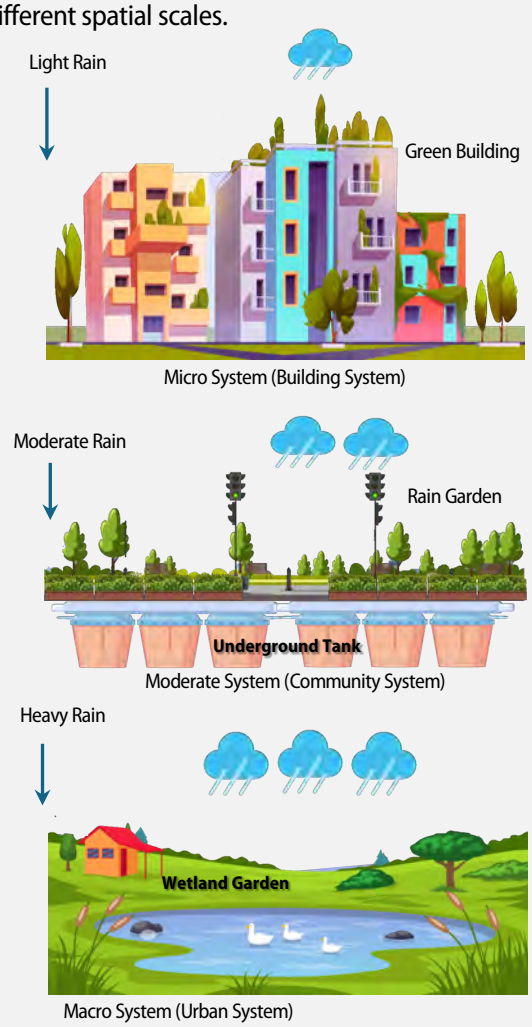
ADAPTATION OF DISASTER RESILIENT ELEMENTS (SPONGE CITY) IN DEVELOPED AREAS

The concept of Sponge City refers to a city or space that is able to integrate water management in planning and design process of the city to reduce risk of flood disasters and impact of urban heat islands.

This concept is also synonymous with Low-Impact Development and the NbS approach that has been implemented successfully in cities of developed countries.

Implementation of the Sponge City concept in China includes all types of low impact development methods and NbS including permeable pavements, green roofs, catchment ponds, rain gardens, green buffer zones and multi-functional green areas.

Illustration of Sponge City Concept Implementation at different spatial scales.

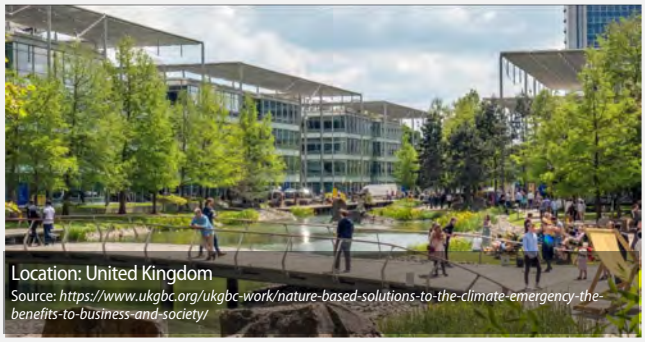


Location : China
Source: *https://www.dw.com/en/china-turns-cities-into-sponges-to-stop-flooding/a-61414704*

Tree Planting and landscaping make the roof of the building more attractive.

Location: China
Source: Walsh, A. (2022) China turns cities into sponges to stop flooding *https://www.dw.com/en/china-turns-cities-into-sponges-to-stop-flooding/a-61414704*

Permeable surfaces allow water to seep into the ground as an effort to reduce the risk of disasters such as floods.



Location: United Kingdom
Source: *https://www.ukgbc.org/ukgbc-work/nature-based-solutions-to-the-climate-emergency-the-benefits-to-business-and-society/*

Development that maximise green, open and recreational areas in the United Kingdom.

IMPLEMENTATION PROPOSAL

CP 4-1.4: STRENGTHENING THE ELEMENTS OF CLIMATE CHANGE RESILIENCE AND DISASTER RISK REDUCTION

Aspects of climate change adaptation and disaster risk reduction need to be applied in the planning process to increase Kuala Lumpur's level of resilience.

Planning and development control for new developments including regeneration need to be more sensitive towards the management and reduction of climate change impacts as well as disaster risks.

These improvements can control impact on the environment, especially pollution control during the development stage and strengthen the resilience element of an area.

The Draft KLLP2040 has identified four (4) main strategies that need to be implemented before development approval is granted as follows:

1. Understand the current risk and history of local disaster events;
2. Consider and evaluate the environmental impacts of each development;
3. Consider the at risk communities that are vulnerable to future development proposals; and
4. Adapt measures of climate change impacts and disaster risk reduction in development proposals.

The implementation approach of this proposal is through project and programme. One (1) initiative being proposed for the implementation of CP 4-1.4.

IMPLEMENTATION INITIATIVE 4-1.4A

IMPROVE THE PROCESS OF DEVELOPMENT APPROVAL

The need to improve the process of development approval by emphasising the impacts of climate change and disaster resilience for new development is an initial strategy in disaster risk mitigation.

This improvement aims to ensure that information related to climate impact assessment and disaster risk are presented and detailed out as requirement in the development approval process. It is in line with the implementation of the Build Back Better concept as shown in the Figure 4.1.12.

The necessary actions to support this initiative are as follows:

1. Ensure new developments located within Special Area Management development area and at risk of disasters consider the implementation of resilience initiatives against effects of climate change and disaster risk reduction; and
2. Comply with current guidelines and in line with strategic and action plans in the development approval process.

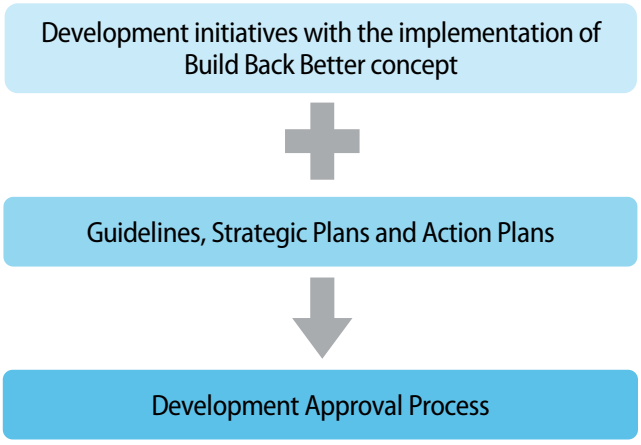
BRIEF INFO

SIX (6) MAIN PROCESSES OF OSC 3.0 PLUS

01	Compilation of Technical Information (Non-Mandatory)
02	Consideration of Development Plan
03	Notification on the Start of Construction Works
04	Observation on the Construction Site and Notification on Interim Evaluation
05	Notification on Final Evaluation Stage I and II
06	Depository of CCC or CFO

Source: Manual OSC 3.0 Plus: Process and Procedure for the Development and Implementation of One Stop Centre (OSC). First Edition 2019, Malaysia Plan.

Figure 4.1.12:
Methods of Improving the Development Approval Process with Build Back Better Concept



Information Checklist for DO in Disaster Risk Areas

1. Development Proposal Report (taking into consideration reports of TIA, SIA, HIA, EIA) Geology and other related documents;
2. EIA Approval Letter (DID);
3. Geological Assessment Report (MGD);
4. Storm Water Management Report (DID);
5. ESA Committee Approval Letter; and
6. Slope Analysis Plan and Geotechnical Report (PWD).

Source: OSC 3.0 Plus Manual: Process and Procedure for the Development and Implementation of the One Stop Centre (OSC). First Edition 2019, Malaysian Plan

IMPLEMENTATION PROPOSAL

CP 4-1.5: MANAGING THE ENDEMIC, EPIDEMIC AND PANDEMIC

Pandemic means "worldwide spread of a new disease" such as COVID-19 which causes drastic changes that affect all aspects of life economically, socially and environmentally.

The COVID-19 pandemic that hit the world has changed the way people live in cities. Physical confinement and limited movement have limited the use of spatial spaces, especially in high density cities like Kuala Lumpur.

Endemic, epidemic and pandemic are terms that describe the extent to which a disease has spread within a geographic area or population. The distinction between these terms is important to help local authorities and related agencies in formulating more appropriate public health responses.

The implementation approach of this proposal is through project and programme. One (1) initiative being proposed for the implementation of CP 4-1.5.

BRIEF INFO

DIFFERENCES BETWEEN ENDEMIC, EPIDEMIC AND PANDEMIC

ENDEMIC

Inside- region or person

1. The occurrence of diseases or disease-carrying agents that always exist in a certain place;
2. This disease is expected to be always present at a stable and low rate; and
3. Example: Dengue in Malaysia.

EPIDEMIC

Among- region or person

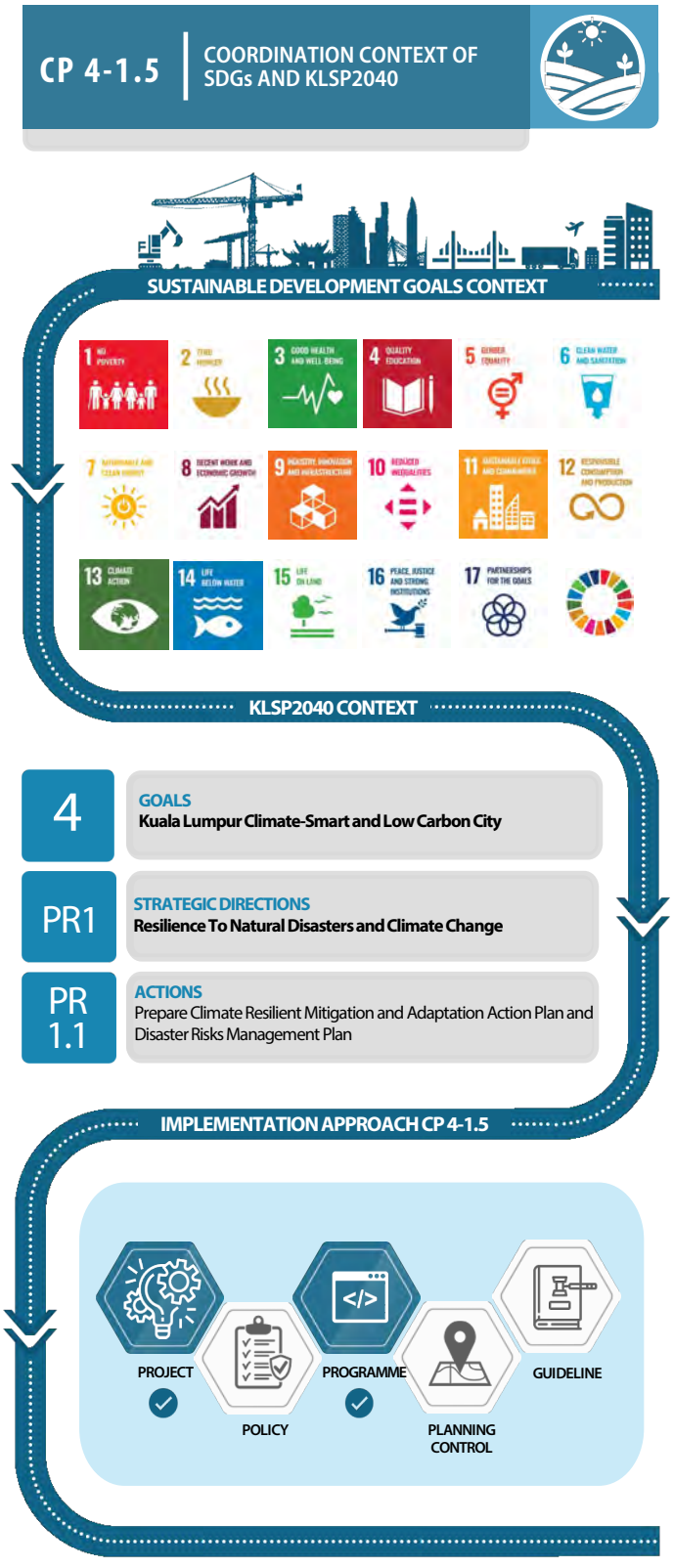
1. The occurrence of a disease with the number of cases in a certain place/location exceeding the number of cases at a normal time or exceeding the normal rate; and
2. Examples: Cholera Fever outbreak, Measles outbreak, Nipah virus outbreak in Negeri Sembilan (1999), Polio outbreak in Sabah (2019).

PANDEMIC

All region or person

1. The occurrence of diseases with the number of cases exceeding the normal rate occurs in many countries and regions around the world and involves large populations;
2. Habits caused by new disease infections (Novel); and
3. Examples: Pandemic influenza-Spanish Flu (1918 - 1919) and Influenza H1N1 (2009), Pandemic COVID-19 (2020 - present).

Source: Adapted from National Security Council (NSC), 2022



IMPLEMENTATION INITIATIVE 4-1.5A

PREPARE A STRATEGIC PLAN FOR THE MANAGEMENT OF ENDEMIC, EPIDEMIC AND PANDEMIC

The preparation of a strategic plan for endemic, epidemic and pandemic management is necessary to ensure the city community are prepared to face the issue. This strategic plan should integrate physical, social and economic aspects.

The necessary actions to support this initiative are as shown in Table 4.1.8.

Table 4.1.8:
Aspects and Actions in the Strategic Plan of Endemic, Epidemic and Pandemic Management

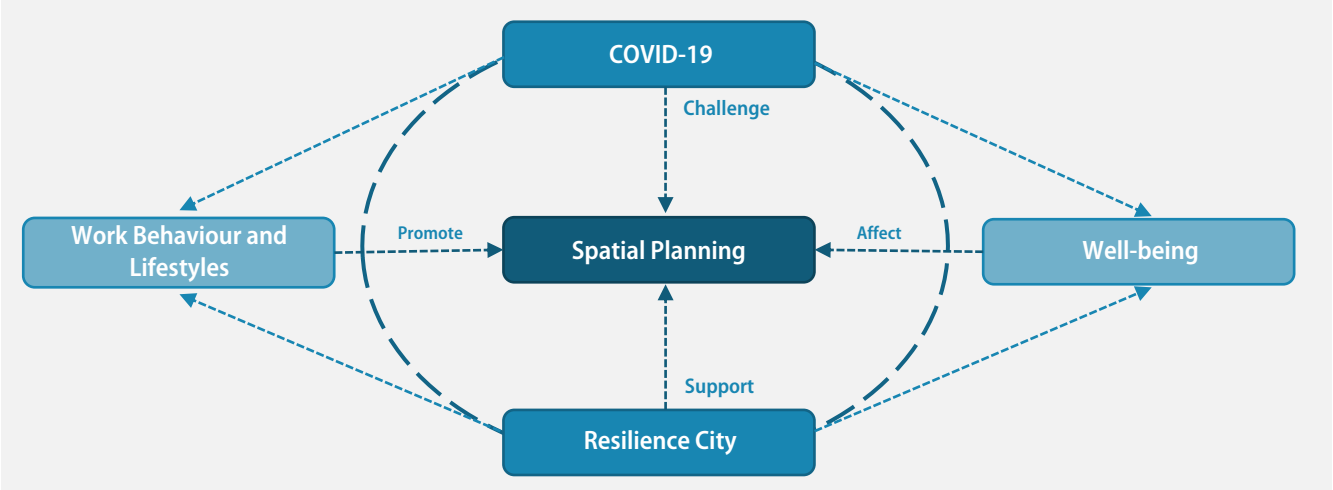
Aspect	Actions
Physical	1. Strengthen existing spaces or buildings into flexible spaces to fulfil the multi-functional needs during pandemics, epidemics and endemics; 2. Improve digital infrastructure facilities; and 3. Improve the delivery of information whether through social media or public announcements.
Social	1. Increase the level of community resilience by organising various awareness programmes; and 2. Promote sustainable practices among the community.
Economic	1. Strengthen the local economy; and 2. Encourage urban farming activities to generate additional household income.

Location: Bukit Damansara Community Hall , Kuala Lumpur

Bukit Damansara Community Hall has the potential to be a temporary evacuation centre and multi-functional public space during a pandemic.

BRIEF INFO

THE RELATIONSHIP BETWEEN SPATIAL PLANNING IN FACING THE PANDEMIC



Source: *Song X, Cao M, Zhai K, Gao X, Wu M and Yang T (2021) The Effects of Spatial Planning, Well-Being, and Behavioural Changes During and After the COVID-19 Pandemic. Front. Sustain. Cities 3:686706. doi: 10.3389/frsc.2021.686706*

IMPLEMENTATION PROPOSAL

CP 4-1.6: IMPLEMENTING CAMPAIGNS AND AWARENESS PROGRAMMES ON CLIMATE CHANGE, DISASTER RISK AND PUBLIC HEALTH

These awareness campaigns and programmes are necessary as an effort to ensure the city's community understand matters related to climate change, disaster risk and public health. In addition, it also helps to raise public understanding on the effect of pollution, climate change and disaster risk including public health.

An accurate and current information must be periodically disseminated through the implementation of programmes to ensure the community is well-prepared.

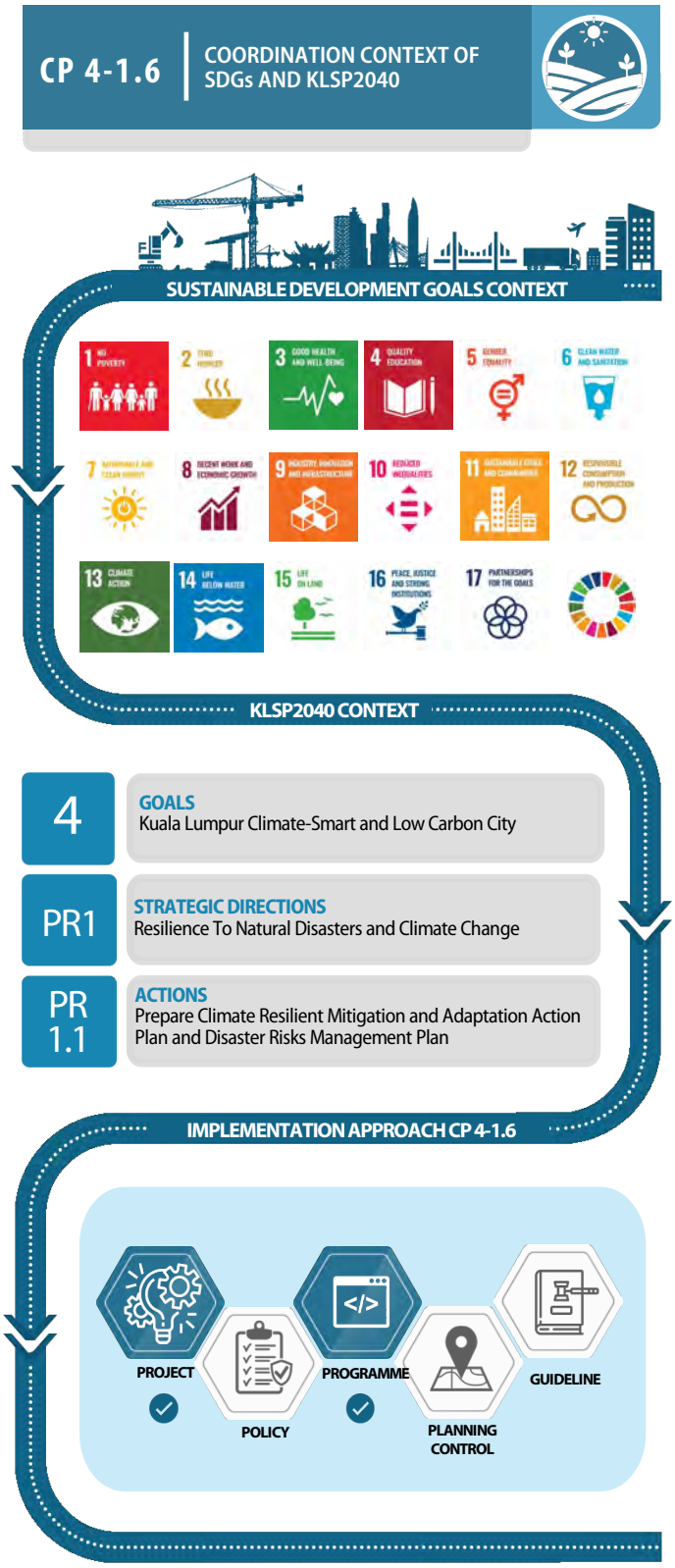
The implementation approach of this proposal is through projects and programmes. One (1) initiative is proposed for the implementation of CP 4-1.6.

Location: Taman Metropolitan Kepong, Kuala Lumpur

Tree Planting and Media Appreciation Programme are among examples of programme that can increase community awareness on the importance of tree planting in Kuala Lumpur.

Location: Taman Metropolitan Kepong, Kuala Lumpur

Active public involvement gives positive impact to the awareness on tree planting initiatives.



IMPLEMENTATION INITIATIVE 4-1.6A

DEVELOP VARIOUS CAMPAIGNS AND AWARENESS PROGRAMMES

The lifestyle of Kuala Lumpur community can be improved by practising a sustainable lifestyle that contribute towards a continuous sustainable environment.

The necessary actions to support awareness campaigns and programmes are as follows:

1. Programmes to increase ground cover plants such as:
   a. Community Urban Farming Programme; and
   b. Application of Nature-Based Solution (NbS) concept in community activities related to physical development.
2. Awareness programmes related to environmental impact, climate change, disaster risk and biological disaster in the integrated school curriculum;
3. Programmes and simulation exercises on various disasters or emergencies;
4. Information dissemination programme through various media including signages; and
5. KL Living Lab programme as a multi-stakeholder collaboration platform (researchers, NGOs, communities, private agencies and technical agencies).

BEST PRACTICE

EXAMPLES OF PROGRAMMES AND AWARENESS CAMPAIGNS

Programme Sayangi Rumahku

Public spaces in PPR areas have the potential to be multi-functional spaces (PPR Seri Cempaka, Pantai Dalam). The activities carried out are part of the collaboration with the private sector and corporate agencies.

Location: PPR Seri Cempaka, Pantai Dalam
Source: *Low Yen Yeing/EdgeProp.my*

Tree Planting Programme

The Tree Planting Programme in Bandar Tasik Selatan is the result of a collaboration between KLCH's Recreational Landscape and Recreation Development Department together with NGOs and the private sector.

Location: Bandar Tasik Selatan
Source: *Ecoknights (2021)*
https://ecoknights.org.my/ecoknights-trees-for-us-program-with-art-of-tree/

KL Living Lab

Kebun Bandar Sungai Bunus as the pilot KL Living Lab which is jointly developed by various stakeholders consisting of corporate agencies, private sectors, institutions of higher education, residents' associations and volunteers.

Location: Kebun Bandar Sungai Bunus

Urban Farming Programme – Kebun Bandar Sungai Bunus.

PLANNING STRATEGY

SP 4-2: EXPANDING APPLICATION OF RENEWABLE ENERGY TECHNOLOGIES

SCENARIO OF APPLICATION OF RENEWAL ENERGY IN KUALA LUMPUR

Renewable energy sources are solar or solar energy, wind energy, water or hydropower, wave energy, biomass fuels and biogas. Renewable energy sources are primarily being utilised to produce electrical energy.

Renewable energy sources have the potential to be naturally replaced in a short period of time and will continuously remain an energy source.

There are various options available for generating low-carbon energy that can be effectively applied and implemented that including the conversion of solar photovoltaic, biomass and biogas into renewable energy.

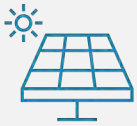
Kuala Lumpur is expected to be able to contribute towards increasing the country's renewable energy due to readily availability of building roof space for installation of solar panels and water bodies to be used as solar farms.

High initial costs of installation and production of solar energy only taking place during daytime are the main issues in the implementation of renewable energy applications. However, there are several incentives and schemes provided by related agencies to promote the usage of renewable energy in Kuala Lumpur.

In order to realise Kuala Lumpur as a city with renewable energy technology applications, one (1) implementation proposal is formulated under Planning Strategy 4–2, as shown in Figure 4.2.1.

BRIEF INFO

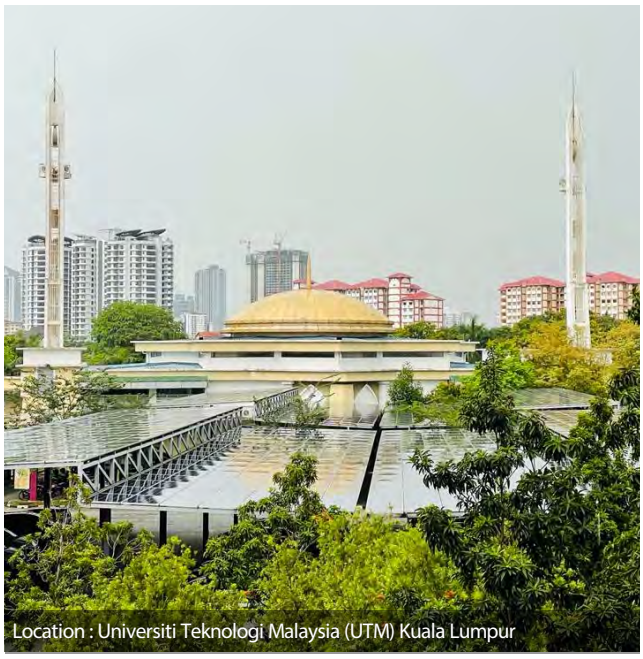
TARGET OF RENEWABLE ENERGY MALAYSIA



25% By 2030

30% By 2040

Source: KLSP2040



Location : Universiti Teknologi Malaysia (UTM) Kuala Lumpur

Photovoltaic solar panels at Universiti Teknologi Malaysia (UTM) Kuala Lumpur.

Figure 4.2.1:
Implementation Proposal for Planning Strategy 4.2

SP 4-2 EXPANDING APPLICATION OF RENEWABLE ENERGY TECHNOLOGIES

CP 4-2.1 Expanding Solar Power Generation

IMPLEMENTATION PROPOSAL

CP 4-2.1: EXPANDING SOLAR POWER GENERATION

Solar energy is a technology created for the purpose of harvesting energy from the sunlight. The solar energy has been widely used over the past few centuries in the form of traditional and modern technology.

Kuala Lumpur has as many as 43 ponds and lakes. However, only six (6) ponds and lakes with total area of 116.9 hectares can be used as Floating Solar Farm site for the purpose of renewable energy generation.

Solar energy is generated from the radiation of the sunlight and can be harnessed by installing the photovoltaic solar panels. Therefore, the installation programme of solar panels on new and existing buildings is one of the measures to increase the generation of renewable energy in Kuala Lumpur.

The expansion in the generation and usage of solar as a source of renewable energy will enable the reduction of carbon emissions and be able to curb the negative impacts of greenhouse effects. This proposal also supports the government's aspiration towards addressing the problem of global warming with the reduction of fossil-based energy consumption such as coal and natural gas.

Furthermore, the implementation of the photovoltaic solar panel installation programme in the high-rise buildings is encouraged as an effort in generating solar energy.

The implementation approach of this proposal is through projects. There are two (2) initiatives proposed for the implementation of CP 4-2.1.

IMPLEMENTATION INITIATIVE 4-2.1A

DEVELOP FLOATING SOLAR FARM AT RETENTION POND

Floating Solar Farm is an energy transition effort towards achieving a sustainable development agenda. The selection criteria of retention pond for Floating Solar Farm project should be detailed out by taking into account the areas and retention pond suitability as solar farm.

The necessary actions to support this initiative are as follows:

1. Identify retention pond with an area of more than eight (8) hectares;
2. Ensure there are no elements of raw water source storage facilities and that are not part of Flood Mitigation Plan (RTB); and
3. Ensure only 30 percent of total water bodies are used.

The Draft KLLP2040 has identified nine (9) suitable retention ponds that can be developed as Floating Solar Farms as shown in the Table 4.2.2 subject to more detailed study.

BRIEF INFO

RENEWAL ENERGY FEED-IN TARIFF (FiT)

"Malaysia's Feed-in Tariff (FiT) system obliges Distribution Licensees (DLs) to buy from Feed-in Approval Holders (FIAHs) the electricity produced from renewable resources (renewable energy) and sets the FiT rate. The DLs will pay for renewable energy supplied to the electricity grid for a specific duration. By guaranteeing access to the grid and setting a favourable price per unit of renewable energy, the FiT mechanism would ensure that renewable energy becomes a viable and sound long-term investment for companies industries and also for individuals."

Source : Sustainable Energy Development Authority (SEDA)

IMPLEMENTATION INITIATIVE 4-2.1B

ENCOURAGE INSTALLATION OF PHOTOVOLTAIC SOLAR PANELS ON ROOFS

The installation of Photovoltaic Solar Panels is encouraged in order to increase the renewable energy generation in Kuala Lumpur. It will also assist in reducing pollution and environmentally friendly.

The necessary actions to support this initiative are as follows:

1. Specify Building Floors Areas for the installation of Photovoltaic Solar Panels as shown in the Table 4.2.1;
2. Ensure the installation of panels is not less than 30 percent of the total areas of the roof;
3. Conduct studies on appropriate pricing of Feed-in Tariff (FiT) for buildings that install Photovoltaic Solar Panels by relevant agencies;
4. Introduce Flexible Loan Assistance Scheme for installation of Photovoltaic Solar Panels; and
5. Introduce awards and certifications to participants involved in this initiative. This recognition may increase the property values.

Table 4.2.1:
Photovoltaic Solar Panels Installation Promotion Programme

Building (Floor Area)	Programme
Less than 1,000 Square Metres	1. Initial capital assistance incentives for the installation through flexible loan assistance schemes; and 2. Awards and certifications to increase property values.
More than 1,000 Square Metres	1. Installing Photovoltaic Solar Panels at no less than 30 percent of the total area of the roof; and 2. Awards and certifications in order to increase property values.

Table 4.2.2:
List of Potential Ponds and Lakes Proposed as Floating Solar Farm Sites

Lakes/Ponds and Acreage (hectares)	Insert Plan	Lakes/Ponds and Acreage (hectares)	Insert Plan
1. Kolam Sri Utara 8.83 hectares		4. Tasik Metropolitan Kepong 45.54 hectares	
2. Kolam Intan Baiduri 16.73 hectares		5. Tasik Ampang Hilir 11.00 hectares	
3. Kolam Kampung Bohol 16.85 hectares		6. Tasik Bandar Sri Permaisuri 16.61 hectares	

PLANNING STRATEGY

SP 4-3: STRENGTHENING ENERGY EFFICIENCY SYSTEMS

SCENARIO OF ENERGY EFFICIENCY SYSTEMS IN KUALA LUMPUR

The energy efficiency system aims to reduce the amount of energy required to provide and to complete a product or work in the form of either production or services.

The practice of energy efficiency systems will reduce the use of fossil fuels such as petroleum, natural gas and coal, greenhouse gas emissions (GHG) and dependency on power plants.

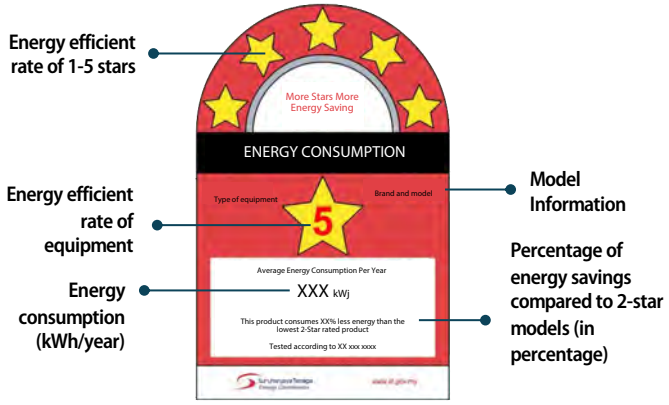
This practice will reduce operating cost of building management and assist in the management of a more sustainable energy infrastructure development.

The diverse urban activities and higher building floors spaces especially in commercial and residential have increased the demand on energies. Therefore, energy saving strategies should be developed in a more practical way and to focus on the aspects of building design as well as fostering efforts on self-awareness of energy saving in consumers' daily practices.

The current practice in fostering awareness in relation to energy saving is the use of energy labels on electrical appliances as shown in Figure 4.3.1. The energy label represents the energy consumption performance rate of an electrical appliance which assists consumers in making their decision while buying electrical appliance.

In order to realise Kuala Lumpur as an energy-efficient city, two (2) Implementation Proposals are formulated under Planning Strategy 4–3, as shown in Figure 4.3.2.

Figure 4.3.1:
Energy Label on Electrical Appliances



A sticker representing the amount of energy consumption of an electrical appliance.

BRIEF INFO

BUILDING ENERGY INDEX (BEI) MALAYSIA

Average Building Energy Index (BEI)

220-250 kWh/m²/year

Building Energy Index (BEI) Score Efficient Building

<135 kWh/m²/year

Source: National Building Energy Intensity (BEI) Labelling For Government Buildings

Figure 4.3.2:
Implementation Proposals for Planning Strategy 4-3

SP 4-3 STRENGTHENING ENERGY EFFICIENCY SYSTEMS

- **CP 4-3.1** Expanding Application of Energy Efficient Building
- **CP 4-3.2** Integrating District Cooling System and Shared Utility Corridor

IMPLEMENTATION PROPOSAL

CP 4-3.1: EXPANDING APPLICATION OF ENERGY EFFICIENT BUILDING

The energy consumption of buildings affects and contributes to the energy efficiency level of an urban area. The focus of expanding the number of energy efficient building is on areas of existing development, new development and redevelopment in Kuala Lumpur.

The Building Energy Index (BEI) is a measurement of the efficiency of the annual energy consumption of a building based on kilowatt hours (kWh) per square metre of floor area.

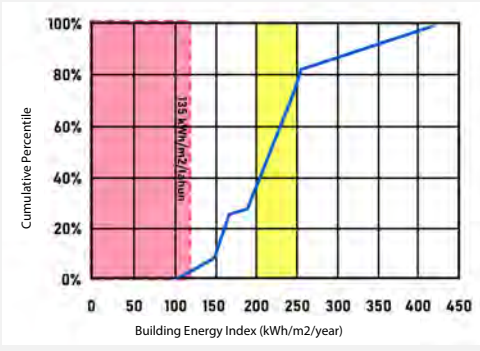
The average energy consumption for most offices and commercial buildings in Malaysia ranges from 220 to 250 kWh/m^2/year. Based on Malaysia Standard (MS) 1525:2007, the recommended amount for energy efficient buildings is below 135 kWh/m^2/year.

The average energy consumption of residential buildings ranges from 10 to 25 kWh/m^2/year. This consumption rate is low and meets the criteria of the accepted target of energy efficient buildings.

The implementation approach of this proposal is through policies. There are two (2) initiatives proposed for the implementation of CP 4-3.1.

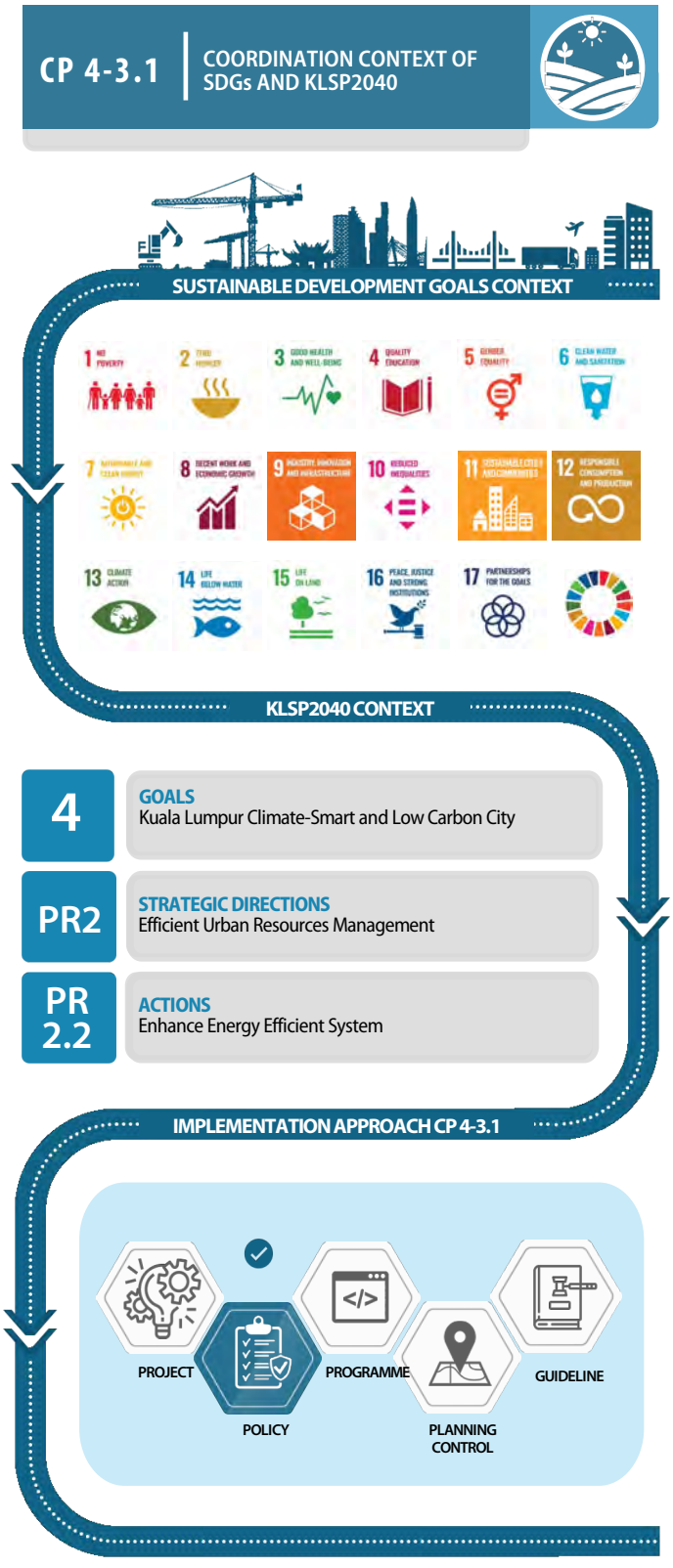
BRIEF INFO

BUILDING ENERGY INDEX (BEI) MALAYSIA



Indicators:
- Envelope Area of Energy Saving Buildings
- Average Energy Consumption for Buildings in Malaysia

Source : Malaysia Green Technology Corporation (MGTC)



IMPLEMENTATION INITIATIVE 4-3.1A

PROMOTE ENERGY EFFICIENT BUILDINGS

Improvement in energy efficiency generally is achieved by applying technologies and more efficient production processes or common methods in reducing energy loss.

In this regard, existing and new buildings are encouraged to apply energy efficient systems in enhancing their resource management efficiency in Kuala Lumpur.

The necessary actions to support this initiative are as follows:

1. Promote the installation of energy-efficient equipment such as light emitting diode (LEDs) or fluorescent lamps;
2. Ensure the optimal maintenance and operation in buildings as well as zero waste for every usage of energy, water and waste generation elements;
3. Implement suitable building design and usage of materials to reduce energy consumption of a building; and
4. Provide certification to agencies or individuals who carryout various efforts and actions in supporting the implementation of energy efficient building initiatives as shown in Table 4.3.1.

Table 4.3.1:
Incentive and Regulatory Programme Towards Increasing the Number of Energy Efficient Buildings in Kuala Lumpur

Incentive
1. Awards and publish list of sustainable and green properties on the KLCH website
1. Acknowledge the preferred building for government activities
1. Facilitate GBI rating

Source: Malaysian Standard (MS) 1575 : 2007

IMPLEMENTATION INITIATIVE 4-3.1B

IMPLEMENT BEI LABELLINGS FOR GOVERNMENT BUILDINGS

The implementation of BEI Labelling is focused on public or government buildings in Kuala Lumpur as to ensure these buildings can be examples and leaders in the efficient usage of energy. Subsequently, public or government buildings will be the catalyst and driver for the overall implementation of energy efficient buildings in Kuala Lumpur.

The pioneer implementation of this proposal is focus on buildings owned by KLCH and eventually be extended to public buildings such as universities, schools, police stations, mosques, government offices and others.

The necessary actions to support this initiative are as follows:

1. Identify buildings owned by KLCH and other government buildings that are suitable in adopting energy efficient systems;
2. Produce lists of main requirements and characteristics towards energy efficient system for its implementation at the buildings owned by KLCH and other government buildings; and
3. Ensure that energy consumption is aligned with the rating programme as shown in Table 4.3.2

Table 4.3.2:
Rating Programme of BEI Labelling for Government or Public Buildings

BEI Labelling for Government or ~~and~~ Public Buildings	
Ratings	**BEI Range kWh/m²/year**
5-Stars	BEI ≤ 100
4-Stars	100 < BEI ≤ 130
3-Stars	130 < BEI ≤ 160
2-Stars	160 < BEI ≤ 250
1-Stars	> 250

Source: Malaysian Standard (MS) 1575 : 2007

IMPLEMENTATION PROPOSAL

CP 4-3.2: INTEGRATING DISTRICT COOLING SYSTEM AND SHARED UTILITY CORRIDOR

The District Cooling System (DCS) is an important infrastructure in implementing energy efficient system for buildings in Kuala Lumpur.

DCS system will produce cold water and channel it from the central source to buildings in an area via plumbing system and network. Although, DCS system is not a new technology in Malaysia, its usage is still not widely adopted in Kuala Lumpur.

An efficient and integrated DCS system is capable to reduce the energy demand and consumption in buildings. It has the potential to be implemented in new development and redevelopment areas.

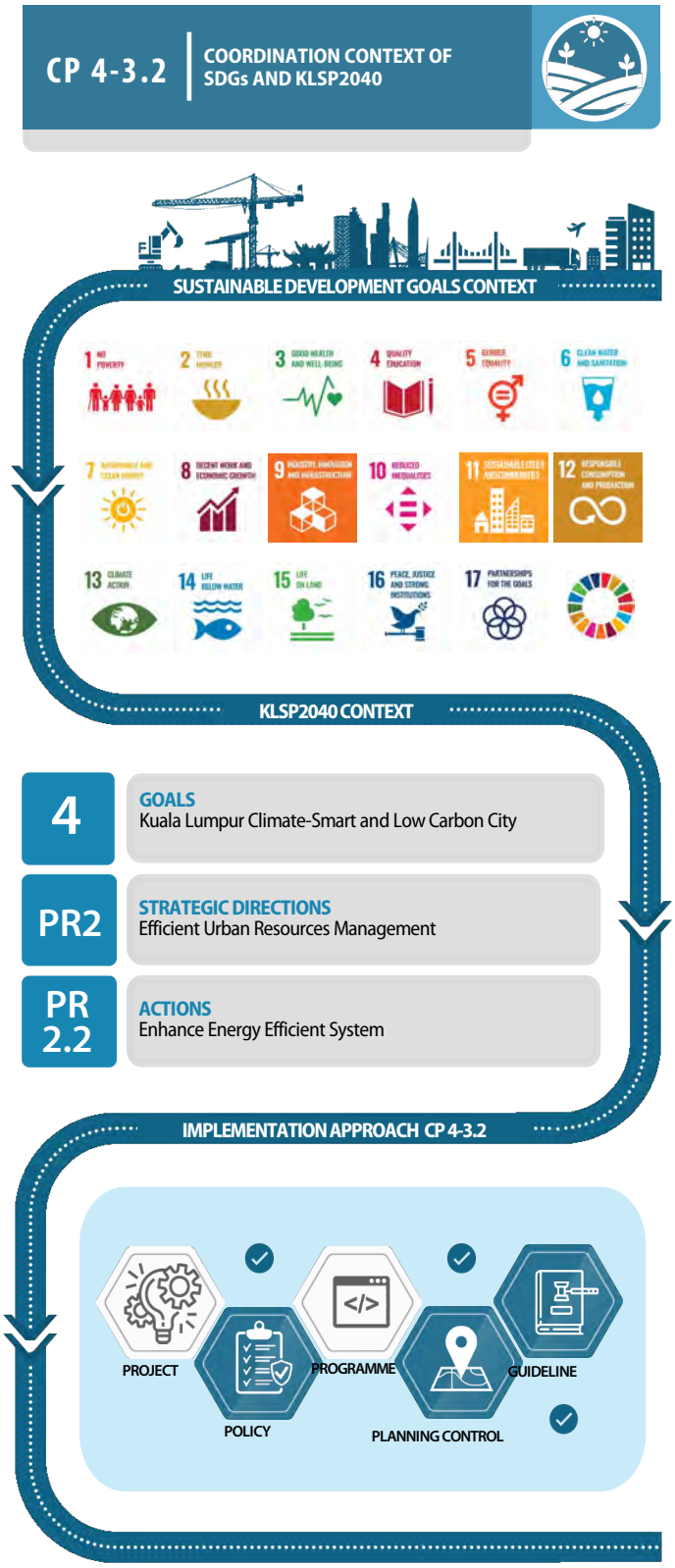
Provision of the common utility trench (CUT) could also contribute towards expanding the application of energy-efficient renewable energy technologies, in addition to the implementation of the DCS System.

Common utility trench (CUT) is a utility cable route facility to ensure the installation of utility cables and pipes is carried out systematically and in an orderly manner without interrupting the surrounding conditions. There is a need for CUT in order to :

1. Facilitate the process of cable installation of utility services;
2. Reduce excavation during utility service cable installation process;
3. Reduce disruption of traffic flow during CUT installation and maintenance process; and
4. Reduce damage to infrastructure and utility facilities such as pedestrian routes and roads.

The provision of CUT can be beautified as open space and green areas to achieve the target of 20 square metres of open space (land) per person in Kuala Lumpur.

The implementation approach of this proposal is through policies, planning controls and guidelines. There are two (2) initiatives proposed for the implementation of CP 4-3.2.



IMPLEMENTATION INITIATIVE 4-3.2A

ENCOURAGE EXTENSIVE IMPLEMENTATION OF THE DISTRICT COOLING SYSTEM (DCS)

DCS can effectively increase energy efficiency, reduce the operating costs of a building and control excessive carbon emissions.

The implementation of DCS needs to be broadly encouraged and ensure it is implementation is part of the planning requirements for a New Development and Redevelopment Scheme.

The necessary actions to support this initiative are as shown in Table 4.3.3.

Table 4.3.3:
Minimum Criteria for the Feasibility of District Cooling System in a Development

Criteria	Details
Land Area	> 3 acres
Plot Ratio	> 1:4
Gross Floor Area	> 50,000 mps

BEST PRACTICE

DISTRICT HEATING AND COOLING SYSTEM OF SHINJUKU, TOKYO

The centre has a cooling capacity of 65,000RT and is one of the largest systems in the world that accommodates more than 20 skyscrapers in the Shinjuku area. This system uses natural gas and the latest technologies such as energy regeneration towards sustainable urban environments through reduced energy consumption.

Based on the best operational efficiency concept, two (2) adjacent DHCs (Shinjuku shin-toshin and Nishi-Shinjuku DHC) began sharing their operations since 2013 through a new underground pipeline, resulting in a reduction of CO2 by 3000t per year. The Shinjuku DHC can also supply electricity if there is an outage and its helps to increase the capacity of the power network in the Shinjuku area.

Source: https://www.hitachiaircon.com/projects/large-scale-installations

IMPLEMENTATION INITIATIVE 4-3.2B

PROVIDE CORRIDOR FOR COMMON UTILITY TRENCH (CUT)

Corridor for Common Utility Trench (CUT) aims to ensure excavation works can be reduced or not required in the future.

The provision of building a new road network should be equipped with a reserve for CUT in accordance with the reserved hierarchy especially in new development and redevelopment areas with the suitable development size.

The necessary actions to support this initiative are as shown in Table 4.3.4.

Table 4.3.4:
Common Utility Trench Reserve Requirements According to Road Hierarchy

Reserved Hierarchy	CUT Reserved Requirements
More than 20 metres (>66 feet)	Three (3) metres and must be provided beside Right Of Way (R.O.W) on the left and right of the road (Dedicated).
Less than 20 metres (<66 feet)	Three (3) metres and shall be provided within Right Of Way (R.O.W) on the left and right of the road (Non-Dedicated).
Rear lanes and side lanes (Reserved <6.1 metres or 20 feet)	Utility corridors can be placed under paved surfaces.
For utility networks that cross arterial roads, collector roads and local roads should be provided with Dedicated Utility Road Crossing (DURC)	DURC need to be provided with a width of 3.5 metres : One (1) DURC per 500 metres for a residential area; and 1.One (1) DURC per 250 metres for industrial and business areas.

PLANNING STRATEGY

SP 4-4: IMPLEMENTING INTEGRATED AND SUSTAINABLE SOLID WASTE MANAGEMENT

SCENARIO OF SOLID WASTE MANAGEMENT IN KUALA LUMPUR

The Solid Waste Management and Public Cleansing Act 2007 (Act 672) came into operation on 1 September 2011 in the Federal Territory of Kuala Lumpur. The Act provides the authority for Federal Government to take over solid waste management and public cleansing from KLCH.

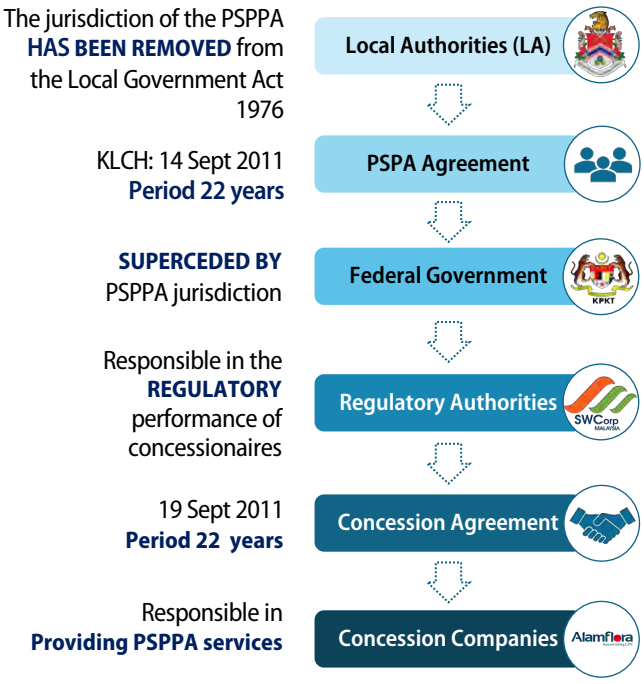
The Federal Government through the Ministry of Housing and Local Government (MHLG) has established the Solid Waste Management and Public Cleansing Corporation (SWCorp). SWCorp is the government enforcement and regulatory agency to administer and enforce solid waste management, public cleansing and other matters related to it.

In line with the enforcement of the legislation, segregation of solid waste at source is a rule that must be complied by all premise owners in Kuala Lumpur. Solid waste segregation is divided into three (3) categories, as follows:

1. Recyclable waste;
2. Organic waste mainly consisting of food waste; and
3. Other wastes not included in the above categories.

The solid waste management and public cleaning model for Kuala Lumpur as shown in Figure 4.4.1.

Figure 4.4.1:
Target for Recycling and Solid Waste Management



BRIEF INFO

8 TYPES OF SOLID WASTE :

- Household Solid Waste;
- Imported Solid Waste (plastic);
- Commercial Solid Waste;
- Institutional Solid Waste;
- Industrial Solid Waste;
- Construction Solid Waste;
- Public Solid Waste; and
- Other Solid Waste designated in the future.

Source : Department of National Solid Waste Management (NSWMD)

Systematic solid waste management will develop a cyclical economy. The implementation of change from the concept of a linear economy to a circular economy can indirectly help recycling activities grow into a sustainable economy.

The concept of a linear linear economy involves the purchase, use and disposal of a material or equipment. Meanwhile, the concept of a circular economy is about using, returning and recreating where solid waste will be recycled. This directly contributes to the development of the recycling sector into a sustainable economy and, in turn, creates a economic culture of recycling that benefits the society and the environment.

The National Solid Waste Management Department (JPSPN) as the Federal Agency, has taken into consideration the element of circular economy in the formulation of the National Cleanliness Policy. This is to enhance the initiative in turning waste as a source of income (waste to money).

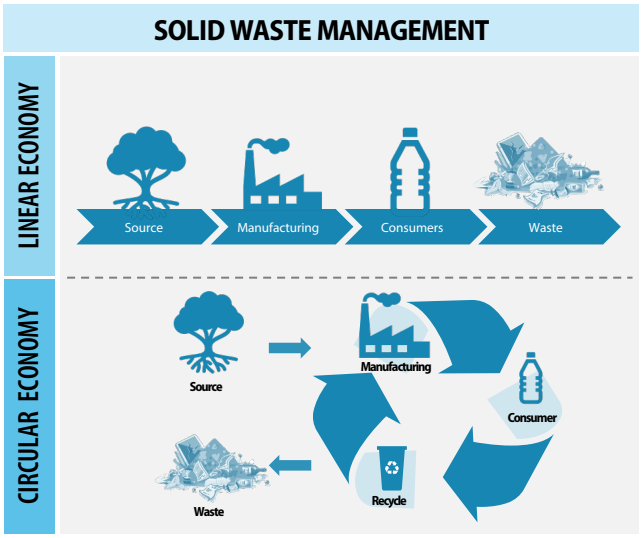
Its implementation is also a major direction towards creating a more effective and integrated Solid Waste Management for the city of Kuala Lumpur by 2040. The solid waste produced can be a source of electricity, production of fertiliser and add value to the economic activities of Kuala Lumpur community.

The 2040 sustainable solid waste recycling and management target is as shown in the Figure 4.4.2.

To realise Kuala Lumpur as an integrated and sustainable solid waste management, four (4) implementation proposals have been formulated under Planning Strategy 4–4, as shown in Figure 4.4.3.

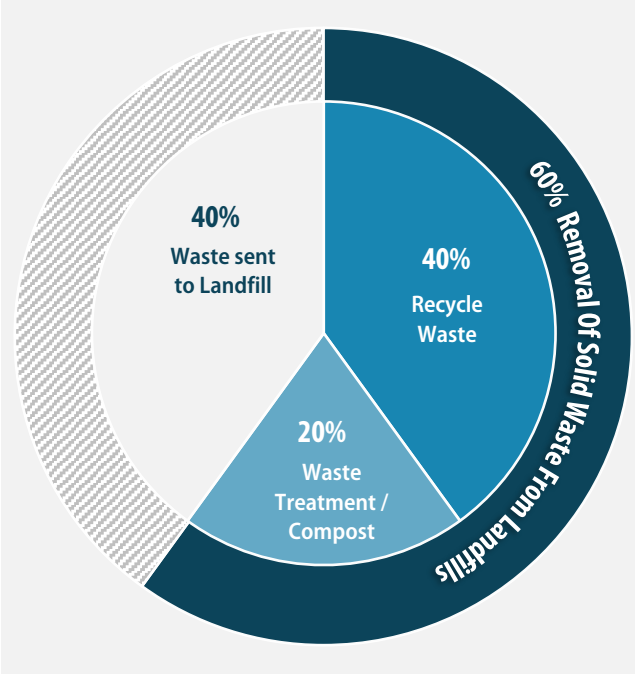
BRIEF INFO

SOLID WASTE MANAGEMENT



Source: Adapted from KLSP2040

Figure 4.4.2:
Kuala Lumpur Sustainable Waste Recycling and Management Target 2040



Source : National Solid Waste Management Department (JPSPN)

Figure 4.4.3 :
Implementation of Proposals for Planning Strategy 4-4

SP 4-4 IMPLEMENTING INTEGRATED AND SUSTAINABLE SOLID WASTE MANAGEMENT

- **CP 4-4.1** Improving Sustainable Solid Waste Management Facilities
- **CP 4-4.2** Empowering Roles of Communities and Stakeholders in Recycle Practices
- **CP 4-4.3** Improving Smart and High Technology Solid Waste Management
- **CP 4-4.4** Strengthening Organic Waste Disposal
- **CP 4-4.5** Strengthening Construction Waste Disposal

IMPLEMENTATION PROPOSAL

CP 4-4.1: IMPROVING SUSTAINABLE SOLID WASTE MANAGEMENT FACILITIES

The capability, efficiency and availability of facilities are the important factors in achieving sustainable solid waste management. The existing solid waste facilities for Kuala Lumpur are at Bukit Tagar Sanitary Disposal Site and Taman Beringin Solid Waste Transfer Station.

The solid waste collected from premises is taken to the Transfer Station in Taman Beringin before sent to Bukit Tagar Sanitary Disposal Site.

However, this existing transfer station at Taman Beringin only provides basic services namely compression process and transition to larger transport trucks to be delivered to Bukit Tagar Sanitary Disposal Site.

Therefore, more effective and integrated solid waste management facilities are required to accommodate the increasing number of solid waste collections in the future.

The development of this new facility is in line with the government's policy to adopt modern and up-to-date technologies in the country's sustainable solid waste management.

This comprehensive development will also support Kuala Lumpur to adopt sustainable solid waste management by 2040.

The implementation approach of this proposal is through projects. One (1) initiative proposed for the implementation of CP 4-4.1.

IMPLEMENTATION INITIATIVE 4-4.1A

DIVERSIFY FUNCTIONS OF EXISTING TRANSFER STATIONS

The planning of the existing transfer stations should be diversified and upgraded by adopting the latest technology in solid waste management. Its implementation will ensure that the functions of the station will become more structured and efficient.

The necessary actions to support this initiative are as follows:

1. Upgrade the transfer station's capacity from 1,700 tons per day to 2,700 tons per day at a new site of 10 hectares (25 acres); and
2. Provide Material Recovery Facility (MRF) which includes the following facilities as follows;
   a. Segregate recycled solid waste by type of waste from the sources that have been segregated;
   b. Segregate recycled materials and organic waste from mixed waste or trash sources;
   c. Digest anaerobically through Anaerobic Digestion Plant for organic waste disposal; and
   d. Provide landscaping waste disposal facility in the form of compost and shredder.

The Draft KLLP2040 has planned development of solid waste management facilities in Kuala Lumpur as shown in Table 4.4.1.

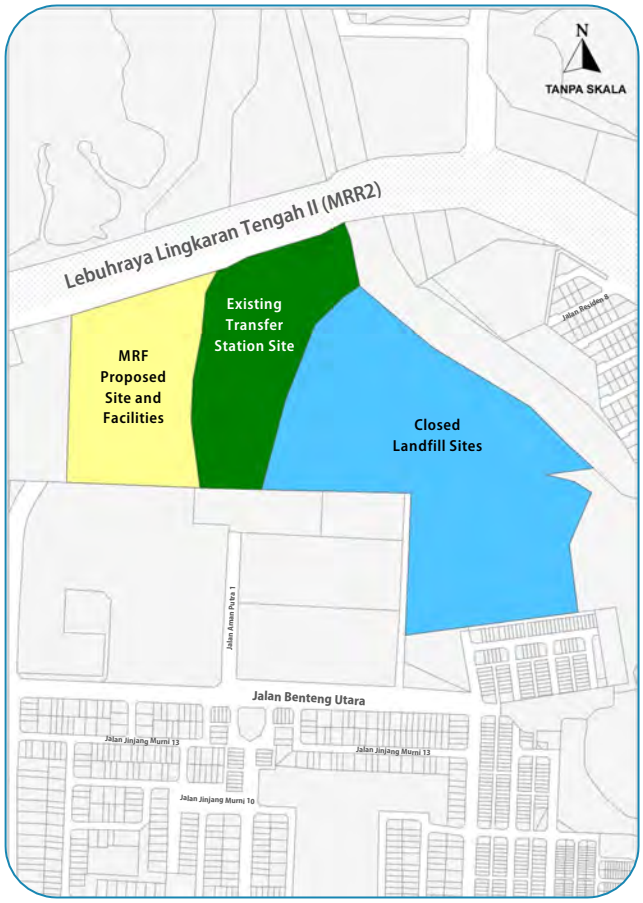
Location : Pusat Bandar Raya, Kuala Lumpur

Metal recycling cages for separate waste collection.

Table 4.4.1:
Planning for development Solid Waste Management Facility in Kuala Lumpur

Location	Status	Capacity
1. Bukit Tagar Sanitary Disposal Site, Hulu Selangor, Selangor (Outside Kuala Lumpur).	Permanent	283 hectares (700 acres)
2. Solid Waste Transfer Station, Taman Beringin (Existing site is to be the location of MRF).	To be Upgraded	10 hectares (25 acres) Current Capacity: 1,700 tons per day and New Capacity: 2,700 tons per day
3. Waste to Energy Plant, Rawang, Selangor (Outside Kuala Lumpur).	Committed	Daily 1,000 tons
4. Proposed Material Recovery Fasility (MRF)	New Proposal	To be decided

Figure 4.4.4:
Plan to Upgrade and Diversify the Functions of Existing Transfer Station



IMPLEMENTATION PROPOSAL

CP 4-4.2: EMPOWERING ROLES OF COMMUNITIES AND STAKEHOLDERS IN RECYCLE PRACTICES

Recycling is a practice that can turn waste into a valuable resource. Apart from that, it can also reduce the consumption of natural materials, generate financial resources and provide social benefits to the local community.

Recycling is also capable of preventing pollution that has an impact to public health. It is also a determinant of a better future to avoid persistent pollution that could affect the lives of the future generations.

This practice also has the potential to promote for the circular economy in the recycling industry in general and solid waste management in particular.

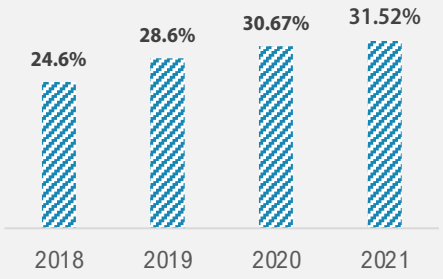
The practice and pattern of the increase in solid waste is expected to continuously increase over time. Therefore, integrated cooperation from all parties is important for the success of this recycling practice awareness programme and campaign among the community.

All parties including the community, government agencies, private sectors, non-governmental organizations (NGOs) and stakeholders need to work together in enhancing this practice.

The implementation approach of this proposal are through project. There are three (3) initiative being proposed for implementation of CP 4-4.2.

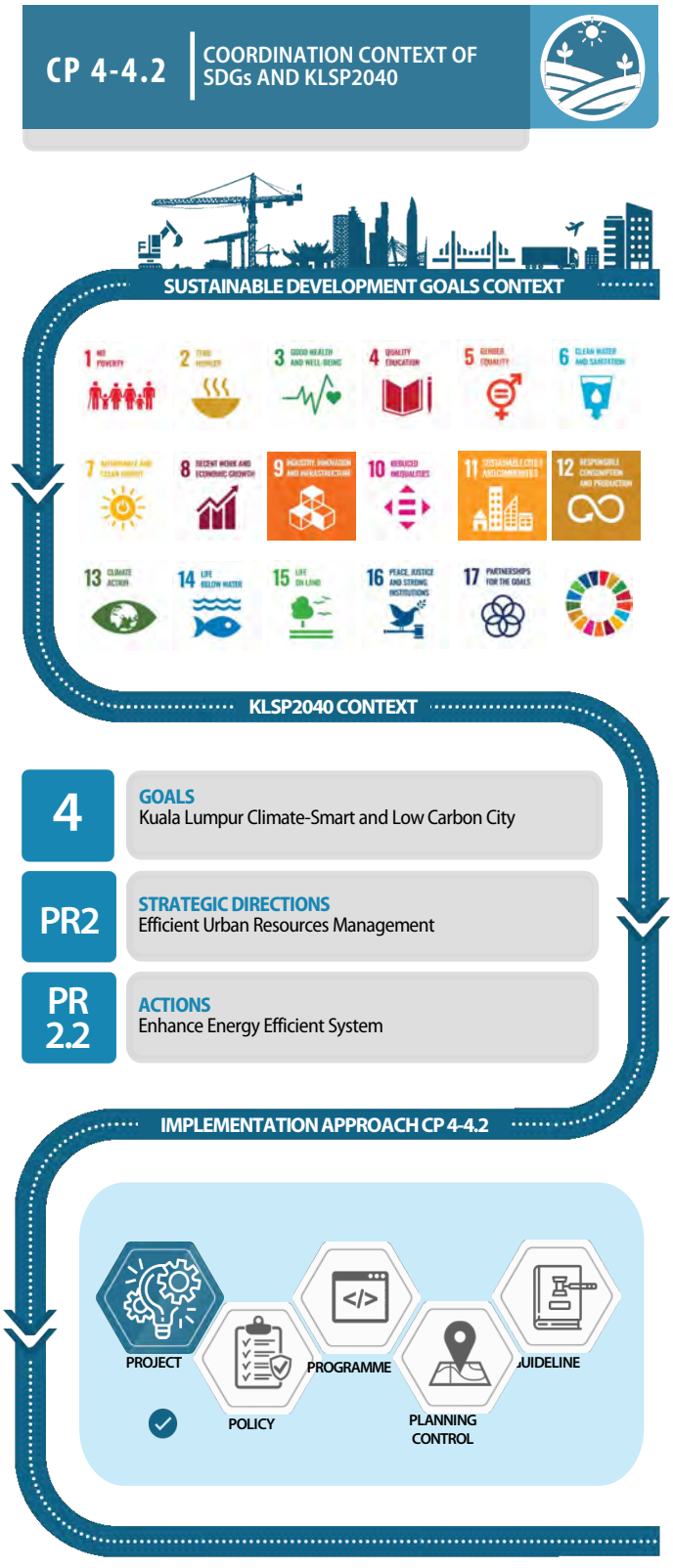
BRIEF INFO

RECYCLING RATE IN MALAYSIA



National recycling rate target of **40 percent** by **2025**

Source: Adapted from Solid Waste Management and Public Cleansing Corporation (SWCorp)



IMPLEMENTATION INITIATIVE 4-4.2A

PROMOTE PROVISON OF COMMUNITY RECYCLING CENTRES

Community recycling centres provide good access for the public to drop off recyclable items near their residential area. Indirectly, it also improve community involvement in sustainable solid waste management and recycling activities.

The Draft KLLP2040 has identified potential areas for the provision of community recycling Centres as follow:

1. Residential Area
   a. Public Housing (PA); and
   b. Projek Perumahan Rakyat (PPR).
2. Community Activity Centres
   a. Multi-purpose Halls; and
   b. Community Centres.
3. Commercial Centres or Shopping Centres
   a. Supermarkets; and
   b. Shopping Malls.
4. Religious Centres.

BEST PRACTICE

WASTE MANAGEMENT AND RECYCLING OF GERMANY

Location : Germany
Source: *https://earth.org/waste-management-germany/*

There are six (6) different bins provided in Germany used to distinguish waste and garbage.

Germany is among the countries that have been successful in waste management and recycling. With the introduction of a recycling scheme, Germany has managed to reduce the amount of waste by 1 million tons annually. Germany recycles 70 percent of the waste produced and this is the highest in the world.

Source: https://earth.org/waste-management-germany/

IMPLEMENTATION INITIATIVE 4-4.2B

IMPROVE IMPLEMENTATION OF PROGRAMMES, CAMPAIGNS AND PROMOTIONS

The implementation of programmes, campaigns and promotions will promote local community involvement as well as providing exposure on recycling practices. This implementation is an effort to create awareness, exposure, education and culture of recycling practices.

The necessary actions to support this initiative are as follows:

1. Encourage the participation of other stakeholders such as non-governmental organisations, corporate bodies and educational institutions as strategic partners of the programme;
2. Implement the 1 Community 1 Recycling (1C1R) programme and zero-waste communities in residential areas especially Public Housing (PA) and Projek Perumahan Rakyat (PPR);
3. Establish a KLCH environmental team to coordinate activities and programmes with the city resident and the local community;
4. Conduct online or physical recycling awareness and education activities among the local community through online or physically;
5. Optimise social media platforms such as website, Facebook, Instagram, Twitter and others to participate in promoting recycling related programmes and promotions in Kuala Lumpur;
6. Create a display concept on KLCH's billboard and social media platforms to attract various community groups. The content is in the form of pictures or videos that consider the recycling practices implemented among the local community;
7. Provide contents focusing on information, complaints and recommendations related to the requirements of recycling practices;
8. Increase access on social media by creating dedicated hashtags. Hashtags must be geared towards the role and contribution of the community in the efforts to enhance recycling and a zero-waste improve recycling; and
9. Recognise stakeholders, community groups, companies or individuals who undertake various efforts and measures in supporting of recycling practice initiatives.

IMPLEMENTATION INITIATIVE 4-4.2C

ESTABLISH STRATEGIC COLLABORATION WITH STAKEHOLDERS

Strategic collaboration with stakeholders is the effort of inculcating recycling practices in local community and to forge a future free from waste.

The necessary actions to support this initiative are as follows:

1. Encourage participation of stakeholders such as non-governmental organisations, corporate bodies and educational institutions as strategic partners of the programme;
2. Establish collaboration with the Federal Territory of Kuala Lumpur Education Department to foster awareness of recycling practices through co-curricular activities at the pre-schools or kindergartens, primary schools, secondary schools and higher learning institutions;
3. Enhance the 5R adoption school programme with KLCH; and
4. Establish cooperation with the local community such as Majlis Perwakilan Penduduk residents' association and Rukun Tetangga (RT) through recycling programmes and 5R.

Location : Public Housing Scheme Sri Kota

Signing Memorandum of Understanding (MOU) by Mayor with non-governmental organisations as strategic partners of recycle programme.

Location: Menara Tabung Haji Lobby
Source: https://www.tabunghaji.gov.my/ms/berita/tue-12042018-1200/program-kitar-semula-di-pejabat-th-dengan-kerjasama-dewan-bandaraya-kuala

Recycling Programme is a between Tabung Haji, the Department of Health and Environment and KLCH with the theme "Together we maintain the cleanliness of the office for the comfort of carrying out our daily duties".

Location: Public Housing Scheme Sri Kota

1 Community 1 Recycling Programme is a collaborative programme between KLCH and Berjaya Enviroparks Sdn Bhd (BEP).

IMPLEMENTATION PROPOSAL

CP 4-4.3: IMPROVING SMART AND HIGH TECHNOLOGY SOLID WASTE MANAGEMENT

Smart solid waste management is defined as the use of digital technology and the Internet of Things (IoT). The enhancement and modernization of solid waste collection infrastructure aligns with the promotion of such technology use. It is also in line with the aspiration to transform Kuala Lumpur into a smart city.

The implementation of smart solid waste management will centrally manage and record all important data such as the number of complaints, collection and transportation information, the amount of solid waste disposed and others. Solid waste management will be more systematic, by allowing for detailed analysis and studies in improving the quality of service in the future.

All solid waste management assets such as waste bins, transport trucks, transfer stations, landfills and others can be connected digitally and through an integrated information networks.

The implementation approach of this proposal is through programmes. One (1) initiative is proposed for the implementation of CP 4-4.3.

Solid Waste collection activities around Kuala Lumpur.

IMPLEMENTATION INITIATIVE 4-4.3A

IMPLEMENT SMART AND HIGH-TECH SOLID WASTE MANAGEMENT SYSTEM

Smart and high-tech solid waste management systems need to be implemented to enable more systematic management and reduce negative impact on the local community as well as the environment. This management system needs to be supported with Internet of Things (IoT) applications.

The necessary actions to support this initiative are as follows:

1. Develop smart applications and sustainable solid waste management system as shown in Figure 4.4.5;
2. Expand the adoption and use of smart waste bins equipped with ultrasonic sensors capable of detecting and transmitting information on collection status, waste quantity and location in real time basis;
3. Equip the compactor truck with the Auto Vehicle Locating System (AVLS);
4. Establish Centralised Command Centre (CCC) as a real-time control and monitoring centre for solid waste collection operations as well as the movement of compact trucks;
5. Integrate smart bin location and compactor truck travel with Radio Frequency Identification Device (RFiD);
6. Encourage the use of waste disposal methods at source through Automated Pneumatic Waste Collection Disposal System, a technology that manages solid waste at the source through underground pipe network infrastructure; and
7. Recognise stakeholders, community groups, companies or individuals who undertake various efforts and measures in supporting the implementation of smart and high technology solid waste management systems as shown in Table 4.4.2.

Figure 4.4.5:
Smart Solid Waste Management System Proposal

Table 4.4.2:
Proposed Incentives to Encourage the Implementation of Smart and High-Tech Solid Waste Management Systems

Proposed Incentives to Promote Automatic Pneumatic Waste Collection System Application
1. Awards and publish the list of sustainable and green properties on the KLCH website
1. Recognise the preferred building for government activities
1. Facilitate GBI rating

Source: Malaysian Standard (MS) 1575 : 2007

IMPLEMENTATION PROPOSAL

CP 4-4.4: STRENGTHENING ORGANIC WASTE DISPOSAL

The process of degradation of food and organic waste disposed off in landfills are the main source of methane gas production. Methane gas is one of the green house gases (GHG) that can cause damage to the ozone layer and contribute to global warming.

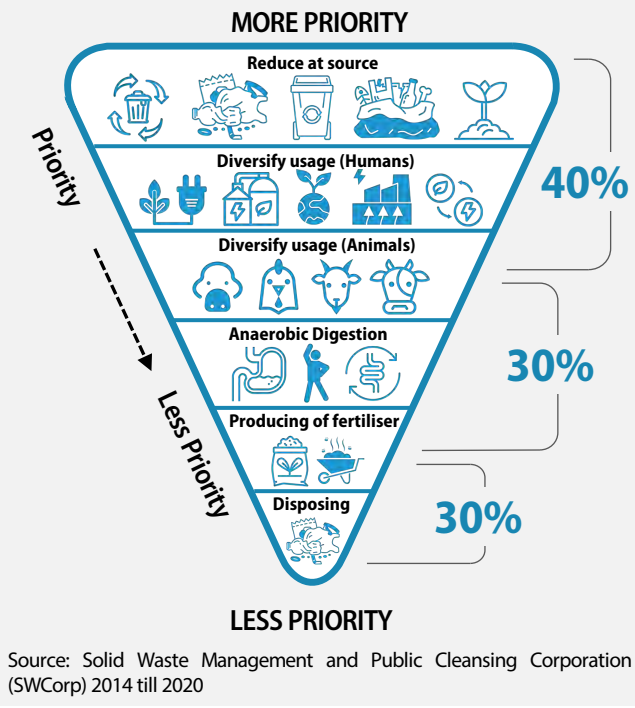
Anaerobic digestion is a process of degradation of organic matter in a closed space by microorganisms without the presence of oxygen. As a result of the degradation process, energy will be stored in organic matter and subsequently converted into flammable biogas and organic fertilisers.

Sustainable organic waste disposal is in line with the National Solid Waste Management Policy which emphasises on comprehensive, cost-effective, sustainable solid waste management and public health protection.

The implementation approach of this proposal is through projects. There are two (2) initiatives proposed for the implementation of CP 4-4.4.

BRIEF INFO

HIERARCHY OF ORGANIC WASTE MANAGEMENT BEST PRACTICES



Source: Solid Waste Management and Public Cleansing Corporation (SWCorp) 2014 till 2020

IMPLEMENTATION INITIATIVE 4-4.4A

PROVIDE ORGANIC WASTE DISPOSAL FACILITIES AT SOURCE

Organic waste disposal should be well managed through the provision of disposal facilities at the source of waste generation site. The Draft KLLP2040 identifies areas or causes that produce high levels of organic waste as a result of the activities of a particular individual or group. The provision of this facility should be implemented as to ensure a clean environment and not detrimental to the environment including public health.

Facilities of organic waste disposal at source potentially to be implemented at wholesale markets, public markets and hawker centres.

The necessary actions to support this initiative are as follows:

1. Identify suitable wholesale markets, public markets and hawker centres for implementation of centralised organic waste disposal facilities;
2. Provide Anaerobic Digestive (A.D) or composting machine facilities of appropriate scale; and
3. Ensure the facilities provided are in accordance with the Malaysian Smart City Indicator Standard (MS ISO 37122:2019).

IMPLEMENTATION INITIATIVE 4-4.4B

DEVELOP DATABASE FOR ORGANIC WASTE GENERATION AT SOURCE

The development of an integrated database is a method to store and manage data related to the generation of organic waste at source. This database is to facilitate the planning and management of organic waste more systematically in the future.

The necessary actions to support this initiative are as follows:

1. Identify main components of an integrated database for organic waste generation;
2. Develop an integrated database for the management of organic waste generation at source;
3. Identify and record data on the amount and type of organic waste generated by day, month or year, existing waste storage places, existing food waste collectors, delivery locations and others; and
4. Strengthen and update organic waste management data at source of waste generation location for reference and future planning.

BRIEF INFO

SEPERATION OF ORGANIC WASTE AT SOURCE

1 The separation of waste generated at the source according to the waste composition such as:

2 The purpose for separation of Solid Waste are:

- Avoid disposal of recyclable materials
- Reduce amount of solid waste sent to landfill
- Reduce national budget for solid waste disposal process

This seperation is based on regulations under the Solid Waste Management and Public Cleansing Act 2007 (Act 672) enforced in the Federal Territory of Kuala Lumpur and Putrajaya, Pahang, Johor, Melaka, Negeri Sembilan, Perlis and Kedah since 1 June 2016.

