



OUR TOWN, CHOA CHU KANG: TOWN DESIGN GUIDE

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Preamble

This HDB Town Design Guide serves as a reference for consultants, town councils, and government agencies, to guide developments within our towns.

Each HDB town is distinctive, with unique history, natural features, built environment, characteristics and communities that provide a sense of identity and belonging for the residents.

Since the 2010s, HDB has planned and built new-generation public housing that is well-designed, community-centric, sustainable, and smart. To keep pace with new needs, HDB launched the Designing for Life roadmap in 2020, which is supported by 3 pillars – 'Live Well', 'Live Green', and 'Live Connected'. The roadmap will centre on the overall health and well-being of residents, to provide them with a better living environment at all stages of their lives. Careful planning backed by science and data will guide HDB's efforts in biophilic design and development of smart and sustainable solutions to help residents live more comfortably with greater convenience. HDB will also find more ways for people to foster social connections and a greater sense of place.

Today, many agencies and town councils make further enhancements and improvements to the towns. HDB wants to provide these partners with a good understanding of the vision and the development history for each town, so that they can further enhance the distinctiveness of the town, and maintain the town identity.

We have provided illustrations and ideas as a Guide to achieve this vision, and HDB welcomes creative ideas and solutions to strengthen the town identity.

Acknowledgements

We would like to thank the following organisations and government agencies for their valuable suggestions and input:

Chua Chu Kang Town Council
Land Transport Authority
Marsiling-Yew Tee Town Council
National Heritage Board
National Parks Board
People's Association
Public Utilities Board
Sport Singapore
Urban Redevelopment Authority

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User Guide

The HDB Town Design Guide establishes the planning, urban and architectural design considerations for the town/ estate at 3 scales.

Town Scale Layers

1. Read to understand the overall theme, historical and physical context of the town

Town scale layers give the general context of the town so that the developments can be aligned with HDB's overall vision of the town.

Neighbourhood Scale Layers

2. Understand the sub-theme to apply relevant planning and design guidelines in your project

Neighbourhood scale layers set out distinctive sub-themes and concepts, to reinforce the town scale layers.

Precinct Scale Layers

3. Apply the design ideas and principles in your project

Precinct scale layers guide the detailed design of projects, allowing flexibility in the micro design elements for a unique precinct identity while aligning with the district themes.

The Guide* should be used for:

New HDB Developments

At design reviews with HDB, design consultants would need to demonstrate how their proposals have addressed the design layers.

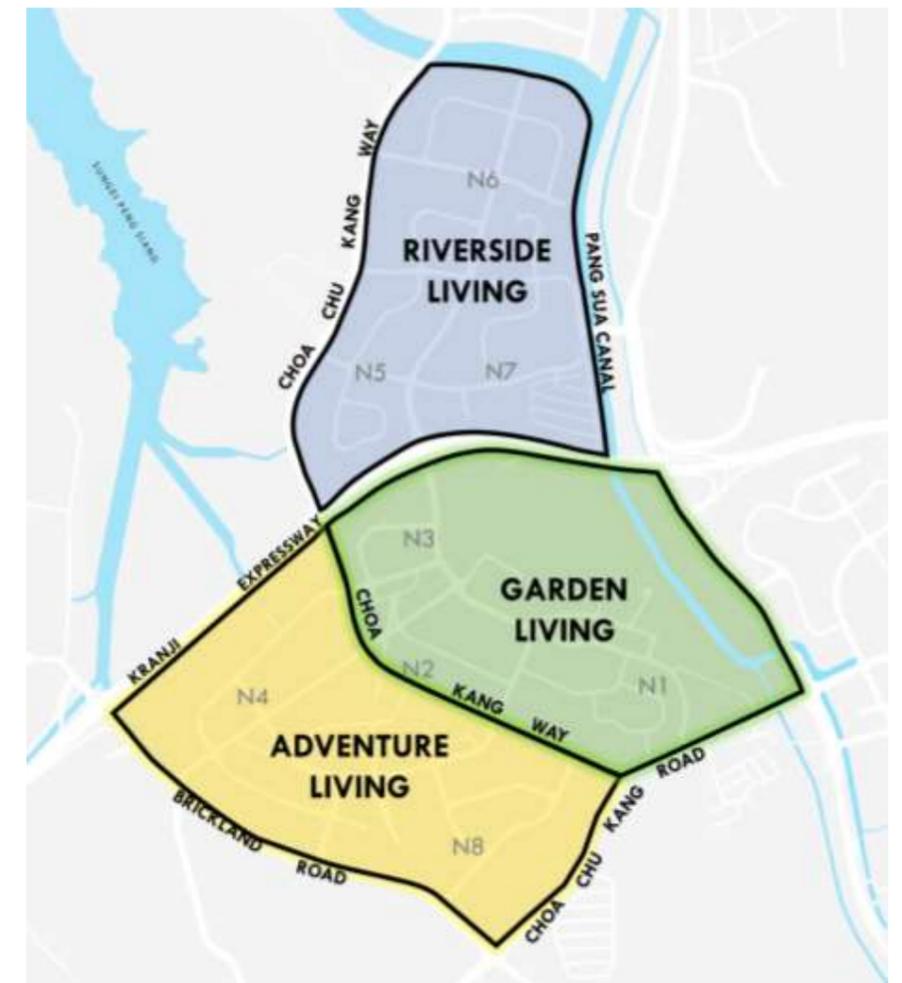
Upgrading and Improvement Projects by HDB or Town Councils

Similarly, design consultants would need to demonstrate how their proposals have responded to the design layers.

Developments by Government Agencies

Government agencies may also use the Guide as part of the design brief/ requirements for their design consultants.

**It is intended to accompany the detailed Urban Design Guidelines of specific developments, where applicable.*



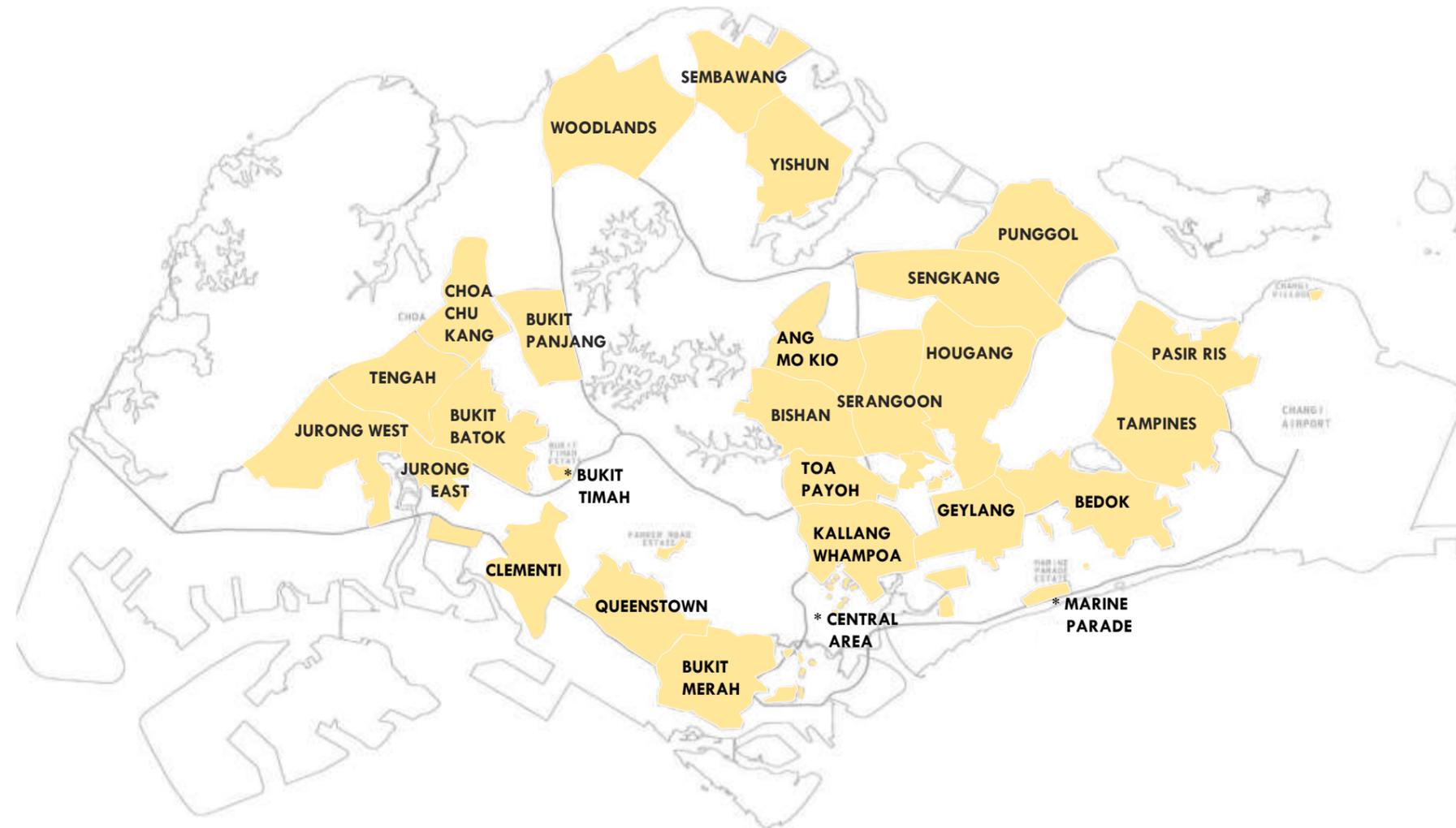
Sub-themes in Choa Chu Kang

Introduction

HDB Towns and Estates

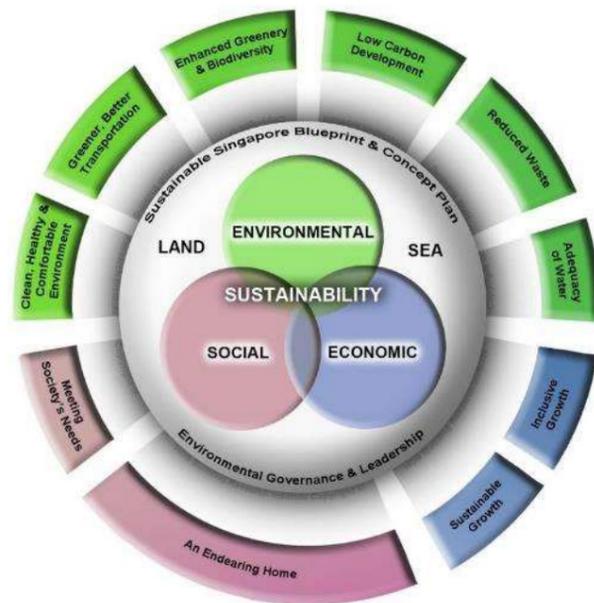
HDB carries out comprehensive town planning and design for 24 towns and 3 estates*, and strives towards achieving a clear vision and unique identity for the communities.

*Bukit Timah, Central Area and Marine Parade



Frameworks

Over the years, HDB has also introduced several frameworks to continuously improve our towns. The principles within the frameworks underpin the planning and design of new public housing developments and the rejuvenation of existing estates. These frameworks have been guided by HDB's Roadmap to Better Living introduced in 2011, and HDB's new Designing for Life Roadmap which was launched in 2020.



2011

Sustainable Development Framework

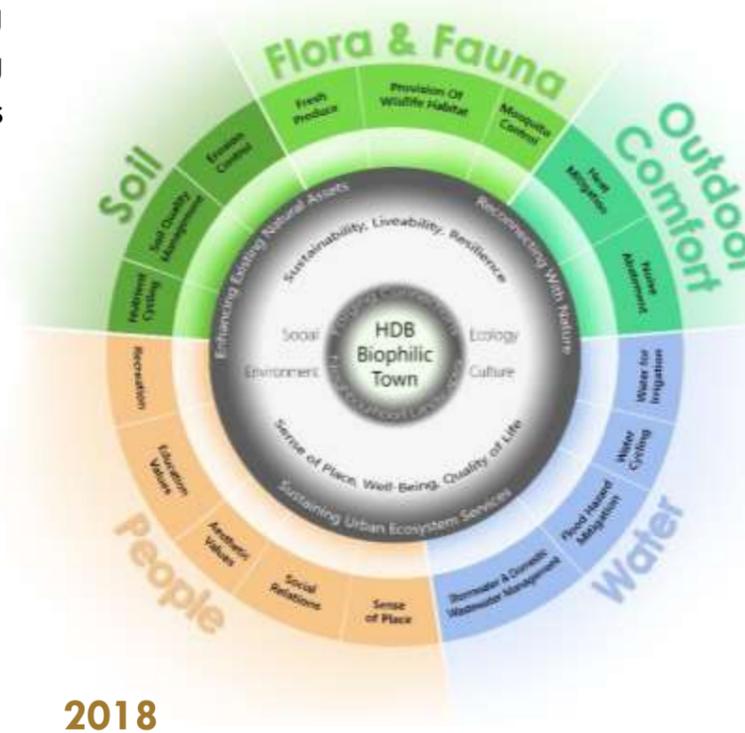
- Deploy sustainability initiatives focusing on 10 key desired outcomes across the dimensions of environmental, social and economic sustainability
- Create sustainable, liveable and more pleasant living environments for residents



2014

Smart Town Framework

- Deploy smart initiatives and technology across the dimensions of planning, environment, estate, living, and community
- Create more liveable, efficient, sustainable, safe, inclusive, empowering and resilient towns
- Supported by infrastructure and connectivity enablers including sensors, communications and a data hub



2018

Biophilic Town Framework

- Promote a greater sense of place, better well-being and enhanced quality of life for residents
- Create nature-centric neighbourhood landscapes that consider the aspects of soil, water, flora and fauna, outdoor comfort, and people



2020 and beyond

Well-being Framework

- Create 'Healthy Towns for All Ages'
- Meet holistic needs across different life cycle stages to enhance physical, mental and social well-being
- More choices for residents to lead healthy lifestyles, keep active minds and build community bonds

HDB Roadmap to Better Living (2011)



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Town Scale

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- Planning Principles
- Town Theme and Concept
- Pedestrian and Cycling Connectivity
- Parks and Waterbodies
- Key Corridors
- Key Nodes and Junctions
- Heritage Elements
- Art Elements
- Broad Landscape Theme

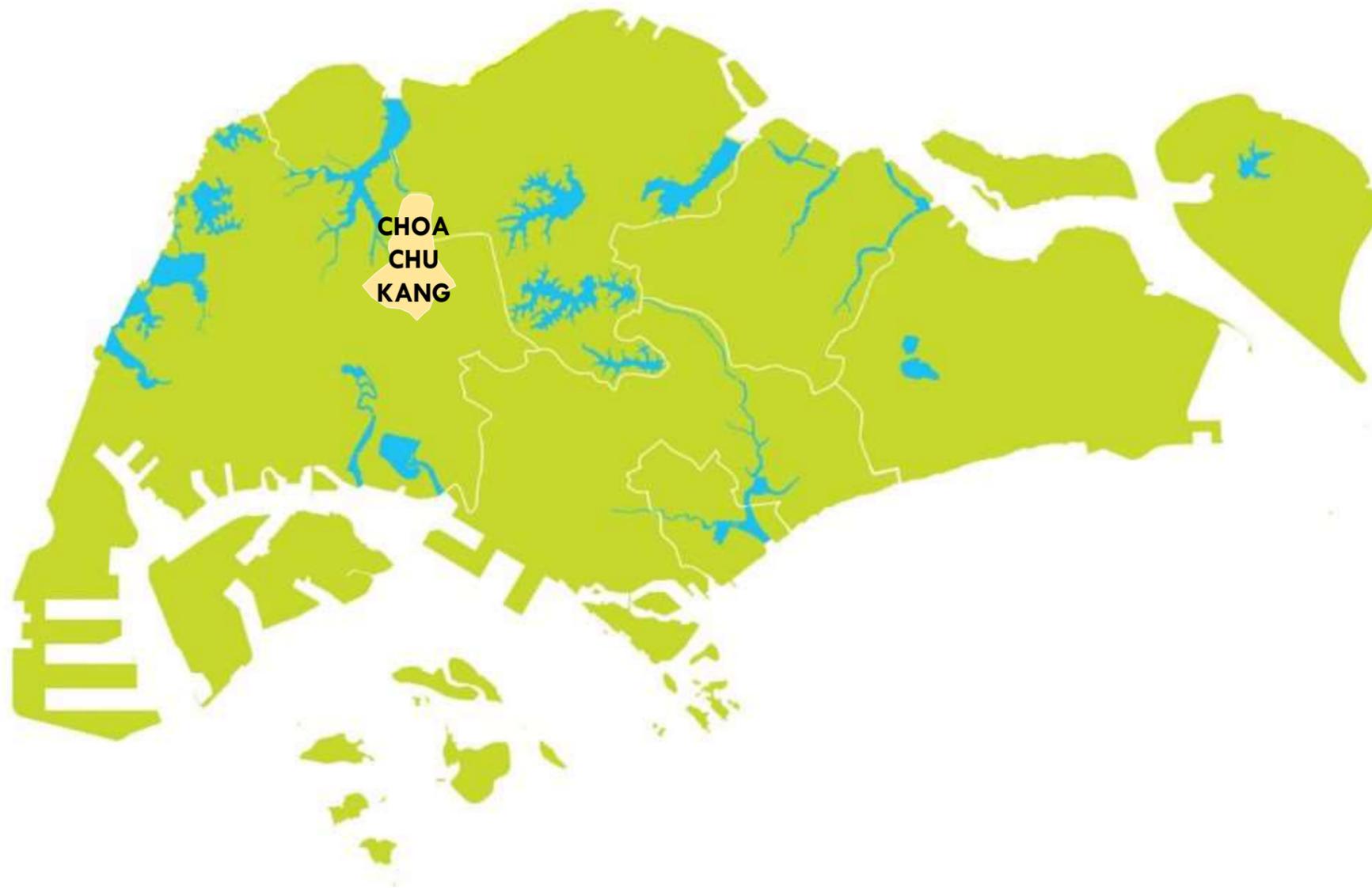
Neighbourhood Scale

- Sub-themes and Concepts
 - Form and Massing
 - Public Spaces
 - Streetscape and Urban Edge
 - Colour Palette
 - Facade and Roofscape
 - Landscape Approach

