



JURONG LAKE DISTRICT

A place to grow

JLD PLANNING AND
URBAN DESIGN GUIDE

DECEMBER 2023

Aim of this Guide

This Jurong Lake District (JLD) Planning and Urban Design Guide presents the planning and urban design considerations for Jurong Lake District to help guide its future developments.

It aims to visually communicate the desired outcomes of the planning and urban design objectives, and the principles behind the design requirements from planning to implementation details. It should be read together with the relevant land sales requirements and conditions for specific sites and developments.

Please note that all the plans shown in this guide are conceptual and indicative only. Please refer to the URA Master Plan for the specified land use and development intensity of the various sites in JLD.

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Join the growing network now!

OPPORTUNITY

Grow seamlessly and easily

A place that grows with you

Our next largest business district

The 410-hectare Jurong Lake District (JLD) will be the largest mixed-use business district outside of the city centre. JLD will be the focus of new developments in the next 10 to 15 years.

Jurong Lake District

200,000 sqm (existing)
1,400,000 sqm (planned)

Woodlands Central
70,000 sqm (existing)

Tampines Regional Centre
130,000 sqm (existing)

Paya Lebar Central
200,000 sqm (existing)

Downtown Core
5,200,000 sqm (existing)

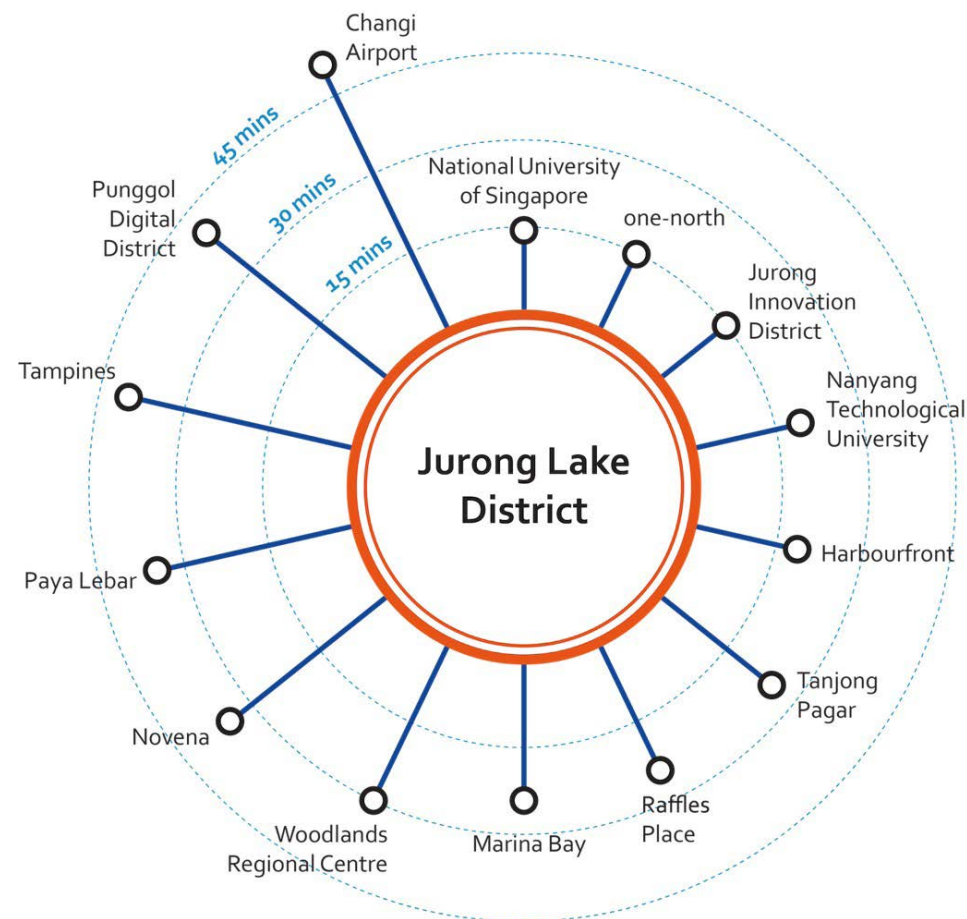
Source: REALIS (URA Real Estate Information System)
Figures shown refer to office Gross Floor Area

Fast connections to major hubs

Jurong Lake District (JLD) enjoys excellent connectivity via two new train lines, Jurong Region Line and Cross Island Line. Together with the existing East-West Line and North-South Lines, these new lines will connect people to major business centres and education hubs in the West and Central regions within 30 minutes.

The district is well-connected to academic, research and innovation hubs, such as the Nanyang Technological University, the Jurong Innovation District and the Punggol Digital District.

JLD is also well-served by the Ayer Rajah Expressway (AYE) and Pan-Island Expressway (PIE).



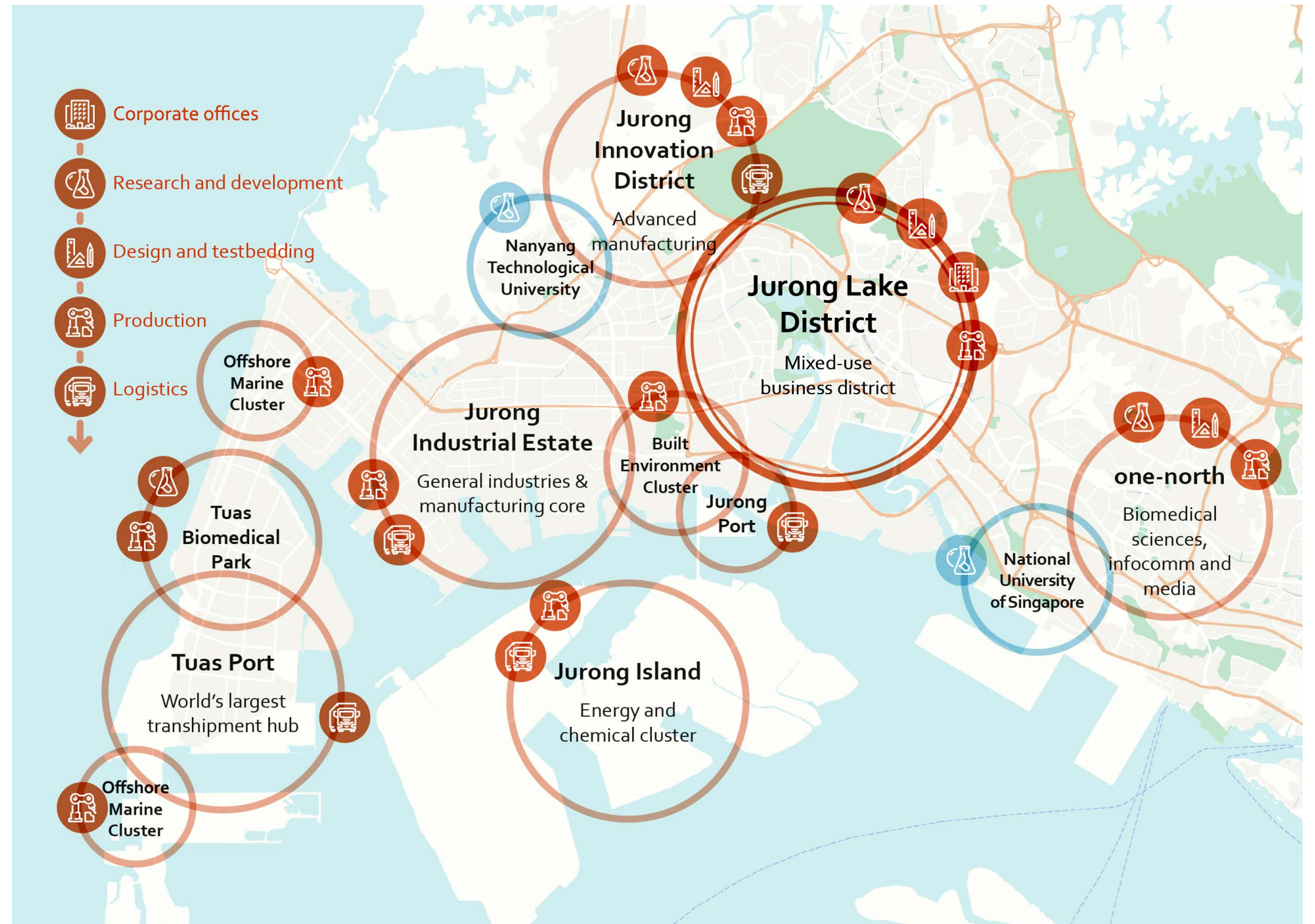
MRT station-to-station travel time to and from JLD