Source: Alam Flora Sdn Bhd

IMPLEMENTATION PROPOSAL

CP 4-4.5: STRENGTHENING CONSTRUCTION WASTE DISPOSAL

Construction waste is defined as waste generated from activities such as construction, building renovation, demolition, land excavation, building construction, site clearing, road construction and repairing of damaged buildings.

Construction projects usually produce physical waste such as brick shards, excess concrete, cut iron, wood, plastic packaging, box packaging paper, pipe (PVC) and many others. It is disposed of through "bulk disposal" and it uses space at the construction site leading to inefficient construction management.

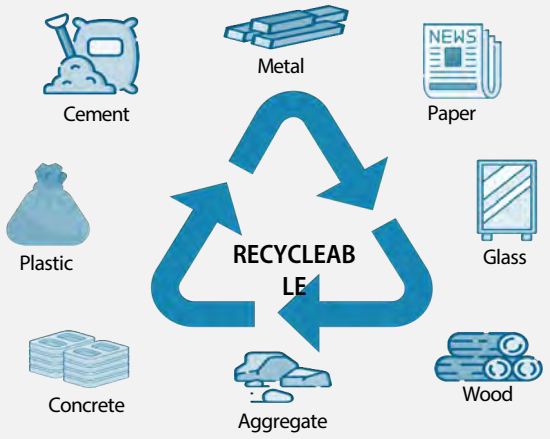
Recycling of this waste normally is not being emphasis. Existing recycling centres focus more on plastic, aluminum cans and paper disposal (daily waste or domestic waste).

Hence, a sustainable construction solid waste management plan and methods needs to be identified in moving towards a more sustainable construction waste management.

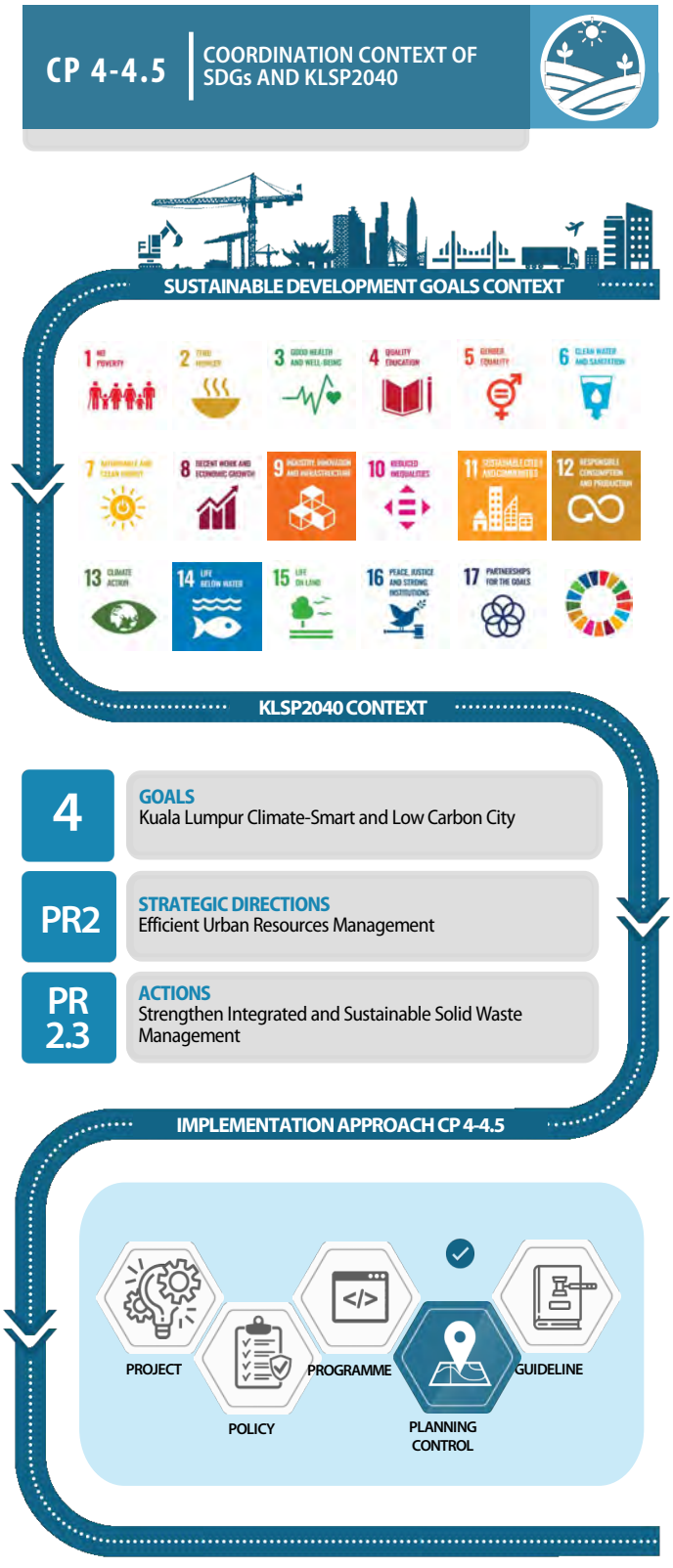
The implementation approach of this proposal is through planning controls. There are two (2) initiatives being proposed for implementation of CP 4-4.5.

BRIEF INFO

TYPES OF RECYCLEABLE CONSTRUCTION SOLID WASTE



Source: Solid Waste Management and Public Cleansing Corporation (SWCorp)



IMPLEMENTATION INITIATIVE 4-4.5A

PROMOTE IMPLEMENTATION OF IBS SYSTEM

Industrial Building System (IBS) is a prefabricated construction technique or building construction method in ensuring the sustainability of the construction sector. The IBS system produces construction components at plants or at construction sites. Subsequently, the components are transfer and installed in the construction sites with minimal labor consumption and thus reducing construction activities.

The use of IBS is able to improve the quality and productivity of construction sector as well as reducing generation of construction waste on site. The IBS is also capable of promoting green technology in the construction sector, reducing carbon emissions, cost-effective and reducing waste during construction.

The necessary actions to support this initiative are as follows:

1. Implement IBS Score which is a systematic and structured calculation method in identifying the usage level of IBS components in a building project;
2. Determine appropriate score standard according to the implementation level to meet the requirements of IBS application criteria. The Draft KLLP2040 proposes the score to be above 70 percent as a benchmark to enhance the usage of IBS in construction sector; and
3. Ensure usage of IBS is controlled through planning control mechanism during the application of Development Order (DO) especially for new developments.

Location : SMK Tiara Permai, Kuala Lumpur

Implementation of IBS at SMK Tiara Permai, Kuala Lumpur.

IMPLEMENTATION INITIATIVE 4-4.5B

STRENGTHEN IMPLEMENTATION OF CONSTRUCTION WASTE MANAGEMENT GUIDELINES

The implementation of this guideline should be strengthened to ensure stakeholders involved will assist in implementing a good and efficient construction solid waste management system.

The stakeholders involved in construction solid waste management include developers, engineers, consultants, architects, urban planners, construction and demolition contractors, collection service contractors and government agencies.

The necessary actions to support this initiative are as follows:

1. Adopt Solid Waste Management Guidelines for new and existing developments;
2. Provide construction solid waste management facilities and services at the construction site;
3. Prepare Construction Solid Waste Management Planning (PPSB) documents; and
4. Ensure implementation of these guidelines is controlled through the planning control mechanism during the application of Development Order (DO) especially for new developments.

The implementation of this guideline must be strengthened to ensure good construction solid waste management system.

PLANNING STRATEGY

SP 4-5: IMPROVING EFFICIENCY OF WATER AND SEWERAGE MANAGEMENT

SCENARIO OF WATER AND SEWERAGE MANAGEMENT EFFICIENCY IN KUALA LUMPUR

An efficient and sustainable management of water supply and sewerage services is essential to cope with growing demand for water, global issues involving climate change, urbanisation and progress of economic development.

New urban development and growth of economic activities have increased the demand for treated water and the need for a more effective sewage treatment system. The efficiency and reliability of a clean water supply system and wastewater treatment are key components in the management of a city.

The water services industry in urbanised areas continues to face issues related to demand, wastage and high non-revenue rates as well as pollution of raw water sources.

The need for more environmentally friendly and sustainable wastewater or waste disposal methods has also become more challenging with rapid urbanisation. Enhancing the accessibility of premises to the Regional Centralised Sewerage System (RSTP) is to be the main strategy towards an effective and integrated sewerage system for Kuala Lumpur.

This planning strategy includes upgrading existing RSTP to meet future demand and widening main sewer pipe network. This is to expand the accessibility of centralised or connected sewerage system in Kuala Lumpur. Water and sewerage services are complementary to the water cycle process and they are closely interrelated.

In order to realise Kuala Lumpur as a city with improved water efficiency and sewerage management, one (1) Implementation Proposal are formulated under Planning Strategy 4–5, as shown in Figure 4.5.1.

BRIEF INFO

SCENARIO OF EXISTING WATER USAGE AND FUTURE TARGET

Year 2020
219 liters/capita/daily
Source: Ministry of Environment and Water

Target for Year 2025
180 liters/capita/daily
Source : Target Ministry of Environment and Water

Target for Year 2040
165 liters/capita/daily
Source : Targets of the United Nations (UN)

Figure 4.5.1:
Implementation of Proposals for Planning Strategy 4-5

SP 4-5 IMPROVING EFFICIENCY OF WATER AND SEWERAGE MANAGEMENT

- **CP 4-5.1** Improving Availability of Non-potable Water Supply Resources
- **CP 4-5.2** Enhancing Elements of Water Saving
- **CP 4-5.3** Developing Project Off River Storage (ORS)
- **CP 4-5.4** Integrating Supply From Langat 2 Water Treatment Plant (WTP) and Upgrade Existing Water Treatment Plant
- **CP 4-5.5** Upgrading Regional Sewage Treatment Plant (RSTP)

IMPLEMENTATION PROPOSAL

CP 4-5.1: IMPROVING AVAILABILITY OF NON-POTABLE WATER SUPPLY RESOURCES

The availability and the usage of water in urban area are referred to two (2) categories, namely treated water and untreated water.

Treated water refers to clean and safe drinking water supplied by water treatment plant after undergoing a systematic and orderly treatment process.

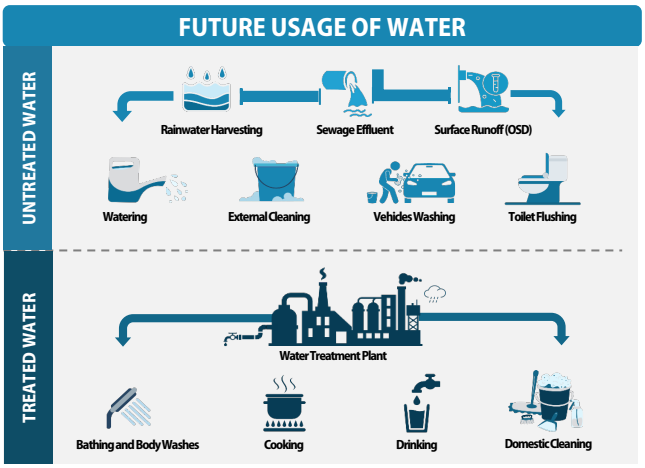
Untreated water is unsafe for drinking, not from domestic sources and does not go through a proper treatment process. Untreated water can be utilised for external cleaning, watering, irrigation and other activities that do not involve cleaning or for feeding purpose.

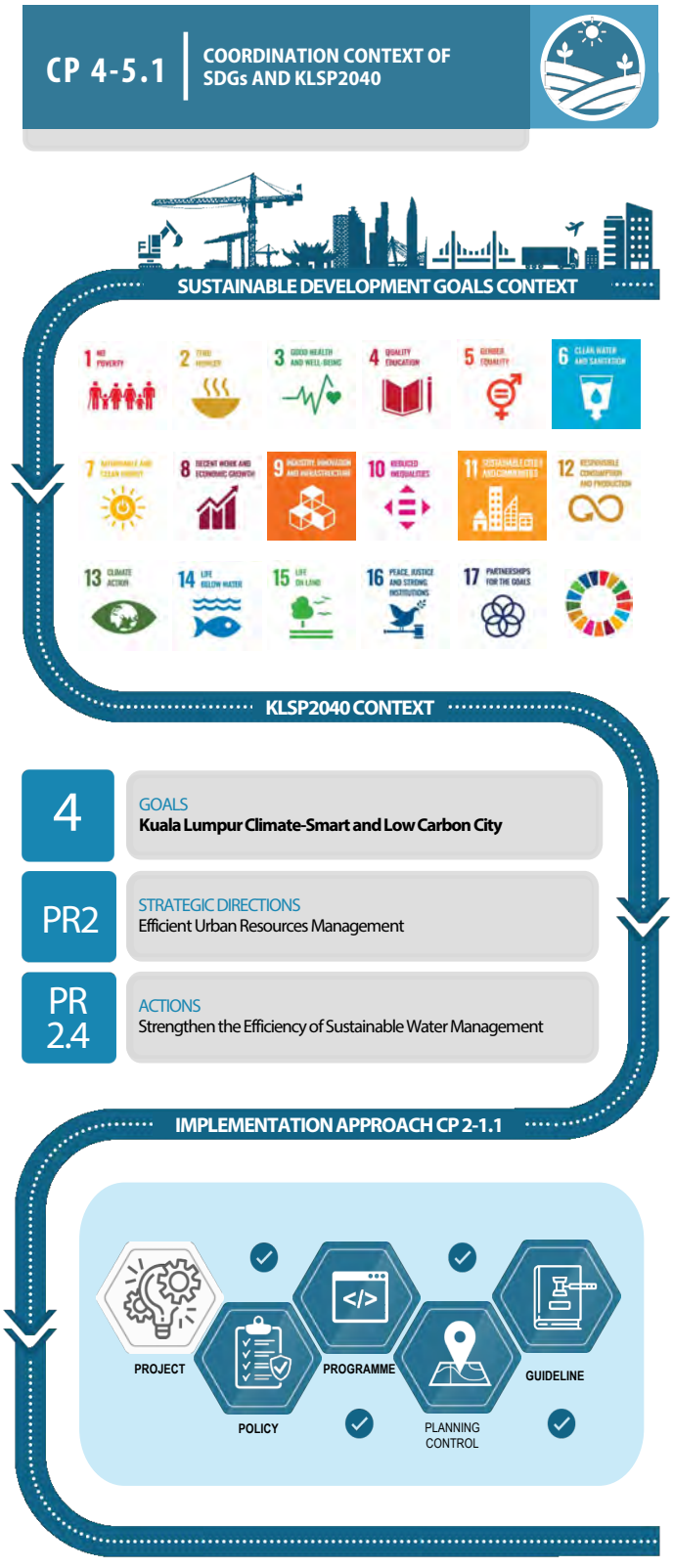
Segregation of resources, infrastructure and usage of water category is the foundation of an efficient and sustainable water management for Kuala Lumpur.

The main strategy towards enhancing the efficiency of sustainable water management is to strengthen the availability of untreated water resources and expand its usage to reduce pressure on the demand of treated water.

The implementation approach of this proposal is through policies, programmes, planning controls and guidelines. One (1) initiative is proposed for the implementation of CP 4-5.1.

BRIEF INFO





IMPLEMENTATION INITIATIVE 4-5.1A

STRENGTHEN AVAILABILITY OF UNTREATED WATER SUPPLY SOURCES

Untreated water supply resources come from sewage wastewater, surface runoff and rainwater harvesting or On-Site Detention (OSD) facilities.

The untreated water supply resources need to be explored in oder to enhance the availability of untreated water in Kuala Lumpur. It is a measure to counter the risk of the city's citizens without a water supply, especially during the dry season. The exploration of such water resources will lead to more efficient and sustainable water management.

The necessary actions to support this initiative are as shown in Table 4.5.1.

Table 4.5.1:
Measures to Strengthen the Availability of Untreated Water Supply Resources in Kuala Lumpur

Untreated Water Resource	Actions	Details
Sewage Wastewater	Implement Wastewater Recycling Programme	Usage of eight (8) Regional Sewage Treatment Plant (RSTP) facilities as sources of untreated water as follows: a. RSTP Pantai; b. RSTP Kerayong; c. RSTP Bunus; d. RSTP Sri Hartamas; e. RSTP Sungai Besi; f. RSTP Bandar Tun Razak; g. RSTP TTDI; and h. RSTP Batu.
Surface Runoff	Provide surface runoff collection and storage facilities	1. Install underground storage facility for surface runoff collection process as a source of untreated water in particular to the following locations: Open area; a.Public area; and b.Non-water-permeable areas such as roads, vehicle parking lots and concrete squares. c.Determine the requirement of retention pond whether community or regional of a development.
Rainwater Harvesting or On-Site Detention	Build and maintain Rainwater Collection System (SPAH) and On-Site Detention (OSD)	Dual plumbing system is an internal plumbing system of a building that has two (2) sources and flows, namely untreated water (SPAH and OSD) and treated water; 1.The segregation of resources and flows can save treated water in the user's daily activities; and 2.The treated water source is only used for bathing and body washing, cooking, drinking and indoor cleaning.

IMPLEMENTATION PROPOSAL

CP 4-5.2: ENHANCING ELEMENTS OF WATER SAVING

Water is an essential resource for life and supports the growth of development. The increase in human population, business activities and development of industrial sector contributed to high rate of water consumption. Therefore, the need to be prudent in water consumption is crucial in ensuring the availability of adequate future water supply in Kuala Lumpur.

Most of the water used by Malaysians are mainly use for cleaning, bathing, washing, cooking, drinking, watering and others. If this excessive use of water can be reduced, it can help to save:

1. Cost and energy for clean water treatment process;
2. Cost of providing water supply support facilities such as water tanks, booster pumps and supply pipe networks; and
3. Cost of environmental conservation such as conservation of catchment areas as well as minimising the need for dam construction.

Water conservation will also enhance the living comfort of urban residents and reduce the burden of water bill payment for consumers.

The implementation approach of this proposal is through policies and programme. There are two (2) initiatives proposed for the implementation of CP 4-5.2.

BRIEF INFO

WATER SAVING MEASURES

IMPLEMENTATION INITIATIVE 4-5.2A

ENCOURAGE USE OF WATER SAVING SYSTEMS AND EQUIPMENT FOR BUILDINGS

The use of water saving systems and equipment for buildings is a physical measure to reduce water consumption especially in the domestic sector.

Buildings in Kuala Lumpur need to be equipped with the necessary systems and equipment towards achieving the goal of water savings.

The necessary actions to support this initiative are as follows:

1. Equip buildings with the installation of Water Saving Devices (WSD); and
2. Implement installation of Dual-Plumbing for new buildings.

Details of the proposed measures and implementation mechanisms to encourage the use of water-saving systems and equipment for buildings are as shown in Table 4.5.2.

IMPLEMENTATION INITIATIVE 4-5.2B

PROMOTE CULTURE AND PRACTICES OF WATER SAVING

Campaigns and promotions to foster a water saving way of life and culture are proactive efforts and steps towards building a society with high water-saving awareness.

The necessary actions to support this initiative are as follows:

1. Encourage participation of stakeholders such as non-governmental organisations, corporate bodies and educational institutions as strategic partners of the programme;
2. Organise continuous water saving programmes, events and campaigns;
3. Cultivate awareness of water-saving practices through co-curricular activities at the preschool or kindergarten, primary school, secondary school and higher learning institutes;
4. Make World Water Day as a platform for organising activities towards fostering awareness of water saving among city citizen; and
5. Optimise use of social media platforms such as website, Facebook, Instagram, Twitter and others in displaying water saving information.

Table 4.5.2:
Proposed Promoting the Use of Water Saving Systems and Equipment for Buildings

Actions	Execution Mechanism
1. Equip Buildings With Water Saving Device (WSD) Installation The reduction and control of water flow through WSD installation are as follows: a. Toilet fittings with a "double flush" system that allows "half water" (3 litres) and "full water" (6 litres); b. Installation of a low-flow aerator; c. Low-flow shower drive; d. Automatic Nozzle Shut Off; e. Water saving washing machine; and f. Water saving dishwashing machine	1. Green Building Index (GBI) rating support for buildings equipped with water management efficiency features including rainwater harvesting, water recycling and water saving equipment; 2. Certification and listing of sustainable and green buildings on the KLCH Sustainable and Green Building website; and 3. Recognition and listing as a preferred building for seminar and gathering of national and international.
2. Implement Dual-Plumbing Installation for New Buildings The use of dual-plumbing with segregation of resources, piping systems and the use of untreated water as well as treated water can enhance water saving consumption at source.	

IMPLEMENTATION PROPOSAL

CP 4-5.3: DEVELOPING PROJECT OFF RIVER STORAGE (ORS)

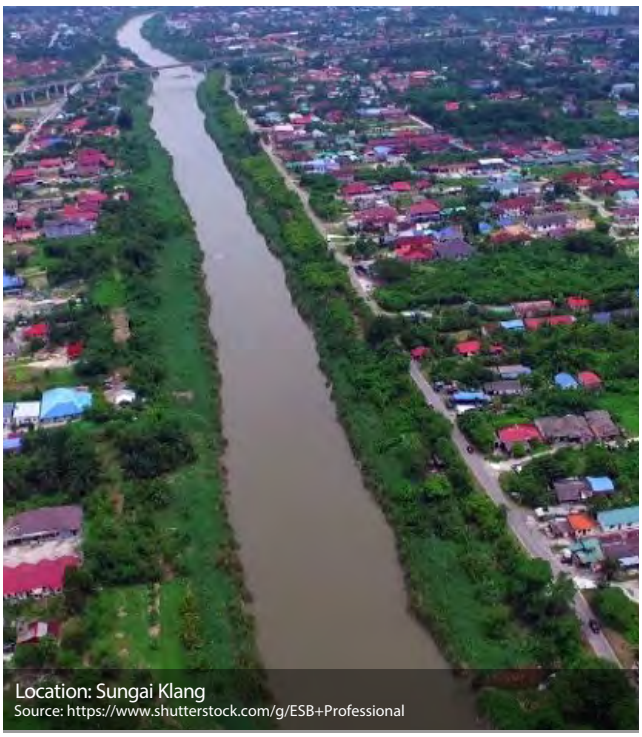
The Off River Storage (ORS) project aims to stabilise river flow and enhance effectively the management of raw water resources.

The main concept for the proposed ORS project is to integrate the existing retention pond and river network in Kuala Lumpur.

The construction of ORS provides an alternative for raw water pumping stations to stop the abstraction of water from the river in the event of contamination. This is because the raw water source will shift to ORS and allow the water treatment plant to continue operating.

Pollution prevention measures is to prevent dirt, debris, oil, harmful metals and others to ensure water source should reach a certain standard for use.

The implementation approach of this proposal is through projects. One (1) initiative is proposed for the implementation of CP 4-5.3.



Sungai Klang as a potential new water source in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 4-5.3A

IDENTIFY CONSTRUCTION LOCATION FOR OFF RIVER STORAGE (ORS)

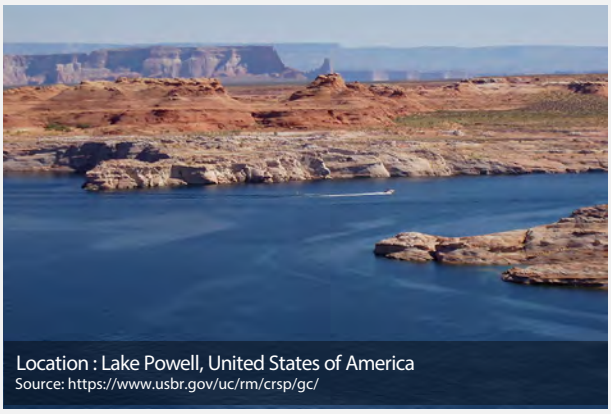
Planning for the construction of water retentions by the riverbank is one of the best efforts in overcoming water supply problem to the city citizens if the raw water source is contaminated.

The necessary actions to support this initiative are as follows:

1. Identify ponds and rivers that have connectivity;
2. Ensure that ponds have an area of more than 10 hectares (24 acres);
3. Ensure that the main river has a large catchment area; and
4. Integrate with Flood Mitigation Plan (RTB).

BEST PRACTICE

EXAMPLE OF RIVER RESERVOIR IN GLEN CANYON, UNITED STATES



Location : Lake Powell, United States of America
Source: https://www.usbr.gov/uc/rm/crsp/gc/

Lake Powell is a reservoir river that stores water to enhance the management of raw water resources more effectively.

Lake Powell is the second largest reservoir in the United States stretching 186 miles long that formed by the waters of Colorado River behind the Glen Canyon Dam.

Lake Powell provides long-term water storage that allows the states located within the Upper Basin of Colorado River such as Wyoming, Colorado, New Mexico, and Utah to use it.

Table 4.5.3:
Proposed Construction Location for Off River Storage (ORS)

Area and size (hectares)	Inset Plan
1. Project Name: ORS Project Sungai Jinjang and Sungai Batu 2. Location Involved: 3. Kolam Nanyang, Sungai Jinjang; a. Kolam Wahyu, Sungai Jinjang; b. Kolam Kampung Delima, Sungai Jinjang; and c. Kolam Batu, Sungai Batu. Acreage: 112.25 hectares (278 acres)	
1. Project Name: ORS Project Sungai Kerayong 2. Location Involved: Tasik Sri Permaisuri, Sungai Kerayong Acreage: 16.61 hectares (41 acres)	
1. Project Name: ORS Project Sungai Gombak 2. Location Involved: Tasik Titiwangsa, Sungai Gombak Acreage: 15.31 hectares (37 acres)	
1. Project Name: ORS Proejct Sungai Kuyoh 2. Location Involved: Kolam Kampung Bohol, Sungai Kuyoh Acreage: 16.85 hectares (41 acres)	

IMPLEMENTATION PROPOSAL

CP 4-5.4: INTEGRATING SUPPLY FROM LANGAT 2 WATER TREATMENT PLANT (WTP) AND UPGRADING EXISTING WATER TREATMENT PLANT

Kuala Lumpur has two (2) Water Treatment Plants (WTPs) namely Bukit Nanas WTP and Wangsa Maju WTP. The Implementation of the upgrading of WTP is required due to the growing needs for domestic water demand.

The suitable upgrading programme of WTP is in line with the exploration of new water resources, namely the Off River Storage (ORS) and groundwater.

The planning of the Langat 2 WTP with a capacity of 2,260 Million Litres per day (MLD) bring benefits and potential for Kuala Lumpur to upgrade the capacity of existing WTP. The Langat 2 WTP developed by Pengurusan Aset Air Berhad (PAAB) will be fully completed by the end of 2023 and capable of supplying clean water to Kuala Lumpur and Selangor.

These three WTPs will be the main facilities of Kuala Lumpur's clean water supply system by 2040.

The implementation approach of this proposal is through projects. One (1) initiative is proposed for the implementation of CP 4-5.4.

Location : Langat 2 Water Treatment Plant
Source: https://www.shutterstock.com/g/ESB+Professional

The Langat 2 Water Treatment Plant provides benefits for Kuala Lumpur to upgrade the existing water treatment plant.

IMPLEMENTATION INITIATIVE 4-5.4A

UPGRADE CAPACITY OF WATER TREATMENT PLANT (WTP) KUALA LUMPUR

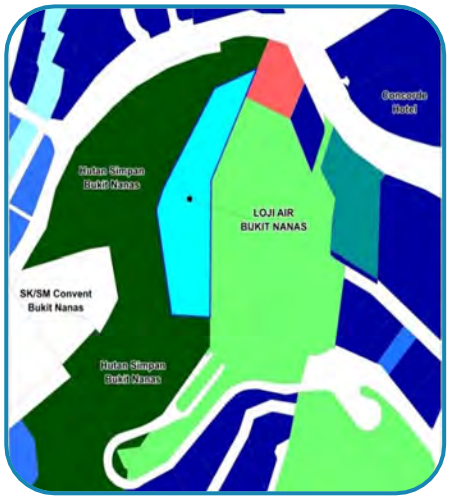
Planning of Project Off River Storage (ORS), Integration of Langat 2 WTP and upgrading of water treatment plant will expand and increase the water supply in Kuala Lumpur. The need for upgrading of existing WTP capacity is necessary by using efficient technology to ensure sustainable water supply.

The necessary actions to support this initiative are as shown in Table 4.5.4.

Location: Bukit Nanas Water Treatment Plant

The Bukit Nanas Water Treatment Plant needs to be upgraded to ensure water supply can be distributed to the city citizens in the future.

Table 4.5.4: Proposed Upgrading of Kuala Lumpur Water Treatment Plant

WTP Upgrading Programme		
WTP	Bukit Nanas Water Treatment Plant	Wangsa Maju Water Treatment Plant
Plan		
Current of Capacity	145 MLD	45 MLD
Capacity 2040	250 MLD	100 MLD
Components Upgrade	Mechanical Equipment; 1.Pumping ability; 2.New raw water pipes; and 3.Improvement of treatment facilities.	

IMPLEMENTATION PROPOSAL

CP 4-5.5: UPGRADING REGIONAL SEWAGE TREATMENT PLANT (RSTP)

Sewerage services are a process to collect, deliver, and treat wastewater as well as maintain sewerage systems and septic tanks. The services are divided into two (2) types which are the direct sewerage system connected to the public sewage treatment plant (centralised or connected) and the individual septic tank.

A centralised sewerage system or also known as a connected system serves to collect and treat sewage from waste generated by certain catchment ponds. It is a system that includes a network of sewage pipes from several sources in an area and subsequently treated at a centralised sewage treatment plant.

The centralised or connected sewerage system is an important infrastructure for an area to ensure the well-being of the residents, livability and environmental sustainability.

This proposal focuses on enhancing the accessibility of premises to the centralised sewerage system by expanding and upgrading the capacity of existing centralised sewage treatment plants to meet future demand.

The implementation approach of this proposal is are through projects. One (1) initiative is proposed for the implementation of CP 4-5.5.

Location: Pantai Regional Centralised Sewage Plant (RSTP) , Kuala Lumpur

The Pantai Regional Centralised Sewage Plant (RSTP) is the largest RSTP in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 4-5.5A

UPGRADE AND RATIONALISE REGIONAL SEWAGE TREATMENT PLANT (RSTP)

The programme to upgrade and rationalise the services of the Regional Sewage Treatment Plant (RSTP) is aimed at ensuring a more economical maintenance and efficient service management.

The necessary actions to support this initiative are as follows:

1. Plan an efficient and sustainable use of infrastructure and technology in all upgrading and rationalisation project of RSTP services;
2. Increase productivity and efficiency of premises accessibility to the RSTP system; and
3. Strengthen control and monitoring framework of RSTP services.

The Draft KLLP2040 has identified eight (8) existing RSTPs that have the potential to be upgraded as shown in the Table 4.5.5.

BEST PRACTICE

RATIONALISATION PROGRAMME OF LANGAT RSTP

The Langat Regional Sewage Treatment Plant (RSTP) has successfully rationalised 164 small sewage plants to 105 kilometres of sewage pipes and 920,000 P.E. treatment capacity.
The RSTP Langat is built on 7.3 hectares of land and uses the expertise of Japan Deep Aeration Method which is able to reduce carbon impact during the Step-Feed Multistage De-Nitrification.

Location : Langat Regional Sewage Treatment Plant (RSTP)
Source: https://www.shutterstock.com/g/zmpixes

Table 4.5.5:
Proposed of Upgrading of Regional Sewage Treatment Plant (RSTP)

Regional Sewage Plant (RSTP)	Year of Implementation	Catchment Area	Capacity (P.E)	
			Current	New
Pantai	2025 (Phase 1) 2030 (Phase 2)	1. Robson Height; 2. Taman Seputeh; 3. Taman Duta; 4. Kampung Bharu; 5. Pusat Bandar; and 6. Taman Halimaton.	1,800,000	2,700,000
Bunus/ Titiwangsa	2025	1. Ampang Hilir; 2. Kampung Datuk Keramat; 3. Taman U-Thant; 4. Kawasan Perumahan Jalan Air Bersih; and 5. Seluruh Kawasan Tadahan Bunus.	1,120,000	1,500,000
TTDI/ Damansara	2020	-	200,000	400,000

Figure 4.5.5:
Proposed of Upgrading of Regional Sewage Treatment Plant (RSTP) (Continued)

Regional Sewage Plant (RSTP)	Year of Implementation	Catchment Area	Capacity (P.E)	
			Current	New
Bandar Tun Razak	2020	1. Taman Midah; and 2. Taman Connaught.	100,000	200,000
Taman Desa/ Lower Kerayong	2020	1. Salak Selatan; 2. Bukit Petaling; 3. Kampung Kerayong; 4. Kampung Baru Salak Selatan; and 5. Kuchai Enterpreneurs Park.	220,000	400,000
Sri Hartamas	2020	1. Kampung Segambut Dalam; 2. Kampung Palimbayan; and 3. Mont Kiara.	153,000	250,000
Sungai Besi	2025 (Phase 1)	1. Kem Tentera Sungai Besi; and 2. Pekan Sungai Besi.	100,000	150,000
Batu	-	1. Kampung Batu Muda; 2. Selayang Baru; 3. Jinjang Utara; 4. Taman Seri Segambut; 5. Jinjang Selatan Tambahan; 6. Kem Batu Kentonmen; 7. Kampung Changkat; 8. Sentul; 9. Kepong; and 10. Batu Caves.	-	1,000,000
Supply (Total New Capacity)				**6,600,00 P.E**
Demand (Projection 2040)		**Commercial :2,309,367 Residential: 2,524,000 Industrial: 371,910**		**4,935,277 P.E**

PLANNING STRATEGY

SP 4-6: ENHANCING SUSTAINABLE DRAINAGE SYSTEMS

SCENARIO OF DRAINAGE SYSTEM IN KUALA LUMPUR

The drainage system in urban areas has transformed from a traditional method that only serves to control flooding to a more integrated design covering elements of flood control, landscaping, urban beautification, recreation and public facilities.

A sustainable urban drainage system is a concept of a long-term drainage system that consider nature and human activity. The approach used involves preserving natural flow, infiltration or penetration of water into the soil, removal or filtration of waste products and removal of pollutants by plant layers.

The frequency of flash floods in Kuala Lumpur due to global climate change is a major social issue that will affect future habitability of the city.

In order to realise Kuala Lumpur as a city with practices sustainable drainage system, one (1) Implementation Proposal is formulated under Planning Strategy 4–6, as shown in Figure 4.6.1.

Location: Taman Tasik Permaisuri

Taman Tasik Permasuri is an example of sustainable drainage system in Kuala Lumpur.

BRIEF INFO

SUCCESS AND ACHIEVEMENT OF SUSTAINABLE URBAN DRAINAGE CONCEPT

Success and Achievement of Sustainable Urban Drainage System
Controlling flood and pollution
Enhances biodiversity
Reducing urban heat and carbon emissions
Increasing the availability of Non-Potable water resources
Expanding public areas, recreation and Green
Improving the level of municipal occupancy

Source: Urban Storm Water Management Manual (MSMA)

Figure 4.6.1:
Implementation of Proposal for Planning Strategy 4-6

SP 4-6	ENHANCING SUSTAINABLE DRAINAGE SYSTEMS
CP 4-6.1	Adopting Eco-friendly Approach in Drainage System

IMPLEMENTATION PROPOSAL

CP 4-6.1: ADOPTING ECO-FRIENDLY APPROACH IN DRAINAGE SYSTEM

The occurrence of flood in Kuala Lumpur is increasingly alarming, hence a more effective and efficient drainage system approach is needed. Flooding occurs when heavy rains increased surface runoff and cause drainage system or a river basin to be unable to function water catchment area. Drainage systems that are not maintained also the cause of flooding.

The eco-friendly drainage system aims to reduce the incidence of flooding and curb water pollution. The main focus of this drainage system is on the management of runoff towards environmental sustainability and improvement in quality of life.

The adoption of eco-friendly drainage systems is required in dense areas where surface runoff management is high and critical. This drainage system also included control approach at source.

The implementation approach of this proposal is through projects. One (1) initiative is proposed for the implementation of CP 4-6.1.

Best practices of eco-friendly drainage systems with the implementation of dry retention pond.

IMPLEMENTATION INITIATIVE 4-6.1A

ADAPT SPONGE CITY CONCEPT DRAINAGE SYSTEM

The concept of a sponge city is an effective approach to create a sustainable urban drainage system. Sponge City is a large-scale rainwater storage that supports the reduction of flash flood risk and increasing the amount of reusable water. It also can reduce the risk of water pollution, heat island problems and increase availability of recreational and green areas including biological diversity.

The necessary actions to support this initiative are as follows:

1. Strengthen Urban Storm Water Management Manual (MSMA) through special standards for parameters and design criteria on development in city centre;
2. Improve the storage capacity of drainage and retention ponds such as the construction of underground pools for redevelopment and new development as well as flood mitigation plans (RTB);
3. Usage of artificial wetlands and natural retention ponds;
4. Plan the continuity of green and blue networks with appropriate width and set back through zone of riverside corridor, lake and pond;
5. Design a porous drainage system which is an infiltration method by plants to prevent contamination of surface runoff;
6. Encourage the implementation of green roofs in buildings especially in the city centre;
7. Adopt water conservation and reuse in buildings such as rainwater harvesting for daily use;
8. Establish monitoring and maintenance mechanisms for all MSMA-built facilities in Kuala Lumpur to make them more effective and systematic; and
9. Implement special initiatives for upgrading the drainage system in Kuala Lumpur as shown in the Table 4.6.1.

Tasik Bohol is one of the retention pond or water bodies that have potential as lakeside zone.

Riverside Zone at Sungai Gombak can become part of the continuous green and blue corridor in Kuala Lumpur.

Taman Tasik Perdana as a potential flood retention pond with capacity of 22.64 cubic metres for the Sungai Bras-Bras catchment area.

Table 4.6.1:
List of Drainage System Upgrading in Kuala Lumpur

Area	Inset Plan	Specific Initiatives
1. Sungai Belankong		1. Deepen Sungai Belankong to accommodate the capacity of runoff and rainwater in the future; and 2. Upgrade Sungai Belankong from earth drain to concrete U-Drain.
2. Sungai Kemunsing (upstream)		1. Redesign and upgrade Sungai Kemunsing to a concrete drainage system (upstream); and 2. Upgrade part of Sungai Kemunsing to concrete drain (L-Shape) starting from Taman Koperasi Polis to Sentul Pasar.
3. Sungai Kemunsing (downstream)		1. Redesign and upgrade Sungai Kemunsing to a concrete drainage system (downstream).
4. Sungai Jinjang		1. Upgrade part of Sungai Jinjang downstream to concrete drain (L-Shape) ; and 2. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries.
5. Sungai Untut		1. Upgrade of Sungai Untut starting from Batu Muda until the confluence of Sungai Gombak.
6. Sungai Toba		1. Upgrade most of the Sungai Toba alignment by widening of concrete drain (L-Shape) ; and 2. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries.

Table 4.6.1:
Upgrade List of Kuala Lumpur Drainage and Drainage System (continued)

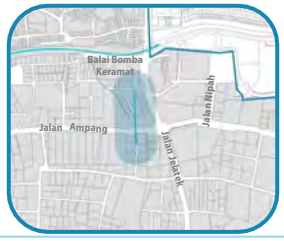
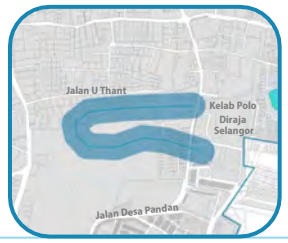
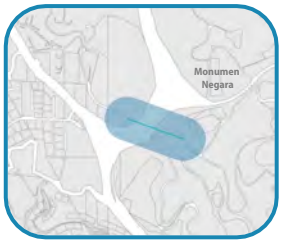
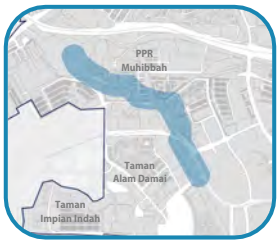
Area	Inset Plan	Specific Initiatives
7. Sungai Kayu Ara		1. Upgrade part of Sungai Kayu Ara starting from the SPRINT highway along Jalan Penchala Hilir to concrete U-Drain; and 2. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries.
8. Monsoon Drain (Kementah)		1. Upgrade monsoon drain from Kampung Pandan to Bandar Malaysia (RMAF Sungai Besi) until the confluence of Sungai Kerayong.
9. Monsoon Drain (Jalan Ampang)		1. Upgrade monsoon drain at Jalan Ampang.
10. Monsoon Drain (Jalan Tun Razak and Jalan U- Thant)		1. Enlarge monsoon drains along Jalan Tun Razak and U-Thant.
11. Drains on the highway		1. Upgrade monsoon drains along the following highways: a. Tuanku Abdul Halim Highway; and b. Sultan Iskandar Highway to Tasik Perdana
12. Flood reservoir		1. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries.

Table 4.6.1:
Upgrade List of Kuala Lumpur Drainage and Drainage System (continued)

Area	Inset Plan	Specific Initiatives
13. Monsoon Drain (Jalan Kampung Pandan and Jalan Travis)		1. Upgrade monsoon drains at Jalan Kampung Pandan and Jalan Travis; and 2. Enlarge monsoon drains along the following roads: a. The main drain at Royal Selangor Club; and b. Jalan 1/76, Desa Pandan.
14. Monsoon Drain (Taman Maluri)		1. Upgrade monsoon drain at Taman Maluri.
15. Sungai Beberas		1. Upgrade Sungai Beberas (downstream).
16. Sungai Anak Air Batu		1. Upgrade Sungai Anak Air Batu starting from the Universiti of Malaya retention ponds to the UM entrance.
17. Sungai Batu		1. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries.
18. Sungai Klang		1. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries.

Table 4.6.1:
Upgrade List of Kuala Lumpur Drainage and Drainage System (continued)

Area	Inset Plan	Specific Initiatives
19. Sungai Penchala		1. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries.
20. Sungai Midah		1. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries. 2. Improve Drainage capacity for implementation of Flood Mitigation (RTB).
21. Sungai Keroh		1. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries.
22. Sungai Bohol		1. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries.
23. Sungai Kuyoh		1. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries. 2. Improve Drainage capacity for implementation of Flood Mitigation (RTB).
24. Sungai Bunus		1. Set a buffer area for the main riverside corridor with a minimum distance of 10 metres from the riverbank to development lot boundaries.

PLANNING STRATEGY

SP 4-7: PROMOTING LOW-CARBON DEVELOPMENT

SCENARIO OF LOW-CARBON DEVELOPMENT IN KUALA LUMPUR

Climate change leads to the occurrence of extreme weather phenomenon such as heavy rains, thunderstorms and heat waves. The frequency and intensity of these extreme weather events are expected to increase in the future and become a threat to the growth of Kuala Lumpur.

Kuala Lumpur needs to address climate change by reducing carbon emissions to improve economic growth, living environment and social well-being.

The Kuala Lumpur Low Carbon Society Blueprint 2030 (KLLCSBP2030) aims to reduce the carbon emission intensity of Gross Domestic Product (GDP) by 70 percent by 2030. The plan also intends to make Kuala Lumpur a Carbon Neutral City by 2050 in line with the Kuala Lumpur Climate Action Plan 2050 (KLCAP2050).

KLSP2040 targets a higher reduction in carbon emission intensity by GDP, which is 85 percent compared to the 70 percent target of KLLCSBP2030. Kuala Lumpur needs to take proactive measures to mitigate the carbon emissions from buildings, transport, waste, carbon sink and community as main contributors of carbon emissions.

In order to realise Kuala Lumpur as a city with low-carbon city, five (5) Implementation Proposal are formulated under Planning Strategy 4–7, as shown in Figure 4.7.1.

BRIEF INFO

NATIONAL COMMITMENT OF CARBON EMISSION REDUCTION 2030

-45%

COP21 • CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE

Malaysia announced a commitment to reduce carbon emission intensity based on GDP up to 45 percent by 2030 at COP21, Paris (2015)

KUALA LUMPUR COMMITMENT FOR 2030, 2040 AND 2050

Targets of carbon emission intensity reduction by GDP

-70% Year 2030	-85% Year 2040	-93% Year 2050
Low-Carbon	**Towards Carbon Neutral**	**Carbon Neutral**
Kuala Lumpur Low Carbon Society Blueprint 2030	Kuala Lumpur Structure Plan 2040	Kuala Lumpur Climate Action Plan 2050

Figure 4.7.1:
Implementation of Proposals for Planning Strategy 4-7

SP 4-7 PROMOTING LOW-CARBON DEVELOPMENT

- **CP 4-7.1** Encouraging Low-Carbon Green Building
- **CP 4-7.2** Increasing Facilities For Electric and Hybrid Vehicles
- **CP 4-7.3** Implementing Low-Carbon Pilot Zone
- **CP 4-7.4** Developing Low-Carbon, Clean and Green Industry
- **CP 4-7.5** Empowering Community Towards Low-Carbon Practices

IMPLEMENTATION PROPOSAL

CP 4-7.1: ENCOURAGING LOW-CARBON GREEN BUILDING

Low-carbon green building is 40 to 50 percent more energy efficient than conventional buildings. It brings benefit in terms of saving in utility bills, reduces building operating costs and yields higher profits. For instance, the rental rate and rental growth of low-carbon green office building is higher compared to conventional office building. Low-carbon green building is able to improve health and comfort of occupants or users of the building.

Low-carbon green buildings have has a higher asset value and market demand. It also provides low implications for the environment and able to assist companies in promoting the environmentally friendly image in the market apart from the benefit of energy efficient.

The implementation of this low-carbon green building is able to attract the interest of domestic and foreign investors, especially multinational companies. The proposal to encourage the development of low-carbon green buildings is important for Kuala Lumpur to achieve the goal of becoming a Carbon Neutral City in 2050.

The implementation approach of this proposal is through policies, programmes, planning controls and guidelines. There are two (2) initiatives proposed for the implementation of CP 4-7.1.

BRIEF INFO

ECONOMIC BENEFIT OF LOW-CARBON GREEN BUILDING

Rental Rate of Green Building (Office)
(In comparison with conventional building)

Additional RM0.50 to RM2.25
square foot

Rental Growth Green Building (Office)

Additional RM0.50 to RM1.00
square foot

Source: Department of Valuation and Property Services, 2014

IMPLEMENTATION INITIATIVE 4-7.1A

INCREASE NUMBER OF LOW-CARBON GREEN BUILDINGS

The number of low-carbon green buildings can be increase through green rating of existing and new buildings.

The necessary actions to support this initiative are as follows:

1. Diversify the methods of recognition approach and green building rating tool and not limited to Green Building Index (GBI), MyCREST (CIDB-JKR), GreenRE (REHDA), Sustainable Energy Low Carbon Building Assessment (SEDA) and Low Carbon Cities Framework (MGTC);

2. Impose planning requirement for all new developments or retrofit that has the potential of being low-carbon green building, especially government institutional buildings and commercial buildings with a total gross floor area of more than 1,000 square metres to obtain a green building certification;

3. Initiate low-carbon green building pilot zone in City Centre and other potential growth centres; and

4. Encourage owners or occupants of low-carbon green buildings in Kuala Lumpur to register, ~~and~~ submit and link building data to inventory systems, including the centralized building reporting systems such as Building Energy Data Online Monitoring System (BEDOS)* for the purpose of continuous monitoring of building performance.

**Note: Building Energy Data Online Monitoring System (BEDOS) is an official building database system provided by Malaysia's Sustainable Energy Development Authority (SEDA) to make it easier for building owners and occupants to report building data and help local governments collect and monitor building data in the area under their administration.*

BRIEF INFO

EXAMPLE OF CURRENT GREEN BUILDING RATING IN THE MARKET (LOCAL AND INTERNATIONAL)

Green Building Index (GBI, Malaysia)

MyCREST (JKR-CIBD, Malaysia)

GreenRE (REHDA, Malaysia)

LEED (United States)

CASBEE (Japan)

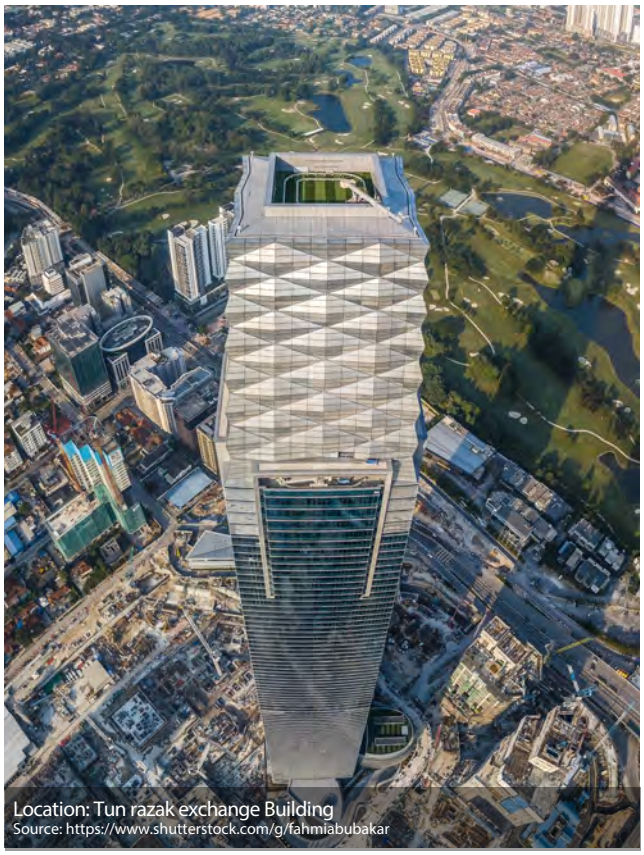
Green Mark (Singapore)

Sustainable Energy Low Carbon Building Assessment (SEDA, Malaysia)

CASBEE Iskandar (Malaysia)

Green Star (Australia)

BREEAM (United Kingdom)



TRX is an example of building with low-carbon green building accreditation

IMPLEMENTATION INITIATIVE 4-7.1B

ADOPT LOW-CARBON GREEN BUILDING FEATURES IN EXISTING AND NEW BUILDINGS

The key features of low-carbon green building include energy and water efficiency, green mobility and sustainable waste management. The adoption of these key features can be implemented in both existing and new buildings.

The key features in a building are as shown in Table 4.7.1.

Table 4.7.1: Features of Low-Carbon Green Building

Aspect	Key Features of Low-Carbon Green Building	Example of Application
Energy	Efficient Building Envelope performance 1. Overall Thermal Transfer Value (OTTV); 2. Roof Thermal Transfer Value, (RTTV); and 3. Visible Light Transmittance, (VLT).	Use of building materials with low thermal transmission (U-value) and an appropriate window-to-wall ratio as well as sun shading devices to reduce heat from the solar radiation.
	Energy Efficient Air Conditioning System	Upgrade conventional air conditioning systems to energy efficient systems such as district cooling systems.
	Passive Design	Ensure the configuration, layout and orientation of the building considers local climate conditions such as sun and wind.
	Energy Efficient Lighting	Utilise energy efficient lamps such as Light Energy Diode (LED) and Compact Fluorescent Lamps (CFL).
	Renewable Energy	Install photovoltaic panels to harness solar energy.
	Energy Management System	Monitor energy consumption through building energy audits to improve building energy performance.
Water	Green Cover	Provide roof garden and vertical green on the building.
	Water Efficiency	Install rainwater harvesting system for rainwater to be collected and reused in buildings.
Mobility	Active Mobility	Provide connected and friendly for pedestrian and micromobility vehicle routes.
	Electric Vehicle Facility or Hybrid	Provide vehicle parking space and charging facility for electric hybrid vehicles.
Waste	Recycling System	Provide recycling bins to facilitate waste separation and waste recycling.

IMPLEMENTATION PROPOSAL

CP 4-7.2: INCREASING FACILITIES FOR ELECTRIC AND HYBRID VEHICLES

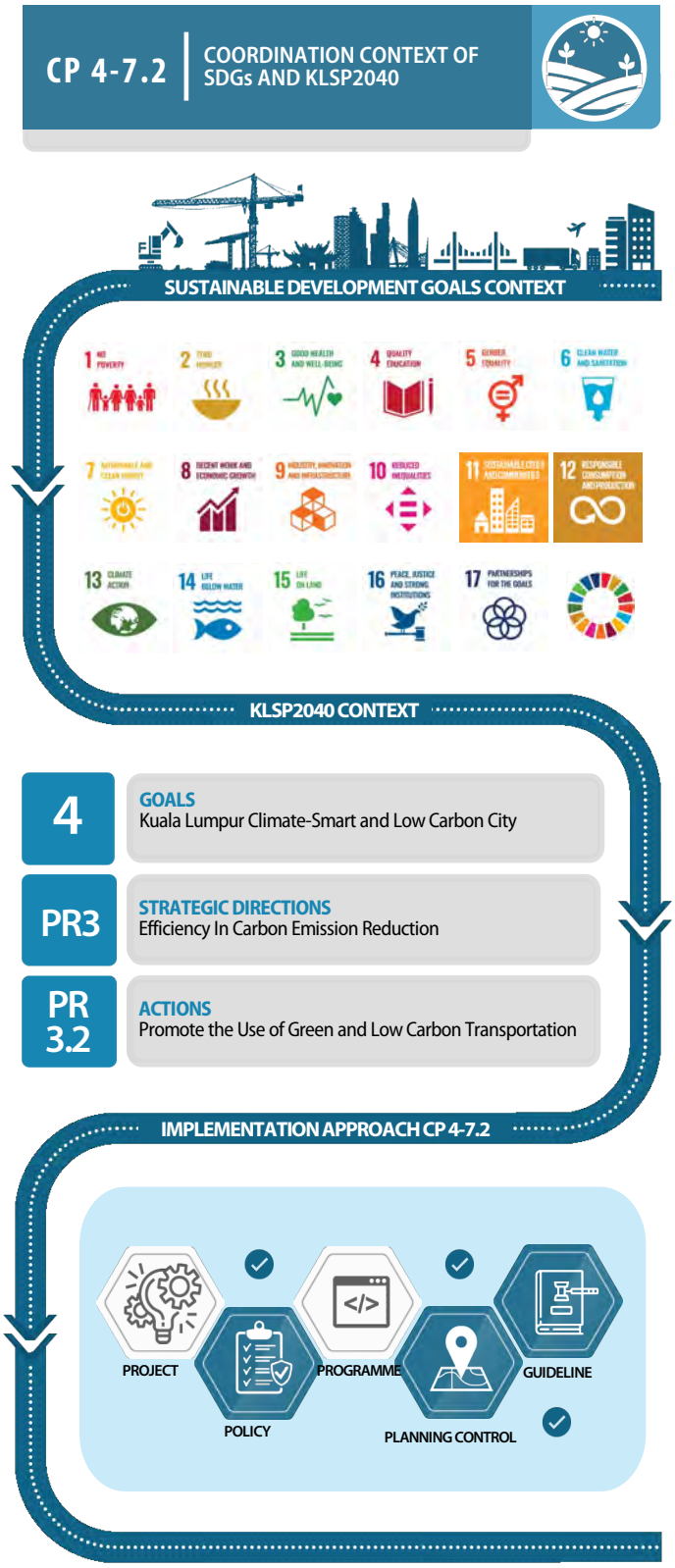
Private vehicles and public transport which use electricity as an alternative fuel are encouraged to reduce carbon emission. Supporting facilities such as electric vehicle charging facilities need to be provided to increase the use of electric vehicles.

The demand for local and international cars has changed with the incentive in usage of electric vehicles and hybrid in the National Automotive Policy 2020 and the National Electric Mobility Blueprint. The execution of the Policy will impact the increased production and use of electric vehicles and hybrid in Kuala Lumpur.

Supporting facilities for electric vehicles and hybrid such as electric vehicle charging facilities currently remains low and most of them are concentrated in major shopping centres only. The increase in electric vehicle charging facilities is important to facilitate and encourage the use of green vehicles as well as support the growth electric vehicle and hybrid in 2040.

The implementation approach of this proposal is through policy, planning control and guideline. One (1) initiative being proposed for the implementation of CP 4-7.2.

Electric vehicle charging facilities in Kuala Lumpur.



IMPLEMENTATION INITIATIVE 4-7.2A

ENHANCE ELECTRIC VEHICLE SUPPORTING FACILITIES

Encourage the use of electric vehicles requiring supporting facilities such as electric vehicle charging facilities with dedicated vehicle parking spaces.

The necessary actions to support this initiative are as follows:

1. Provide guidelines for electric vehicle parking equipped with electric vehicle charging facilities for every new development, especially high-rise commercial and residential developments;

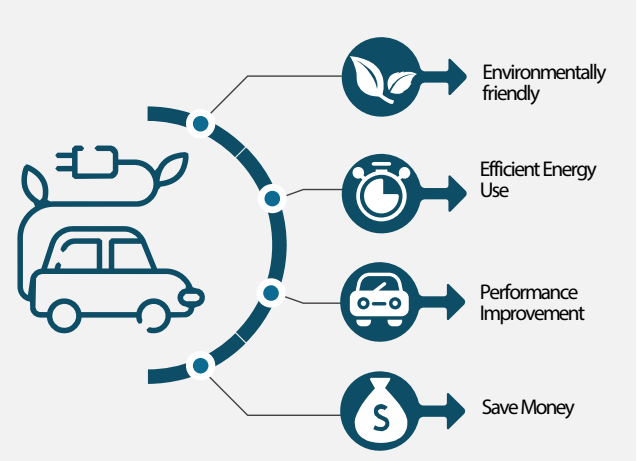
2. Encourage provision of charging facilities for electric vehicles, as follows:
   a. Commercial premise such as supermarkets, shopping centres mall and tourist accommodations;
   b. TPZ and TIZ areas to facilitate the use of green and low-carbon public transport modes such as electric and hybrid buses; and
   c. Major community facility areas such as public parks, stadiums, sports complexes, rest and relaxation stops (R&R) along highways.

3. Introduce special scheme such as vehicle parking rate incentives and prioritise vehicle parking spaces near the entrance for owners of electric vehicles; and

4. Conduct community awareness campaigns such as Drive Electric Week or Drive Electric Earth Day to share the information and benefits about electric vehicles.

BRIEF INFO

ADVANTAGES OF ELECTRIC VEHICLES



BEST PRACTICE

PLANNING GUIDE OF VEHICLE PARKING SPACE

Planning guide for the vehicle parking space provision with electric vehicle charging facilities in Global Major Cities.

Parking Standards (Electric Vehicle Charging Requirements)	Ratio
[1]California, United States	100 : 2
[2]London, United Kingdom	100 : 40
[3]Vancouver Metropolitan, Canada	100 : 20

Source: [1]City of California, [2]Greater London Authority, [3]City of Vancouver

Source:
https://www.shutterstock.com/image-photo/kuala-lumpur-malaysia-aug-23-2019-1490534630
https://www.shutterstock

Electric vehicle charging facilities at Kuala Lumpur shopping centre.

IMPLEMENTATION PROPOSAL

CP 4-7.3: IMPLEMENTING LOW-CARBON PILOT ZONE

An effective implementation of Low-Carbon City development needs to be initiated in areas that have been identified as potential Low-Carbon Pilot Zones and as good practice examples in Kuala Lumpur.

The Draft KLLP2040 has identified four (4) locations as Low-Carbon Pilot Zones. The criteria for determining the low-carbon pilot zones include hierarchy of urban growth centre, location, development concept and feasibility of low-carbon activities.

The implementation of this Low-Carbon Pilot Zone would also encourage the involvement of the local community in Kuala Lumpur towards cultivating a low-carbon lifestyle and achieving a Carbon Neutral City by 2050.

The implementation approach of this proposal is through projects, policies, programmes and planning controls. One (1) initiative is proposed for the implementation of CP 4-7.3.

Location: Wangsa Maju

Wangsa Maju Carbon Neutral Growth Centre is among the key initiatives of Low-Carbon Pilot Zone in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 4-7.3A

IMPLEMENT LOW-CARBON PILOT ZONE

The Draft KLLP2040 has identified four (4) potential sites for the Low-Carbon Pilot Zone programme, namely the City Centre, Wangsa Maju, Kepong and Bukit Jalil areas.

The selection of location is based on the functionality of the location as a City Centre and District Growth Centre that supports the needs of residents or users as well as surrounding activities as shown in Table 4.7.2.

The necessary actions to support this initiative are as follows:

Table 4.7.2: List of Proposed Low-Carbon Pilot Zone of Kuala Lumpur

Location	Development Concept	General Initiative
City Centre	Smart City	1. Apply Internet of Things (IoT) and Artificial Intelligence (AI) technologies to deliver world-class urban services such as lighting, traffic management, environmental cleanliness and security; 2. Encourage communities to use smart building energy systems that are capable of real-time monitoring and managing optimal energy use based on the consumption patterns of each equipment; and 3. Provide Kuala Lumpur city data and information sharing platform to facilitate communication between stakeholders, communities, agencies and investors with KLCH.
Wangsa Maju	Carbon Neutral Growth Centre	1. Promote the use of microgrid energy systems powered by renewable energy; 2. Increase local community participation in community garden and urban farming activities; 3. Provide pedestrian and micromobility vehicle routes that are energy efficient, comfortable and connected to transit stations to help the movement and travel of the local community; 4. Empower recycling programmes and activities in each neighborhood centre; and 5. Plant more trees for shade and greenery.
Kepong	Ecological and Biodiversity City	1. Maintain and extend connection between open space and main water bodies in Kepong. This will form a wide and connected network of regional parks for the purposes of recreation, biodiversity and carbon absorption. (The proposed areas are Taman Tasik Metropolitan Kepong, Kolam Intan Baiduri, Kolam Sri Utara, Kolam Nanyang, Kolam Taman Wahyu, Tasik Kampung Batu and Taman Tasik Metropolitan Batu); and 2. Grow and diversify more tree species to increase green cover. *Note: The proposed area is also potentially connected to the Taman Botani FRIM and Hutan Simpan Kekal Lagong, Selangor*
Bukit Jalil	Sustainable Sport Hub	1. Ensure application of energy efficient systems in sport complexes and sport facilities such as lighting and LED display; 2. Introduce incentive scheme of ticket discount for visitors who take public transport to the Bukit Jalil Sport Complex; 3. Improve public transport and facilities for electric vehicle; and 4. Encourage the installation of rainwater harvesting systems for the maintenance of field, landscaping and other facilities.

IMPLEMENTATION PROPOSAL

CP 4-7.4: DEVELOPING LOW-CARBON, CLEAN AND GREEN INDUSTRY

The usage of green technology and industrial building with the concept of 'Green and Smart' should be encouraged to establish low-carbon and green industrial development in Kuala Lumpur.

The resource and energy consumption through the application of the 'Waste to Energy' concept, especially for manufacturing industrial cluster needs to be optimised. This concept is based on principle of a circular economy that promotes the use and generation of renewable energy. It encourages the reuse of industrial waste to generate energy sources hence producing a low level of waste.

The development of low-carbon, clean and green industry need to be planned comprehensively to achieve Kuala Lumpur's goal of becoming a Carbon Neutral City by 2050.

The implementation approach of this proposal is through policies, planning controls and guidelines. One (1) initiative is proposed for the implementation of CP 4-7.4.

BEST PRACTICE

EXAMPLE OF LOW-CARBON INDUSTRY IN CZECH REPUBLIC, EUROPE

A view of technology park area and industrial factories that use low-carbon industries.

IMPLEMENTATION INITIATIVE 4-7.4A

ENCOURAGE EXISTING AND NEW LOW-CARBON, CLEAN AND GREEN INDUSTRIES

Existing and new industrial activities need to shift to the low-carbon, clean and green concept. Its industrial operation needs to focus on the use of green technology and improve energy efficiency to manufacture cleaner products.

The Draft KLLP2040 has identified areas for implementation of low-carbon industries in Land Use Zone of Industrial (IP), Land Use Zone of Mixed Industrial Development (MXI) and Land Use Zone of Technology Park (TP).

Industrial activities that are permissible to operate in the selected areas such as in villages need to take the same approach.

The steps to support this initiative can be achieved by considering the main characteristics of low-carbon green buildings and several specific low-carbon, clean and green industry initiatives that have been identified as efforts to improve energy efficiency and the manufacturing of cleaner products as shown in Table 4.7.3.

The necessary actions to support this initiative are as follows:

Table 4.7.3:
Specific Initiatives to Enhance Energy Efficiency and Cleaner Production for Existing and New Industries in Kuala Lumpur

Specific Initiatives for Low-Carbon, Clean and Green Industry
Green Product
1. Design environmentally friendly products to reduce unnecessary product packaging;
2. Limit the use of non-recyclable packaging; and
3. Ensure products receive Green Product Certification such as MyHijau introduced by the Malaysian Green Technology and Climate Change Corporation (MGTC) Malaysia to manufacture products that meet internationally recognised environmental and ecological standards.
Sustainable Energy
1. Use of intelligent lighting systems such as automatic lighting control to dim lights when lighting is no longer needed;
2. Use of energy efficient manufacturing equipment (electric motors, pumps, boilers and furnaces); and
3. Use of photovoltaic and solar thermal systems to save energy.
Water Efficiency
1. Reuse of rainwater and treated wastewater for industrial activities, manufacturing processes, workshops and machinery cleaning.
Green Mobility
1. Encourage staff to use public transport services (bus and rail); and
2. Transition to greener hybrid modes of freight transportation.
Sustainable Waste Management
1. Practice waste reduction and waste recycling at source on a scheduled and periodic basis;
2. Apply the concept of a circular economy to promote the recycling of waste in material chain; and
3. Promote the energy recovery such as electricity, heat, biogas or biodiesel from waste.

IMPLEMENTATION PROPOSAL

CP 4-7.5: EMPOWERING COMMUNITY TOWARDS LOW-CARBON PRACTICES

Empowering the community towards low-carbon pratices is important and should be fostered and encouraged through the provision of infrastructure facilities that support awareness programmes and enhance low-carbon behaviour in the society.

Low-carbon practices refer to a sustainable lifestyle that makes possible a reduction in the carbon footprint. Examples of low-carbon practices include energy conservation, recycling practices, shifting to a minimalist lifestyle and selecting low-carbon modes of transportation such as walking, cycling and using public transport.

Enhancing community facilities to promote the involvement and participation of the public in low carbon programmes as well as low-carbon education campaigns is important for Kuala Lumpur to create a low-carbon society and achieve the goal of a Carbon Neutral City in 2050.

The implementation approach of this proposal is through projects and programmes. One (1) initiative is proposed for the implementation of CP 4-7.5.

Low-carbon community programme can foster sustainable practices and lifestyles.

IMPLEMENTATION INITIATIVE 4-7.5A

IMPROVE COMMUNITY FACILITY AND AWARENESS OF LOW-CARBON

Facilities and public awareness of low-carbon practices need to be improved to support low carbon practices such as composting and recycling programmes as well as low carbon education campaigns, and campaigns for the use of photovoltaic panel systems.

The Draft KLLP2040 has identified facilities and measures to intensify low carbon practices. The selection of these facilities considers the function of the facilities as a focus area for residents or users. The facilities that have been identified are community centre, public hall, public market and hawker centre as shown in the Table 4.7.4.

The necessary actions to support this initiative are as follows:

Implementation of a low-carbon community programme in Kuala Lumpur.

Table 4.7.4:
Measures that Could Enhance the Facilities to Encourage the Involvement of the Public In Low-Carbon Community Activities and Programme in Kuala Lumpur

Community Programme and Public Hall	Community Centre	Public Hall	Public Market	Hawker Centre
1. Implement and strengthen the awareness programme on low-carbon practices in the community;	✓	✓	✓	✓
2. Establish a low-carbon neighborhood association;	✓	✓		
3. Develop new climate projects for children and youth;	✓	✓		
4. Provide conducive and sufficient facilities;	✓	✓	✓	✓
5. Establish local community-based recycling centres;	✓		✓	
6. Provide facilities for the collection of organic waste or food waste to support composting activities for producing fertiliser and recycling of cooking oil;			✓	✓
7. Plant shade trees as an effort to increase local greenery; and	✓	✓	✓	✓
8. Review rental rate of facilities after the low-carbon community programme has been carried out.			✓	✓

THE SUMMARY

GOAL 4 : STRENGTHENING ON THE DEVELOPMENT OF KUALA LUMPUR AS A SMART CLIMATE AND LOW-CARBON CITY

Various initiatives and implementation approaches have been proposed for Goal 4 towards strengthening on the development of Kuala Lumpur as a smart climate and low carbon city can be realised.

The planning and implementation of Goal 4 in the Draft KLLP2040 considers the SDGs, proposal of KLSP2040 and other national development policies which are detailed through projects, policies, programmes, planning controls and guidelines.

The proposed strategies, initiatives and implementation approaches emphasis climate change, which has physical, social, and economic implications for creating a sustainable and resilient environment against the effects of climate change and disaster risk.

Table 4.1 shows a summary of the planning strategy and implementation proposal for Goal 4.

Table 4.1:
The Summary of Planning Strategy and Implementation Proposal of Goal 4

Planning Strategy	Implementation Proposal	Implementation Approach				
		Project	Policy	Programme	Planning Control	Guideline
SP 4-1	CP 4-1.1	1	-	1	-	-
	CP 4-1.2	1	-	1	-	-
	CP 4-1.3	1	-	1	1	-
	CP 4-1.4	1	-	1	-	1
	CP 4-1.5	1	-	1	-	-
	CP 4-1.6	1	-	1	-	-
SP 4-2	CP 4-2.1	1	-	-	-	-
SP 4-3	CP 4-3.1	-	1	-	-	-
	CP 4-3.2	-	1	-	1	1
SP 4-4	CP 4-4.1	1	-	-	-	-
	CP 4-4.2	1	-	-	-	-
	CP 4-4.3	-	-	1	-	-
	CP 4-4.4	1	-	-	-	-
	CP 4-4.5	-	-	-	1	-
SP 4-5	CP 4-5.1	-	1	1	1	1
	CP 4-5.2	-	1	1	-	-
	CP 4-5.3	1	-	-	-	-
	CP 4-5.4	1	-	-	-	-
	CP 4-5.5	1	-	-	-	-
SP 4-6	CP 4-6.1	1	-	-	-	-
SP 4-7	CP 4-7.1	-	1	1	1	1
	CP 4-7.2	-	1	-	1	1
	CP 4-7.3	1	1	1	1	-
	CP 4-7.4	-	1	-	1	1
	CP 4-7.5	1	-	1	-	-
TOTAL		**16**	**8**	**12**	**8**	**6**

GOAL 5

FOCUSING DEVELOPMENT OF KUALA LUMPUR AS AN EFFICIENT AND ENVIRONMENTAL-FRIENDLY MOBILITY CITY

GOAL 5

FOCUSING DEVELOPMENT OF KUALA LUMPUR AS AN EFFICIENT AND ENVIRONMENTAL-FRIENDLY MOBILITY CITY

Transportation system is an important sector to ensure the sustainability and to support development in Kuala Lumpur. This goal will include the planning of a comprehensive, integrated and connected transport system as an effort to ensure an efficient and sustainable level of mobility in Kuala Lumpur.

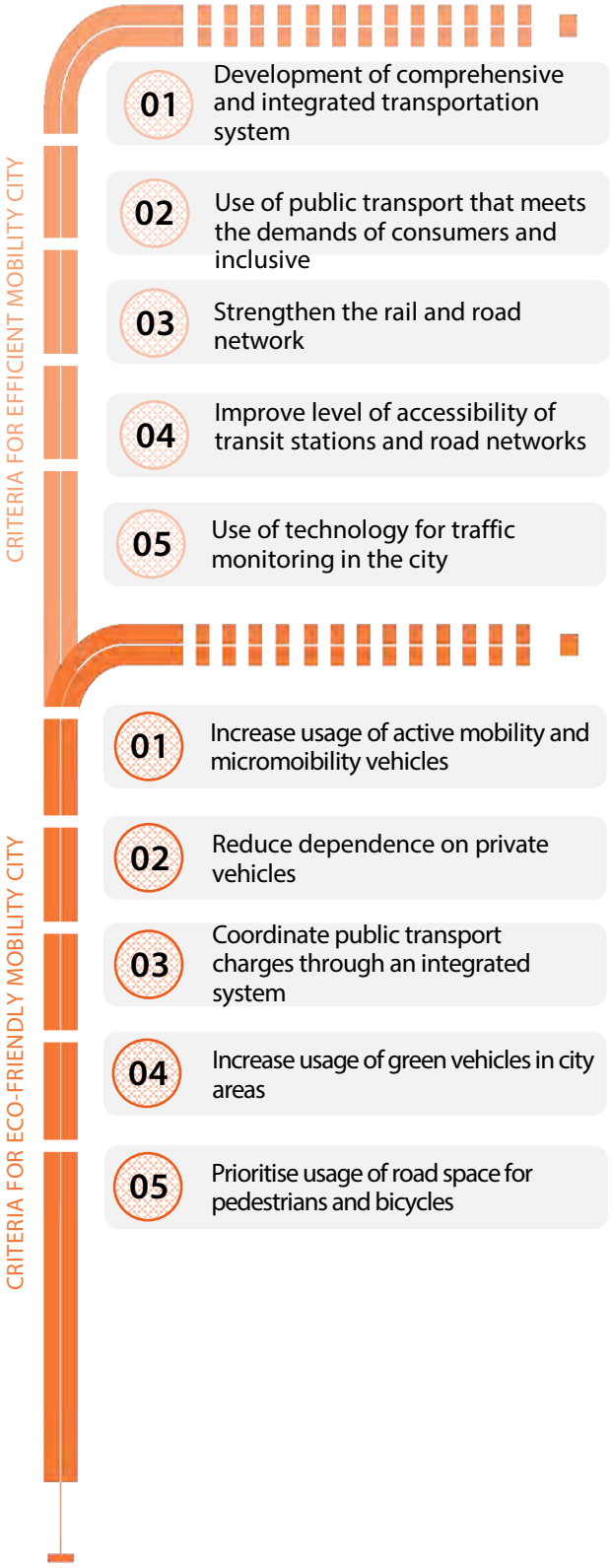
An efficient and environmental-friendly mobility should include various modes of transportation such as public transport, private vehicles and active mobility. The availability of various modes of transportation will increase the level of accessibility in Kuala Lumpur.

The criteria for a mobility efficient city emphasise the development of a comprehensive and integrated transportation system, use of public transport that meets the demands of consumers and is inclusive, strengthening the rail and road network, improvement in the level of accessibility of transit stations and road networks as well as the use of technology for traffic monitoring in the city.

The criteria for an eco-friendly mobility city emphasise increased usage of active mobility and micromobility vehicles, reduced dependence on private vehicles, coordinating public transport charges through an integrated system, increased usage of green vehicles in city areas and prioritising usage of road space for pedestrians and bicycles.

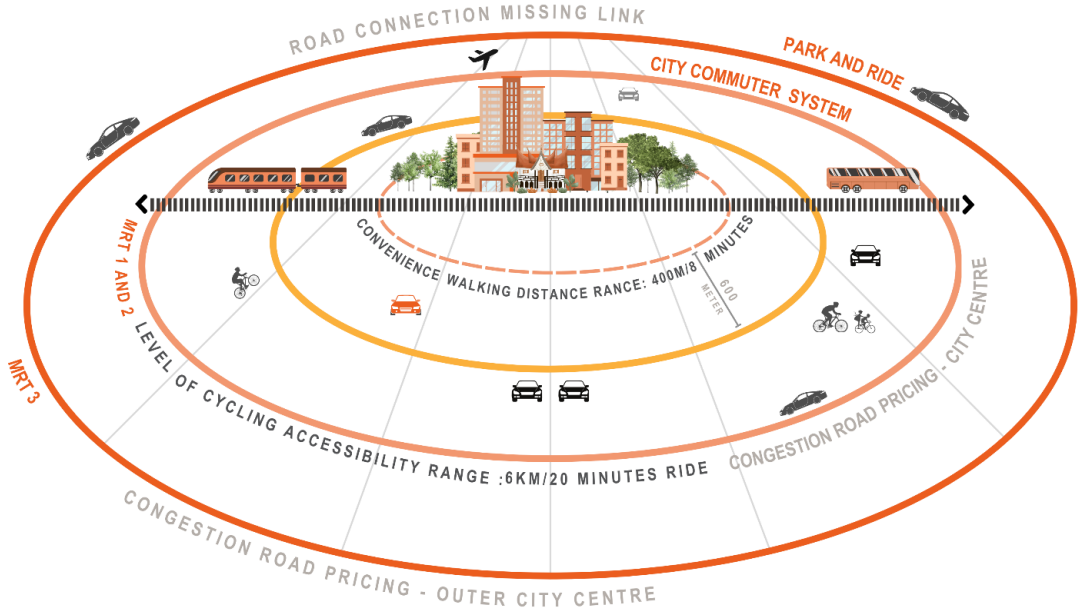
Figure 5.1 lists the main criteria that need to be implemented as a focus to empower the development of Kuala Lumpur as an Efficient and Eco-friendly Mobility City.

Figure 5.1:
Criteria for Efficient Environmental-friendly Mobility City



PUBLIC TRANSPORT AND PRIVATE VEHICLES MODAL SPLIT IN KUALA LUMPUR IN 2040.

Figure 5.2:
Scenario of Transport Modal split in Kuala Lumpur by 2040



LEGEND:

400 metres Transit Planning Zone (TPZ)

600 metres Transit Influenced Zone (TIZ)

The use of public transport should be increased as an important effort to achieve the target of public transport modal split of 60 percent in 2030 and 70 percent by 2040.