Precinct Scale

- Precinct Facilities
- Playgrounds
- Street Furniture
- Wayfinding
- Covered Linkway Design

Context and History

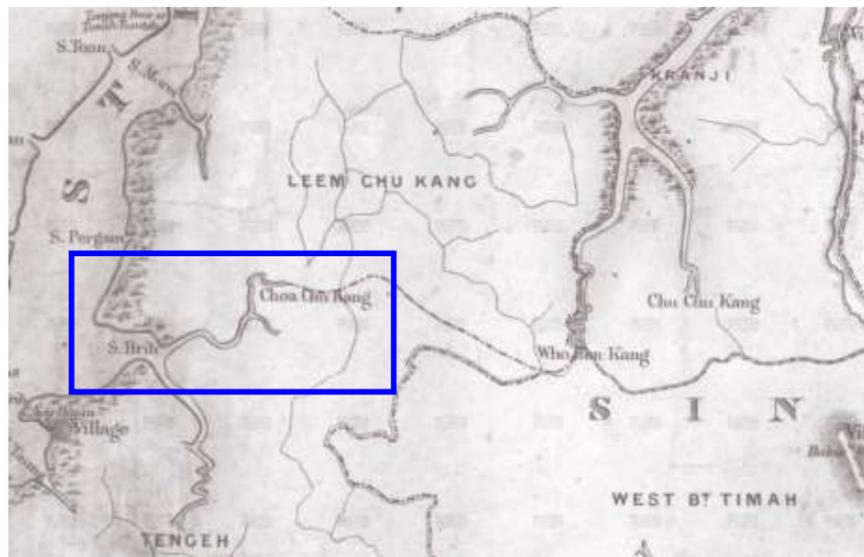


Choa Chu Kang is located in the Western Region of Singapore. Its name is derived from the Teochew dialect, based on its history of settlements at the river mouth with plantation owners known as '*kang chu*'. The settlement was headed by the '*Choa*' clan, hence its name Choa Chu Kang.

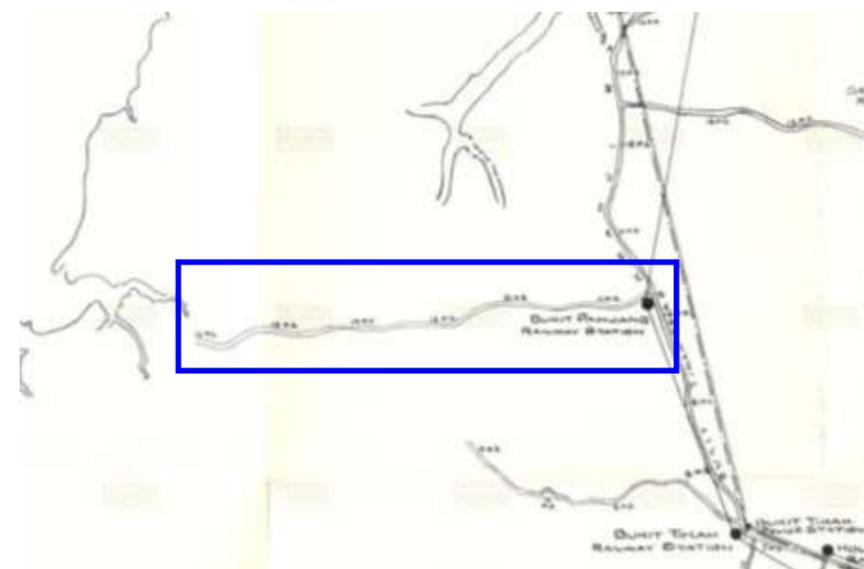
Following the resettlement of villages, Choa Chu Kang was progressively transformed into a vibrant town with wide range of commercial, community and recreational amenities for its residents.

As part of the Remaking Our Heartland programme, many residents shared feelings of being bonded and are proud of their town. Residents can now look forward to more exciting rejuvenation plans to make residents feel more "At Home with Choa Chu Kang".

Context and History



1873 map showing Choa Chu Kang village at the mouth of Sungei Berih



1912 map showing old Choa Chu Kang Road and Bukit Panjang Railway Station



Bukit Panjang Railway (before KTM closure in 2011)



Kampung House in Keat Hong Village

Historical Background

Choa Chu Kang village was originally located at the mouth of Sungei Berih, in the western fringe of Singapore. Present day Choa Chu Kang Town is in an area known as Chu Chu Kang in the 1800s.

By 1898, Choa Chu Kang had become a geographical area encompassing present-day Tengah Town and the Western Catchment area. Original settlers of Choa Chu Kang village (*kampungs* with attap houses) were gambier and pepper farmers. Later settlers grew pineapple, rubber and coconut, and had vegetable and poultry farms. Residents had to depend on boats/ bullock carts for transportation.

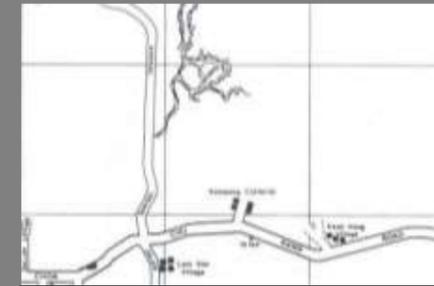
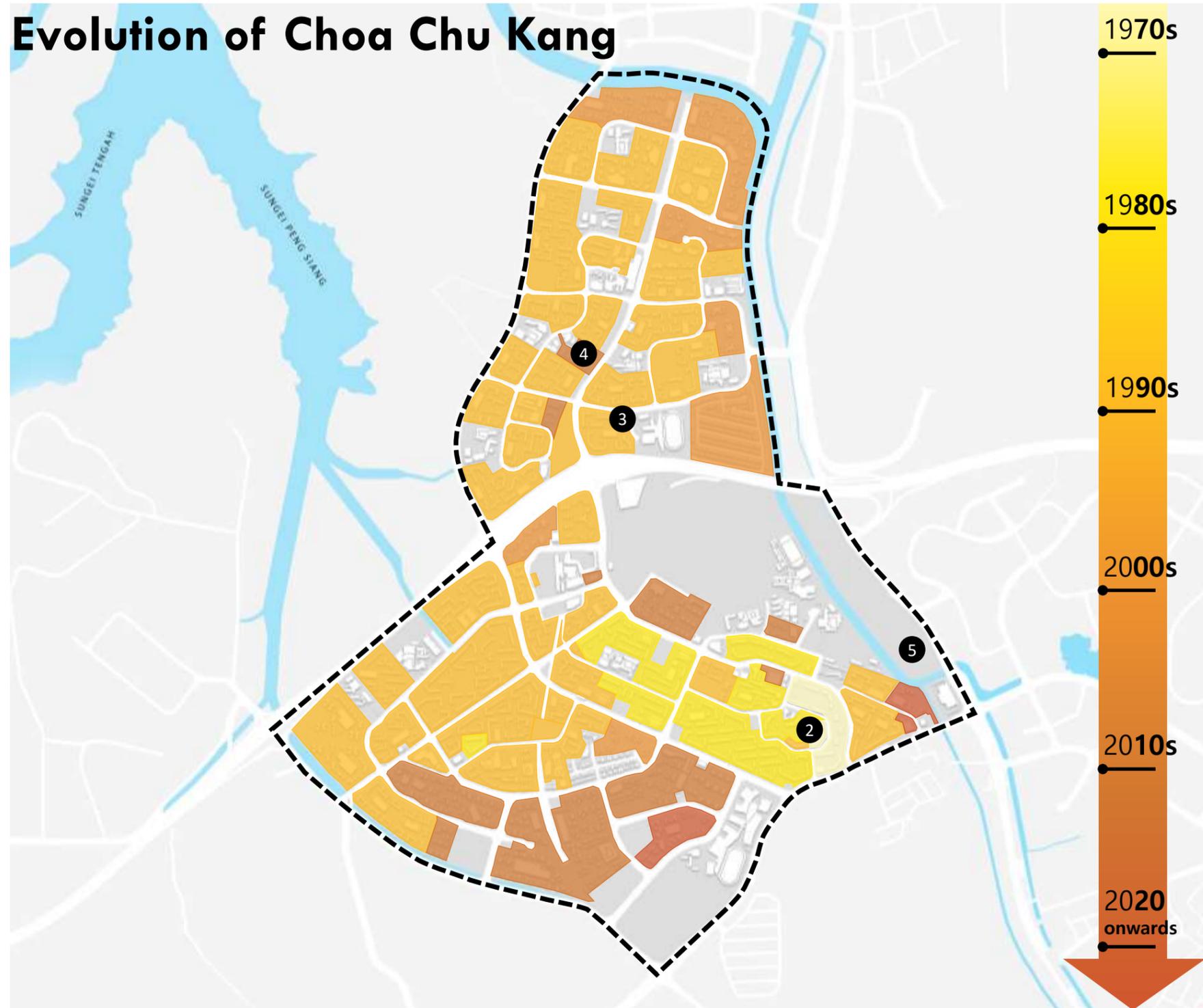
The Singapore-Johor Railway opened in the early 1900s, with Bukit Panjang Railway station being one of the stops. Old Choa Chu Kang Road also became more established to link-up the railway station to the villages on the western edges of Singapore. Traditional estates / villages (e.g. Keat Hong Estate, Tay Eng Leong Estate, etc.) started sprouting along Old Choa Chu Kang Road.

Parts of Choa Chu Kang were also used as admiralty (navy) and military areas prior to WWII.

The town is now an urban settlement along waterbodies, bounded by Pang Sua Canal and Sungei Peng Siang.

Context and History

Evolution of Choa Chu Kang



1. 1966 Map of Choa Chu Kang

Before 1970s, there were *kampungs*, plantations, villages and military camps along Old Choa Chu Kang Road.



2. Blocks 12-20 slab and point blocks in Teck Whye

From 1970 onwards, comprehensive planning began, with villages cleared for urban growth. Architecture of early housing blocks are characteristic of development forms then.



3. 1990s distinct building facades

Special architectural features were incorporated to achieve strong visual identity and build character.



4. 2000s greenery and heritage elements

By 2000s, Choa Chu Kang was mostly built up and new developments emphasised injection of greenery and heritage elements.



5. Future housing along the Rail Corridor (Artist's impression)

The town will be revitalised with the Remaking of Our Heartland programme, to achieve the vision of the town "At Home with Choa Chu Kang".

Context and History



Pineapple motifs on facade of Block 340 Choa Chu Kang Loop



Keat Hong Crest at the site of the former Keat Hong Camp, with its facade patterns inspired by the site's history



Military-themed playground at Keat Hong Garden



Rail Garden I & II fronting Rail Corridor and Sungai Pang Sua with building façade colors and patterns inspired by greenery.

Heritage and Identity

Our heritage connects us to our past, enriching our sense of place, belonging and identity. The stories from Choa Chu Kang's rich history are told today through a variety of heritage elements.

Some of the key heritage elements that strengthen the identity of Choa Chu Kang Town are:

- Plantation motifs on building facades
- Design elements relating to the area's military history
- The Rail Corridor with its alignment dating back to 1903

A new heritage trail will capture the history and heritage elements of Choa Chu Kang from the 19th century to present. The trail will cover stories of the early *kampung* era, Rail Corridor, WWII and military heritage, and housing development. NHB will be working on new research for the Choa Chu Kang Heritage Trail that is expected to be launched in 2026.

Context and History



Artist's impression of town plaza for variety of community activities



Artist's impression of play and event spaces at residents' doorsteps



Artist's impression of public space with thematic street furniture and play elements

Injecting New and Exciting Developments

1. **Town Centre in a Park**
 - Rejuvenation of Town Centre with a new integrated transport hub, mixed-use developments and refreshed facilities, set within lush landscaping.
2. **Heart of Yew Tee**
 - Integrated development with senior housing and a mix of community and healthcare facilities.
3. **New Housing along Rail Corridor**
 - New public housing development integrating greenery and heritage.

Revitalising Recreational Spaces

4. **Activity Corridor**
 - Rejuvenation of spaces under North-South Line viaduct to enrich residents' recreational experiences.
5. **Pang Sua Promenade**
 - Pang Sua Canal will be further enhanced for a pleasant experience.
6. **Wellness Zone**
 - Introduction of restorative and therapeutic spaces.

Refreshing Neighbourhood Amenities

7. **Upgrading of Neighbourhood Centres**
 - Improved spaces in Neighbourhood Centres to promote holistic well-being.
8. **Upgrading of Neighbourhood Parks and Bringing Greenery Closer to Homes**
 - Refreshed park spaces with facilities and creative injection of greenery across the town.
9. **Comprehensive Mobility Network**
 - New Jurong Region Line stations and network of park connectors, cycling paths to make travel more convenient and enjoyable



Remaking Our Heartland 4 Choa Chu Kang

The Remaking Our Heartland 4 (ROH4) plans for Choa Chu Kang Town will focus on 3 key strategies:

Injecting New & Exciting Developments

New developments that strengthen town identity, range of facilities for all

Revitalising Recreation Spaces

Variety of public spaces for community bonding

Refreshing Neighbourhood Amenities

Everyday spaces made more comfortable and convenient for all

Context and History

Overview of Engagements



*FGD – Focus Group Discussion

Residents' wishes for Choa Chu Kang

Improved range of facilities and spaces for all

More green and natural elements

Enhanced options for an active lifestyle

New facilities for convenient commute and interesting experiences around the town