A dynamic ecosystem to grow your business

Jurong Lake District (JLD) is situated near to more than 3,000 multinational companies clustered in the International Business Park, Jurong and Tuas Industrial Estates, and Tuas Port. Companies in JLD can tap on the large talent pool from the many tertiary institutions and research hubs in the vicinity, such as Nanyang Technological University, National University of Singapore, one-north and the Science Parks.

With over a million residents in the West region, companies will also be able to gain ready access to a large number of workers and customers from the surrounding towns of Clementi, Bukit Batok, Jurong East, Jurong West and Tengah.

When fully developed over 20 to 30 years and beyond, JLD can provide 100,000 new jobs and 20,000 new homes.



New developments taking shape

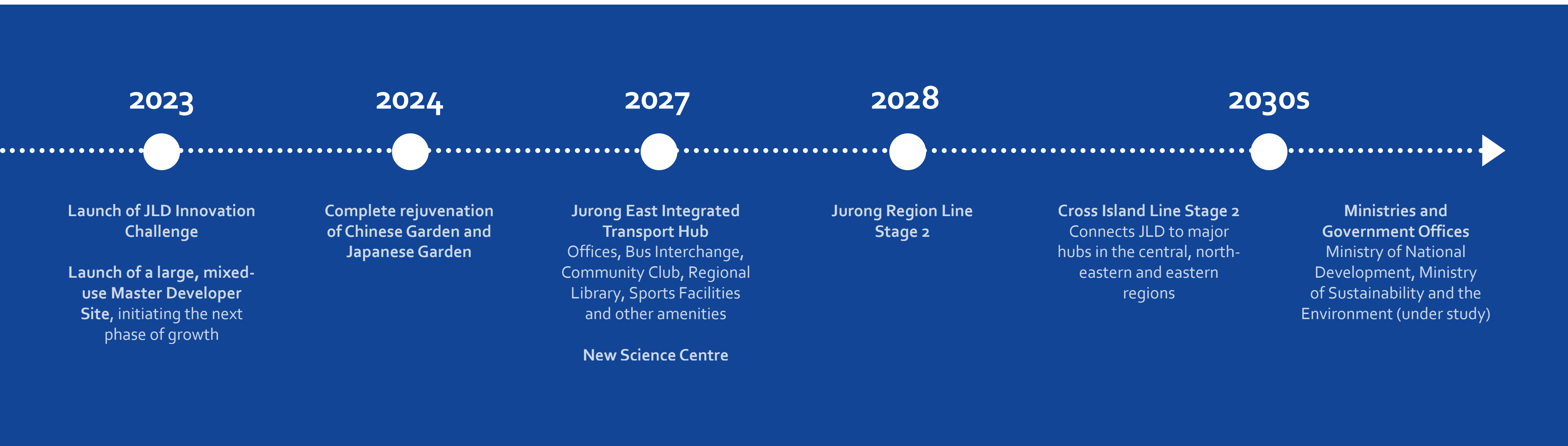
The area around Jurong East MRT Station today comprises offices, retail, residential and institutional uses. By 2027, a new integrated transport hub next to the Jurong East MRT Station (comprising offices and retail spaces, a regional library, community club and sports facilities) will be completed.

To the south of Jurong Town Hall Road, a new 120-hectare precinct will connect seamlessly to the existing commercial centre and MRT Station via elevated and underground pedestrian links as well as landscaped streets. The precinct will have a mix of offices, housing, retail, hotel, entertainment and other complementary amenities in a car-lite and park setting.

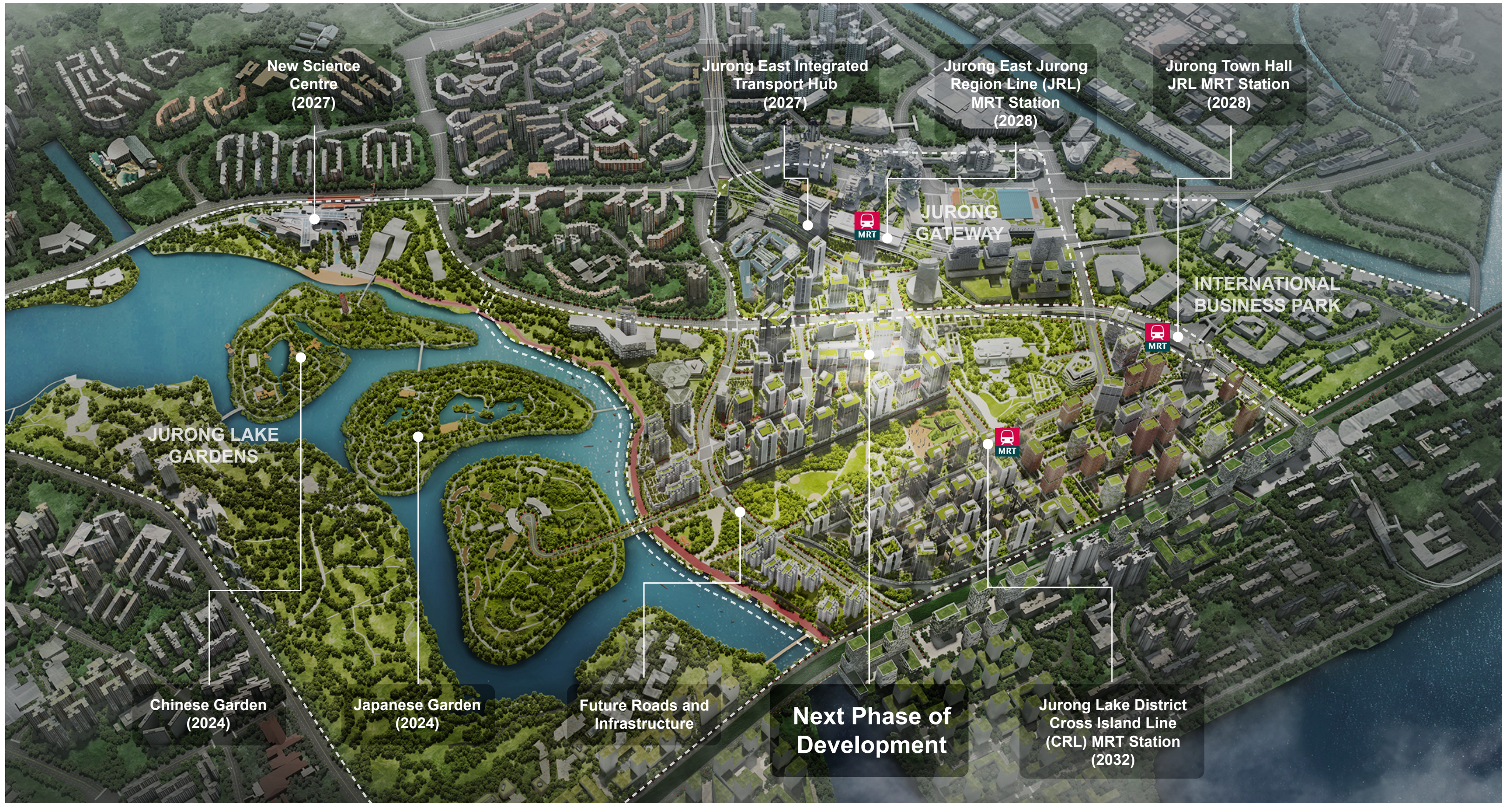
To support these new developments and to enhance connectivity to the rest of the island, Jurong Lake