The achievement of public transport modal split target depends on the expansion of rail transport planning, bus services and continuity of first and last mile network. The provision of supporting facilities and infrastructure such as pedestrian and micromobility vehicle routes is in line with the direction of achieving an active mobility mode in Kuala Lumpur.

The Draft KLLP2040 aims to minimise movement of private vehicles in Kuala Lumpur by 2040. Figure 5.2 shows the proposed future transportation modal split scenario in Kuala Lumpur by 2040.

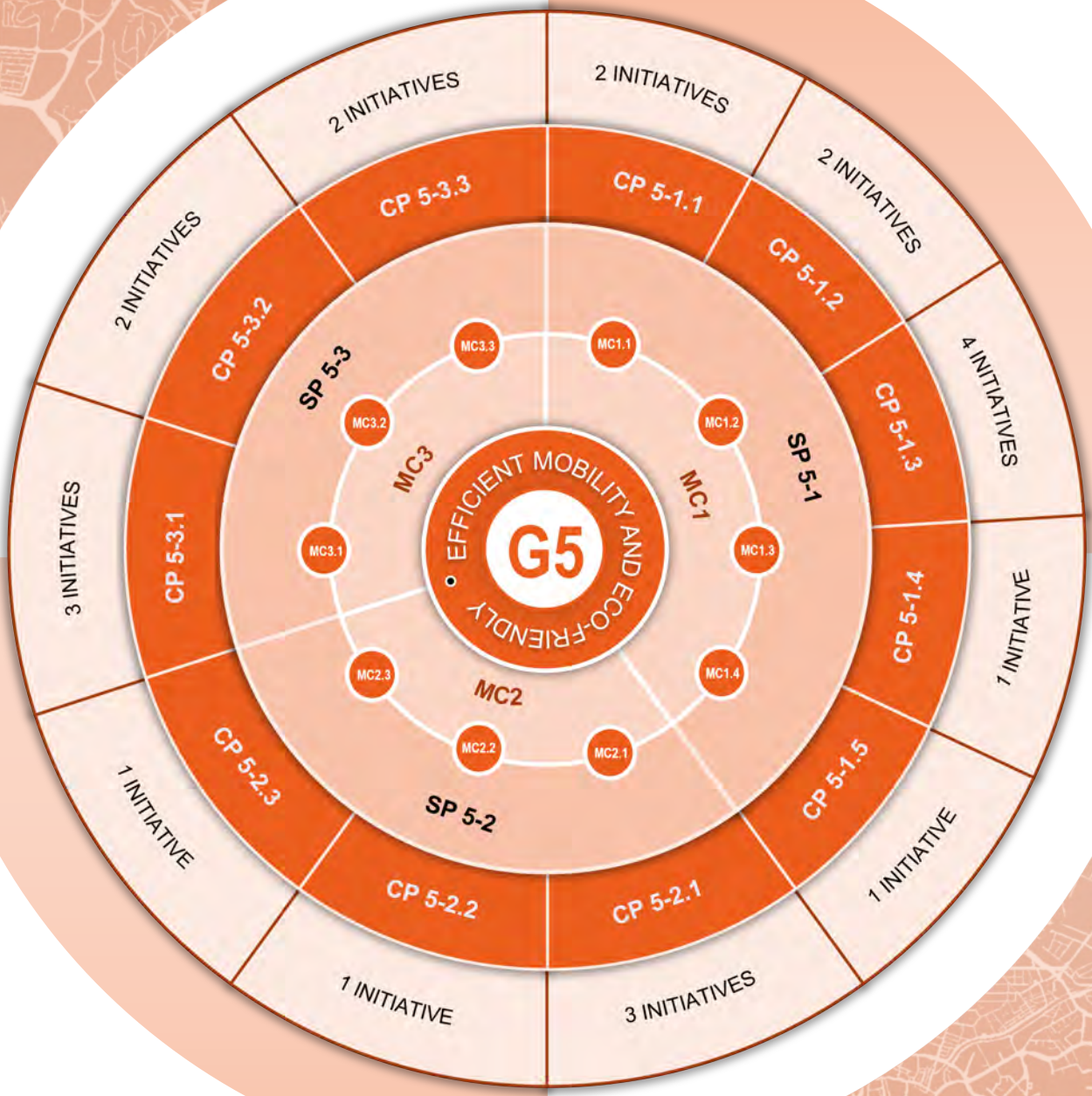
Modal split of 60:40 by 2030 as targeted by KLSP2040 will be the planning basis of Draft KLLP2040. The Draft KLLP2040 takes into account the proposal and feasibility of the programs set out in the PITKL study. A more inclusive strategy must be implemented with an emphasis on encouraging the usage of public transportation before 2030.

BRIEF INFO

TARGET OF PUBLIC TRANSPORT AND PRIVATE VEHICLES MODAL SPLIT

KLSP2040
3 STRATEGIC DIRECTIONS
10 ACTIONS

FIGURE 5.3
SUMMARY OF PLANNING STRATEGY AND IMPLEMENTATION PROPOSAL
GOAL 5:
FOCUSING DEVELOPMENT OF KUALA LUMPUR AS EFFICIENT AND ENVIRONMENTAL-FRIENDLY MOBILITY CITY



There are three (3) Planning Strategies (SP), 11 Implementation Proposals (CP) and 22 Implementation Initiatives (IP) that are formulated in line with KLCP2040 as summarized in Figure 5.3.

DRAFT KLLP2040
3 PLANNING STRATEGIES
11 IMPLEMENTATION PROPOSALS

PLANNING STRATEGY

SP 5-1: PROVIDING PUBLIC TRANSPORTATION NETWORK WITH PROVISION OF MULTIPLE TRANSIT OPTIONS

SCENARIO OF PUBLIC TRANSPORT IN KUALA LUMPUR

The public transport sector has a role in creating sustainable development and promoting an inclusive urban environment from the aspect of accessibility.

The increase in vehicle ownership contributes to the increase of vehicles on the road. The modal split of public transport modes with private vehicles is around 20:80 in 2020 and is targeted to increase to 70:30 by 2040. The use of private vehicles contributes to the problem of congestion and inefficient modal split.

The provision of a public transport network with various transit options encourages the community to shift daily travel pattern from using private vehicles to public transport.

This planning strategy focuses on promoting efficient and active mobility, increasing the public transportation modal split and reducing the use of private vehicles. KLCH together with responsible agencies needs to mobilise effective and integrated efforts to increase the public transport modal split in Kuala Lumpur.

In order to realise Kuala Lumpur as a city capable of providing a public transport network with provision of multiple transit options, five (5) Implementation Proposals are formulated under Planning Strategy 5-1, as shown in Figure 5.1.1.

BRIEF INFO

EXISTING URBAN RAIL NETWORK OF KUALA LUMPUR

156 kilometers until MRT2

The length of the rail lines in Kuala Lumpur

103 Stations until MRT2

The number of rail stations in Kuala Lumpur

266,436,703 passengers

Number of passengers recorded in 2019

Source: Adapted from Prasarana, 2019

Figure 5.1.1:
Implementation Proposals for Planning Strategy 5-1

SP 5-1 PROVIDING PUBLIC TRANSPORTATION NETWORK WITH THE PROVISION OF MULTIPLE TRANSIT OPTIONS

- CP 5-1.1 Strengthening Of Transport Infrastructure and Expansion Of City Public Rail Network
- CP 5-1.2 Developing a City Commuter System in City Centre
- CP 5-1.3 Prioritising Development of Public Bus Services
- CP 5-1.4 Providing Pick-up Points Of Taxi and E-hailing Services
- CP 5-1.5 Developing Technology In Intelligent Transport System

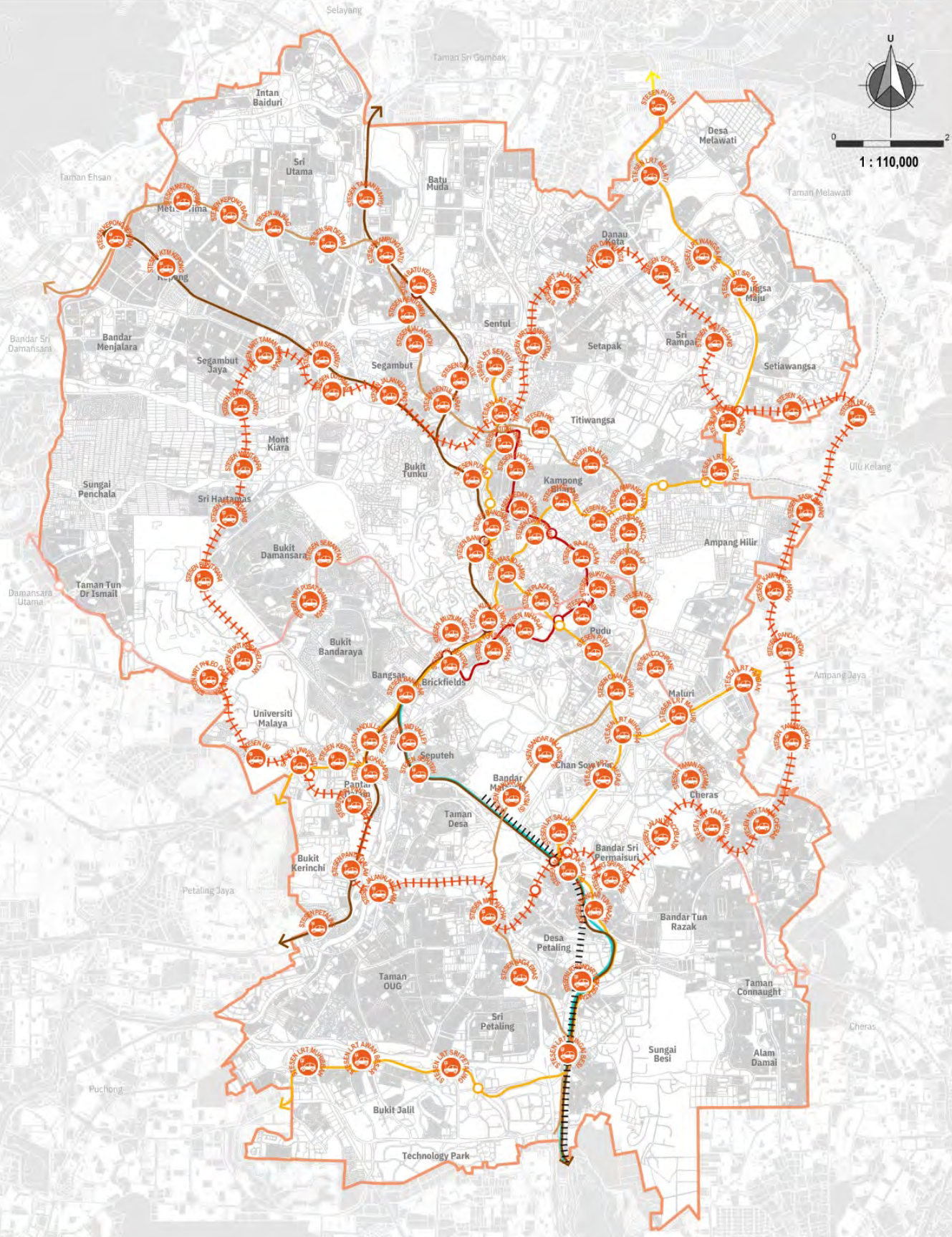


FIGURE 5.1.2 | Plan of Existing and Proposed Future Rail Networks

Legend :

Proposed

- MRT Line 3 Corridor and Station (In Planning)
- Propose High Speed Rail Corridor *Subject to Amendment

Existing

- MRT Line and Station
- MRT Line 2 and Station
- LRT Line and Station
- Monorail Line and Station
- KTM Commuter Line and Station
- ECRL Line and Station
- ERL Line and Station

Other

- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 5-1.1: STRENGTHENING OF TRANSPORT INFRASTRUCTURE AND EXPANSION OF CITY PUBLIC RAIL NETWORK

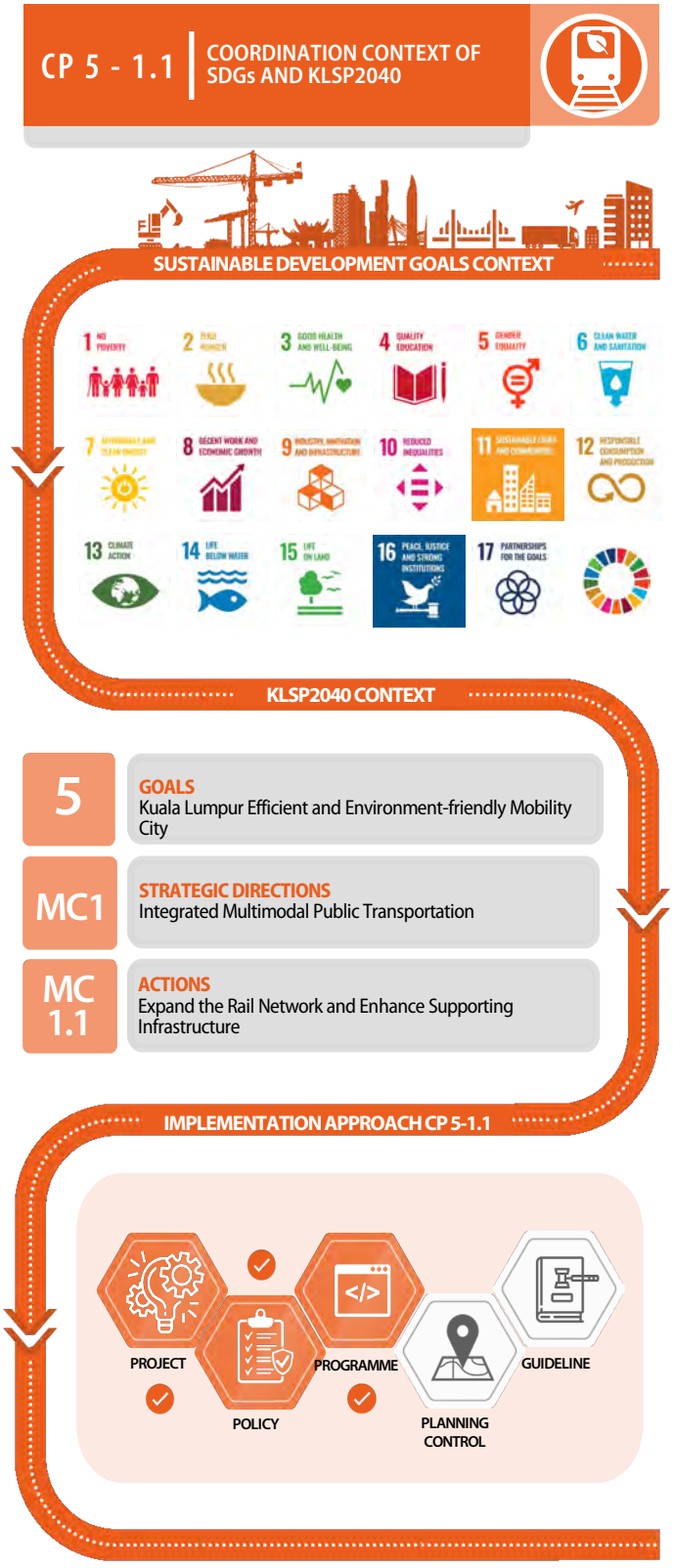
The Draft KLLP2040 identify five (5) city rail services system in Kuala Lumpur. Total length of existing rail line in Kuala Lumpur is 156 kilometres with 103 transit stations. The coverage of the existing rail station includes KTM Commuter, LRT, Monorail, ERL and MRT lines is 18 percent of the total area of Kuala Lumpur.

Kuala Lumpur's future rail network coverage will be increased with new proposed lines of the MRT 3 and HSR. Strengthening of infrastructure needs to be enhanced for transit system to be more efficient and integrated in the future.

The implementation approach of this proposal is through projects, policies, and programmes. There are two (2) initiatives proposed for the implementation of CP 5-1.1.

Location: Coach MRT 2
Source : https://www.shutterstock.com/g/SyariffHidayatullah

City dwellers using MRT service in Kuala Lumpur.



IMPLEMENTATION INITIATIVE 5-1.1A

IMPLEMENT COMPREHENSIVE RAIL SYSTEM IN KUALA LUMPUR

An integrated and efficient rail network system need to be implemented to ensure comprehensive public transport service in Kuala Lumpur.

The necessary actions to support this initiative are as follows:

1. Ensure the service of LRT, MRT 1, MRT 2, Monorail and Commuter provide comfortable, quality and optimal services.
2. Implement the proposed 42 kilometres MRT Circle Line (MRT3) to complete Kuala Lumpur rail transport system which is expected to pass through areas such as Bukit Kiara, Mont Kiara, Titiwangsa, Setapak and Salak Selatan;
3. Implement the proposed project of 350 kilometres Kuala Lumpur - Johor Bahru High Speed Railway (HSR) with an estimate of 90 minutes travel time; and
4. Increase accessibility of East Coast Rail Link (ECRL) and LRT Shah Alam (LRT3) to Kuala Lumpur.

BRIEF INFO

PROPOSED NEW RAIL NETWORK OF KUALA LUMPUR

MRT Circle Line (MRT3)
- 42 kilometres approximate distance of the rail line in Kuala Lumpur
- 28 number of stations in Kuala Lumpur

Kuala Lumpur – Johor Bahru High Speed Rail (HSR)
- 8 kilometres approximate distance of the rail line in Kuala Lumpur
- 1 number of station in Kuala Lumpur

Source: MRT Corporation, 2022 and MyHSR Corporation, 2022

Location: MRT Putrajaya Line
Source : https://www.shutterstock.com/g/abdulrazaklatif

MRT service in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 5-1.1B

STRENGTHEN SUPPORTING INFRASTRUCTURE AT TRANSIT STATIONS

An efficient city rail service need to be strengthened by provision of supporting infrastructure at transit stations.

The necessary actions to support this initiative are as follows:

1. Provide a comfortable, safe, and continuous path for pedestrians within 400 metres and micromobility vehicle routes within 800 metres of each transit station;
2. Provide park and ride facilities at transit stations with integrated public transport ticketing system;
3. Provide parking facilities for micromobility vehicles especially bicycle at each transit station;
4. Provide basic facilities such as changing rooms, bathrooms and storage areas for users of mobility vehicles who utilise rail services;
5. Create a special lane for bicycles and micromobility vehicles to enter the station; and
6. Ensure provision of facilities that meet age and disable-friendly requirements.

BEST PRACTICES

WOODLANDS MRT STATION OF SINGAPORE

The planning of facilities at transit stations contributes to the smoothness of the journey for users, especially micromobility vehicles. Examples of facilities planned at MRT stations in Singapore include:

1. Covered pedestrian routes;
2. Pedestrian overpass; and
3. Bicycle parking.

Location: Woodlands MRT Station, Singapore
Source: https://www.shutterstock.com/g/slovegrove

Provision of elevated bicycle parking facilities are available at almost every MRT station in Singapore to increase the use of micromobility vehicles and public transport.

Location: Ang Mo Kio subway, Singapore
Source : https://www.shutterstock.com/g/toapayohvets

Provision of bicycle parking spaces near the Ang Mo Kio subway. Passenger will cycle from home and park their bikes at the subway station for their journey to the next destinations.

IMPLEMENTATION PROPOSAL

CP 5-1.2: DEVELOPING CITY COMMUTER SYSTEM IN CITY CENTRE

The city commuter is one of the public transportation for short distances that operates within the City Centre. It is also an alternative that supports the provision of a more complete and comprehensive transit coverage. City commuter can also reduce traffic congestion during peak hours, reduce parking demand and support the growth of business, financial and urban tourism activities.

City commuter refers to public transport that operates and shares the flow of road within City Centre. It has dedicated routes separately for the transport of private vehicles, pedestrian and micromobility vehicle routes.

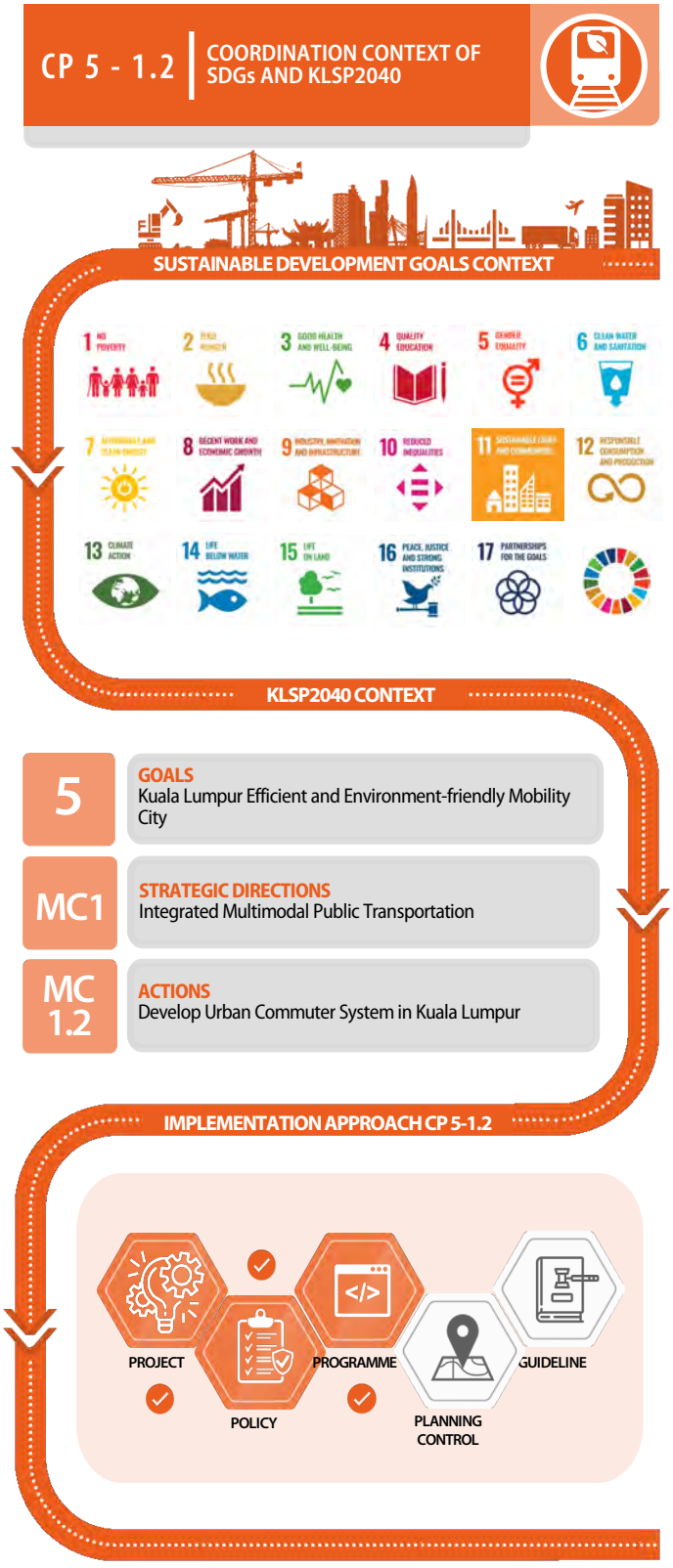
The implementation approach of this proposal is through projects, policies and programmes. There are two (2) initiatives proposed for the implementation of CP 5-1.2.

BEST PRACTICES

AUTOMATED RAPID TRANSIT OF NETHERLANDS

Location: Amsterdam, the Netherlands

The use of the Automated Rapid Transit (ART) system as public transport in the Netherland.



IMPLEMENTATION INITIATIVE 5-1.2A

DEVELOP CITY COMMUTER SERVICE SYSTEM IN THE CITY CENTRE

The modes of public transport in the future need to be diversified and expanded comprehensively and efficiently. This is in line with population growth, increased travel demand and technological advancement development of the public transport system. It requires an efficient, flexible and easily accessible mode of transportation that has a high coverage area in the City Centre.

The proposed city commuter service system is one of the mechanisms that has the potential to be introduced in the City Centre for the implementation of the smart people mover system such as tram and bus. This proposal can facilitate access and enhance the level of accessibility in the City Centre.

The Draft KLLP2040 proposes a tram system because it optimises space and contributes toward a more efficient transport system. The implementation of this proposal need to be studied in detail from the aspect of site suitability and feasibility.

The proposed tram route is estimated to be 29 kilometres long and it is divided into four (4) zones as shown in Figure 5.1.3 as follows:

1. Zone 1 : KLCC and Bukit Bintang area;
2. Zone 2 : Dataran Merdeka, Jalan Petaling and Taman Botani Perdana;
3. Zone 3 : Jalan Tuanku Abdul Rahman, Masjid Jamek, Sultan Abdul Samad and Kampong Bharu; and
4. Zone 4 : KLCC and Bandar Malaysia.

BRIEF INFO

Criteria for the implementation of the urban commuter service system:

Aspect	Details
Minimum Road Width	1. Two (2) routes direction = 20 metres to 25 metres, (minimum) 2. One (1) route direction = 10 meters to 15 metres (minimum)
Route Track Type	Middle alignment (Two routes direction)
Type of Stop Location	Stop on the platform on the left or right side of the track
Distance between Two Stops	200 metres to 800 metres
Length of vehicle	Simple: 8-18 metres Articulated: 18 - 30 metres Multi-articulated: 25-45 metres
Width of vehicle	2.20 to 2.65 metres (normal track gauge)
Height of vehicle	3.00 metres to 4.00 metres
Route Track Width	Minimum 1.00 metres to 1.50 metres
Tram System Speed Level	1. Minimum = 12-15 kilometres per hour 2. Average = 16-19 kilometres per hour 3. Maximum = 20-30 kilometres per hour

Source: https://yarratrams.com.au/

BEST PRACTICES

TRAM SYSTEM OF MELBOURNE, AUSTRALIA

In 2017, the City of Melbourne has a tram network of 250 kilometres double tracks and with a total of 24 routes. The city of Melbourne also has a total of 1,763 tram stops supported by 493 tram units.

Details of the Melbourne Tram System

Agency	: Public Transport Victoria
Network	: 24 route
Owner	: VicTrack (since 1999)
Depot	: 8 depots
Track length	: 250 kilometres
Track Width	: Between 4 feet and 5 feet

The tram transport system is the second highest used form of public transport with 206 million user trips recorded in 2017.

Location: Melbourne, Australia
Source: https://www. en.wikipedia.org

Overseas tram services such as in Melbourne, Australia.

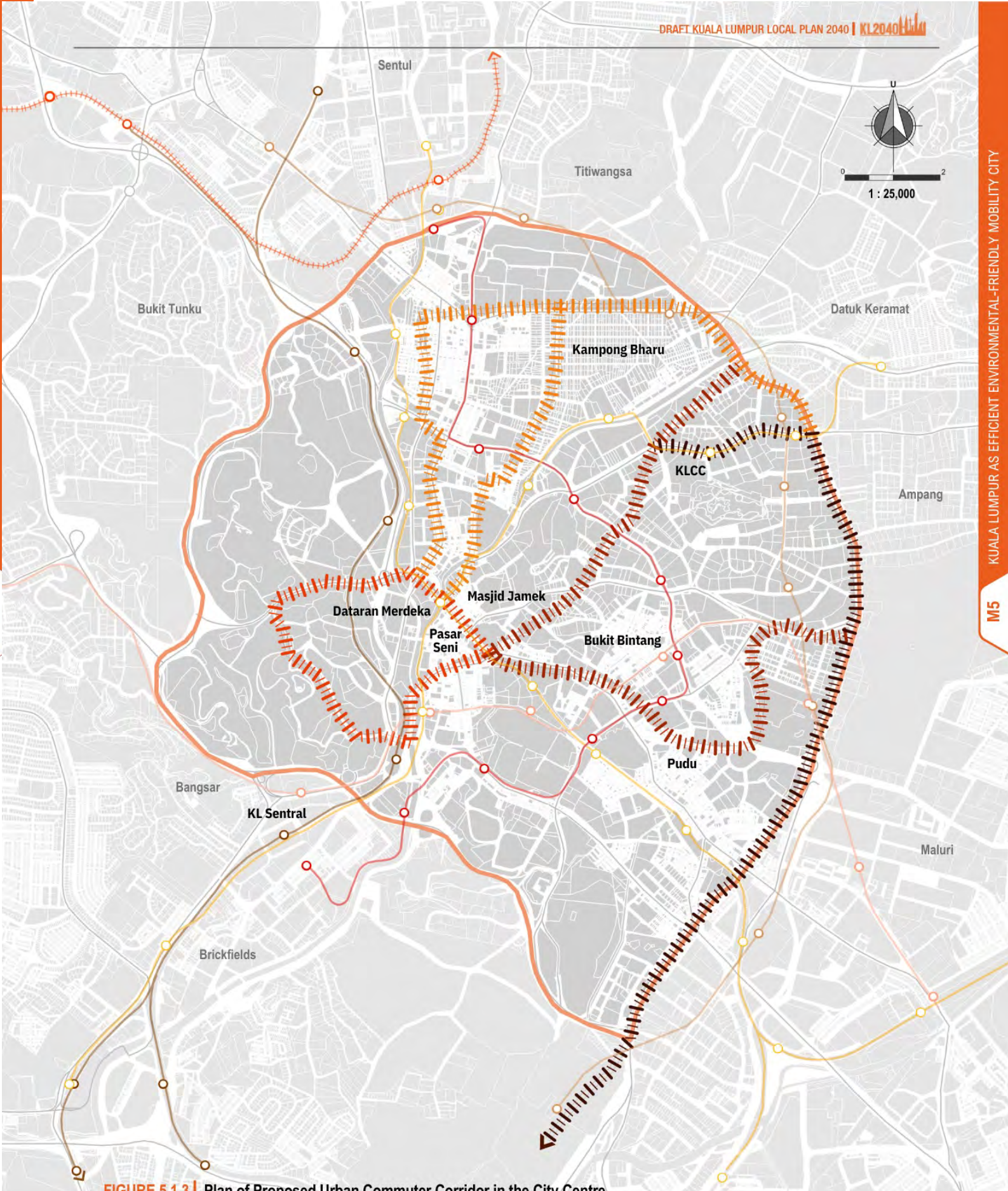


FIGURE 5.1.3 | Plan of Proposed Urban Commuter Corridor in the City Centre

Legend :

Proposed
- Zone 1: KLCC and Kawasan Bukit Bintang
- Zone 2: Dataran Merdeka,Jalan Petaling, and Taman Botani Perdana;
- Zone 3: Jalan Tunku Abdul Rahman, Masjid Jamek, Jalan Sultan Abdul Samad and Kampong Bharu; and
- Zone 4: KLCC and Bandar Malaysia

Existing
- MRT Line and Station
- Monorail Line and Station
- KTM Commuter Line and Station
- MRT 2 Line and Station
- LRT Line and Station

Others
- Main Road
- Kuala Lumpur Boundary
- MRT Line 3 Corridor and Station (In Planning)

IMPLEMENTATION INITIATIVE 5-1.2B

PROVIDE BUS RAPID TRANSIT (BRT) SERVICE CORRIDOR

Bus Rapid Transit (BRT) is a bus service corridor that provides high-capacity services on strategic routes such as Taman Melawati to City Centre. The implementation of the BRT is considered as an intra-city express service that will:

1. Support several corridors to the City Centre and public transport circular routes that connect main district centres;
2. Support the future rail network and providing additional services and facilities to the area; and
3. Provide an opportunity for passengers to travel between residential and work areas without going through the City Centre.

The necessary actions to support this initiative are as follows:

1. Determine the Right of Way (ROW) in detail for provision of bus transit lines, BRT stops and station design by the responsible agency;
2. Provide dedicated routes in suitable areas to ensure smooth bus movement and meet the scheduled travel time;
3. Provide a traffic management system where bus movement is given priority at traffic light intersections; and
4. Ensure the provision of facilities that meet needs of age and disabled-friendly groups.

The Draft KLLP2040 proposes six (6) BRT service corridors that have the potential to be developed as shown in Table 5.1.1.

Table 5.1.1: Kuala Lumpur BRT Service Corridor

	BRT Corridor
1.	Ampang – Kepong;
2.	Taman Melawati – Pusat Bandar Raya Kuala Lumpur;
3.	Ampang – Pusat Bandar Raya Kuala Lumpur;
4.	Puchong – Pusat Bandar Raya Kuala Lumpur;
5.	Kerinchi – Alam Damai Kuala Lumpur; and
6.	Klang – Pusat Bandar Raya Kuala Lumpur.

Provision of BRT services used on the BRT route in Sunway Station.

BEST PRACTICES

BRT SERVICES, SINGAPORE

SBS Transit is a leading bus and rail operator multi-mode public transport. It also operates a 42 kilometres underground line with 34 stations in Singapore.

Provision of BRT services used on the BRT route in Dakota Station, Singapore.

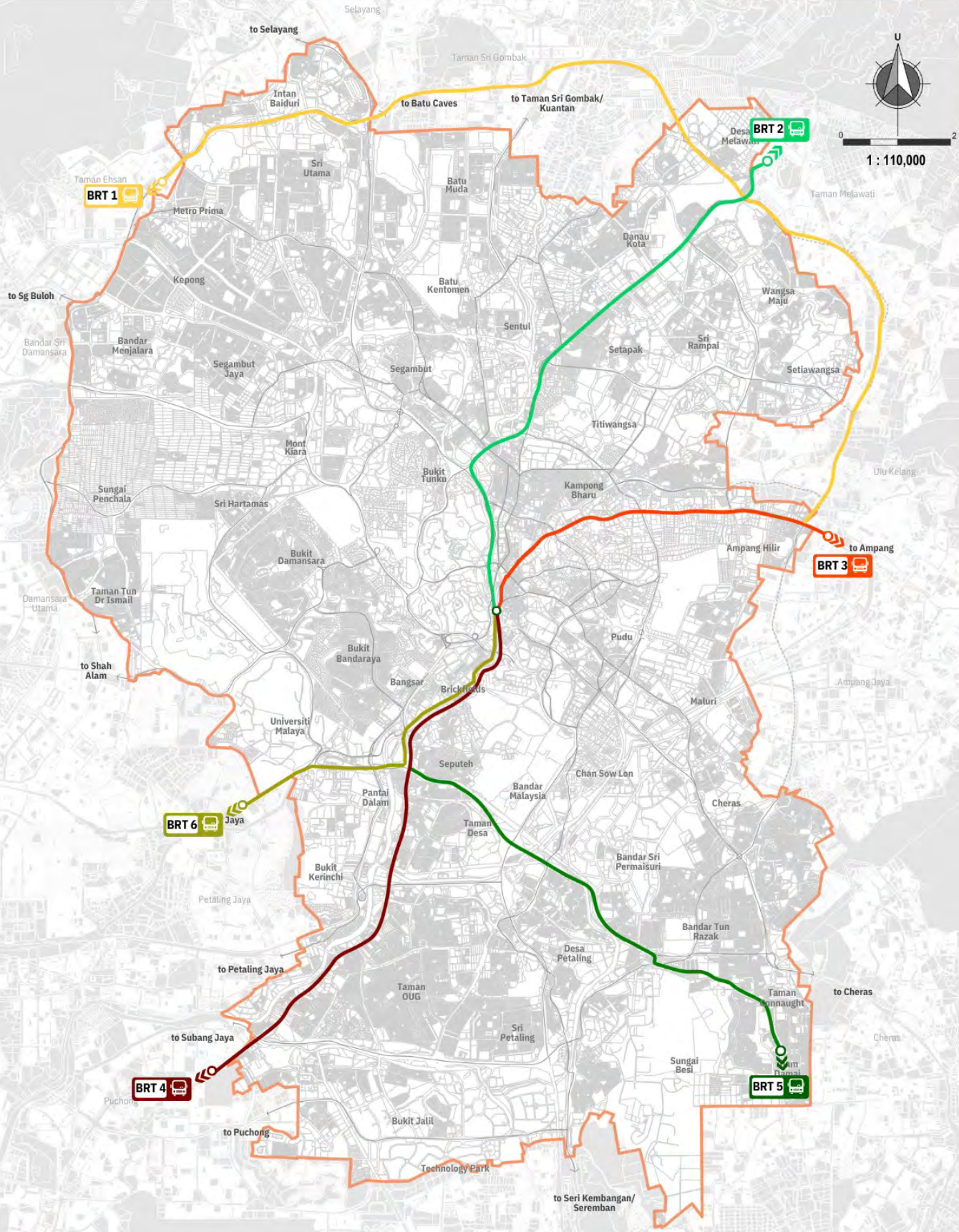


FIGURE 5.1.4 | Plan of Proposed BRT Service Corridor

Legend :

Proposed BRT Corridor

- BRT 1 – Ampang - Kepong
- BRT 2 – Taman Melawati - Pusat Bandar Raya
- BRT 3 – Ampang - Pusat Bandar Raya
- BRT 4 – Punchong - Pusat Bandar Raya
- BRT 5 – Kerinchi - Alam Damai
- BRT 6 – Klang - Pusat Bandar Raya

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 5-1.3: PRIORITISING DEVELOPMENT OF PUBLIC BUS SERVICES

Bus services are one of modes of public transport will expected to remain as main public transport especially in Kuala Lumpur and neighbourhoods in the future. There are several initiatives in order to improve the public transport network in Kuala Lumpur such as Bus Express Transit (BET), feeder bus and GoKL.

An efficient and comprehensive bus service will improve accessibility as well as attract users to switch modes of transport from private to public vehicles.

Planning and management needs to be integrated within public bus transport operators and rail services to ensure high level of accessibility in Kuala Lumpur.

The implementation approach of this proposal is through projects, policies and programmes. There are four (4) initiatives proposed for the implementation of CP 5-1.3.

Location: MRT Feeder Bus Depot - Sg. Buloh
Source: https://www.shutterstock.com/g/ESB+Professional

Provision of feeder bus for MRT passengers.

IMPLEMENTATION INITIATIVE 5-1.3A

PROVIDE BUS EXPRESSWAY TRANSIT (BET) SERVICES

Bus Expressway Transit (BET) is a bus service that makes use of highway routes and connected from bus station to intercity bus station. It also will reduce traveling time and able to plan more regularly.

Pasar Seni Bus Station is the main hub in implementation of BET services that will be connected to other modes of public transport such as MRT, LRT, taxis and buses.

The Draft KLLP2040 has identified nine (9) BET corridors that have the potential to be implemented in Kuala Lumpur as shown in Table 5.1.2.

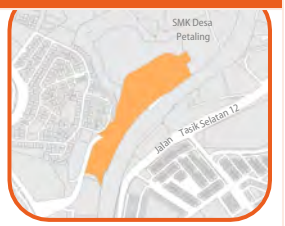
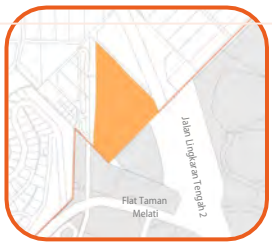
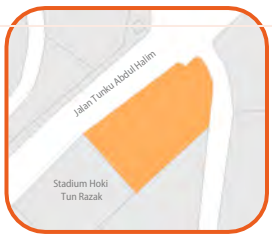
Table 5.1.2: Proposed BET Route

	BET Route
1.	BET 1 - Kota Damansara – Pasar Seni route (via Penchala Link Expressway);
2.	BET 2 – Bandar Sungai Long - Pasar Seni route (via Cheras to Kajang Highway);
3.	BET 3 - Subang Mewah – Pasar Seni route (via Federal Highway);
4.	BET 4 - Taman Sri Muda – Pasar Seni route (via Federal Highway);
5.	BET 5 – Bandar Tasik Puteri – Medan Pasar route (via Kuala Lumpur to Kuala Selangor Expressway);
6.	BET 6 - Bukit Beruntung – Pasar Seni route (via North to South Highway);
7.	BET 7 - Sri Nilam – Munshi Abdullah route (via Ampang to Kuala Lumpur Elevated Expressway);
8.	BET 8 - Semenyih Sentral – Pasar Seni route (via Cheras to Kajang Highway); and
9.	BET 9 - Rawang – Pasar Seni route (via Jalan Rawang to Jalan Kuching)

The necessary actions to support this initiative are as follows:

1. Provision of new stop areas outside the City Centre to reduce the entry of buses into the city centre and contribute to the reduction of traffic congestion during peak hours;
2. Integrated supporting facilities such as real time arrival at bus stops, having interactive information displays for any announcements such as bus delays or route changes;
3. Identify three (3) potential stations to be BET bus stops as shown in Table 5.1.3:
   a. Terminal Bersepadu Selatan;
   b. Terminal Bersepadu Gombak; and
   c. Hentian Duta.
4. Apply latest technology in operation of BET buses such as an integrated ticket purchase system, online ticket billing, bus tracker, use of smartphone applications and others.

Table 5.1.3:
Proposed BET Bus Stop Station in Kuala Lumpur

Area and size (hectares)	Inset Plan
1. Terminal Bersepadu Selatan 13.54 hectares	
2. Terminal Bersepadu Gombak 4.71 hectares	
3. Hentian Duta 1.34 hectares	

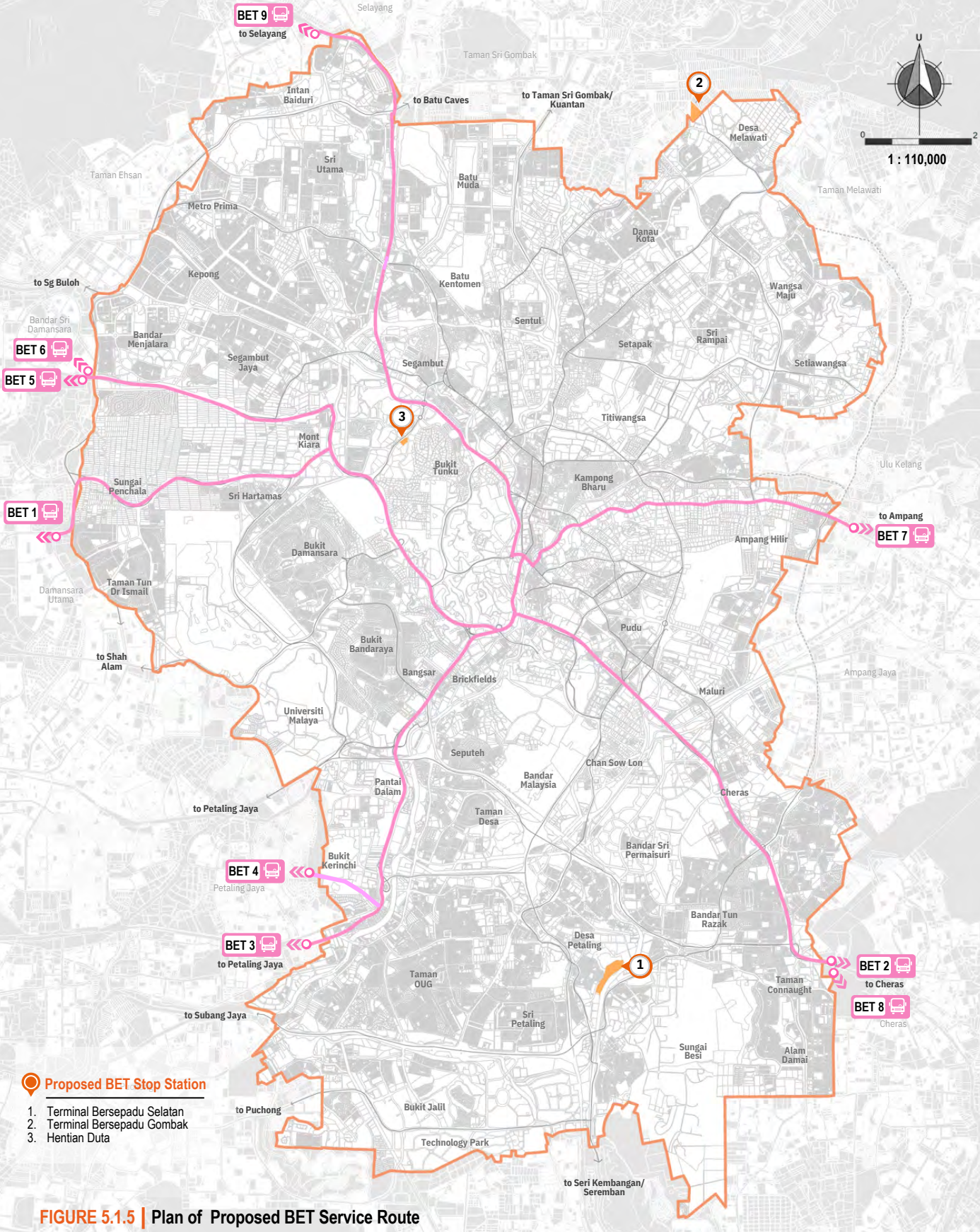


FIGURE 5.1.5 | Plan of Proposed BET Service Route

Legend :

Proposed BET Routes

- BET 1 – Kota Damansara – Pasar Seni route (via Penchala Link Expressway)
- BET 2 – Bandar Sungai Long – Pasar Seni route (via Cheras to Kajang Highway)
- BET 3 – Subang Mewah – Pasar Seni route (via Federal Highway)
- BET 4 – Taman Sri Muda – Pasar Seni route (via Federal Highway)
- BET 5 – Bandar Tasik Puteri – Medan Pasar route (via Kuala Lumpur to Kuala Selangor Expressway)
- BET 6 – Bukit Beruntung – Pasar Seni route (via North to South Highway)
- BET 7 – Sri Nilam – Munshi Abdullah route (via Ampang to Kuala Lumpur Elevated Expressway)
- BET 8 – Semenyih Sentral – Pasar Seni route (via Cheras to Kajang Highway)
- BET 9 – Rawang Route – Pasar Seni route (via Jalan Rawang to Jalan Kuching)

Existing

- Potential Station to Be BET Bus Stop

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION INITIATIVE 5-1.3B

IMPROVE BUS TRANSPORTATION SYSTEM IN NEIGHBOURHOOD AREAS

Kuala Lumpur has several feeder bus operators that provide services to residential, industrial and commercial areas such as Rapid Bus, MRT, GoKL and other public buses. It also provides one-stop bus services as well as feeder bus services to LRT, Monorail and MRT stations.

The necessary actions to support this initiative are as follows:

1. Prepare an integrated public bus transport master plan in collaboration with relevant agencies to improve the quality of bus services;
2. Ensure frequency and duration of bus service operation is extended for areas with high demand such as Wangsa Maju, Titiwangsa and Datuk Keramat;
3. Coordinate bus and rail movement times to make it easier for users to plan their travel;
4. Ensure effectiveness of first and last mile planning such as pedestrian and micromobility vehicle routes to bus stops in neighbourhood area;
5. Ensure that there is no overlap of bus routes in the neighbourhood in order to provide optimal service access;
6. Usage of latest technology applications such as internet access (Wi-Fi) at bus stop, smartphone applications, real time arrival display and bus tracker;
7. Provide complete infrastructure for active mobility at every bus stop;
8. Conduct promotions to increase the usage of feeder bus and public transport;
9. Usage of high-tech buses such as electric buses to reduce carbon emissions; and
10. Ensure the provision of facilities that meet needs of age and disabled-friendly groups.

Location : Kuala Lumpur City Centre
Source: https://www.shutterstock.com/g/ahmadyani70

Provision of feeder bus services based on the Electric Vehicle (EV) concept to support the green city initiative.

Location: Rapid KL Bus Station
Soure: https://www.shutterstock.com/g/withgod

Rapid KL is one of the bus operators that provides feeder bus services in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 5-1.3C

EMPOWER GoKL BUS SERVICES

GoKL bus services have been implemented in Kuala Lumpur since 2012 to increase public transport usage and reduce traffic congestion in Kuala Lumpur. GoKL bus services are easily accessible, have good connectivity, are safe, comfortable and are provided free of charge to users.

GoKL bus services operate 14 routes and can be expanded to potential areas in Kuala Lumpur. These services should not overlap with other public transport services such as feeder bus and rail systems.

The planning criteria necessary to support this initiative are as follows:

1. Connect residential area with transit stations;
2. Encourage users to switch mode of transport (modal shift) for travel to or from the workplace from private vehicle to public transport;
3. Focus services on high-density residential areas;
4. Giving priority to the B40 group; and
5. Prioritise low-cost housing area, public housing and affordable housing.

Location: Jalan Tuanku Abdul Rahman, Kuala Lumpur

Provision of GoKL Bus Service as a feeder bus for city dwellers.

The necessary actions to support this initiative are as follows:

1. Introduce usage of smart technology in the implementation of GoKL bus services such as real time arrival and bus tracking;
2. Usage of high-tech buses such as electric buses to reduce carbon emissions;
3. Encourage users to bring micromobility vehicles onto the bus;
4. Provide dedicated spaces in buses that give priority to women;
5. Ensure the provision of facilities that meet needs of age and disabled-friendly groups;
6. Impose fare charges on non-citizens; and
7. Expand the route to potential areas to increase the use of public transport, such as:
    a. Area of Sungai Penchala;
    b. Area of Segambut;
    c. Area of Kepong; and
    d. Area of Cheras.

BRIEF INFO

GoKL Bus Service

At the initial implementation stage of GoKL Bus services, it was operated by Land Public Transport Agency (APAD) but after APAD was disbanded, GoKL Bus is now operated by Kuala Lumpur City Hall.

Operation Hours

1. Monday to Friday: 6.00am until 11.00pm.
2. Saturday, Sunday and Public Holiday: 7.00am until 11.00pm

Bus Frequency

1. Monday to Friday : Peak Hour (7.00am – 10.00am and 4.00pm – 8.00pm) : Every 5 minute
2. Saturday, Sunday dan Public Holiday : Every 10 minute

Source: https://www.myjadual.com/ms/bas-gokl-city-bus/

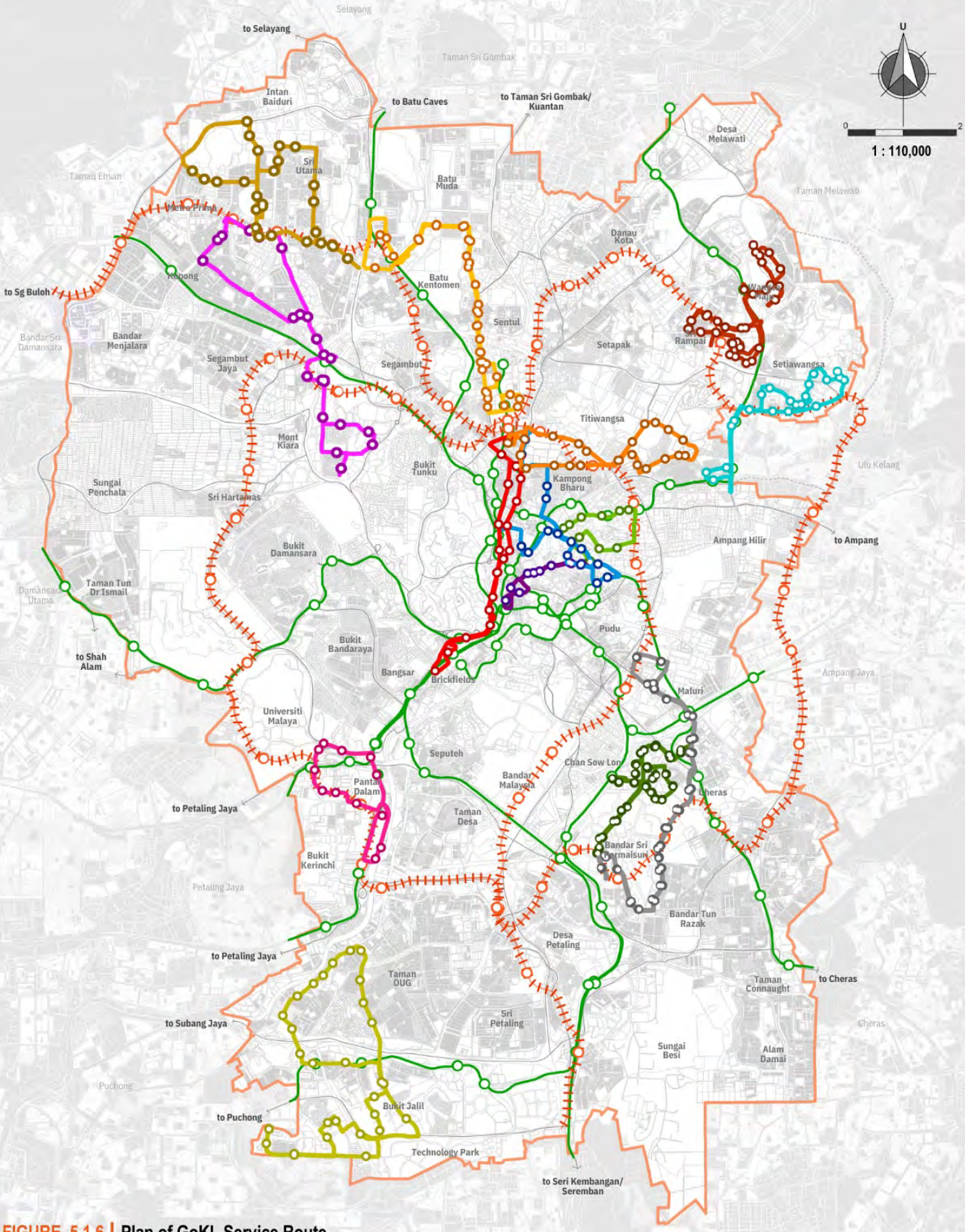


FIGURE 5.1.6 | Plan of GoKL Service Route

Legend :

Rail Network
- Existing Rail Network
- Future Rail Network

Existing
- Suria KLCC - Bukit Bintang Line
- Pasar Seni Hub - Bukit Bintang Line
- Titiwangsa - KL Sentral Line
- Titiwangsa - Bukit Bintang Line
- Titiwangsa - MINDEF Line
- PPR Pantai Ria - LRT Universiti Line
- LRT Dato' Keramat - Taman Setiawangsa Line
- MRT/KTM Kampung Batu - Chow Kit Line
- LRT Sri Rampai - Section 10 Wangsa Maju Line
- LRT/MRT Maluri – Bandar Sri Permaisuri Line
- LRT/MRT Maluri – Bandar Tun Razak Line
- MRT Jinjang – MATRADE Line
- Taman Fadason – MRT Sri Delima Line
- LRT Taman Muhibbah – PPR Pinggiran Bukit Jalil/ Taman Overseas Union Line

Others
- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION INITIATIVE 5-1.3D

IMPLEMENT DEDICATED LANE FOR BUSES AND TAXIS IN KUALA LUMPUR

Dedicated bus and taxi lanes are used on main routes with frequent services every 10 minutes at peak hours or traffic congestion which may affect bus travel and arrival times.

Provision of bus and taxi lanes makes use of using existing roads that have been converted from shared lanes to dedicated lanes.

The necessary actions to support this initiative are as follows:

1. Provide detailed guidelines for bus and taxi priority routes;
2. Provide dedicated lanes for buses and taxis considering the needs of micromobility vehicle routes with a minimum width of 3.3 metres;
3. Priority to traffic signals for dedicated lanes for bus and taxi to reduce travel delays;
4. Usage of dark grey paint to dedicated lanes for bus and taxi;
5. Implement continuous enforcement and monitor by authorities;
6. Provide bus and taxi stops that are high-tech, smart and low-carbon; and
7. Ensure interconnected bus and taxi routes.

The Draft KLLP2040 has identified six (6) potential roads for the implementation of dedicated lanes for buses and taxis after considering the suitability of existing roads, as shown in Table 5.1.4.

Table 5.1.4:
Proposed of potential roads for the implementation of dedicated lanes for bus and taxi

Dedicated Lane for Bus and Taxi	
1.	Jalan Klang Lama;
2.	Jalan Ampang;
3.	Jalan Loke Yew;
4.	Jalan Kinabalu;
5.	Jalan Raja Laut; and
6.	Jalan Ipoh.

Illustration of provision of dedicated lanes for bus and taxi as well as decorated with soft landscape in Kuala Lumpur.

Illustration of the provision of dedicated lanes for bus and taxi in Kuala Lumpur.

Note: Subject to relevant guidelines or technical agency requirements.

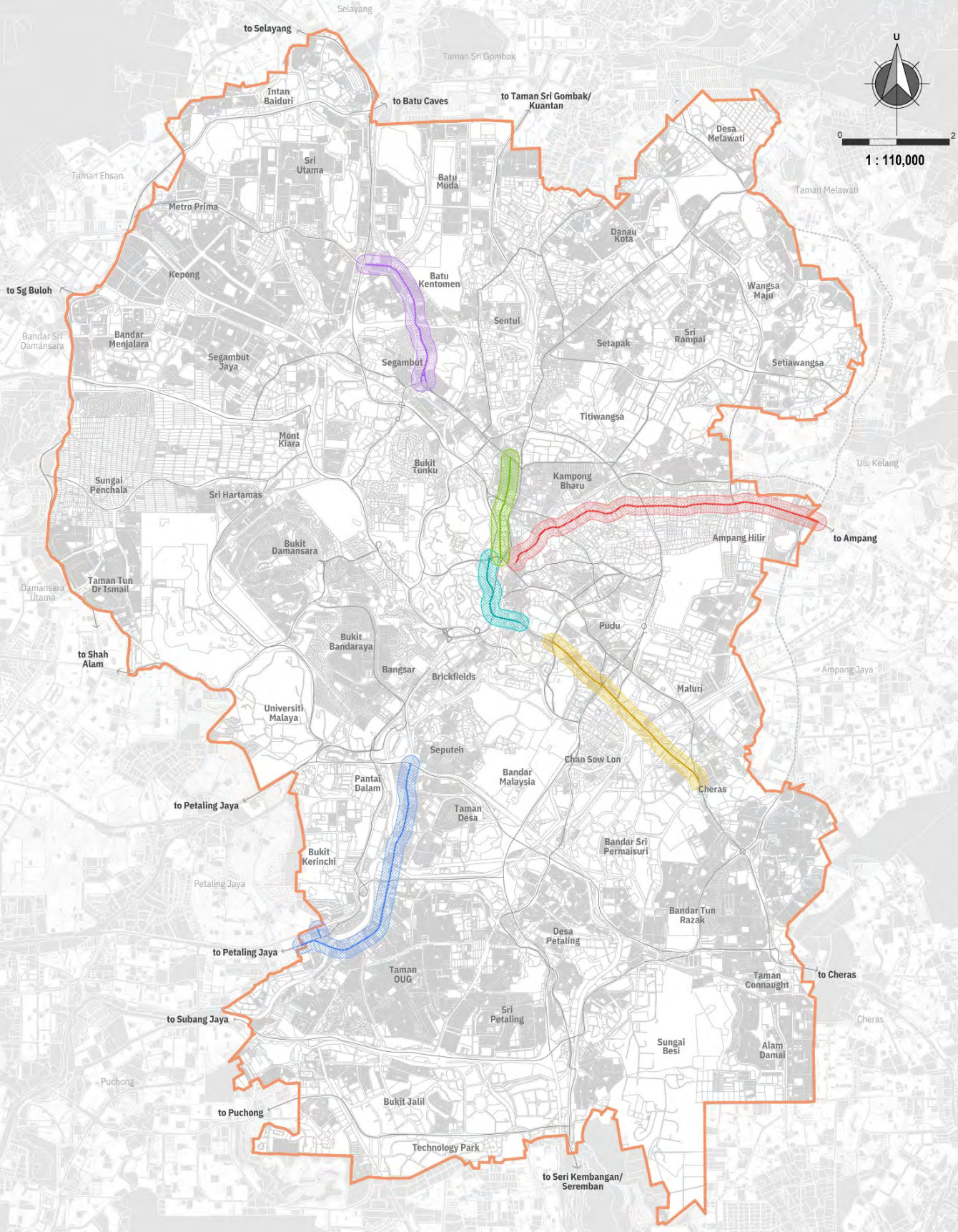


FIGURE 5.1.7 | Plan of Proposed Dedicated Lane for Bus and Taxi in Kuala Lumpur

Legend :

- Jalan Klang Lama
- Jalan Ampang
- Jalan Loke Yew
- Jalan Kinabalu
- Jalan Raja Laut
- Jalan Ipoh

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 5-1.4: PROVIDING PICK-UP POINTS OF TAXI AND E-HAILING SERVICES

Taxi and e-hailing services are alternative transport for passenger services, delivery of goods or food. There are 46 e-hailing operators approved to operate under the Land Public Transport Agency (APAD) in Malaysia such as Grab, Mycar, EzCab and others. This service can facilitate passengers during off-peak hours especially in areas where access to rail and bus services is limited or outside the service area. It also to completes the user's first and last mile continuity.

Pick up point is a place to pick up and drop off passengers, as well as to deliver goods or food to an area. Its provision is important because it can facilitate the use of taxi and e-hailing services.

The implementation approach of this proposal is through projects, policies and programmes. One (1) initiative is proposed for the implementation of CP 5-1.4.

Location: Mid Valley, Kuala Lumpur
Source: https://www.shutterstock.com/g/NAUFAL+ZAQUAN

Provision of Pick Up and Drop Off Points for Taxi and e-hailing services at shopping centre in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 5-1.4A

INCREASE TAXI AND E-HAILING SERVICES

Taxi and e-hailing services will give users another choice of public transport modes in Kuala Lumpur in addition to rail and bus services.

The collaboration between KLCH and related agencies is crucial ensure the level and coverage of taxi and e-hailing services are efficient, of quality and comfortable.

The necessary actions to support this initiative are as follows:

1. Ensure vehicles and taxi stand facilities are safe, comfortable as well as age and disabled-friendly;
2. Provide waiting areas for taxi and e-hailing vehicles in tourist hotspots, shopping complexes, hospitals and transit stations;
3. Restructure the location and space for taxi stand in the City Centre to reduce traffic congestion during peak hours;
4. Ensure every building that attracts crowds, such as shopping malls and public buildings, provides a pick-up point;
5. Ensure only e-hailing vehicles with special sticker are only allowed to drop off and pick up passengers at taxi stands located in the dedicated bus lane to assure high accessibility to users and e-hailing drivers;
6. Allow only taxi and e-hailing vehicles that are less than ten (10) years to operate; and
7. Allow taxi and e-hailing services to operate in dedicated bus lanes provided there are passengers in the vehicle and have a special sticker for the service.

Location: KL Sentral
Source: https://www.shutterstock.com/g/ESB+Professional

Provision of taxi waiting area at KL Sentral, Kuala Lumpur.

BRIEF INFO

SERVICE OF GRAB E-HAILING

Grab is the largest e-hailing operating company in Southeast Asia. Currently, Grab has a total of 2.7 million registered drivers throughout Southeast Asia. In 2020, the Land Public Transport Agency (APAD) has allowed 46 e-hailing companies to operate legally in Malaysia.

Terms and Conditions of e-hailing Service :

License and Registration	1. Malaysian Citizen; 2. Age not less than 21 years; 3. Not blacklisted by PDRM, JPJ and APAD; 4. Possess Public Service Vehicle License; 5. Register Electronic Vehicle Permit (EVP) from APAD; and 6. Possess Drivers Electronic Cards from APAD.
Vehicle	1. Provision of vehicle seating capacity between four (4) and 11; 2. Mandatory vehicle inspection for vehicles aged three (3) years old and above; and 3. Usage of a vehicle that is no more than ten (10) years old.

Source: https://www.grab.com/my/about/

IMPLEMENTATION PROPOSAL

CP 5-1.5: DEVELOPING TECHNOLOGY IN INTELLIGENT TRANSPORT SYSTEM

Technology plays an important role and it needs to be applied to all modes including public transport services to optimise its users. Intelligent Transport System (ITS) is an, application which improves quality of service, monitors, manages and efficiency of transport system.

ITS greatly depends on its data collection and findings of analysis. The built-up system with collected data will be analyse to control, manage and plan the urban transportation systems.

The implementation approach of this proposal is through projects, policies and programmes. One (1) initiative is proposed for the implementation of CP 5-1.5.

Source: *https://www.shutterstock.com/g/chombosan*

Application Intelligent Transport System is an effort to improve the efficiency of transportation system.

IMPLEMENTATION INITIATIVE 5-1.5A

DEVELOP INTELLIGENT TRANSPORT SYSTEMS (ITS)

Intelligent Transport Systems (ITS) are advanced applications that provide innovative services related to different modes of transport and traffic management.

ITS allows users to get better information and to use a safer, more coordinated and smarter transport network.

ITS applications can be used in the management and coordination of urban transport system as follows:

1. Expand real-time parking management;
2. Expand road speed enforcement (AES);
3. Expand implementation of Radio-Frequency Identification (RFID);
4. Integrate ITS with smartphone applications such as Moovit and Pulse; and
5. Apply Intelligent Dynamic Traffic Light Sequence

The necessary actions to support this initiative are as follows:

1. Develop a big data centre to collect data related to transportation infrastructure and traffic system in Kuala Lumpur;
2. Integrate existing systems such as the GoKL and Smart Selangor through shared data system for users to plan trips; and
3. Promote periodic information in the use of ITS application for users to know more about its functions.

BEST PRACTICES

NATIONAL TRAFFIC CONTROL CENTRE OF SCOTLAND

Glasgow City of Scotland has implemented intelligent transport system to provides regular information for daily public buses commuters about time, seat availability, current location of the bus, time taken to reach a particular destination, location of the next bus and number of passenger in the bus.

Transport Scotland plays an important role in achieving the Scottish government's goal to become a developed country in the transport sector through the following approaches:

1. Provision of CCTV;
2. Variable Massage Signs (VMS); and
3. Traffic Control and Information System.

There are six (6) main strategies for the development of ITS in Scotland as follows:

1. Asset Management and Operations Services;
2. Traffic and Travel Quality Information;
3. Sustainability and Environment;
4. Smart Mobility;
5. Economics, Communications and Logistics; and
6. Data, Innovation and Collaboration.

The situation in a traffic control centre of Glasgow City, Scotland.

PLANNING STRATEGY

SP 5-2: ENCOURAGING ACTIVE MOBILITY MODE WITH IMPROVED ACCESSIBILITY AND SAFETY

SCENARIO OF ACTIVE MOBILITY MODE IN KUALA LUMPUR

Transport planning needs to integrate active mobility, such as pedestrian and micromobility vehicle routes with public transport services. Active mobility is a choice of movement mode involving short distances and is able to reduce the dependence of use on motor vehicles as well as contribute towards sustainable environment.

According to the Kuala Lumpur Pedestrian and Cycling Masterplan 2019 to 2028, only 18 percent of residents in Kuala Lumpur choose to walk or cycle and 82 percent of residents choose not to walk or cycle to work or school.

Kuala Lumpur needs to encourage the use of active mobility mode because it provides various benefits in terms of physical and mental health as well as reduce greenhouse gas (GHG) emissions.

In order to realise Kuala Lumpur as a city capable of encouraging active mobility mode with improved accessibility and safety, three (3) Implementation Proposals are formulated under Planning Strategy 5-2, as shown in Figure 5.2.1

WHAT IS MICROMOBILITY?

According to Act 333, the definition of micromobility vehicles means vehicles that are propelled by electrical means, an internal-combustion engine or human power and having a maximum speed of 50 kilometre per hour

Station-based bike share
(Including e-bikes)

Dockless bike share
(Including e-bikes)

Scooter share

Location: Lebuh Pasar, Dataran Merdeka

Upgrading and adding space for active micromobility mode is expected to help reduce dependency on the use of motor vehicles.

Figure 5.2.1:
Implementation Proposals for Planning Strategy 5-2

SP 5-2 ENCOURAGING ACTIVE MOBILITY MODE WITH IMPROVED ACCESSIBILITY AND SAFETY

- **CP 5-2.1** Developing Safe, Seamless And Accessible Pedestrian and Micromobility Vehicle Routes
- **CP 5-2.2** Implementing Bike-sharing System (BSS) Facility
- **CP 5-2.3** Promoting Pedestrian and Use Of Micromobility Vehicle Routes

IMPLEMENTATION PROPOSAL

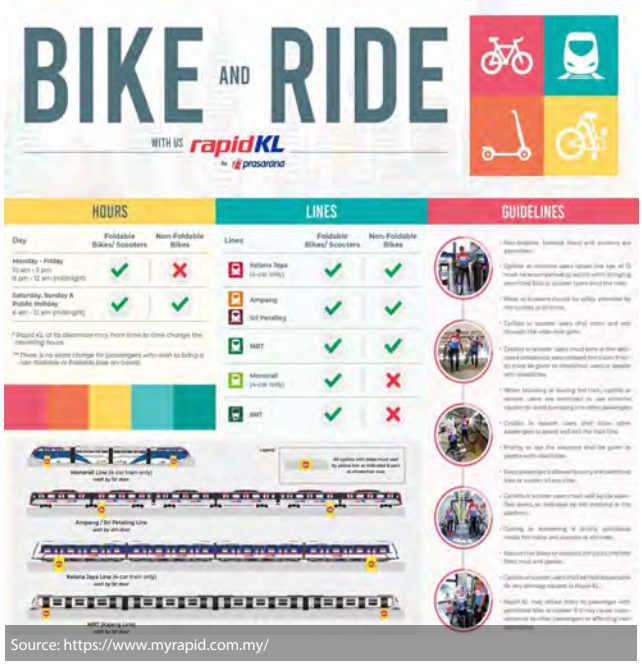
CP 5-2.1: DEVELOPING SAFE, SEAMLESS AND ACCESSIBLE PEDESTRIAN AND MICROMOBILITY VEHICLE ROUTES

The integration of the public transport system with pedestrian and micromobility vehicle routes at transit stations needs to be improved and upgraded especially at focal areas such as Cheras, Seputeh, Segambut, Titiwangsa and Pantai Dalam.

Ten (10) bicycle rack facilities, have been provided at Taman Melati stations on LRT Kelana Jaya line and six (6) at Sentul Timur stations on LRT Ampang line. These facilities are introduced through the Bike and Ride Program introduced by MyRapid and being able to attract user to take their bicycle along while boarding the train.

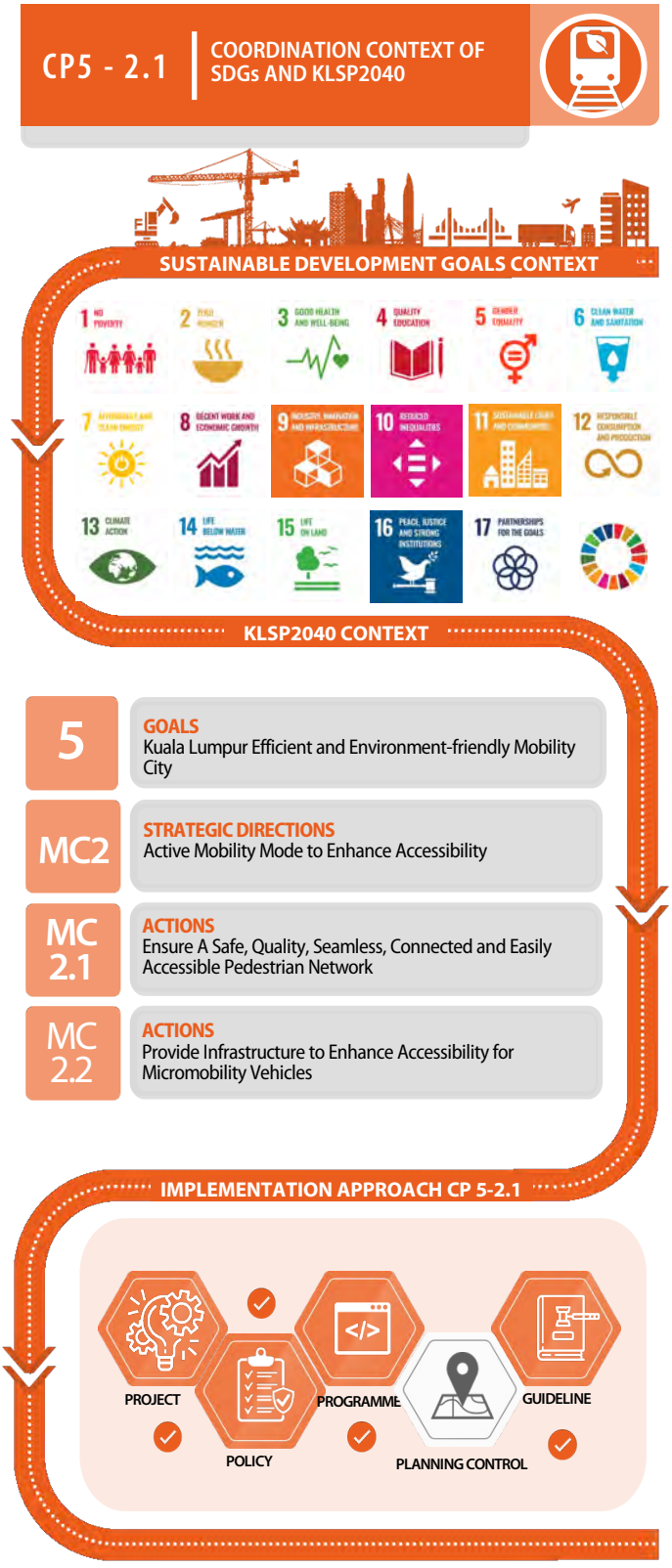
More proactive efforts are required to ensure that all stations are equipped with bicycle rack facilities as a convenience for pedestrian and micromobility vehicle routes users are required. Provision of the facilities is in line with the Kuala Lumpur Pedestrian and Cycling Masterplan 2019 to 2028 and to achieve the modal split of 70 percent public transport in Kuala Lumpur.

The implementation approach of this proposal is through projects, policies, programmes and guidelines. There are three (3) initiatives proposed for the implementation of CP 5-2.1.



Source: https://www.myrapid.com.my/

Rapid KL Bike and Ride program implemented by Rapid KL.



IMPLEMENTATION INITIATIVE 5-2.1A

PROVIDE NETWORKS OF PEDESTRIAN AND MICROMOBILITY VEHICLES ROUTES

The provision of networks for pedestrian and micromobility vehicle routes requires safe, seamless, and accessible planning. This provision requires collaboration between agencies and stakeholders to focus on areas with high rates of pedestrian as well as micromobility vehicles, such as school areas, hospital areas, shopping centers, and transit stations.

The necessary actions to support this initiative are as follows:

1. Identify optimal pedestrian route by considering the geometric design of the road that is suitable and comfortable to use;
2. Provide map of pedestrian routes in Kuala Lumpur;
3. Provide the design of pedestrian and micromobility vehicle routes network in focal areas with consideration on the safety and uninterrupted movement of users;
4. Encourage developer to integrate pedestrians with existing or new developments;
5. Provide adequate lighting on all pedestrian and micromobility vehicle routes;
6. Use latest technology in the planning and provision of pedestrian and micromobility vehicle routes network ; and
7. Ensure the provision of supportive facilities that are user-friendly, especially for the elderly and disabled.

IMPLEMENTATION INITIATIVE 5-2.1B

PROVIDE INFRASTRUCTURE FOR PEDESTRIAN AND MICROMOBILITY VEHICLE ROUTES

Provision of infrastructure for pedestrian and micromobility vehicle routes should be prioritised in focal areas such as transit stations. Planning for this infrastructure is appropriate within 400 metres to 800 metres from the transit station.

The Draft KLLP2040 proposed provision of infrastructure for pedestrian and micromobility vehicle routes as shown in Figure 5.2.2.

The necessary actions to support this initiative are as follows:

1. Provide a comfortable, safe and continuous pedestrian routes within 400 metres and micromobility vehicle routes within 800 metres of each transit station;
2. Provide separate pedestrian and micromobility vehicle routes network network with motorised vehicle paths on utility or landscape reserves as shown in Figure 5.2.3 and Table 5.2.1;
3. Consider facilities such as directional signage as well as dividers to separate motorised vehicles from pedestrian and micromobility vehicle routes;
4. Enforce the prohibition of motorcycles on pedestrian and micromobility vehicle routes network to avoid the risk of accidents; and
5. Introduce related acts or legal provisions in giving permission for the use of pedestrian and micromobility vehicle routes in Kuala Lumpur.