Choa Chu Kang ROH

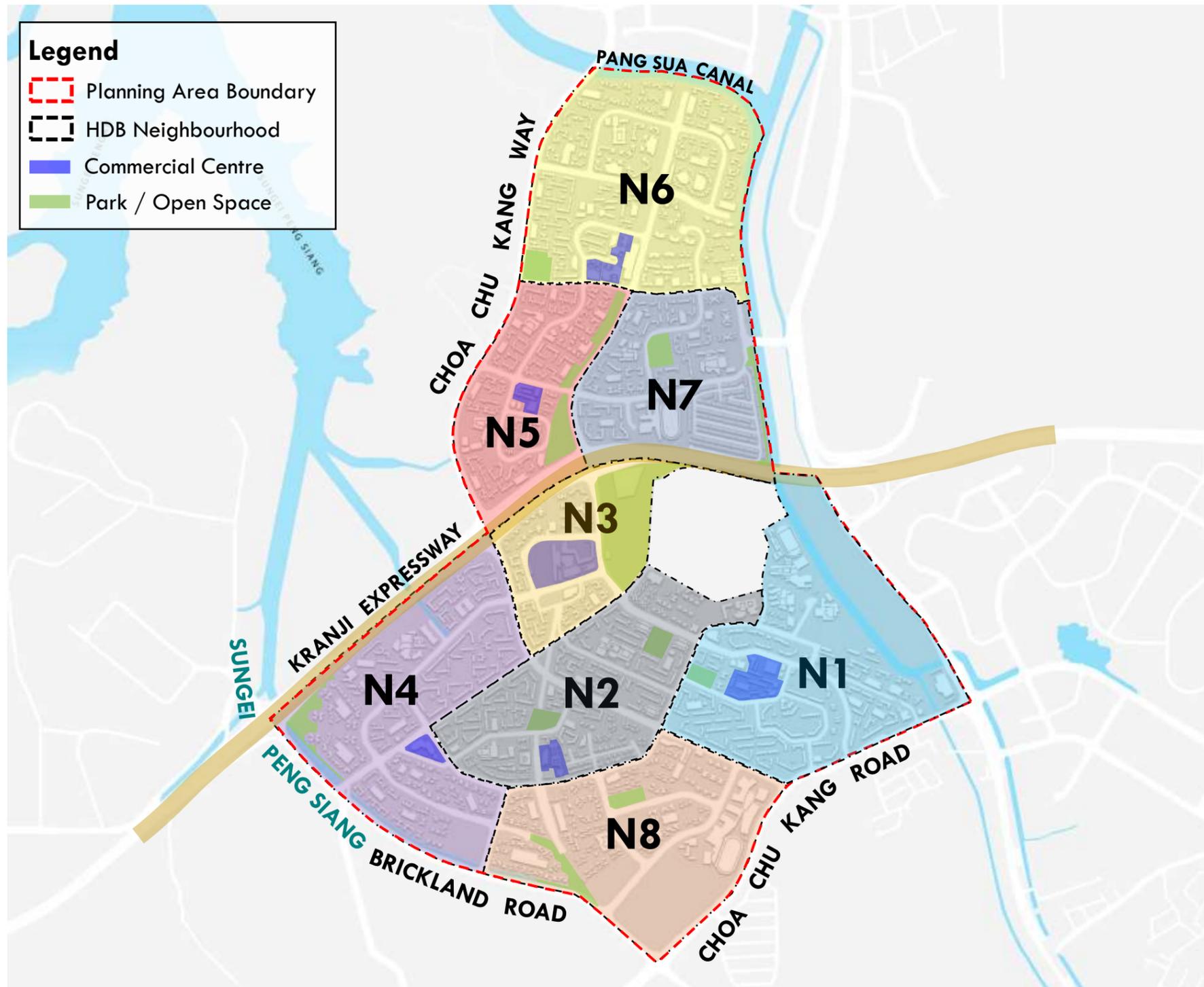
Findings from E-Survey and Focus Group Discussions (FGDs)

In drawing up the rejuvenation plans for Choa Chu Kang, HDB actively engaged residents and other stakeholders to seek their views.

About 480 participants shared their ideas for Choa Chu Kang's rejuvenation over three rounds of engagement sessions held between 2020 and 2022.

Overall, Choa Chu Kang is home to many with shared feelings of belonging and togetherness. There is a collective vision for all to be **At Home with Choa Chu Kang.**

Planning Principles



Neighbourhood Concept

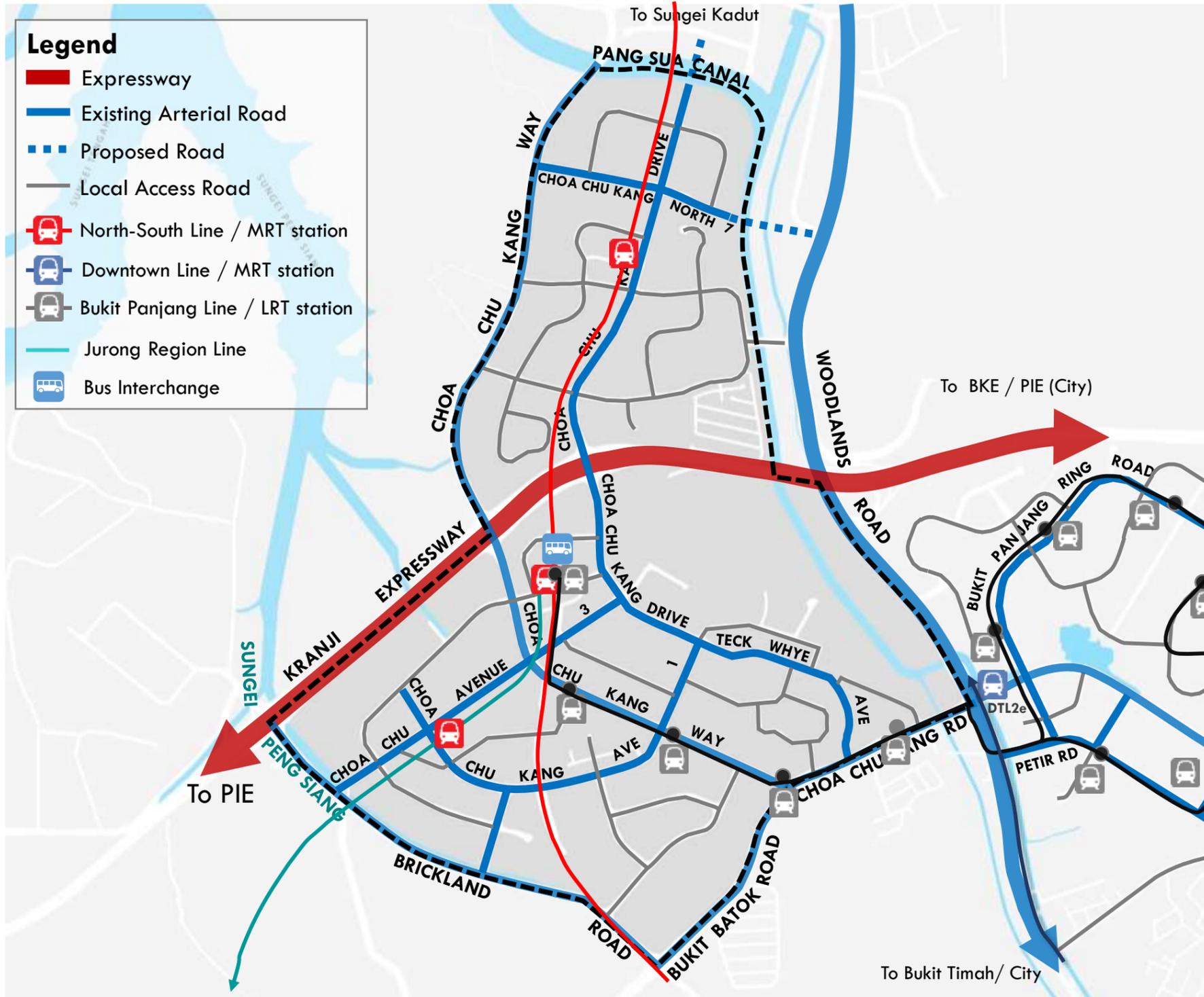
Choa Chu Kang was comprehensively planned based on the neighbourhood concept. There are currently 8 neighbourhoods planned within Choa Chu Kang.

Apart from residential developments, land is also planned and developed for a full range of complementary developments. These include commercial, educational, recreational and institutional developments to support live, work and play.

Did You Know?

Blocks are numbered according to the neighbourhood. The first digit denotes its neighbourhood number, while the second and third digits, and where necessary, a letter from the alphabet denotes the block. For example in Neighbourhood 4, the block numbering starts from 401 to 490D.

Planning Principles



Transport Network

Choa Chu Kang town is well served by the North-South MRT line and the Bukit Panjang LRT, as well as a Bus Interchange, which allows residents to stay well connected to the surrounding areas.

As the town develops, new MRT stations along the Jurong Region line will be opened to add greater connectivity to the town.

Transport network and facilities are also planned on a hierarchical basis.

Choa Chu Kang is well-connected with a comprehensive road network. Kranji Expressway divides the town into northern and southern areas and Choa Chu Kang Way further divides the southern area into two halves. Local access roads complement arterial roads to ensure accessibility.

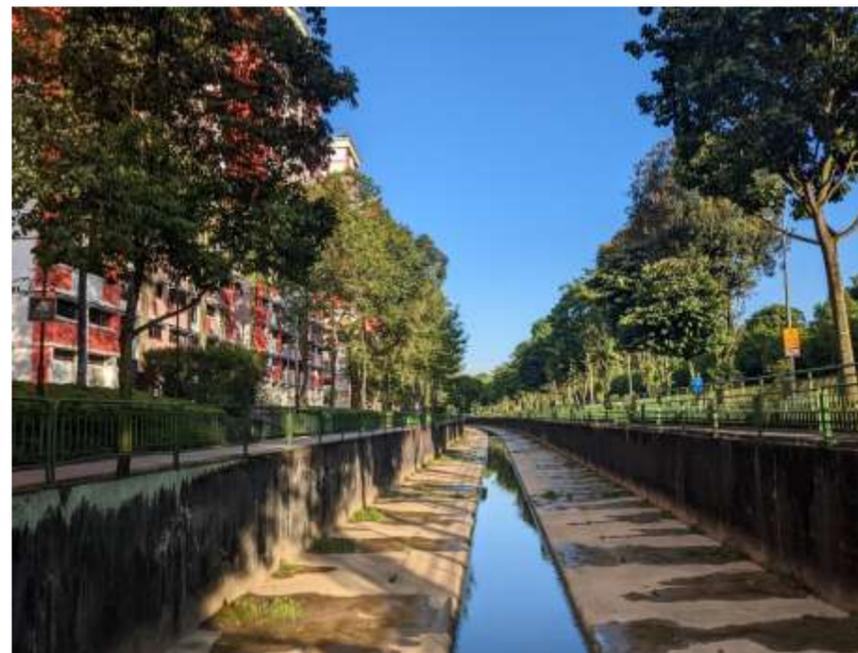
Town Theme and Concept

ETYMOLOGY AND EMERGENCE

蔡 CHOA → Head Clan's Family Name
厝 CHU KANG → A Settlement at the River Mouth
港



View of Pang Sua Canal and fishing deck adjacent to Neighbourhood 6 housing blocks



View of Sungei Peng Siang next to blocks in Neighbourhood 8

The town's name 'Choa Chu Kang' is a key source of inspiration. Its name was derived from the history of settlements at the river mouth with plantation owners known as *kang chu* in Teochew. *Chu* also means home.

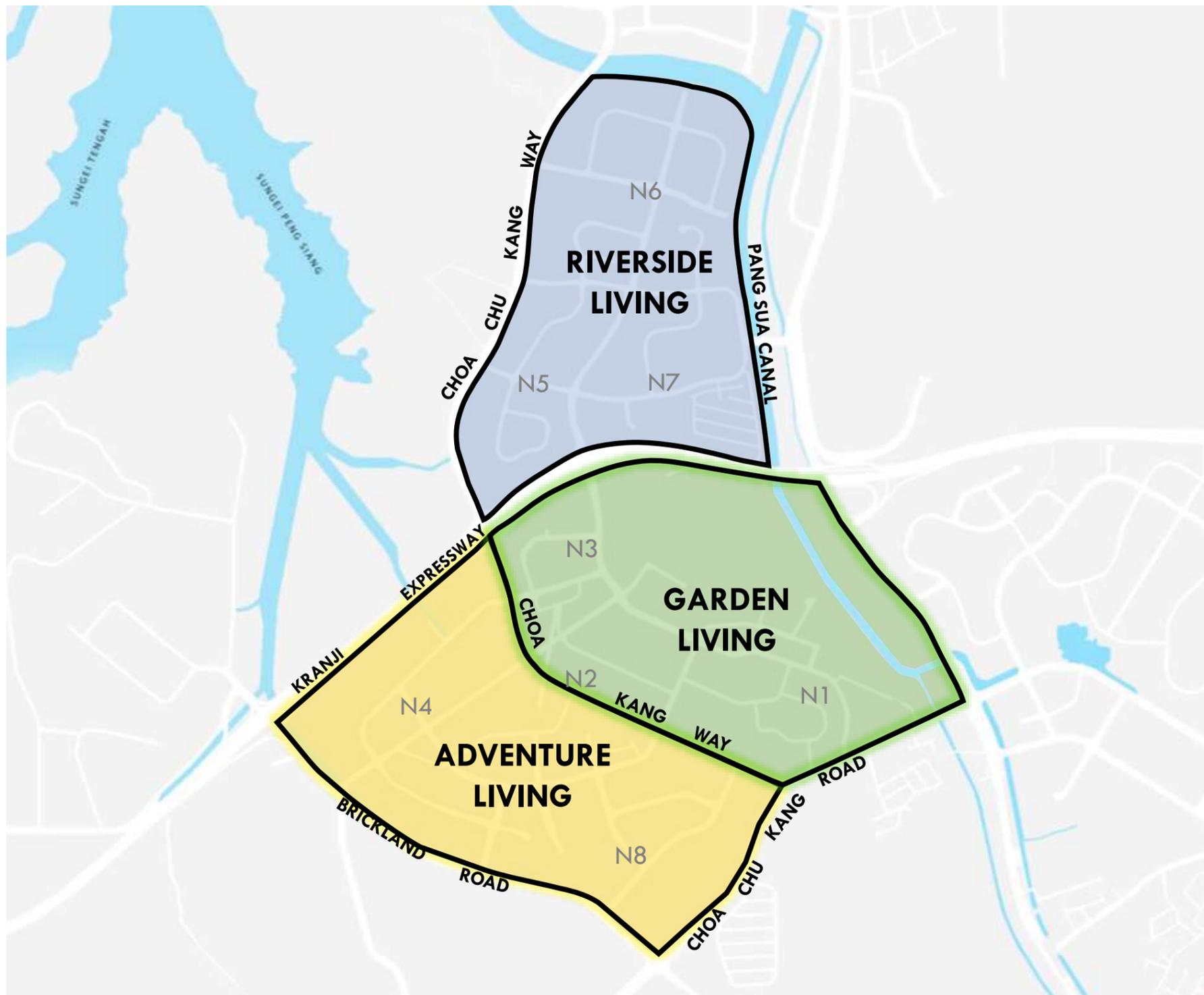
The town theme captures the experience of living near water features, such as Pang Sua Canal and Sungei Peng Siang.

Putting these together, the town theme is 'Homes by the River'.



Town Theme:
Homes By The River

Town Theme and Concept



Sub-themes by Area

Choa Chu Kang is divided into 3 different areas by Kranji Expressway and Choa Chu Kang Way. Their sub-themes are identified based on existing context, such as social and physical features, that are prevalent within the different areas.

Choa Chu Kang (North) – Riverside Living

- There were fish farms and *kampung* village in the past. Together with the Pang Sua Canal, a prominent feature today where residents frequent for recreation, the sub-theme for this area is Riverside Living.