District (JLD) will be served by the new Jurong Region Line (Stage 2) and Cross Island Line (Stage 2) to be completed by 2028 and 2032 respectively.

Located in close proximity to the Jurong Lake Gardens, the precinct will enjoy more than 10 kilometres of waterfront around the Jurong Lake, lined with signature attractions that will provide opportunities for leisure and recreation.



Transforming Jurong Lake District



Artist's impression of the upcoming developments within JLD

EXPERIENCE

More than a CBD

Live, work, play by the lake

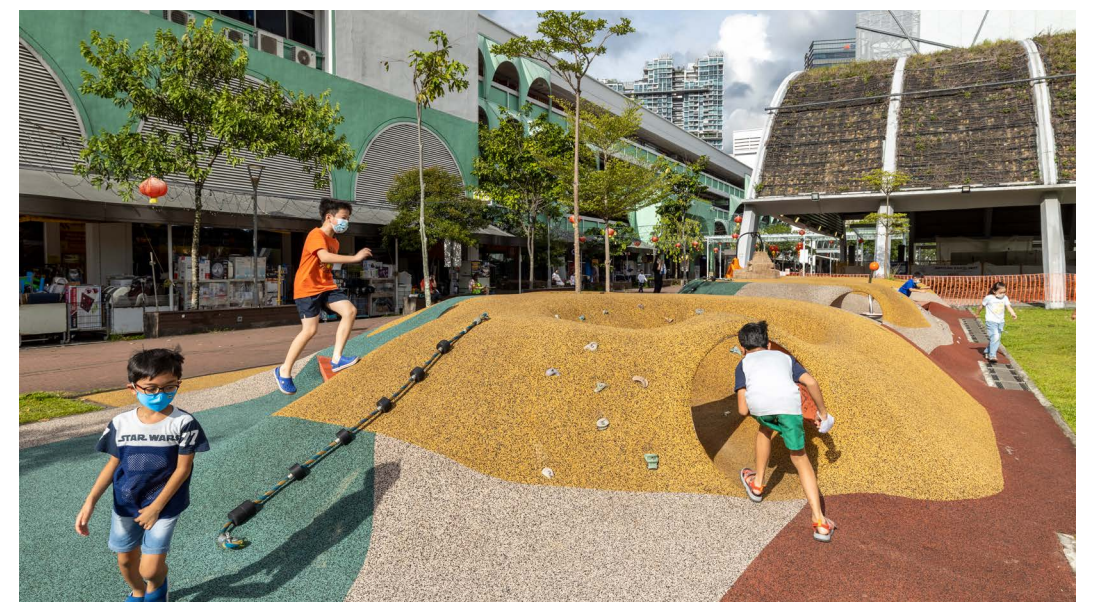
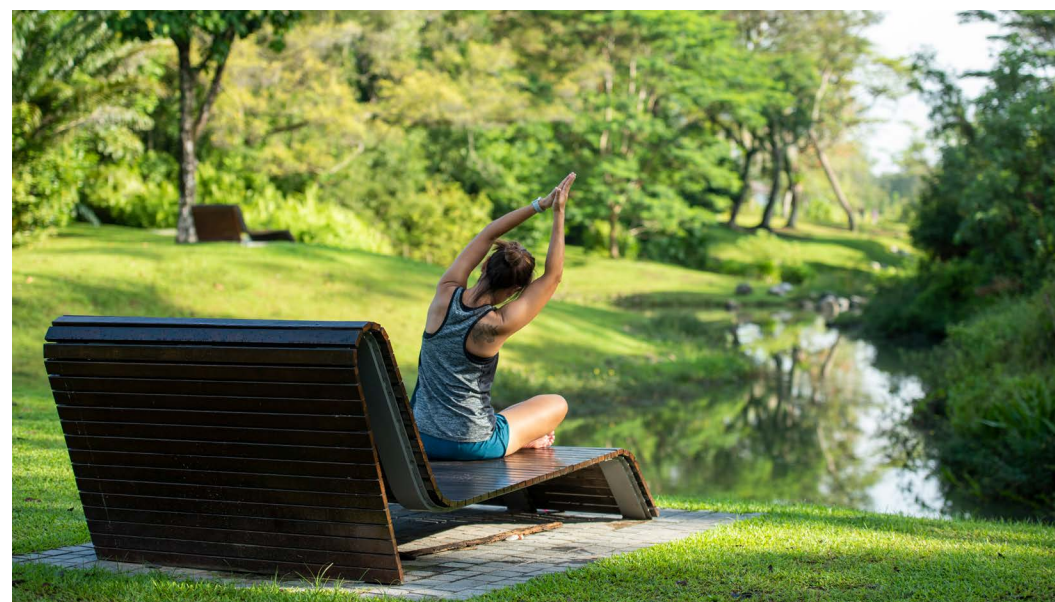
A district of gardens and waterbodies

10-minute neighbourhoods

Live, work, play by the lake

Diverse mix of uses

The new precinct extending from Jurong Gateway, south of Jurong Town Hall Road, is primarily zoned 'White', which will provide greater flexibility for developers to experiment with new development concepts and typologies, and innovative ways to integrate live, work and play, thus enabling companies to locate all their activities and teams in one place. Large sites will give developers the flexibility to create integrated campuses tailored to business needs.



Photographs showing the diverse mix of uses in the district

A district of gardens and waterbodies

| Immersive greenery

More than 40 per cent of the district will be set aside for parks, greenery and waterbodies, which includes more than 10 kilometres of active lakefront promenade around Jurong Lake.

Throughout the Jurong Lake District (JLD), streets are lined with canopy trees, forming green corridors that provide shade while serving as Nature Ways for wildlife. The Central Park as the main green spine will link all neighbourhoods to the edge of Jurong Lake.

All buildings in JLD will be required to achieve 100 per cent landscape replacement, where greenery lost through development will be fully replaced by landscaping, sky terraces, roof gardens and vertical greenery. This creates opportunities for people to enjoy greenery at all levels.