Table 5.2.1: Requirement of Pedestrian and Micromobility Vehicle Routes

Area	Route Design (Marker, Path Painted in Blue/Green Color)	Special Routes (Poles or Road Reflector or Rubber Hump)	Path Width	Buffer zone	Stop Zones At Intersections
Commercial and Industry Centre (all street categories)	✓	✓ (Poles or Rubber Hump)	Min. 1.2 m Proposed: 1.5 m	Min. 0.8 m	✓
Residential Area (Arterial Road)	✓	✓ (Poles or Road Reflector or Rubber Hump)	Min. 1.2 m Proposed: 1.5 m	Min. 0.8 m	✓
Residential Area (Collectors Road)	✓	✓ (Poles or Road Reflector)	Min. 1.2 m Proposed: 1.5 m	-	-
Residential Area (Local Streets - > 4 units per acre)	✓	(Road Reflector)	Min. 1.2 m Proposed: 1.5 m	-	-

Source: Adapted from Pedestrian and Cycling Masterpan 2019 to 2028

Figure 5.2.2: Cross Sections for Pedestrian and Micromobility Vehicle Routes

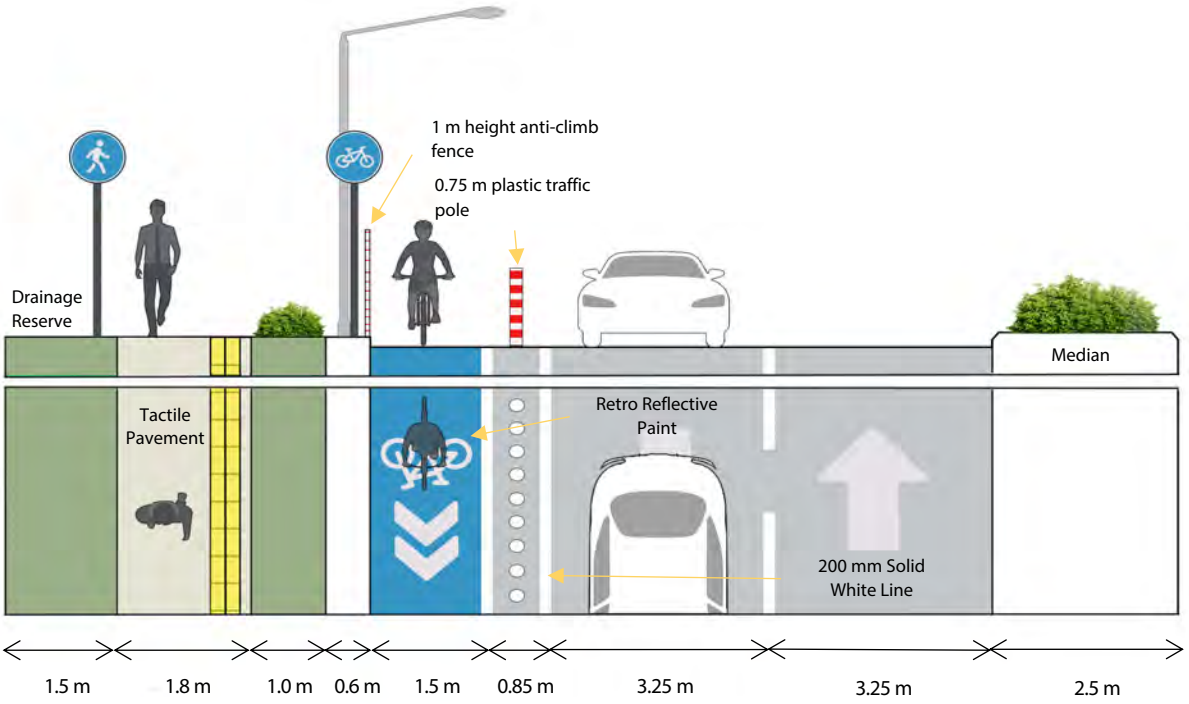
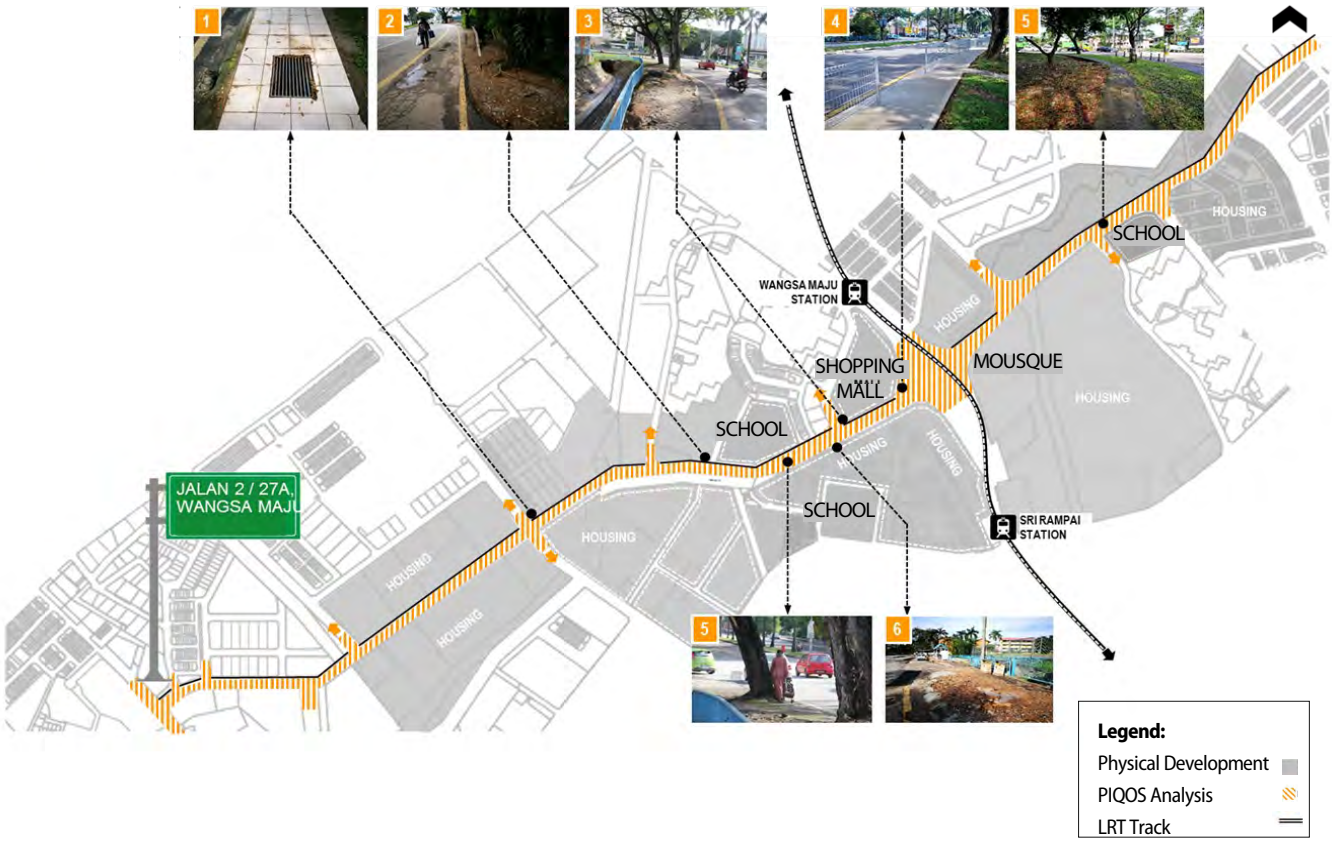


Figure 5.2.3: Quick-Win Project Proposals for Facilities and Community Area Infrastructure in Wangsa Maju



IMPLEMENTATION INITIATIVE 5-2.1C

PROVIDE PEDESTRIAN ROUTES PRIORITY ZONE IN THE CITY CENTRE

A pedestrian routes has been established at several strategic locations in the City Centre, nevertheless, it still needs to be improved in order to connect focal areas and encourage optimal use in the City Centre.

The construction of Pintasan Saloma connecting Kampong Bharu and KLCC is a good example of provision of a pedestrian walkway that connects two (2) focal points. Bukit Bintang elevated road to KLCC is also another example of a good connectivity network towards promoting the use of pedestrian walkway in City Centre.

Pedestrian walkways help to create a vibrant and attractive environment especially in focal areas such as commercial zones and employment centres. There are various methods applied in several countries to create full or partial pedestrian priority zones. The provision of pedestrian priority zones needs to consider current activities and physical readiness of roads.

The necessary actions to support this initiative are as follows:

1. Convert Jalan Tuanku Abdul Rahman into a pedestrian priority zone with the potential to be completely closed to vehicles;
2. Identify potential pedestrian priority zones with temporary closure from vehicles such as Jalan Bukit Bintang and Jalan Masjid India;
3. Design seamless, comfortable, barrier-free and user-friendly pedestrian walkways;
4. Provide a width of the pedestrian routes that is able to accommodate the high capacity of pedestrians;
5. Ensure the pedestrian routes is located along the main activity area with supporting infrastructure facilities such as directional signboard;
6. Encourage more controlled street vending activities in the form of kiosks in pedestrian areas;
7. Provide adequate lighting to ensure the safety and comfort of pedestrians; and
8. Revitalise pedestrian area through interesting design elements in street furniture and landscaping to allow users to enjoy pocket parks, public art areas and street entertainment.

Provision of pedestrian crossings and overpasses is one of the efforts to encourage pedestrianisation in Kuala Lumpur.

IMPLEMENTATION PROPOSAL

CP 5-2.2: IMPLEMENTING BIKE-SHARING SYSTEM (BSS) FACILITY

Bike-sharing system (BSS) is a transport model that uses smart application with a certain payment rate for the use of bicycles. Its implementation is suitable in many areas such as City Centre, commercial centres, recreational areas and tourist hotspots.

This system is introduced to increase flexibility in the public transport system. It is also expected to provide be able to provide a positive and cost-effective perception in improving the first and last mile aspects between modes of transport.

The implementation approach of this proposal is through projects, policies and programmes. One (1) initiative is proposed for the implementation of CP 5-2.2.

BEST PRACTICES

USE OF BIKE-SHARING SYSTEM, NETHERLANDS

In 2018, the statistics of bicycle ownership in the Netherlands is estimated at 23 million compared to the total population of the country which is 17 million. The total bicycle ownership shows that the Dutch people have made bicycles the main mode of daily transportation in the country.

Location: Antwerp, Belanda

IMPLEMENTATION INITIATIVE 5-2.2A

PROVIDE BIKE-SHARING SYSTEM (BSS) SERVICES AND FACILITIES IN KUALA LUMPUR

Bike-Sharing System (BSS) facility is a step action to promote an efficient and flexible micro transport transit system. The provision of this service should be focused in City Centre area and extended throughout Kuala Lumpur.

The necessary actions to support this initiative are as follows:

1. Promote the provision of Bike-Sharing System (BSS) facilities as many as ten (10) to 16 stations per square kilometres;
2. Encourage the provision of Bike-Sharing System (BSS) facilities based on a ratio of ten (10) to 30 bicycles per 1,000 residents;
3. Consider the quality of the bike with the appropriate level of durability, comfort, attractiveness, and practicality; and
4. Develop a user-friendly application for the use purpose of using the Automated Locking System (ALS) and Advanced Tracking System (ATS) that can improve the safety features of bicycles.

The Draft KLLP2040 has identified ten (10) potential locations for the implementation of BSS facilities in Kuala Lumpur as shown in Figure 5.2.4 as follows:

1. Bandar Wawasan;
2. TRX;
3. Menara Warisan 118;
4. Bandar Malaysia;
5. KLCC;
6. Masjid Jamek;
7. Bukit Bintang;
8. KL Sentral;
9. Pasar Seni; and
10. Dataran Merdeka.

BEST PRACTICES

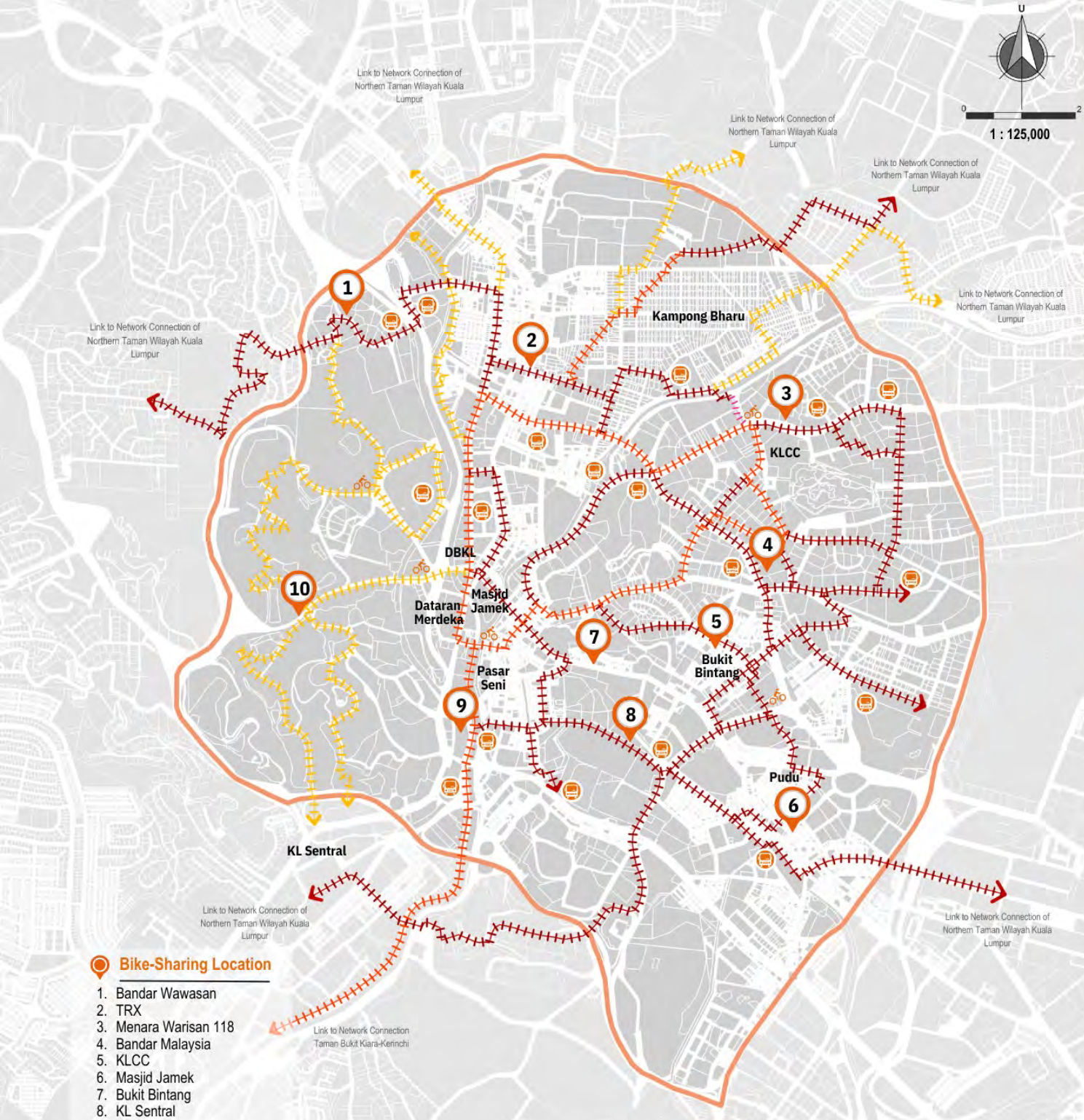
CITY BIKES OF STOCKHOLM, SWEDEN

City	Stockholm
Country	Sweden
Implementation Year	June 2007
Stakeholders	Clear Channel City of Stockholm
Goal	1. Improve the status of cycling lifestyle; and 2. Promote the use of bicycles for short distances travel.
Details	1. Implement this project via public-private partnership; 2. Encourage the use of bicycles for a maximum period of three (3) hours starting from 6.00 am until 10.00 pm; and 3. Provide a ticket system such as seasonal cards or daily cards for a period of three (3) days.

Source: https://viewstockholm.com/rent-bike stockholm/

Location: Stockholm, Sweden
Source: https://www.shutterstock.com/g/EQRoy

Provision of a practical and comfortable Bike-sharing System (BSS) for the populations of Stockholm City.



Bike-Sharing Location

1. Bandar Wawasan
2. TRX
3. Menara Warisan 118
4. Bandar Malaysia
5. KLCC
6. Masjid Jamek
7. Bukit Bintang
8. KL Sentral
9. Pasar Seni
10. Dataran Merdeka

FIGURE 5.2.4 | Plan of Proposed Network and Location of Bike-Sharing System (BSS) Locations in City Centre

Bike-Sharing System (BSS) Network in City Centre

1. **Route 1 [4.9 km]**
   Jalan Dato Onn - Jalan Sultan Salahuddin - Jalan Tun Ismail - Jalan Tunku - Jalan Tun Ismail -Jalan Putra - Jalan Raja Laut
2. **Route 2 [2.2 km]**
   Jalan Raja Laut - Jalan Sri Amar - Jalan Dewan Sultan Ismail Jalan Raja Abdullah - Jalan Raja Muda Musa Jalan Hassan Salleh - Saloma Bridge Jalan Saloma - Jalan Ampang
3. **Route 3 [4.4 km]**
   Jalan Ampang - Jalan 1/68B - Jalan Binjai - Persiaran KLCC - Jalan Stonor - Jalan Conlay - Jalan Kia Peng - Jalan Pinang - Jalan P. Ramlee - Jalan Perak
4. **Route 4 [2.4 km]**
   Jalan Sultan Ismail - Jalan Ampang - Jalan Gereja - Jalan Raja Chulan
5. **Route 5 [1.1 km]**
   Bukit Bintang St - Changkat Bukit Bintang - Jalan Ceylon - Persiaran Raja Chulan - Jalan Raja Chulan
6. **Route 6 [7.3 km]**
   Jalan Sultan Ismail - Jalan Raja Chulan - Bukit Bintang St - Jalan Gading - Jalan Utara - Jalan Barat - Jalan Harley - Jalan Kampung Pandan - Jalan Imbi - Jalan Khoo Teik Ee - Lorong Walter Granier - Jalan Walter Granier - Jalan Sultan Ismail - Jalan Bulan 1 - Jalan 1/77b - Jalan Changkat Thambi Dollah - Jalan Brunei - Jalan Pudu - Jalan Merlimau
7. **Route 7 [0.9 km]**
   Bukit Bintang St - Jalan Pudu - Jalan Tun Perak
8. **Route 8 [1.4 km]**
   Jalan Merlimau - Lorong Meranti - Jalan Hang Jebat - Jalan Sultan
9. **Route 9 [2.8 km]**
   Jalan Tun Perak - Jalan Pudu -Jalan Sultan - Lorong Petaling - Jalan Stadium - Jalan Sultan Mohamed - Lebuh Pasar Besar - Jalan Hang Kasturi - Jalan Tun Sambathan
10. **Route 10 [4.9 km]**
    Jalan Dato Onn - Jalan Sultan Salahuddin - Jalan Tun Ismail - Jalan Tunku - Jalan Tun Ismail -Jalan Putra - Jalan Raja Laut

[total Distance: 34.5 km]

Legend:

- Proposed System Locations Bike-Sharing
- City Centre Area
- Main Road
- Kuala Lumpur Boundary
- Bus Stop
- Cycling Route
- Main Cycling Route
- Existing Cycling Route
- Secondary Cycling Route

IMPLEMENTATION PROPOSAL

CP 5-2.3: PROMOTING PEDESTRIAN AND USE OF MICROMOBILITY VEHICLE ROUTES

Promoting public awareness promotion is very important to encourage pedestrian and the use of micromobility vehicle routes in Kuala Lumpur.

This promotion can be implemented through various methods such as social media, pamphlets, digital exhibitions and open campaigns. It also targets to all age groups especially youth and children.

This implementation can be achieved through collaboration between of KLCH with related agencies such as government, private, non-governmental organisations (NGOs) and local residents.

The implementation approach of this proposal is through programmes. One (1) initiative is proposed for the implementation of CP 5-2.3.

BEST PRACTICES

PROGRAM OF AWARENESS AND SAFETY

Location: Jalan Raja Laut, Kuala Lumpur

Safety campaign program about the use of pedestrian and the use of micromobility vehicle routes.

IMPLEMENTATION INITIATIVE 5-2.3A

IMPLEMENT AWARENESS PROMOTION FOR WALKING AND MICROMOBILITY VEHICLE ROUTES ACTIVITIES

The public needs to understand the efforts and initiatives related to pedestrian and micromobility vehicle routes especially cycling as being implemented by the government.

The necessary actions to support this initiative are as follows:

1. Enforce existing rules to protect the rights and safety of pedestrians and micromobility vehicle users especially cyclists;
2. Provide incentives for pedestrians and micromobility vehicle users especially cyclists;
3. Promote Kuala Lumpur as a primary city for pedestrians and micromobility vehicles especially bicycle;
4. Organise Road Safety Campaign;
5. Conduct awareness programme such as safe routes to schools and neighbourhoods together with educational institutions;
6. Increase publicity digitally through social media and digital display; and
7. Conduct design audits on the construction of pedestrian walkways and micromobility vehicle routes especially cycling.

BRIEF INFO

Regular and frequent promotions need to be carried out on various platforms such as physical and virtual campaigns.

KLCH is always actively promoting awareness to encourage the use of pedestrian and micromobility vehicle route.

Source: https://klcarfreemorning.my/

KLCH is also actively promoting a healthy lifestyle for city residents through the KL Car Free Morning programs. The programs are one of the green city initiatives by closing part of the main road in Kuala Lumpur for all level of society to cycle, walk, run and carry out other sports and health activities.

Kuala Lumpur's car-free morning programme is actively implemented by KLCH.

Source: https://klcarfreemorning.my/

PLANNING STRATEGY

SP 5-3: MANAGING TRAFFIC EFFECTIVELY

SCENARIO OF TRAFFIC MANAGEMENT IN KUALA LUMPUR

In 2020, the modal split of vehicles in Kuala Lumpur by the Malaysian Ministry of Transport showed only 20 percent used public transport and 80 percent still used private vehicles.

This data indicates a high level of dependence among the residents of Kuala Lumpur on the use of private vehicles. It also puts pressure on the existing road capacity and creates problems of traffic congestion and delays, air and noise pollution, as well as increased costs of road construction and management.

The Draft KLLP2040 ensures that urban traffic management and effective road network planning are given attention. The focus is on the proposal to complete the road network that is not connected (missing link) in Kuala Lumpur.

In order to realise Kuala Lumpur as a city capable of managing traffic effectively, three (3) Implementation Proposals are formulated under Planning Strategy 5-3, as shown in Figure 5.3.1.

Figure 5.3.1:
Implementation Proposals for Planning Strategy 5-3

SP 5-3 MANAGING TRAFFIC EFFECTIVELY

- CP 5-3.1 Managing Traffic In Kuala Lumpur
- CP 5-3.2 Planning and Managing Of Vehicle Parking Space
- CP 5-3.3 Providing Roads Connector To Complete The Road Network

BRIEF INFO

VEHICLE TRIP GENERATIONS AND ATTRACTION OF KUALA LUMPUR

Morning Peak Hours

195,874 PCU per hour
Generation

249,466 PCU per hour
Attraction

Evening Peak Hours

235,883 PCU per hour
Generation

186,129 PCU per hour
Attraction

Source: Adapted from the Kuala Lumpur Traffic Master Plan 2040

IMPLEMENTATION PROPOSAL

CP 5-3.1: MANAGING TRAFFIC IN KUALA LUMPUR

Traffic congestion in Kuala Lumpur needs to be overcome through a more comprehensive traffic management, integrated with the development of public transport that is user-friendly, efficient and easily accessible. The diversity of integrated public transport modes will be able to influence the shift of dependence on private vehicles to the target of 70 percent public transport by 2040.

Solution to the problem is not only focused on the development of road infrastructure. An innovative approach through traffic management initiatives using the latest technology needs to be improved to monitor vehicle movement and congested locations more efficiently.

Implementation of Road User Charging (RUC), peak hours and heavy vehicle management are among the traffic management mechanisms in Kuala Lumpur, especially the City Centre.

Implementation of the mechanism is based on following criteria:

1. Main entrance to the City Centre;
2. Roads that experience traffic congestion during peak hours such as Persiaran KLCC, Jalan Tuanku Abdul Rahman and Jalan P.Ramlee;
3. Streets that are complete with the provision of a comprehensive pedestrian and micromobility vehicle routes; and
4. High level of public transport accessibility.

The implementation approach of this proposal is through project, policy and programme. There are three (3) initiatives proposed for the implementation of CP 5-3.1.

IMPLEMENTATION INITIATIVE 5-3.1A

IMPLEMENT ROAD USER CHARGING (RUC) SCHEME AT THE CITY CENTRE ENTRANCE

The implementation of the RUC mechanism aims to reduce high traffic congestion by controlling the entry of private vehicles into the City Centre. It is also able to improve the quality of environment through reduction of carbon emissions in Kuala Lumpur.

The necessary actions to support this initiative are as follows:

1. Increase level of service, coverage area and continuity of public transport routes which are also supported by active mobility infrastructure;
2. Provide park and ride facilities at transit stations located at the suitable Kuala Lumpur border;
3. Revise calculation rate of parking provision requirements within RUC's proposed development area; and
4. Increase public awareness on the benefits of using public transportation through education programmes and best practices.

Implementation of the RUC should also take into account the charge rate that is subject to the travel time, vehicle type, location and other aspects. Implementation charges for residents living within the RUC area should be considered.

Implementation of the RUC mechanism are as follows:

1. Carry out a detailed study on the implementation of RUC involving methods, socio-economic impact, legal and administrative aspects.
2. Ensure that the implementation of RUC is done after taking into account the effectiveness of comprehensive public transport system in the future;
3. Priorities its implementation in stages in City Centre; and
4. Coordinate RUC scheme collection for the purpose of upgrading public transport system, parking, park and ride as well as other city management purposes.

The Draft KLLP2040 has identified potential roads for implementation of RUC as shown in Figure 5.3.2 as follows:

1. Persiaran KLCC;
2. Jalan Tuanku Abdul Rahman;
3. Jalan P.Ramlee;
4. Jalan Pinang;
5. Jalan Yap Kwan Seng;
6. Jalan Raja Chulan;
7. Jalan Sultan Ismail;
8. Jalan Ampang;
9. Jalan Kia Peng;
10. Jalan Bukit Bintang;
11. Jalan Nagasari;
12. Changkat Bukit Bintang;
13. Jalan Imbi; and
14. Jalan Tun Sambanthan.

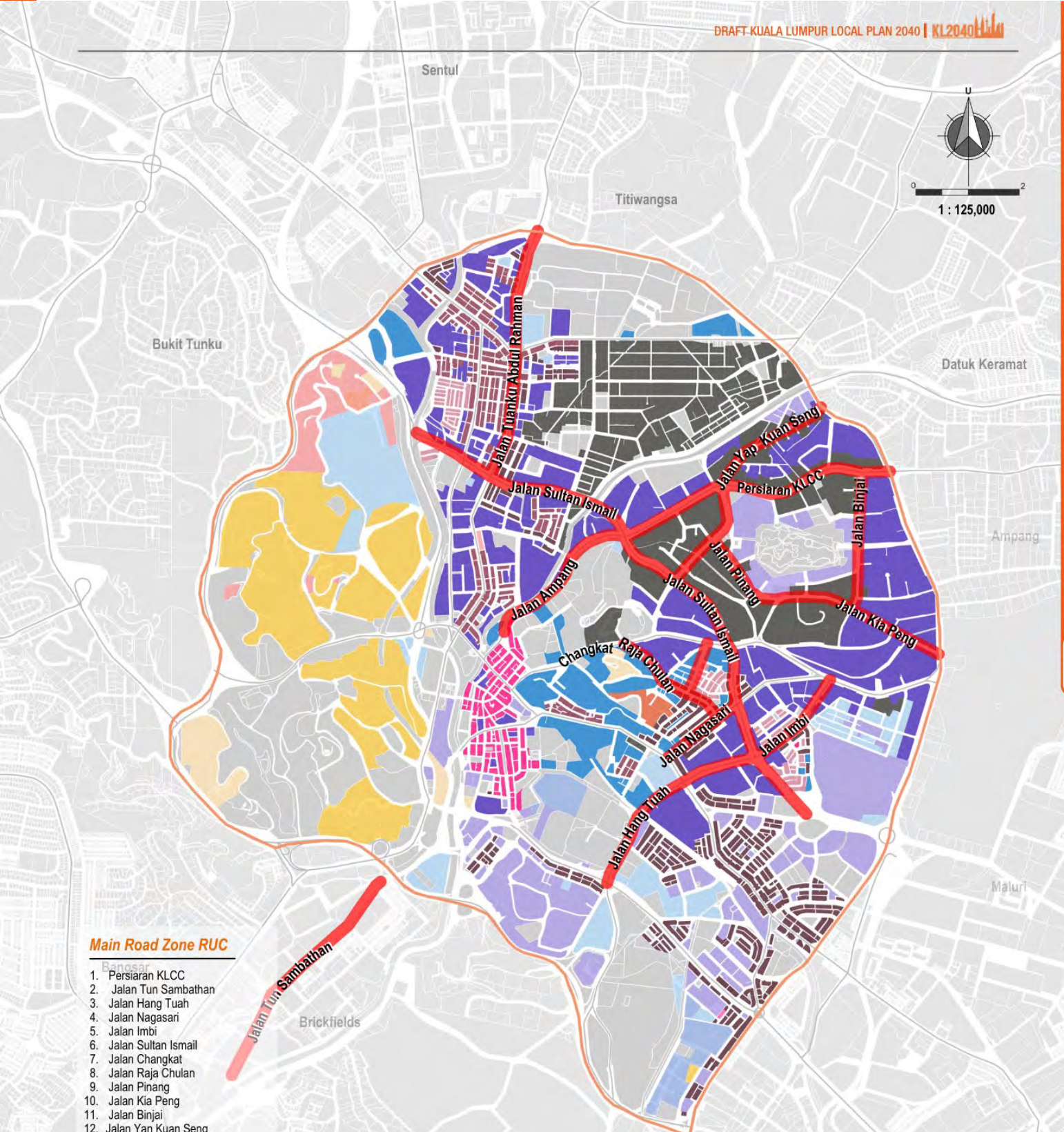
BEST PRACTICES

IMPLEMENTATION OF RUC'S ABROAD

This system has been implemented in several large cities known for congestion problems such as London, Stockholm and Singapore:

1. London
   - Introduced in 2003 and 25 percent of reduction in traffic;
2. Stockholm
   - Introduced in 2006 and 20 percent reduction in traffic; and
3. Singapore
   - Introduced in 2009 and 13 percent reduction in traffic.

Source: https://www.theiet.org/media/1667/road-user.pdf



Main Road Zone RUC

1. Persiaran KLCC
2. Jalan Tun Sambathan
3. Jalan Hang Tuah
4. Jalan Nagasari
5. Jalan Imbi
6. Jalan Sultan Ismail
7. Jalan Changkat
8. Jalan Raja Chulan
9. Jalan Pinang
10. Jalan Kia Peng
11. Jalan Binjai
12. Jalan Yan Kuan Seng
13. Jalan Ampang
14. Jalan Tuanku Abdul Rahman

FIGURE 5.3.2 | Plan of RUC's Proposed on the Access Road to the City Centre

Legend :

Residential Plot Ratio
- NP 1:2:5
- NP 1:3.5
- NP 1:4
- NP 1:5

Non-Residential Plot Ratio
- NP 1:2
- NP 1:3
- NP 1:4
- NP 1:5
- NP 1:6
- NP 1:7
- NP 1:8
- NP 1:10

Height Control
- 4 Floors
- 7 Floors
- 10 Floors
- 14 Floors

Others
- Main Road
- Kuala Lumpur Boundary
- RUC Zone

IMPLEMENTATION INITIATIVE 5-3.1B

MANAGE TRAFFIC DURING PEAK HOURS

Traffic management at peak hours is important in controlling traffic flow in Kuala Lumpur.

The necessary actions to support this initiative are as follows:

1. Expand the Tidal-Flow System in congested roads such as Jalan Ampang and Jalan Bangsar especially during peak hours from 6.30 am to 9.30 am and 4.30 pm to 7.30 pm;
2. Implement flexible working hours to ensure employees can plan their trips to avoid congestion on the roads and public transport;
3. Encourage Work From Home (WFH) to reduce the journeys to work especially in the City Centre; and
4. Encourage employers to provide incentives to public transport users.

IMPLEMENTATION INITIATIVE 5-3.1C

CONTROL THE ENTRY TIME OF HEAVY VEHICLES IN CITY CENTRE

Controlling the entry of heavy vehicles to City Centre is important for maintaining an exclusive, clean and vibrant image.

The necessary actions to support this initiative are as follows:

1. Tighten and enforce entry time controls for heavy vehicles entering Kuala Lumpur from 6.30 am to 9.30 am and 4.30 pm to 7.30 pm (excluding Saturdays, Sundays and Public Holidays);
2. Monitor the issuance of Heavy Vehicle Movement Permit for tow truck category (BDM>7500 kilograms), container trucks and mobile cranes as well as cement mixer trucks within the City Centre area;
3. Ensure the placement of the "No Entry Zone" during peak hours especially on the main route going towards to City Centre;
4. Allow unloading activities outside of peak hours from 10.00 am to 4.00 pm and 8.00 pm to 6.00 am;
5. Ensure continuous enforcement; and
6. Encourage use of technology to control the entry of heavy vehicles into the City Centre.

Location : One Fullerton, Singapore

Electric Riad Pricing (ERP) is a congestion charge reduction system as a method of traffic management during peak hours in Singapore .

IMPLEMENTATION PROPOSAL

CP 5-3.2: PLANNING AND MANAGING OF VEHICLE PARKING SPACE

Kuala Lumpur is estimated to have 88,500 spaces for vehicle parking (TLK) along on-street parking and 304,064 for TLK off-street parking. This TLK demand will continue to increase if it is not carefully planned and managed. The management of TLK supply and distribution needs to be coordinated so as to increase and consequently the use of public transport can be improved to reduce traffic congestion.

City Centre and urban renewal areas need to focus on the planning and management of TLK with more carefully especially in TPZ and TIZ areas. The provision of Centralised TLK needs to be planned in integrated with perfect pedestrian and micromobility vehicle routes facilities and connected to transit stations. This provision will entice the interest of users and encourage road users to change from riding their own vehicles to public transport.

Focus of TLK management for the development of offices and commerce in City Centre needs to be implemented innovatively through joint partnerships for residential development.

The implementation approach of this proposal is through projects, policies, programmes and planning controls. There are two (2) initiatives proposed for the implementation of CP 5-3.2.

Location : One Fullerton, Singapore

A multi-storey and integrated car park developed by KLCH for the convenience of Taman Tasik Metropolitan Kepong users.

IMPLEMENTATION INITIATIVE 5-3.2A

REORGANISE VEHICLE PARKING SPACE

The provision of TLK spaces in Kuala Lumpur need to be adjusted according to the suitable use of the spaces. The coordination of TLK space to the use of active mobility routes or the use of Kuala Lumpur's public transport corridor can optimise the use of the space.

TLK on the road especially in areas covered by an extensive public transport system should be reduced.

The necessary actions to support this initiative are as follows:

1. Identify and plan new parking sharing mechanisms for housing developments with commercial developments such as offices;
2. Integrate TLK payment with public transport especially around TPZ and TIZ as well as focal areas;
3. Reduce TLK along on-street parking especially in City Centers, Primary Trade Centers and other employment focus areas. The space should be used for pedestrian and micromobility vehicle routes;
4. Ban any vacant land that has not yet been developed from being used as an open TLK;
5. Limit the TLK of heavy vehicles in City Centre;
6. Identify tourist focus areas for the provision of tourist bus parking;
7. Provide high-powered motor TLK in appropriate areas;
8. Re-examine TLK fee charges and propose an increase in TLK charges by ten (10) percent every year to control the entry of vehicles in the City Centre in line with Kuala Lumpur Traffic Master Plan 2040 (PITKL);
9. Revise Kuala Lumpur's TLK policy periodically every five (5) years especially the charge and rate of TLK preparation; and
10. Give priority to the provision of TLK for women, disabled drivers and families.

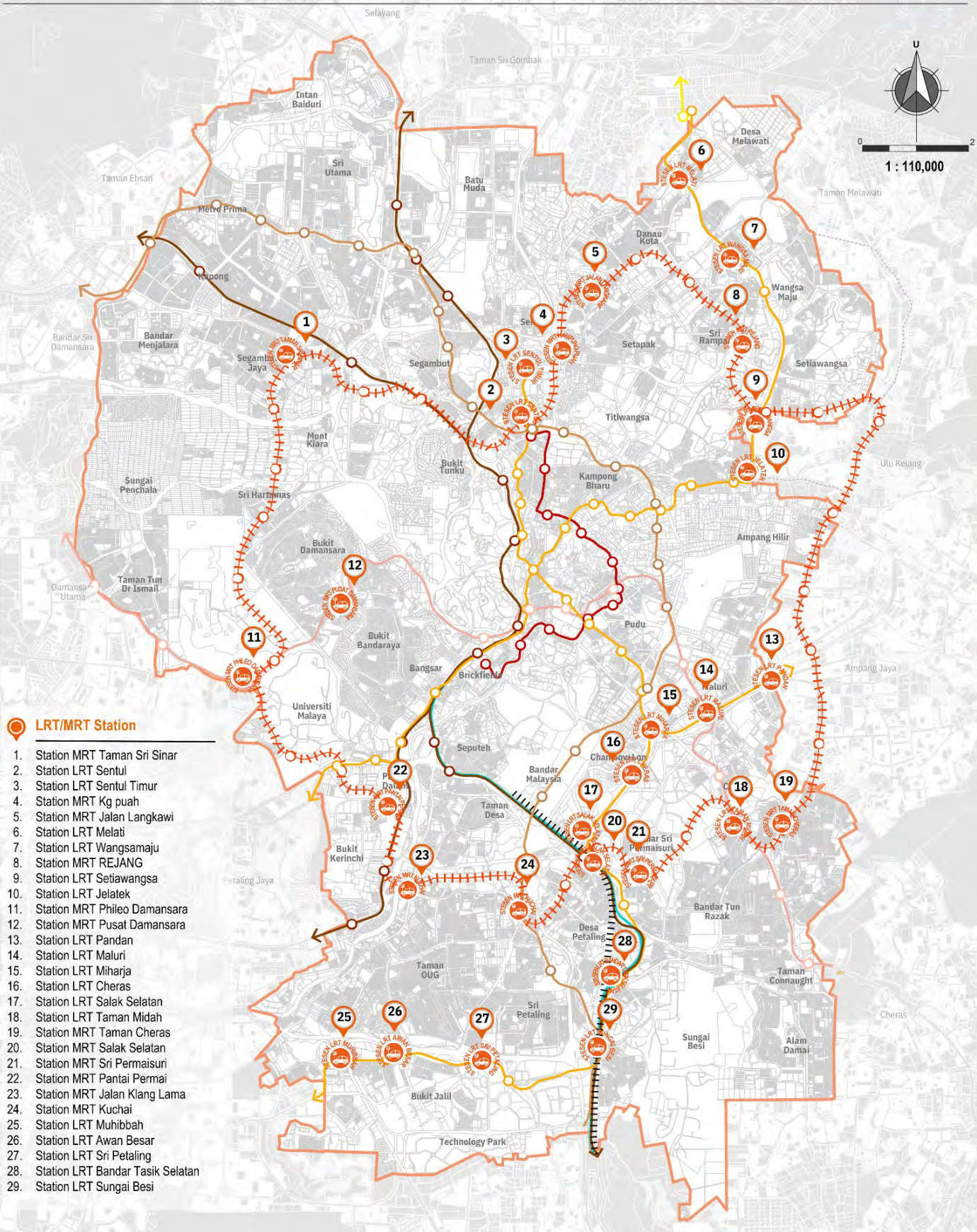
IMPLEMENTATION INITIATIVE 5-3.2B

IMPROVE OF PARK AND RIDE FACILITIES

Park and ride facilities allow road users to use private vehicles for part of their journey. Road users can park their vehicles and continue their journey using the transit mode. This facility provides some flexibility to users and reduce the use of private vehicles in Kuala Lumpur as shown in Figure 5.3.3.

The necessary actions to support this initiative are as follows:

1. Upgrade open TLK to multi-level TLK to ensure the increasing number of parking is capable to meet the needs of users;
2. Upgrade better and more innovative parking such as mechanical TLK;
3. Provide new park and ride facilities at potential MRT2 and MRT3 transit stations especially outside the City Centre;
4. Integrate TLK facility information with a digital display system at the entrance and main road of Kuala Lumpur to facilitate users to get parking bays immediately;
5. Develop a smart application regarding TLK reservations to facilitate travel planning to City Centre;
6. Provide complete supporting facilities to park and ride users such as women's TLK spaces, disabled TLK spaces, electrical vehicle charging station facilities as well as safe and comfortable pedestrian and micromobility vehicle routes to transit stations;
7. Integrate the park and ride fee charging system along with the use of public transport; and
8. Provide incentives or offers that can attract interest in the use of park and ride facilities as well as public transport such as MY50 provided by Prasarana.



LRT/MRT Station

1. Station MRT Taman Sri Sinar
2. Station LRT Sentul
3. Station LRT Sentul Timur
4. Station MRT Kg puah
5. Station MRT Jalan Langkawi
6. Station LRT Melati
7. Station LRT Wangsamaju
8. Station MRT REJANG
9. Station LRT Setiawangsa
10. Station LRT Jelatek
11. Station MRT Phileo Damansara
12. Station MRT Pusat Damansara
13. Station LRT Pandan
14. Station LRT Maluri
15. Station LRT Miharja
16. Station LRT Cheras
17. Station LRT Salak Selatan
18. Station LRT Taman Midah
19. Station MRT Taman Cheras
20. Station MRT Salak Selatan
21. Station MRT Sri Permaisuri
22. Station MRT Pantai Permai
23. Station MRT Jalan Klang Lama
24. Station MRT Kuchai
25. Station LRT Muhibbah
26. Station LRT Awan Besar
27. Station LRT Sri Petaling
28. Station LRT Bandar Tasik Selatan
29. Station LRT Sungai Besi

FIGURE 5.3.3 | Plan of Proposed Strengthening of Kuala Lumpur Park and Ride

Legend :

Proposed
- Proposed Park and Ride
- MRT Line 3 Corridor and Station (In Planning)
- Propose High Speed Rail Corridor *Subject to Amendment

Existing
- MRT Line and Station
- Monorail Line and Station
- KTM Commuter Line and Station
- MRT Line 2 and Station
- LRT Line and Station
- ECRL Line and Station
- ERL Line and Station

Others
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 5-3.3: PROVIDING ROADS CONNECTOR TO COMPLETE THE ROAD NETWORK

The practice of building more highways or roads in Kuala Lumpur will contribute to the increase in the use of private vehicles which in turn will be a factor in the increasing the level of road congestion and maintenance costs in the future. This practice is a short-term solution that results in the deterioration of air quality and affects the society's well-being.

Kuala Lumpur's future planning should be towards completing the continuity of the highway network and the network between major roads. The focus of strengthening existing roads includes completing the missing link. This planning also aims to ensure that each lot can be connected especially area outside the City Centre and to disperse traffic more effectively in the areas involved.

The implementation approach of this proposal is through projects and policies. There are two (2) initiatives proposed for the implementation of CP 5-3.3.

IMPLEMENTATION INITIATIVE 5-3.3A

CONNECT NETWORK BETWEEN HIGHWAYS IN KUALA LUMPUR

Kuala Lumpur has 17 highway networks to accommodate current and future traffic volumes. Based on the number of these highway networks, Kuala Lumpur no longer needs the construction of new highways except to connect missing links to facilitate the movement of vehicles, especially in the City Centre.

The highway development proposal to complete the existing highway connection is as shown in Table 5.3.1.

The existing highways in Kuala Lumpur are able to accommodate current and future traffic volume.

Table 5.3.1: Proposed Highway Connection in Kuala Lumpur

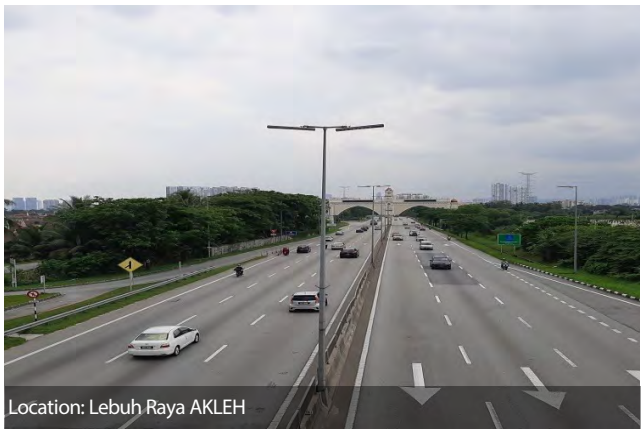
Highway	Details
1. Kuala Lumpur Northern Dispersal Expressway (KL-NODE)	The proposed Kuala Lumpur North Dispersal Expressway (KL-NODE) forms the northern part and completes the Kuala Lumpur Outer Ring Road (KLORR). The orbital road network for the Greater KL area is complete when there is a KL-NODE proposal. This proposal allows non-City traffic to bypass the City Centre.
2. Duta – Ula Klang 2 Expressway (DUKE 2A)	The proposed DUKE 2A alignment completes the link ring road that crosses over MRR1 and MRR2. DUKE 2A Highway will have two (2) road branches heading south which will optimise the road coverage of the highway. The external road branch starts from NKVE (Duta) and DUKE 1 across the dedicated road corridor above Jalan Duta and Jalan Istana before connecting to the Setiawangsa Pantai Expressway (SPE) in the southeast and the proposed New Pantai Expressway Phase 2 (NPE2) in the southwest. The internal road branch starts from the proposed KL-NODE and DUKE 1 in the north across above Jalan Kuching and continues south towards MRR1. This inner road branch also continues eastward along Jalan Tun Razak (MRR1) and provides a highway connection to the proposed redevelopment of the Kampong Bharu area.
3. Pantai New Expressway Phase 2 (NPE2)	The first phase of New Pantai Expressway starts from Subang Jaya in the west and disperses its traffic to Jalan Bangsar in the North. The proposed NPE2 will start at the Pantai Dalam Toll Plaza through a specific road corridor above Jalan Syed Putra towards Jalan Istana and finally connecting to the adjacent DUKE 2A.
4. Duta – Ula Klang 2 Expressway (DUKE 2A) and connecting Elevated Highway Ampang - Kuala Lumpur (AKLEH Link)	This highway route starts from DUKE 2 through a specific corridor above MRR1 towards AKLEH in the east.

Source: Reproduce from the Kuala Lumpur Traffic Master Plan 2040

IMPLEMENTATION INITIATIVE 5-3.3B

COMPLETE MAIN ROAD NETWORK

The Kuala Lumpur Traffic Master Plan 2040 (PITKL2040) proposes 57 main roads, consisting of 47 proposals for the construction of new main roads, including slip roads, and ten (10) proposals to upgrade existing main roads, as shown in Table 5.3.2. This proposal is expected to strengthen the road network in Kuala Lumpur and disperse traffic congestion from current and future development projects.



Highway or main road needs to be completed to disperse traffic effectively.

Table 5.3.2:
Proposal of New and Upgraded Main Roads

	New Road	New Slip Road	Road Upgrading
1.	Road connecting Jalan Metro Perdana Barat to Jalan Besar Kepong	Slip Road from MRR2 exit to Jalan 1/2B	Widening of Jalan Sentul Pasar
2.	Road connecting Jalan Benteng Utara to Jalan 15/34C	Slip Road from MRR2 into Jalan 1/2B	Widening of Jalan 5/51F
3.	Road connecting Jalan Benteng Utara to MRR2 (headling to Batu Caves)	Slip Road from Jalan 1/2B into MRR2 (heading to Bulatan Batu Caves)	Widening of Jalan Dutamas 2
4.	Road connecting Jalan 6/3A to Jalan 1/28 (bersebelahan Tasik Sri Murni)	Slip Road from Jalan Kampung Selayang Lama into MRR2	Widening of Jalan Segambut Dalam (from intersection Jalan 6/38J) to Jalan Kiara 4 (Mont Kiara International School)
5.	Road connecting Jalan Sibu to Jalan Kepong	Slip Road from MRR2 exit to Jalan Kampung Selayang Lama	Widening of Jalan Duta Kiara
6.	Road connecting Jalan Sibu to Jalan Kepong Lama	Slip Road from MRR2 exit/into to/from Jalan Residen	Widening of Jalan Hj Hamzah
7.	Road connecting Jalan 6/21C to Jalan 1/18D	Slip Road from Jalan Seri Utara exit to MRR2 (heading to Kepong)	Widening of Jalan Palimbayan
8.	Road connecting Jalan Sentul Pasar to Jalan 1/12D	Slip Road from Jejambat Bulatan Batu Caves (2nd tier) to Jalan Seri Utara	Widening of Jalan Sri Penchala
9.	Road connecting Jalan Langkawi to Jalan Gombak	Slip Road from DUKE Expressway into and exit to Jalan 26/26	
10.	Road connecting Jalan 2/50C to Jalan Semarak Api 3	Slip Road from Jalan Kuching Masuk into Jalan Dutamas 2 (heading Persiaran Dutamas)	
11.	Road connecting Jalan Perusahaan Ringan to Jalan 1/23C	Slip Road from DUKE Expressway (north) exit to Jalan Sultan Hj Ahmad Shah	
12.	Road connecting Jalan 1/23C to Jalan 5/51F	Slip Road from Jalan Sultan Hj Ahmad Shah into DUKE Expressway (north)	

Table 5.3.2:
Proposal of New and Upgraded Main Roads (Continued)

	New Road	New Slip Road	Road Upgrading
13.	Road connecting Jalan Rejang to Jalan 2/54B	Slip Road from DUKE Expressway (south) exit to Jalan Sultan Hj Ahmad Shah	
14.	Road connecting Jalan Ayer Madu to Jalan Tiara Titiwangsa	Slip Road from Jalan Sultan Hj Ahmad Shah into NKVE Expressway (west direction)	
15.	Road connecting Jalan Tiara Titiwangsa to DUKE (KIV)	Slip Road from Jalan Kiara 7 into Lebuhraya Penchala Link	
16.	Road connecting Jalan Tiara Titiwangsa 3 to road connecting from Jalan Tiara Titiwangsa to DUKE Expressway(No. 25)	Slip Road from Lebuhraya Penchala Link exit to Jalan Kiara 7	
17.	Road connecting Persiaran Dutamas to Jalan Sri Hartamas 1	Slip Road from Jalan Kerinchi Kiri into SPE Expressway	
18.	Road connecting Jalan Hj Hamzah to Jalan Duta Kiara	Slip Road from SPE Expressway exit to Jalan Kerinchi Kiri 2	
19.	Road connecting Jalan Palimbayan to Jalan Hj Hamzah	Slip Road from persimpangan Lebuhraya Salak/Jalan Cheras to Jalan Cheras Hartamas	
20.	Road connecting Jalan Hj Hamzah (No 19) to Jalan Kiara 5		
21.	Road connecting Jalan Hj Hamzah (No 35) to Jalan Kiara 7		
22.	Road connecting Jalan Hj Hamzah (No 35) to Serene Mont' Kiara		
23.	Road connecting Jalan Penchala Indah to Jalan Palimbayan		
24.	Flyover above Damansara Link (SPRINT) from Jalan Maarof intersection to Jalan Semantan intersection (In front of Menara Zurich)		
25.	Road connecting Jalan Semantan to Jalan Bukit Tunku		
26.	Road connecting Jalan Pantai Dalam to Jalan Pantai Sentral 3		
27.	Road connecting Jalan 4/155 to Jalan 13/155C		
28.	Road connecting Lorong Jintan 2 to Persiaran Desa Aman 2		
29.	Road U-turn at MRR2 (Batu Caves Roundabout) from Kepong to Kepong		
30.	Road U-turn at MRR2 (Batu Caves Roundabout) from Gombak to Gombak		

Source: Adapted from the Kuala Lumpur Traffic Master Plan 2040

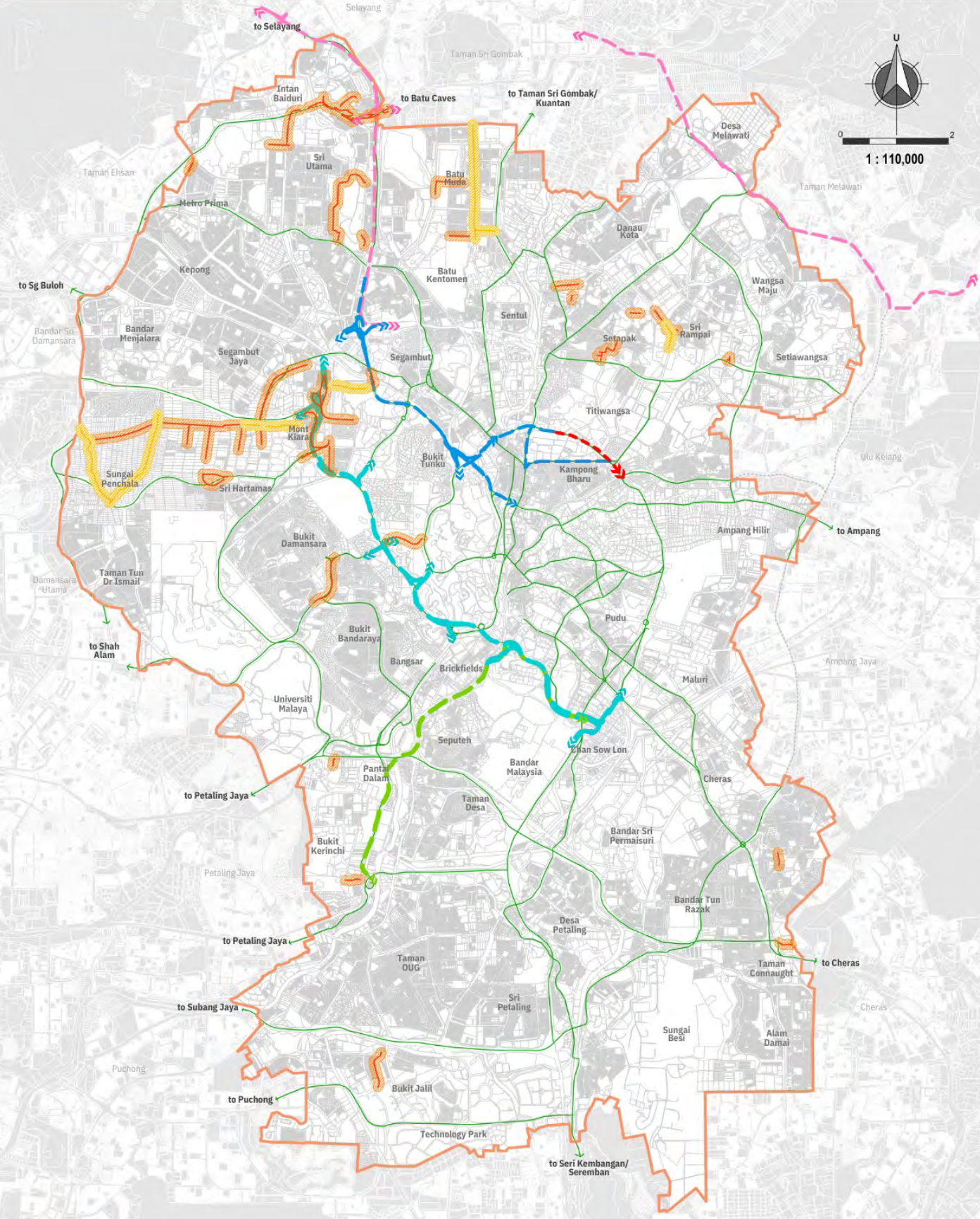


FIGURE 5.3.4 | Plan of Proposed Road Connector for Highway and Main Road Network in Kuala Lumpur

Legend :

- Kuala Lumpur Northern Dispersal Expressway (KL-NODE)
- Duta Ulu Klang Expressway 2A (DUKE 2A) (Kampong Bharu Link)
- Duta Ulu Klang Expressway 2A (DUKE 2A) (Jalan Istana Link)
- New Pantai Expressway Phase 2 (NPE2)
- Duta - Ulu Klang Expressway 2 (DUKE 2) (AKLEH Link)
- Proposed Main Road
- Proposed Upgrading Main Road

Others

- Main Road
- Kuala Lumpur Boundary

THE SUMMARY

GOAL 5 : FOCUSING ON THE DEVELOPMENT OF KUALA LUMPUR AS EFFICIENT ENVIRONMENTAL-FRIENDLY MOBILITY CITY

Various initiatives and implementation approaches have been proposed for Goal 5 towards focusing the development of Kuala Lumpur as an Efficient and Environmental-friendly Mobility City can be realised.

The planning and implementation of Goal 5 in the Draft KLLP2040 considers the SDGs, proposal of KLSP2040 and other national development policies which are detailed through projects, policies, programs, planning controls and guidelines.

The proposed strategies, initiatives and implementation approaches emphasis on providing public transportation network with provision of multiple transit options, encouraging active mobility mode with improved accessibility and safety as well as managing traffic effectively.

Table 5.1 shows a summary of the planning strategy and implementation proposal for Goal 5.

Table 5.1:
The Summary of Planning Strategy and Implementation Implementation Proposal of Goal 5

Planning Strategy	Implementation Proposal	Implementation Approach				
		Project	Policy	Programme	Planning Control	Guideline
P 5-1	CP 5-1.1	1	1	1	-	-
	CP 5-1.2	1	1	1	-	-
	CP 5-1.3	1	1	1	-	-
	CP 5-1.4	1	1	1	-	-
	CP 5-1.5	1	1	1	-	1
SP 5-2	CP 5-2.1	1	1	1	-	-
	CP 5-2.2	1	1	1	-	-
	CP 5-2.3	-	-	1	-	-
SP 5-3	CP 5-3.1	1	1	1	-	-
	CP 5-3.2	1	1	-	1	1
	CP 5-3.3	1	1	-	-	-
TOTAL		**10**	**10**	**9**	**1**	**2**

GOAL 6

EMPOWERING DEVELOPMENT OF KUALA LUMPUR AS AN INTEGRATED AND SUSTAINABLE CITY

GOAL 6

EMPOWERING DEVELOPMENT OF KUALA LUMPUR AS AN INTEGRATED AND SUSTAINABLE CITY

KLSP2040 focuses on empowering land management, sustainable development and integrated development planning. This is in line with the need to address the ongoing development pressures taking into account the limited availability of land in Kuala Lumpur.

The importance of integrated and sustainable development is to achieve the well-being of the population which is expected to increase to 2.35 million people by 2040. This stipulation is important to ensure that the economic performance of Kuala Lumpur remains robust and competitive on a global level.

The empowerment of sustainable development is also aimed at increasing Kuala Lumpur's preparedness against climate change and extreme weather that result in natural disasters.

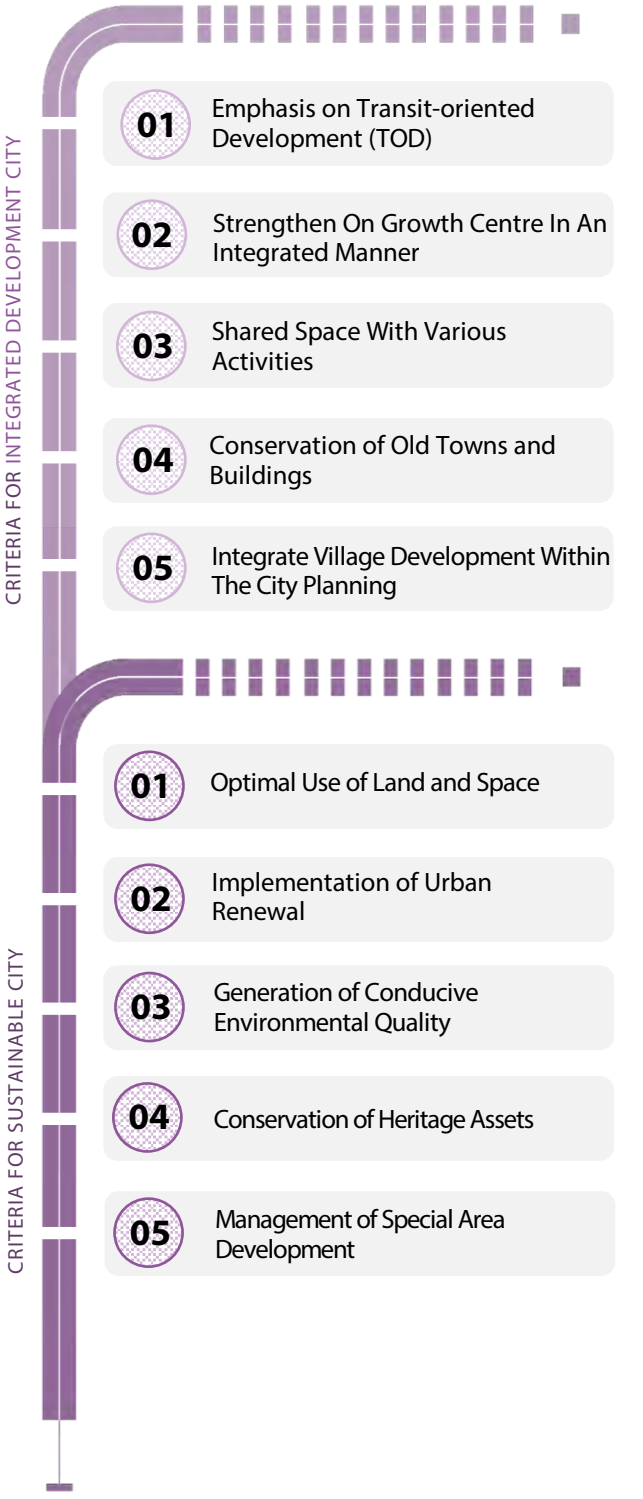
The strategy for land use and spatial management in Kuala Lumpur towards 2040 involves the provision of a clear framework for integrated and sustainable land use development.

The criteria for an integrated city development emphasise a focus on Transit-oriented Development (TOD), strengthening of growth centres in an integrated manner, sharing of spaces with various activities, conservation of old towns and buildings as well as integrating village development within the city planning.

The criteria for a sustainable city emphasise optimal use of land and space, implementation of urban renewal, generation of conducive environmental quality, conservation of heritage assets and management of special area development.

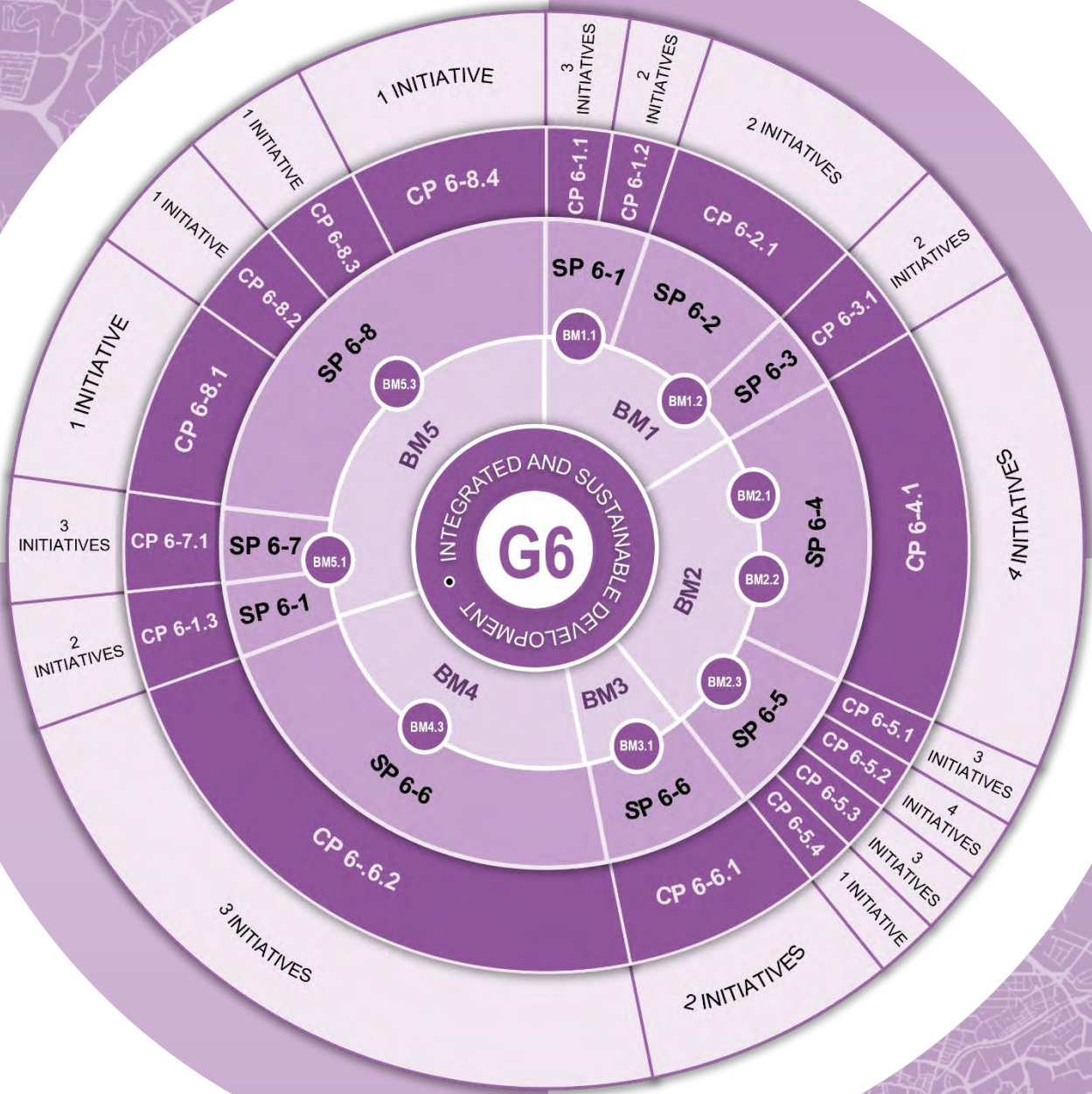
Figure 6.1 lists the main criteria that need to be implemented as a focus to empower the development of Kuala Lumpur as an Integrated and Sustainable City.

Figure 6.1:
Criteria for Integrated and Sustainable City



KLSP2040
5 STRATEGIC DIRECTIONS
15 ACTIONS

Figure 6.2
SUMMARY OF PLANNING STRATEGY AND IMPLEMENTATION PROPOSAL
GOAL 6:
EMPOWERING DEVELOPMENT OF KUALA LUMPUR AS AN INTEGRATED AND SUSTAINABLE CITY



There are eight (8) Planning Strategies (SP), 17 Implementation Proposals (CP) and 38 Implementation Initiatives (IP) that are formulated in line with KLSP2040 as summarized in Figure 6.2.

DRAFT KLLP2040
8 PLANNING STRATEGIES
17 IMPLEMENTATION PROPOSALS

PLANNING STRATEGY

SP 6-1: PLANNING AND COORDINATING LAND DEVELOPMENT EFFECTIVELY

SCENARIO OF LAND DEVELOPMENT IN KUALA LUMPUR

Land development in Kuala Lumpur is very rapid and being implemented as infill development or redevelopment. The focus areas of development are in the City Centre and growth centres such as Bandar Tasik Selatan, Sentul, Pavillion Bukit Jalil, Sri Hartamas and Pusat Bandar Damansara.

In 2021, the percentage of built-up area in Kuala Lumpur was 78.84 percent while the non-built-up area was 21.16 percent.

This built-up area is expected to continue to increase based on the trend of committed land use in 2021, especially residential that comprised 61.01 percent and commercial 25.78 percent. Industrial land uses are also affected by the pressure of changing land use to commercial and mixed development such as Chan Sow Lin Industrial Area.

Land development planning and coordination must be carried out effectively to ensure optimal land use, encourage the sharing of space with a variety of activities and be able to generate conducive environmental quality.

BRIEF INFO

LAND USE CATEGORY BY 2021

1. Residential
2. Commercial
3. Industry
4. Mixed Development
5. Public Facilities
6. Infrastructure and Utility
7. Transportation

Built-Up (78.84%)

1. Forest
2. Water Bodies
3. Open Space and Recreation
4. Vacant Land

Non-Built-Up (21.16%)

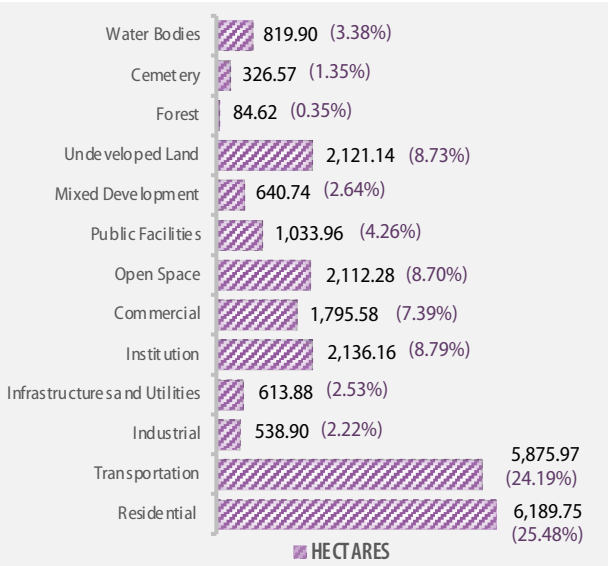
1. Undeveloped Land

Land Use Potential (8.73%)

Source : Adapted from KLSP2040

BRIEF INFO

CURRENT LAND USE IN KUALA LUMPUR 2021



Total : 24,289.45 Hectares

Source : Adapted from KLCP2020

TOTAL DEVELOPMENT COMMITTEE KUALA LUMPUR 2000 - 2021

Land Use Category	Total Development Committed until 2021	Percentage (%)
1. Residential	2,217	61.01
2. Commercial	937	25.78
3. Industry	23	0.63
4. Mixed Development	165	4.54
5. Institution and Public Facilities	98	2.70
6. Open Space and Recreational	194	5.34
TOTAL	**3,634**	**100.0**

Source : KLSP2040

Main factors that have contributed to the rapid development and change in land use patterns in Kuala Lumpur are as follows:

1. Planning policies that encourage comprehensive development through infill or redevelopment;
2. Function of Kuala Lumpur as the country's economic activities hub in attracting real estate investment; and
3. Expansion of the rail network and services such as the Kajang MRT Line and Putrajaya MRT Line influences the development of land use.

Rapid land use development is also one of the contributing factors to traffic congestion in Kuala Lumpur. Based on the Kuala Lumpur Traffic Master Plan, it was estimated about 40 percent of the road network operated at or exceed capacity during the morning and evening peak hours in 2020. This development trend also leads to a continuous increase in land prices in Kuala Lumpur.

In 2021, there were 2,121.14 hectares of undeveloped land in Kuala Lumpur. These lands were the areas with the potential to accomodate new development and required planning as well as appropriate development intensity.

This land use planning needs to be reviewed so that land use becomes more economical and has added value in the real estate market. Comprehensive land use planning needs to consider local populations in terms of providing adequate housing, open space and community facilities.

The Draft KLLP2040 will empower Kuala Lumpur's growth potential with integrated and sustainable land planning and development.

In order to realise Kuala Lumpur as a city with more productive and effective space utilisation, three (3) Implementation Proposals are formulated under Planning Strategy 6–1, as shown in Figure 6.1.2.

Figure 6.1.1:
Implementation Proposals of Planning Strategy 6-1

SP 6-1 PLANNING AND COORDINATING LAND DEVELOPMENT EFFECTIVELY

- **CP 6-1.1** Strengthening Land Use Zones and Development Intensity
- **CP 6-1.2** Managing Undeveloped Land Optimally and Productively
- **CP 6-1.3** Regulating Industrial Activities Outside Suitable Land Use Zones

Land development in Kuala Lumpur is very dynamic and requires a more productive as well as effective planning of space.

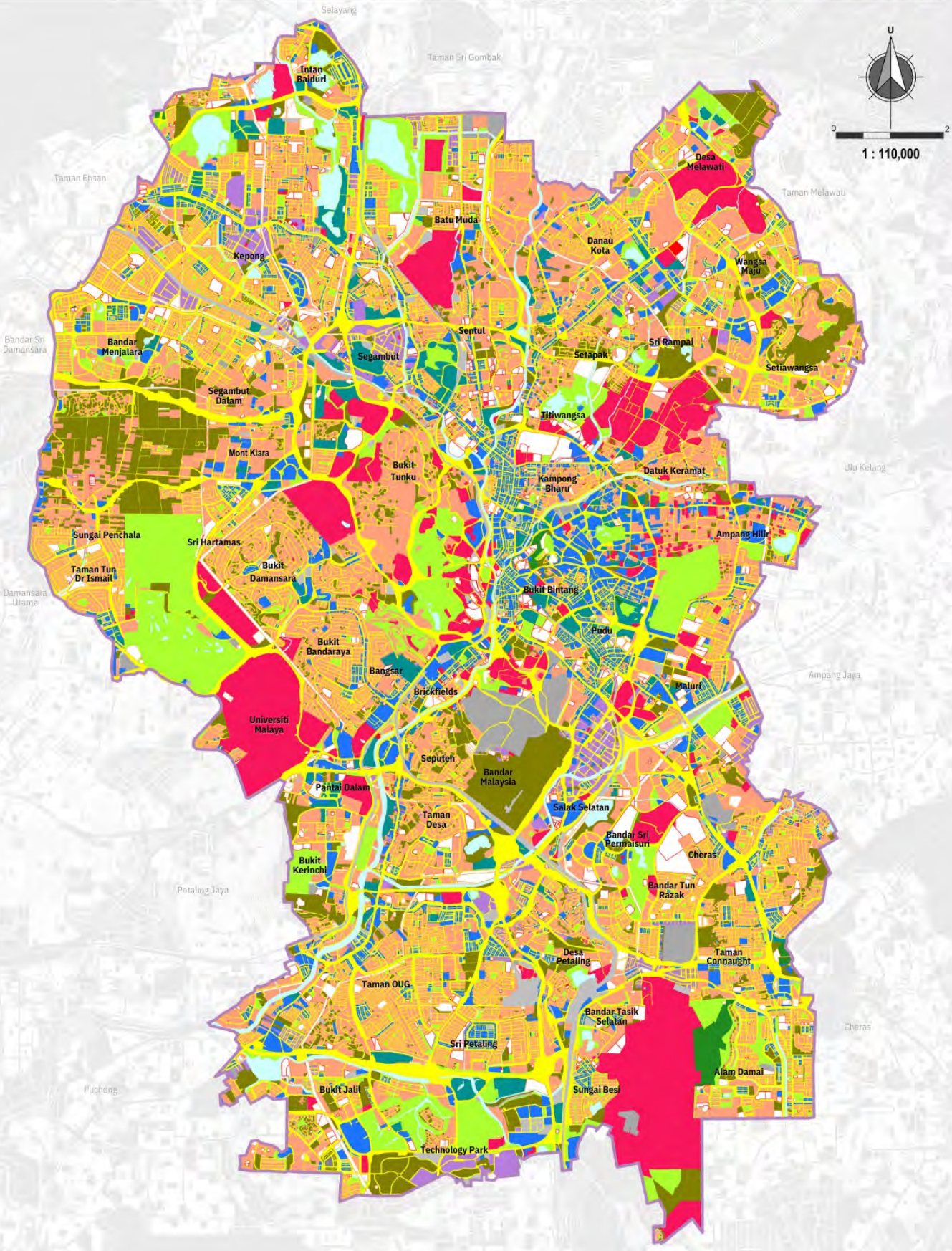


FIGURE 6.1.2 | Plan of Current Land Use 2021

Legend:

Current Land Use Category

- Residential
- Commercial
- Industrial
- Institutional
- Mixed Development
- Community Facilities
- Cemetery and Mortuary Management
- Infrastructure and Utilities
- Transportation
- Open space
- Vacant Land
- Forest Reserve

Others

- Kuala Lumpur Boundary
- Water Bodies
- Road Reserved

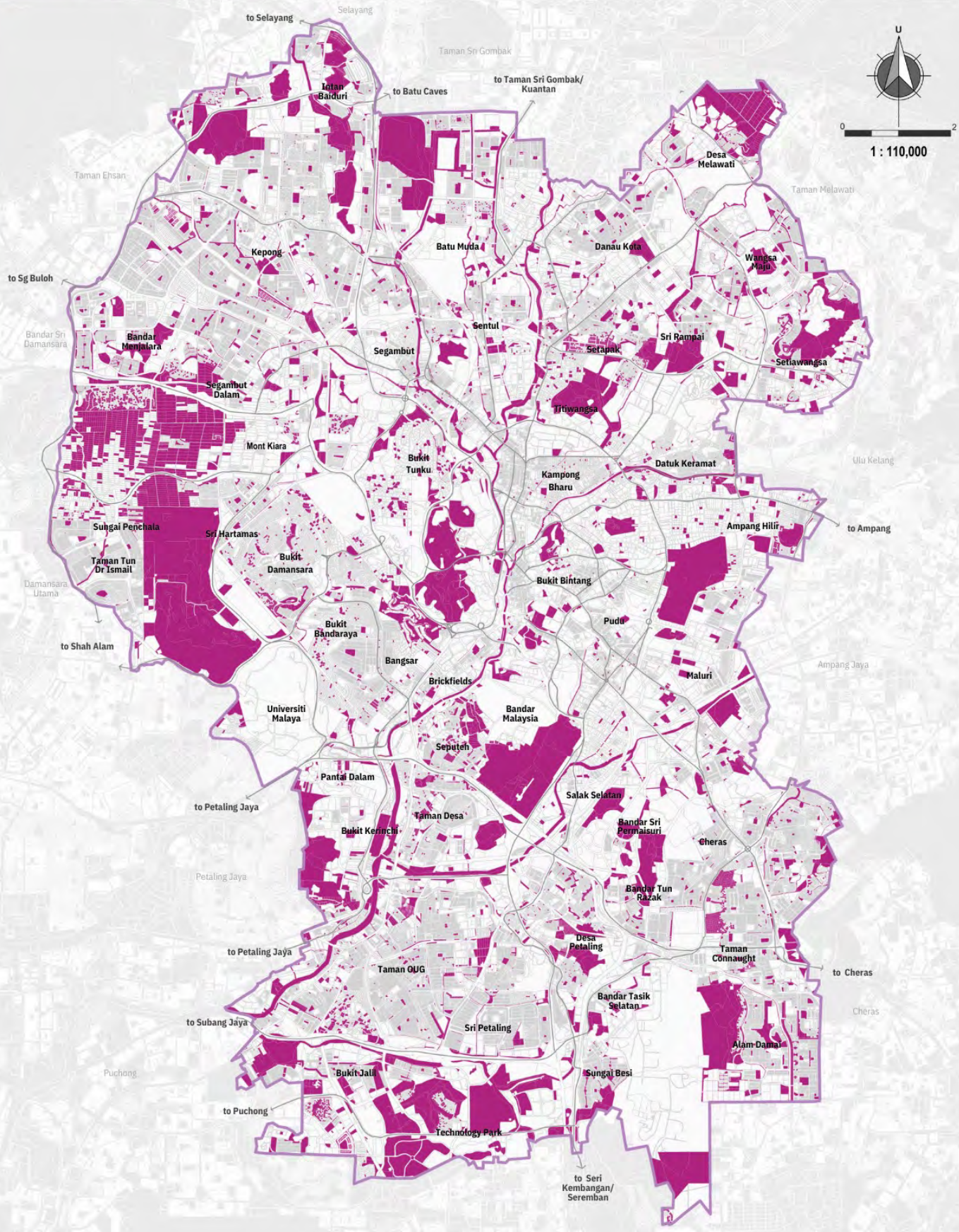


FIGURE 6.1.3 | Plan of Build-up and Non Build-up Distribution By 2021

Legend:

- Built-up
- Non-Built-up

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 6-1.1: STRENGTHENING LAND USE ZONES AND DEVELOPMENT INTENSITY

The Draft KLLP2040 is a land use and intensity planning plan in Kuala Lumpur until 2040. This plan serves as a guide to the activities and economic growth of Kuala Lumpur by taking into account the environmental capabilities and community needs as follows:

1. Integrate land use and public transport;
2. Achieve innovative and productive economic growth;
3. Develop World-Class Livable City equipped with high-quality residential environment;
4. Provide comprehensive public facilities in a high-quality urban environment;
5. Improve traffic management that affecting land use patterns and travelling demand;
6. Protect natural environment and open space; and
7. Regenerate dilapidated areas.