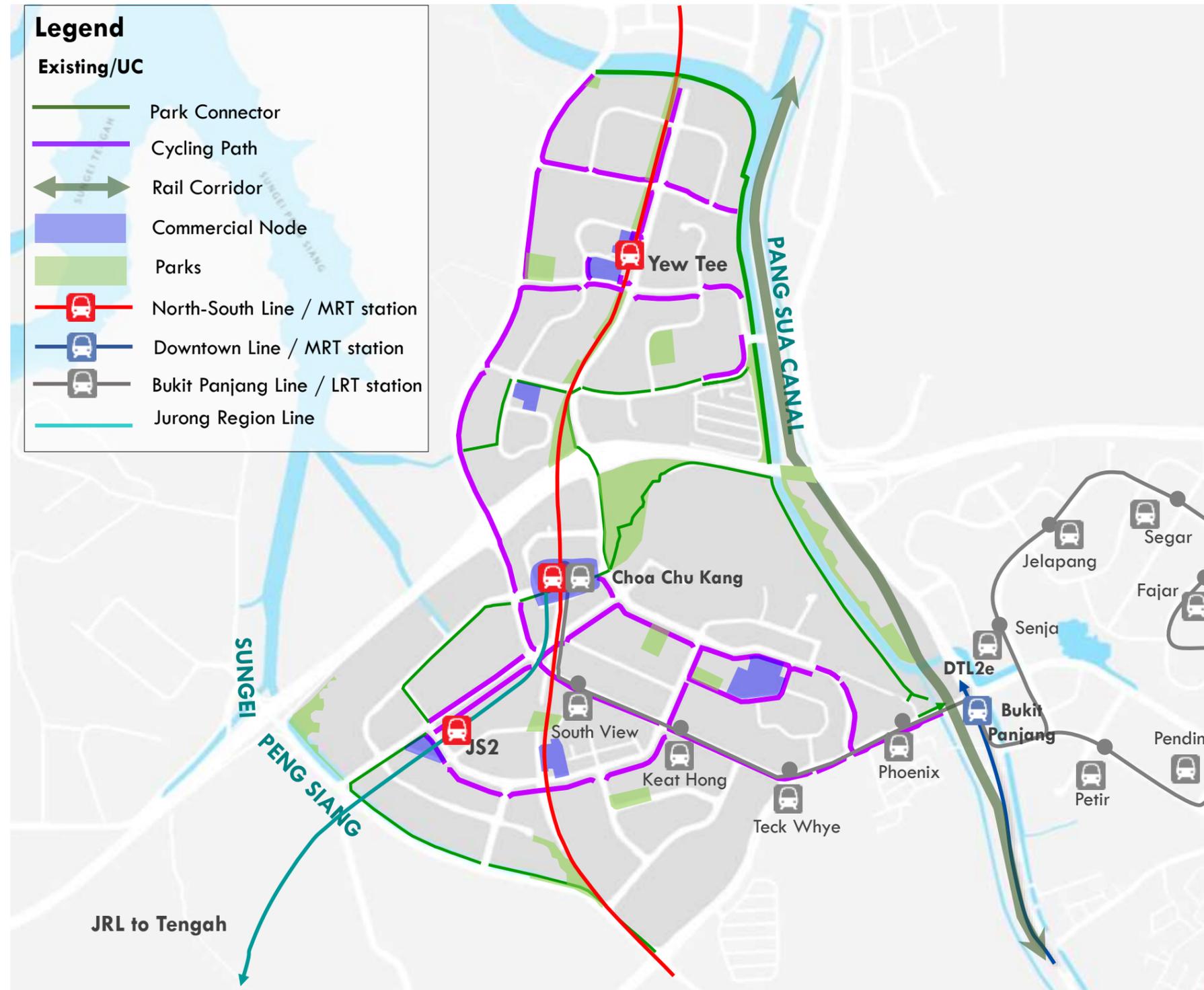
Choa Chu Kang (Southeast) – Garden Living

- Settlers grew pineapple and rubber, and had vegetable and poultry farms in Choa Chu Kang village. The spirit of cultivation lives on today, with the Town Park and many community gardens in this area.

Choa Chu Kang (Southwest) – Adventure Living

- This sub-theme is inspired by its military history and existing facilities. Previously home to Keat Hong Camp, this area is now vibrant with play and sports facilities.

Pedestrian and Cycling Connectivity



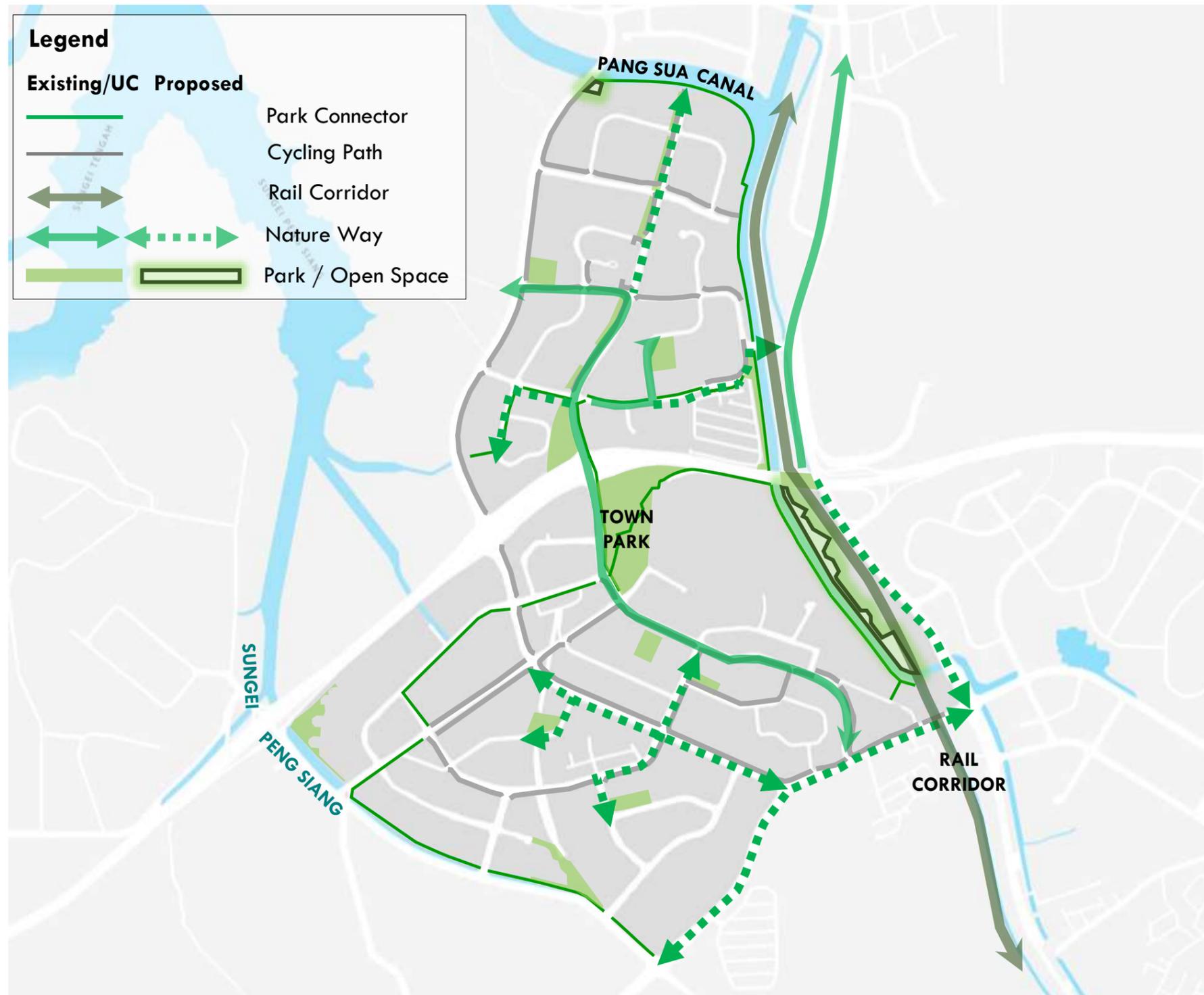
A comprehensive network of park connectors and cycling paths has been planned to support active mobility to key nodes.

The Rail Corridor also provides recreational opportunities for residents.

This map provides a useful reference when planning pedestrian connectivity and accessibility to local key nodes such as commercial centres and transport facilities.

Future developments should consider how to respond to the planned network and opportunistically address gaps in pedestrian and cycling connectivity.

Parks and Waterbodies



Pang Sua Canal and Sungei Peng Siang are the town's blue assets. Green lungs that the residents enjoy include the Town Park, neighbourhood parks and precinct greens, which are linked up by park connectors, Nature Ways and the Rail Corridor.

These spaces are valuable green assets of the town and future developments are encouraged to respond in a sensitive manner.

Key Corridors: Yew Tee Lifestyle Corridor, Limbang Green Spine and Activity Corridor



The **Yew Tee Lifestyle Corridor, Limbang Green Spine and Activity Corridor** spans from Pang Sua Canal to Bukit Batok Road and are areas under certain stretches of the North-South Line MRT viaduct which will be rejuvenated to offer different community spaces to enrich residents' recreational experiences.

- The **Yew Tee Lifestyle Corridor**, which runs from the Pang Sua Canal to Yew Tee MRT station will offer outdoor spaces to promote community bonding and healthy living.
- **Limbang Green Spine** provides resting places and sheltered linkways with new fitness equipment amidst the green to encourage healthier lifestyles.
- Enhanced wayfinding features will guide residents to explore new and interesting spaces along the **Activity Corridor**.



Artist's impression of Yew Tee Lifestyle Corridor



Limbang Green Spine



Artist's impression of Activity Corridor

Key Corridors: River Ways



River ways in Choa Chu Kang include Pang Sua Canal and Sungei Peng Siang. They provide greenery and restorative routes for activities such as jogging and cycling. Both canals will be further enhanced to provide residents with a place of respite and infuse a stronger sense of wellness for residents, enhancing the walking and cycling experience.

Future developments where feasible, should maximise views to the canal and may consider seamless access points to the canals to bring the neighbourhood closer to the water's edge.



Pang Sua Canal will be beautified with creepers along its walls



Sungei Peng Siang will be beautified with enhanced greenery, for a pleasant jogging and cycling experience

Key Corridor: Rail Corridor



The **Rail Corridor** runs along the edge of the Choa Chu Kang town. Besides its historical significance, it is an important recreational corridor for the community and also provides some ecological connectivity.

Community spaces could be introduced along the Rail Corridor, seamlessly integrating with the existing greenery of the corridor, bringing residents closer to nature. Soft street edges with dense and lush planting can be considered, contributing to the rich greenery and biodiversity of this corridor.

New developments where feasible, should maintain high degree of visual and physical porosity toward the Rail Corridor, through building orientation or form to enhance the green experience of the corridor.

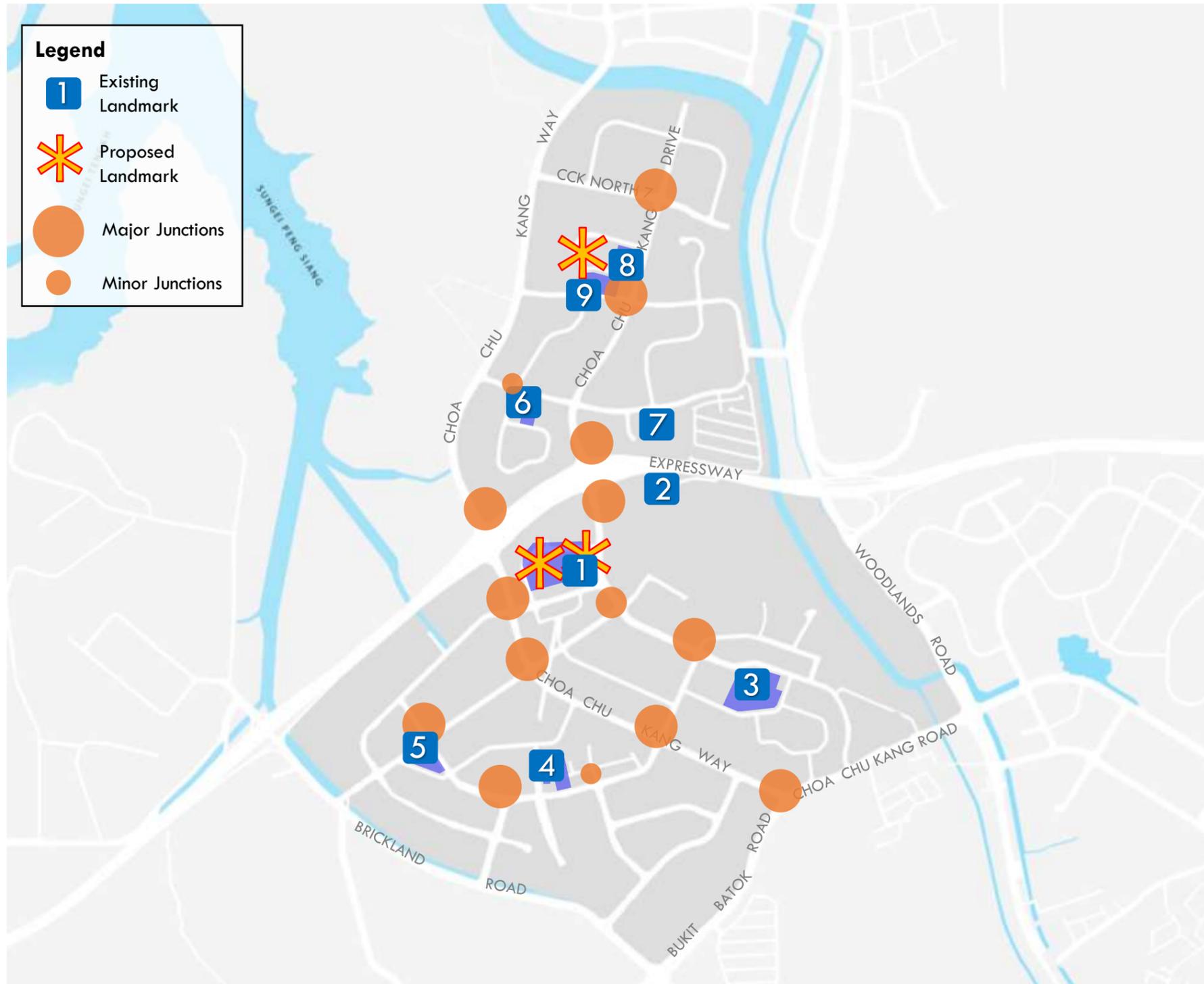


Artist's impression of community spaces at Rail Green I & II along the Rail Corridor



Artist's impression of residential blocks at Rail Green I & II along the Rail Corridor

Key Nodes and Junctions



Key nodes are areas that have community-related spaces and/ or commercial facilities that attract users, such as parks, commercial centres and community centres.

Some key nodes are also landmarks that residents feel strongly represent Choa Chu Kang, such as Lot One Shopper's Mall, Yew Tee Point, and Teck Whye Shopping Centre. These spaces contribute to a sense of town identity and new developments should respond to these nodes through strategies such as visual and pedestrian connectivity and architectural approach etc.

Key junctions mark major navigational points and interfacing points between neighbourhoods and near key nodes. Adjacent developments can adopt corner treatments to further define these junctions as visual reference points in the town.



5 Sunshine Place



6 Limbang Shopping Centre



7 Choa Chu Kang Sports Centre



8 Yew Tee Point



1 Lot One Shoppers' Mall



2 SAFRA Clubhouse



3 Teck Whye Shopping Centre



4 Keat Hong Shopping Centre



9 Heart of Yew Tee

Heritage Elements



Artist's impression of a playground and design elements at Rail Green I & II that are inspired by the site's rail heritage



Mural and sculptures referencing *kampung* history at Limbang Shopping Centre



The military-themed playground at Keat Hong Garden pays homage to the area's military heritage



URA's 'Do It Right Guide for Heritage Interpretation'

Heritage Interpretation

Heritage interpretation is a means through which the unique history of the site can be communicated and brought alive for different audiences.

These elements should be designed with the following considerations:

- Visually delightful and engaging, giving new life to historical narratives
- Well integrated within the development and prominently located along key pedestrian routes, nodal spaces or within the precinct green.
- Easily appreciated by different age groups
- Accompanied by short text descriptors or captions to explain the historical inspiration

Examples of heritage interpretation elements could include, but are not limited to:

- Murals
- Photo walls
- Thematic playgrounds
- Street furniture
- Wayfinding elements
- Architectural design of the building form, facade or interior spaces

Refer to [URA's 'Do It Right Guide for Heritage Interpretation'](#) for more examples.

Art Elements



Series of murals depicting plantation life in early 1990s to 1950s (Blocks 102, 112 and 122)



Mondrian style, bright vibrant colours painted on block facade (Blocks 1-7)

Art elements add delight and help to foster a sense of belonging. To strengthen the identity and memorability of the town, art elements can take reference from the context of the town and site, e.g. history, environment and town/ sub-themes, where applicable, and consider engaging residents and local artists to create the artworks.