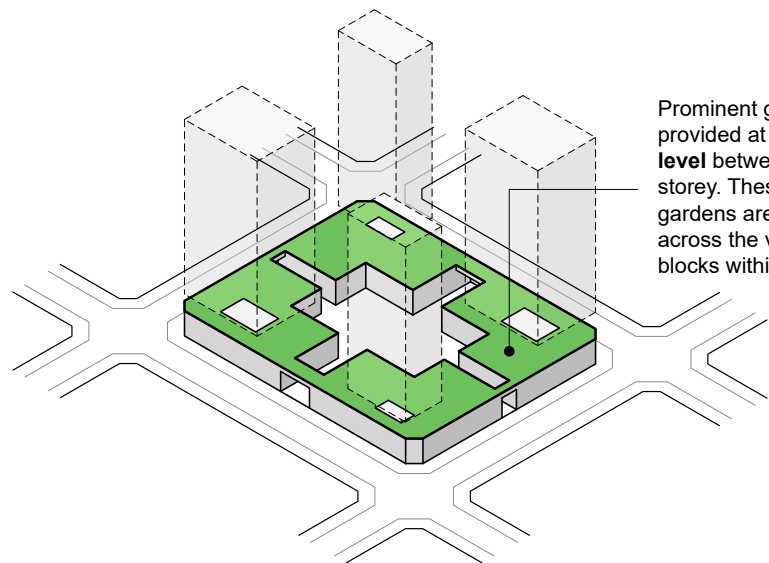
Artist's impression of the lush landscaping within developments in JLD

Green carpet

The vision for the new precinct is to have a green carpet effect at key levels to create a three-dimensional landscape datum.

Prominent greenery shall be provided at the podium roof level between the second and sixth storey of the developments, and shall include trees and shrub planted close to the perimeter of the podium so that the greenery is visible from street level and adjacent developments.

These podium roof gardens are to be connected across the various building blocks within the development, to create a seamless experience of an additional green communal space above the street.



Prominent greenery shall be provided at the **podium roof level** between the 2nd and 6th storey. These podium roof gardens are to be **connected** across the various building blocks within the development.



Artist's impression of the green carpet effect created through the provision of greenery at key levels

| Green carpet



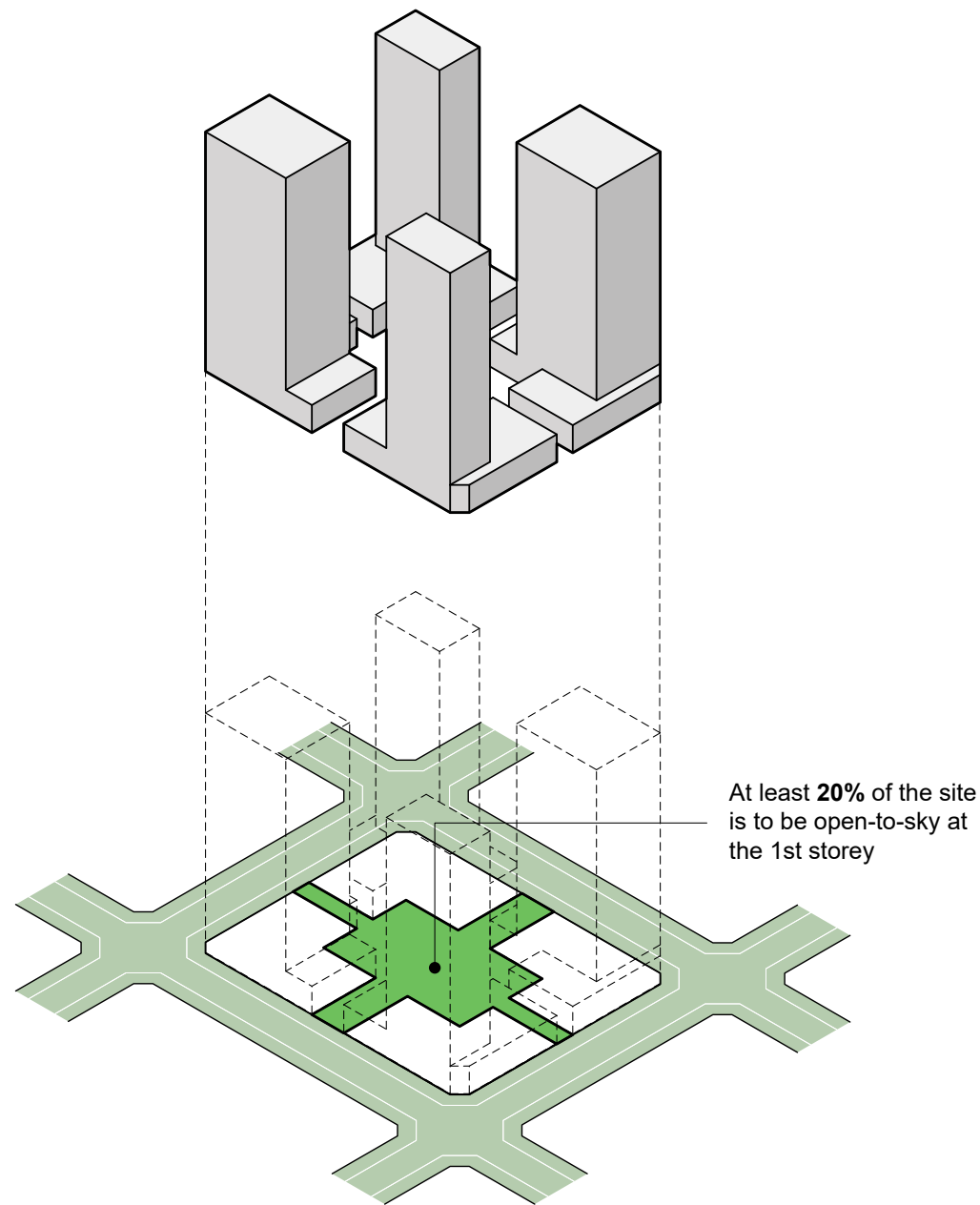
Image courtesy of KCAP Architects & Planners, SAA Architects, Arup, S33 and Loker

Artist's impression of the green carpet effect and the additional green communal space above the street
Jurong Lake District Planning and Urban Design Guide

Vibrant courtyards for all to enjoy

Developments in Jurong Lake District (JLD) are required to provide central courtyards for residents, workers and visitors to enjoy, which supports a convivial and inclusive public realm.

The courtyards shall be designed as extensions of the surrounding streets, connected by open-to-sky streets, through-block links, or pedestrian malls. They can be designed as places for vibrancy, enjoyment, respite, or a mix of activities.



Artist's impression of an open-to-sky courtyard that is designed as an extension of the surrounding streets

Vibrant courtyards for all to enjoy



Artist's impression of the courtyard developments in JLD

To create a porous, pedestrian-friendly and lushly landscaped ground level, the developments in the new precinct shall be designed such that at least 20 per cent of the site is open-to-sky at the first storey. This open-to-sky courtyard shall be accessible and open to the public at all times.

In addition, at least 25 per cent of this courtyard area is to be dedicated to tree planting. This ensures that the courtyards are enjoyed as lushly landscaped extensions of the surrounding streets.



Artist's impression of an open-to-sky courtyard that is open to the public at all times and lushly landscaped

Signature attractions by the lake

Jurong Lake Gardens is Singapore's third national gardens and the first that is located in the heartlands. The redeveloped Chinese Garden and Japanese Garden of the Gardens will be completed by 2024.

A string of unique attractions will add to the variety of recreational spaces and amenities around the Gardens. These attractions will be connected via a continuous pedestrian promenade and boardwalks, which will bring users closer to the tranquil waters and rich biodiversity of the Gardens.