The Draft KLLP2040 establish land use zones and development intensity infrastructure capacity, locations and its implementation is subject to market demand conditions as well as the feasibility of development projects.

The implementation approach of this proposal is through policies, planning controls and guidelines. There are three (3) initiatives proposed for the implementation of CP 6-1.1.

Comparison of land use zones between KLCP2020 and Draft KLLP2040 shows that there is a change in total area for main land use classification such as residential, commercial, infrastructure and utilities as shown in Table 6.1.1. These changes are generally caused by factors as follows:

1. Comply with new government policies from time to time;
2. Encourage development through redevelopment initiatives, affordable housing development, lot mergers and development in transit planning zones (TPZ);
3. Re-plan potential lots, especially those located in front of main roads;
4. Changes in real estate market demand from various social groups such as Double Income No Kids (DINK), Young Urban Professionals (Yuppies) and others;
5. Changes in current trends and development pressure of surrounding areas;
6. Improve infrastructure and public transport system that are more comprehensive and accommodating to the needs of future development; and
7. Rezoned land use based on land express conditions, current activities and changes of base map.

Table 6.1.1: Land Use Zone of Draft KLLP2040 (Hectares)

No.	Main Land Use	Land Use Zone	Draft PTKL2040	
			Area (Hectares)	Percent (%)
1.	Commercial	City Centre Commercial (CCC)	447.33	1.84
		Major Commercial (MC)	676.40	2.78
		Commercial (C)	1,046.83	4.31
		Local Commercial (LC)	52.42	0.22
2.	Mixed Development	Mixed Development(MX)	1,850.47	7.62
3.	Industrial	Industry (IP)	118.11	0.49
		Mixed Industry (MXI)	95.29	0.39
		Technology Park (TP)	230.37	0.95
4.	Institutional	Institution (INT)	2,284.67	9.41
5.	Residential	Residential 1 (R1)	1,349.74	5.56
		Residential 2 (R2)	707.11	2.91
		Residential 3 (R3)	1,904.73	7.84
		Residential 4 (R4)	364.70	1.50
		Established Residential (EH)	2,088.09	8.60
		Traditional Village 1 (TV1)	41.23	0.17
		Traditional Village 2 (TV2)	133.83	0.55
6.	Open Space	Public Open Area 1 (OS1)	1,411.83	5.81
		Public Open Area 2 (OS2)	392.41	1.62
		Private Open Area (OS3)	585.86	2.41
		Forest Reserve (FR)	84.62	0.35
7.	Public Facilities	Public Facilities (PF1)	1,037.87	4.27
		Private Facilities (PF2)	51.33	0.21
8.	Cemetery	Cemetery and Mortuary Management (CE)	366.34	1.51
9.	Infrastructure and Utilities	Infrastructure and Utilities(IU)	1,430.50	5.89
10.	Transportation	Transportation (TR)	5,537.37	22.80
		TOTAL	**24,289.45**	**100.00**

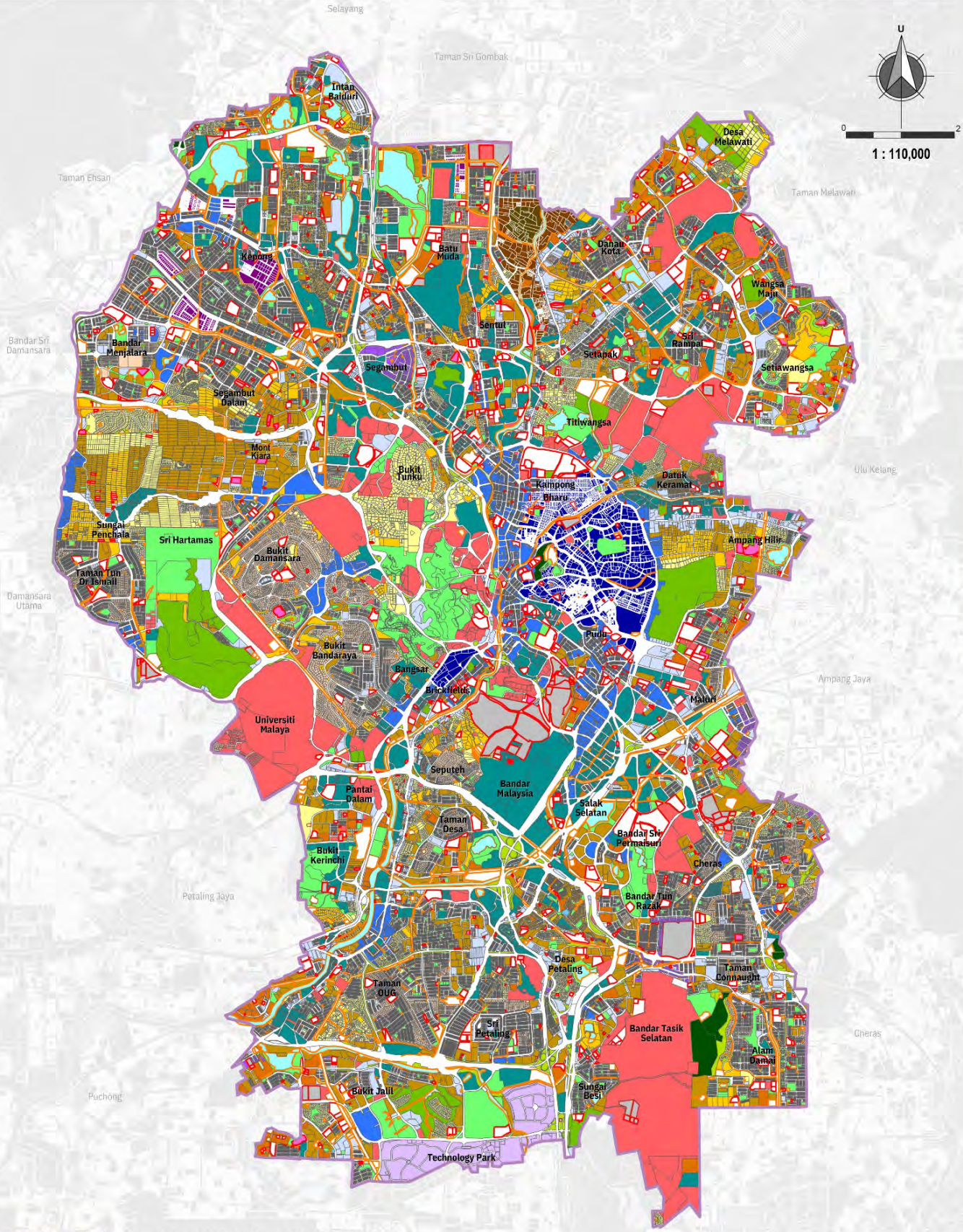


FIGURE 6.1.4 | Plan of Land Use Zone Draft KLLP2040

Legend:

Commercial
- City Centre Commercial (CCC)
- Major Commercial (MC)
- Commercial (C)
- Local Commercial (LC)

Industry
- Mixed Industrial (MXI)
- Industrial (IP)
- Technology Park (TP)

Mixed Development
- Mixed Development (MX)

Residential
- Residential 1 (R1)
- Residential 2 (R2)
- Residential 3 (R3)
- Residential 4 (R4)
- Established Residential (EH)
- Traditional Village 1 (TV1)
- Traditional Village 2 (TV2)

Institution
- Institutional (INT)

Community Facilities
- Public Facilities (PF 1)
- Private Facilities (PF 2)

Cemetery
- Cemetery and Mortuary Management (CE)

Infrastructure and Utilities
- Infrastructure and Utilities (IU)
- Water Bodies (BDA)

Transportation
- Transportation (TR)

Open Space
- Open Space 1 (OS1)
- Open Space 2 (OS2)
- Private Open Space (OS3)
- Forest Reserve (FR)

Other
- Kuala Lumpur Boundary

IMPLEMENTATION INITIATIVE 6-1.1A

IMPROVE CLASSIFICATION OF MAIN LAND USE

The basic principle of land use zones is to be multi-purpose in order to reduce vehicle movement, encourage compact city and TOD concepts as well as maintain energy-efficient and low-carbon buildings.

The Draft KLLP2040 has streamlined the KLCP2020 main land use classification into ten (10) main land use categories and 25 land use zones as shown in Table 6.1.2. The streamlining of this main land use category is to detail the classification of land use zones more clearly by taking into account the needs of current land use development trends in Kuala Lumpur.

The detailed definition for each main land use category are as per Volume 1: Part 1 Development Control, Draft KLLP2040.

A panorama view of multipurpose development activities in Kuala Lumpur.

Table 6.1.2: Details Classification of Ten (10) Main Land Use

MAIN LAND USE CLASSIFICATIONS
1. COMMERCIAL
The Commercial Land Use (C) category refers to shops or commercial spaces that serve as financial centres, premier trade, service, main employment and major commercial centres. The Draft KLLP2040 has categorized commercial areas into four (4) land use zones: 1. City Centre Commercial (CCC); 2. Major Commercial (MC); 3. Commercial (C); and 4. Local Commercial (LC); The criteria for commercial land use zones (C) are determined based on the hierarchy of growth centres, the re-planning strategy of an area and current development trends.
2. RESIDENTIAL
The Residential Land Use (R) category refers to landed residential with single ownership such as detached houses, semi-detached houses, terraced houses, landed strata, multi-storey dwellings, multi-storey strata, town houses, affordable housing including public housing as well as traditional villages. The Draft KLLP2040 has categorized from six (6) to seven (7) land use zones as residential areas compared to KLCP2020 as follows: 1. Residential 1 (R1); 2. Residential 2 (R2); 3. Residential 3 (R3); 4. Residential 4 (R4); 5. Traditional Village 1 (TV1); 6. Traditional Village 2 (TV2); and 7. Established Residential (EH). The criteria for residential land use zone (R) are determined based on the size of the site, typology, compatibility with the surrounding area, development trends and infrastructure capacity of the area.

Table 6.1.2: **Detailed Classification of Ten (10) Main Land Uses (continued)**

MAIN LAND USE CLASSIFICATIONS
3. MIXED DEVELOPMENT
The Mixed Development Land Use (MX) category refers to a land use zone that allows the mixing of commercial components to support the basic use of residences in a development. Residential components including residential units, quarters and serviced apartments shall not be less than 60 percent of the total gross floor area. The KLCP2020 has set a mixed development zone consisting of Mixed Development (MX) and Mixed Industry (MXI). However, the Draft KLLP2040 has realigned this land use zone for commercial and residential activities only. The criteria for the Mixed Development Land Use Zone (MX) are determined based on the increase in added value in an area, the promotion of flexible development, and the dynamics and trends of current development.
4. INDUSTRY
The Industry Land Use (IP) category refers to land use zones for manufacturing, production, services and research, trade, high-tech industries in Research and Development (R&D) based support activities and related activities. The Draft KLLP2040 has categorized from two (2) to three (3) land use zones as industrial areas compared to the KLCP2020 as follows: 1. Industry (IP); 2. Mixed Industry (MXI); and 3. Technology Park (TP). The criteria for industry land use zones (IP) are determined based on location suitability, trends and changes in industrial activities. Industrial areas that are maintained and upgraded include Kepong, Segambut and Bandar Tun Razak industrial areas.
5. INSTITUTION
The Institution Land Use (INT) category refers to land use zones designated for the uses of cultural and civic activities as well as government and semi-government facilities such as palaces, museums, galleries or memorials, cultural centres, libraries, universities, colleges, training centres, research centres, military camps, security agency headquarters, care and rehabilitation centres, homeless transit centres, courts and other government-related offices as well as allow residential development in accordance with any requirement by the government as well as subject to planning suitability including socioeconomic benefits. These institutions activities are usually facilitated by the government, statutory bodies or non-governmental bodies. The Draft KLLP2040 maintains the institutional land use zone as per the KLCP2020. The criteria for Institutional Land Use Zone (INT) are determined based on the needs of agencies as well as to preserve public interest. Maintained institutional areas include the National Palace, Bukit Aman Police Headquarters and the Universiti of Malaya. These changes provide added value to institutional development sites and Federal Government policy changes to optimise the use of federal owned land or reserves.
6. COMMUNITY FACILITIES
The Community Facilities Land Use (PF) category refers to the land use zone designated for educational, religious, health, safety and emergency well-being facilities for the general public or local community as well as for other supporting activities (as ancillary uses) that require such facilities. These community facilities can be owned and operated by the government or statutory bodies facility that could be managed by private parties. They can also be managed by the private sector such as designated in the development scheme's layout plan for the provision of community facilities. Private entities can own, operate, and manage these facilities. The Draft KLLP2040 has categorised community facilities owned, controlled and managed by public agencies or private sectors from one (1) to two (2) land use zones compared to the KLCP2020 as follows: 1. Public Facilities (PF1); and 2. Private Facilities (PF2). The criteria for Community Facility Land Use Zone (PF) are determined based on population catchment needs, the carrying capacity of an area and coordination of the land ownership status.

Table 6.1.2: Detailed Classification of Ten (10) Main Land Use Categories (continued)

MAIN LAND USE CLASSIFICATIONS
7. CEMETERY AND MORTUARY MANAGEMENT
The Cemetery and Mortuary Management Land Use (CE) category refers to the land use zone designated for the management of Muslim and non-Muslim burials. The cemetery area includes Muslim, Chinese, Hindu, Christian and other cemeteries. The Draft KLLP2040 has classifies cemeteries as a main land use category compared to the KLCP2020 which placed it under other land use zones. The criteria for Cemetery and Mortuary Management (CE) Land Use Zones are determined based on the needs of the population catchment and land availability.
8. INFRASTRUCTURE AND UTILITIES
The Infrastructure And Utilities Land Use (IU) category refers to the land use and building intended for the provision of infrastructure and utilities such as water supply, energy supply (electricity, gas, cooling systems and others), sewerage, telecommunications, drainage (irrigations, rivers, lakes, detention pond), solid waste disposal and other relative infrastructure and utilities. The Draft KLLP2040 has classifies Infrastructure and Utilities (IU) as a main land use category compared to the KLCP2020 which placed it under other land use categories. The criteria for infrastructure and Utility Land Use Zones (IU) are determined based on the needs and carrying capacity of an area, the needs of agencies and to support the main land use zone.
9. OPEN SPACE
The Open Area Land Use (OS) category refers to open space for recreational activities such as leisure, games, sports or cultural activities for public (OS1), nature recreational activities, buffer zone, suitable roundabout or traffic island, linear green area, including development excess areas that is used as green areas such as slopes, and small land spaces in between developments including those surrender by private parties. OS2 can be managed or maintained by KLCH or other relevant entities as well as recreational activities such as park, playground, recreation ground, sports ground, golf course or cultural activities that are privately owned or privately managed, wherein the public has limited access except with authorisation of usage. Development for the purpose of socio-economic benefits (commercial or residential component) for part of the site is subject to suitability involving aspects of site size, location, environment, and capacity of an area without affecting its original functionality except for sites that exist due to planning requirements. The KLCP2020 has classified open space as an open space category with three (3) land use zones. The Draft KLSP2040 has categorized open areas from three (3) to four (4) land use zones compared to the KLCP2020 as follows: 1. Public Open Area 1 (OS1); 2. Public Open Area 2 (OS2); 3. Private Open Space (OS3); and 4. Forest Reserve (FR). The Draft KLLP2040 also proposes the category of Stratified Public Open Space (OS4), which is a multi-purpose public open space located on a podium and accessible to the public and is not specific to only the local community. Public Open Space within Private Development Scheme (OS4) is not displayed in the land use zone plan and is not considered in the land use zone area of open space. However, OS4 is only shown as a planning control layer in land use zone map. OS4 is surrendered to KLCH through strata parcels or accessory parcels or specified through express conditions in the land title deed or determined through an undertaking agreement. The area of OS4 is not counted in the calculation of land use zones but is considered in the preparation of open space requirements.
10. TRANSPORTATION
The Transportation Land Use (TR) category refers to the land use zone designated for the provision of transportation facilities including public transportation terminals, public transportation stations, park and ride facilities, parking facilities (PF), transportation depots, road reserves, rail lines and other related facilities permissible to support the transportation infrastructure system and services. The Draft KLLP2040 has classifies transport as a main land use category compared to the KLCP2020 which placed transport under other land use zones. The criteria for the Transport Land Use Zone (TR) are determined based on changes in government policy, user needs and support for the main land use.

IMPLEMENTATION INITIATIVE 6-1.1B

STANDARISED DETERMINATION OF DEVELOPMENT INTENSITY

Controlling the intensity of development in Kuala Lumpur is important to achieve an integrated and sustainable environment. The intensity of development needs to be controlled to ensure that the development is planned according to suitability of the site, surrounding area and availability of infrastructure as well as social facilities.

KLCP2020 set development intensity through two (2) forms of intensity planning control tools, namely density for residential land use and plot ratio for commercial, industrial and institutional development. The permitted intensity is subject to compliance with planning guidelines and incentives set by KLCH.

The Draft KLLP2040 streamlines the intensity by setting two (2) forms of intensity control as follows:

1. Plot ratios for all main land uses except community facilities, infrastructure, transportation, open space and cemeteries; and
2. Height control for commercial terrace buildings, Land Use Zone of Residential 1 (R1), Land Use Zone of Traditional Village 1 (TV1) and Land Use Zone of Established Residential (EH).

The streamline of development intensity in the Draft KLLP2040 takes into account the following criteria as follows:

1. Plan compact city development due to limited land supply;
2. Conform to physical conditions, location and size of the site;
3. Increase capacity and upgrading of infrastructure, utilities and roads;
4. Improve public transport system;
5. Consider growth centres hierarchy, re-planning area strategies and current development trends;
6. Maintain typology of landed housing, stable housing and terraced commercial;
7. Enhanced image and value of an area;
8. Adopt flexible and dynamic development approach; and
9. Coordinate implementation planning incentives.

Determination of intensity also takes into account the main land use zone for a plot of land. Land use zones will be classified according to the main land use that is suitable to show the typology, intensity and hierarchy of land plot development.

Plan of Development Intensity in the form of plot ratio control and building height is shown in Figure 6.1.6 . The proposed plot ratio is the base plot ratio of a site.

Incentives of additional plot ratio are subjected to identified sites or areas as follows :

1. Transit Planning Zone (TPZ);
2. Lot Amalgamation Area;
3. Redevelopment Area; and
4. Development with Affordable Housing Components.

The principle of providing additional plot ratio incentives is considered if the development provides added value, contributes towards improving the quality of the built environment and urban sustainability.

The KLDCP2024 plot ratio is the base plot ratio, while the maximum plot ratio is subject to applicable incentives. Additional plot ratio incentives should be in accordance with the percentage rate of the base plot ratio that has been set. However, the implementation of incentive determination is subject to current policies and guidelines.

These planning controls apply to proposed new developments as well as additions and alterations to existing developments. Any development or existing land lot that has been approved in excess of the allowed base plot ratio is calculated as the maximum plot ratio set for the land and must be maintained. However, this approved plot ratio cannot be taken into account as a base plot ratio for the purpose of granting incentives in the Draft KLLP2040. If the base plot ratio along with incentives exceeds the approved plot ratio, the plot is eligible to be considered with the maximum plot ratio set.

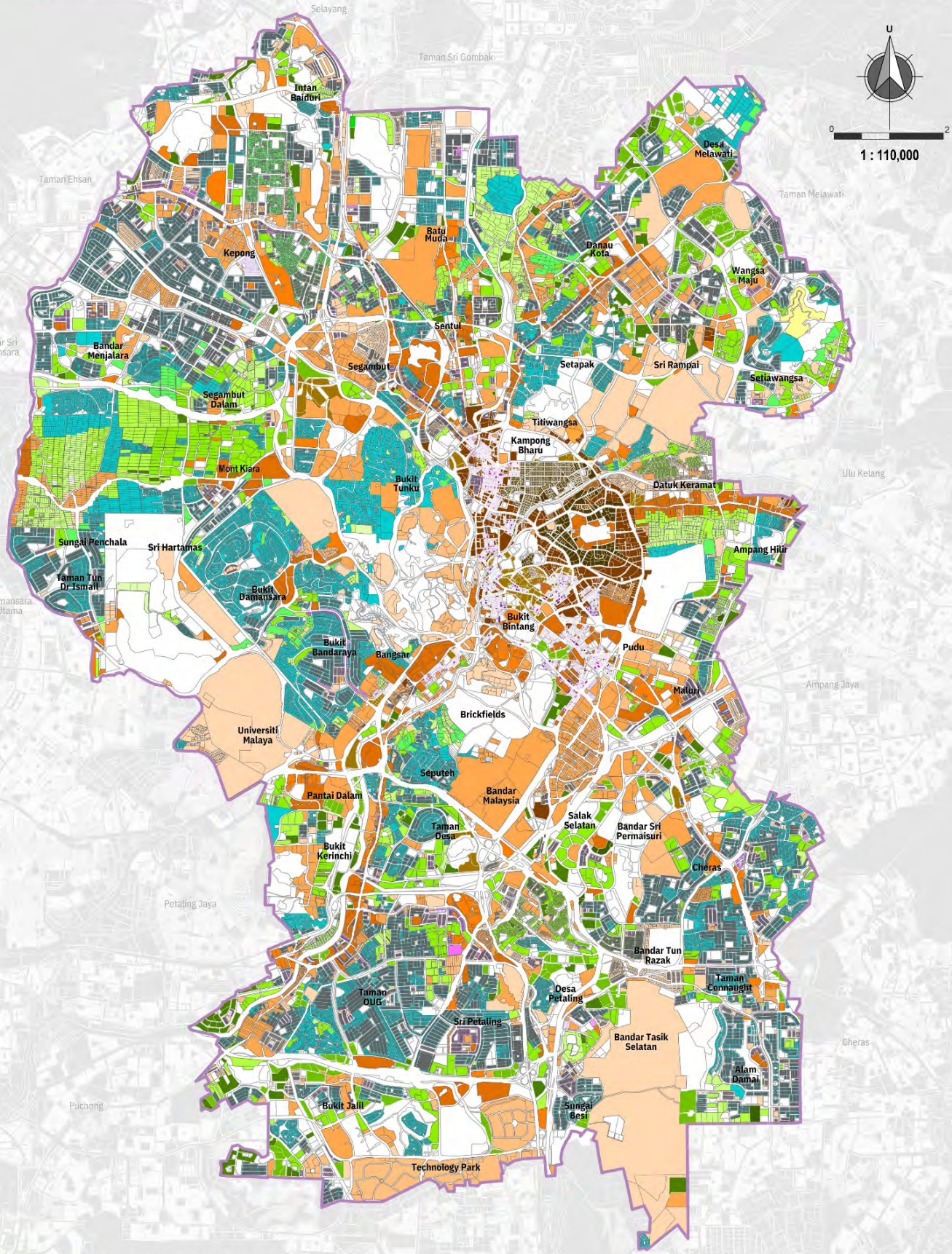


FIGURE 6.1.5 | Plan of Intensity Draft KLLP2040

Legend:

Residential Plot Ratio
- PR 1:0.5
- PR 1:1.5
- PR 1:2
- PR 1:2.5
- PR 1:3
- PR 1:3.5
- PR 1:4
- PR 1:5
- PR 1:6

Non-Residential Plot Ratio
- PR 1:2
- PR 1:3
- PR 1:4
- PR 1:5
- PR 1:6
- PR 1:7
- PR 1:8
- PR 1:10

Height Control Non-Residential
- 2 Storeys
- 3 Storeys
- 4 Storeys
- 5 Storeys
- 6 Storeys
- 7 Storeys
- 10 Storeys
- 14 Storeys

Height Control Residential
- 2 Floor
- 3 Floor

Others
- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION INITIATIVE 6-1.1C

STRENGTHEN THE PLANNING CONTROL LAYER

The planning control layer is a requirement in the form of additional requirement to the land use zone plan and the development intensity plan. The Draft KLLP2040 has identified seven (7) layers of planning control and application details as well as planning guidance as shown in Table 6.1.3. Detail compliance requirements and location of planning control layer are as outline in Volume 1: Part 1 Development Control, Draft KLLP2040.

Aerial view around the KL Sentral area.

Table 6.1.3: Planning Control Layer

Planning Control Layer
1. Planning Control Layer of Layout Plan Plot Ratio Planning control layer for Layout Plan Plot Ratio refers to control over an area that has been granted plot ratio approval based on the development scheme. The Layout Plan Plot Ratio is shown as a single development plot marked with only one plot ratio. Plot ratio according to the development plot should refer to the approved layout plan. The determination of plot ratio planning control layer is intended to: a. Control the maximum floor space approved within the distribution of development plots subject to the approved layout plan; and b. Facilitates implementation of a long period development due to certain changes based on market needs, demand and government policies without involving changes to the Draft KLLP2040.
2. Planning Controls Layer for Side Corridors of River, Lake and Pond Planning control layer for Side Corridors of River, Lake and Pond a planning control for all new development and redevelopment located adjacent to identified rivers, lakes and ponds. It is categorized into two (2) components as follows: i. Riverside corridor; and ii. Lakeside and pondside corridors. The determination of the control layer of riverside, lake and pond corridor planning is intended to: a. Preserve and conserve Riverside Corridors as flood control areas as well as ecological corridor of the lake to enhance the natural habitat of the city's biodiversity assets; b. Contribute to the provision of green areas for Kuala Lumpur; c. Develop the river areas as a public recreation centres and nodes to attract tourists and improve the image of Kuala Lumpur as a green, healthy and vibrant city; d. Ensure that all forms of new development and redevelopment around the lake and pond area are carried out in a harmonious, attractive, comfortable, safe and environmentally friendly manner; e. Make the Lakeside and Pondside Corridors as a recreational area that are accessible to the public; and f. Maintain Lakeside Corridors and Pondside Corridors as access routes and spaces for lake and pond operation and maintenance work.

Table 6.1.3: **Planning Control Layer (continued)**

Planning Control Layer
3. Planning Control Layer for Heritage Areas and Buildings Planning control layer for Heritage Areas and Buildings refers to ensures all buildings in the area comply with the requirements and guidelines. Compliance to this development guidelines is meant to conserve and maintain the special character of Kuala Lumpur Heritage Zone. The heritage zone planning control layer is divided into three (3) components as follows: i. Heritage Zone consists of old buildings with a special architectural character which ought to be preserved. It is mostly concentrated in the Kuala Lumpur City Centre; ii. Heritage buildings have historical, architectural, cultural or aesthetic values that require conservation either in whole or in part depending on the significance of the heritage category; and iii. Heritage site refers to a site or location identified as having historical value that is important to the culture of the community. It refers to any site that remains in a specific location and cannot be moved to another location such as a historical park, nature reserve and old burial ground. The determination of the Heritage Areas And Building planning control layer is intended to: a. To maintain and preserve buildings or sites that have historical significance for a specific area; b. To highlight the uniqueness of Kuala Lumpur by conserving and improving the character, image and identity of cultural heritage of specific areas; c. To ensure that changes and new developments comply with prescribe conditions based on Heritage Area Development Control mechanism; and d. To provide long term protection on properties of heritage significance to ensure conservation through resource management on a larger scale.
4. Planning Control Layer for Height Control Zone Surrounding the Istana Negara Planning control layer for Height Zone Surrounding the Istana Negara refers to the additional control mechanism to the height or intensity control guidelines of the building. Any building located within 800 metres and 1 kilometre of the Istana Negara boundary is included in this height control. This control is to preserve open vistas from and towards the Istana Negara itself. The determination of this zone planning control layer is intended to: a. Enhance the superiority and dignity of the Istana Negara as a symbol of national government; and b. Ensure tranquility and privacy of the palace are controlled against high-intensity development in the surrounding area.
5. Planning Control Layer for Line of Sight Towards Landmarks Planning control layer for Line of Sight refers to additional control over the height, design or orientation of new buildings located in the identified line towards landmarks in Kuala Lumpur. The determination of this zone planning control layer is intended to ensure that the importance of existing landmark buildings as iconic symbols of Kuala Lumpur are preserved.

Table 6.1.3: **Planning Control Layer (continued)**

Planning Control Layer
6. Planning Controls Layer for Public Open Spaces in Private Schemes (OS4) Planning control layer for Public Open Spaces in Private Schemes (OS4) refers to multi-purpose Public Open Spaces located at ground level or at podium that is accessible to the public. It is an area of public use and not only limited specific to the local community. The determination of the OS4 Planning Control Layer is intended to: a. A one (1) new initiative to address the issue of limited land availability through innovative methods to ensure the use of multifunctional open spaces; b. Ensuring availability of Public Open Spaces innovatively in large-scale private development schemes; c. Optimising land use by allowing other activities underneath the open spaces; d. Enabling collaboration with building owners for the high quality management and maintenance of open spaces; e. Addressing the issue of limited land availability for development purposes in urban areas in line with the need to achieve the target of 20 square metres of open space per person by 2040; and f. Diversifying the types of public open spaces from concentrating on the ground level only.
7. Planning Controls Layer for Affordable Housing (RMM) Planning control layer for Affordable Housing (RMM) refers to existing and approved affordable houses. These houses are affordable and livable to meet the needs of B40 and part of M40 income groups. The determination of the RMM planning control layer is intended to: a. Ensure the retaining of existing RMM in line with the needs of future population; b. Coordinate existing RMM redevelopment to ensure that the redeveloped site retain the number of existing units and encourages the addition of units in the same development scheme; and c. Balance RMM demand needs for B40 and part of M40 groups which is expected to experience pressure in demand compared to the overall supply of residential units in Kuala Lumpur by 2040.

IMPLEMENTATION PROPOSAL

CP 6-1.2: MANAGING UNDEVELOP LAND IN AN OPTIMUM AND PRODUCTIVE APPROACH

Kuala Lumpur is a city with rapid economic growth in Malaysia. KLSP2040 estimated an area of 1,149.65 hectares of residential land is required to accommodate a population of 2.35 million people based on normal development approach. KLSP2040 also identified an area of 5,137.94 hectares of non-built-up area consisting of forests, water bodies, undeveloped land, as well as open space and recreation facilities.

The Draft KLLP2040 proposes land management that focuses on land requirement and increasing appropriate intensity. It involve undeveloped land (vacant land) with an area of 2,121.14 hectares.

Vacant lands are land available for future development where only 554.50 hectares is development land without physical barriers. This limited supply of land is a key factor in planning land development in Kuala Lumpur holistically.

Kuala Lumpur also has spaces that are potential for activity sharing and uses such as river reserve, roads and rail reserve, transmission line and other spaces that can be used as open space, community gardens, pedestrian and micromobility vehicle routes as well as other suitable activities. Encouraging space sharing in this area will contribute to more optimal, economical and productive land use.

The implementation approach of this proposal is through policies, planning controls and guidelines. There are two (2) initiatives proposed for the implementation of CP 6-1.2.

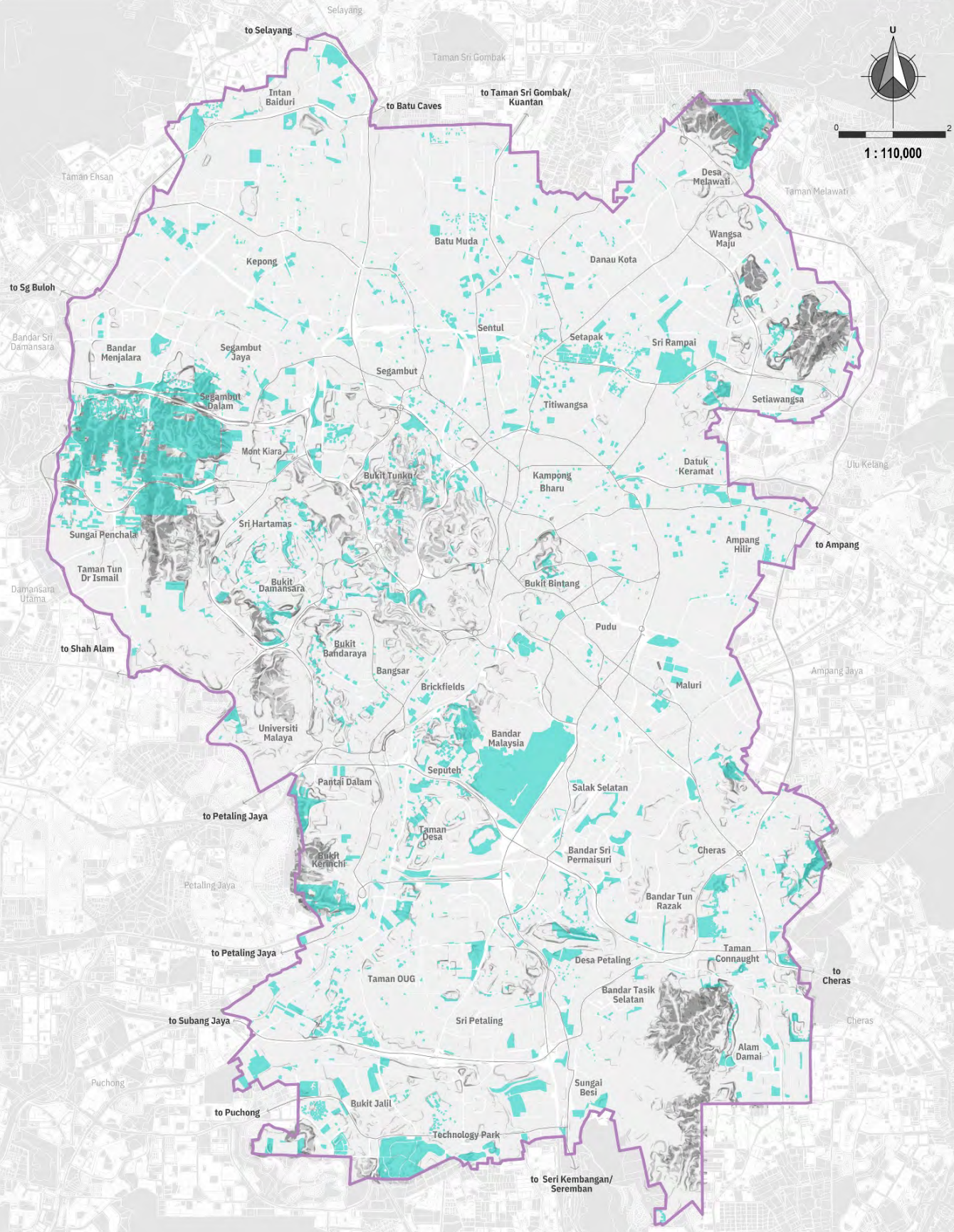


FIGURE 6.1.6 | Plan of Undeveloped Land Distribution (Vacant Land), 2021

Legend:

- Slope level 1
- Slope level 2
- Slope level 3
- Slope level 4
- Vacant Land
- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION INITIATIVE 6-1.2A

DETERMINE SUITABLE LAND USE ZONES AND INTENSITY FOR UNDEVELOPED LAND (VACANT LAND)

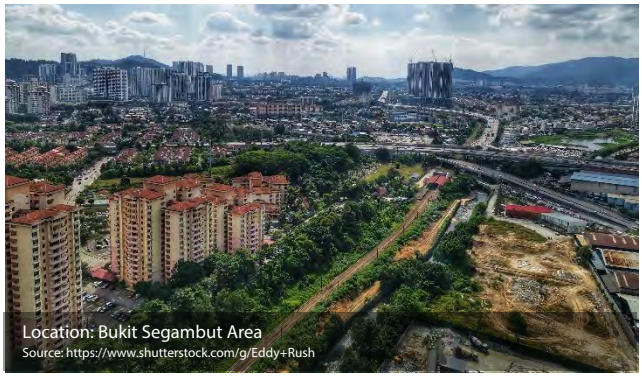
The proposed land use zoning for undeveloped land (vacant land) involves retaining or changing the zoning and development intensity. The zone and development intensity for the vacant land involved must be suitable to the local context and in line with changed development trend.

A total of 1,149.65 hectares of vacant land is zoned as a residential area with higher intensity such as the proposed base plot ratio for free market price residential is up to 1:4 and 1:6 for affordable housing development. This planning is in line with residential needs to accommodate the increasing population by 2040.

Other land use zones proposed for this vacant land are 214 hectares of commercial zone and 255.27 hectares of open space zone. The proposed commercial zone base plot ratio is up to 1:10 depending on the suitability of the location and size of the lot involved as shown in Table 6.1.4.

The development of hilly and sloping vacant land must be based on Planning Guidelines of Hills and Slopes Development, Federal Territory of Kuala Lumpur 2010. These guidelines will guide development with engineering solutions that are subjected to comply with special conditions emphasising the factor of safety (FOS).

Development in this area should also consider local sensitive risks, targeted mitigation measures towards reducing current risks, avoiding future risks and strengthening local resilience. Vacant land with small lots on other hand is encouraged to be developed through the method of lot amalgamation to produce a more comprehensive and planned development.



View from Bukit Segambut that shows the rapid development in Kuala Lumpur.

BRIEF INFO

DISTRIBUTION OF UNDEVELOPED LAND

2,121.14Hectares
Total Undeveloped Land

1,981.02Hectares
Undeveloped land without committed development

554.50Hectares
Undeveloped land without physical barriers

Source: Adapted from KLSP2040

Table 6.1.4:
Proposed Land Use Zone and Intensity for Undeveloped Land (Vacant Land)

Land Use Zone	Area (Hectares)	Base Plot Ratio
1. Residential	1,030.07	Up to 1:6
2. Commercial	214.00	Up to 1:10
3. Industrial	104.85	Up to 1:4
4. Mixed Development	198.45	Up to 1:6
5. Institution	117.44	Up to 1:4
6. Public Facilities	106.55	-
7. Cemetery and Mortuary Management	8.24	-
8. Infrastructure and Utility	65.49	-
9. Open Space	255.27	-
10. Transportation	19.78	-
Total	**2,121.14**	**-**

IMPLEMENTATION INITIATIVE 6-1.2B

ENCOURAGE SHARING OF RIVER, ROADS AND RAIL RESERVE, TRANSMISSION LINE AND OTHER SPACES FOR SUITABLE ACTIVITIES

Sharing the potential use of space with a variety of suitable temporary activities can optimise land use. The use of space and activities beyond KLCH jurisdiction area must involve cooperation with stakeholders for the purpose of implementing partnerships.

The use of space and sharing of these activities is subject to the approval and conditions set by the agencies involved. It also needs to be well maintained and effective.

The necessary actions to support this initiative as shown in Table 6.1.5.

Table 6.1.5:
Proposed Suitable Activities For Space Sharing

Suitable Activities	Location
1. Community Garden	a. Residential and commercial areas; b. Community facilities areas; c. Transmission line; and d. River reserve.
2. Food Truck	a. Suitable public space; and b. Vehicle parking space at certain period.
3. Parking	a. Under suitable LRT line and highways
4. Recreation Space and Public Park	a. Road reserve; and b. Transmission line.
5. Recycle Space	a. Utility reserve.
6. Art Space	a. Building alleys.
7. Nursery	a. Under suitable rail line; and b. Transmission line.
8. Public Plaza	a. River reserve.

Source : Adapted from KLSP2040

The criteria for suitable use and sharing of spaces are as follows:

1. Suitable river reserve near the residential and commercial areas . For example in Sungai Bunus;

Location: Kebun Bandar, Sungai Bunus

2. Suitable space are under elevated highways and suitable railways located near to residential and commercial areas. The area must have good access from through local roads and subject to the approval and guidelines of relevant agencies. For example, in Chow Kit rail line, Kuala Lumpur; and

Location: Chow Kit, Kuala Lumpur

3. The corridor area of the transmission line including the easement by TNB with 20 metres to 30 metres along the alignment so as not to interfere with the transmission route and line towers. For example in PPR Intan Baiduri, Kuala Lumpur.

Location: PPR Intan Baiduri

IMPLEMENTATION PROPOSAL

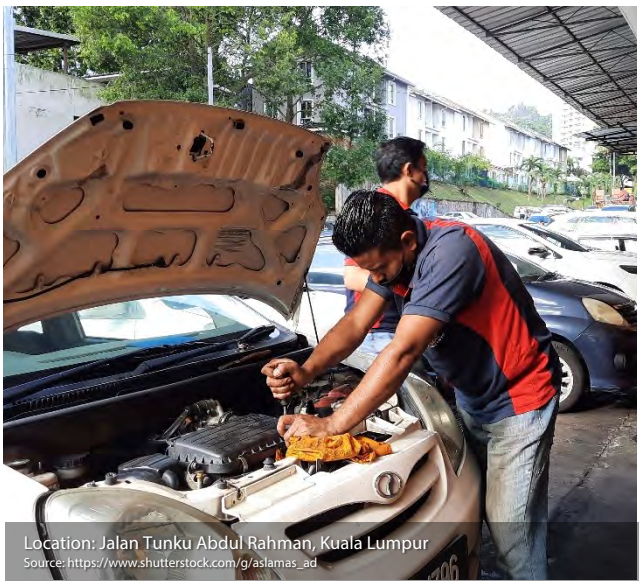
CP 6-1.3: REGULATING INDUSTRIAL ACTIVITIES OUTSIDE SUITABLE LAND USE ZONES

The re-planning of industrial activities that operate without a license and are located outside of the industrial zone such as in the residential land use zone and the commercial land use zone needs to be emphasized. This activity needs to be controlled through a legalisation programme to ensure the industrial activities carried out do not affected and cause nuisance to the surrounding area.

Industrial activities carried out in residential zones usually consist of small and medium industries and cottage industries. There are still some polluting industries such as metal and iron industries that are carried out in residential zones that need to be addressed.

The industrial activities carried out in the commercial land use zone are mostly service industry activities such as vehicle repair. A service industry like this needs to be regulated in terms of the nature of activity to prevent issue of disturbance and environmental pollution in the area.

The implementation approach of this proposal is through policies and planning controls. There are two (2) initiatives proposed for the implementation of CP 6-1.3.



Service industry such as repairing vehicles require control to avoid nuisance to the citizens of the city.

IMPLEMENTATION INITIATIVE 6-1.3A

ALLOW SELECTED INDUSTRIAL ACTIVITIES IN LAND USE ZONES OF COMMERCIAL

The industrial activity legalisation programme in the Land Use Zone of Commercial is aimed at controlling permitted industrial activities to promote economic growth, ensure urban sustainability and assure the quality of life in Kuala Lumpur.

Industrial activities permitted for the legalisation programme in Land Use Zones of Commercial consist of non-polluting industries are as follows:

1. Light Industrial Activities: storage, packaging and distribution as well as publishing and printing; and
2. Medium Industrial Activities: vehicle repair services, manufacturing and processing, and vehicle exhibition and sales centres.

This initiative is important to ensure that industrial activities carried out in the Commercial Land Use Zone do not cause issues on nuisance and pollution to the surrounding area as well as not affecting the level of productivity of commercial activities.

The necessary actions to support this initiative are as shown in Table 6.1.6.

Table 6.1.6: Details of Industrial Activities Permissible in Commercial Land Use Zones

CITY CENTRE COMMERCIAL (CCC)
Permissible
1. Technology, Research and Development
Permissible with Conditions
1. Medical and Health Laboratory
MAJOR COMMERCIAL (MC)
Permissible with Conditions
1. Packaging, Storage and Distribution 2. Service and Repair Vehicles 3. Technology, Research and Development 4. Medical and Health Laboratory 5. Construction Material Storage 6. Household Goods Maintenance Centre
COMMERCIAL (C)
Permissible with Conditions
1. Packaging, Storage and Distribution 2. Gas Station and Vehicle Maintenance 3. Service and Repair Vehicles 4. Technology, Research and Development 5. Medical and Health Laboratory 6. Building Material Storage 7. Household Goods Maintenance Centre
LOCAL COMMERCIAL (LC)
Permissible with Conditions
1. Vehicle Service and Repair

IMPLEMENTATION INITIATIVE 6-1.3B

ALLOW SELECTED INDUSTRIAL ACTIVITIES IN LAND USE ZONES OF TRADITIONAL VILLAGE (TV) AND SPECIAL VILLAGE CULB

Selected industrial activities are allowed with control in Land Use Zones of Traditional Village 1 (TV1), Land Use Zones of Traditional Village 2 (TV2) and areas that use Special Village CULB.

Selected industrial activities are allowed with control must be regularly monitored to avoid nuisance such as foul smell, noise, and others.

The necessary actions to support this initiative are as shown in Table 6.1.7.

Table 6.1.7: Industrial Activities Allowed in Traditional Village Land Use Zones and Special Village CULB

TRADITIONAL VILLAGE 1 (TV1)
Permissible with Conditions
1. Service and Repair Vehicles 2. Cottage Industry
TRADITIONAL VILLAGE 2 (TV2)
Permissible with Conditions
1. Service and Repair Vehicles 2. Cottage Industry
LIMITED TO THE FOLLOWING VILLAGES ONLY:
Malay Reserve Villages (MRV) 1. Kampung Segambut 2. Kampung Palimbayan 3. Kampung Bukit Lanjan 4. Kampung Selayang Lama 5. Kampung Sungai Penchala
Non-Malay Reserve Villages (NMRV) 1. Kampung Pandan Melayu 2. Kampung Pasir Segambut 3. Kampung Malaysia Tambahan 4. Kampung Malaysia Raya 5. Kampong Bharu 6. Kampung Datuk Keramat
New Villages 1. Kampung Baru Cheras Baru 2. Kampung Baru Salak Selatan 3. Kampung Baru Jinjang Selatan 4. Kampung Baru Jinjang Utara 5. Kampung Baru Baru Ayer Panas

PLANNING STRATEGY

SP 6-2: STRENGTHENING URBAN GROWTH CENTRE HIERARCHY

SCENARIO OF URBAN GROWTH CENTRE IN KUALA LUMPUR

Urban growth centre is a commercial focus area which offers services and facilities to the surrounding population. This focus area is supported by activities such as residences, recreational parks, government and public services, especially those within the TPZ and TIZ.

The main function of the urban growth centre is to promote balanced development and accessibility of areas in Kuala Lumpur. The growth centre needs to distributes development pressure from City Centre to the surrounding areas. It will be a node that connects the road network, transit rail, green network, public facilities, pedestrian and micromobility vehicle route.

The planning of urban growth centre area focuses on combining monocentric and polycentric urban structures to ensure balanced urban growth and good accessibility to public facilities. This concept establishes one (1) main urban growth centre and supported by several growth centres of a lower hierarchy.

Redevelopment areas can also be part of urban growth centres by considering the function, activity, intensity, connectivity, availability of current and future infrastructure as well as taking into account the strategic direction in KLSP2040.

Development in the growth centre areas are to strengthen the function of each area while promoting efficient and optimal land use. Development in the urban growth centre should also take into account physical aspects and design such as identity, image and development control to maintain the skyline and visuals of the city in the following areas:

1. TPZ/TIZ area;
2. Redevelopment area;
3. Heritage Zone; and
4. Visual Line of Sight Towards Landmarks

In order to realise Kuala Lumpur as a city with more productive and effective space utilisation, one (1) Implementation Proposal is formulated under Planning Strategy 6–2, as shown in Figure 6.2.1.

Figure 6.2.1:
Implementation Proposal for Planning Strategy 6-2

SP 6-2	STRENGTHENING URBAN GROWTH CENTRE HIERARCHY
CP 6-2.1	Strengthening Urban Growth Centres

The city skyline of Kuala Lumpur skyline at sunset in Malaysia.

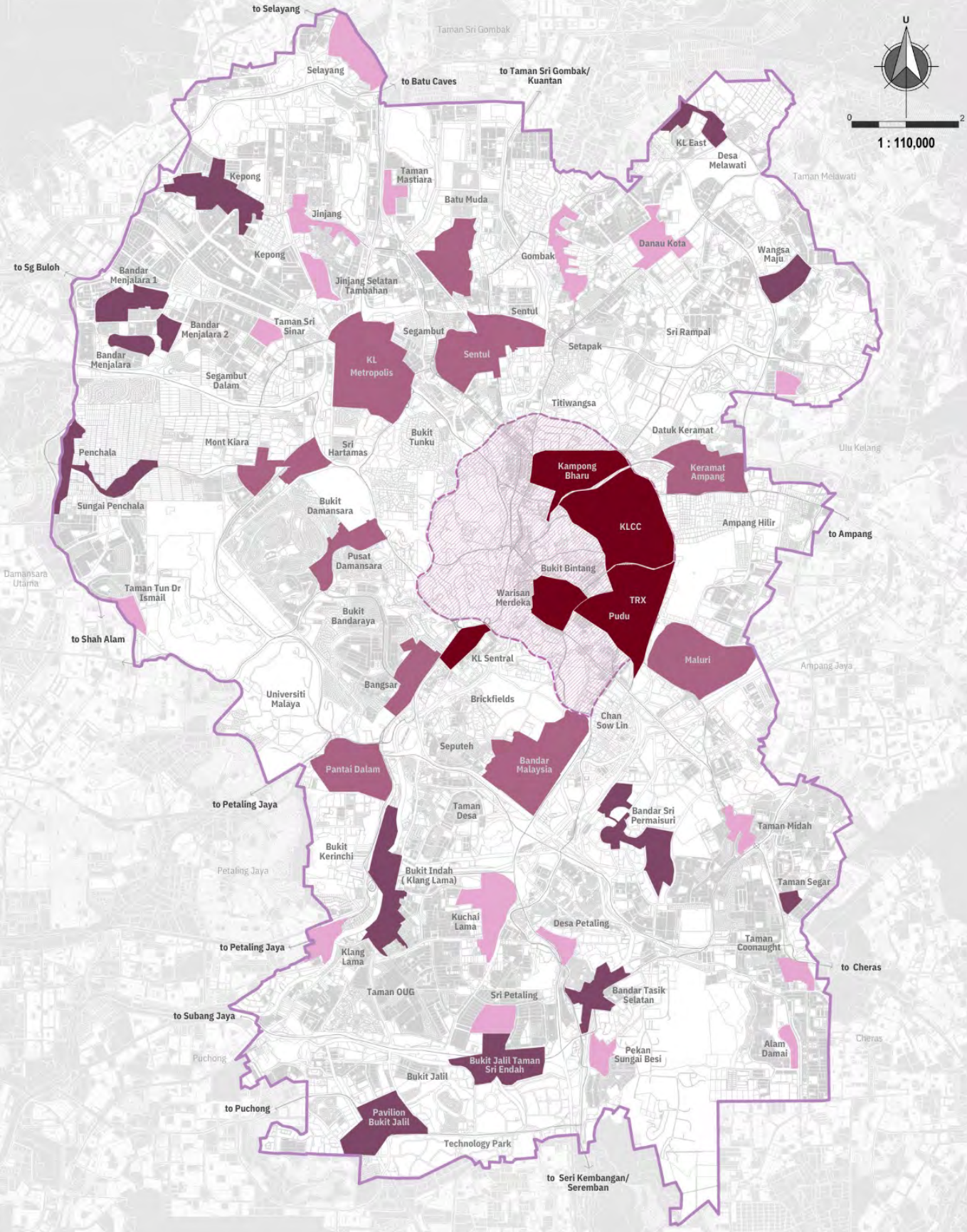


FIGURE 6.2.2 | Plan of Centre Hierarchy of Urban Growth

Legend:

- Primary Growth Centre
- Supporting Growth Centre
- District Growth Centre
- Local Growth Centre

Others

- Main Road
- Kuala Lumpur Boundary
- City Centre Boundary

IMPLEMENTATION PROPOSAL

CP 6-2.1: STRENGTHENING URBAN GROWTH CENTRES

Kuala Lumpur is the key focus in development planning that can add value and contribute to the development of the surrounding area. It remains functional as a city centre accommodating global corporate headquarters, high-end hotels, major shopping centres, recreational and entertainment centres, professional and medical services as well as specialized training facilities.

The overspill of development pressure from the city centre has resulted in the growth of new cities around Kuala Lumpur. Urban growth is also influenced by development policies, physical factors, infrastructure capacity and community facilities as well as urban socioeconomics.

Strengthening the new urban growth centre requires improvement on the level of facilities, infrastructure and services in order to increase the urban quality of life in line with current development.

There are four (4) hierarchies of urban growth centres in Kuala Lumpur as follows:

1. Primary Growth Centre;
2. Secondary Growth Centre;
3. District Growth Centre; and
4. Local Growth Centre.

The implementation approach of this proposal is through planning controls. There are two (2) initiatives proposed for the implementation of CP 6-2.1.

IMPLEMENTATION INITIATIVE 6-2.1A

STRENGTHEN URBAN GROWTH CENTRE HIERARCHY

The new urban growth scenario is the result of development pressure from within the city centre. These new growth centres develop and form a hierarchy based on distinctive functions.

The strategy to strengthen the hierarchy of urban growth centres is one of the approaches in controlling development of urban area.

The necessary step in supporting this initiative is to set the main characteristics of each growth centre hierarchy as shown in Table 6.2.1.

Table 6.2.1:
Hierarchy and Main Characteristics of Growth Centres in Kuala Lumpur

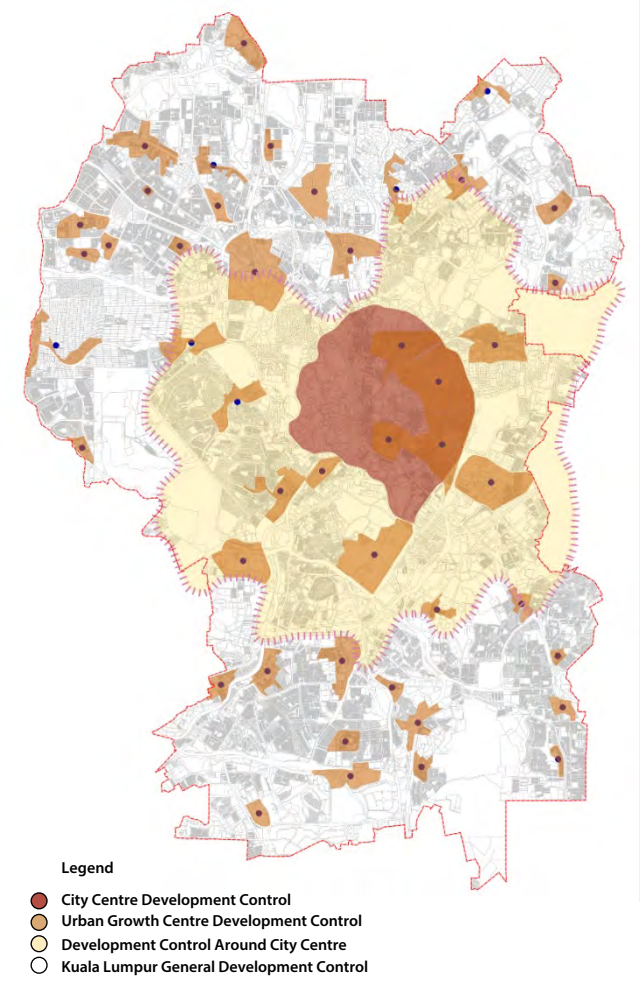
Hierarchy of Urban Growth Centre	Main Characteristics
PRIMARY GROWTH CENTRE Primary Growth Centre is the highest hierarchy of growth centre and located within the boundaries of the City Centre and KL Sentral.	1. A centre with significant economic growth; 2. A mega-scale development with potential investment and new job opportunities; 3. An area with high employment population and commercial activity; 4. A planned development area with the integration of active mobility modes and emphasis on seamless, comfortable and safe pedestrian routes; 5. A centre that has an adequate community facilities such as health and safety facilities; 6. A centre that has a complete infrastructure facilities such as bus services network and rail stations; 7. A centre that has international standard green building design and construction; and 8. A centre that encourages low-carbon communities with low-carbon conceptual development in line with the strategic direction of KLSP2040.
SECONDARY GROWTH CENTRE Secondary Growth Centre is a new hierarchy introduced to reduce the high development pressure from the City Centre to the surrounding area. It consists of an upgraded district growth centre and several potential new areas.	1. A centre with the potential as a redevelopment area or committed development; 2. A centre that has good connection networks with transit stations; 3. A centre with the ability to impose lot amalgamation for development purposes; 4. A centre that offers services and employment opportunities in support of primary growth centres; 5. A centre that provides housing to increase the population in the city; and 6. A centre that encourages low-carbon communities with low-carbon conceptual development in line with the strategic direction of KLSP2040.
DISTRICT GROWTH CENTRE District Growth Centres are areas with medium-scale commercial and employment centres that are located nearby to residential and neighbourhood areas. It serves as a service, social, cultural and recreational hub for the local community.	1. A centre that supports local employment and business needs in commercial areas; 2. A centre that attracts investment with flexible activities on a medium scale; 3. A centre that allows activities in the City Centre with suitable regulations and scale; and 4. A centre that encourages low-carbon communities with low-carbon conceptual development in line with the strategic direction of KLSP2040.

Table 6.2.1:
Hierarchy and Main Characteristics of Growth Centres in Kuala Lumpur (continued)

Hierarchy of Urban Growth Centre	Main Characteristics
LOCAL GROWTH CENTRE Local Growth Centre is a community and commercial hub located in a stable neighbourhood and within close proximity to other growth centres. It contributes to economic growth and local activities as well as to support the social needs of surrounding neighbourhood.	1. A centre that provides recreational areas and small-scale commercial to cater the needs of the residents and reduce the need to travel to obtain other services; 2. A centre that emphasises the 15 minutes city concept through active mobility modes and strengthening the first and last mile system. It can reduce the dependency on private vehicle and carbon emissions; and 3. A centre that connects residential to commercial areas and parks through the upgrading of street or road with streetscapes, green canopies, and pedestrian connectivity that is universal, safe, and age-friendly.

BRIEF INFO

OVERVIEW OF AREA COVERAGE UNDER DEVELOPMENT CONTROL



City Centre Development Control

1. The City Centre area has been developed with high intensity developments and building landmarks that reflect Kuala Lumpur's identity; and
2. Urban design in the City Centre area is subject to the Kuala Lumpur Urban Design Guidelines.

Urban Growth Centre Development Control

1. The urban growth centres has special characteristics that allow these areas to gain intensity based on criteria and conditions that has been outlined.

Development Control Around City Centre

1. The area around the City Centre needs to be controlled in terms of height and intensity to maintain the physical visual appreance of the City Centre;
2. The boundaries of these areas are bounded by the proposed MRT3 rail line;
3. The development pressure that occurs in the area around the City Centre causes a high-intensity demand in this area however the increase in intensity in these areas are lower compared to the urban growth centre; and
4. Increase in intensity will be based on criteria and conditions that have been outlined.

Kuala Lumpur General Development Control

1. This control applies to areas other than those specified above; and
2. The intensity in this area must not exceed the intensity of the urban growth centre and must be in harmony with the existing development and neighbourhood.

IMPLEMENTATION INITIATIVE 6-2.1B

DEVELOPMENT PLANNING IN URBAN GROWTH CENTRE HIERARCHY

A city is the centre of economic growth and services for population of a country such as Kuala Lumpur. Each city has its own character and role and needs to be planned based on a hierarchy with specific characteristics to avoid duplication of functions from the aspects of land use, economy, social, infrastructure, urbanisation facilities and others.

The necessary actions to support this initiative are divided into general and specific initiatives as shown in Table 6.2.2.

Location: LaLaport Bukit Bintang
Source: https://www.shutterstock.com/g/gracethang2

Lalaport is a former Pudu Prison site that has been redeveloped as a new commercial area in Bukit Bintang that incorporates green landscape elements and public spaces for the city's residents.

Table 6.2.2:
Development Planning Initiatives of Urban Growth Centre Hierarchy in Kuala Lumpur

General Initiative
1. Emphasise on commercial land use and mixed development, as well as strengthening the provision of public facilities in locations that are easily accessible to the public;
2. Adopt integrated TOD concept to promote comprehensive development;
3. Provide quality and liveable homes for various segments of the society;
4. Provide green areas and identify areas with potential to be used as public spaces;
5. Emphasise on development that prioritises pedestrians and encourages the use of micromobility vehicles;
6. Improve back lanes and increase the accessibility to transit stations and public transportation;
7. Strengthen main roads as walkable and shared streets as well as limit the flow of private vehicles in the urban growth centre;
8. Improve integration system and provision of an efficient public transport in making public transportation as users main choice;
9. Strengthen the image, function and identity of each key urban growth centre;
10. Consider the design of adjacent buildings and surrounding environment to create harmony between buildings;
11. Emphasise urban design that encourages active street activity;
12. Emphasise development and provision of facilities based on universal design and suitable for all age groups;
13. Comply with green building and low carbon building standards; and
14. Identify effective and systematic parking management methods.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

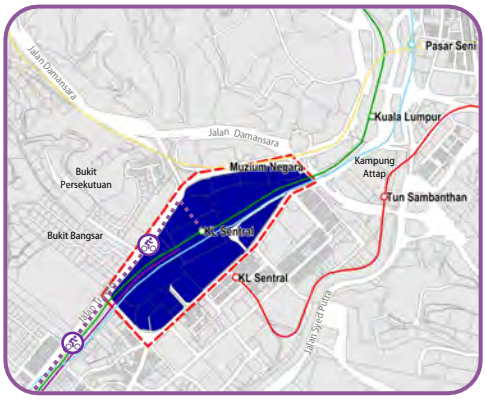
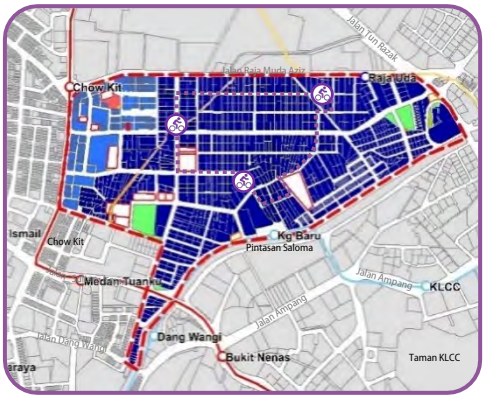
Location	Specific Initiatives
1. PRIMARY GROWTH CENTRE	
1. KLCC AND BUKIT BINTANG 	1. Enhance and improve key commercial areas and shopping centres; 2. Ensure active mobility mode routes to key tourist hotspots such as KLCC, Pavilion, Petaling Street, Kasturi walk and River of Life (RoL) are in good condition, safe and comfortable; 3. Enhance Jalan Bukit Bintang as a shopping street by limiting traffic speed. This road has the potential to be upgraded as a dedicated pedestrian and micromobility vehicle route; 4. Propose improvements for pedestrian and micromobility vehicle routes crossings at the intersection of KLCC and Public Bank, and join with Saloma Link; 5. Improve crossing time at Bukit Bintang main crossing; 6. Enhance surrondings of Jalan Ampang as an eco-district; and 7. Utilise Jalan Ampang cemetery as an open green area.
2. KL SENTRAL 	1. Enhance identity of the area through urban design improvements as well as pedestrian and micromobility vehicle routes around TOD KL Sentral including Brickfields with the concept of Street for People; 2. Promote provision of shuttle transportation and improve pedestrian and micromobility vehicle routes connections especially bicycles along Jalan Bangsar towards Taman Botani Perdana and River of Life (RoL); 3. Improve green space with appropriate methods; and 4. Provide a seamless pedestrian route connecting KL Sentral, the National Museum and the Bukit Persekutuan area through underground development.
3. KAMPONG BHARU 	1. Enhance identity of the area as an enclave of Malay identity in the City Centre through urban design, development control in accordance with Kampong Bharu Islamic Malay Architectural Guidelines; 2. Maintain the mosque as the main node of development in Kampong Bharu; 3. Consider the skyline and view of KLCC and Kuala Lumpur Tower in the planning of height, orientation or design of future development; and 4. Integrate Kampong Bharu development with LRT station in Kampong Bharu and Dang Wangi, MRT Station Kampong Bharu as well as Chow Kit Monorail Station. 5. Integrate development with key infrastructure around the site such as Duke 2A and AKLEH.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

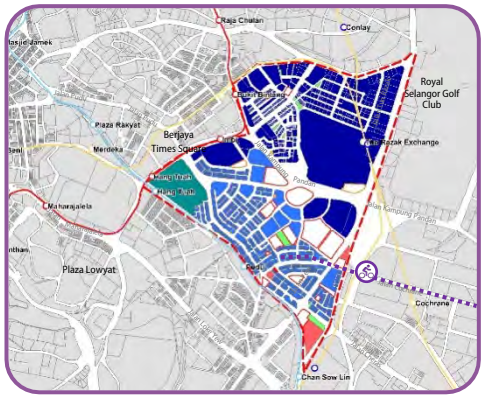
Location	Specific Initiatives
1. PRIMARY GROWTH CENTRE	
4. TRX AND PUDU 	1. Adopt specific design guidelines for the development of TRX; The Tun Razak Exchange Development Code - Plot Controls; 2. Maintain and enhance identity of Pasar Pudu enclave as a Market Area through the improvement of urban design and public spaces; 3. Apply Urban Block concept in small plots for the purpose of large-scale development in infill areas; 4. Provide public spaces especially green areas with pedestrian and micromobility vehicle routes; 5. Encourage provision of public facilities in development areas that can be directly accessed by the public from ground level; and 6. Improve the pedestrian and micromobility vehicle routes around from Pasar Pudu to Maluri through Jalan Cochrane.
5. WARISAN MERDEKA AREAS AND PLAZA RAKYAT 	1. Maintain and enhance identity of independence heritage architectural area through development control and urban design; 2. Provide suitable, safe and comfortable pedestrian and micromobility vehicle routes facilities to connect three (3) main public transports, namely Merdeka MRT Station, Hang Tuah and Plaza Rakyat LRT Station as well as Hang Tuah and Maharajalela Monorail Station; 3. Provide interconnected pedestrian routes for new developments such as Merdeka 118 Tower to Merdeka MRT Station and Plaza Rakyat LRT Station; and 4. Enhance pedestrian landscape design from Jalan Hang Jebat to Jalan Sultan up to the River of Life (RoL).
2. SECONDARY GROWTH CENTRE	
1. BANDAR MALAYSIA 	1. Connect green linkages between Bandar Malaysia and the surrounding focal points with an emphasis on through emphasising of integrated pedestrian and micromobility vehicle routes. Bandar Malaysia will be connected to the Razak City area through provision of a bridge and to the River of Life (RoL) through Kwong Tong cemetery; 2. Develop Bandar Malaysia as a nature-friendly city by adopting green and low-carbon development guidelines; 3. Integrate development components with MRT stations and proposed High-Speed Rail (HSR) stations; and 4. Integrate development with key infrastructure around Bandar Malaysia such as Duke 2A (Istana Link) and Setiawangsa Pantai Expressway (SPE).