Motifs of hexagonal lattices on the façade screens of blocks that depicts the pineapple plantation history of the town (e.g. Blocks 352–354)

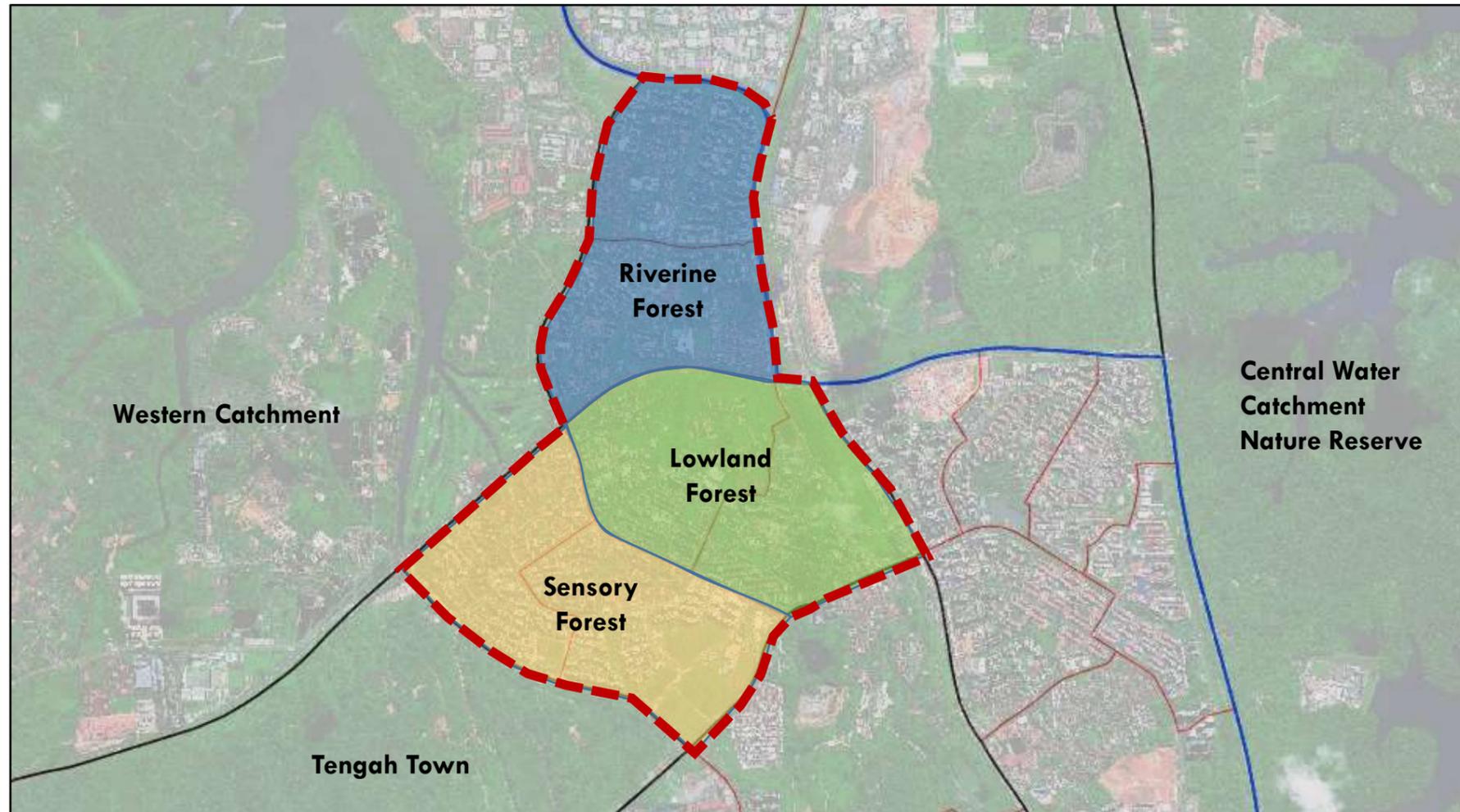


Murals in Choa Chu Kang Sports Complex commemorate the 5th FIBA 3x3 Asia Cup 2022 hosted in Singapore.



Murals at Block 9 Teck Whye Ave depicting the seasons of life

Broad Landscape Theme



Under the 'Homes by the River' town theme, greenery is an important element to enhance the identity and connectivity of Choa Chu Kang Town, since it is located in between the Western Catchment and the Central Water Catchment Nature Reserve.

The broad landscape theme considers NParks' landscape masterplan, which comprises three broad selections of plant species relating to the existing characteristics and contexts.

In the north, the plant selections are mainly riverine forest species, as this zone is adjacent to the Pang Sua Canal which leads to Kranji's freshwater reservoir.

In the central part of Choa Chu Kang Town, multi-tiered plantings of lowland forest species are used to enhance the Rail Corridor and the site's history and character.

In the south, the landscape and open spaces are characterised by the idea of self-discovery and exploration, with views framed by sensory plant species.



Example of riverside landscape with meandering paths along Kallang Park Connector



Example of multi-tiered plantings along Ulu Pandan Park Connector, adjacent to Ghim Moh Estate



Example of open space framed by sensory plant species with colors and textures in Keat Hong Garden

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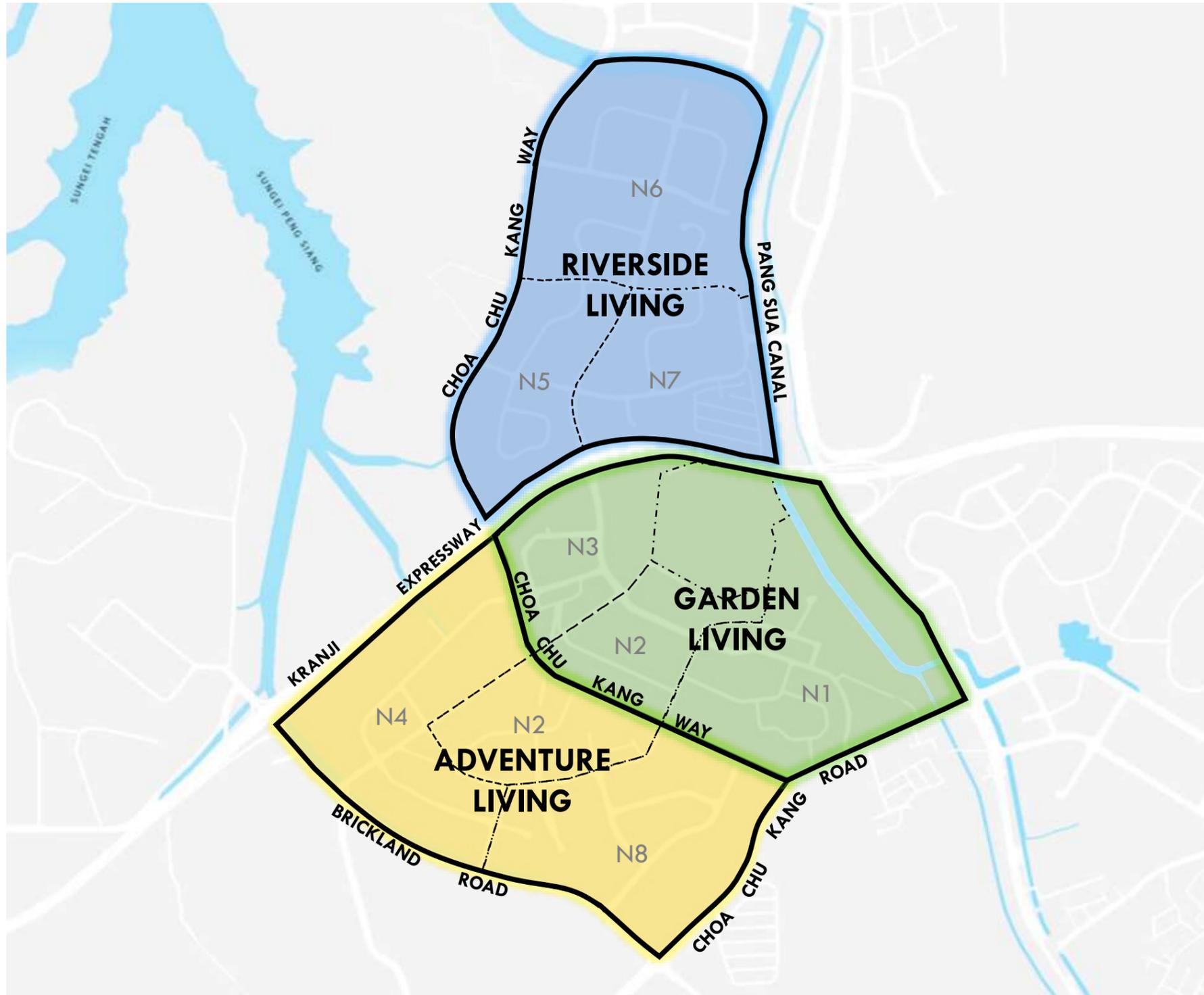
Neighbourhood Scale

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 - Colour Palette
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 - Landscape Approach

Precinct Scale

- Precinct Facilities
- Playgrounds
- Street Furniture
- Wayfinding
- Covered Linkway Design

Sub-themes and Concepts



Sub-themes are based on existing context, such as social and physical features, that are prevalent within the different areas.

3 Distinct Areas

Based on the prevalent characteristics, the 3 areas are given specific sub-themes which also relate to the overall Choa Chu Kang town theme of 'Homes by the River'.

Developments in each area can take reference from both the Choa Chu Kang town theme and the corresponding sub-theme in their concept and design. This will help to strengthen the identity of each area:

- **Riverside Living:** Neighbourhood 5, 6 and 7
- **Garden Living:** Neighbourhood 1, 2 (part) and 3 (Town Centre)
- **Adventure Living:** Neighbourhood 2 (part), 4 and 8

Neighbourhood Scale Layers

Each of the neighbourhood scale layers should take into consideration the respective sub-themes, in order to create a strong and coherent identity for each area.

Form and Massing

Form and massing can be designed based on the sub-themes and site context to create urban landscapes and landmarks.

Streetscape and Urban Edge

Paying careful attention to the design and treatment of the streetscape can enhance the experience of the users moving along a street or through a space.

Examples of streetscape treatment:

- Forms that front the street
- Street level activities
- Landscaping and shelters
- Pocket spaces along the street
- Pedestrian-friendly connections

Facade and Roofscape

The facade and roofscape of a development are distinct elements of its architectural design. When different developments in an area take reference from the sub-theme, it can contribute to the identity of the area.

Public Spaces

To encourage social interaction and community bonding, public spaces can be designed to be welcoming and vibrant. Such spaces include community plazas, and areas with facilities.

Landscape Approach

The use of plants, as defined by planting concepts and strategies, strengthens the identity of a precinct and neighbourhood. The shape, form and colour of plants can also assist in defining a space through repetition and scale.

As each thematic area is made up of varying extents of vacant land and existing developments, the Neighbourhood Scale Layers will be customised to suit the needs of each area.

Where there are sizeable areas with the opportunity for development, all the neighbourhood scale layers will apply.

Where areas are predominantly made up of existing developments, the emphasis can be in the design of public spaces.

Neighbourhood Scale Layers

Colour Palette

Colours can greatly enhance identity. Used consistently across precincts, colour palettes can help to reinforce the identity of an area. The suggested colour palette for each area in a town draws reference from its sub-theme. It consists of:

- **Primary Colours**
Unify the identity of the town, and form the main base of the colour scheme (55–70% of painted area)
- **Secondary Colours**
Complement the primary colours (20–30% of painted area)
- **Accent Colours**
Highlight certain architectural features on facades (such as fins, ledges, canopies, spandrels, selected parts of gable end walls, etc.) and precinct facilities (10–15% of painted area)

Application of Colour Palettes

For the colour scheme of each development, it is recommended to use:

- Building Facades: 2 primary colours, 1 or more secondary colour(s), and 1 or more accent colour(s)
- Precinct Facilities: 1 or more accent colour(s)



Primary Colour
Secondary Colours
Accent Colour



Primary Colour
Secondary Colour
Accent Colours

Examples of the application of colour palettes on facades

Neighbourhood Scale Layers

Summary of Colour Palettes for Choa Chu Kang

Based on the 'Homes By the River' town theme, the suggested colour palettes of the 3 distinct areas in Choa Chu Kang are inspired by elements of nature such as the waterbodies, and its historical background of *kampungs*, plantations and military camps. Please refer to each area for the details of its suggested colour palette.

Choa Chu Kang North
Riverside Living

Choa Chu Kang Southeast
Garden Living

Choa Chu Kang Southwest
Adventure Living

Primary Colours



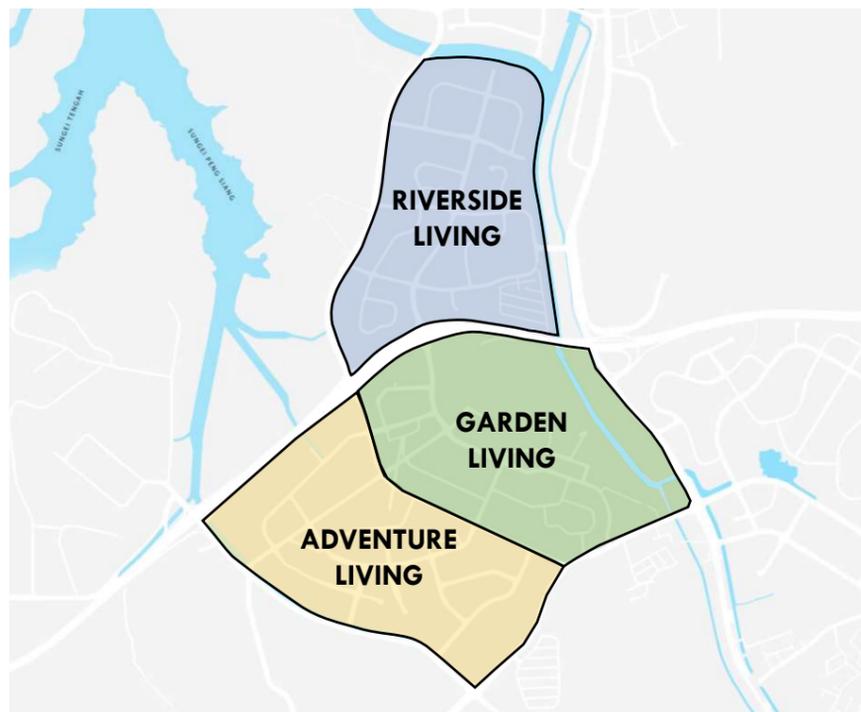
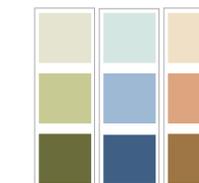
Secondary Colours



Accent Colours



POSSIBLE EXAMPLES



Choa Chu Kang North – Riverside Living



Top: Pang Sua Canal flanked by residential developments today

Bottom left: Fishing Deck along Pang Sua Canal

Bottom right: Artist's impression of the Heart of Yew Tee integrated development, with its cascading green terraces

Sub-theme and Concept

Choa Chu Kang was developed from *kampung* villages by the river and consisted of fish farms in the past.

Today, the Pang Sua Canal has become a prominent social node at this part of Choa Chu Kang where residents frequent to enjoy the park connector and go fishing.



Choa Chu Kang North – Riverside Living



Sub-theme and Concept

Planning and Design Considerations

- The north of the town is bounded by the Pang Sua Canal along the northern and eastern edge. It is envisioned to have seamless connectivity that will lead residents to the canal at the edge of the town and remind them of the historical roots of the town.
- Introducing more green community spaces along the canal and main corridors of the neighbourhood to provide visual relief amongst the urban environment and provide residents with more spaces for community gathering and activities.

Choa Chu Kang North – Riverside Living



Retaining wall enhanced with landscaping to soften urban edge



Artist's impression of upcoming amphitheater lawn along Pang Sua Canal



Artist's impression of motivational signage at staircase along the canal to encourage active lifestyle



Artist's impression of water play area under Yew Tee Lifestyle Corridor

Public Spaces

- Enhancements at the Active Stretch of Pang Sua Canal, where existing fishing deck/look out point is located
- Improvements to existing PCN e.g. greening of canals, to enhance walking and cycling experience along the canal
- Introduce active and social nodes for residents to be closer to the river, equipped with community bonding elements (e.g. play features, stage)

Choa Chu Kang North – Riverside Living



Barrier-free access from residential areas to canal to enhance connectivity



Artist's impression of creepers along Pang Sua Canal walls

Streetscape and Urban Edge

- Enhance access points towards the canal (e.g. Barrier Free Access ramps)
- Introduce creepers along canal wall to better integrate green and blue features
- Design of key corridors can reflect the riverside theme through paving and street furniture e.g. river related motifs such as water, boat, fish on footpaths, signages, benches etc.