Artist's impression of the Water Lily Pavilion in the Japanese Garden



Artist's impression of an activated, pedestrian-friendly promenade along the water's edge

Signature attractions by the lake

The new Science Centre, when completed by around 2027, will introduce more exciting leisure and entertainment offerings along the waterfront.

Designed by Zaha Hadid Architects in collaboration with Architects 61, the new Science Centre will be Singapore's biggest living lab to showcase real-world applications of science and technology. Its facilities, programmes and lush lakeside location will offer an immersive learning experience in a unique space for visitors and residents in Jurong Lake District.



Artist's impression of the entrance from Chinese Garden MRT Station



Artist's impression of the new Science Centre located along Jurong Lake

Images courtesy of Science Centre located at Zaha Hadid Architects

| Attractive lakefront and greenery

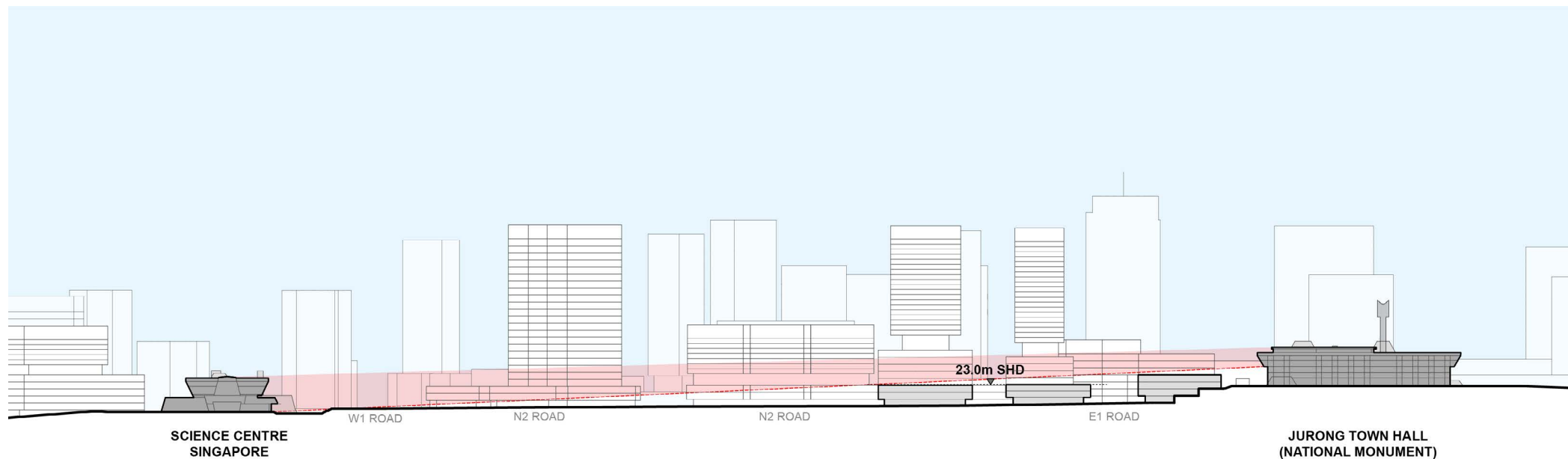
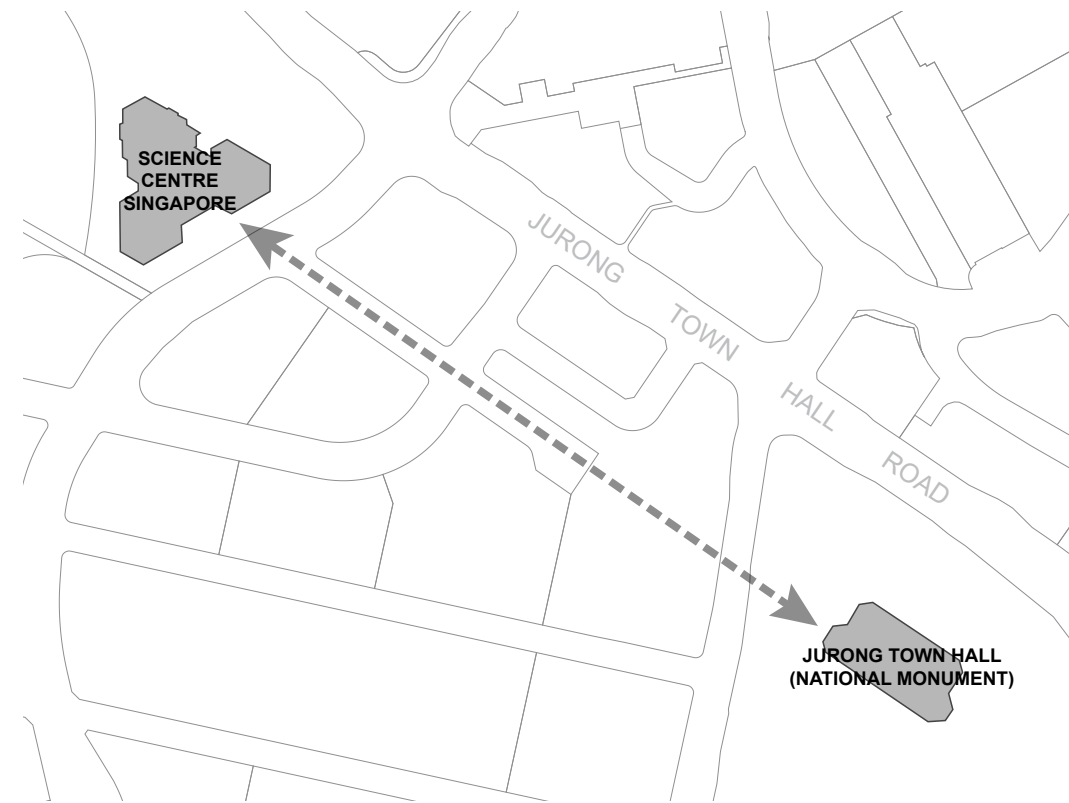


Artist's impression of the pedestrian promenade along the lakefront and the main green spine that connects the new precinct to the Jurong Lake

Distinctive architectural heritage

Located within the Jurong Lake District are two distinctive landmarks. The Jurong Town Hall is a gazetted National Monument that sits on a hillock. Next to Jurong Lake, the Science Centre Singapore is a significant place of social memory for all Singaporeans, especially in the promotion of scientific and technological education.

These two landmarks will be physically connected via a view corridor and public walkways lined with activity-generating uses. The buildings will continue to serve as important anchors to celebrate the district's history and create a strong sense of place for the community.



Conceptual section showing the view corridor that connects the Jurong Town Hall monument to the Science Centre Singapore main building

Jurong Town Hall

Jurong Town Hall is symbolic of the success of Singapore's industrialisation programme in Jurong. The building was completed in 1974 and designed by Architects Team 3, led by pioneer architect, Lim Chong Keat. As one of the seven national monuments built after World War II, the building is a vital piece of our modern architecture heritage. The main building of the Science Centre Singapore was designed by pioneer architect, Raymond Woo, as a companion to the Jurong Town Hall by echoing the Jurong Town Hall's outward-slanting cantilever that casts shade in the interior.