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

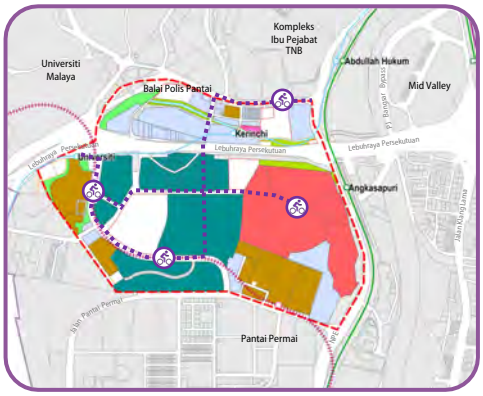
Location	Specific Initiatives
2. SECONDARY GROWTH CENTRE	
2. BANGSAR 	1. Increase green canopy and connect pedestrian routes to improve connectivity and create a continuous route to KL Sentral, Setia Federal Hill, Jalan Abdullah area, Bangsar 61 KL Eco City and Mid Valley; 2. Develop a multi-choice residential component to increase the quality of urban living and encourage population growth in urban growth centre areas; 3. Emphasis services sector that can offer high-value employment opportunities; and 4. Improve and strengthen the urban design of Bangsar Growth Centre.
3. BANGSAR SOUTH 	1. Connect two (2) main landmarks of Bangsar South, such as Telekom Malaysia Tower and Angkasapuri building through a green network corridor to form a pleasant key route by adopting the 'Glasgow M8 Motorway Elevated Park Project'; 2. Integrate development components with the Universiti and Kerinchi LRT Stations; 3. Create a central open space that becomes the social nodes of this area; and 4. Implement redevelopment of Taman Sri Angkasa Flats.
4. BATU KENTONMEN 	1. Develop this area in a planned manner by focusing on the provision of residential, commercial, community facilities and recreational areas; 2. Provide conducive affordable housing and affordable commercial spaces; 3. Promote mixed development by integrating future development components with Kampung Batu KTM Station and Batu Kentonmen MRT Station; and 4. Create a central open space that becomes the social node of this area.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

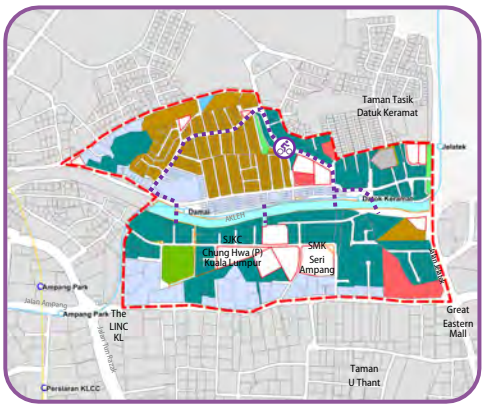
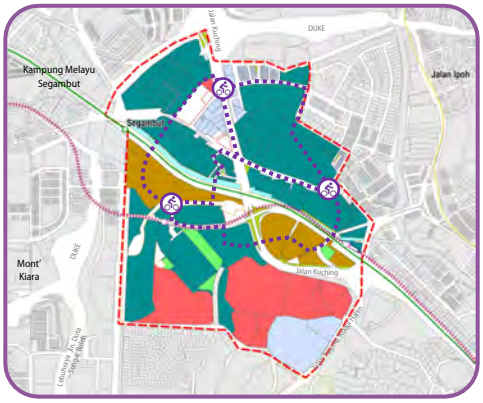
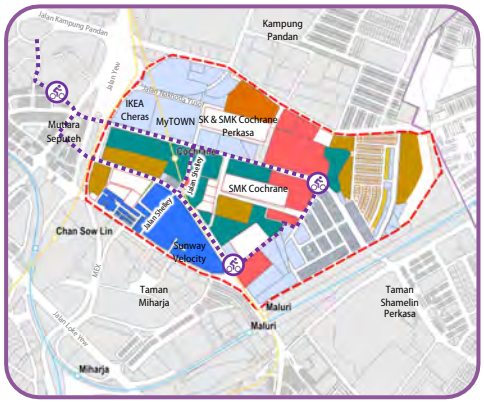
Location	Specific Initiatives
2. SECONDARY GROWTH CENTRE	
5. JALAN AMPANG AND DATUK KERAMAT 	1. Connect northern area of Kampung Datuk Keramat, Jalan Damai and southern area of Jalan Aman through a safe pedestrian crossing and micromobility vehicle routes to expand the network of LRT Damai, LRT Dato Keramat and LRT Jelatek; 2. Develop residential areas and mixed development comprehensively through the approach of lot amalgamation incentive; 3. Upgrade local roads in support of higher development intensity in Datuk Keramat, Jalan Damai and Jalan Aman for future development; and 4. Encourage quality residential development in line with the character of Jalan Ampang.
6. KL METROPOLIS 	1. Enhance KL Metropolis which is the centre of M.I.C.E with the proposed MRT Laluan Lingkaran (MRT3) transit station in this area; and 2. Improve connectivity between KL Metropolis development area and Kompleks Jalan Duta with the redevelopment area in the north consisting of Tan Chong Motor, Goh Ban Huat and Federal Cable, through pedestrian overpasses and micromobility vehicle routes that across the Sungai Keroh.
7. MALURI 	1. Enhance open space at Cochrane MRT station as the main open space for Maluri growth centre; 2. Improve green space by identifying suitable approach such as the use of space under the transmission line and SMART tunnel reserve; 3. Improve pedestrian and micromobility vehicle routes as well as the first and last mile from Cochrane MRT Station to Sunway Velocity and MyTown or IKEA; and 4. Develop Jalan Shelley as a pedestrian-friendly road with appropriate width and shaded trees for pedestrian and micromobility vehicle routes to connect Sunway Velocity with MyTown or IKEA.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

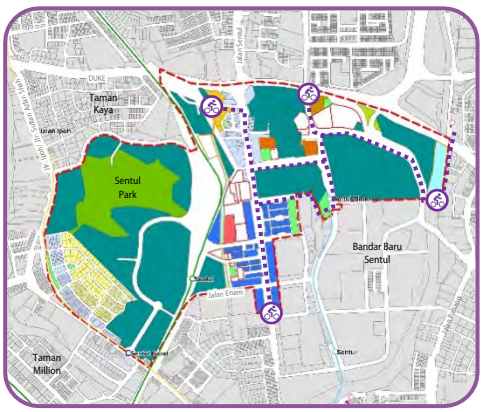
Location	Specific Initiatives
2. SECONDARY GROWTH CENTRE	
8. PUSAT BANDAR DAMANSARA 	1. Improve pedestrian and micromobility vehicle routes to Pusat Bandar Damansara MRT Station and Semantan MRT Station; 2. Ensure that part of the areas located within the height control zone of Istana Negara comply with the specified height regulations; 3. Enhance pedestrian and micromobility vehicle routes for the first and last mile to connect residential areas around Damansara City Centre to Damansara City Centre MRT station; 4. Propose Jalan Damansara as pedestrian-friendly road with suitable width and shaded trees for pedestrian and micromobility vehicle routes; and 5. Propose improvement, rearrangement and urban design that consider the concept of off-street cafes or al-fresco in suitable areas.
9. SENTUL 	1. Increase livability rate of the area for every level of society through the provision of quality housing; 2. Encourage use of privately owned open space as public open space for social activities of local residents and surrounding areas; 3. Enhance open spaces around growth centre areas; 4. Propose pedestrian and micromobility vehicle routes that connect Sentul West MRT Station, Sentul East MRT Station and Sentul KTM Station in making this area easily accessible by pedestrian users; and 5. Focus on business activities that generate high-value employment opportunities.
10. SRI HARTAMAS 	1. Propose pedestrian and micromobility vehicle routes from MRT Sri Hartamas Station to Jalan Sri Hartamas 1 and proposed MRT Mont Kiara Station to Jalan Kiara 4; 2. Propose Jalan Sri Hartamas 1 and Kiara 4 as pedestrian-friendly road with suitable width and shaded trees for pedestrian and micromobility vehicle routes to create connectivity between residential and commercial areas; 3. Enhance open space around Sri Hartamas growth centre; and 4. Identify the best appraoch of parking management in Sri Hartamas area.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

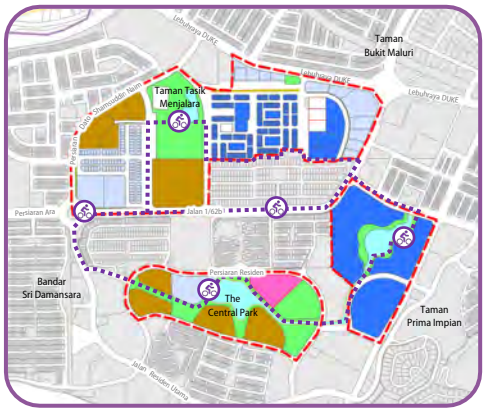
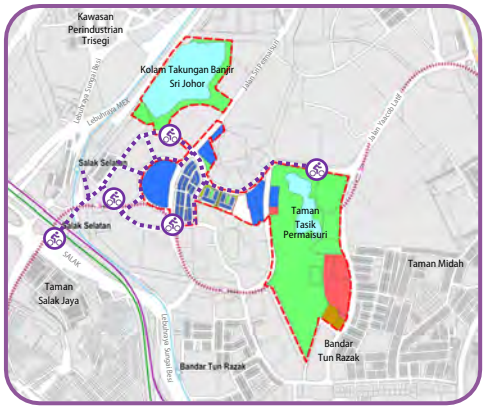
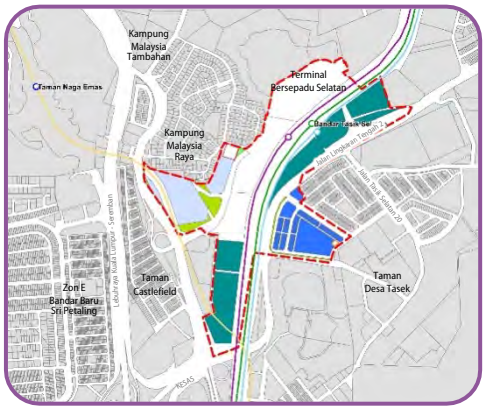
Location	Specific Initiatives
3. DISTRICT GROWTH CENTRE	
1. BANDAR MENJALARA 	1. Improve accessibility through the green linkages connecting Taman Tasik Menjalara and Taman Utama Desa Park City with suitable pedestrian and micromobility vehicle routes; 2. Emphasise the use of feeder buses that connect Bandar Menjalara area to Sri Damansara Sentral MRT Station; 3. Emphasise control of commercial terraces character in Bandar Menjalara area in line with road infrastructure and limited parking spaces; and 4. Enhance road infrastructure and parking in Bandar Menjalara commercial area.
2. BANDAR SRI PERMAISURI 	1. Encourage commercial and recreational development that prioritises pedestrian and micromobility vehicle routes access to transit stations; 2. Emphasise the use of feeder buses that connect Bandar Sri Permaisuri area to the Salak Selatan KTM Station; 3. Propose Sri Johor Flood Retention Pond as an open recreational area that can be used by the public; 4. Improve accessibility through green connectivity network that connects Bandar Sri Permaisuri with Taman Tasik Permaisuri and Sri Johor Flood Retention Pond; and 5. Ensure that new developments provide open spaces that can be used by the public.
3. BANDAR TASIK SELATAN 	1. Identify suitable activities to improve the role of Bandar Tasik Selatan commercial area as a district growth centre; 2. Strengthen the pedestrian and micromobility vehicles route as the first and last mile that connects commercial and residential areas in Bandar Tasik Selatan with the Bandar Tasik Selatan Integrated Terminal (TBS); and 3. Propose catchment pond next to Bandar Tasik Selatan Integrated Terminal (TBS) as a recreational area that can be used by the public.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

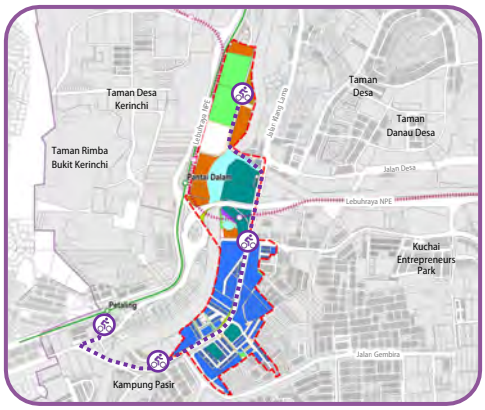
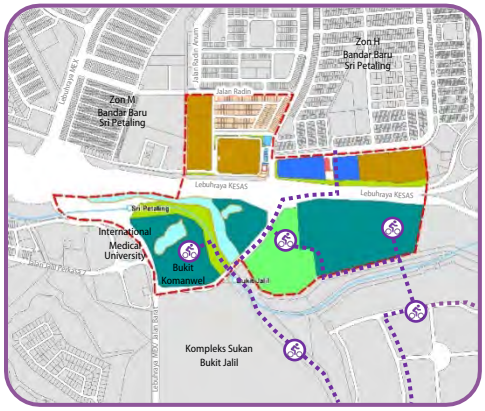
Location	Specific Initiatives
3. DISTRICT GROWTH CENTRE	
4. BUKIT INDAH (KLANG LAMA) 	1. Provide pedestrian and micromobility vehicle routes from Bukit Indah commercial area to Petaling KTM Station and propose MRT3; 2. Emphasise the use of intermediate buses that connect the Bukit Indah commercial area to Petaling KTM station; 3. Propose pedestrian and micromobility vehicle routes from Bukit Indah commercial area to Pantai Eco Park across the Sungai Klang; 4. Implement the proposed additional alignment of RoL 1 along Bukit Indah commercial area facing the Sungai Klang; and 5. Upgrade landscape space of Jalan Klang Lama in Bukit Indah growth centre area to enhance its image and identity.
5. BUKIT JALIL AND TAMAN SRI ENDAH 	1. Provide pedestrian and micromobility vehicle routes facilities to Bukit Jalil LRT Station and Sri Petaling LRT Station in new development; 2. Improve connectivity between the commercial areas of Endah Parade, Bukit Komanwel, Sri Petaling LRT Station and Bukit Jalil LRT Station; 3. Ensure the existing area surrounding the lake is developed as a recreational area and integrated with Sungai Midah and the Bukit Jalil Sports Complex; 4. Utilise Sungai Kuyoh as a green area and make it as one of the main elements of urban planning and design in the area; and 5. Identify suitable activities to generate active commercial activities.
6. PAVILION BUKIT JALIL 	1. Connect Bukit Jalil Pavilion area with the LRT station through feeder bus services and the use of comfortable active mobility modes; 2. Emphasise use of feeder buses that connect Pavillion Bukit Jalil area to the Muhibbah LRT Station and Awan Besar LRT Station; and 3. Improve parking lot at Awan Besar LRT Station with multi-storey parking to encourage the use of LRT in this area.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

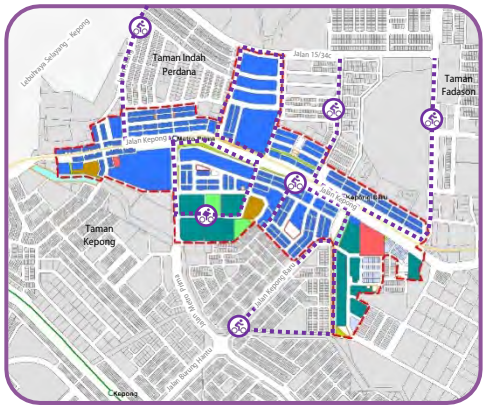
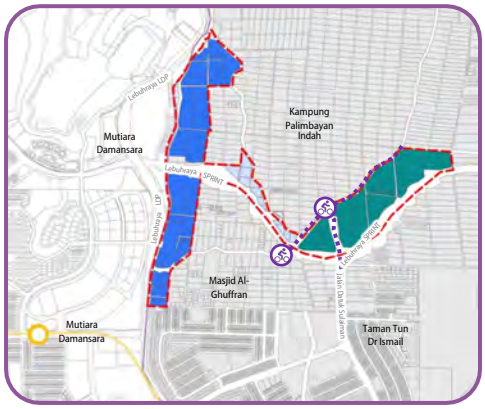
Location	Specific Initiatives
3. DISTRICT GROWTH CENTRE	
7. KEPONG 	1. Provide pedestrian and micromobility vehicle routes to Kepong Baru MRT Station and Metro Prima MRT Station for new developments; 2. Enhance existing walkways with shade-providing plants to improve pedestrian comfort at Jalan Kepong and its surroundings; 3. Propose an interconnected pedestrian and micromobility vehicle routes with canopy tree coverage similar to those implemented in Sentul East, to make the area easily accessible for pedestrians; and 4. Propose an Urban Block design concept on redevelopment and new development sites in ensuring the design in Kepong growth centre area is more organised.
8. PENCHALA 	1. Encourage commercial development that is suitable to the activities, character and intensity in Mutiara Damansara; 2. Propose lot amalgamation approach by emphasising on suitable infrastructure development and public facilities in line with proposed development concept; 3. Ensure activities in Penchala growth centre are supporting medium and high intensity for the entire Rezab Melayu Penchala and Rezab Melayu Segambut; 4. Ensure new development considers the existing topographical conditions and physical environment; 5. Emphasise the importance of preserving Sungai Penchala skyline from the elevation level of highways which needs to be controlled in terms of height; and 6. Emphasise the use of feeder buses that connect the growth centre area to the MRT Laluan Lingkaran (MRT 3) and Mutiara Damansara MRT Station.
9. TAMAN MELATI AND KL EAST 	1. Provide safe and comfortable pedestrian and micromobility vehicle routes that connect major developments areas such as KL East, Platinum Hill and surrounding commercial centres with Gombak Integrated Terminal and Melati LRT Station; 2. Emphasise the use of feeder buses that connect Taman Melati area to Taman Melati LRT Station; 3. Introduce Jalan Melati 4 and its surroundings, a pedestrian-friendly road with suitable width and shaded trees for pedestrian and micromobility vehicle routes; and 4. Encourage local community service activities and facilities.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

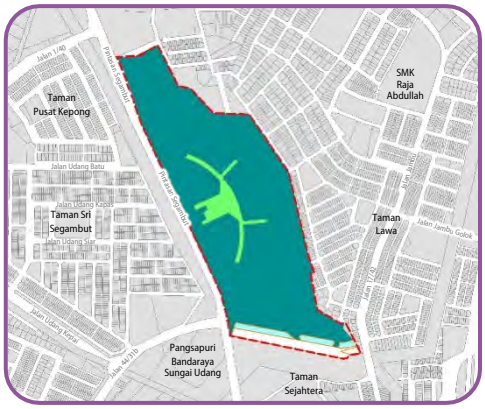
Location	Specific Initiatives
3. DISTRICT GROWTH CENTRE	
10. WANGSA MAJU 	1. Increase livability of the area through the provision of quality housing especially for areas located within 400 metres from the LRT station; 2. Encourage commercial development adapting to the, character and intensity in supporting Wangsa Maju as Carbon Neutral Growth Centre; 3. Identify good parking management approach in Wangsa Maju area; 4. Provide a safe and comfortable pedestrian and micromobility vehicle routes that connects Wangsa Maju area with Sri Rampai LRT station; and 5. Enhance function of open space around Wangsa Maju.
11. TAMAN SEGAR 	1. Coordinate development intensity for Taman Segar with infrastructure facilities such as parking and active mobility to public transport stations; and 2. Provide a comfortable and safe surrounding pedestrian and micromobility vehicle routes from Taman Segar commercial area to Taman Mutiara MRT station; 3. Emphasise the control of commercial terraces character in Taman Segar area in line with road infrastructure and limited parking spaces; 4. Identify good parking management approach in Taman Segar; 5. Enhance function of open space around Taman Segar; and 6. Improve accessibility to local community facilities.
4. LOCAL GROWTH CENTRE	
1. JINJANG SELATAN 	1. Provide a safe and comfortable pedestrian and micromobility vehicle routes with canopy tree coverage that connects Jinjang Selatan area to Jinjang MRT Station and Segambut KTM Station in creating this area easily accessible by pedestrians; 2. Identify suitable activities to improve the role of Jinjang Selatan commercial area as a local growth centre; 3. Emphasise on the use of feeder buses that connects Jinjang Selatan area to Jinjang MRT Station and KTM Segambut Station; and 4. Ensure adequate provision of open space in accordance with planning requirements.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

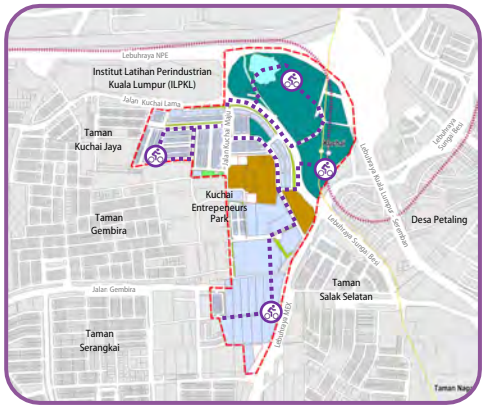
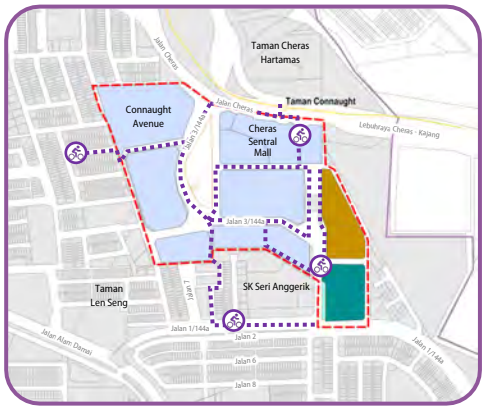
Location	Specific Initiatives
4. LOCAL GROWTH CENTRE	
2. KUCHAI LAMA 	1. Provide pedestrian and micromobility vehicle routes facilities with canopy tree coverage from Kuchai Entrepreneurs Park to public transport station in new development areas in ensuring this area is easily accessible for the pedestrian; 2. Emphasis on the use of feeder buses that connects Kuchai Lama area to proposed Kuchai MRT Station; 3. Identify suitable activities to improve the role of Kuchai Lama area as a local growth centre; 4. Emphasis control of commercial terraces character in Kuchai Lama area in line with road infrastructure and limited parking spaces; and 5. Ensure adequate provision of open space in accordance with planning requirements.
3. TAMAN CONNAUGHT 	1. Provide pedestrian and micromobility vehicle routes facilities with canopy tree coverage from Taman Connaught to Taman Connaught MRT Station; 2. Emphasise on the use of feeder buses that connects Taman Connaught area to Taman Connaught MRT Station; and 3. Regenerate Taman Connaught commercial area with suitable activities to enhance the function as a local growth centre.
4. TAMAN TUN DR ISMAIL 	1. Enhance urban design through improvement of landscaping and street furniture in Taman Tun Dr. Ismail commercial area; 2. Maintain and strengthen image and function of Pasar TTDI as a commercial area by improving urban design of surrounding area; 3. Improve pedestrian and micromobility vehicle routes with canopy tree coverage from the growth centre, surrounding residential area and TTDI Rimba Kiara Recreation Park to TTDI MRT Station in ensuring this area is easily accessible for pedestrians; 4. Emphasis control of commercial terraces character in Taman Tun Dr. Ismail area in line with road infrastructure and limited parking spaces; and 5. Identify suitable activities to improve the function of Taman Tun Dr. Ismail as a local growth centre.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

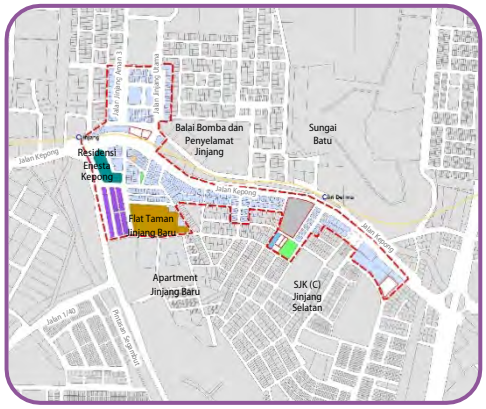
Location	Specific Initiatives
4. LOCAL GROWTH CENTRE	
5. DANAU KOTA 	1. Improve pedestrian and micromobility vehicle routes from Danau Kota growth centre to Wangsa Maju LRT Station and the proposed MRT station through Jalan Genting – Klang, Jalan Kilang and Jalan 3/27a with canopy tree coverage to ensure this area is easily accessible for the pedestrians; 2. Emphasise on the use of feeder buses that connects Danau Kota area to the proposed MRT station and LRT Wangsa Maju; 3. Enhance commercial activities around Danau Kota growth centre by encouraging commercial activities oriented towards the lake view; and 4. Provide green landscape elements along the main road to enhance the image and identity of local growth centre.
6. JINJANG 	1. Maintain and strengthen the image and function of Jinjang Utara and Pasar Jinjang Selatan as commercial areas through the design of shophouses; 2. Improve pedestrian and micromobility vehicle routes with canopy tree coverage from Jinjang local centre to Jinjang MRT Station, Sri Delima MRT Station, and the proposed MRT station to ensure these areas are easily accessible for pedestrians; 3. Increase green landscape elements along the main road to improve the image and identity of Jinjang local centre; and 4. Identifying the best methods of vehicle parking management in Jinjang.
7. KLANG LAMA 	1. Improve connectivity of surrounding neighborhoods within 400 metres up to 800 metres radius to the Klang Lama Local Growth Centre; 2. Improve comfortable pedestrian and micromobility vehicle routes with tree canopies around the local centre, surrounding neighborhoods and public facilities; 3. Beautify the Sungai Klang as a significant green corridor element in the planning and design of the area especially in terms of accessibility and river frontage; and 4. Plan and reorganise the layout of commercial and terrace commercial along the street (on-street) with the provision of parking facilities.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

Location	Specific Initiatives
4. LOCAL GROWTH CENTRE	
8. PEKAN SUNGAI BESI 	1. Maintain the image and function of Pekan Sungai Besi as a commercial area through the strengthening of urban design and emphasising the control of commercial terraces character; 2. Improve the comfort of pedestrian and micromobility vehicle routes around the commercial centre towards Sungai Besi MRT Station with green tree canopies; 3. Propose connectivity improvements from Permai Apartment area to Sungai Besi MRT Station and further to Pekan Sungai Besi; 4. Upgrade the existing open space in Lakefields commercial centre with green landscape elements, urban furniture, and lighting to increase the level of its usage; and 5. Strengthen the road infrastructure and reorganise the layout of parking spaces along the road (on-street parking) in Pekan Sungai Besi local centre.
9. SELAYANG 	1. Improve connectivity of Pasar Borong Selayang with Pasar Selayang through improvement of feeder buses around the local growth centre area; 2. Improve the quality of pedestrian and micromobility vehicle routes that connect the Pasar Borong Selayang area to Taman Sri Selayang bus station especially in terms of safety, to make this area is easily accessible for pedestrians and public transport users; 3. Reorganise the layout of on-street parking in the Pasar Borong Selayang area to avoid traffic congestion, especially during peak hours; and 4. Strengthen the image and function of Pasar Selayang as a commercial area through the improvement of shop buildings as well as the restructuring of shop lots according to sectors such as banking, retail, telecommunications, and others.
10. SETIAWANGSA 	1. Maintain the image of existing tree canopies and increase green landscape elements along Jalan Taman Setiawangsa to enhance the image and identity of the local growth centre; 2. Improve pedestrian and micromobility vehicle routes with canopy tree coverage around Setiawangsa Growth Centre to Setiawangsa LRT Station; 3. Upgrade existing pedestrian routes to covered pedestrian routes from Apartment Mahsuri to Jalan Setiawangsa 1; 4. Propose an extension of covered pedestrian routes from the intersection of Jalan Setiawangsa 13 and Jalan Setiawangsa 1 to the Jalan Taman Setiawangsa intersection; 5. Enhance the open space area around the Setiawangsa Growth Centre; and 6. Identify a good vehicle parking management approach, especially in the Setiawangsa commercial area.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

Location	Specific Initiatives
4. LOCAL GROWTH CENTRE	
11. SRI PETALING 	1. Encourage the use of feeder buses that connect the Sri Petaling commercial area with Sri Petaling LRT Station and Bukit Jalil LRT Station; 2. Provide a central open space within the commercial area of the local growth centre; 3. Enhance green space through suitable methods such as encouraging vertical green or on roof top planting in Sri Petaling Growth Centre; 4. Improve pedestrian and micromobility vehicle routes that connects commercial areas to public facilities and neighborhood areas; and 5. Create a multi-level parking centre with community facilities and landscape elements, as well as canopy cover around the parking centre.
12. TAMAN MASTIARA 	1. Enhance commercial activities surrounding Taman Mastiara through the promotion of suitable commercial activities to improve the function of Taman Mastiara as a local growth centre; 2. Improve connectivity, especially for residential activities and residing facilities, to Taman Wahyu KTM Station, Kampung Batu KTM Station and Kampung Batu MRT Station through the improvement of covered pedestrian and micromobility vehicle routes integrated with green landscape elements; and 3. Emphasise the use of feeder buses that connects Taman Mastiara Growth Centre to Taman Wahyu KTM Station, Kampung Batu KTM Station, and Kampung Batu MRT Station.
13. TAMAN MIDAH 	1. Improve the connectivity of surrounding neighbourhoods to the Taman Midah Growth Centre through the provision of safe and comfortable pedestrian and micromobility vehicle routes; 2. Restructure design of Jalan Midah Besar to accommodate pedestrian-friendly boulevard for pedestrian and micromobility vehicle routes with a suitable width to connect the residential area with the Taman Midah commercial area; 3. Provide green landscape elements along Jalan Midah Besar to enhance the image and identity of the local growth centre; 4. Provide comfortable pedestrian and micromobility vehicle routes with shaded trees to connect Taman Midah area to Taman Midah MRT Station to ensure this area is easily accessible for pedestrians; and 5. Reorganise the layout of vehicle parking along the road (on-street) with the provision of an organised parking facilities.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

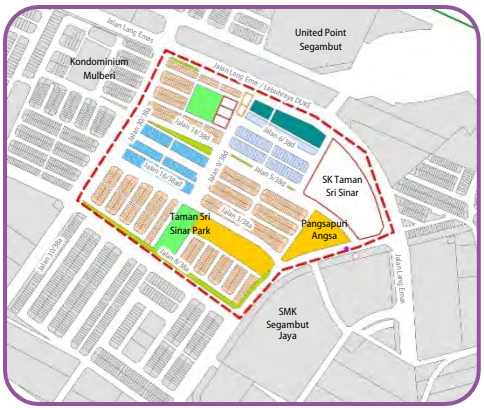
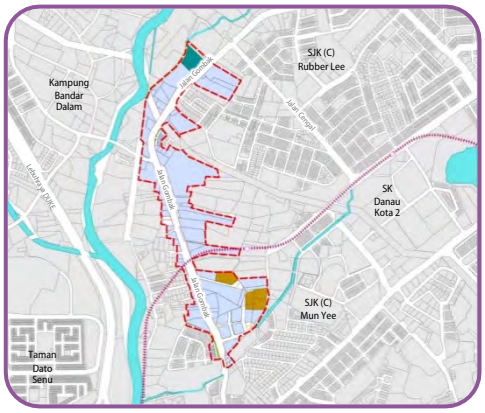
Location	Specific Initiatives
4. LOCAL GROWTH CENTRE	
14. TAMAN SRI SINAR 	1. Connect the Taman Sri Sinar growth centre with the United Point shopping centre through the provision of safe and comfortable pedestrian and micromobility vehicle routes; 2. Improve the connectivity of the Taman Sri Sinar Local Growth Centre to the Segambut KTM Station through the provision of feeder busses and proposed Taman Sri Sinar MRT Station through the improvement of pedestrian and micromobility vehicle routes; and 3. Proposed a green network along Jalan 8/38d and 9/38d up to Taman Sri Sinar for the use of pedestrian and micromobility vehicle routes in suitable width to enhance the image and identity of the area.
15. ALAM DAMAI 	1. Improve the accessibility of Alam Damai Local Growth Centre to Surau As-Sobirin, Masjid Al-Mukhlisin, and surrounding residential areas through the provision of pedestrian and micromobility vehicle routes with good shaded trees; 2. Improve connectivity from the Alam Damai commercial area to Alam Damai Recreation Park through a park connector; 3. Improve green space in the Alam Damai Growth Local Centre through a suitable approach such as integrating the parking area with green landscape elements, and ensure adequate provision of open space in accordance with planning requirements; and 4. Ensure the provision of adequate parking to cater to development pressure from inside and outside the growth centre.
16. GOMBAK 	1. Improve connectivity within Gombak Local Growth Centre through the improvement of Jalan Gombak by providing safe and comfortable covered pedestrian and micromobility vehicle routes; 2. Emphasise the development of new commercials with a design concept that encourages street-level activities (active street frontage); 3. Regenerate the Gombak commercial area with suitable activities to improve the function of the Gombak Local Growth Centre; 4. Increase canopy trees along Jalan Gombak to improve the image and identity of the local growth centre; and 5. Create and increase open space in the Gombak Growth Centre through a suitable approach, such as integrating parking areas with green landscape elements.

Table 6.2.2:
Development planning in the urban growth centre hierarchy in Kuala Lumpur (continued)

Location	Specific Initiatives
4. LOCAL GROWTH CENTRE	
17. DESA PETALING 	1. Improve the connectivity of the surrounding neighbourhood to the Desa Petaling local growth centre, especially Jalan 2/125 through the provision of safe and comfortable pedestrian and micromobility vehicle routes with shaded landscapes; 2. Emphasise the use of feeder buses that connect the Desa Petaling commercial area with Taman Naga Emas MRT Station and Bandar Tasik Selatan Integrated Terminal; 3. Create a centralised open space in the proposed new development to improve the image of the Desa Petaling growth centre; and 4. Identify a good vehicle parking management approach in the Desa Petaling area.

Location: Jalan Bukit Bintang
Source: https://www.shutterstock.com/g/f11photo

Bukit Bintang is one of the primary growth centres in Kuala Lumpur.

PLANNING STRATEGY

SP 6-3: ENCOURAGING INFILL DEVELOPMENT

SCENARIO OF INFILL DEVELOPMENT IN KUALA LUMPUR

Rapid development is often linked to the availability of land to accommodate future development. The concept of infill development is the best alternative in increasing an optimal and efficient use of land in Kuala Lumpur.

It also can minimise the pressure of new development area or scarcity of open space issues. The development of infrastructure such as upgraded transit and road systems makes an area potentially suitable for infill development in line with the rapid development growth in Kuala Lumpur.

Infill development can activate the area and increase more effective use of urban space. It ensures efficient land resources for smart city development, promotes social interaction, improves quality of life and physical environment. Infill development is also seen to be able to allocate new facilities according to the needs of the local community.

KLSP2040 has identified two (2) types of significant infill development for Kuala Lumpur, as follows:

1. Infill for residential parcels in established housing area; and
2. Infill in commercial or industrial areas.

The site criteria for infill development are as follows:

1. A vacant lot or a lot with existing use that is uneconomical;
2. Ensure it is located within existing built-up areas, city centre areas, growth centre and regeneration areas; and
3. Have existing infrastructure, utilities and public facilities that are well-established.

In order to realise Kuala Lumpur as a city with more productive and effective space utilisation, one (1) Implementation Proposal is formulated under Planning Strategy 6–3, as shown in Figure 6.3.1.

BRIEF INFO

BENEFIT OF INFILL DEVELOPMENT

1. Increase use of land in built-up areas to be more optimal and efficient;
2. Reduce pressure of new development area and the scarcity of open space issues;
3. Generate activities and uses that reactivate the area;
4. Effective use of urban space, encouraging social interaction and providing prospects for new facilities according to the needs of the local community;
5. Increase population and availability of affordable housing in the city; and
6. Diversify use of land in urban areas.

Figure 6.3.1:
Implementation Proposal for Planning Strategy 6-3

SP 6-3	ENCOURAGING INFILL DEVELOPMENT
CP 6-3.1	Controlling Infill Development

IMPLEMENTATION PROPOSAL

CP 6-3.1: CONTROLLING INFILL DEVELOPMENT

Infill development refers to the development of empty land or sites with less optimal land use involving various scales of development in existing built-up area. It aims to improve the image and value of a particular land and its surrounding.

The implementation needs to consider specific development control principles to ensure the harmony of new development with the image, identity, function and current condition of surrounding area by referring to the Second National Urbanisation Policy 2 (NUP2) and KLSP2040.

The purpose of infill development control is to ensure that it follows the basic principles of planning as follows:

1. Promote development that is harmonious with the scale and function of development surrounding;
2. Have good connectivity with existing infrastructure such as transport systems, roads, pedestrian routes and open spaces;
3. Promote development of Compact City, Smart Growth and Green Building;
4. Ensure quality urban design; and
5. Ensure the infrastructure or utility site that has been given possession for development still maintains the existing function of the particular infrastructure or utility.

The Draft KLLP2040 has identified sites or undeveloped land (vacant land) located in the city centre, primary commercial zone, regeneration area, and boundaries of urban growth centres with the potential to be developed for infill development, as shown in Figure 6.3.1.

The implementation approach of this proposal is through planning controls and guidelines. There are two (2) initiatives proposed for the implementation of CP 6-3.1.

IMPLEMENTATION INITIATIVE 6-3.1A

PROMOTE INFILL DEVELOPMENT IN CITY CENTRE AND COMMERCIAL CENTRES

Infill development in city centre and commercial centre focuses on areas, sites or undeveloped land (vacant land) located within the City Centre, Primary Commercial areas, regeneration area and sites within the boundaries of urban growth centres.

The selection of an infill area or site is based on the following characteristics:

1. Undeveloped land (vacant land);
2. Undeveloped land between buildings;
3. Abandoned land with uneconomic development;
4. Old warehouse buildings in industrial areas or zoned as commercial areas;
5. Separate hypermarket site;
6. Open vehicle parking spaces;
7. Vacant shop site or old shop house;
8. Abandoned, unproductive and non-operating industrial site or buildings;
9. Old petrol pump site; and
10. Utility sites that are no longer in active use.

Location: ST Rosyam Mart Hypermarket

ST Rosyam Mart building as a separate hypermarket site that could potentially be used for infill development.

IMPLEMENTATION INITIATIVE 6-3.1B

CONTROL INFILL DEVELOPMENT IN EXISTING BUILT-UP AREAS

Infill development can promote township development in existing urban areas especially in Greater Kuala Lumpur area.

Infill development control needs to be implemented especially for built-up areas, brownfield areas and greenfield areas.

The necessary actions to support this initiative are as follows:

1. Identify main areas of infill development;
2. Create one (1) master plan for infill development planning;
3. Determine mixed development of land use, height and intensity of sustainable infill development;
4. Diversify land use class activities and ensure not to cause disturbance, such as a mix of residential, commercial, cultural, recreational, institutional, and modern industrial activities;
5. Provision of infill development design and guidelines;
6. Empower provision of quality public spaces in the city centre and commercial centres with suitable infill development such as provision of plazas, recreational parks and cultural spaces;
7. Upgrade existing infrastructure and utilities to support infill development requirement;
8. Increase transportation facilities including pedestrian and micromobility vehicle routes;
9. Ensure the harmony of building scale and function of the surrounding area is maintained;
10. Promote infill development through planning advisory services; and
11. Involve the existing communities in the infill development process.

PLANNING STRATEGY

SP 6-4: STRENGTHENING REDEVELOPMENT PLANNING THROUGH SUSTAINABLE CITY CONCEPT

SCENARIO OF URBAN REDEVELOPMENT IN KUALA LUMPUR

Kuala Lumpur still has old and dilapidated areas that are not suitable for residing and are no longer conducive, especially the low-cost houses that were built as early as the 1970s. These cause a deterioration in the character and fabric of the city that also affects the image and identity of Kuala Lumpur.

The deterioration that occurred affected the quality of buildings and the environment, as well as the capacity of infrastructure and community facilities that were unable to comply with the needs of the current population. This scenario gives the impression that there are areas in Kuala Lumpur, especially the existing public housing areas, that have the potential to be redeveloped. Redevelopment that have been completed and under construction include Kuala Lumpur Convention Centre (KLCC), KL Sentral, Bangsar South, Mid Valley, Merdeka 118, Razak Mansion Public Housing and Government Quarters in Jalan Cochrane. This redevelopment approache contributes to optimise the use of limited land in Kuala Lumpur.

The expansion of the rail network also encourages the redevelopment of residential, commercial, and industrial sites located near transit stations with provision of better facilities that meet the needs of population. This development will encourage redevelopment around transit stations and in areas outside the City Centre in line with the construction of the Putrajaya MRT Line and the proposed MRT Circle Line.

This redevelopment is to ensures that continuity of development even with a limited land area. It also can support Kuala Lumpur's aspirations towards sustainable and integrated development.

In order to realise Kuala Lumpur as a city with more productive and effective space utilisation, one (1) Implementation Proposal is formulated under Planning Strategy 6–4, as shown in Figure 6.4.1.

BRIEF INFO

INTERPRETATION OF REDEVELOPMENT

New development on an existing site or area that involves changing the whole or a substantial part of the area from the layout, structure, function or activity of the building or area.

2 Category :
1. Redevelopment
2. Regeneration

REDEVELOPMENT ADVANTAGE

1. Improve quality of environment that provides investment opportunities as well as more integrated land management for future;
2. Well planned development through the provision of community facilities, public space, open space and more efficient infrastructure;
3. Increase value of land through the formation of a more economical diversity of activities;
4. Improve quality of life and economy of population in Kuala Lumpur; and
5. Provide necessary housing and offer a variety of mixed activities to support the needs of population in the future.

Source: Adapted from Urban Regeneration

Figure 6.4.1:
Implementation Proposal for Planning Strategy 6-4

SP 6-4 STRENGTHENING REDEVELOPMENT PLANNING THROUGH SUSTAINABLE CITY CONCEPT

CP 6-4.1 Redevelopment of Old, Dilapidated and Abandoned Areas or Buildings

IMPLEMENTATION PROPOSAL

CP 6-4.1: REDEVELOPMENT OF OLD, DILAPIDATED AND ABANDONED AREAS OR BUILDINGS

Draft KLLP2040 has identified a total of 139 main and potential sites for redevelopment. The Redevelopment Incentive is also eligible for consideration if there are other sites that meet the redevelopment criteria.

Draft KLLP2040 also identifies eight (8) Specific Redevelopment Incentive sites that have been zoned as Land Use of Residential 2 (R2) and Land Use of Residential 3 (R3) which usually has an area of less than 10,000 square feet. This sites need to comply with certain criteria to qualify for the use of designated land use zone.

The principles of redevelopment in Kuala Lumpur are as follows :

1. Prioritise the redevelopment of public housing sites and areas that are obsolete, old, or abandoned in TPZ and TIZ;
2. Obtain planning incentives in the form of additional plot ratio intensity to the base plot ratio in Draft KLLP2040 to encourage redevelopment initiatives from private sectors.
3. Ensure redevelopment to comply with criteria to improve the quality of environment, quality of life, low-carbon cities and smart cities.

Redevelopment will be able to accommodate the limited land needs in Kuala Lumpur in line with the increase in population by 2040. The implementation of redevelopment that covers old, dilapidated, and abandoned areas or building can also be seen to be able to improve the quality and image of Kuala Lumpur as a Low Carbon, Resilient and Inclusive City.

The implementation approach of this proposal is through projects, policies, planning controls and guidelines. There are four (4) initiatives proposed for the implementation of CP 6-4.1.

IMPLEMENTATION INITIATIVE 6-4.1~~A~~

IMPROVE SELECTION CRITERIA OF REDEVELOPMENT SITES

The criteria for the selection of the development site is in line with the Kuala Lumpur Urban Renewal Implementation Guide by the Department of Federal Territories (JWP). In context of the implementation of Draft KLLP2040, the redevelopment site selection criteria have been updated and improved to accommodate the limited land needs in Kuala Lumpur by 2040.

The necessary actions to support this initiative need to consider the following key aspects as follows:

1. Identify residential, commercial and industrial areas or buildings that are older than 30 years excluding Land Use of Residential 1 (R1), Established Residential (EH) and Traditional Village 1 (TV1);
2. Identify residential, commercial and industrial buildings that have been abandoned for more than ten (10) years;
3. Identify abandoned development projects that have been confirmed by the responsible agency or committee;
4. Identify buildings that are certified unsafe for occupancy by the responsible agency;
5. Identify residences that are not suitable for living physically and socially;
6. Identify complex buildings or business centres that are not viable;
7. Identify areas of former solid waste disposal sites and sewage treatment plant sites that are no longer in use and have met the site's rehabilitation period;
8. Identify buildings and telecommunications tower sites that are no longer in use;
9. Identify obsolete or abandoned institutional areas;
10. Identify area of the former depot or public transportation station; and
11. Identify squatter areas.

IMPLEMENTATION INITIATIVE 6-4.1B

IMPLEMENT REDEVELOPMENT ON IDENTIFIED SITES

The draft KLLP2040 has identified are 139 sites in Kuala Lumpur as redevelopment areas as shown in Figure 6.4.2. These identified sites involve residential, commercial, institution, infrastructure and utility land use areas as well as other land uses. There are 60 redevelopment sites in Residential land use zone and 60 redevelopment sites in TPZ and TIZ area.

Residential area redevelopment generally focuses on public housing areas and multi-storey housing that have become obsolete. Infrastructure redevelopment sites are mostly telecommunication tower sites and management offices which is obsolete. However, infrastructure or utility sites that have been given possession for the development are still required to maintain the existing function of the particular infrastructure or utility.

Most of the public residential area redevelopment sites are proposed to be classified as Mixed Development (MX) main land use that is developed entirely as Mixed Development (MX) for commercial purposes or Mixed Development (MX) for commercial purposes together with affordable housing development.

Table 6.4.1: Classification of Main Land Use for Redevelopment Sites, Draft KLLP2040

Classification of Land Use	Base Plot Ratio
Residential	Up to 1:5
Commercial	Up to 1:10
Mixed Development	Up to 1:7
Institution	Up to 1:2
Public Facilities	-
Infrastructure and Utilities	-
Industry	-

IMPLEMENTATION INITIATIVE 6-4.1C

IMPLEMENT PROVISION OF PLANNING INCENTIVES

The Draft KLLP2040 consider provision of planning incentives through the provision of additional plot ratios to base plot ratio. The provision of these incentives is to encourage the private sector to initiated the implementation of redevelopment.

The Draft KLLP2040 proposes to provide detailed incentives especially redevelopment for mixed development as follows:

1. Development of the entire area with permanent built structures and stratified ownership;
2. Redevelopment area and building such as old, dilapidated or abandoned facilities; and
3. Regeneration planning of an area or building.

The provision of this incentive is subject to the following financial and development commitments as follows:

1. Provide transit houses or financial allocations for temporary accommodation during the construction period of development;
2. Demolition of the overall original building structure;
3. Ensure construction of new buildings and utilities are in line with planning requirements for the development of new infrastructure;
4. Replanning and upgrade infrastructure and utilities for identified site areas;
5. Allow for the replanning of an area when the value of the land has exceeded the value of the existing permanent structure;
6. Replanning obsolete or non-viable areas in line with current needs; and
7. Ensure physical structure of building is constantly upgraded and updated.

This incentive policy can also change according to changes in JWP policy. Details of the redevelopment categories and criteria are explained in Volume 1: Part 1, Development Control, Draft KLLP2040.

IMPLEMENTATION INITIATIVE 6-4.1D

IMPLEMENT SUSTAINABLE URBAN CRITERIA IN REDEVELOPMENT PLANNING

Implementation of redevelopment area must comply with the criteria that have been set in order to inject new synergies through the realignment of existing development areas and future needs.

The necessary actions to support this initiative are as follows:

1. Mixed development that complements each other, such as residences, retail businesses, and offices;
2. Development that emphasises the public interest in land owned by the government and its agencies;
3. Principles of inclusive, equitable development and carry out engagement with relevant stakeholders;
4. Provision of mixed income housing which is at least 30 percent of the total development by giving priority to the current population of the site;
5. Provision of affordable retail and office space to encourage entrepreneurial activities;
6. Establish and provide more flexible vehicle parking-spaces for redevelopment within TPZ and TIZ;
7. Provision of integrated, quality and inclusive green space, open space and community facilities;
8. Provision of building design and use of technology that reduces the impact on social, environmental and urban management aspects;
9. Evaluation of social and physical impact assessment to consider the needs of redevelopment sites such as Social Impact Assessment, Environmental Impact Assessment and Traffic Impact Assessment; and
10. Development that aligns with elements or principle of Low Carbon City, Safe City, Smart City and Resilient City.

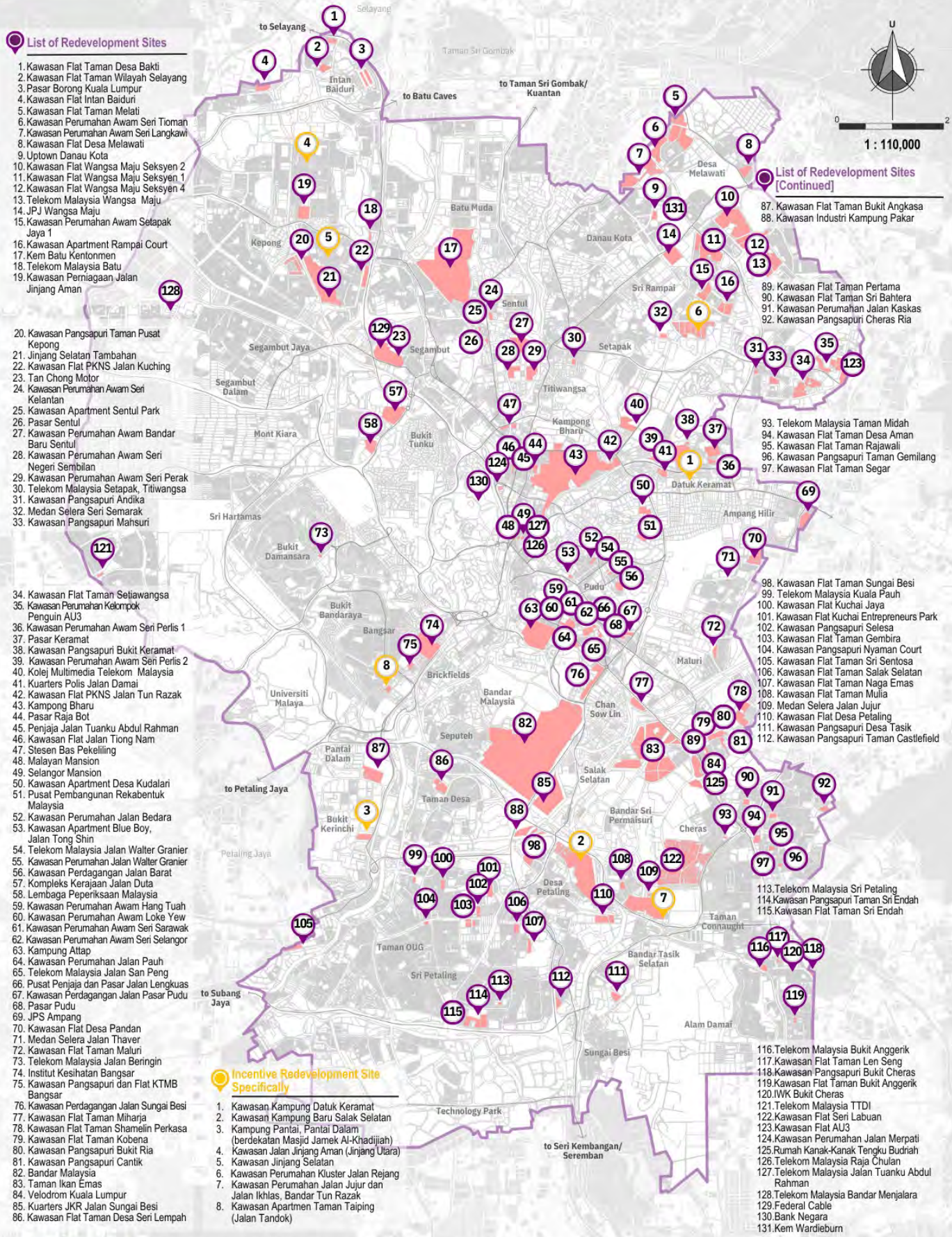


FIGURE 6.4.2| **Plan of Redevelopment Sites Distribution Draft KLLP2040**

Legend:

- Redevelopment Site

Others

- Main Road
- Kuala Lumpur Boundary

PLANNING STRATEGY

SP 6-5: REVITALISING URBAN FUNCTIONS THROUGH THE PRESERVATION AND CONSERVATION OF OLD BUILDINGS

SCENARIO OF REVITALISING URBAN FUNCTIONS IN KUALA LUMPUR

Revitalisation of urban functions in Kuala Lumpur focuses on buildings with historical significance and architectural value in the Primary Heritage Zone, Secondary Heritage Zone and Special Character Zone.

The encouragement to reactivate old buildings does not only involve conservation, renovation, and restoration work on heritage buildings. The improvement of buildings, environment and new activities are necessary in the effort to improve the image and quality of the city to attract visitors. The Draft KLLP2040 focuses on the conservation of old towns and buildings involving four (4) criteria, as follows:

1. Areas that have heritage significance and cultural value;
2. Important and valuable government buildings;
3. Historic old shophouse; and
4. Historic public sites.

BRIEF INFO

NUMBER OF HERITAGE BUILDINGS, KUALA LUMPUR

Heritage buildings gazetted under the National Heritage Act 2005

National Heritage: 32

Heritage: 43

Heritage buildings in the process of being gazetted by DNH

10

Heritage Buildings in DNH Gazetteer Planning (Inventory)

46

Vacant and abandoned Heritage Buildings

National Heritage: 5

Heritage: 3

Inventory: 3

Source: Adapted from Department of National Heritage,2022

Various old buildings of different eras and architectural styles have shaped the image of early business areas in Kuala Lumpur. Rows of old shophouses with the neo-classical, renaissance, art deco, colonial and modern eclectic architectural styles remain in the Kuala Lumpur Heritage Zone to this day.

The Draft KLLP2040 has identified as many as 840 units of old shophouses in the Kuala Lumpur Heritage Zone that have architectural significance to be preserved and restored. Meanwhile, some have been given a new lease of life with façade beautification work and the color of the building.

There are also old buildings that have been renovated without following the guidelines on the conservation of heritage buildings that have been enforced. The rapid development of city has led to conflicts with existing planning policies and conservation of heritage buildings. In addition, the cost and conservation process are also a challenge for Kuala Lumpur to carry out conservation work.

The Legal aspects also bring constraints to KLCH and government agencies especially in terms of management, finance and maintenance of government-owned or privately owned heritage buildings that are empty and unused.

The existence of old buildings and shophouses in the heritage zone can contribute to the local socioeconomics. Old empty and derelict buildings and shophouses have the potential to be repurposed to re-invigorate the function of the city.

The principle of conservation needs to be emphasised when renovation work is carried out to maintain the originality of the design and materials used.

Encouraging the revitalization of the city and old historical buildings through the principles of conservation that are important as follows:

1. Protect heritage buildings and old buildings from damage and neglect;
2. Restore, adapt and reuse of historic buildings for heritage tourism purposes;
3. Retain social memory through the preservation of the spirit of a place (genius loci) by maintaining old buildings;
4. Attract more tourists to visit heritage areas in Kuala Lumpur;
5. Promote sustainable environment as well as the use of pedestrian routes to reduce carbon emissions through good traffic management; and
6. Increase revenue for the government and related agencies as well as local populations through involvement in the heritage tourism industry.

Empowerment of existing heritage assets will benefit Kuala Lumpur by emphasising on the quality and upgrading of old, abandoned building areas. This empowerment focuses on public areas with urban heritage importance that could benefit everyone.

In order to realise Kuala Lumpur as a city with more productive and effective space utilization, four (4) Implementation Proposals area formulated under Planning Strategy 6–5, as shown in Figure 6.5.1.

Figure 6-5.1:
Implementation Proposal for Planning Strategy 6-5

SP 6-5 REVITALISING URBAN FUNCTIONS THROUGH THE PRESERVATION AND CONSERVATION OF OLD BUILDINGS

- CP 6-5.1 Preservation and Conservation Of Old Buildings With Heritage Value
- CP 6-5.2 Preparation of Heritage Area Conservation Action Plan
- CP 6-5.3 Participation and Engagement With Community
- CP 6-5.4 Implementing Heritage Building Conservation Incentives

Carcosa Seri Negara building, over 100 years old is one of the heritage buildings that need to be restored.

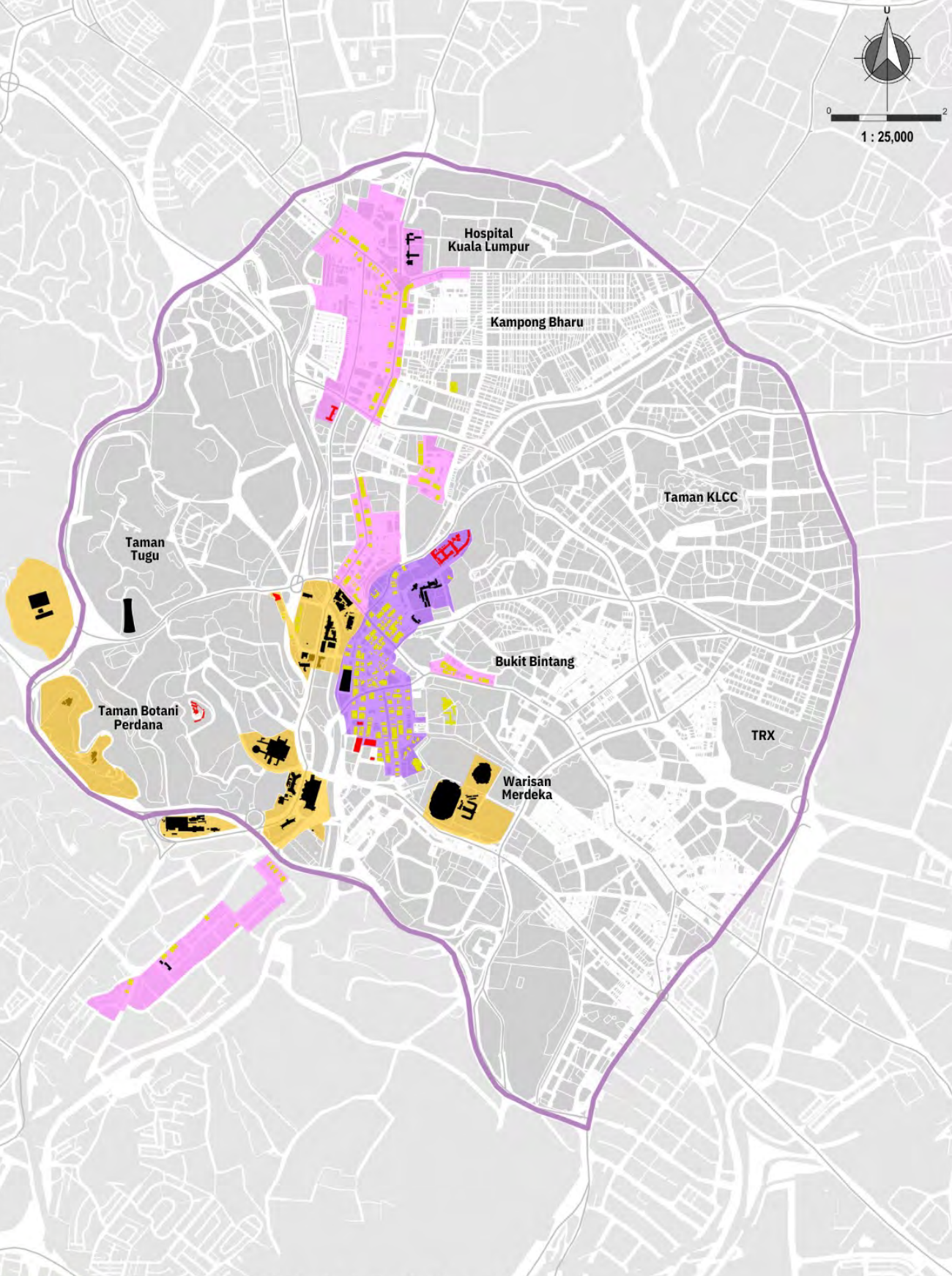


FIGURE 6.5.2 | Plan of Old Buildings Distribution in the City Centre Area

Legend:

Zone
- Primary Heritage Zone
- Natural Heritage Zone
- Secondary Heritage Zone
- Special Character Zone

Existing
- Building Category 1
- Building Category2
- Old Building With Heritage Characteristic to Be Preserved
- Category 1 and 2 Buildings That Are Vacant and Abandoned

Others
- Main Road
- Kuala Lumpur City Centre Boundary

IMPLEMENTATION PROPOSAL

CP 6-5.1: PRESERVATION AND CONSERVATION OF OLD BUILDINGS WITH HERITAGE VALUE

Old buildings that have historical value with a unique environment and architectural style are the main attractions for tourists. The approach of preservation and conservation of old buildings is a best practice to ensure that heritage buildings can be adapted, activated and given a new lease of life.

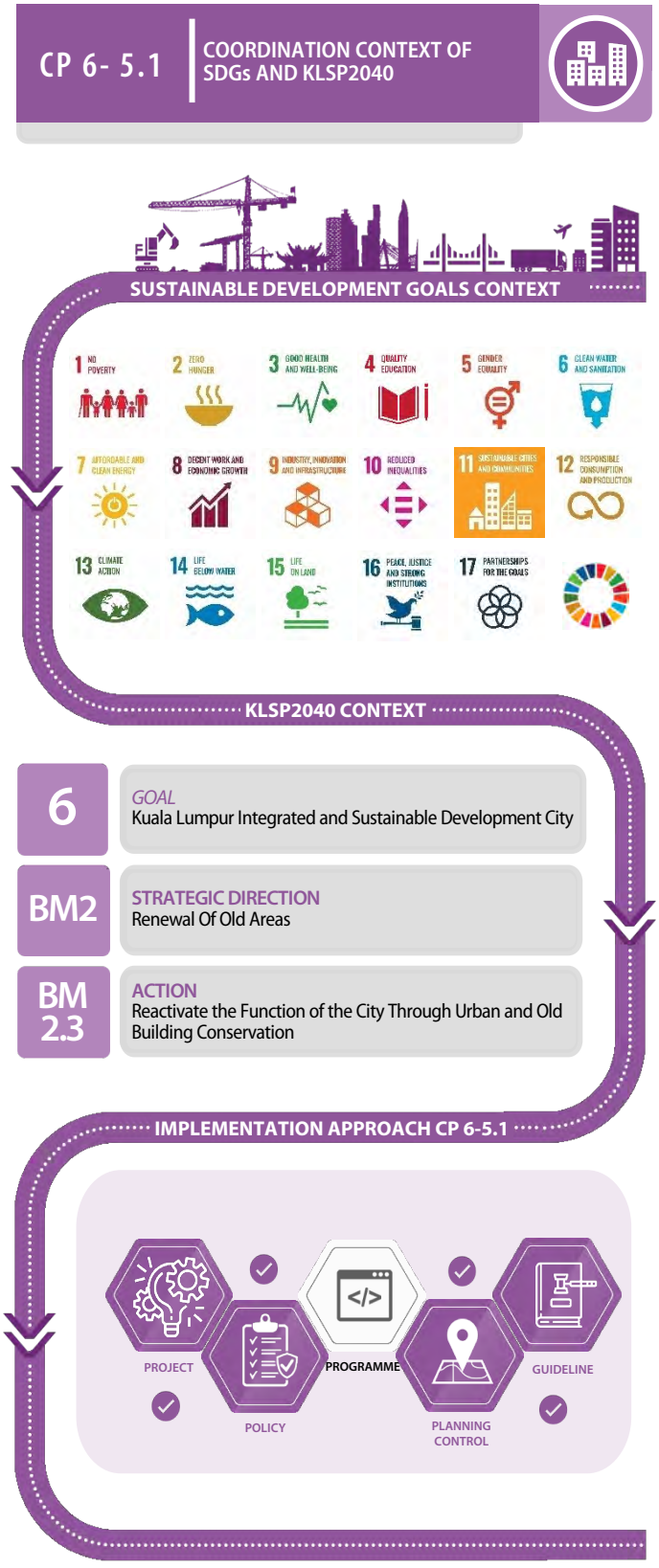
This approach creates a more competitive and sustainable environment. It will create a better image and quality for the old urban area comparable to new development areas.

Preservation and conservation work needs to take into consideration current factors, building conditions, functions and activities to be created. In addition, the work of upgrading supportive facilities such as street furniture, back and side lane beautification, and replanning of formal and informal activities should be considered to improve the quality of the old building environment.

The implementation approach of this proposal is through projects, policies, planning controls and guidelines. There are three (3) initiatives proposed for the implementation of CP 6-5.1.

Location: Loke Chow Kit's former home, Jalan Tangsi

Loke Chow Kit's former house known as Loke Hall was built in 1907 and went through the conservation process and was gazetted by the Department of National Heritage in 2012.



IMPLEMENTATION INITIATIVE 6-5.1A

RESTORATION OF EXISTING OLD BUILDINGS WITH HERITAGE VALUE

Restoration of old buildings that have heritage value refers to the basic principles of conservation methods. This method involves the work of rebuilding and restoring the original look and finishes of old buildings through appropriate use of building materials and treatment techniques. It can be implemented on old shophouses and individual buildings that require minimal renovation work.

The main objective of this restoration is to avoid damage to the entire old building which has historical significance and heritage value. It promotes the repurposing of old buildings for local socioeconomic activities and optimising the use of a building's space.

The restoration method of old buildings can be promoted and used as a very valuable resource to attract tourists to Kuala Lumpur.

The Draft KLLP2040 identified old buildings that have the potential for the implementation of restoration methods, as follows:

1. Masjid Jamek Sultan Abdul Samad;
2. Pasar Seni;
3. Stadium Negara;
4. Carcosa Seri Negara; and
5. Old Shophouses.

The necessary actions to support this initiative are as follows:

1. Restore important functions of old buildings such as centres for religious, cultural, and artistic activities as well as other suitable activities;
2. Rehabilitate building façades, architecture, building structures and interior spaces in old business areas;
3. Maintain the original architectural patterns and styles such as Neo-Gothic, Tudor Revival, Eclectic-Mughal and minarets to retain their significance as heritage buildings;
4. Improve quality of lighting to highlight the beauty of architecture, liven up nighttime activities and enhance security elements;
5. Preserve and conserve old buildings that have heritage value in line with conservation principle, which is to extend the lifespan of old buildings; and
6. Encourage socioeconomic activities by revitalising areas facing the river such as boutique hotels, cafes and Al-Fresco, souvenir and handicraft sales, art galleries, and performances.

Location: Pasar Seni, Kuala Lumpur

The building was constructed in 1888 as a wet market during the days of the tin trade. In 1986, it became Pasar Seni and no longer operated as a wet market.

Location: Masjid Jamek Sultan Abdul Samad

This mosque was built in 1909 and is one of the oldest mosques in Kuala Lumpur that functions as a centre for religious activities for Muslims.

BRIEF INFO

PROCEDURES OF HERITAGE BUILDING CONSERVATION

Department of National Heritage has issued the 2016 Heritage Building Conservation Guidelines which detail the conservation of heritage buildings, as follows:

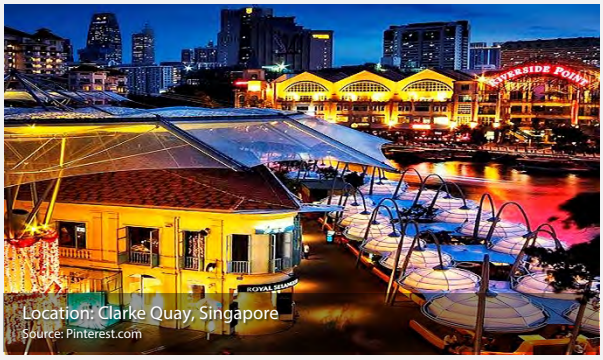
CONSERVATION OF HERITAGE BUILDINGS
Work Procedures

01 Brick Pillar Treatment
02 Chalk Wall Treatment
03 Stone Flooring Treatment
04 Roof Damage Treatment
05 Treatment of Wood Posts and Beams
06 Treatment of wooden beams and floors
07 Treatment of Ceilings and Wooden Beams
08 Treatment of Wood Elements Due to Termite Attacks
09 Door and Window Treatment
10 Wood Staircase Treatment

Source: Adapted from Heritage Building Conservation Guidelines, 2016.

BEST PRACTICES

HERITAGE BUILDING IN SINGAPORE, CONSERVATION OF LITHUANIA AND HOLLAND



Singapore's Clarke Quay has restored the old building's important function as a the main focal point of the public with new activity attractions such as Al-Fresco dining facing the river.

Vilnius, Lithuania, is famous for its 17th and 18th-century architecture. This area has undergone a facelift, preserving the original design and materials.

Building façade beautification at a famous building in Amsterdam, Holland that uses modern materials but still maintains the character of the original building façade.

IMPLEMENTATION INITIATIVE 6-5.1B

ADAPTIVE REUSE OF OLD BUILDINGS WITH HERITAGE VALUE

The method of reusing old buildings of heritage value for new uses that are appropriate and compatible is the best approach to ensure that old buildings are actively used and appreciated by the community.

It also can protect and provide great benefits in reviving the function of old buildings.

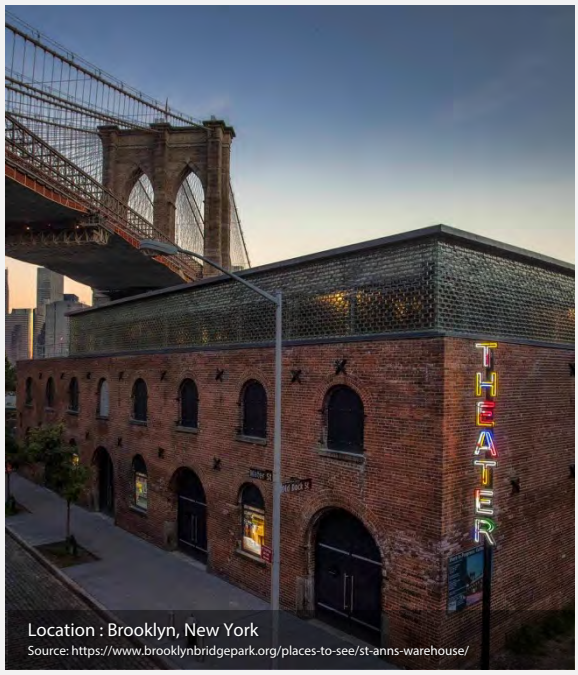
The necessary actions to support this initiative are as follows:

1. Repair and maintain old buildings involving façades, architecture and building structures as well as interior spaces through appropriate methods and techniques;
2. Restore important function of this old building as a main focal point for the public with business activities such as Al-Fresco cafes, boutique hotels, souvenir and handicraft sales, art galleries and performances;
3. Practice concept of shared facilities (communal living) to save space and promote social interaction especially for the B40 group, single persons and newly employed;
4. Encourage involvement of various parties including the public, private sector and non-governmental organisations to diversify activities and new functions of old buildings; and
5. Encourage lighting elements to highlight the design of the building façade as well as a safety element.

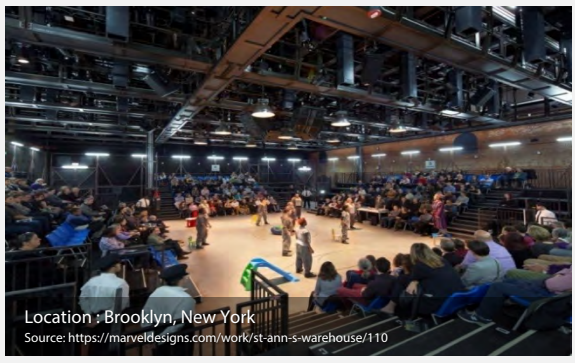
BEST PRACTICES

ADAPTIVE REUSE OF ST.ANN WAREHOUSE BROOKLYN, NEW YORK

Before: St. Ann's Warehouse that was left empty and unused.



Building of St. Ann's Warehouse after going through the process of restoration and reuse in 2015.



St. Ann's Warehouse was originally built in 1850 as a tobacco warehouse on the Brooklyn Bridge and has undergone a transformation involving restoration and adaptive reuse into a theater studio.

IMPLEMENTATION INITIATIVE 6-5.1C

IMPROVE ENVIRONMENT OF OLD BUILDINGS WITH HERITAGE VALUE

The approach for this implementation initiative is to improve the environment of old buildings that have heritage significance. This area with old buildings was the main focus area and an important node for the people of Kuala Lumpur in the past.

The Draft KLLP2040 identified and proposed several actions in improving the environment of old buildings, as follows:

1. Improve and maintain supporting facilities, landscape beautification, Street Scape improvement and cleanliness of the area, especially in the area facing the river;
2. Encourage lighting elements to highlight the design of the building façade and also as a safety element;
3. Improve accessibility through pedestrian and micromobility vehicle routes facilities, and public transportation services that meet age-friendly and disabled-friendly standards, efficient and safe;
4. Ensure continuous maintenance of the environment and provision of an attractive landscape;
5. Improve and empower the quality of environment as well as maintenance of business areas to be more organised, planned and conducive;
6. Provide a special space to promote placemaking activities as well as heritage-related programmes such as cultural, arts, and local skills activities especially in public and open spaces such as in Pasar Seni and Lebuh Pasar Areas;
7. Applying the concept and elements of a safe city such as CCTV, security booths and lighting elements;
8. Create pause area that provides basic facilities such as street furniture, shade and suitable activities in strategic areas to encourage the public to use pedestrian and micromobility vehicle routes;
9. Identify good practices in better-organised parking management;
10. Implement the Area Improvement Programme (AIP) in less viable areas; and
11. Ensure public lanes or paths are free of obstacles such as informal structures.

BEST PRACTICES

PROPOSED ENVIRONMENTAL IMPROVEMENT OF OLD BUILDINGS

Illustration of the Jalan Melayu surrounding where the entrance gates and business activities highlight the identity and culture of a race.

BEST PRACTICES

CAMDEN LONDON

A clean and well-organised open bazaar area like in Camden, London which has become a tourist attraction.

IMPLEMENTATION PROPOSAL

CP 6-5.2: PREPARATION HERITAGE AREA CONSERVATION ACTION PLAN

Conservation Action Plan is provided as a guide that involves the preparation of a framework or structure for the implementation of development projects in suitable heritage areas. This action plan will detail the implementation mechanism, monitoring method and implementation period.

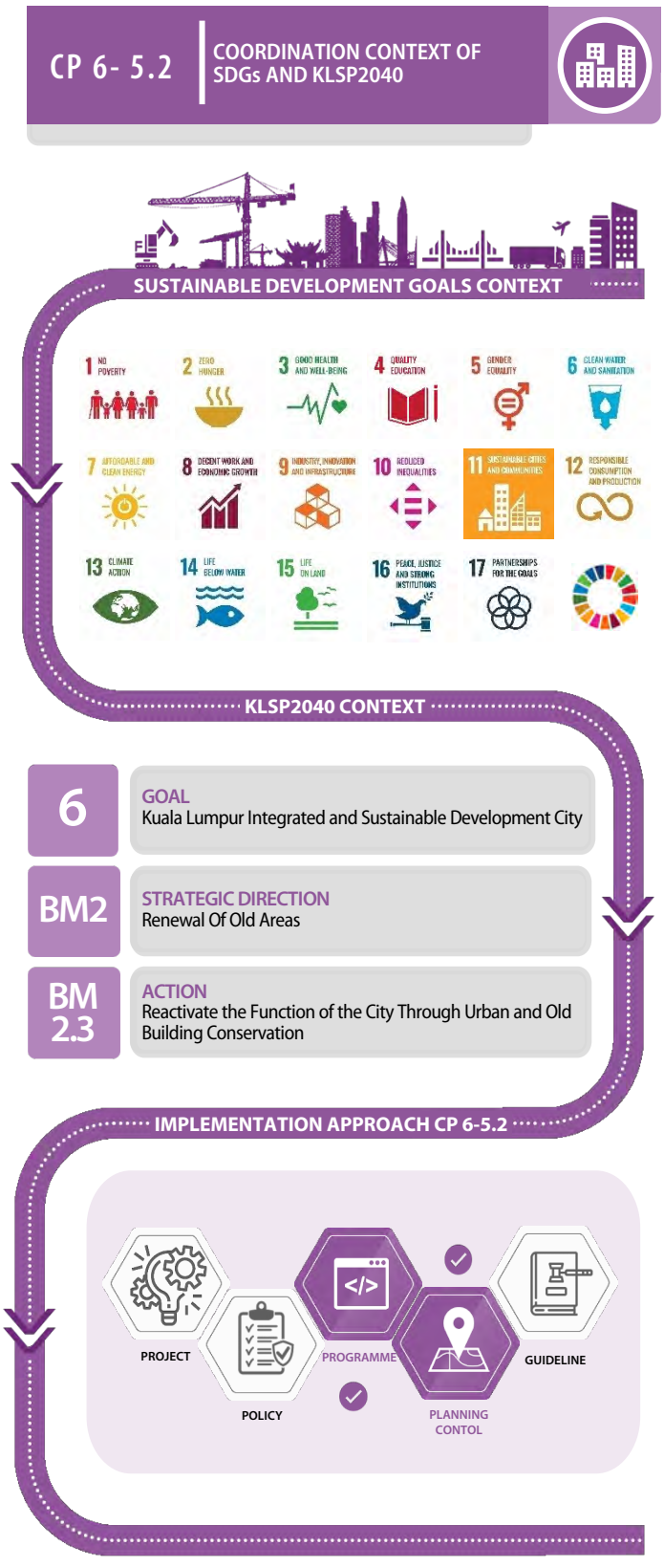
The implementation of Conservation Action Plan for the conservation of heritage areas is part of the strategic commercial areas that have been identified in KLSP2040. Six (6) Commercial Area Improvements have been identified within the Heritage Zone and Kuala Lumpur Heritage Trail route in the Conservation Action Plan.

The selection of the area is based on the function of an old area such as an old business area and the availability of heritage buildings to be restored and preserved. It will improve the quality of the environment and reactivate the function of the area with new activities, making it more competitive.

Conservation Action Plan (AIP) implementation needs to be driven by the involvement of private sector and premises owners by taking collective responsibility to ensure the area remains viable. The implementation duration of this plan depends on the scale and complexity of the actions to be carried out.

The Draft KLLP2040 has detailed the recommendations for the preservation and conservation of heritage areas as well as the specific measures that need to be prepared in the Action Plan for the Conservation of Heritage Areas.

The implementation approach of this proposal is through programmes and planning controls. There are four (4) initiatives proposed for implementation of CP 6-5.2.



IMPLEMENTATION INITIATIVE 6-5.2A

DRAFT GUIDELINES FOR THE IMPLEMENTATION OF HERITAGE PPK

The Implementation Guide needs to be formulated so that planning and development for the buildings and areas involved can be restored and preserved. The implementation of PPK can be done entirely by private developers, landowners (individuals) or companies interested in implementing it. Implementation mechanism of the PPK area can also be implemented through Government-Private cooperation under the Public-Private Partnership Unit (UKAS).

JWP and KLCH are the main agencies coordinating the implementation guidelines for renewal projects. KLCH will act as a coordinator and process applications for the implementation of PPK by developers, owners or companies so that it fulfills the requirements that have been set.

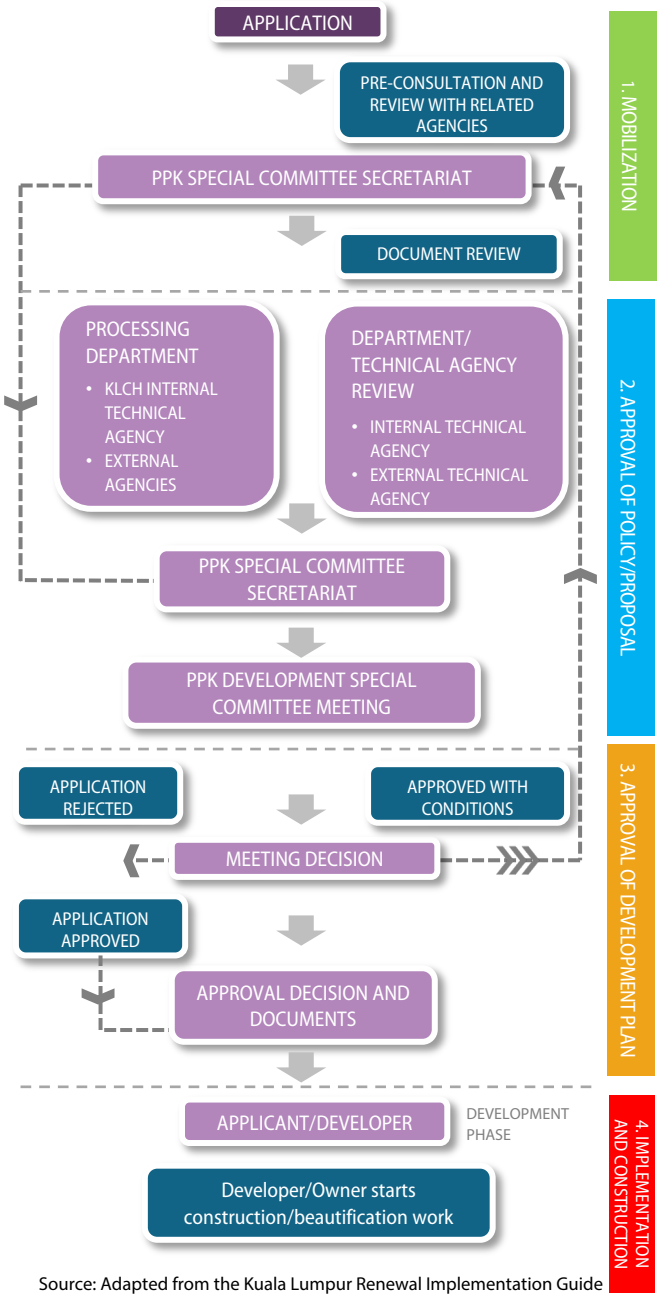
The necessary actions to support this initiative are as follows:

1. Establish special unit under the KLCH internal department to coordinate the implementation of the PPK through a decision making committee at the KLCH level;
2. Carry out a study and prepare a detailed master plan or action for the area involved;
3. Establish PPK Heritage Guidelines to control development in the areas involved; and
4. Coordinate Planning Permission Application Approval Process for the Heritage PPK Area as shown in Figure 6.5.3 which involves four (4) stages as follows:
    a. Mobilisation Stage (Proposal Preparation);
    b. Policy Approval Stage;
    c. Development Plan Approval Stage; and
    d. Implementation and Construction Stage.

Private developers, land owners (individuals) or any company need to go through several stages of development approval from KLCH's technical department or agency for the proposed PPK area.

The Heritage PPK Implementation Process Guide is as shown in Figure 6.5.3.

Figure 6.5.3:
Heritage Area PPK Implementation Process Guide



Source: Adapted from the Kuala Lumpur Renewal Implementation Guide

IMPLEMENTATION INITIATIVE 6-5.2B

IDENTIFY ACTION AREA OF HERITAGE PPK

Identification of the area and demarcation of Heritage PPK is based on the current situation, existing activities, and its importance to the heritage of Kuala Lumpur. It include stable areas and old areas ready to return to competitiveness.

The selection criteria for action areas of Heritage PPK are as follows:

1. Have an existing functional heritage area that needs to be preserved and restored;
2. Have a building façade of heritage value in a row of old shops with the potential to be maintained;
3. Obsolete heritage area that strives to become more competitive and livable;
4. Have an old and attractive urban design and layouts such as narrow road conditions, passages or lane between buildings that are cut off and obstructed from maintenance and upgrading;
5. Old area which function as an important node for the public and tourist attractions;
6. Has important heritage buildings that remain owned by the local people;
7. Has importance to architectural heritage and national identity;
8. Strengthen pride in the country, unity and increasing human capital among Malaysians; and
9. Improve public spaces that are inclusive and accessible to be appreciated and enjoyed by various layers of society.

The Draft KLLP2040 identified Heritage PPK areas to support this initiative as shown in Table 6.5.1.

Table 6.5.1:
Proposed Heritage PPK Action Area

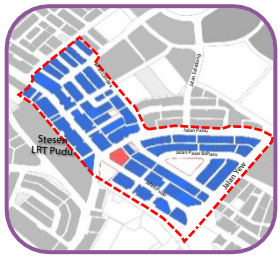
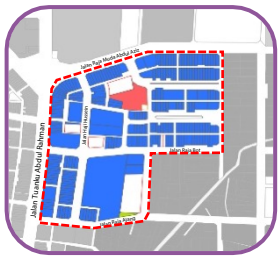
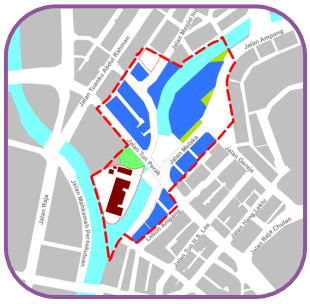
Location	Inset Plan
1. Medan Tuanku Abdul Rahman (Part of Traditional Shop Trail)	
2. Pasar Pudu dan Jalan Landak (Part of Old Pudu Town Trail)	
3. Pasar Raja Bot a. Jalan Raja Bot; dan b. Jalan Hj Hussein. (Part of the Heritage Village Trail)	
4. China Town a. Jalan Petaling; and b. Jalan Panggung. • Part of the Petaling-Bukit Nanas Heritage Zone; and • Part of the Tin Trading Town Trail; • Part of the Madras area Improvement Program by KLCH and agencies.	