Meandering floor pattern on footpaths depicting river (example from Hougang Town Centre)

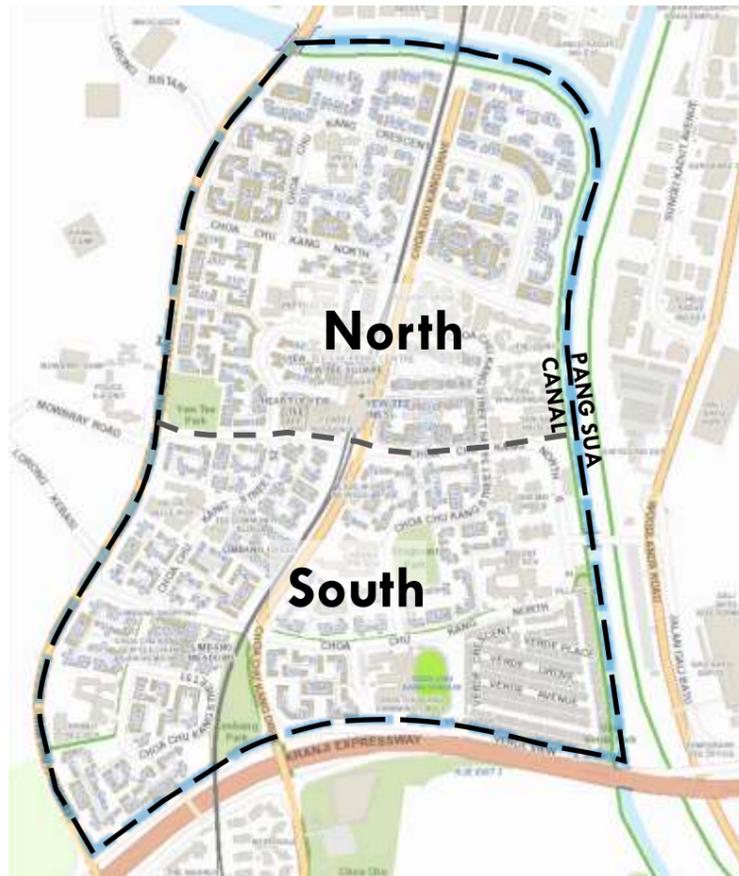


Artist's impression of public space at Yew Tee Square with river-themed street furniture and play elements

Choa Chu Kang North – Riverside Living

Colour Palette

In line with the ‘Riverside Living’ sub-theme, the suggested colour palette for northern part of this area has teals and blues. Reds and browns are in the suggested colour palette for the southern part of this area to reflect the rustic quality of the *kampung* environment in the past. Together with the shades of greenish blues, the colours create a relaxing and tranquil environment for riverside living.



Primary Colours

Unify the identity of the area, and form the main base of the colour scheme
(choose both primary colours)



Secondary Colours

Complement the primary base colours
(choose 1 or more secondary colours)



Accent Colours

Highlight certain architectural features, such as fins, ledges, canopies, spandrels, selected parts of gable end walls, etc.
(choose 1 or more accent colours)

NORTH



SOUTH

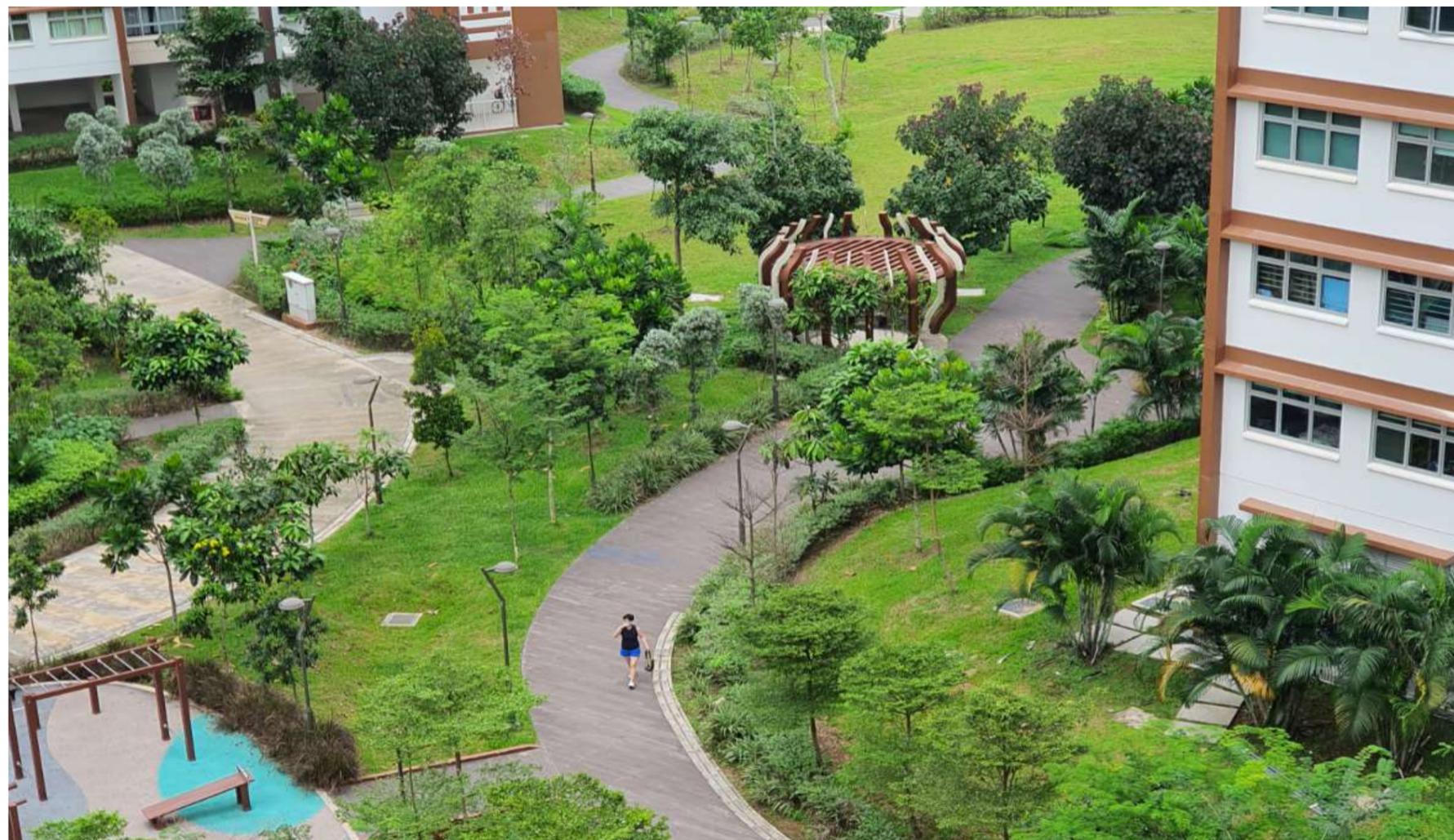


Teal accents applied against blue (example from Fernvale Riverbow)



A simulation of the suggested colour palette for the southern part of this area on existing blocks

Choa Chu Kang North – Riverside Living



A possible planting concept, to line trees along meandering footpaths to evoke the riverside experience (example from Anchorvale Plains)



From left: Suggested trees include *Palaquium obovatum* (White Gutta), *Tristaniopsis whiteana* (River Tristania), *Leptospermum madidum ssp sativum* (Weeping Tea-Tree), *Salix babylonica* (Weeping Willow)

Landscape Approach

The landscape design of developments in the ‘Riverside Living’ sub-theme area is about emphasising the riverside experience. ABC Waters design features*, such as rain gardens, can also be implemented where feasible to cleanse rainwater runoff.

Planting Concept

Planting shall be layered, using riverine forest species, to highlight the riverside experience. Planting can showcase trees with weeping canopies, and shade trees along the meandering footpath.

Suggested Tree Species

The following list is intended as a guide for tree species selection and is not meant to be restrictive. The list includes the following:

- *Palaquium obovatum* (White Gutta)
- *Tristaniopsis whiteana* (River Tristania)
- *Leptospermum madidum ssp sativum* (Weeping Tea-Tree)
- *Salix babylonica* (Weeping Willow)

*Refer to [PUB’s ABC Waters Design Guidelines](#) for more information.

Choa Chu Kang North – Riverside Living

Overview of Key Urban Design Considerations



Transport

EXISTING / UC PROPOSED

 MRT Station

Facilities

 Neighbourhood/ Commercial Centre

Parks and Waterbodies

  Park

 Waterbody

  Park Connector/ Cycling Path/ Round Island Route

Key Corridors

 Limbang Green Spine / Yew Tee Lifestyle Corridor

  Nature Way

 River Way

Key Nodes and Junctions

  Landmark

 Key Junction

Streetscape and Urban Design Response

 Social Node

Choa Chu Kang Southeast – Garden Living



Top: Choa Chu Kang Park

Bottom left: Community garden in Choa Chu Kang Park

Bottom right: Trees lining Pang Sua Canal

Sub-theme and Concept

This area comprises of the Choa Chu Kang Town Centre, Choa Chu Kang MRT Station and Choa Chu Kang Park.

In 1970s, settlers in this area grew pineapple and rubber, and had vegetables and poultry farms. The culture of cultivation is still present today, in the form of community gardens found in this area.

The neighbourhood is also rich with green community spaces like the Choa Chu Kang Town Park and the Rail Corridor, which are well-loved and frequented by residents.



Community
Gardens

Undulating
terrain

Green
Rail Corridor

Garden Living

Town Park

Green
library

Choa Chu Kang Southeast – Garden Living



Sub-theme and Concept

Planning and Design Considerations

- Designs that relate to the garden, cultivation and greenery arising from the history of plantation and cultivation of the area
- In response to existing community gardens in Teck Whye area, there is opportunity to introduce therapeutic gardens and allotment gardens in this part of Choa Chu Kang Town
- Respond sensitively to the Pang Sua canal and Rail Corridor as key nature elements

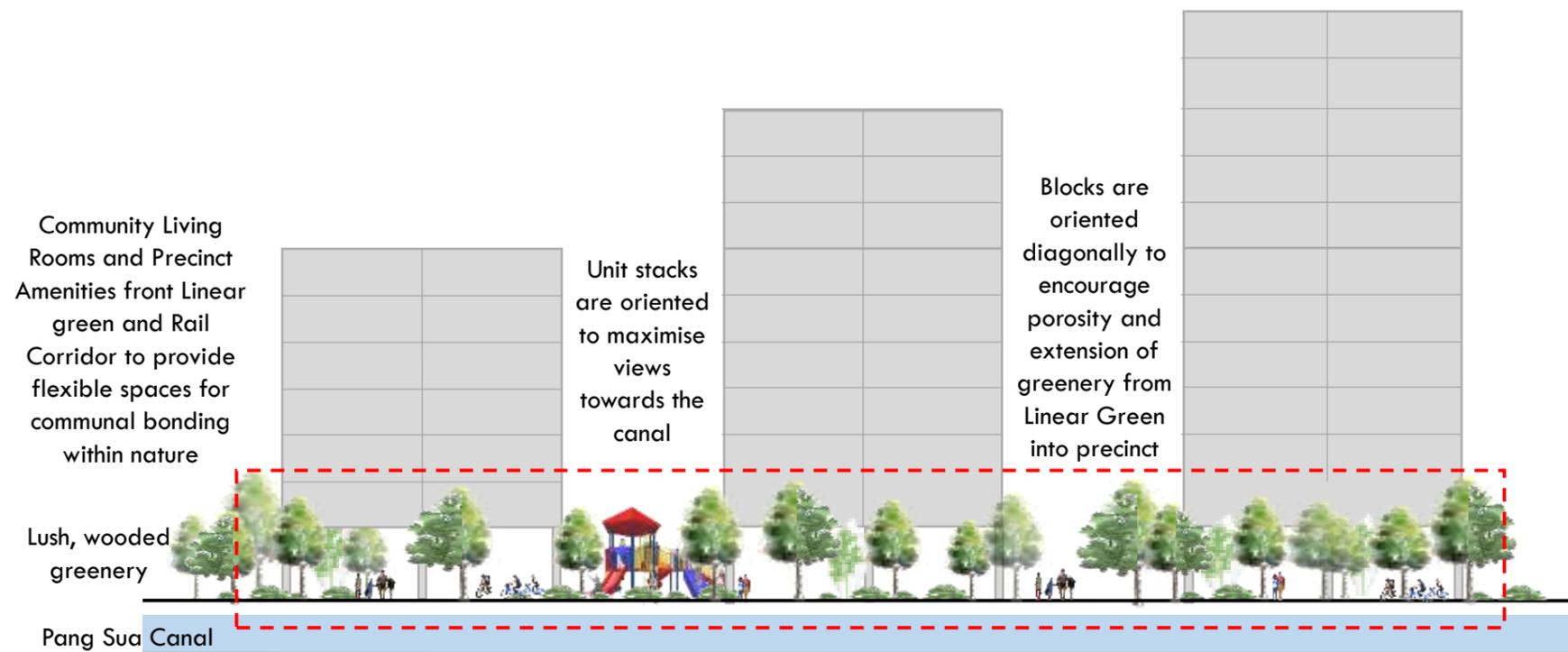
Choa Chu Kang Southeast – Garden Living



Artist's impression of development along Pang Sua Canal and Rail Corridor

Form and Massing

- Maintain visual and physical porosity along Rail Corridor
- Blocks fronting canal to be orientated diagonally and step down along canal to maximise views towards the Canal



Schematic elevation of the future housing development in response to Pang Sua Canal and existing greenery

Choa Chu Kang Southeast – Garden Living



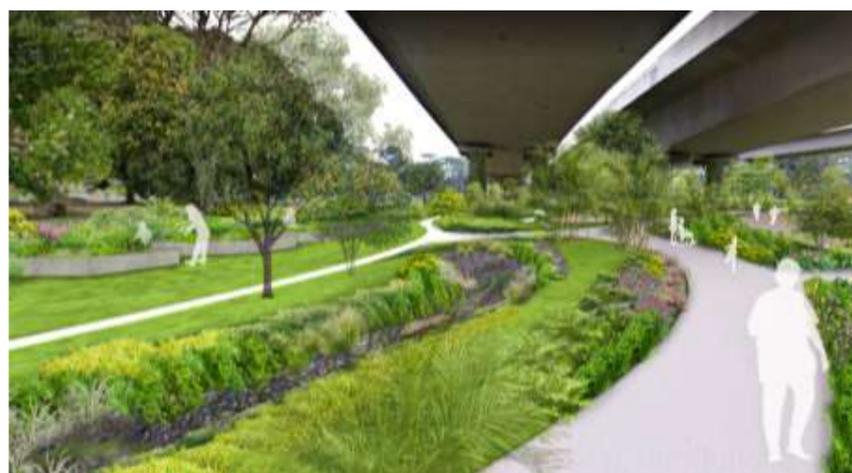
Artist's impression of wellness landscapes such as therapeutic garden within public housing precincts



Artist's impression of nature playgarden in Choa Chu Kang Park, for experiential learning and multi-sensory experiences



Artist's impression of multi-purpose lawn in Choa Chu Kang Park, which will be rejuvenated with enhanced landscaping



Artist's impression of allotment gardens and landscaping at new extension to Villa Verde Park beneath the Kranji Expressway viaduct

Public Spaces

- Introduce more community/ allotment gardens to encourage residents' gardening activities
- Inject more greenery into public spaces to improve residents' well-being (e.g. therapeutic gardens, town plaza)
- Upgrade/ introduce more nature-friendly facilities (e.g. pavilions/ seating) to encourage people to spend more time outdoors



Artist's impression of town plaza for variety of community activities lined with greenery

Choa Chu Kang Southeast – Garden Living



Artist's impression of Rail Corridor along Rail Green I & II, flanked with trees and social spaces

Streetscape and Urban Edge

- Enhance connectivity from residential areas to Rail Corridor
- Nature Ways to have a garden theme for landscaping e.g. low shrubs, flowering plants etc.
- The streetscape along the Rail Corridor will have a footpath lined with trees on both sides for pedestrians to walk comfortably



Artist's impression of Nature Way



Artist's impression of upgrading works to Teck Whye Shopping Centre

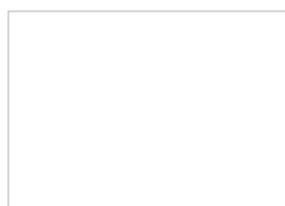
Choa Chu Kang Southeast – Garden Living

Colour Palette

In line with the ‘Garden Living’ sub-theme, the suggested colour palette for Choa Chu Kang Southeast consists of nature-inspired shades of pastel greens and browns, and bright vibrant red, yellow and green accents inspired by the fruits from the community gardens in the area.

Primary Colours

Unify the identity of the area, and form the main base of the colour scheme
(choose both primary colours)



BS 00 E 55



BS 08 B 15

Secondary Colours

Complement the primary base colours
(choose 1 or more secondary colours)



BS 12 C 31



BS 06 C 33

Accent Colours

Highlight certain architectural features, such as fins, ledges, canopies, spandrels, selected parts of gable end walls, etc.

(choose 1 or more accent colours)



BS 10 E 53



BS 08 E 51



BS 04 E 53



BS 12 E 51



BS 12 C 37



Blocks at Teck Whye View with bright red, yellow and green accents, creating a vibrant and joyful look



Artist's impression of windows accentuated by shades of yellow and orange (example from Garden Bloom @ Tengah)

Choa Chu Kang Southeast – Garden Living



Landscape layouts can include seating corner for users to appreciate and interact with nature (example from Bidadari Greenway, adjacent to Alkaff Vista)



From left: Suggested trees include *Sterculia cordata* (Kelumpang), *Cratoxylum cochinchinense* (Mempat), *Strombosia javanica* (Bayam Badak), *Agrostistachys sessilifolia* (Jejulong)

Landscape Approach

Spaces in the ‘Garden Living’ sub-theme area shall provide a lush and rustic experience, by incorporating natural materials and earthy colors.