Photograph of the Jurong Town Hall monument

Distinctive architectural heritage



Artist's impression of the view corridor with the Science Centre Singapore main building terminating the vista
Jurong Lake District Planning and Urban Design Guide

Distinctive architectural heritage



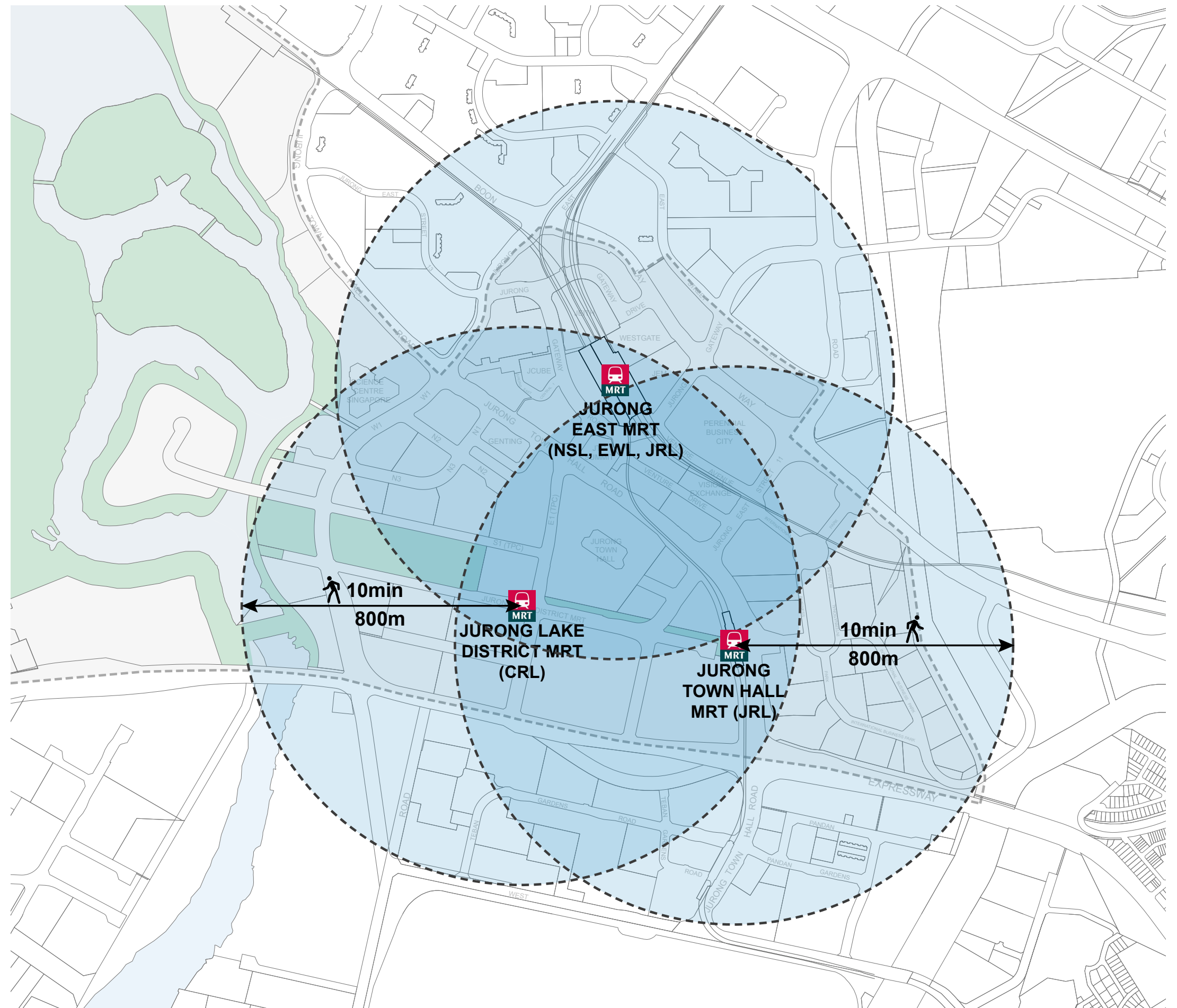
Artist's impression of the view corridor with the Jurong Town Hall monument terminating the vista
Jurong Lake District Planning and Urban Design Guide

10-minute neighbourhoods

Convenient city living

Jurong Lake District will be made up of neighbourhoods where amenities, green spaces and public transport nodes will be within a 10-minute reach by walking, cycling and public transport. A comprehensive network of elevated, at-grade and underground pedestrian linkages will also connect the buildings to public transport nodes. This comprehensive network will allow for seamless first- and last-mile connectivity and will make walking convenient, enjoyable and comfortable in all weathers.

New developments will be integrated with public spaces, cafes, restaurants, attractions, recreation, healthcare and schools, supporting the business and resident communities.



Conceptual plan showing the areas reachable within a 10-minute walk from the MRT stations

| Sustainable transport

Jurong Lake District (JLD) is gazetted as a car-lite district. To achieve the car-lite vision and to support greener mobility in JLD, at least 85 per cent of all trips are targeted to be made by Walk-Cycle-Ride modes of transport by 2035. Key roads will be designed as Transit Priority Corridors, with bus-only usage lanes, wider footpaths and cycling paths.

Car parking provisions are lowered to reduce traffic and create a more people-friendly environment. Pick-up and drop-off locations and service areas and unloading and loading bays are located underground to free up the first storey for pedestrian use. Similarly, interconnected basements will allow cars and service vehicles to move between developments without contributing to street traffic.

To support electric vehicles, EV charging points will be progressively deployed across the district. JLD will also be served by cleaner energy buses, including fully electric buses by 2030.