Table 6.5.1: **Proposed Heritage PPK Action Area (continued)**

Location	Inset Plan
5. Medan Pasar a. Jalan Medan Pasar; dan b. Lorong Medan Pasar • Part of the Petaling-Bukit Nanas Heritage Zone; • Part of the Tin Trading Town Trail; • Part of the proposed Hang Lekiu Block Rejuvenation Program by KLCH and agencies.	
6. Masjid India a. Jalan Tuanku Abdul Rahman; b. Jalan Masjid India; dan c. Jalan Melayu • Part of the Special Character Zone of Jalan Tuanku Abdul Rahman and Jalan Doraisamy, • Part of Traditional Trades Trail; • Part of the Jamek Mosque Enclave Action Plan Proposals by KLCH and agencies,	

Location	Inset Plan
7. Dataran Merdeka a. Jalan Raja; b. Jalan Leboh Pasar Besar; c. Jalan Mahkamah Tinggi; d. Jalan Mahkamah Persekutuan; and e. Jalan Tun Perak; • Part of the Civic District Trail; • Part of the Primary Heritage Zone: Dataran Merdeka, Kuala Lumpur Railway Station, Masjid Negara and Stadium Merdeka; and • It is a proposed Dataran Merdeka Heritage Area Redevelopment by KLCH and agencies.	
8. Carcosa Seri Negara a. Persiaran Tuanku Ja'afar; b. Part of the Primary Heritage Zone: Parliament, Carcosa Seri Negara and Taman Botani Perdana; c. Part of the Lake Gardens Trail; and d. Is a Proposed Redevelopment of the Carcosa Seri Negara Area by KLCH and agencies.	
9. Masjid Mamek a. Jalan Tun Perak; b. Jalan Melaka; c. Jalan Melayu; and d. Jalan Benteng. • It is an area of the Masjid Jamek Enclave Action Plan by KLCH and agencies; • Part of the Secondary Heritage Zone: Jalan Petaling-Bukit Nanas; and • Part of Tin Trading Town Trail.	

PROGRAMME OF BUSINESS IMPROVEMENT DISTRICT (BID) IN HATTON GARDEN, UNITED KINGDOM

Location: Hatton Garden, United Kingdom
Source: https://www.shutterstock.com/g/europe

Location: Hatton Garden, United Kingdom
Source: https://www.nytimes.com/2018/03/28/world/europe/uk-hatton-garden-heist.html

Location: Hatton Garden, United Kingdom
Source: https://www.hatton-garden.london/about

The business environment becomes more vibrant and marketing management is managed more efficiently.

The implementation of BID in Hatton Garden, UK in 2016 was driven by the partnership of investors from the private sector to see the Hatton Garden area realize its potential and grow as a world-renowned business and tourism destination. The BID has helped to enhance its iconic status as London's prominent jewelry precinct.

Source: https://www.hatton-garden.london/about

PROGRAMME OF BUSINESS IMPROVEMENT DISTRICT (BID) IN HAMPSTEAD VILLAGE, UNITED KINGDOM

Location: Hampstead Village, UK
Source: https://www.shutterstock.com/g/robertewen

The character of the heritage area is translated through the use of street furniture design and original color of the building as well as maintaining the original façade of the old building.

Location: Hampstead Village, UK
Source: https://www.essentialliving.co.uk/blog/living-in-hampstead-an-idyllic-north-london-village/

The implementation of the BID programme in Hampstead Village, UK was established in 2016 for a period of five (5) years to benefit businesses and improve the trading environment in the area.

The objective is to preserve and develop the appeal of Hampstead Village to visitors, encourage business development and maintain the unique atmosphere of the area.

This BID programme in Hampstead Village, UK has conserved and preserved buildings by maintaining the original materials and colors of old buildings. In addition, the area has also been improved with the use of street furniture and CCTV facilities to monitor the safety of visitors.

Source: https://hampsteadvillagelondon.com/

IMPLEMENTATION INITIATIVE 6-5.2C

IMPLEMENT AREA IMPROVEMENT MEASURES

Improvements to the area involving the upgrading of the surrounding environment is important to make it more conducive in preserving heritage buildings in the PPK area. The involvement of private parties and premise owners is important so that function of the PPK area can benefit everyone in the area.

The necessary actions to support this initiative are as follows:

1. Reactivate the original function or a new function that is more economical without changing and affecting the heritage interest using a better marketing strategy;
2. Preserve and conserve the heritage buildings of the PPK area;
3. Maintain the building and surrounding of the PPK area;
4. Strengthen urban design elements and beautification of the surrounding areas that are less viable;
5. Improve comfort, safety and accessibility in the PPK area;
6. Improve promotion and management of the PPK area for mutual benefit and attraction to tourists; and
7. Encourage support activities that enhance the function of the PPK area.

The activities promoted in the PPK area must be able to contribute to and improve the economic and surrounding competitiveness of the heritage area. In addition to existing activities, new activities must comply with the Classes of Use of Land And Buildings 2024 (CULB2024).

The Draft KLLP2040 identifies measures to improve the PPK area and activities that are encouraged in the heritage area as shown in Table 6.5.2.

BEST PRACTICES

PROGRAMME OF BID IN NORTHBANK, LONDON, UNITED KINGDOM

BID programme at Northbank, London, UK includes Trafalgar Square, the Strand and Aldwych which are the main focus areas of tourists in the city of London. It is a transformational programme to make Northbank a world-class business and tourism destination from a combination of various business partners and stakeholders. The implementation of this BID is very successful and brought great benefits to the area.

Source: https://www.thenorthbank.london/northbank-bid

The BID programme in Northbank successfully applies a holistic approach by creating public spaces and placemaking activities that form the gateway to the West End. This programme has created a Creative and Cultural District supported by several stakeholders. Its implementation has successfully overcome several major problems by:

1. Improve air quality;
2. Solve traffic congestion;
3. Provide more green areas;
4. Being pedestrian and cyclist friendly; and
5. Expanding connections with the surrounding area.

Table 6.5.2:
Proposed measures Improvement of Heritage PPK Area

Improvement Action		Location					
		Medan Tuanku Abdul Rahman	Pasar Pudu and Jalan Landak	Pasar Raja Bot	China Town	Medan Pasar	Masjid India
Preserve and Conserve buildings							
1.	Conserving building façades, original colors and control of billboards on heritage buildings; and	✓			✓	✓	✓
2.	Encourage the conservation of old buildings and shophouses that have heritage value.	✓			✓	✓	✓
Maintain PPK Area							
3.	Improve the cleanliness of heritage areas; and	✓	✓	✓	✓	✓	✓
4.	Maintain roads, drains and alleys between buildings;	✓	✓	✓	✓	✓	✓
Empower Urban Design Elements and Beautifying the Environment							
5.	Encourage placemaking and street art activities;	✓			✓	✓	✓
6.	Enhance lighting elements in heritage building façades;				✓	✓	✓
7.	Enhance the image and character of the area through the design of street furniture, colors, pathways and landscape elements; and	✓	✓	✓	✓	✓	✓
8.	Applying way finding elements in heritage areas	✓	✓	✓	✓	✓	✓
Improve Comfort and Safety							
9.	Provide pedestrian and micromobility vehicle routes for access to public transportation stations;	✓	✓	✓	✓	✓	✓
10	Upgrade basic tourism facilities and street furniture;	✓	✓	✓	✓	✓	✓
11.	Improving safety elements through the installation of CCTV and adaptation of CPTED; and	✓	✓	✓	✓	✓	✓
12.	Improve the provision of age-friendly and disabled-friendly facilities.	✓	✓	✓	✓	✓	✓
Improve Promotion and Management							
13.	Improve the promotion and marketing aspects of the PPK area; and	✓	✓	✓	✓	✓	✓
14.	Create efficient management and administration to increase the competitiveness of the PPK area.	✓	✓	✓	✓	✓	✓
Encourage and Diversify Heritage Area Activities							
15.	Increase the space utilisation and the provision of facilities for art and cultural activities;	✓		✓		✓	✓
16.	Reorganise stall and open bazaar activities;		✓		✓		✓
17.	Empower activities that support heritage areas and existing activities that attract visitors;				✓	✓	✓
	a. Ethnic traditional clothing stores, fabric and accessories stores;				✓	✓	✓
	b. Traditional products, handicrafts and souvenirs;				✓	✓	✓
	c. Local foods, traditional foods and street cafés;	✓					
	d. Boutique hotels and accommodations with a 'bed and breakfast' concept;	✓	✓				
	e. Market activities, night markets, open markets and planned hawkers	✓	✓	✓		✓	✓
	f. Open bazaar and festive bazaar activities (seasonal);			✓		✓	✓
	g. Festive and religious goods of various races;	✓	✓	✓		✓	✓
	h. Street cafés, street foods, fresh fruits and flowers;	✓		✓	✓	✓	✓
	i. Art activities, street art and street artists;			✓		✓	✓
	j. Cultural performances, theater and folk entertainment;			✓		✓	✓
	k. Museum of art and history						

IMPLEMENTATION INITIATIVE 6-5.2D

IMPLEMENT COLLABORATION PROGRAMME WITH THE DEPARTMENT OF NATIONAL HERITAGE

The collaboration programme is aimed to encourage the regeneration and upgrading of old areas or dilapidated, unoccupied and derelict buildings. This initiative will also rejuvenate the function of old buildings without affecting the overall value of building design, urban function, quality of urban fabric and character of Heritage Zone.

The Draft KLLP2040 proposed five (5) actions for collaboration programmes with the Department of National Heritage (DNH) and related government agencies as follows:

DNH restored this Victoria Institution building in 2009 and it has become the venue for the National Heritage Declaration Ceremony.

Table 6.5.3:
Proposed Actions for Collaboration Programmes with DNH and Related Government Agencies

Action	Details
1. Provision of Incentive for Preservation and Conservation of Heritage Areas or Buildings	a. Provide Incentive for Financing of Conservation Work and Preservation of Heritage Areas or Buildings based on Act 645; and b. Provide development incentives based on suitability and importance to heritage preservation as well as compliance with planning guidelines set by relevant agencies.
2. Coordination Activities in Heritage Areas or Buildings	Coordinate activities related to heritage in the form of culture and art.
3. Research and Development (R&D) of Heritage Areas or Buildings	DNH in collaboration with KLCH to carry out research on specific heritage areas or buildings in particular old shop buildings that have heritage significance.
4. Maintenance of Public Buildings with Heritage Status	a. Maintenance of public buildings with heritage status is carried out by DNH and related government agencies. Section 38, National Heritage Act, 2005 allows the government to cooperate with any party in an effort to conserve and preserve heritage sites. DNH as a heritage authority can facilitate building maintenance through collaboration with relevant government agencies; and b. Preparation of the Maintenance Guide for Heritage Status Buildings by DNH involves aspects of inspection, maintenance, conservation and preservation of heritage sites according to the set criteria that can be implemented by relevant government agencies.
5. Implementation of Government and Private Partnerships	a. Implementation improvement programmes by private parties can be implemented on individual landowners and corporation. This method of implementation is highly encouraged in the regeneration of old areas that are less competitive within heritage sites in City Centres; and b. Renewal of heritage area or building can be implemented as a collaboration between government and private sector involving several approaches implemented by UKAS, FTD, MOTAC, DNH and KLCH for that particular purpose.

IMPLEMENTATION PROPOSAL

CP 6-5.3: PARTICIPATION AND ENGAGEMENT WITH COMMUNITY

Heritage conservation programmes can be implemented with the cooperation from stakeholders and community support. The collaboration of all parties is a good approach for building continuous relationships that benefit the community.

Community refers to residents or communities in a particular area that play an important role in revitalising the function of an area or city. Therefore, cooperation between the community and relevant government agencies is important to achieve the goal of better environmental quality.

Community involvement in the preservation and conservation of heritage buildings will help to reduce the conflict between achieving a better quality of life with aspects of economic development and the importance of preserving and conserving heritage assets for future generations.

Community involvement will create a conducive environment for improving quality of life for the community, sense of belonging and social relationships that appreciate local values.

The implementation approach of this proposal is through programmes. There are three (3) initiatives proposed for the implementation of CP 6-5.3.

Iftar Ramadan Programme which is held with the cooperation and involvement of the community, can revive cultural practices that add value to heritage tourism in Kuala Lumpur.

IMPLEMENTATION INITIATIVE 6-5.3A

DEVELOP OPEN APPLICATION FOR HERITAGE OF KUALA LUMPUR

The formation of an open application regarding the development and heritage development in Kuala Lumpur is a method of involving the public or the local community. This application is openly accessible which allows the public to obtain information and report any issue related to heritage in Kuala Lumpur.

The content of the application must be related to the effort of revitalising heritage areas and old buildings in Kuala Lumpur. This application is able to increase the role of community in contributing to the empowerment and a sense of belonging to heritage areas and buildings.

The necessary actions to support this initiative are as follows:

1. Develop specific open applications (open web) that can be integrated with software such as Geographical Information System (GIS) and Google Maps to facilitate participation and interactive engagement with the community;
2. List and update of details need to be included in the particular application are as follows:
    a. Details of heritage areas and buildings within the city centre;
    b. Details of old buildings and vacant buildings that have heritage significance;
    c. Current issue or damages complaints; and
    d. Suggestions for improvement and suitable activities.
3. Encourage community to actively participate in the preservation and conservation of heritage buildings and sites.

IMPLEMENTATION INITIATIVE 6-5.3B

OPTIMISE USE OF SOCIAL MEDIA PLATFORMS

Current trends show the need to promote heritage areas and old buildings using different methods. An optimal use of social media platforms is among the best and current trend in revitalising heritage areas and old buildings in Kuala Lumpur with the community.

The necessary actions to support this initiative are as follows:

1. Optimise the use of social media platforms such as websites, Facebook, Instagram, Twitter and others to participate in the promotion of heritage tourism in Kuala Lumpur;
2. Provide content in the form of information, complaints and suggestions that are in line with the objective of revitalising heritage areas and old buildings in Kuala Lumpur;
3. Form a display concept on social media that can attract various groups of people. The content is in the form of photos or videos that take into consideration the uniqueness and aesthetic value of buildings and heritage sites;
4. Promote activities with key industry players and stakeholders through a community-based activity schedule and programme; and
5. Increase coverage on social media by creating specific hashtags. The hashtags sign must be directed to the role and contribution of community in the effort to revive functions of the city through conservation of old towns and buildings.

This implementation will encourage the community and public to participate actively based on current trends and support the efforts made by relevant government agencies.

BEST PRACTICES

APPLICATION OF CITIZEN'S EYE

The Citizen's Eye application was developed through the River of Life Public Outreach Programme (RoLPOP) to allow communities or members of the public to report any information related to activities on river management or problems such as pollution.

The Public Outreach Programme (POP) started in 2012 to foster cooperation and increase the awareness of target groups to reduce river pollution. This programme promotes a sense of belonging to the river and creates lasting long-term behavioral changes in protecting the river. RoLPOP's target group consists of the public and stakeholders such as educational institutions, local communities, traders and private parties.

The same approach can be applied in Kuala Lumpur's heritage zone which has many historic buildings of which some have been inactive. Community involvement through open applications is important to make monitoring and planning more effective in the future, especially in tourists attraction areas.

The involvement of key agencies such as KLCH, MOTAC and DNH is needed to directly motivate the local community and stakeholders to revitalise historic buildings in Kuala Lumpur's heritage zone.

The Citizen's Eyes open application concept by RoLPOP5 allows the public to express their views on arising problems in their area.

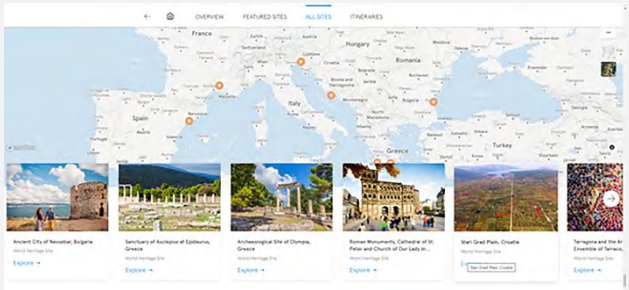
BEST PRACTICES

OPEN APPLICATION OF UNESCO - WORLD HERITAGE JOURNEYS EUROPE AND UNESCO #SHAREOURHERITAGE

The open application function implemented by UNESCO for the location of heritage sites around the world has provided extensive exposure and functions as a magnetic field that can attract tourists, positively impacting on the socioeconomic aspects of communities in the areas involved.

World Heritage Journeys Europe

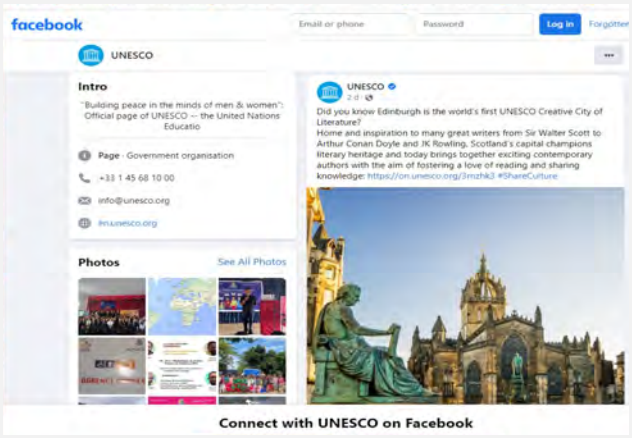
UNESCO has established cooperation with several agencies such as National Geographic with financial support from the European Union (EU) to develop UNESCO World Heritage Journeys Europe. This interactive website allows web surfers from around the world to explore World Heritage sites in Europe with a new context and perspective.



World Heritage Journeys Europe provides details about European culture and history to inspire visitors around the world before the actual visit to the heritage site.

UNESCO #ShareOurHeritage.

UNESCO is promoting access to culture including world heritage sites with living heritage practices during the COVID-19 pandemic that is sweeping the world as part of UNESCO's #ShareOurHeritage campaign. UNESCO launched an interactive online exhibition featuring heritage sites from around the world through collaboration with other agencies such as Google Arts & Culture and promotion through social media platforms such as Facebook, Linkedin, Instagram and others.



UNESCO's promotion of the heritage and cultural sites of communities around the world through several social media platforms.

IMPLEMENTATION INITIATIVE 6-5.3C

IMPLEMENT HERITAGE PPK FUNDING AND FINANCE AMONG THE COMMUNITY

The implementation of the Heritage PPK programme will focus on areas of old buildings and shops that have heritage significance and require improvement in terms of services and environmental quality. PPK's financial resources and funding are to cover the expenses of beautification works, improve services and upgrade facilities and maintenance managed by an appointed management body.

The Draft KLLP2040 identifies funding sources that can be offered in the PPK areas, as follows:

1. Financing from premises owners and tenants;
2. Funding from public and private sources;
3. Joint venture financing; and
4. Voluntary funding from stakeholders.

The necessary actions to support this initiative are as follows:

1. Additional tax collection on activities and business premises involved.

Collective contribution from the premise owners or tenants determined by the appointed PPK management body. The additional tax rate will take into account the factors of location, area of the premise and the type of services offered and agreed by all.

2. Public or private financing according to the importance of the project to be implemented.

Projects that have a high impact on heritage preservation and socioeconomic benefits will be given priority from this funding source. Funding sources can be obtained in the form of development funds or incentives. Incentives by the government must meet specific conditions and criteria including:

a. Meet regeneration site criteria;
b. Involve beautification, improvement and restoration of heritage areas and buildings;
c. Improve old business areas of heritage significance; and
d. Implement heritage PPK programme.

3. Funding as a joint venture between the government and the private sector.

This joint venture financing involves processes and approaches under UKAS. UKAS plays a role as a central agency in forming a strategic partnership between the public and private sectors that has an impact on the socioeconomics.

Funding sources can be obtained in the form of funds or development incentives according to procedures and criteria that have been set.

4. Additional funding from premises owners and voluntary contributions.

PPK management body can also obtain additional funding from property and premises owners and voluntary contributions from interested organisations outside the PPK vested area.

The type of financing of PPK area will involve four (4) main activities, as follows:

1. Increase corporate social responsibility (CSR);

   Improving the surrounding quality of heritage areas and old businesses to fulfill social responsibilities through beautification and maintenance projects that have a positive impact on owners, visitors and the PPK community.

2. Enhance security of the PPK area;

   Improve security features by providing a complete security system to create a Safe Business Area with zero crime and social behavior problems.

3. Improve quality of the public space (public realm); and

   Improve the surrounding of public spaces and the provision of street furniture such as pedestrian and micromobility vehicle routes, public parks, signs and placemaking activities.

4. Promote the PPK area.

   Marketing and promoting of the PPK area through social media, periodic programmes and activities in the form of culture and arts to create the identity of PPK area to tourists and public.

IMPLEMENTATION PROPOSAL

CP 6-5.4: IMPLEMENTING HERITAGE BUILDING CONSERVATION INCENTIVES

The implementation of heritage building conservation requires encouragement and motivation. Providing incentives is one form of encouragement that can be given to owners or developers of heritage buildings to conserve and maintain heritage buildings. The incentives offered depend on the relevant government agencies or other parties whether they will be given in the form of funds or other appropriate services.

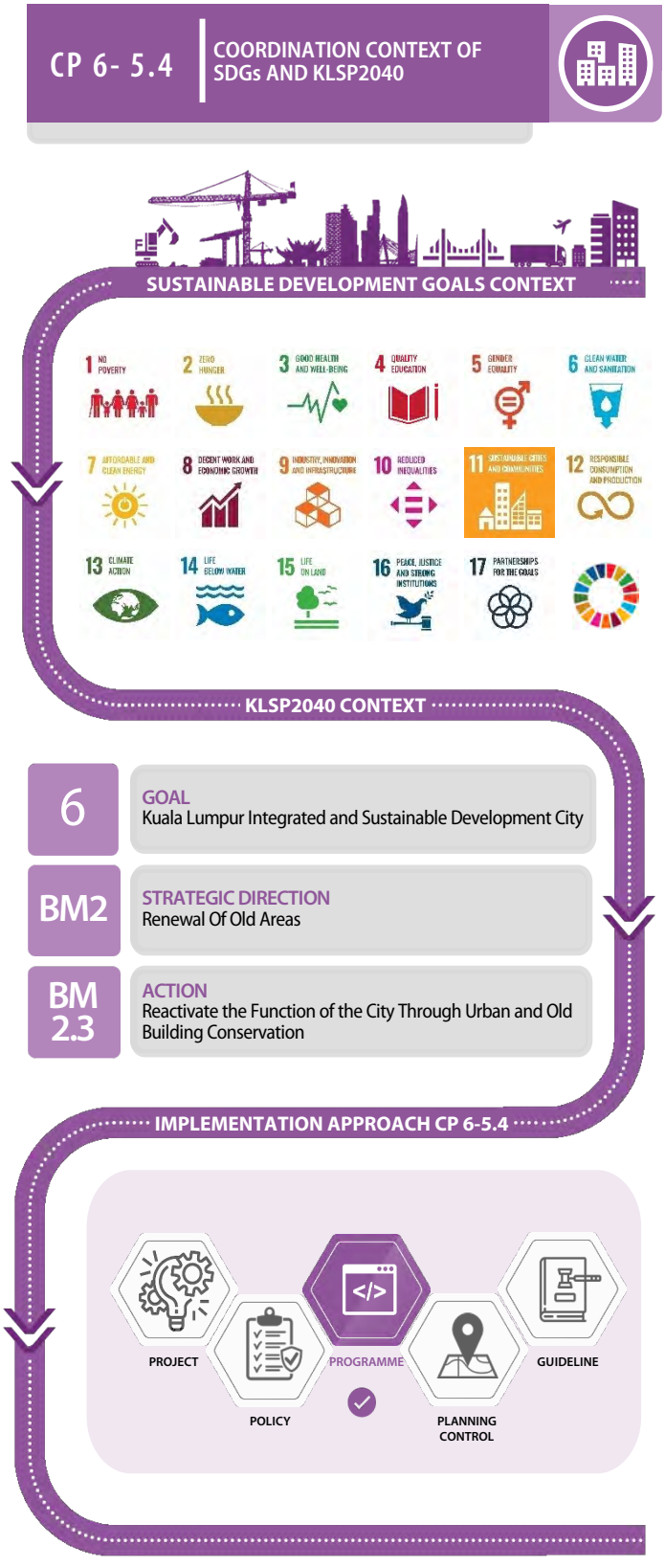
Incentives provision must give priority to heritage buildings that have been gazetted under Act 645, Act 267 and comply with planning requirements that have been set by KLCH.

This incentive is proposed to support the restoration, improvement and maintenance of old buildings that have heritage value. It is important to ensure the long-term preservation of historical heritage resources in Kuala Lumpur. It will also encourage the involvement of private parties or building owners to preserve and conserve heritage buildings.

The implementation approach of this proposal is through programmes. One (1) initiative is proposed for implementation of CP 6-5.4.

Location: Bangunan Sultan Abdul Samad, Kuala Lumpur

Sultan Abdul Samad Building has a National Heritage status and heritage values that need to be preserved.



IMPLEMENTATION INITIATIVE 6-5.4A

IDENTIFY PLANNING AND DEVELOPMENT INCENTIVES OF HERITAGE AREAS AND BUILDINGS

Redevelopment, rehabilitation and reuse are approaches that help to empower conservation of heritage assets or buildings. This empowerment requires the cooperation of all parties related to the implementation of suitable incentives.

Regeneration incentives can be given for sites upgrading, areas and old buildings that are dilapidated and less viable. KLCH will act as a coordinator and evaluate the proposed project to obtain consideration for the development incentive.

The Draft KLLP2040 identifies criteria for heritage sites and buildings that are eligible for planning and development incentives as follows:

1. Gazetted heritage sites and buildings under the National Heritage Act 2005 (Act 645);
2. Development sites located within 200 metres of heritage sites and buildings; and
3. Specific criteria were determined by KLCH based on the importance of the site.

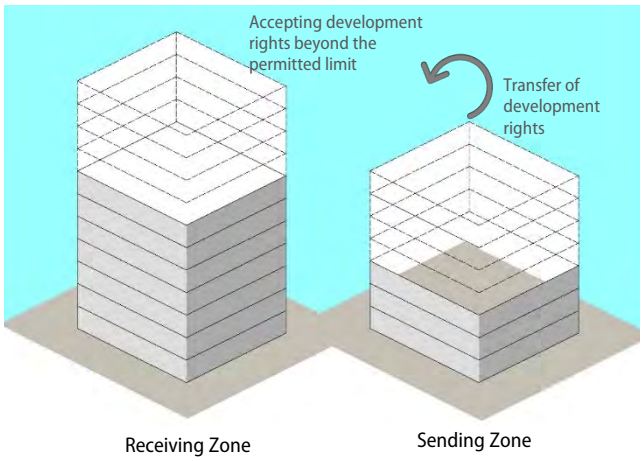
The necessary actions to support this initiative are as follows:

1. Allowing the Transfer of Development Right

The transfer of development rights is intended to enable financial resources to be generated for the purpose of conserving heritage buildings and maintaining the form of development in accordance with KLCH regulations. This transfer of rights is through the ratio of unused plots from the heritage site or building to the site or building outside the heritage site. It is subject to the conditions, guidelines set by KLCH and compliance with the relevant agency's technical review as well as not affecting the related heritage site or building.

The implementation of the transfer of development rights needs to be detailed with specific studies and action plans according to the legislation and specific guidelines before it is implemented as shown in Figure 6.5.4.

Figure 6.5.4:
Development Rights Transfer Programme



Sending Zone:

1. The sending zone is a heritage building that is in the **heritage preservation zone**; and
2. A heritage preservation zone where development rights are **"transferred"** from it to another area.

Receiving Zone

1. The receiving zone is **located outside the conservation area or heritage zone;**
2. This zone **"receives development rights"** where the same developer adds intensity beyond what is allowed from the **Sending Zone;**
3. This process is controlled at the Development Order (DO) application stage; and
4. It is necessary to take into account the level of infrastructure capacity, utilities and public facilities.

2. Implement Heritage Area Matching Grant.

Matching Grants are funds provided to be given according to proportion from other sources. Matching grants are usually created for the public interest or the benefit of the community by creating a dedicated trust fund for the regeneration of areas of heritage interest.

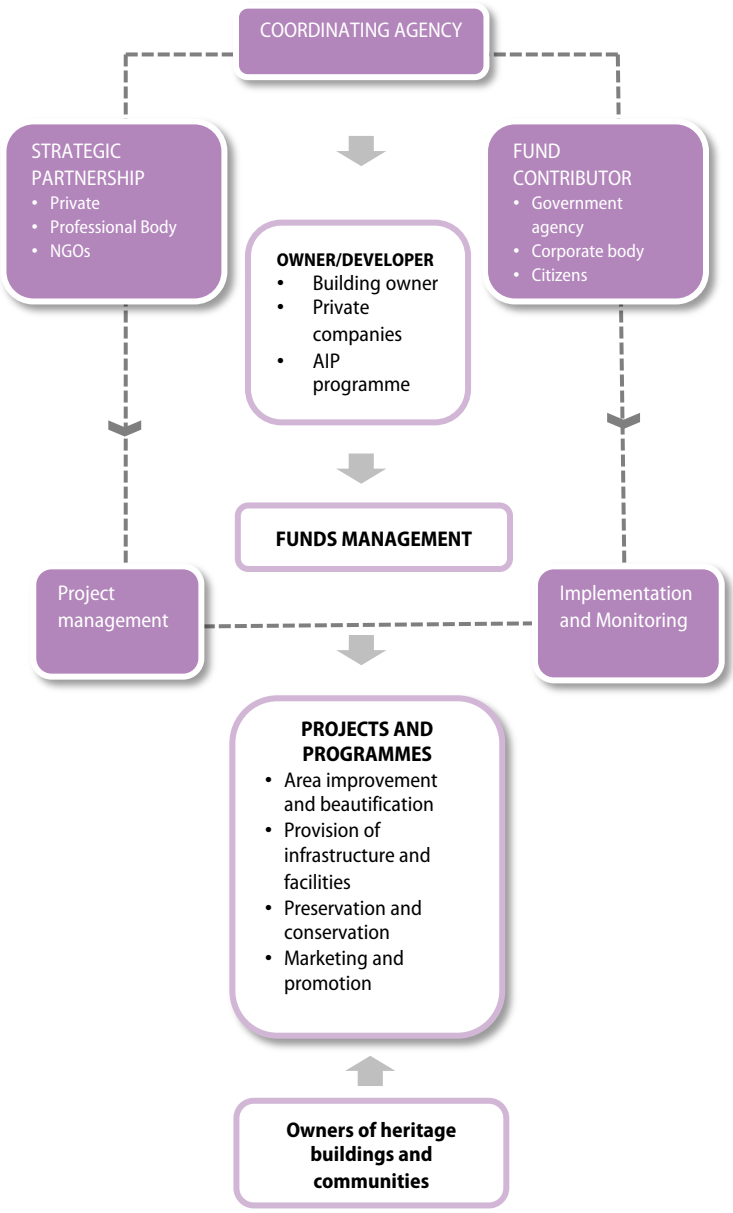
Sources of funds can be obtained through statutory bodies, corporate bodies, private companies and the public. This win-win situation can be obtained in the form of cost-sharing through contributions and proportions from different sources of funds.

This resource allows owners of old sites, areas, or buildings through the Area Improvement Programme (AIP) to improve the surroundings of their premises. Agencies or related parties will give priority to improve and upgrade infrastructure, promote and carry out activities and programmes that add value to buildings and heritage areas that have been regenerated.

This situation will benefit the owners of old buildings, KLCH and also the public.

The provision of incentives is subject to the suitability and importance of the heritage site and compliance with the corresponding grant implementation process as shown in Figure 6.5.6. It also needs to comply with the established planning guidelines.

Figure 6.5.5:
Matching Grant Implementation Process



PLANNING STRATEGY

SP 6-6: INTEGRATING RAIL TRANSPORTATION AND SPATIAL DEVELOPMENT

SCENARIO OF RAIL TRANSPORTATION AND SPATIAL DEVELOPMENT IN KUALA LUMPUR

Kuala Lumpur is a city equipped with an existing, under construction and at the planning stage of rail transport system. This system supports the rapid growth of Kuala Lumpur and increases the level of user access to rail transport facilities and services in the city.

The integration of land use development with rail transit stations is a key challenge of spatial planning in Kuala Lumpur because almost all transit stations are located in existing built up area. The supply of vacant land, especially in the area of the rail transit stations is very limited for infill development. The integration of rail transit stations and land use development can be implemented if there are areas for redevelopment such as KLCC and KL Sentral.

The rail transit station area has become the focus of mixed development as a centre of employment, commerce and residence. This area needs to have a high level of connectivity to rail transit stations with provision of pedestrian and micromobility vehicle routes at street level, underpasses and overpasses facility for the users.

The integrated development of rail transport and land use can also be implemented through the concept of underground and air rights development apart from development at ground level.

The concept of air rights and underground space development is one of the methods to meet the growing demand for land with limited land availability in Kuala Lumpur.

The concept of underground development is currently limited to the provision of pedestrian routes and parking spaces. This concept has the potential to be expanded but needs to be regulated through planning mechanisms and comply with existing legal provisions.

The concept of using air rights is to create an overlapping development on top of the existing development and the creation of layered ownership with lots below and above the ground surface. This concept has the potential to be implemented to optimise the use of air space with various activity uses.

The Draft KLLP2040 proposes a comprehensive and effective integration of transport through the implementation of the concept of Transit Oriented Development (TOD) and the spatial development of underground and air space so that Kuala Lumpur becomes an integrated and sustainable development in the future.

In order to realise Kuala Lumpur as a city with more productive and effective space utilisation, two (2) implementation proposals are formulated under Planning Strategy 6–6, as shown in Figure 6.6.1.

Figure 6.6.1:
Implementation Proposals of the Planning Strategy 6-6

IMPLEMENTATION PROPOSAL

CP 6-6.1: PLANNING TRANSIT ORIENTED DEVELOPMENT (TOD)

The transit station areas act as a catalyst for development of land use activities through compact development, mixed land use and pedestrian oriented development. The development around this station will be translated into the concept of Transit Oriented Development (TOD). This will indirectly affect the character of the surrounding area, transit usage patterns, land use zones and the intensity of development planned at each transit station.

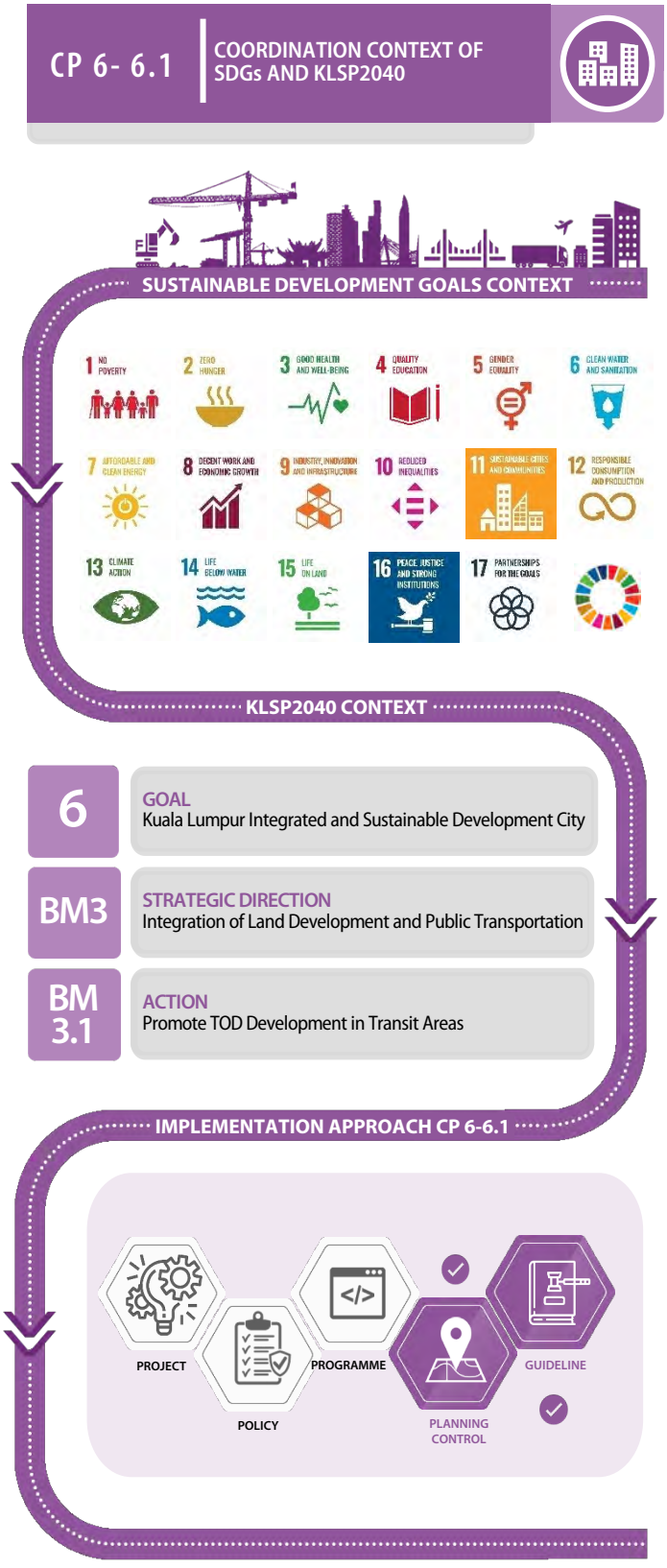
The KLSP2040 has listed 27 stations as TOD including two (2) station that located outside Kuala Lumpur borders, which is the Bandar Utama Station and Gombak Station. The Draft KLLP2040 has proposed an additional 20 potential transit stations out of 103 transit stations as TOD development. This proposal of 20 additional stations is based on the criteria as follows:

1. Availability of undeveloped land;
2. Availability of area or site with potential for redevelopment; and
3. Focus on type of mixed development and serves as a point of origin and destination.

A total of 58 transit stations are not listed as TOD developments since the stations do not meet the criteria. However, stations are not listed as TOD are still eligible to receive planning incentives in order to encourage high intensity development around transit stations subject to the suitability of the area.

The Draft KLLP2040 also encourages the TOD development concept within a catchment radius of 400 metres from the station boundaries known as the Transit Planning Zone (TPZ) and an additional 200 metres from the boundaries of the TPZ as the Transit Influenced Zone (TIZ) for all transit stations located inside and outside the border of Kuala Lumpur.

The implementation approach of this proposal is through planning controls and guidelines. There are two (2) initiatives proposed for the implementation of CP 6-6.1.



IMPLEMENTATION INITIATIVE 6-6.1A

APPLY PLANNING PRINCIPLES IN TRANSIT STATIONS

Transit Oriented Development (TOD) planning incorporates urban design principles that are considered important for planning of holistic and liveable development. The principles of TOD development are based on TOD planning guidelines as well as adaptations from foreign examples of TOD development best practice.

The necessary actions to support this initiative are as as shown in Table 6.6.1.

Figure 6.6.2: TOD Development Concept

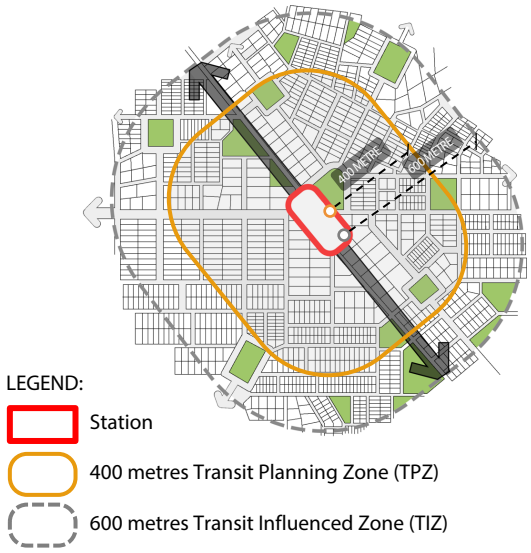


Table 6.6.1: Proposed TOD Principles

TOD principle	Description
1. Mixed and multiple use developments	a. Mixing of activities within a building or between land use activities to encourage transit use; b. A variety of activities around the station and surrounding areas; and c. Provision of housing and affordable commercial space in the TOD area.
2. Compact and high-intensity development	a. Higher intensity development especially within 400 metres and 600 metres from station.
3. Livability	a. Provision of open spaces, institutions, civic and welfare spaces as well as security facilities; b. Provision of quality, easily accessible and sufficient facilities; c. Development design based on active ground floor retail; d. Human scale development design; and e. Application of the characteristics of CPTED principles and universal design.
4. Connectivity	a. Provision of effective transport mode options for movement in and around the TOD area (feeder buses, pedestrian and micro-mobility vehicle routes); and b. Compact urban development with a comprehensive network of pedestrian and micromobility vehicle routes.
5. Age-friendly and disable-friendly environment (pedestrians, and micro-mobility vehicles)	a. Provision of continuous and seamless pedestrian and micromobility vehicle routes with crossing and barrier-free facilities; b. Provision of pedestrian and micromobility vehicle routes crossings that are age-friendly and disable-friendly and integrated with smart elements for safety purposes; c. Provision of supporting facilities and route design that can support the movement of all groups, and especially people with disabilities, including the provision of signage for those with hearing impairment and learning disabilities as well as bicycle parking; d. Preference for covered walkways or shade landscaping to encourage activities of pedestrian and micromobility vehicle routes; and e. Good and safe lighting to prevent crime especially at night.
6. Application of sustainable planning concept	a. Implementation of safe city elements CPTED, universal designs, smart technology and Low Carbon City including the use of smart poles, smart pedestrian technology, CCTV and panic buttons; and b. Barrier-free environment that is accessible to all.

BEST PRACTICES

OVERVIEW OF PROPOSED DESIGN CONCEPT AND DEVELOPMENT IN TOD AREA

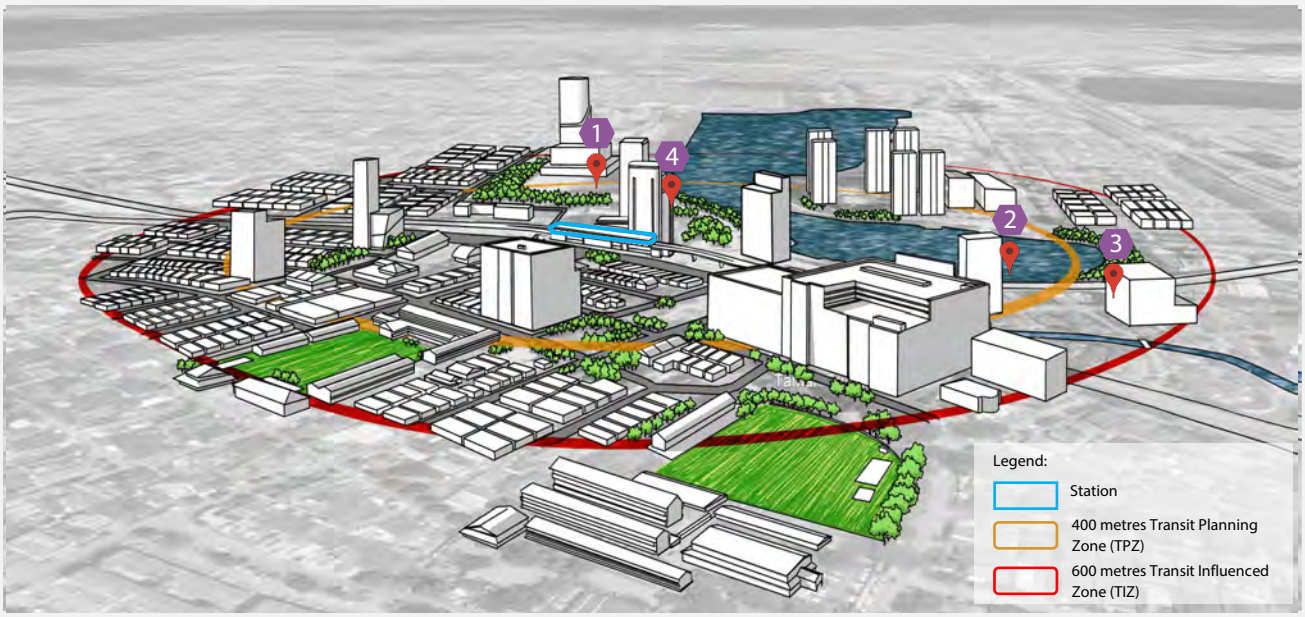


Illustration of the proposed provision of covered walkways to encourage pedestrian activities.

Illustration of the proposed provision of a continuous and safe user-friendly pedestrian crossing.

Illustration of the proposed provision of effective mode of transportation options for moving in and around the TOD area.

Illustration of the use of smart elements that can be implemented in Kuala Lumpur such as the installation of CCTV and bollards.

IMPLEMENTATION INITIATIVE 6-6.1B

DETERMINE DEVELOPMENT FORM BY TOD CATEGORY

The KLSP2040 has identified five (5) TOD categories according to the activities and character of a transit station. It will indirectly determine the land use zone and intensity of development according to transit station.

The determination of the TOD category according to KLSP2040 is as follows:

TOD 1: City Centre (CBD);
TOD 2: Main Growth Centre;
TOD 3: Neighbourhood Area;
TOD 4: Institution and Public Facilities Area; and
TOD 5: Suburban Area.

Land use and the intensity of development in the TOD area must be optimised so that environmental, economic and social benefits can be reaped from this development.

The necessary actions to support this initiative are through the determination of proposed stations based on the guideline framework land use zones and intensity according to the TOD category as shown in Table 6.6.2.

BRIEF INFO

TOD GUIDELINE FRAMEWORK

Type of TOD/ Category	TOD 1 City Centre (CBD)	TOD 2 Main Growth Centre	TOD 3 Neighbourhood Area	TOD 4 Institution and Public Facilities Area	TOD 5 Suburban Area
MUNICIPAL ACTIVITY PATTERNS	1. Main business hotspot centre; 2. High intensity mixed; development 3. High intensity housing; and 4. Main office area.	1. Business hotspot centre; 2. Medium high mixed development; 3. High and medium high intensity housing; and 4. Office area.	1. Housing area; and 2. Neighbourhood business area.	1. Higher education centre; 2. Main Sports centre, cultural/civic centre; and 3. Administrative office area.	1. Housing; 2. Industry; 3. Institution; and 4. Specific employment.
TYPE OF STATION	Transportation hub	Integrated Interchange and Rail Station	Rail Station		
TRANSIT SERVICES	> 2 types of transit services in the Core TOD Zone (KTM, MRT, LRT, monorail, BRT, tram, high-speed rail)	> 2 types of transit services in the TOD Secondary Zone (KTM, MRT, LRT, monorail, BRT, tram, high speed rail)	1 type of transit service in the secondary zone		1 type of transit service in the supporting zone
DEVELOPMENT INTENSITY	High intensity	Medium high intensity	Medium intensity		
FACILITIES PROVIDED	1. Feeder bus; 2. Pedestrian connector network until the secondary zone; 3. Micromobility vehicle connector network until the supporting zone; and 4. Taxi, e-hailing services and others.				1. Similar to the facilities provided in TOD 1 to TOD 4; and 2. Park and Ride Facilities.

Source: Adapted from KLSP2040

Table 6.6.2: Station Proposals Based on the TOD Guidelines Framework

Number	List of TOD Stations (KLSP2040)	Number	List of TOD Stations (Draft KLLP2040)
1.	KL Sentral	28.	Sri Rampai
2.	Hang Tuah	29.	Kampung Baru
3.	Masjid Jamek	30.	Dato' Keramat
4.	Sungai Besi	31.	Damai
5.	Sentul Timur	32.	Maharajalela
6.	Sentul Barat	33.	Kuchai
7.	Sentul	34.	Cochrane
8.	Ampang Park	35.	Kentonmen
9.	Mid Valley	36.	Hospital Kuala Lumpur
10.	Titiwangsa	37.	KLCC
11.	Chan Sow Lin	38.	Taman Connaught
12.	Salak Selatan	39.	Sri Delima
13.	Taman Midah	40.	Putra
14.	TRX	41.	Kepong Baru
15.	Kerinchi	42.	Pudu
16.	Bukit Bintang	43.	Bandar Malaysia North
17.	Pasar Seni	44.	Persiaran KLCC
18.	Maluri	45.	Conlay
19.	Bukit Jalil	46.	Bandaraya/Bank Negara
20.	Bandar Malaysia South	47.	Taman Tun Dr. Ismail
21.	Sentul Bandar Baru		
22.	Kepong Sentral		
23.	Kampung Batu		
24.	Setiawangsa		
25.	Pandan Jaya		
26.	Bandar Utama (Luar Sempadan Kuala Lumpur		
27.	Gombak (Luar Sempadan Kuala Lumpur		

Note: The total number is 47 TOD stations in Kuala Lumpur, TOD stations 1 to 27 are TOD stations that have been listed by KLSP2040 while TOD stations 28 to 47 are proposed additional transit stations in the Draft PTKL2040.

Source: Adapted from KLSP2040

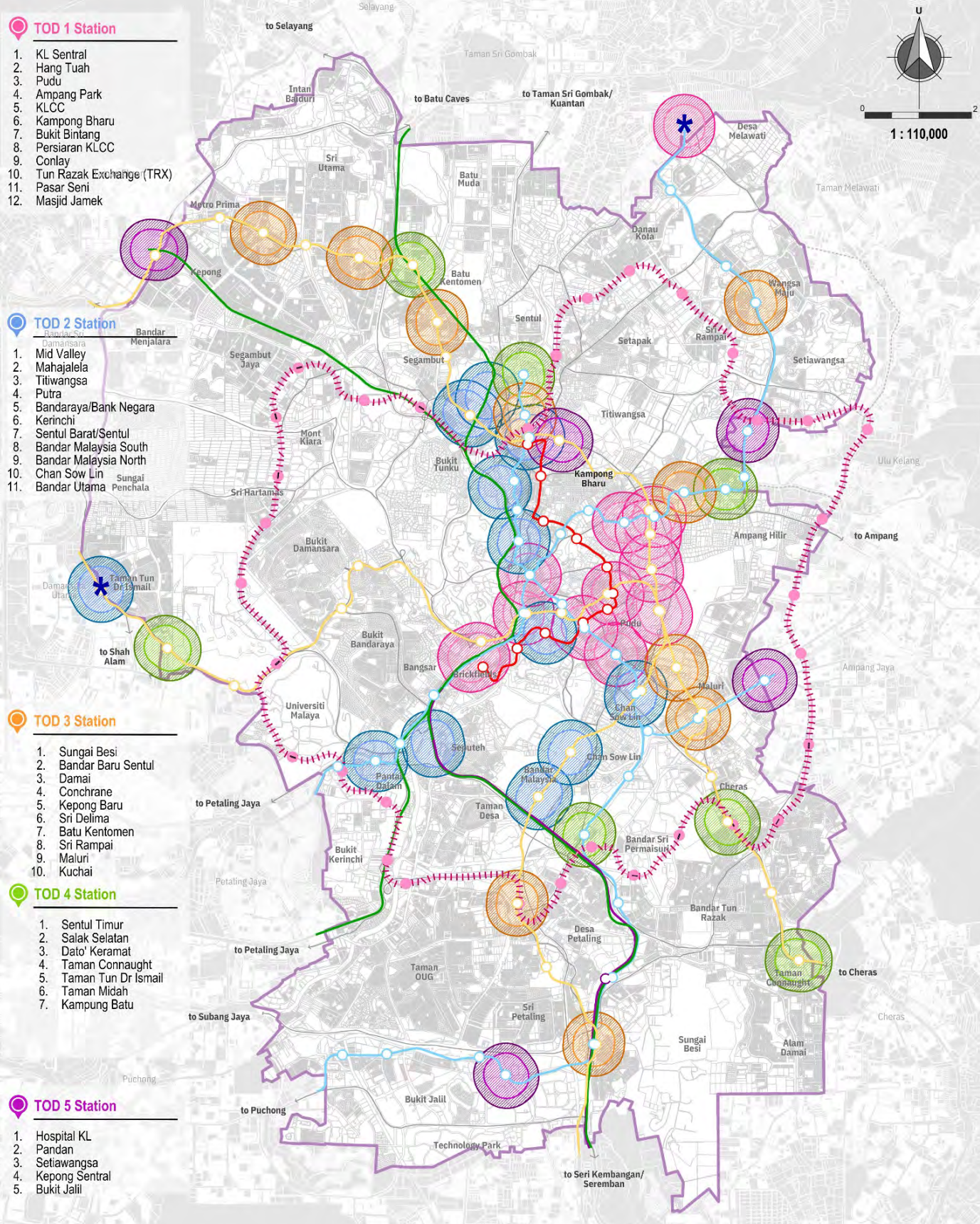


FIGURE 6.6.3 | **Plan of Proposed Potential Transit Stations For Transit-Oriented Development (TOD)**

Legend:

Existing
- Transit Station for Concept TOD 1
- Transit Station for Concept TOD 2
- Transit Station for Concept TOD 3
- Transit Station for Concept TOD 4
- Transit Station for Concept TOD 5
- Station Outside Kuala Lumpur

Public Transportation Lines
- MRT Line and Station
- LRT Line and Station
- Monorail Line and Station
- KTM Commuter Line and Station
- ERL Line and Station

Others
- Main Road
- Kuala Lumpur Boundary
- MRT Line 3 Corridor and Station (In Planning)

IMPLEMENTATION PROPOSAL

CP 6-6.2: PLANNING UNDERGROUND AND AIR SPACE DEVELOPMENT IN MAIN TRANSIT AND INFRASTRUCTURE AREAS

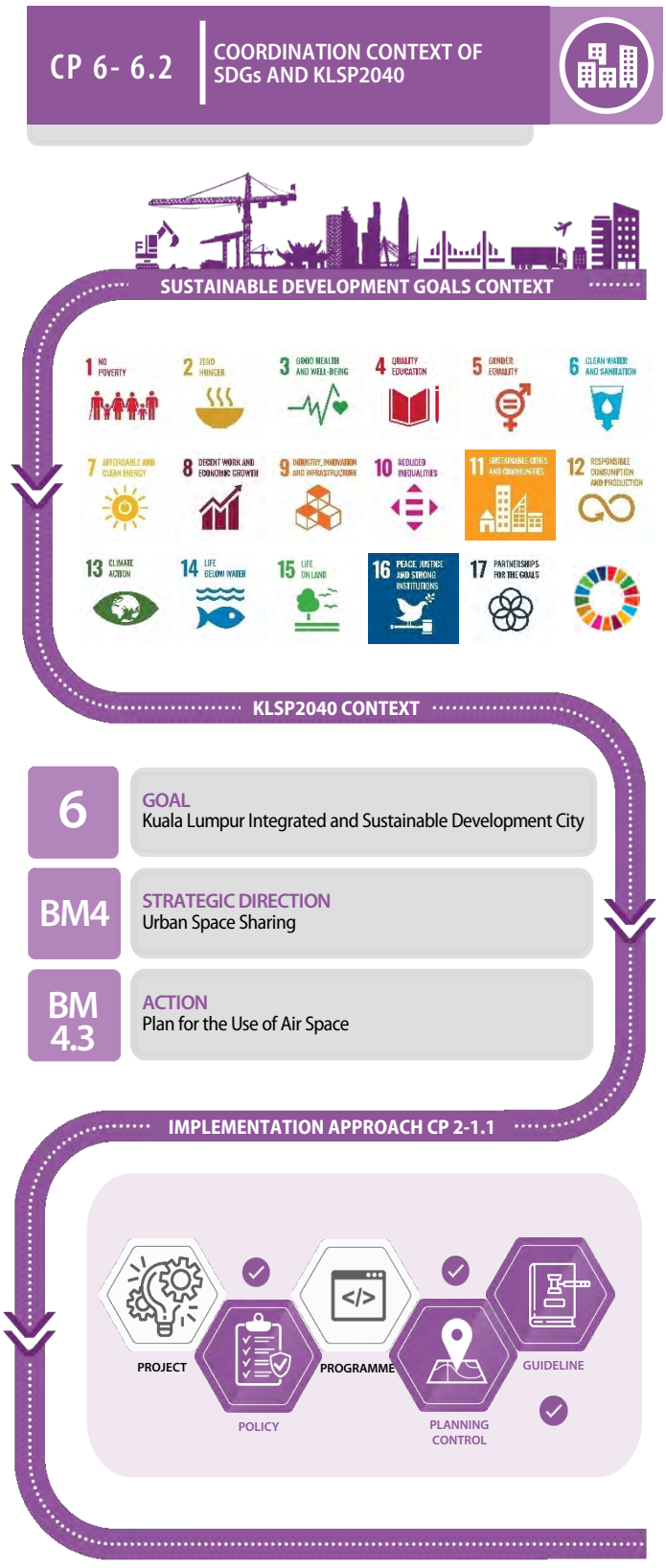
Rapid development, population density and limited land constraints in Kuala Lumpur require a planning approach involving underground development and use of air rights development. This planning approach allows the available land and space resources to be used optimally and more effectively. Air rights and underground development are currently the trend for modern urban development in line with the development of technology and rapid development of cities in the world.

Priority areas for the implementation of underground space and air rights planning are in the high intensity commercial and mixed development land use zone including Transit Oriented Development (TOD) areas.

The main components of the proposed underground development are commercial activities, recreation, creative industries and social activity centres. The implementation must ensure the environment and space provided underground are of high quality, safe and comfortable for users.

Amendments to the National Land Code in 1990 and 2016 have allowed underground land to be used and developed for permitted activities. Meanwhile, the main components of the air rights must be examined based on activities allowed according to the provisions of law and current guidelines.

The implementation approach of this proposal is through policies, planning controls and guidelines. There are three (3) initiatives proposed for the implementation of CP 6-6.2.



IMPLEMENTATION INITIATIVE 6-6.2A

PROPOSE DEVELOPMENT OF UNDERGROUND SPACE

Underground development should be encouraged especially in TOD areas to ensure optimal use of space and land. This initiative can also be a new alternative to overcome the issue of limited land for development in Kuala Lumpur.

The necessary actions to support this initiative are as follows:

1. Encourage development of activities based on Commercial Land Use Zones, Public Facilities and other activities capable of supporting a vibrant and dynamic underground city concept;
2. Ensure good accessibility to public transport services and connectivity for active mobility modes including walkways and micro-mobility vehicle paths;
3. Ensure provision of complete infrastructure and supporting facilities; and
4. Apply sustainable planning concept such as element of Crime Prevention Through Environmental Design (CPTED), universal design, green building, smart technology and Low Carbon City.

IMPLEMENTATION INITIATIVE 6-6.2B

PROMOTE THE DEVELOPMENT OF AIR RIGHTS

The development of air rights for undeveloped land is encouraged especially in TOD areas and mixed development zones.

The necessary actions to support this initiative are as follows:

1. Encourage development of air rights as a recreational area or green space to support the implementation of low carbon cities and reduction of urban heat islands;
2. Develop air rights as a facility that supports good urban connectivity and pedestrian-oriented concepts such as development of skyways or elevated linkages between buildings;
3. Ensure availability and maintenance of infrastructure facilities and other supporting facilities that are complete and capable of meeting the needs of users and visitors; and
4. Apply sustainable planning concept such as element of Crime Prevention Through Environmental Design (CPTED), universal design, green building, smart technology and Low Carbon City.

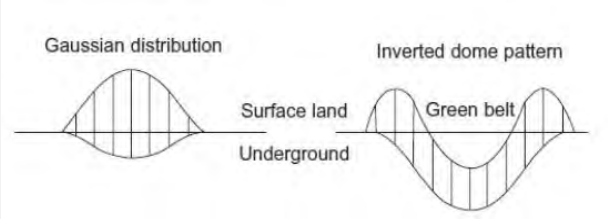
BRIEF INFO

CONCEPT OF UNDERGROUND DEVELOPMENT

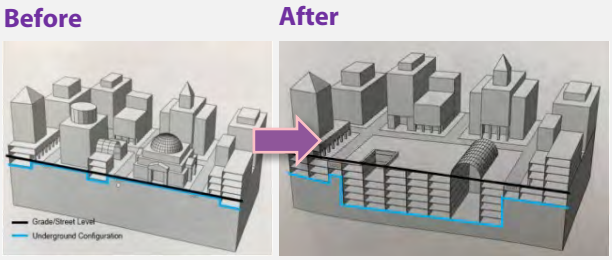
The activities that can be proposed for underground pedestrian-oriented space are commercial and recreational in nature, such as offices, shopping centres, restaurants, sports centres, hotels, convention halls, education centres and health clinics.

Underground space development also connects two (2) buildings or more to create an urban ecosystem that has good pedestrian accessibility.

This concept uses an inverted dome pattern instead of Gaussian distribution, making the underground space development area more connected with good accessibility with a more vibrant and dynamic use of space. This can attract a high number of pedestrians and drive economic development rapidly as well as reduce the issue of congestion on the roads.



Source: Underground Infrastructures; Planning, Design, and Construction



Source: Urban Subterranean Space: A link between a ground level public space and underground infrastructure

BEST PRACTICES

DEVELOPMENT OF AIR RIGHTS AND UNDERGROUND IN JAPAN

Location: Kyoto Station
Source: https://media.timeout.com/images/102540127/image.jpg

The terrace rooftop garden at Kyoto Station is a tourist attraction because it functions as an observatory deck to enjoy the view of Kyoto City.

Location: Tenjin Chikagai Underground Street, Japan
Source: https://www.researchgate.net/publication/325444556/

The development of an underground complex in Tenjin Chikagai Underground Street that connects the rail transport system.

Location: High Line Park, Manhattan
Source: https://www.shutterstock.com/g/Pitk18

A beautiful view of the city from the High Line Park in Manhattan. The High Line Park is a popular linear park built on elevated railroad tracks above Tenth Avenue in New York City.

IMPLEMENTATION INITIATIVE 6-6.2D

PROMOTE DEVELOPMENT THROUGH THE SPATIUM CONCEPT

Development through the concept of spatium focuses on overlapping development on top of existing development with layered ownership. This concept aims to address the limited availability of land and the increasing demand for land in Kuala Lumpur for future development. This concept will take into account various aspects including legislation, physical and social impact, economic and infrastructure capacity as well as security.

The necessary actions to support this initiative are as follows:

1. Provide relevant specific guidelines covering location, area, support structure and access requirements:
2. Coordinate related legal provisions through ownership and leasing;
3. Ensure capacity and availability of building infrastructure and environment;
4. Ensure level of development safety and preparedness against disaster risk; and
5. Apply sustainable planning concept such as element of Crime Prevention Through Environmental Design (CPTED), universal design, green building, smart technology and Low Carbon City.

BEST PRACTICES

DEVELOPMENT THROUGH THE SPATIUM CONCEPT IN JAPAN

Location: Osaka, Jepun
Source: https://www.shutterstock.com/g/AsiaTravel

Osaka famous cityscape with the elevated highway going through an office building in the business district of Japan third largest city in Kansai province.

PLANNING STRATEGY

SP 6-7: REGULATING DEVELOPMENT IN SPECIAL AREA MANAGEMENT (SAM) ZONE

SCENARIO OF DEVELOPMENT IN SPECIAL AREA MANAGEMENT ZONE (SAM) KUALA LUMPUR

Kuala Lumpur has a diversity of flora and fauna as a natural heritage asset that supports sustainable development. Due to its rapid growth, cases of environmental disasters and other disasters continue to increase.

The trend of flash flood incidents in Kuala Lumpur has increased over a period of ten (10) years. A total of seven (7) cases were recorded in 2011 and increased to 13 cases in 2020. There are also cases of landslides in steeply sloping areas that affect the quality of life of city residents.

The preservation of forested areas as an element of Special Area Management (SAM) has the potential to generate positive impact on the environment by reducing the urban heat island effect, lowering local temperatures, and becoming a habitat for various flora and fauna.

KLSP2040 has placed special emphasis on planning and developing important areas. It covers protection of nature, biodiversity and preservation of ecosystem from the pressure of increasingly vigorous development.

In order to realise Kuala Lumpur as a city with more productive and effective space utilisation, one (1) Implementation Proposal is formulated under Planning Strategy 6–7, as shown in Figure 6.7.1.

BRIEF INFO

THE IMPORTANCE OF FORESTS AS SAM

1.	Supply oxygen;
2.	Habitats for flora and fauna;
3.	Reduce local temperature; and
4.	Reduce effects of urban heat island.

Taman Rimba Bukit Nanas, which is surrounded by rapid development in the City Centre, needs to be protected to help reduce the heat island effect in Kuala Lumpur.

Figure 6.7.1:
Implementation Proposal for Planning Strategy 6-7

SP 6-7 REGULATING DEVELOPMENT IN SPECIAL AREA MANAGEMENT (SAM) ZONE

CP 6-7.1	Classification of Types and Levels Of Special Area Management (SAM) Zone

PLANNING STRATEGY

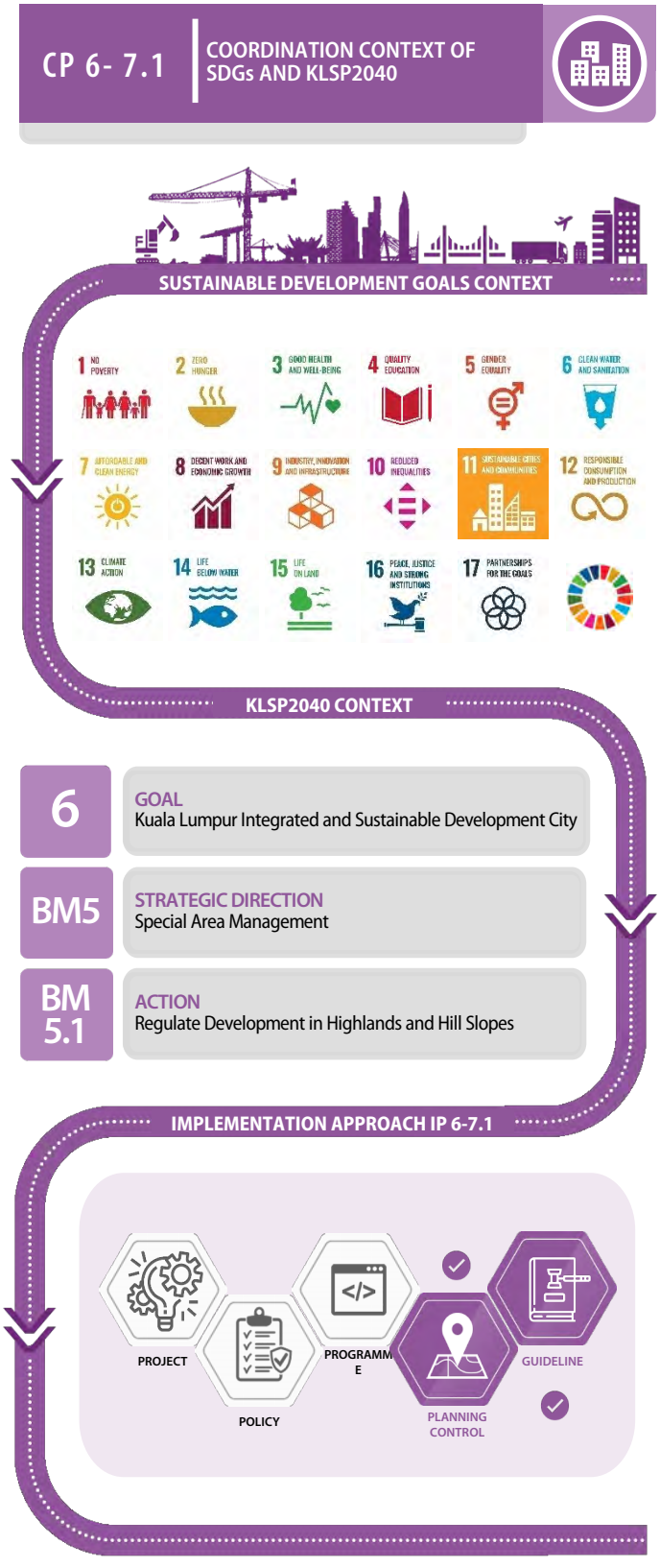
CP 6-7.1: CLASSIFICATION OF TYPES AND LEVELS OF SPECIAL AREA MANAGEMENT (SAM) ZONE

Special Area Management (SAM) Zone that receive the impact of development will change the stability of ecosystem and can affect the quality of environment. Overall land use planning needs to be integrated with the availability of SAM Zone, which covers forested areas, water bodies, and hilly and sloping areas. This area receives rapid development pressure from the surrounding area in terms of physical, economic and social activities. This scenario requires efficient zoning and management actions towards achieving Sustainable Development Goals (SDGs) in addition to balancing physical, economic and social development in Kuala Lumpur.

The availability of SAM Zone by the year 2040 is 1,272.76 hectares (5.23 percent) of the area of Kuala Lumpur, which needs to be integrated with the KLCDP2022 Land Use and Intensity Zone Map.

The implementation approach of this proposal is through planning controls and guidelines. There are three (3) initiatives proposed for the implementation of CP 6-7.1.

Hutan Simpan Kekal Bukit Nanas is a significant Special Area Management (SAM) Zone in Kuala Lumpur.



IMPLEMENTATION INITIATIVE 6-7.1A

CLASSIFY SPECIAL AREA MANAGEMENT (SAM) ZONE

The level of SAM Zone comprise of different classification based on the nature of resource and its sensitivity to the development impact in which any form of development needs to consider the quality of environment in the area.

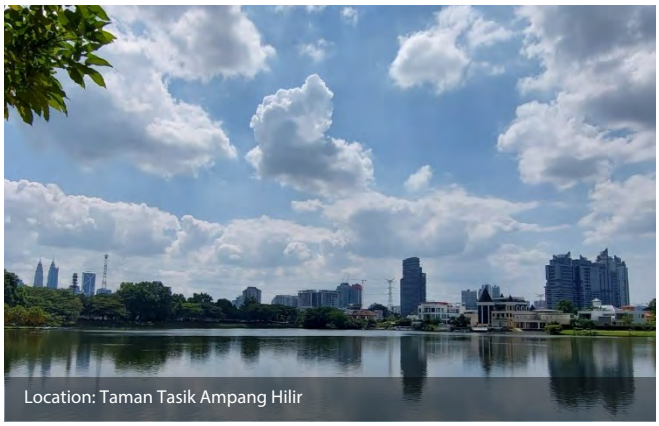
The Draft KLLP2040 proposed a special classification for SAM Zone levels in Kuala Lumpur as shown in Table 6.7.1.

Table 6.7.1:
Proposed Classification of SAM Zone in Kuala Lumpur

Classification of SAM	Details
SAM Zone Level 1: Natural Biodiversity Protection Area (high control)	SAM Zone Level 1 is a natural Permanent Forest Reserve (PFR) that has been gazetted under the National Forestry Act 1984. This area is a natural resource that accommodates high-value biological diversity and is very sensitive to the impact of development in the surrounding area. The activities carried out must emphasis preserving and maintaining the environment that does not affect the nature of the resource ecosystem. This SAM Zone Level 1 is a Forest Reserve (FR) land use zone.
SAM Zone Level 2: Biodiversity Conservation Area (moderate control)	SAM Zone Level 2 is a forested resource area that supports conservation work. It is also sensitive to the impact of surrounding development at a moderate level. Activities carried out with an average impact are allowed without affecting the nature of the resource ecosystem. This SAM Zone Level 2 is Public Open Space 1 (OS1) land use zone.
SAM Zone Level 3: Controlled Development Area (low control)	SAM Zone Level 3 has natural resources that allow development with selective and controlled development only. This SAM Zone Level 3 is subject to compliance with the KLDCP2024 Land Use and Intensity Zone Map, the Draft KLLP2040 and planning requirements of relevant guidelines.

The maintenance of PFR Bukit Nanas as SAM Zone Level 1 which is currently surrounded by buildings will balance the quality of its environment.

Taman Persekutuan Bukit Kiara is a SAM Zone forest park that needs to be preserved and conserved.



Taman Tasik Ampang Hilir is a water body that balances nature with development in the city of Kuala Lumpur.

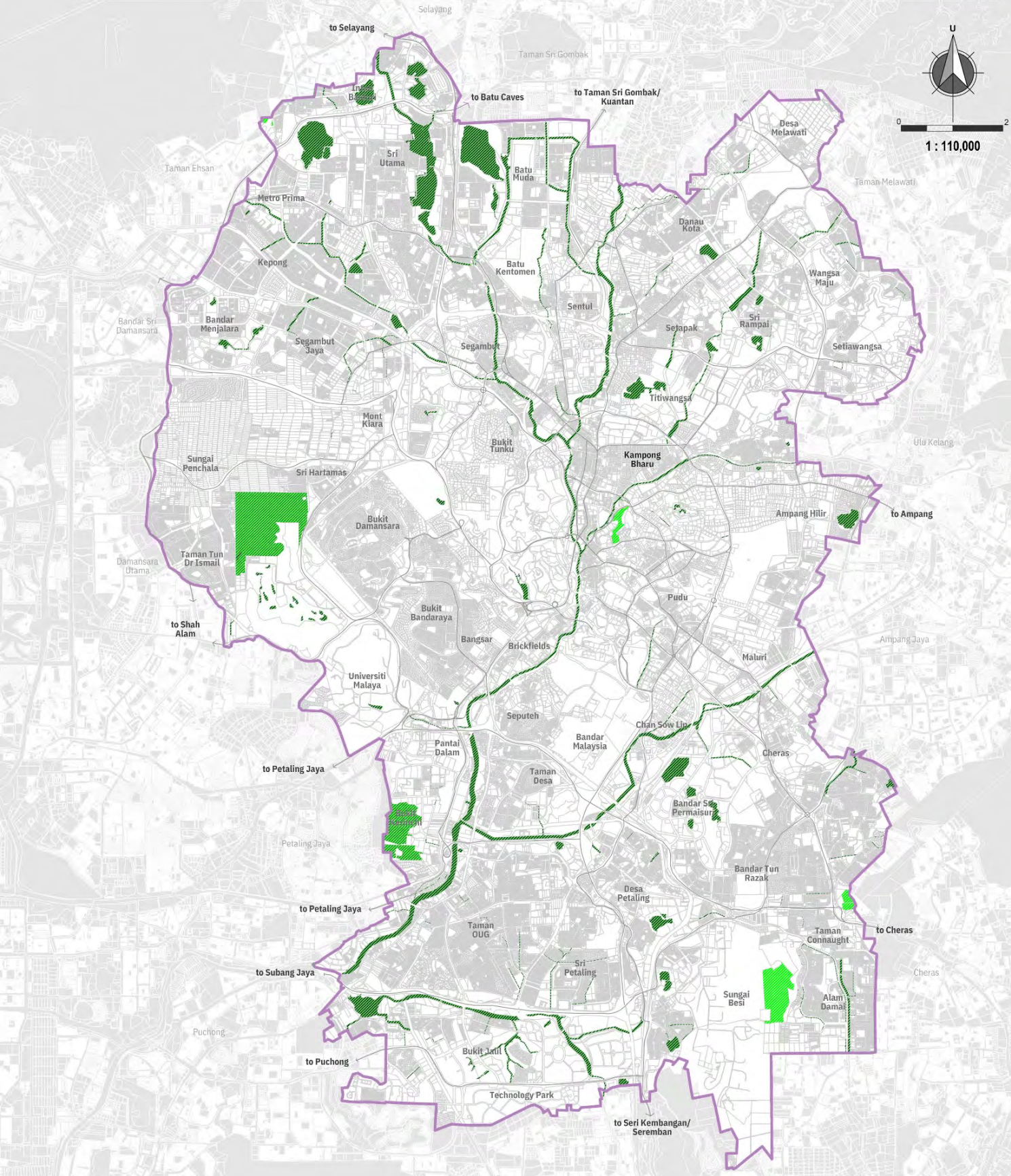


FIGURE 6.7.2 | Plan of Level of Special Area Management (SAM) Zone

Legend:

- SAM Zone Level 1
- SAM Zone Level 2
- SAM Zone Level 3

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION INITIATIVE 6-7.1B

IDENTIFY SPECIAL AREA MANAGEMENT ZONE (SAM)

Recent development of global climate change also threatens the availability of resources in Kuala Lumpur if it is not well managed.

The Draft KLLP2040 has identified the types and levels of SAM in Kuala Lumpur in order to control, monitor and manage the resources. It will also transform Kuala Lumpur into a sustainable and resilient city by 2040.

The necessary actions to support this initiative is by SAM classification according to different sensitivity levels depending on the resource ecosystem as shown in Table 6.7.2.

Location: Taman Bukit Mas

Bukit Tabor is a hilly and slope area that needs to be preserved and conserved to protect the ecosystem of natural resources.