The landscape layouts can include rest stops for users to appreciate and interact with nature, in a garden setting. The walking experience shall be curated to celebrate colors of nature and diversity of flora.

Planting Concept

The tree plantings shall include primarily native lowland forest species, planted with a mix of tree species at different heights, and lush shrubs and groundcovers.

The plant selection should include feature species with vibrant colors and textures, to highlight unique characteristics of native plant species in a garden setting.

Suggested Tree Species

The following list is intended as a guide for tree species selection and is not meant to be restrictive. The list includes the following:

- *Sterculia cordata* (Kelumpang)
- *Cratoxylum cochinchinense* (Red Mempat)
- *Strombosia javanica* (Bayam Badak)
- *Agrostistachys sessilifolia* (Jejulong)

Choa Chu Kang Southeast – Garden Living

Overview of Key Urban Design Considerations



Transport

- | | | |
|---------------|----------|-------------|
| EXISTING / UC | PROPOSED | |
| | | MRT Station |
| | | LRT Station |

Facilities

- | | |
|--|----------------------------------|
| | Neighbourhood/ Commercial Centre |
|--|----------------------------------|

Parks and Waterbodies

- | | |
|--|------------------------------|
| | Park |
| | Waterbody |
| | Park Connector/ Cycling Path |
| | Proposed local link |

Key Corridors

- | | |
|--|---------------------|
| | Limbang Green Spine |
| | Activity Corridor |
| | Nature Way |
| | River Way |

Key Nodes and Junctions

- | | | |
|--|--|--------------|
| | | Landmark |
| | | Key Junction |

Streetscape and Urban Design Response

- | | |
|--|--|
| | Maximisation of views towards greenery and waterbodies |
|--|--|

Choa Chu Kang Southwest – Adventure Living



Mega playground at Choa Chu Kang Ave 4



Archival photo of Keat Hong Camp from 1987



Military-themed playground at Keat Hong Garden

Sub-theme and Concept

The southwestern part of Choa Chu Kang is characterised by its military history and the Old Choa Chu Kang Road that runs across the area.

Today, the area is an interesting place for explorations and is filled with many play and sports facilities.



Mega playground Build-a-playground Wellness
Rustic

Sport-in-precinct Adventure Living

Young neighborhood

Military History

Choa Chu Kang Southwest – Adventure Living



Sub-theme and Concept

Planning and Design Considerations

- Design to relate to the rustic nature of military history and adventure
- Creating an environment that encourages play, active lifestyle and exploration for the community

Choa Chu Kang Southwest – Adventure Living



Rustic design (example from Pulau Ubin trail)



Artist's impression of Keat Hong Park upgrading with new play and exercise amenities for all ages



Artist's impression of Tembusu Park with large adventure playground, basketball court and jogging track



Artist's impression of Brickland Sport-in-Precinct, which includes basketball court, playground and fitness corners

Public Spaces

- Introduce more rest stops/ nodes to support recreational and community activities (e.g. play features, fitness corners, wellness elements)
- Introduce adventure or active activities (e.g. active health circuit) into public spaces and existing parks/ spaces to create inviting, safe and engaging environments.
- Storyboards with information on Choa Chu Kang's military history and natural heritage to be strategically placed at key nodes/public spaces

Choa Chu Kang Southwest – Adventure Living



Artist's impression of beautification of Sungei Peng Siang with enhanced greenery for pleasant jogging, cycling experience



Artist's impression of Keat Hong Shopping Centre upgrading with textured flooring



Meandering footpaths at Keat Hong Crest



Artist's impression of footpath with image imprints to encourage exploration

Streetscape and Urban Edge

- Landscaping to incorporate meandering footpaths and hardscape e.g. textured flooring, concrete imprints to enhance the concept of adventure and exploration
- Soft landscaping could be introduced along Sungei Peng Siang to provide a pleasant space for strolling, jogging or cycling

Choa Chu Kang Southwest – Adventure Living

Colour Palette

The suggested colour concept for Choa Chu Kang Southwest is inspired by the military camps in the area in the past.

Taking reference from the camouflage patterns, multiple shades of the same colours can be applied on to the gable end walls in different ways such as mosaics, bands or lines.

Any block signage located on the gable end walls should be clearly visible.

Primary Colours

Unify the identity of the area, and form the main base of the colour scheme
(choose both primary colours)



Secondary Colours

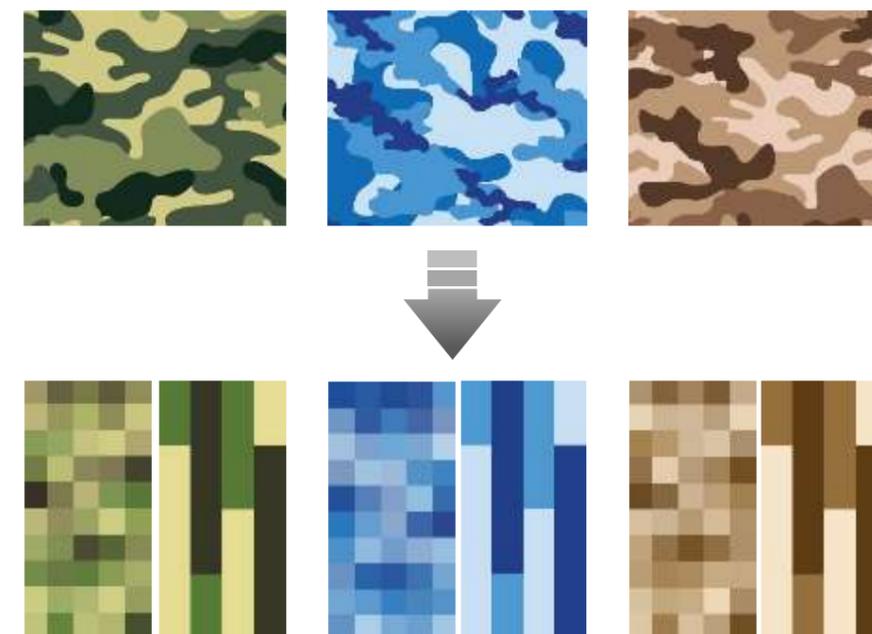
Complement the primary base colours
(choose 1 or more secondary colours)



Accent Colours

Highlight architectural features at gable end walls
(choose a combination of accents formed by multiple shades of the same colour)

POSSIBLE EXAMPLES



Examples of multiple shades of reds and browns on the gable end walls of blocks at Choa Chu Kang Ave 4 (left) and Keat Hong Mirage (right), with simulated block signage that is clearly visible.

Choa Chu Kang Southwest – Adventure Living



Landscape layouts can include lush plantings to evoke the sense of discovery and exploration (example from Fusionpolis Park North)



From left: Suggested trees include *Rubroshorea macroptera subsp macroptera* (Meranti Melantai), *Sterculia parviflora* (Common Sterculia), *Mesua ferrea* (Ceylon Ironwood), *Pometia pinnata* (Island Lychee)

Landscape Approach

The landscape design of developments in the 'Adventure Living' sub-theme aims to integrate urban lifestyle with the surrounding undulating terrain to celebrate adventure living.

It invokes the idea of integrating both natural and man-made elements, terrains and lush greenery with a mix of canopy and flowering trees, for the residents to explore and discover the outdoor sensory landscapes, while enjoying the shade.

Planting Concept

The plantings include majestic native trees with spreading canopies, alongside other lush tropical and flowering plantings that attract native biodiversity.

Suggested Tree Species

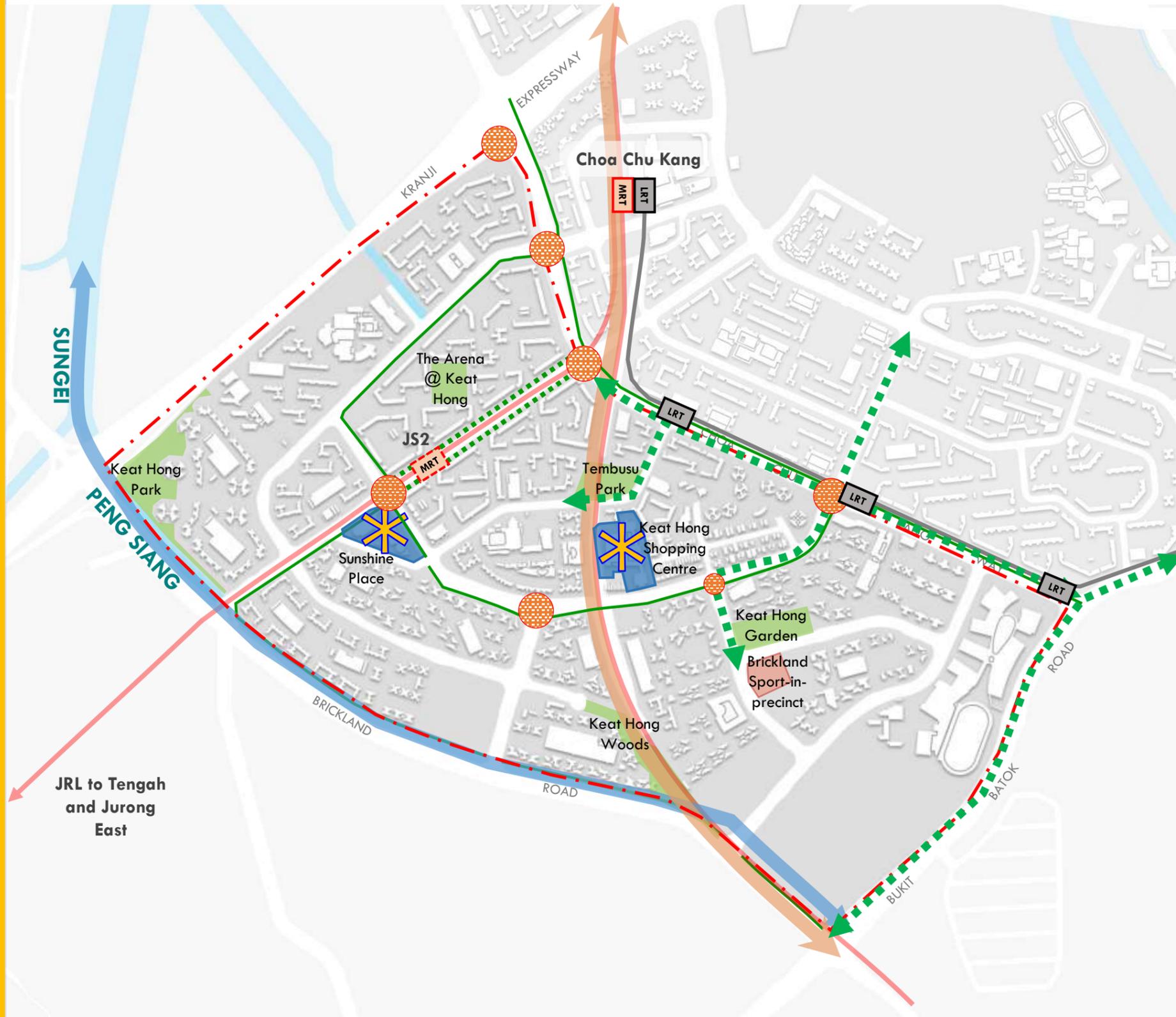
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- *Sterculia parviflora* (Common Sterculia)
- *Mesua ferrea* (Ceylon Ironwood)
- *Pometia pinnata* (Island Lychee)

Choa Chu Kang Southwest – Adventure Living

Overview of Key Urban Design Considerations



Transport

EXISTING



PROPOSED

MRT Station

LRT Station

Facilities



Neighbourhood/ Commercial Centre



Community Facility

Parks and Waterbodies



Park



Waterbody



Park Connector/ Cycling Path/ Round Island Route

Key Corridors



Activity Corridor



Nature Way



River Way

Key Nodes and Junctions



Landmark



Key Junction

Contents

Town Scale

- Context and History
- Planning Principles
- Town Theme and Concept
- Pedestrian and Cycling Connectivity
- Parks and Waterbodies
- Key Corridors
- Key Nodes and Junctions
- Heritage Elements
- Art Elements
- Broad Landscape Theme

Neighbourhood Scale

- Sub-themes and Concepts
 - Form and Massing
 - Public Spaces
 - Streetscape and Urban Edge
 - Colour Palette
 - Facade and Roofscape
 - Landscape Approach

Precinct Scale

- Precinct Facilities
- Playgrounds
- Street Furniture
- Wayfinding
- Covered Linkway Design

Precinct Facilities

Precinct facilities include structures like precinct pavilions, shelters, trellises, drop-off porches, and precinct markers.

Here are possible ideas of how precinct facilities could be designed to express the respective sub-themes.

Choa Chu Kang North Riverside Living

Design Considerations

- Tropical design elements such as overhangs and louvres
- Expression of rustic designs with earthy tones



A rustic pergola with seating inspired by fishing baskets (example from Waterway View)



A lookout point with a roof overhang (example from Punggol Waterway Park)

Precinct Facilities

Choa Chu Kang Southeast Garden Living

Design Considerations

- Nature-inspired elements and forms, e.g. trees, leaves and flowers
- Porosity with organic motifs



Flower petals-inspired canopy over seating area (example from Kovan City)



Seating with shelter inspired by tree branches (example from Tampines Green Forest Park)

Choa Chu Kang Southwest Adventure Living

Design Considerations

- Layering of heights
- Expression of rustic textures



Shelters with differing heights (example from Tampines GreenRidges)

Playgrounds

Playgrounds are one of the key facilities in our housing precincts. They are commonly co-located with adult and elderly fitness facilities to form a 3-Generation (3G) playground to foster inter-generational bonding.

Themed playgrounds are opportunities to contribute to a unique precinct identity, enhance wayfinding by serving as nodes or landmarks, and also form part of the social memories of residents. The design of themed playgrounds can draw reference from the area's sub-theme, character, heritage or historical context.

For larger playgrounds in neighbourhood parks and common greens, inclusive elements could be incorporated within the playgrounds to cater for children with special needs. Nature play spaces, sensory gardens or lawns can also be incorporated for a greater variety of learning experiences.

Design Principles

Value and Variety of Play

Playgrounds should have sufficient play values to activate the cognitive and motor skills of the young, spark their imagination, allowing children to learn through play and interaction with one another. Playgrounds in adjacent precincts and parks should not be repeated to ensure variety among the playgrounds.

Creating Identity

Playgrounds can help in creating precinct identity, enhance wayfinding and also form part of the social memories of HDB residents.

Practicality

Practical considerations for playgrounds include space to accommodate play equipment and their safety zones, meeting safety standards, maintainability and cost, particularly with customised playgrounds. For a more comfortable play environment, playgrounds should be sited in areas shaded by buildings during the anticipated times of usage, or adequately sheltered by larger trees.

Playgrounds

Choa Chu Kang North Riverside Living

Design Ideas

Suitable play features (i.e. nets, riverside huts) with differing platforms and vibrantly coloured motifs to evoke the experience of playing along the riverside



Use of elevated play structures to evoke the sense of exploring the riverside (example from Buangkok Square Park)

Choa Chu Kang Southeast Garden Living

Design Ideas

Use of bright and vibrant play elements to celebrate the flora and fauna in the garden



Use of colours to add vibrancy to the play space (example from Dawson Vista)

Choa Chu Kang Southwest Adventure Living

Design Ideas

Sculptural play elements with ropes and cargo nets, to evoke the sense of adventure and discovery



Use of sculptural play elements at Keat Hong Garden, to evoke the sense of adventure and discovery

Street Furniture – Seating

Seating is found in various locations within the precinct, such as community living rooms, etc. They are used for rest, people and activity-watching, social interaction, and can also be used for exercise.

Design Principles

Aesthetics

The design of the various seats in the precinct can draw reference from the area’s sub-theme.

Adequate Weather Protection

Seating in sheltered but unenclosed spaces like precinct pavilions, should be placed such that they are adequately shielded from rain.