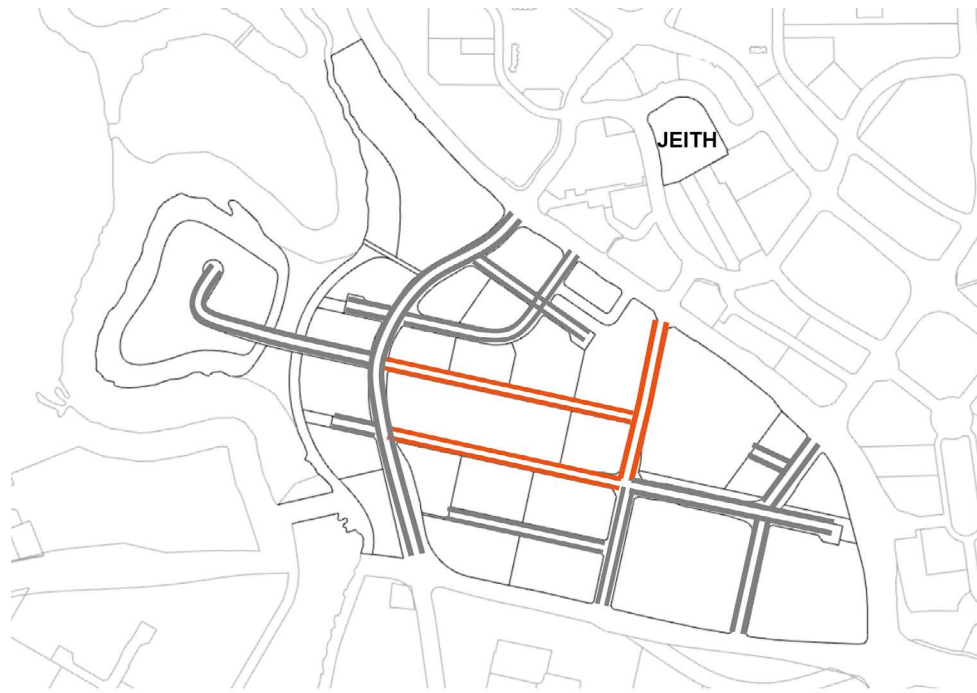


Artist's impression of a Transit Priority Corridor in JLD

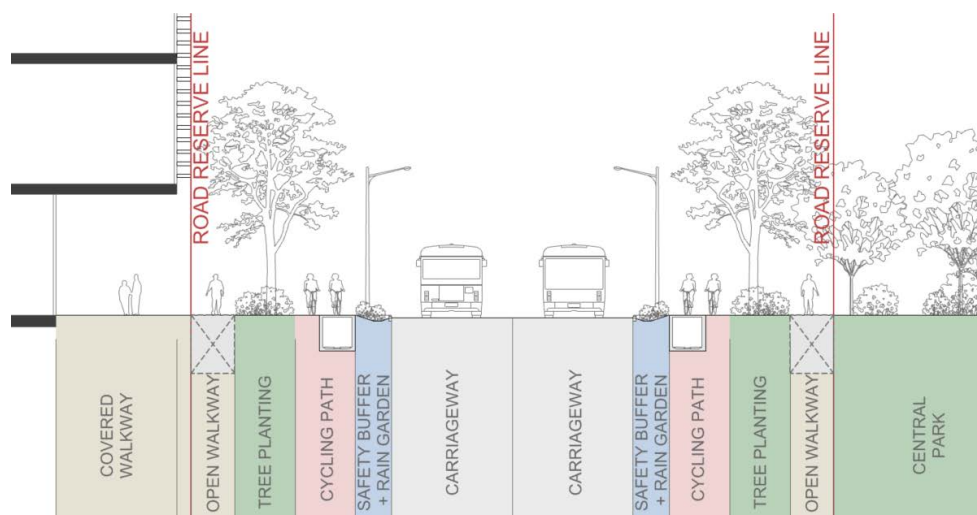
Active streets

The streets serving the new precinct has been designed to promote walking, cycling and the use of public transport. With a reduced number of road lanes, it will free up more space for Walk Cycle Ride (WCR) modes and make it easier for people to cross the street.

Within the central part of the new precinct, three bus-only, Dual-1 Transit Priority Corridors (TPC) have been planned to prioritise the movement of buses. These TPCs will facilitate bus travel between the future new Jurong East Integrated Transport Hub (JEITH) and the new precinct.



- ▬▬ Transit Priority Corridors
- ▬▬ Proposed mixed-traffic roads



Conceptual section showing a Dual-1 Transit Priority Corridor
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Artist's impression of the active streets that promote walking, cycling and the use of public transport

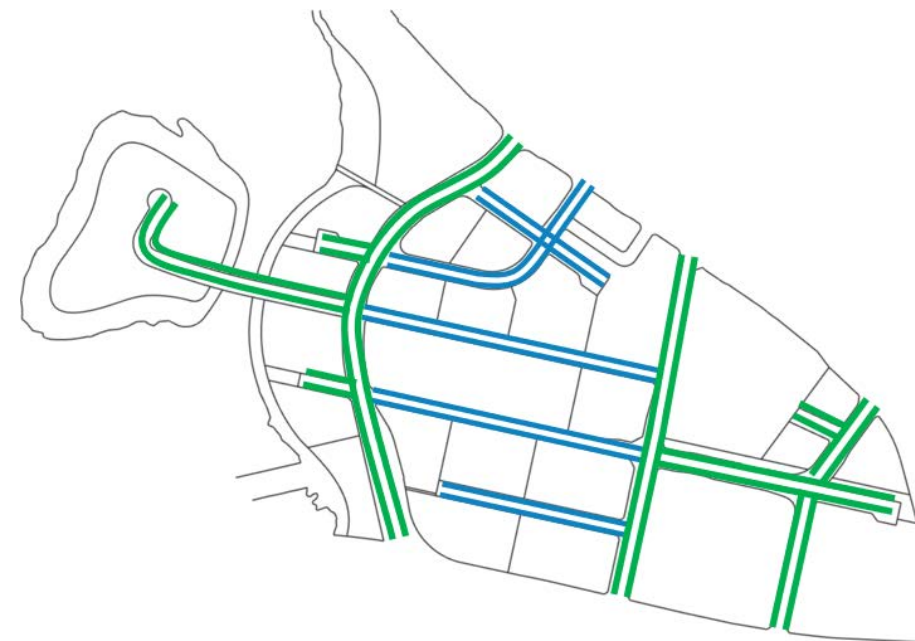
Image courtesy of KCA Architects & Planners, SAA Architects, Arup, S33, and Lektor

Active streets

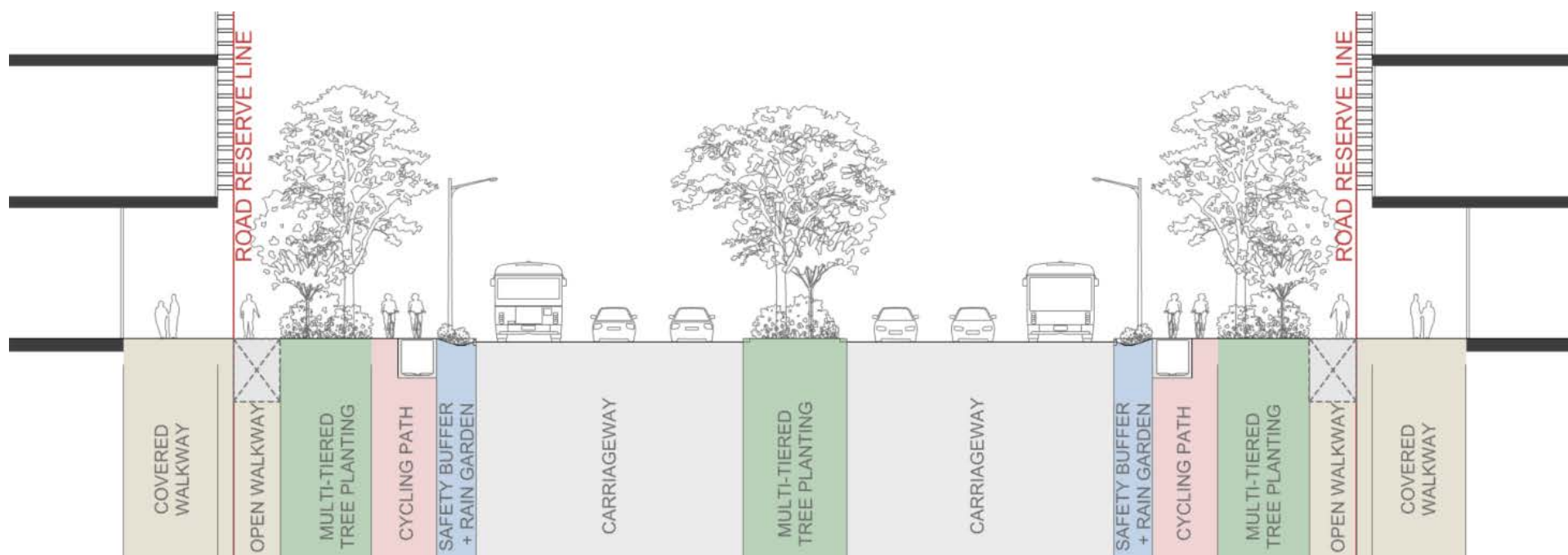
There are two types of streets planned in the new precinct, namely “Urban” and “Green” streets.

The “Urban” streets have narrower sidetables and planting verges to create more intimate and urban streetscapes. The “Green” streets flanking the urban core have wider sidetables and planting verges. These wider sidetables will support more extensive landscaping to help mitigate the Urban Heat Island effect arising from their larger widths.