Table 6.7.2:
Classification of Type and Level of SAM in Kuala Lumpur

Level of SAM	SAM	Area (Hectare)	Percentage (%)
Level 1	The identified Permanent Forest Reserves (PFR) are: 1. PFR Bukit Lagong (Additional); 2. PFR Bukit Nanas; 3. PFR Bukit Sungai Puteh; 4. PFR Sungai Besi; and 5. PFR Sungai Besi Tambahan.	84.62	6.65
Level 2	The identified Urban Forest Parks are: 1. Taman Persekutuan Bukit Kiara; and 2. Hutan Rimba Bukit Kerinchi	223.21	17.54
Level 3	The identified rivers, ponds and flood reservoirs are: 43 ponds and flood reservoirs 3 main rivers, 9 big rivers and 4 small rivers	 381.44 429.69	 29.97 33.76
Level 3	The identified hill areas are: 1. PFR Bukit Nanas (95 metres); 2. Part of Bukit Sg. Besi (295 metres); 3. Part of Bukit Arang (Universiti Malaya) (140 metres); 4. Part of Bukit Gasing (Pantai Dalam) (155 metres); 5. Part of Bukit Dinding, Wangsa Maju (295 metres); 6. Part of Bukit Batu Tabor dan Bukit Mas (300 metres); 7. Part of Bukit Pudu (165 metres); and 8. Part of Taman Persekutuan Bukit Kiara (260 metres). The identified slope areas Class IV (Exceeding 35°) are: 1. Bukit Lanjan; 2. Bukit Kiara; 3. Bukit Gasing; 4. Bukit Dinding; 5. Bukit Batu Tabor; and 6. Bukit Sungai Besi.	153.80	12.08
	Total	**1,272.76**	**100.00**

IMPLEMENTATION INITIATIVE 6-7.1C

MANAGE SPECIAL AREA MANAGEMENT ZONE (SAM)

Development at SAM needs to be managed by considering level, location and permitted activities aspects to preserve and conserve SAM resources. The management and compliance requirements of development control is an efforts to achieve sustainable development in Kuala Lumpur in line with SDGs goals.

The necessary actions to support this initiative is development control as shown in Table 6.7.3. Development control is required to avoid a significant impact on the SAM that have been identified.

Development should comply with Land Use and Intensity Zone Map KLDCP2024 as well as referring to the planning requirements in the relevant guidelines.

Sungai Kuyoh is a body of water that needs to be controlled and maintained so as not to disturb the stability of the natural ecosystem.

Table 6.7.3:
Development Control in Special Area Management Zone According to Levels

SAM	Permitted Activities or Work	Forms of Control
Level 1 - PFR: 1. PFR Bukit Lagong (Additional); 2. PFR Bukit Nanas; 3. PFR Bukit Sg Puteh; 4. PFR Sungai Besi; and 5. PFR Sungai Besi Tambahan. Land Use Zone is Forest Reserve (FR).	a. Preservation, conservation, and maintenance work; b. Research and development (R&D); c. Ecotourism; d. Recreation or leisure; e. Office (Use Class A3); and f. Facilities involving food and drink (Use Class A5).	a. Practice environmentally friendly methods that do not affect the stability of the ecosystem and have a low impact; and b. Adhere to appropriate technical guidelines and special conditions.
Level 2 - Urban Forest Parks : 1. Taman Persekutuan Bukit Kiara 2. Hutan Rimba Bukit Kerinchi Land Use Zone is Public Open Area 1 (OS1).	a. Preservation, conservation, and maintenance work; b. Research and development (R&D); c. Recreation or leisure; d. Office (Use Class A3); e. Facilities involving food and drink (Use Class A5); and f. Entertainment (Use Class A6).	a. Practice environmentally friendly methods that do not disturb the stability of the ecosystem and have a moderate impact, and b. Adhere to appropriate technical guidelines and special conditions.
Level 3 – Water Bodies: Rivers and ponds or flood reservoirs. Land Use Zone is Infrastructure and Utilities (IU), that is Drainage (Use Class H3).	a. Preservation, conservation, and maintenance work; b. Research and development (R&D); c. Recreation or leisure; and d. Commercial or residential development subject to planning suitability	a. Practice environmentally friendly methods that do not disturb the stability of the ecosystem and have a moderate impact; b. Drainage and Irrigation Report according to the Eco-Friendly Drainage Manual 2 (MSMA2); and c. Adhere to appropriate technical guidelines and special conditions.

Table 6.7.3:
Development Control in Special Area Management Zone According to Levels (continued)

SAM	Permitted Activities or Work	Forms of Control
Level 3 – Hilly areas (150-300 metres): 1. Hutan Simpanan Kekal Bukit Nanas; 2. Part of Bukit Sungai Besi; 3. Part of Bukit Arang (in Universiti Malaya); 4. Part of Bukit Gasing (Pantai Dalam); 5. Part of Bukit Dinding, Wangsa Maju; 6. Part of Bukit Batu Tabor dan Bukit Mas; 7. Part of Bukit Pudu; and 8. Part of Taman Awam Berskala Besar Bukit Kiara. (Level 3 - Slope areas Class IV (Exceeding 35°) : 1. Bukit Lanjan; 2. Bukit Kiara; 3. Bukit Gasing; 4. Bukit Dinding; 5. Bukit Batu Tabor; and 6. Bukit Sungai Besi. Refer to KLCDP2024 Land Use Zone and Intensity Map for Land Use Zones.	a. Preservation, conservation, and maintenance work; b. Research and development (R&D); c. Recreation or leisure; d. Residence (own land); e. Office (Use Class A3); f. Facilities involving food and drink (Use Class A5); and g. Entertainment (Use Class A6).	a. Prepare engineering studies and earthwork plans; b. Practice slope stabilization engineering approach (engineering solutions); c. Comply with the requirements of the geotechnical study; d. Prepare geological and geomorphological mapping work; e. Prepare a detailed Environmental Impact Assessment Report (EIA) study including an Environmental Management Plan (EMP); f. Prepare Drainage and Irrigation Reports according to the Eco-Friendly Drainage Manual 2 (MSMA2); and g. Adhere to appropriate technical guidelines and special conditions.

Bukit Gasing is a hilly area at Level 3 that needs to be preserved and restored.

PLANNING STRATEGY

SP 6-8: PLANNING QUALITY DEVELOPMENT IN TRADITIONAL AND ORDINARY VILLAGES

SCENARIO OF DEVELOPMENT TRADITIONAL VILLAGES AND ORDINARY VILLAGES IN KUALA LUMPUR

Kuala Lumpur has old village areas located outside the City Centre. KLSP2040 has identified six (6) traditional villages consisting of Traditional and Semi-Traditional Villages.

These villages did not have a clear traditional profile such as cultural components, architecture, economic activities and others. This issue is driven by the location of the village in the urban area where the history of its existence is based on the function of Kuala Lumpur as an economic centre.

The traditional identity of the village in Kuala Lumpur can be clearly seen through character, architecture of the buildings and atmosphere of the village. The village characteristic can also be seen through the planning of small roads, close arrangement of residences, residential lots that do not have access as well as the provision of village community facilities at a moderate and centralised level.

The Draft KLLP2040 proposes villages with traditional values be maintained and preserved through infrastructure improvement programmes, empowerment of community facilities, open spaces, tourism development and preservation of Special Tradition Zones.

In order to realise Kuala Lumpur as a city with more productive and effective space utilisation, four (4) Implementation Proposals are formulated under Planning Strategy 6–8, as shown in Figure 6.8.1.

BRIEF INFO

TYPES OF VILLAGES IN KUALA LUMPUR

Figure 6.8.1:
Implementation Proposals for Planning Strategy 6-8

SP 6-8 PLANNING QUALITY DEVELOPMENT IN TRADITIONAL AND ORDINARY VILLAGES

- CP 6-8.1 Empowering Identity of Traditional Village 1 (TV1)
- CP 6-8.2 Planning Control of Traditional Village Zone 2 (TV2)
- CP 6-8.3 Empowering Potential Development Village
- CP 6-8.4 Planning Development of Ordinary Villages

The criteria for classifying Traditional Villages in Kuala Lumpur are different according to the current situation, capacity of infrastructure and local populations.

The Draft KLLP2040 has proposed a special classification for villages in Kuala Lumpur for the purpose of preservation, conservation and provision of suitable development as follows:

Table 6.8.1: List Of Traditional Villages And Other Villages In Kuala Lumpur

Type of Village	List of Village	Details
Traditional Village	**1. Traditional Village Zone 1 (TV1)** a. Part of Kampung Padang Balang **2. Traditional Village Zone 2 (TV2)** a. Part of Kampung Padang Balang (other than those under Traditional Village zone); b. Part of Kampung Sungai Mulia; c. Part of Kampung Sungai Merali; d. Kampung Banda Dalam; e. Part of Kampung Chubadak Hulu; and f. Part of Kampung Puah Asal.	**Traditional Village** is divided into two (2) zones which are Land Use Zone of Traditional Village 1 (TV1) which is a controlled development area and Land Use Zone of Traditional Village 2 (TV2) which is an area where development is allowed with certain conditions and acts as a buffer to land use zone of TV1 and other development areas;
Potential Development Village	1. Kampung Sungai Penchala; 2. Kampung Bukit Lanjan; 3. Kampung Palimbayan; 4. Kampung Segambut; 5. Kampung Selayang Lama; 6. Kampung Datuk Keramat; and 7. Kampong Bharu;	**Potential Development Village** is a village that has been identified as having the potential to be developed subject to the predetermined intensity in line with its surrounding area. The village was given a new lease of life through improvement proposals such as development of road networks, infrastructure, utilities and suitable community facilities; and
Ordinary Village	1. Kampung Semarak; 2. Kampung Pandan Melayu; 3. Kampung Pandan India; 4. Kampung Pasir Baru; 5. Kampung Pantai Dalam; 6. Kampung Muhibbah; 7. Kampung Petaling Bahagia; 8. Kampung Batu Muda; 9. Kampung Seri Batu; 10. Kampung Melayu Segambut; 11. Kampung Pasir Segambut; 12. Kampung Segambut Tengah; 13. Kampung Segambut Bahagia; 14. Kampung Delima; 15. Kampung Batu Muda Tambahan; 16. Kampung Desa Bakti; 17. Kampung Malaysia Tambahan; 18. Kampung Malaysia Raya; 19. Kampung Melayu FRIM; 20. *Kampung Baru Salak Selatan; 21. *Kampung BaruCheras Baru; 22. *Kampung Baru Jinjang Selatan; 23. *Kampung Baru Jinjang Utara; dan 24. *Kampung Baru Kolam Air Panas.	**Ordinary Village** refers are villages that have developed concurrently with the surrounding development pressure on a medium scale and some have been converted into planned housing area. However, there are still villages that practice the culture and lifestyle of village community by carrying out self-sufficient activities.

Note: *Kampung Baru

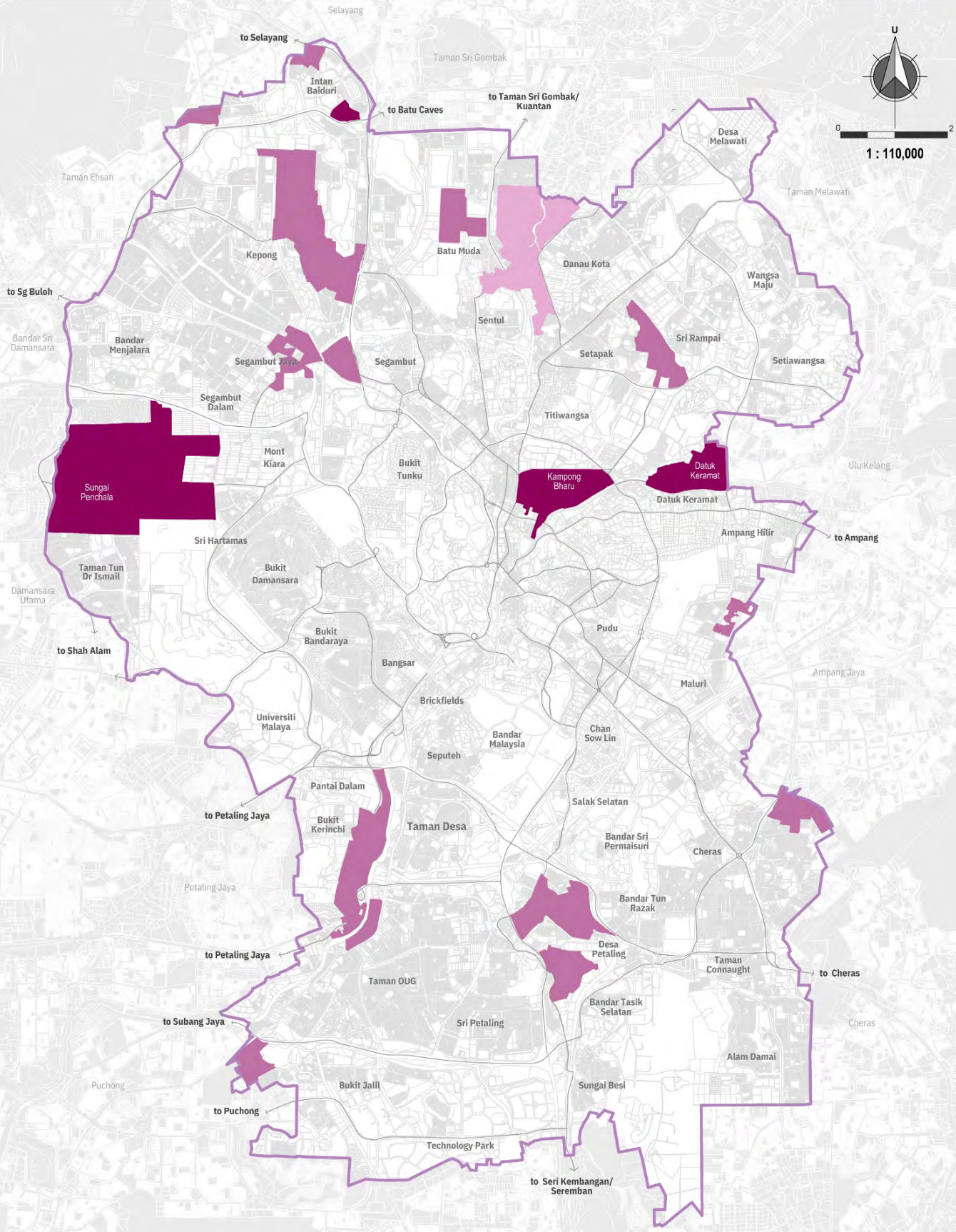


FIGURE 6.8.2| Plan of Traditional Villages and Ordinary Villages Distribution in Kuala Lumpur

Legend:

- Traditional Village
- Development Potential Village
- Ordinary Villages

Others

- Main Road
- Kuala Lumpur Boundary

IMPLEMENTATION PROPOSAL

CP 6-8.1: EMPOWERING IDENTITY OF TRADITIONAL VILLAGE 1 (TV1)

Traditional village is an area that has been passed down for several generations with the characteristics of a Malay culture identity. This village exists in an unplanned and organic manner with linear and clustered settlement pattern.

Land Use Zone of Traditional Village 1 (TV1) involves part of Kampung Padang with an area of 41.23 hectares. This zone has the potential to be preserved based on its status as a Malay Reserve Land. It possesses strong historical value, Malay village atmosphere as well as having natural assets such as Sungai Gombak making it suitable for preservation.

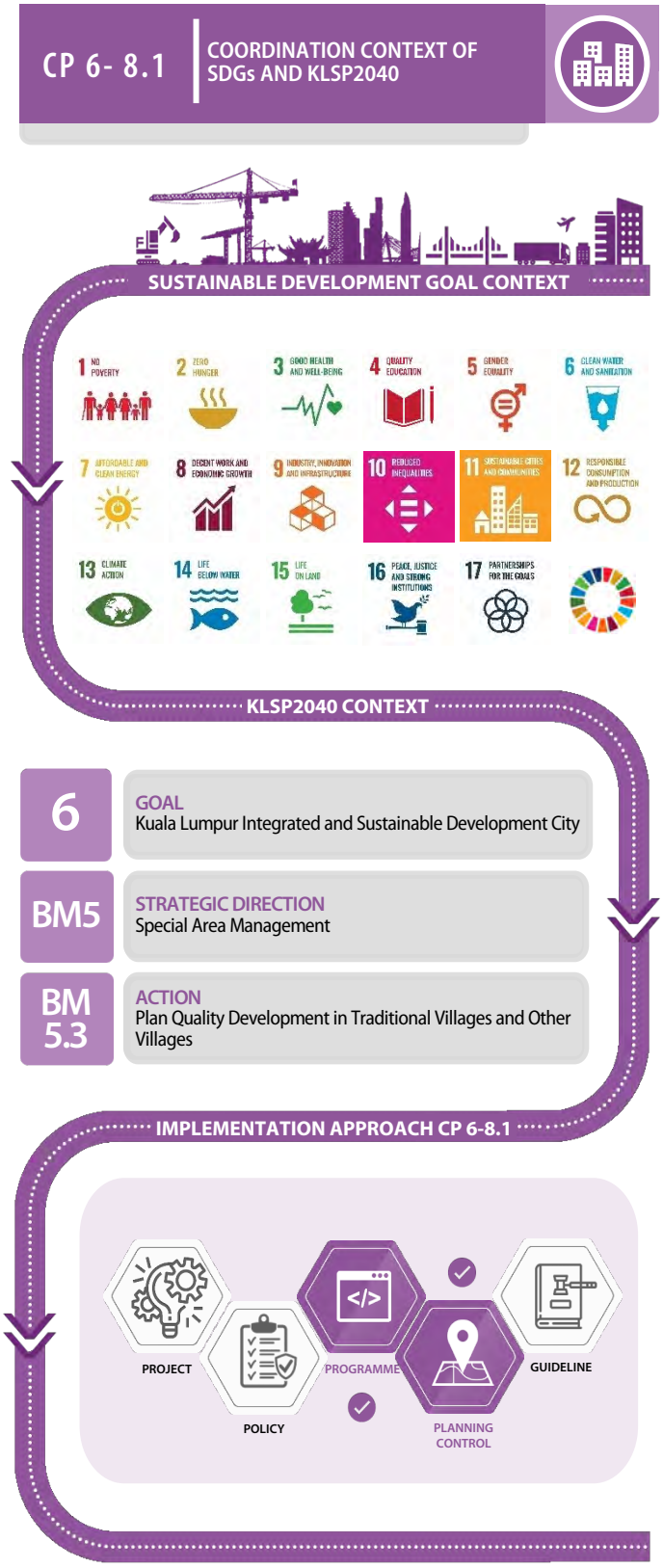
Land use zone for this area is Traditional Village 1 (TV1) where the characteristics and surrounding of the village will be preserved and maintained such as single or semi-detached houses having a design characteristic of traditional Malay houses with a height not exceeding three (3) floors.

Development control in this Traditional Zone can be implemented through the Classes of Use of Land and Buildings 2024 (CULB2024) for land use zone of TV1.

This area will also emphasise and encourage the development of heritage tourism through living museum concept with the provision of supporting facilities such as village landscape, entrance roads, gateway and planning of tourism activities.

The implementation approach of this proposal is through programme and planning control. One (1) initiative is proposed for the implementation of CP 6-8.1.

Traditional Malay House in Kampung Padang Balang.



IMPLEMENTATION INITIATIVE 6-8.1A

CONTROL DEVELOPMENT PLANNING OF TRADITIONAL VILLAGE 1 (TV1) ZONE

Control of development planning in traditional village areas is carried out with the aim to ensure that traditional village areas can develop in a controlled manner. The control of development planning in this area is to maintain the original traditional value of villages.

The necessary actions to support this initiative are as follows:

1. Prepare and implement a detailed Master Plan and Urban Design Plan for the Traditional Village area;
2. Promote business activities and services that incorporate elements such as handicrafts and food products;
3. Encourage local cottage industrial activities related to traditions such as carving art, manufacturing of traditional musical instruments and weapons;
4. Encourage homestay activities among residents and registered with the authorities to support traditional tourism activities;
5. Allow single and semi-detached type houses with height control not exceeding three (3) floors;
6. Control design of buildings that characterise Malay tradition;
7. Strengthen planning of road and utility infrastructure such as upgrading Jalan Padang Balang and Jalan Bandar Dalam as the main roads;
8. Identify methods of maintaining the character and intensity of development through innovative approaches such as Transfer of Development Right (TDR);
9. Develop recreational components along and across Sungai Gombak including rest and recreation areas, pedestrian and micromobility vehicle routes;
10. Provide historical inscriptions that explain the existence of villages in Kuala Lumpur;
11. Provide four (4) formal entrances to land use zone of TV1 with signages and landscape elements as shown in Figure 6.8.3 and Table 6.8.2;
12. Encourage villagers to provide tourism support components such as homestays, and bicycle facilities; and
13. Create a special event to visit the Tradition Zone with a joint venture between the tourism agency and KLCH to promote the TV1 village.

Three (3) storey Traditional Malay House in Kampung Padang Balang.

Figure 6.8.3:
Plan of Proposed for Formal Entrance to the Tradition Zone

LEGEND:

- Traditional Village 1 (TV1)
- Proposed Entrance
- Proposed Mini Gallery
- Traditional Malay House
- Historical Inscriptions
- Road
- Main Road Network
- Walkways and Bicycle Network
- Leisure and Recreation Area

Illustration of gateway and special signages to show a sense of welcoming to the traditional village area.

Illustration of gateway as a sign of entry to the traditional village area.

Illustration of Mini Gallery to explain the existence of villages in Kuala Lumpur.

Table 6.8.2 : Formal Entrance Proposals

Entrance	General Initiatives	Specific Initiatives
P1	1. Provision of gateway as a sign of entry into the traditional village area; and 2. Provision of landscape elements with village characteristic as well as friendly pedestrian and micromobility vehicle routes.	1. Provision of gateways or special signages to show a sense of welcoming to the village area; 2. Empowerment of business activity focus areas in P1 as the main attraction; 3. Mosque as the focus of activities for Islamic and cultural historical tourism; and 4. Entrance road from Jalan Kampung Padang Balang.
P2		Entrance road from Jalan Changkat.
P3		Entrance road from Lorong Sungai Mulia.
P4		Entrance road from Jalan Marmar.

IMPLEMENTATION PROPOSAL

CP 6-8.2: PLANNING CONTROL OF TRADITIONAL VILLAGE 2 (TV2) ZONE

The planning and development control will only apply in Traditional Village 2 (TV2) Land Use Zone. TV2 zone has the character of traditional Malay houses that support identity of Traditional Village 1 (TV1). Modern residential features such as terraced houses or multistorey houses with a design characteristic of the Malay House Tradition can be allowed.

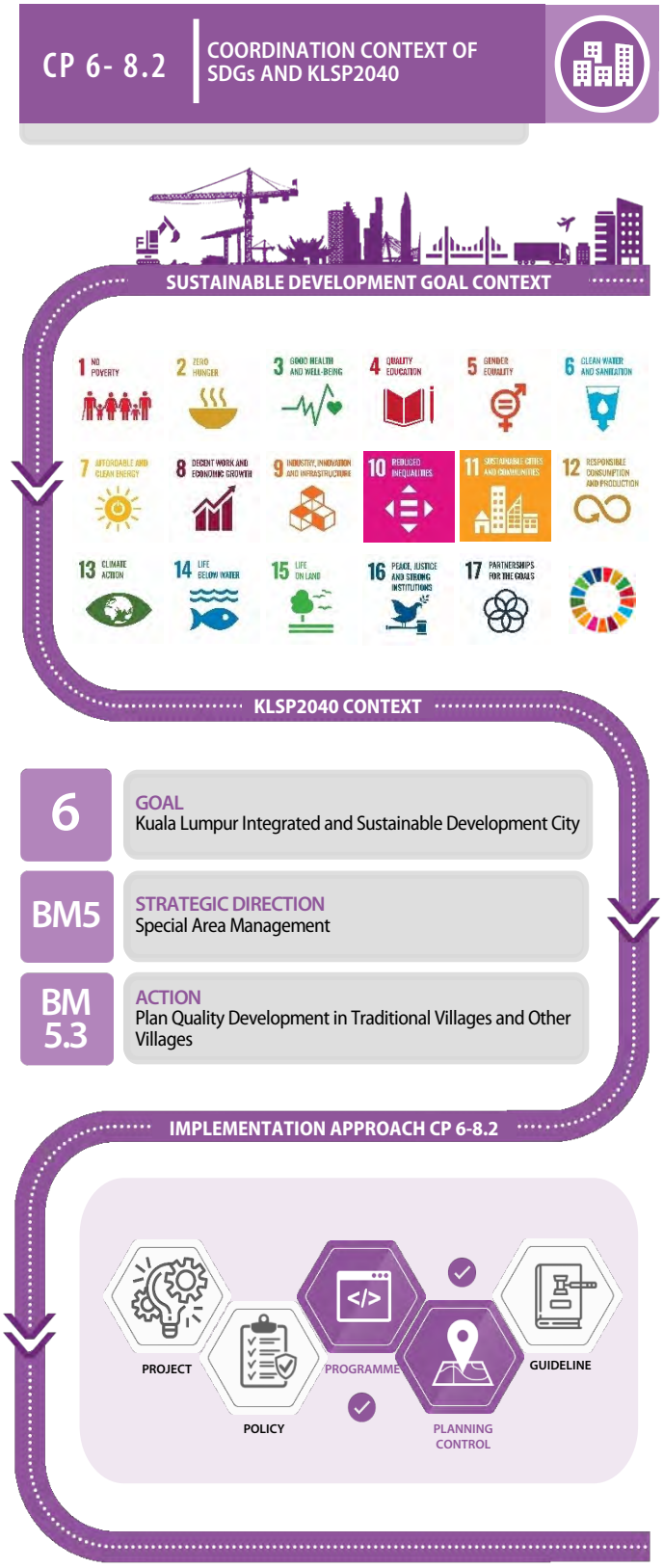
The Draft KLLP2040 identifies six (6) of villages in Traditional Village 2 (TV2), as follows:

1. Part of Kampung Padang Balang;
2. Part of Kampung Sungai Mulia;
3. Part of Kampung Sungai Merali;
4. Kampung Banda Dalam;
5. Part of Kampung Puah Asal; and
6. Part of Kampung Chubadak Hulu.

Malay Reserve Village (MRV) in part of TV2 is an area that has been created under the Malay Reserve Enactment of 1913 and Land Enactment of 1987. The enactment of this law aims to ensure that Malays are able to own land especially in urban areas. The ownership of MRV area cannot transferred to non-Malays either through sale or lease.

The implementation approach of this proposal is through programmes and planning controls. One (1) initiative is proposed for the implementation of CP 6-8.2.

Traditional Malay house in Kampung Banda Dalam.



IMPLEMENTATION INITIATIVE 6-8.2A

IMPROVE PLANNING OF TRADITIONAL VILLAGE 2 (TV2) ZONE

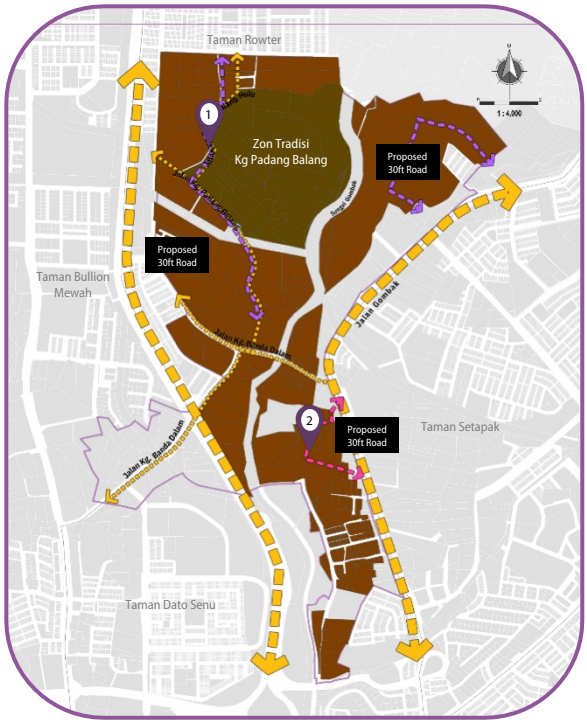
Land use zone of Traditional Village 2 (TV2) has the potential to be improved through land use class planning, land use activities and development control. Among the development controls that can be applied are base plot ratio development and height of building.

It also needs to be supported by the provision of public and infrastructure facilities in part of TV2 areas.

The necessary actions to support this initiative are as follows:

1. Control land use zone and intensity of residential development or compatible with surrounding typology with a base plot ratio of 1:2.0;
2. Provide high-intensity development incentives for TV2 that suit the area such as part of Gombak MRV. The incentives are based on the Classes of Use of Land and Buildings 2024 (CULB2024) as well as Gombak MRV Planning Guidelines. It is also subject to the capacity of facilities and infrastructure of the area;
3. Prepare an appropriate Land Use Class for TV2 in line with development pressure and main physical sectors, namely commercial, industry and housing based on the Gombak MRV Planning Guidelines;
4. Strengthen planning of road and utility infrastructure such as the provision of suitable road reserves as shown in Figure 6.8.4;
5. Optimise vacant space and road reserves for landscape beautification and supporting facilities for visitor and tourist such as bus parking and visitor vans;
6. Develop recreational components along and across Sungai Gombak including rest and recreation areas, pedestrian and micromobility vehicle routes; and
7. Consider shading aspects such as covered walkway, soft and hard landscape equipped with supporting facilities.

Figure 6.8.4:
Plan of Proposed Traditional and Partial Traditional Zone Gombak MRV



LEGEND:

- Traditional Village 1 (TV1)
- Traditional Village 2 (TV2)
- Proposed 30ft Road
- Proposed 50ft Road
- Road
- Main Road Network

Illustration of Road Reserve Proposal at Jalan Padang Hulu (30').

Illustration of Road Reserve Proposal at Lorong Balai Raya (50').

IMPLEMENTATION PROPOSAL

CP 6-8.3: EMPOWERING POTENTIAL DEVELOPMENT VILLAGE

Identity empowerment of the Traditional Zone area involves the area surrounding villages which face development pressure. This area is being classified as a Potential Development Village.

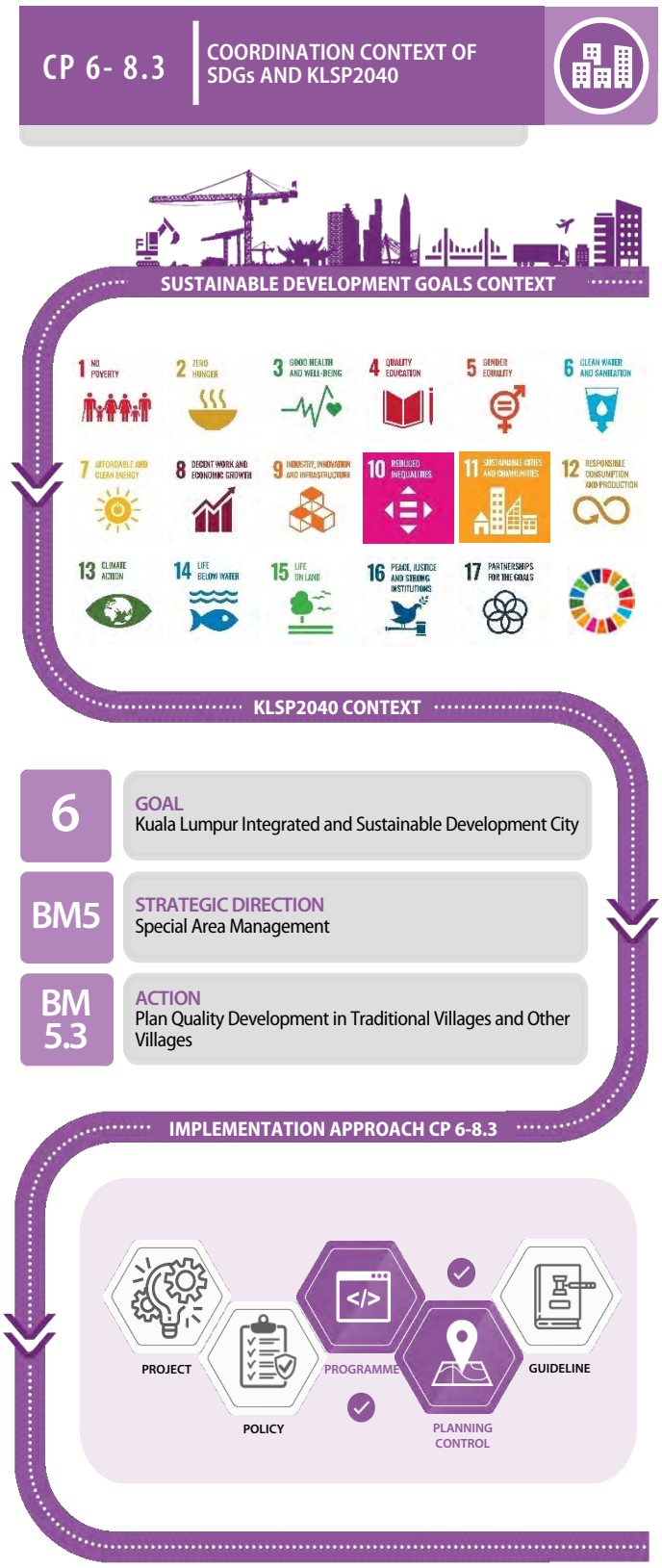
Potential development villages are villages that have been planned for future development based on current development trends and pressures.

Villages that have been identified are recommended for development subject to planning control so that land ownership rights, asset ownership and its community are preserved. New developments are encouraged to integrate Malay values as well as intangible values in order to form the continuity of the development design with Land Use Zones of TV1 and TV2.

The Draft KLLP2040 identifies seven (7) villages that have potential of development as follows:

1. Kampung Sungai Penchala;
2. Kampung Bukit Lanjan;
3. Kampung Palimbayan;
4. Kampung Segambut;
5. Kampung Selayang Lama;
6. Kampung Datuk Keramat; and
7. Kampong Bharu.

The implementation approach of this proposal is through programmes and planning controls. One (1) initiative is proposed for the implementation of CP 6-8.3.



IMPLEMENTATION INITIATIVE 6-8.3A

DEVELOP AND UPGRADE SELECTED VILLAGES

Developing the Potential Development Village requires in upgrading the facilities and infrastructures within village area in Kuala Lumpur. The necessary actions to support this initiative are as follows:

1. Provide suitable Classes of Use of Land and Buildings 2024 (CULB2024) in line with development pressure and main physical sectors, such as commercial, industry and residential;
2. Strengthen planning of road and utility infrastructure as shown in Table 6.8.3;
3. Provide open space, public facilties and optimise vacant space for leisure and recreation activities;
4. Encourage development that integrates pedestrian and micromobility vehicle routes into open spaces and transit stations;
5. Consider shading aspects such as covered walkway, soft and hard landscape as well as equipped with supporting facilities; and
6. Strengthen the image and character of Traditional Village through urban design elements, signages and gateway development that characterise Malay tradition.

The proposed development plan of the village is as shown in Table 6.8.3.

BEST PRACTICES

PROVISION OF RECREATION AREAS ALONG THE NORTH SASKATCHEWAN RIVER TO EDMONTON PARK, CANADA

Provision of recreational components such as soft and hard landscape around the river area.

Provision of soft and hard landscape components as well as other supporting facilities around the river area.

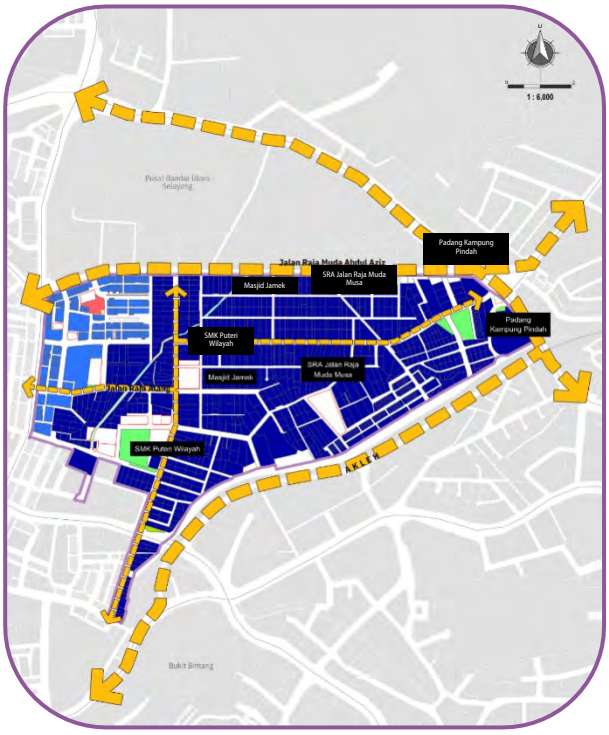
Table 6.8.3 :
Proposed Upgrade of Jalan Sungai Penchala and Jalan Segambut

Area	Specific Initiatives
Jalan Sungai Penchala and Palimbayan	1. Main entrance and exit to the village leads to Country Heights; 2. Widening the road from 12 metres (40') to 30 metres (100'); 3. Provision of streetlights, signages, landscaping element and others; and 4. Proposal for this street to be more pedestrian and micromobility vehicle routes friendly.
Jalan Sri Penchala	1. Widening the road from 10 metres (30') to 20 metres (66'); 2. Provision of streetlights, signages, landscaping element and others; and 3. Proposal for this street to be more friendly pedestrian and micromobility vehicle routes.
New road proposal	1. Proposed road width of 20 metres (66'); and 2. Road bypass that connects Kampung Bukit Lanjan, Palimbayan and Segambut Dalam.

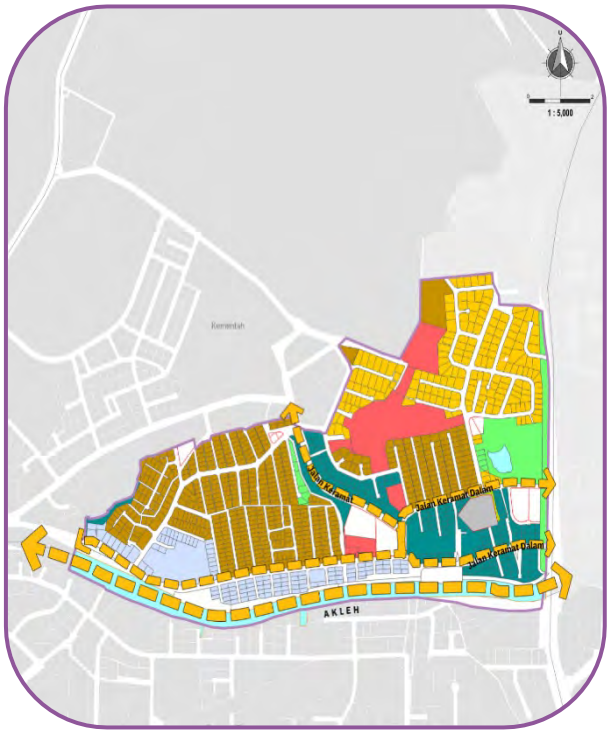
Table 6.8.4:
Proposed Plan for Development Potential Village

Inset Plan

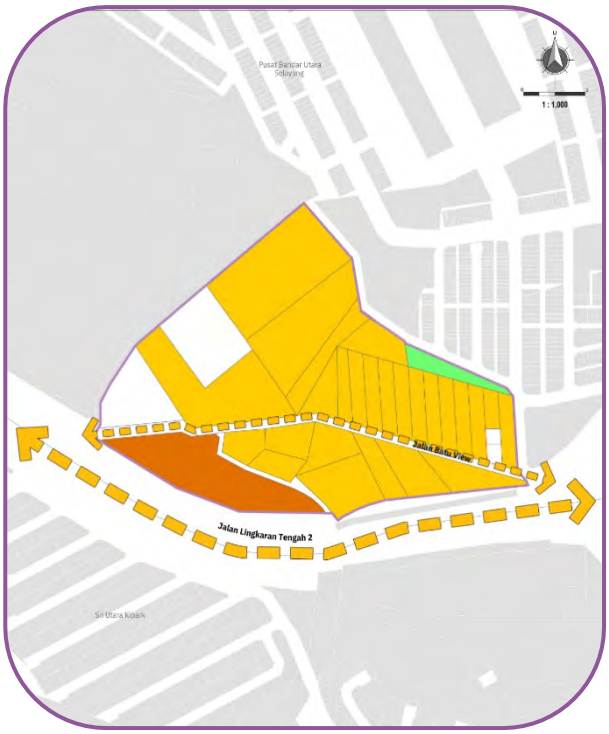
1. Kampong Bharu



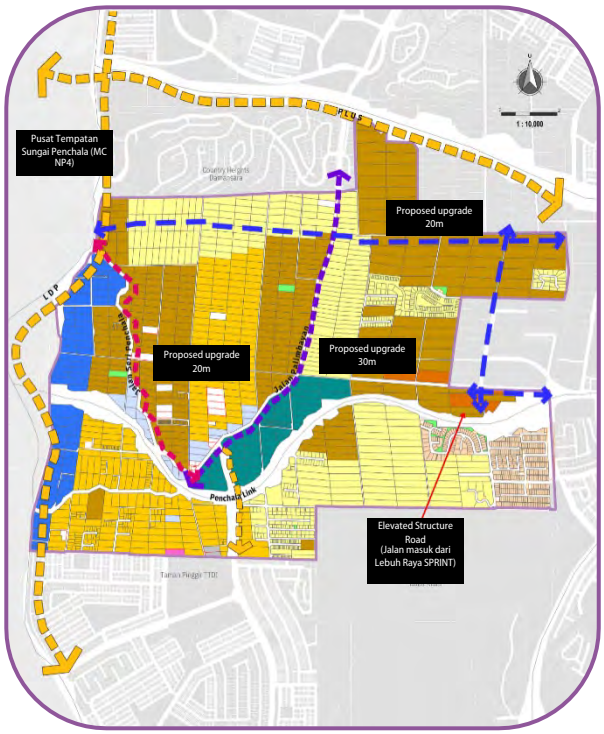
3. Kampung Datuk Keramat



2. Kampung Selayang Lama (MRV)



4. Kampung Sungai Penchala (MRV) Kampung Bukit Lanjan, Kampung Palimbayan and Kampung Segambut



IMPLEMENTATION PROPOSAL

CP 6-8.4: PLANNING DEVELOPMENT OF ORDINARY VILLAGES

Planning for infrastructure development of ordinary village is categorised in two (2) area which is ordinary village and Kampung Baru Cina. Kampung Baru Cina is a rural resettlement area created by the British Colonial government in the 1950s. The implication of these actions has caused the under provision of community facilities and infrastructure development in this area.

The Draft KLLP2040 identifies 24 other villages of which are 19 ordinary villages and five (5) kampung baru that have already been developed and do not have the character of a village, as follows:

1. Kampung Semarak;
2. Kampung Pandan Melayu;
3. Kampung Pandan India;
4. Kampung Pasir Baru;
5. Kampung Pantai Dalam;
6. Kampung Muhibbah;
7. Kampung Petaling Bahagia;
8. Kampung Batu Muda;
9. Kampung Seri Batu;
10. Kampung Melayu Segambut;
11. Kampung Pasir Segambut;
12. Kampung Segambut Tengah;
13. Kampung Segambut Bahagia;
14. Kampung Delima;
15. Kampung Batu Muda Tambahan;
16. Kampung Desa Bakti;
17. Kampung Malaysia Tambahan;
18. Kampung Malaysia Raya;
19. Kampung Melayu FRIM;
20. *Kampung Baru Salak Selatan;
21. *Kampung Baru Cheras Baru;
22. *Kampung Baru Jinjang Selatan;
23. *Kampung Baru Jinjang Utara; and
24. *Kampung Baru Kolam Air Panas.

Therefore, development will be allowed in these villages subject to compliance with the Land Use Zone and Classes of Use of Land and Buildings 2024 (CULB2024) that have been set by KLCH.

The implementation approach of this proposal is through programmes and planning controls. One (1) initiative is proposed for the implementation of CP 6-8.4.

IMPLEMENTATION INITIATIVE 6-8.4A

IMPROVE PLANNING OF ORDINARY VILLAGES

Development in ordinary villages will be developed in accordance with Classes of Use of Land and Buildings 2024 (CULB2024). The necessary actions to support this initiative are as follows:

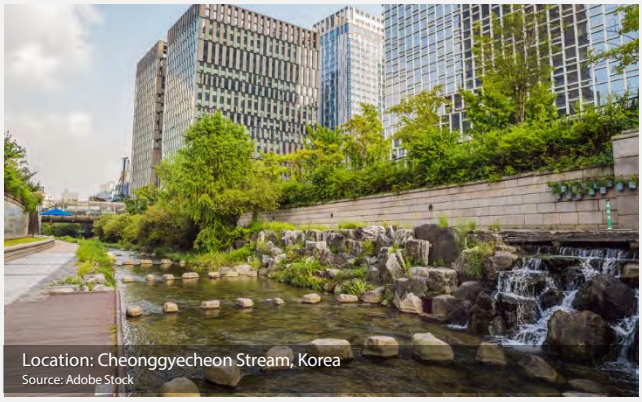
1. Provide suitable Classes of Use of Land and Buildings 2024 (CULB2024) in line with development pressure and main physical sectors, such as commercial, industry and residential;
2. Allow development of shops or cottage industries in areas that receive development pressure in a controlled manner along main roads;
3. Encourage lots amalgamation for suitable sites to ensure that new development does not affect the surrounding area;
4. Provide community support facilities that comply with the needs and density of population;
5. Improve infrastructure and utility services in line with development pressure;
6. Consider shading aspects such as covered walkways, soft and hard landscape equipped with facilities such as street furniture, rest facilities trash cans, lamps and other supporting facilities; and
7. Control and enhance the image and character of the village through urban design elements, landscaping or street furniture such as signages.

Kampung Batu Muda community hall facilities.

Food court in Sri Pantai Kampung Pantai Dalam.

BEST PRACTICES

RECREATIONAL ELEMENTS IN URBAN AREA CHEONGGYECHEON STREAM, KOREA



Provision of recreational facilities such as hard and soft landscape along areas with water elements.

THE SUMMARY

GOAL 6 : EMPOWERING DEVELOPMENT OF KUALA LUMPUR AS AN INTEGRATED AND SUSTAINABLE CITY

Various initiatives and implementation approaches have been proposed for Goal 6 towards empowering development of Kuala Lumpur as an Integrated and Sustainable City can be realised.

The planning and implementation of Goal 6 in the Draft KLLP2040 considers the SDGs, proposal of KLSP2040 and other national development policies which are detailed through projects, policies, programmes, planning controls and guidelines.

The proposed strategies, initiatives and implementation approaches emphasis on planning and coordinating land development effectively, strengthening urban growth centre hierarchy, encouraging infill development, strengthening redevelopment planning, revitalizing urban functions, integrating rail transportation and spatial development, regulating development in Zone of Special Area Management (SAM) as well as planning quality development in traditional and ordinary villages.

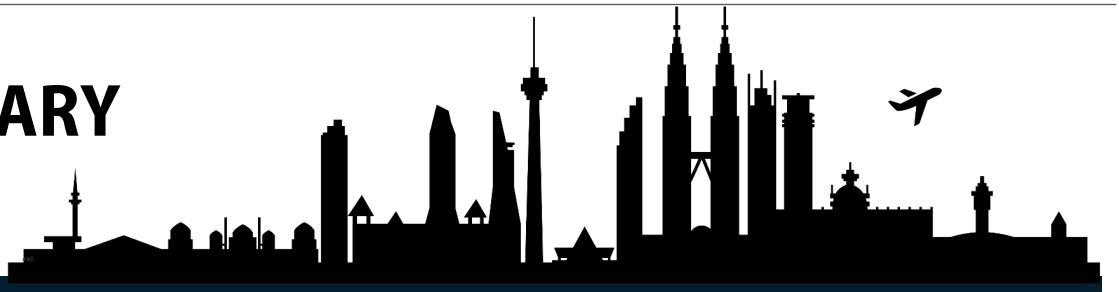
Table 6.1 shows a summary of the planning strategy and implementation proposal for Goal 6.

Table 6.1:
The Summary of Planning Strategy and Implementation Proposal of Goal 6

Planning Strategy	Implementation Proposal	Implementation Approach				
		Project	Policy	Programme	Planning Control	Guideline
SP 6-1	CP 6-1.1	-	1	-	1	1
	CP 6-1.2	-	1	-	1	1
	CP 6-1.3	-	1	-	1	-
SP 6-2	CP 6-2.1	-	-	-	1	-
SP 6-3	CP 6-3.1	-	-	-	1	1
SP 6-4	CP 6-4.1	1	1	-	1	1
SP 6-5	CP 6-5.1	1	1	-	1	1
	CP 6-5.2	-	-	1	1	-
	CP 6-5.3	-	-	1	-	-
	CP 6-5.4	-	-	1	-	-
SP 6-6	CP 6-6.1	-	-	-	1	1
	CP 6-6.2	-	1	-	1	1
SP 6-7	CP 6-7.1	-	-	-	1	1
SP 6-8	CP 6-8.1	-	-	1	1	-
	CP 6-8.2	-	-	1	1	-
	CP 6-8.3	-	-	1	1	-
	CP 6-8.4	-	-	1	1	-
TOTAL		**2**	**6**	**7**	**15**	**8**

GLOSSARY AND ABBREVIATION

GLOSSARY



TERMS	INTERPRETATION
Adaptation	Adaptation includes actions that help communities and ecosystems to cope with actual and expected climate change. Some examples include climate change, sea level rise and natural disasters such as droughts and floods.
Artificial Intelligence (Ai)	Intelligence is owned and demonstrated by a programming system or machine that is capable of performing tasks and functions similar to those generated by human thought.
Al fresco	Al fresco dining, or alfresco dining, is a general term referring to eating together outdoors, especially in the open air.
Affordable Housing	Affordable housing includes low-cost, medium-low-cost and medium-cost housing with sales prices between RM42,000 and RM150,000 per unit to meet the needs of household income groups between RM1,500-RM4,000 per month.
Big Data	Big Data refers to large and complex data sets that are often used for analytical processes.
Biodiversity	The Convention on Biological Diversity defines biodiversity as the diversity of living organisms from various sources that include land, sea and aquatic ecosystems as well as the ecological complex that is part of it including the diversity of species, between species and ecosystems.
Biogas	Biogas is produced through the action of bacteria on organic waste and used as fuel.
Biomass Fuels	Biomass fuels a renewable energy sources derived from organic materials, often plant or animal origin. Some examples of biomass fuels include wood, crops, fertilizers and solid waste materials. When burned, the chemical energy in biomass is released as heat.
Bolted Joint	A bolt is a fastener consisting of a rod with a head. The head features a smooth surface and a screw-type thread is used on the exterior of the bolt. Often, the bolt head has several edges, and its flat surface is not designed for use with a screwdriver.
Blueprint	A design plan or other technical drawing.
Buffer Zone	A buffer zone is usually takes the form of a green area, which separates two (2) land use activities that are incompatible, such as residential and industrial areas.
Built-Up Area	Areas where the main land use consists of municipal land use including housing, commerce, industry, institutions and other infrastructure facilities.
Carbon City	A city adhering to sustainable development principles and ensures the fulfillment of development needs across all sections of society. It actively contributes globally stabilize the production of CO2 and mitigate greenhouse gases addressing climate change through pollution reduction. The city demonstrate high capacity in efficient use energy use reliance on low-energy sources technology production.
Concept of Sponge City	This concept is an integrated and innovative water management strategy addressing the impacts of climate change, mitigating flood disasters and promoting water conservation.
Conducive	Suitable and capable of promoting positive outcomes or encouraging production of beneficial result.
Conurbation	Economically thriving urban areas, including major cities and connected urban regions, with economic relationships experiencing population growth forming densely built areas that develop continuously.
COVID-19/Corona Virus	Coronavirus (CoV) is a type of virus known to cause respiratory tract infections, with various strains such as severe acute respiratory syndrome coronavirus (SARS) and Middle East Respiratory syndrome-related coronavirus (MER-CoV).

TERMS	INTERPRETATION
Climate Change	Significant changes in climate seen in the climate of a region between two reference periods.
Creative industry	Industries that involve individual creativity, skills, and talents that have the potential to generate wealth and create job opportunities through the promotion and exploitation of intellectual property.
Disabled People	According to the Persons with Disabilities Act 2008, PWDs include those who have long-term physical, mental, intellectual or sensory disabilities that, when interacting with various barriers, can restrict their full and effective participation in society.
Ecology	The relationship between living organisms and their environment.
E-Commerce	Any commercial transaction carried out through an electronic network, including the provision of information, marketing promotion, supply or delivery of goods or services, although payment and delivery related to this transaction may be carried out offline.
e-hailing	The process of ordering a car, taxi, limousine, or any other form of transportation through a virtual, computer or mobile cellular device.
Endemic	Endemic refers to a disease or epidemic that always exists in a certain area or region.
Feed-In Tariff	A mechanism of allowing electricity generated from renewable energy sources (TBB) by independent developers and individuals to be sold to the electricity supply utility company (TNB) at a premium tariff rate for a period set by the Government.
First Mile - Last Mile	Describes the start or end of individual journeys made mainly by public transport. The trip is easily accessible by foot, and bike from public transit.
Global City	The city is determined through an important meeting point in the global economic system and houses various world-class (international) activities.
Green House Gas	Gases that trap heat in the earth's atmosphere that trap heat. During the day, the sun shines through the atmosphere, warming the earth's surface. At night, the earth's surface cools, releasing heat back into the air. But some of the heat is trapped by the greenhouse gases in the atmosphere.
Group B40	The lowest 40 percent income household group of the overall income distribution. Households with a monthly income of less than RM4,850 per month.
Group M40	The group of households earning the middle 40 percent of the overall income distribution. Households with a monthly income between RM4,851 to RM10,970 per month.
Group T20	The group of households earning the top 20 percent of the overall income distribution has the highest income of more than RM10,971 per month.
Homeless	People who do not have a place of residence or an irregular place of residence.
Inclusive	Inclusive means covering all groups and layers of society among citizens, whether in terms of gender, ethnicity, socio-economic status, age, education, religion or space.
Infill Development	Development or redevelopment carried out on vacant land or developed sites located within built-up areas and areas under development.
Industry4WRD	The Industri4WRD policy is a national policy designed to encourage the development of Malaysian products and services by using innovative manufacturing capabilities based on technology.

TERMS	INTERPRETATION
Internet of Things (IoT)	It is a network of devices, vehicles, home appliances and other physical items that are implemented with electronic components, software, sensors, actuators and connectivity that allow such devices to connect, collect and exchange data.
Labour	The labour force refers to the population in the working age group (15 to 64 years) whether employed or unemployed.
Linear Corridor	Areas/green/ecological zones that connect one area to another in a row.
Mitigation	Actions taken to overcome/reduce the implications of a natural disaster and climate change.
Micromobility	Refers to transportation solutions for short distance travel usually in the first or last distance of the trip.
Mobility Active	Pedestrian paths, bicycle paths and micromobility vehicles.
Monocentric	A city that has one business center (the Central Business District) with economic, cultural, and administrative activities concentrated in the central area and growing out of one center.
Multi National	A company that has assets and facilities in one or more countries, other than the home country, and has a centralized office where global management is coordinated.
Observatory center	A national data, reference, monitoring and reporting center that monitors the well-being and sustainability of sustainable cities through social, municipal, economic and environmental aspects.
Pandemic	Pandemic refers to an epidemic that attacks in a larger scope and is not limited to a community or district alone.
Photovoltan	Photovoltan is a field of technology and research related to the conversion of energy from sunlight into electricity.
Plot Ratio	Plot ratio means the ratio between the area of the floor space of the building compared with the area of the building plot as defined in Act 267 (Part 1, Section 2).
Polycentric	A city that develops or grows by having more than one business center where each one has its own economic, cultural, and administrative functions.
Public Space	Public space is a social space that is generally open and can be used by the public.
Senior citizen	Individuals aged 60 years and above.
Smart City	A smart city is a technologically modern urban area that uses different types of electronic methods and sensors to collect specific data. Information gained from that data is used to manage assets, resources and services efficiently; in return, that data is used to improve operations across the city.
Smart Climate	"Smart climate" refers to concepts related to climate change or intelligent environmental management using technology or artificial intelligence.
Spatial	Spatial is related to space.
Spatium	Spatium is a concept for creating overlapping development on top of existing development and the creation of layered ownership with volume lots below and above the ground surface, aiming to meet the needs of the increasingly high demand for land.
Stratum	Stratum is underground soil that has been identified for the purpose of independent and unrelated disposal or use.

TERMS	INTERPRETATION
Solar Energy	Solar energy or solar energy is a technology for obtaining useful energy from sunlight.
Sustainable Development	An agenda to produce an action plan that realises human rights, gender equality and empowers women and children. The goal is integrated and balances the three dimensions of sustainable development including economic, social and environmental.
Territory	Territory means an area that spans two (2) or more administrative areas. According to the Urban and Rural Planning Act, Aka 172, a region consists of two (2) states or more.
Transit Oriented Development (TOD)	Transit Oriented Development (TOD) is a mixed residential and commercial area designed to maximize access to public transportation and often incorporates features to encourage transit riders.
Universal Design	The design of environments and products that can be used freely by all groups of individuals without the need for any adaptation or special design.
Youth Citizens	Individuals between the ages of 15 and before reaching the age of 30.
Wave Energy	Wave power devices extract energy directly from surface waves or from subsurface pressure fluctuations. Wave energy can be converted into electricity by changing the movement of the water surface or the change in water pressure as the wave propagates

ABBREVIATIONS

	BAHASA MELAYU	ENGLISH
4G/5G	Penjanaan Teknologi Rangkaian Selular Jalur Lebar	Generation Of Broadband Cellular Network Technology
CM	Langkah Balas	Countermeasures
CO2	Karbon Dioksida	Carbon Dioxide
CPTED	Pencegahan Jenayah Melalui Reka Bentuk Persekitaran	Crime Prevention Through Environment Design
CUT	Terowong Utiliti Bersama	Common Utility Tunnel
DBKL	Dewan Bandaraya Kuala Lumpur	Kuala Lumpur City Hall
DCS	Sistem Penyejukan Daerah	District Cooling System
DINK	Pendapatan Berganda Tiada Anak	Dual Income No Kids
DNH	Jabatan Warisan Negara	Department of National Heritage
DPN	Dasar Perbandaran Negara	National Municipal Policy
DPN 2019-2030	Dasar Pengangkutan Negara 2019-2030	National Transport Policy 2019-2030
DPN2	Dasar Perbandaran Negara Kedua	Second National Municipal Policy
DPN2030	Dasar Pengangkutan Negara 2030	National Transport Policy 2030
DRR	Pengurangan Risiko Bencana	Disaster Risk Reduction
DUKE	Lebuhraya Duta- Ulu Kelang	Duta- Ulu Kelang Expressway
DURC	Persimpangan Jalan Utiliti Khusus	Dedicated Utility Road Crossing
ECRL	Laluan Kereta Api Pantai Timur	East Coast Railway Line
EIA	Penilaian Impak Alam Sekitar	Environment Impact Asessment
ERL	Pautan Rel Ekspres	Express Rail Link
ESCP	Pelan Kawalan Hakisan dan Sedimen	Erosion and Sediment Control Plan
ETS	Perkhidmatan kereta api eletrik	Electric Train Service
FiT	Tarif Galakan	Feed-In Tariff
FRIM	Institut Penyelidikan Perhutanan Malaysia	Malaysian Forestry Research Institute
GBI	Indeks Bangunan Hijau	Green Building Index
Gbps	Gigabit Sesaat	Gigabits Per Second
GHG	Pelepasan Gas Rumah Hijau	Greenhouse Gas Emissions
GIS	Sistem Maklumat Geografi	Geographic Information System
GPWPKL 2010	Garis Panduan Perancangan Pembangunan di Kawasan Bukit dan Cerun bagi WPKL 2010	Guidelines for Development Planning in Hill and Slope Areas for WPKL 2010
Greentech Malaysia	Pusat Teknologi Hijau dan Perubahan Iklim Malaysia	Centre for Green Technology and Climate Change Malaysia

	BAHASA MELAYU	ENGLISH
GUO	Balai Cerap Bandar Global	Global Urban Observatory
HORAS	Sistem Pembesaran Luar Sungai Hibrid	Hybrid Off River Augmentation System
HSK	Hutan Simpan Kekal	Permanent Forest Reserve
HSR	Keretapi Berkelajuan Tinggi	High Speed Rail
HTMP	Pelan Induk Jejak Warisan	Heritage Trail Master Plan
IBS	Sistem Bangunan Berindustri	Industrialised Building System
ICT	Teknologi Komunikasi dan Maklumat	Communication and Information Technology
IKM	Institut Koperasi Malaysia	Malaysian Cooperative Institute
IKS	Industri Kecik Sederhana	Medium Small Industry
IMUO	Balai Cerap Bandar Iskandar Malaysia	Iskandar Malaysia Urban Observatory
Industry 4WRD	Dasar Industri 4.0 Kebangsaan	National Industry 4.0 Policy
INSKEN	Institut Keusahawanan Negara	National Institute of Entrepreneurship
IoT	Internet Pelbagai Benda	Internet of Things
IP	Inisiatif Pelaksanaan	Implementation Initiative
IP	Inovatif dan Produktif	Innovative and Productive
IPT	Institusi Pengajian Tinggi	Higher education institutions
IPU	Indeks Pencemaran Udara	Air pollution index
IS	Inklusif dan Saksama	Inclusive and Fair
ITIS	Sistem Pengurusan Pengangkutan Pintar	Intelligent Transportation Management System
IUCN	Kesatuan Antarabangsa untuk Pemuliharaan Alam Sekitar	International Union for Conservation of Nature
Jalan TAR	Jalan Tuanku Abdul Rahman	Tuanku Abdul Rahman Street
JAS	Jabatan Alam Sekitar	Environmental Department
JAWI	Jabatan Agama Islam Wilayah Persekutuan	Federal Territories Department of Islamic Religion
JBP	Jabatan Pengangkutan Bandar	Department of Urban Transport
JKKN	Jabatan Kebudayaan dan Kesenian Negara	National Department of Culture and Arts
JKM	Jabatan Kebajikan Masyarakat	Social Welfare Department
JKTSM	Jabatan Tenaga Kerja Semenanjung Malaysia	Department of Manpower Peninsular Malaysia
JMG	Jabatan Mineral dan Geosains	Department of Minerals and Geosciences
JMM	Jabatan Meteorologi Malaysia	Department of Meteorology Malaysia
JPJ	Jabatan Pengangkutan Jalan	Department of Road Transport

	BAHASA MELAYU	ENGLISH
JPPH	Jabatan Penilaian dan Perkhidmatan Harta	Valuation and Property Services Department
JPS	Jabatan Pengairan dan Saliran	Department of Irrigation and Drainage
JPWKL	Jabatan Pendidikan Wilayah Persekutuan Kuala Lumpur	Education Department of the Federal Territory of Kuala Lumpur
JWN	Jabatan Warisan Negara	National Heritage Department
KDNK	Keluaran Dalam Negara Kasar	Gross Domestic Product
Ketsa	Kementerian Tenaga dan Sumber Asli	Ministry of Energy and Natural Resources
KL	Kuala Lumpur	Kuala Lumpur
KLCAP	Pelan Tindakan Iklim Kuala Lumpur	Kuala Lumpur Climate Action Plan
KLCC	Pusat Bandaraya Kuala Lumpur	Kuala Lumpur City Centre
KLIA	Lapangan Terbang Antarabangsa Kuala Lumpur	Kuala Lumpur International Airport
KLIA 2	Lapangan Terbang Antarabangsa Kuala Lumpur 2	Kuala Lumpur International Airport 2
KLUO	Balai Cerap Bandar Kuala Lumpur	Kuala Lumpur Urban Observatory
KPKT	Kementerian Perumahan dan Kerajaan Tempatan	Ministry of Housing and Local Govermance
KPLB	Kementerian Pembangunan Luar Bandar	Ministry of Rural Development
KPSBM	Kementerian Pelancongan, Seni dan Budaya Malaysia	Ministry of Tourism, Arts and Culture Malaysia
KPTB	Kadar Penyertaan Tenaga Buruh	Labor Force Participation Rate
KRM	Kawasan Rizab Melayu	Malay Reserve Area
ktCO2eq	Kilo Tan Karbon Dioksida Setara	Kilo Tons of Carbon Dioxide Equivalent
KTM	Keretapi Tanah Melayu	Malayan Railway
KTN	Kanun Tanah Negara	National Land Code
Ktoe	Kilo Ton setara minyak	Kilotonne of Oil Equivalent
KULSIS	Sistem Maklumat Cerun Kuala Lumpur	Kuala Lumpur Slope Infirmation System
kWh	Kilowatt-jam	Kilowatt-hour
KWP	Kementerian Wilayah Persekutuan	Ministry of Federal Territories
LA21	Agenda Tempatan 21	Local Agenda 21
LC	Perdagangan Tempatan	Local Trade
LCCF	Rangka Kerja Bandar Rendah Karbon	Low Carbon City Framework
LED	Diod pemancar cahaya	Light Emitting Diode
LEO	Pejabat Tenaga Rendah	Low Energy Office
LEZ	Zon Pelepasan Rendah Karbon	Low Emission Zone

	BAHASA MELAYU	ENGLISH
LID	Pembangunan Berimpak Rendah	Low Impact Development
LPPPIR	Laporan Penyiasatan Pendapatan dan Perbelanjaan Isi Rumah	Household Income and Expenditure Survey Report
LRA	Loji Rawatan Air	Water Treatment Plant
LRT	Transit Aliran Ringan	Light Rail Transit
LUAS	Lembaga Urus Air Selangor	Selangor Water Management Board
M2	Meter Persegi	Square Meters
M40	Kumpulan pendapatan pertengahan 40%	Middle 40% income group
MAA	Persatuan Automotif Malaysia	Malaysian Automotive Association
MARA	Majlis Amanah Rakyat	People's Trust Council
MAS	Penempatan Pertanian Melayu	Malay Agricultural Settlement
MATIC	Pusat Pelancongan Malaysia	Malaysian Tourism Center
MATRADE	Perbadanan Pembangunan Perdagangan Luar Malaysia	Malaysia External Trade Development Corporation
MBPJ	Majlis Bandaraya Petaling Jaya	Petaling Jaya City Council
Mbps	Megabit Sesaat	Megabits Per Second
MBSA	Majlis Bandaraya Shah Alam	Shah Alam City Council
MC	Mobiliti Cekap	Efficient Mobility
MEDEC	Pusat Pembangunan Usahawan Malaysia	Malaysian Entrepreneur Development Center
MESTECC	Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim	Ministry of Energy, Science, Technology. Environment and Climate Change
MGTC	Perbadanan Teknologi Hijau Malaysia	Malaysia Green Technology Corporation
MICE	Mesyuarat, Insentif, Persidangan dan Pameran	Meeting, Incentives, Conferences and Exhibitions
MIDA	Lembaga Penggalak Industri Malaysia	Malaysian Industry Promotion Board
MIGHT	Kumpulan Industri-Kerajaan Bagi Teknologi Tinggi Malaysia	Malaysian Industry - Government Group for high Technology
MNC	Syarikat Multinasional	Multinational Corporation
MOSTI	Kementerian Sains, Teknologi dan Inovasi	Ministry of Science, Technology and Innovation
MOT	Kementerian Pengangkutan	Ministry of Transportation
MOTAC	Kementerian Pelancongan, Seni dan Budaya	Ministry of Tourism, Arts and Culture

	BAHASA MELAYU	ENGLISH
MPAJ	Majlis Perbandaran Ampang Jaya	Ampang Jaya Municipal Council
MPFN	Majlis Perancangan Fizikal Negara	National Physical Planning Council
MPK	Majlis Perbandaran Klang	Klang Municipal Council
MPKJ	Majlis Perbandaran Kajang	Kajang Municipal Council
MPKL	Majlis Perbandaran Kuala Langat	Kuala Langat Municipal Council
MPS	Majlis Perbandaran Selayang	Selayang City Council
MPSepang	Majlis Perbandaran Sepang	Sepang Municipal Council
MRF	Kemudahan Pemulihan Bahan	Material Recovery Facility
MRT	Transit Aliran Massa	Mass Rapid Transit
MSC	Koridor Raya Multimedia	Multimedia Super Coridor
MSMA	Manual Saliran Mesra Alam	Environmentally Friendly Drainage Manual
MTDC	Perbadanan Pembangunan Teknologi Malaysia	Malaysian Technology Development Corporation
MUO	Balai Cerap Bandar Malaysia	Malaysia Urban Observatory
MVEC	Pusat Pameran Mid Valley	Mid Valley Exhibition Centre
MW	Megawatt	Megawatt
MWh	Megawatt-jam	MegaWatt-hour
MWp	MegaWatt-peak	MegaWatt-peak
MX	Pembangunan bercampur	Mix Development
NAPIC	Pusat Maklumat Harta Tanah Negara	National Property Information Centre
NBS	Penyelesaian Berasaskan Alam Semula Jadi	Nature- Based Solution
NEM	Pemeteran Tenaga Bersih	Net Energy Metering
NFCP	Gentian Kebangsaan Pelan Kesalinghubungan	National Fibersation on Connectivity Plan
NGO	Pertubuhan Bukan Kerajaan	Non-Governmental Organizations
NPCC	Dasar Perubahan Iklim Negara	National Climate Change Policy
NPE	Lebuhraya Pantai Baru	New Pantai Expressway
NRW	Kehilangan air tidak berhasil	Non-Revenue Water
NUA	Agenda Perbandaran Baharu	New Urban Agenda
nZEB	Bangunan Hampir Sifar Tenaga	Nearly Zero Energy Building
NZEB	Bangunan Tenaga Sifar Bersih	Net Zero Energy Building

	BAHASA MELAYU	ENGLISH
OKU	Orang Kelainan Upaya	Persons with Disabilities
OSD	Penahanan Di Tapak	On-Site Detention
OUG	Taman Overseas Union	Overseas Union Garden
P2P	Rakan kepada Rakan Sebaya	Peer to Peer
PA	Perumahan Awam	Public Housing
PASS	Perumahan Awam Sewa Bersubsidi	Subsidized Rental Public Housing
PBB	Pertubuhan Bangsa-bangsa Bersatu	United Nations
PBN	Pihak Berkuasa Negeri	State Authorities
PBRKL 2020	Pelan Bandar Raya Kuala Lumpur 2020	Kuala Lumpur City Plan 2020
PBT	Pihak Berkuasa Tempatan	Local Authority
PEERS	Rakan Kongsi Melibatkan dan Memperkasakan Orang yang Tidur Kasar	Partners Engaging and Empowering Rough Sleepers
PGK	Pendapatan Garis Kemiskinan	Poverty Line Income
PIJWKL	Pelan Induk Jejak Warisan Kuala Lumpur	Kuala Lumpur Heritage Trail Master Plan
PIMRK KL 2030	Pelan Induk Masyarakat Rendah Karbon Kuala Lumpur 2030	Kuala Lumpur Low Carbon Society Master Plan 2030
PITKL	Pelan Induk Trafik Kuala Lumpur 2040	Kuala Lumpur Traffic Master Plan 2040
PKG	Pemegang Kelulusan Galakan	Promotional Approval Holders
PKI	Penambahbaikan Kawasan Industri	Industrial Area Improvement
PKJ	Penambahbaikan Kawasan Kejiranan	Neighbourhood Improvement
PKK	Penambahbaikan Kawasan Komesial	Commercial Area Improvement
PKK	Pengurusan Kawasan Khas	Special Area Management
PKNS	Perbadanan kemajuan Negeri Selangor	Selangor State Development Corporation
PKP	Perintah Kawalan Pergerakan	Movement Control Order
PKPR	Pejabat Kecil Pejabat Rumah	Small Office Home Office
PLP	Pemegang Lesen Pengagihan	Distribution Licensee
PMB	Prasarana Malaysia Berhad	Infrastructure Malaysia Berhad
PMD	Alat Mobiliti Peribadi	Personal Mobility Devices
PPAM	Perumahan Penjawat Awam Malaysia	Malaysian Civil Servant Housing

	BAHASA MELAYU	ENGLISH
ROW	Hak Laluan	Right of Way
RSTP	Loji Rawatan Kumbahan Serantau	Regional Sewage Treatment Plant
RTB	Rancangan Tebatan Banjir	Flood Mitigation Plan
RTM	Radio dan Televisyen Malaysia	Radio and Television Malaysia
RUC	Mengecas Pengguna Jalan Raya	Road User Charging
RUMAWIP	Rumah Mampu Milik Wilayah Persekutuan	Federal Territories Affordable Homes
SAIDI	Indeks Tempoh Gangguan Purata Sistem	System Average Interruption Duration Index
SAM	Kawasan Pengurusan Khas	Special Area Management
SDG	Matlamat Pembangunan Mampan	Sustainable Development Goals
SEDA	Pihak Berkuasa Pembangunan Tenaga Lestari	Sustainable Energy Development Authority
SESB	Sabah Electricity Sdn. Bhd	Sabah Electricity Sdn. Bhd
SFDRR	Rangka Kerja Sendai untuk Pengurangan Risiko Bencana 2015-2030	Sendai Framework for Disaster Risk Reduction 2015-2030
SIA	Penilaian Impak Sosial	Social Impact Asessment
SIRIM	Institut Piawaian dan Penyelidikan Perindustrian Malaysia	Malaysian Institute of Standards and Industrial Research
SKM	Suruhanjaya Koperasi	Cooperative Commission
SMART	Pengurusan Air Ribut dan Terowong Jalan	Stormwater Management and Road Tunnel
SOHO	Pejabat Kecil Rumah Pejabat	Small Office Home Office
SOV	Penggunaan Kenderaan Persendirian	Use of Private Vehicles
SP	Strategi Perancangan	Planning Strategy
SPAH	Sistem Penuaian Air Hujan	Rainwater Harvesting System
ST	Suruhanjaya Tenaga	Energy Commission
SUDS	Sistem Saliran Bandar Mampan	Sustainable Drainage Systems
SV	Sihat dan Vibrant	Healthy and Vibrant
SWCORP	Perbadanan Pengurusan Sisa Pepejal Dan Pembersihan Awam	Solid Waste Management and Public Cleansing Corporation
T20	Kumpulan berpendapatan Atas 20%	Top 20% income group
TAPS	Takungan Air Pinggiran Sungai	Riverside Water Reservoir
TAZ	Zon Aktiviti Lalu Lintas	Traffic Activity Zone

	BAHASA MELAYU	ENGLISH
tc02EQ tan	Karbon Dioksida Setara	Carbon Dioxide Equivalent
TDR	Pemindahan Hak Pembangunan	Transfer of Development Rights
TEKUN	Tabung Ekonomi Kumpulan Usaha Niaga	Business Group Economic Fund
TIA	Penilaian Impak Lalulintas	Traffic Impact Asessment
TLK	Tempat Letak Kereta	Parking lot
TLM	Tempat Letak Motosikal	Motorcycle Parking
TM	Telekom Malaysia	Telekom Malaysia
TNB	Tenaga Nasional Berhad	Tenaga Nasional Berhad
TOD	Pembangunan Berorientasikan Transit	Transit- Oriented Development
TPO	Perintah Pemeliharaan Pokok	Tree Preservation Order
TPZ	Zon Perancangan Transit	Transit Planning Zone
TRX	Tun Razak Exchange	Tun Razak Exchange
TTDI	Taman Tun Dr. Ismail	Taman Tun Dr. Ismail
TUDM	Tentera Udara Diraja Malaysia	Royal Malaysian Airforce
UAV	Dron	Unmaned Aerial Vehicle
UDA	Perbadanan Pembangunan Bandar	Urban Development Corporation
UDGKL	Garis Panduan Reka Bentuk Bandar Pusat Bandaraya Kuala Lumpur	Urban Design Guidelines Kuala Lumpur City Centre
UFC	Hutan Komuniti Bandar	Urban Community Forest
UHI	Pulau Haba Bandar	Urban Heat Island
UKAS	Unit Kerjasama Awam Swasta	Public Private Cooperation Unit
UNCRPD	Agenda Konvensyen Bersatu Mengenai Hak Orang Kurang Upaya	Agenda United Convention on the Right of Person with Disabilities
UNESCO	Pertubuhan Pendidikan, Saintifik dan Kebudayaan Bangsa-Bangsa Bersatu	The United Nations Educational, Scientific and Cultural Organization
UNFCCC	Konvensyen Rangka Kerja Perubahan Iklim Bangsa-Bangsa Bersatu	United Nations Framework Convention on Climate Change
USM	Universiti Sains Malaysia	University of Science Malaysia
UTC	Pusat Transformasi Bandar	Urban Transformation Centre
VMS	Sistem Informasi Perjalanan	Travel Information System
VMT	Batu Kenderaan Dilalui	Vehicle Miles Travelled

	BAHASA MELAYU	ENGLISH
VOC	Sebatian Organik Meruap	Volatile Organic Compound
WHO	Pertubuhan Kesihatan Dunia	World Health Organization
WKB2030	Wawasan Kemakmuran Bersama 2030	Shared Prosperity Vision 2030
WKN	Wilayah Konurbasi Nasional	National Concubine Region
WPKL	Wilayah Persekutuan Kuala Lumpur	Kuala Lumpur City Centre
WSD	Peranti Penjimatan Air	Water Saving Device
WSUD	Reka Bentuk Bandar Sensitif Air	Water Sensitive Urban Design
YUPPIES	Profesional Muda Bandar	Young Urban Professionals
ZEB	Bangunan Sifar Tenaga	Zero Energy Building

DRAFT PTKL2040