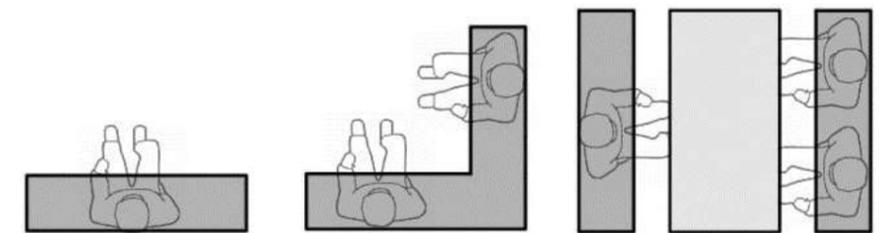
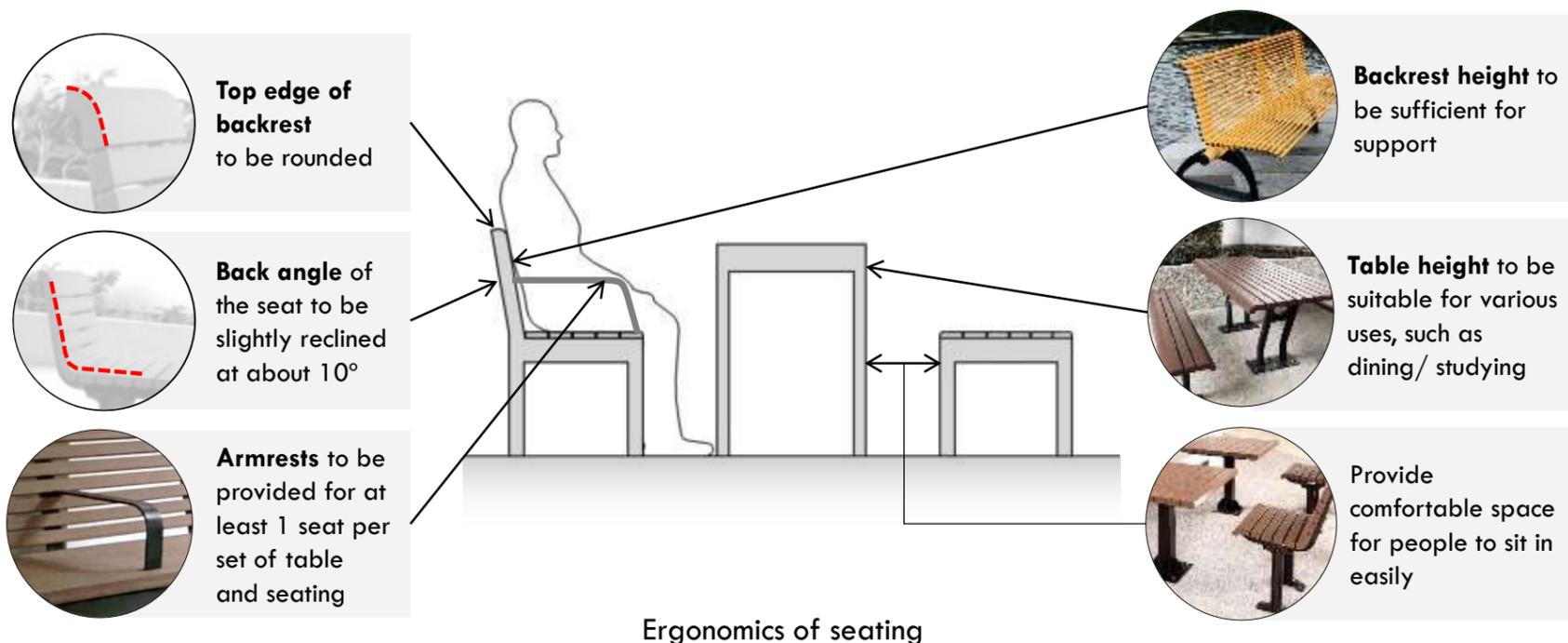
Universal Design

It is important to consider the needs of children, elderly, and users of different heights and abilities, to ensure a user-friendly and inclusive design.

- Provide a variety of seating arrangements, to facilitate different levels of social interaction
- Place along pedestrian routes at regular intervals as specified in BCA’s ‘Code on Accessibility in the Built Environment’
- Proprietary systems recommended for better ergonomics
- Cater to different heights
- Benches with exercise elements should be provided at non-dedicated fitness areas to encourage residents to do simple exercises
- Space for wheelchair users

Maintenance

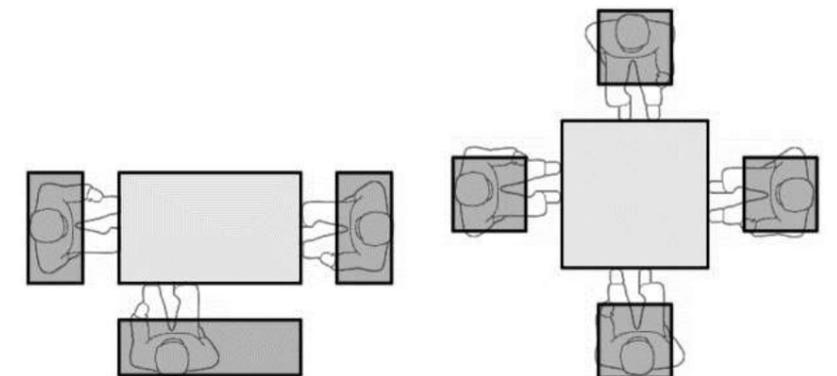
- Proprietary systems are generally easy to replace
- Select materials that are durable against weathering and vandalism (e.g. avoid natural wood, recommended to use metal with wood grain finish, powder coated metal etc.)
- Place seating in the landscaped areas on paved surfaces to avoid the need for grass cutting below



Individual seating
for resting and solitary moments

L-shape seating
for views and small group conversation

Face-to-face seating
for conversation



3-sided seating
creates greater intimacy and opens up towards views

4-sided seating
for social gatherings and interaction

Variety of seating arrangements for different uses

Street Furniture – Outdoor Lighting

Besides its functional purpose, the choice of outdoor lighting also lends ambience and character to the space.

Selection Principles

Function and Aesthetics

The selected light fixtures should serve the purpose intended for its location either for functional or ambient lighting. It can also complement the design of the development and reinforce the identity of the precinct. In addition, the placement and colours of the various types of outdoor lighting within the development should be carefully chosen and coordinated.

Driveway/ Service Road

The light fixtures should have the appropriate lux level for the safety of both drivers and pedestrians. The choice of these light fixtures contribute to precinct identity as they usually envelop the development along the service road.

Hardcourt

The light fixtures should provide sufficient lighting levels for the activities/ games intended at the hardcourt, while not causing glare to the users and the residential units in the surrounding blocks.

Landscape/ Playground

The choice of light fixtures should create a welcoming and relaxed ambience in these spaces, and also contribute to the unique character of the precinct.

Covered Linkway/ Precinct Pavilion

Light fixtures selected should be well integrated with the design of the covered linkway and precinct pavilion structure, and also be functional for the usage of the space.

Maintenance

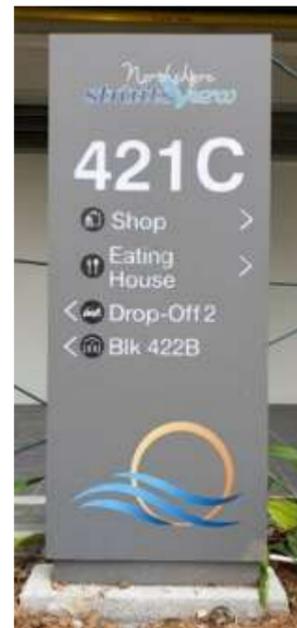
Easy maintenance of the light fixtures and cost-efficient replacement of parts is recommended.

Wayfinding

A clear wayfinding strategy is important so that users can find their way around the precinct easily.



Use of simple motifs, colour and tile bands for wayfinding



A precinct map and block entrance signage (example from Northshore StraitsView)

Main Circulation Route

Demarcate the main circulation route through the blocks connecting to the key nodes (e.g. lift lobbies, community living rooms, drop-off porches, etc.):

Clarity and Aesthetics

- Use visual cues such as tile bands, motifs, column and wall painting
- Use clear and consistent floor demarcation
- Use simple floor patterns, avoid dark colours and avoid using too many colours to reduce confusion, in particular for persons living with dementia
- Design and colours should complement the overall design concept

Sense of Familiarity

- Consider placing distinctive design features (e.g. motifs, sculptures, murals, etc.) that relate to the site's heritage and context as well as to serve as familiar references for persons living with dementia

Maintenance and Safety

- Use materials and floor finishes that are easy to maintain and replace
- Avoid using floor finishes that would be slippery when exposed to rain

Signage

There are various types of signages in a precinct, such as precinct maps, and directional signage. They should be designed with reference to the 'SS 599 Guide for Wayfinding Signage in Public Areas'.

Aesthetics and Identity

- Design the various signage in a precinct for consistency in aesthetics and precinct identity

Legibility and Clarity

- Use appropriate font sizes for the intended viewing distance and avoid cursive fonts, to ensure that the font is legible
- Use pictograms/ motifs that are easy to recognise and not too abstract
- Ensure good colour contrast between the font and the background
- Provide well-lit signage so it can be clearly seen at night

Location

- Locate signage at key decision points along the pedestrian and vehicular flow to give clear directions.
- Ensure signage are not blocked from view

Covered Linkway Design

Covered linkways provide shelter and can be found extensively in the built-up environment in our towns. Hence, the design of covered linkways should recede into or match the surroundings and existing contexts (in terms of profile and colours), rather than stand out. Only at appropriate areas where the intention is to create a gateway, can covered linkways be designed as features. The following design principles apply to covered linkways within HDB precincts.

Design Principles

Neat and Elegant Design

Columns are only provided on one side of the linkway for a more seamless walking experience. Services such as M&E conduits and junction boxes should be detailed to be integrated with the design and hidden from pedestrian view. Added attention should be paid to details such as the column stumps, light fixtures, roof edge, location of the grated drains, interfacing details between the linkways, high links, drop-off porches and buildings. Neutral colours and shallow roof profiles are recommended. If necessary, block numbers, directional signage, floor patterns and other visual cues are encouraged to be included to improve wayfinding.

Adequate Weather Protection

Width \geq to height is recommended for linkways, to minimise rainwater splashing.

Lighting Ambience

Lighting should be pleasant and non-glaring. Placement of light fixtures should avoid lights shining directly at pedestrians', cyclists' and motorists' lines of sight.

Materials

Materials used should be commonly available in the market, and easy to maintain or replace.



Covered linkway in a new HDB precinct



A covered linkway added to an existing HDB precinct has block numbers to help in wayfinding (example from Block 618 Yishun Ring Road)



Careful interfacing between linkways and a new drop-off porch added to an existing HDB precinct (example from Choa Chu Kang North 7)

Image Credits

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Chua Chu Kang Town Council

- Page 53, bottom right: Artist's impression of Brickland Sport-in-Precinct, which includes basketball court, playground and fitness corners.

Marsiling-Yew Tee Town Council

- Page 23, top left: Artist's impression of water play area under Yew Tee Lifestyle Corridor.
- Page 38, top right: Artist's impression of upcoming amphitheater lawn along Pang Sua Canal.
- Page 38, bottom right: Artist's impression of water play area under Yew Tee Lifestyle Corridor.

National Archives of Singapore

- Page 10, top right: Bukit Panjang Railway (before KTM closure in 2011).
- Page 51, top right: Archival photo of Keat Hong camp from 1987.

The National Archives (UK)

- Page 10, top left: 1873 map showing Choa Chu Kang Village at the mouth of Sungei Berih.
- Page 10, bottom left: 1912 map showing old Choa Chu Kang Road and Bukit Panjang Railway Station.

National Parks Board

- Page 24, top: Planting scheme and indicative species selection along Choa Chu Kang Drive.
- Page 24, bottom: Planting scheme and structure showing the layering of different plant species.
- Page 41, bottom far left: *Palaquium obovatum* (White Gutta). Photographer: NParks Flora & Fauna Web.
- Page 41, bottom second from left: *Tristaniaopsis whiteana* (River Tristania). Photographer: Vicky Lim Yen Ngoh, NParks Flora & Fauna Web.
- Page 41, bottom second from right: *Leptospermum madidum ssp sativum* (Weeping Tea-Tree). Photographer: Patricia Yap, NParks Flora & Fauna Web.
- Page 41, bottom far right: *Salix babylonica* (Weeping Willow). Photographer: Boo Chih Min, NParks Flora & Fauna Web.
- Page 46, bottom left: Artist's impression of multi-purpose lawn in Choa Chu Kang Park, which will be rejuvenated with enhanced landscaping.
- Page 46, bottom middle: Artist's impression of allotment gardens and landscaping at new extension to Villa Verde Park beneath the Kranji Expressway Viaduct.
- Page 47, bottom left: Artist's impression of Nature Way.

- Page 49, bottom far left: *Sterculia cordata* (Kelumpang). Photographer: Jessica Teo, NParks Flora & Fauna Web.
- Page 49, bottom second from left: *Cratoxylum cochinchinense* (Mempat). Photographer: Patricia Yap, NParks Flora & Fauna Web.
- Page 49, bottom second from right: *Strombosia javanica* (Bayam Badak). Photographer: NParks Flora & Fauna Web.
- Page 49, bottom far right: *Agrostistachys sessilifolia* (Jejulong). Photographer: NParks Flora & Fauna Web.
- Page 53, top left: Rustic design (example from Pulau Ubin trail).
- Page 56, bottom far left: *Rubroshorea macroptera subsp macroptera* (Meranti Melantai). Photographer: Ang Wee Foong, NParks Flora & Fauna Web.
- Page 56, bottom second from left: *Sterculia parviflora* (Common Sterculia). Photographer: Boo Chih Min, NParks Flora & Fauna Web.
- Page 56, bottom second from right: *Mesua ferrea* (Ceylon Ironwood). Photographer: Boo Chih Min, NParks Flora & Fauna Web.
- Page 56, bottom far right: *Pometia pinnata* (Island Lychee). Photographer: Jessica Teo, NParks Flora & Fauna Web.

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Singapore Land Authority, courtesy of National Archives of Singapore

- Page 10, bottom right: *Kampung* house in Keat Hong Village.

Singapore Land Authority

- Page 11, top: 1966 Map of Choa Chu Kang.

ADDP Architects LLP

- Page 59, left: A rustic pergola with seating inspired by fishing baskets (example from Waterway View).

JYHa LLP

- Page 66, right: Careful interfacing between linkways and a new drop-off porch added to an existing HDB precinct (example from Choa Chu Kang North 7).

SQFT Architects Pte Ltd

- Page 60, left: Flower petals-inspired canopy over seating area (example from Kovan City).

Surbana Jurong Consultants Pte Ltd

- Page 12, bottom left and Page 51, bottom left: Military-themed playground at Keat Hong Garden.
- Page 28, bottom left: The military-themed playground at Keat Hong Garden pays homage to the area's military heritage.
- Page 62, right: Use of sculptural play elements at Keat Hong Garden, to evoke the sense of adventure and discovery.

Derek Loei

- Page 30, bottom left: Example of riverside landscape with meandering paths along Kallang Park Connector.
- Page 30, bottom middle: Example of multi-tiered plantings along Ulu Pandan Park Connector, adjacent to Ghim Moh Estate.
- Page 30, bottom right: Example of open space framed by sensory plant species with colors and textures in Keat Hong Garden.
- Page 41, top: A possible planting concept, to line trees along meandering footpaths to evoke the riverside experience (example from Anchorvale Plains).
- Page 49, top: Landscape layouts can include seating corner for users to appreciate and interact with nature (example from Bidadari Greenway, adjacent to Alkaff Vista).
- Page 62, left: Use of elevated play structures to evoke the sense of exploring the riverside (example from Buangkok Square Park).
- Page 62, middle: Use of colours to add vibrancy to the play space (example from Dawson Vista).

Hoo Xin Yu

- Page 56, top: Landscape layouts can include lush plantings to evoke the sense of discovery and exploration (example from Fusionpolis Park North).

Lye Pok Min

- Page 66, middle: A covered linkway added to an existing HDB precinct has block numbers to help in wayfinding (example from Block 618 Yishun Ring Road).

Tan Si Ying

- Page 40, bottom right: A simulation of the suggested colour palette for the southern part of this area on existing blocks.
- Page 48, top: Blocks at Teck Whye View with bright red, yellow and green accents, creating a vibrant and joyful look.
- Page 55, bottom row: Examples of multiple shades of reds and browns on the gable end walls of blocks at Choa Chu Kang Ave 4 (left) and Keat Hong Mirage (right), with simulated block signage that is clearly visible.
- Page 60, middle: Seating with shelter inspired by tree branches (example from Tampines Green Forest Park).
- Page 60, right: Shelters with differing heights (example from Tampines GreenRidges).

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