The planting verges along “Green” streets are wider at 3.5 metres to support multi-tiered tree planting. Wider centre medians are also provided along “Green” streets to provide lush landscaping.



- == **URBAN**
Urban tree planting (2.0 – 2.5m)
- == **GREEN**
Multi-tiered tree planting (3.5m)

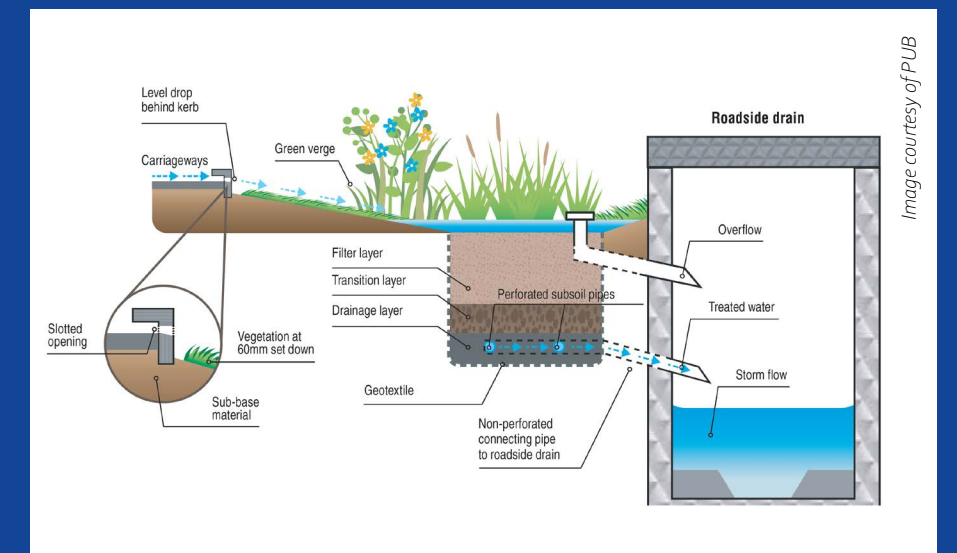


Conceptual section showing a “Green” street with wider sidetables and wider centre medians for multi-tiered tree planting
Jurong Lake District Planning and Urban Design Guide

Rain gardens

All streets in the new precinct will be lined with rain gardens, designed to detain and treat rainwater runoff.

Runoff from the carriageway is filtered by the vegetation in the rain garden, as well as the soil layers beneath the rain garden surface. Sediments are trapped via this filtration process, while pollutants like nutrients are removed by plants. The water that exits the rain garden will then be channelled to the roadside drain before eventually discharged into Jurong Lake.

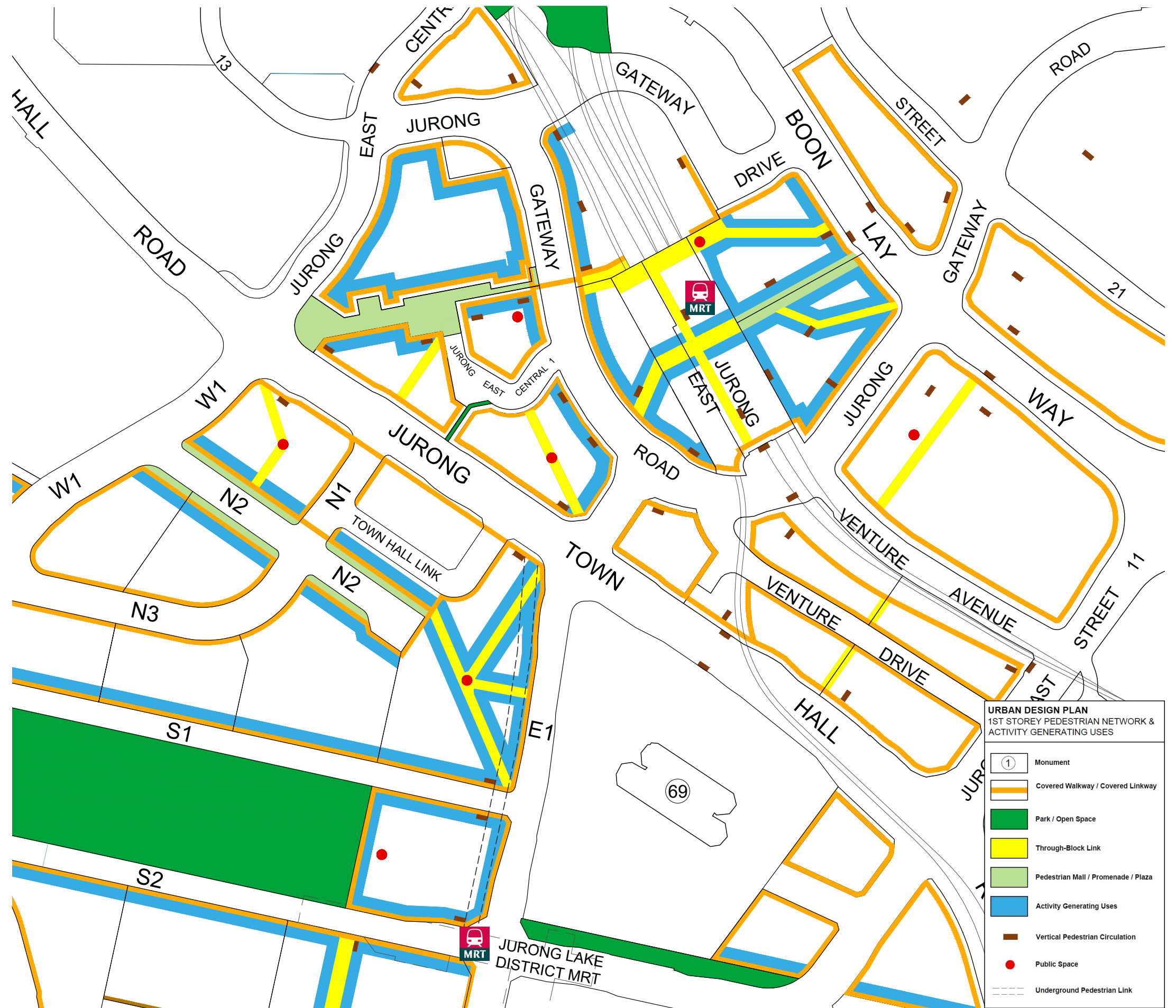


Section showing a rain garden within a road verge with a slotted kerb. For more information on rain gardens, please refer to PUB’s *Active, Beautiful, Clean Waters Design Guidelines*. For more information on the slotted kerb design, please refer to LTA’s *Standard Details of Road Elements*.

Fenceless ground plane

The district is defined by fenceless developments that allow pedestrians to walk through and not around buildings. In addition, a comprehensive at-grade pedestrian network of covered walkways, covered linkways and through-block links provide weather-protected routes. All developments are required to provide covered walkways at the first storey along the site boundaries or designated setback lines. Through-block links are planned to improve the walkability of the area, by providing shorter routes and improving the permeability of the street block.

Activity-generating uses, such as retail, food and beverage outlets, are required along main pedestrian routes to contribute to the vibrancy of these streets. Outdoor Refreshment Areas are also encouraged to be located along these streets, promenades and pedestrian malls to add to the liveliness of the district.



Conceptual plan showing the first storey pedestrian network and location of activity generating uses in the district

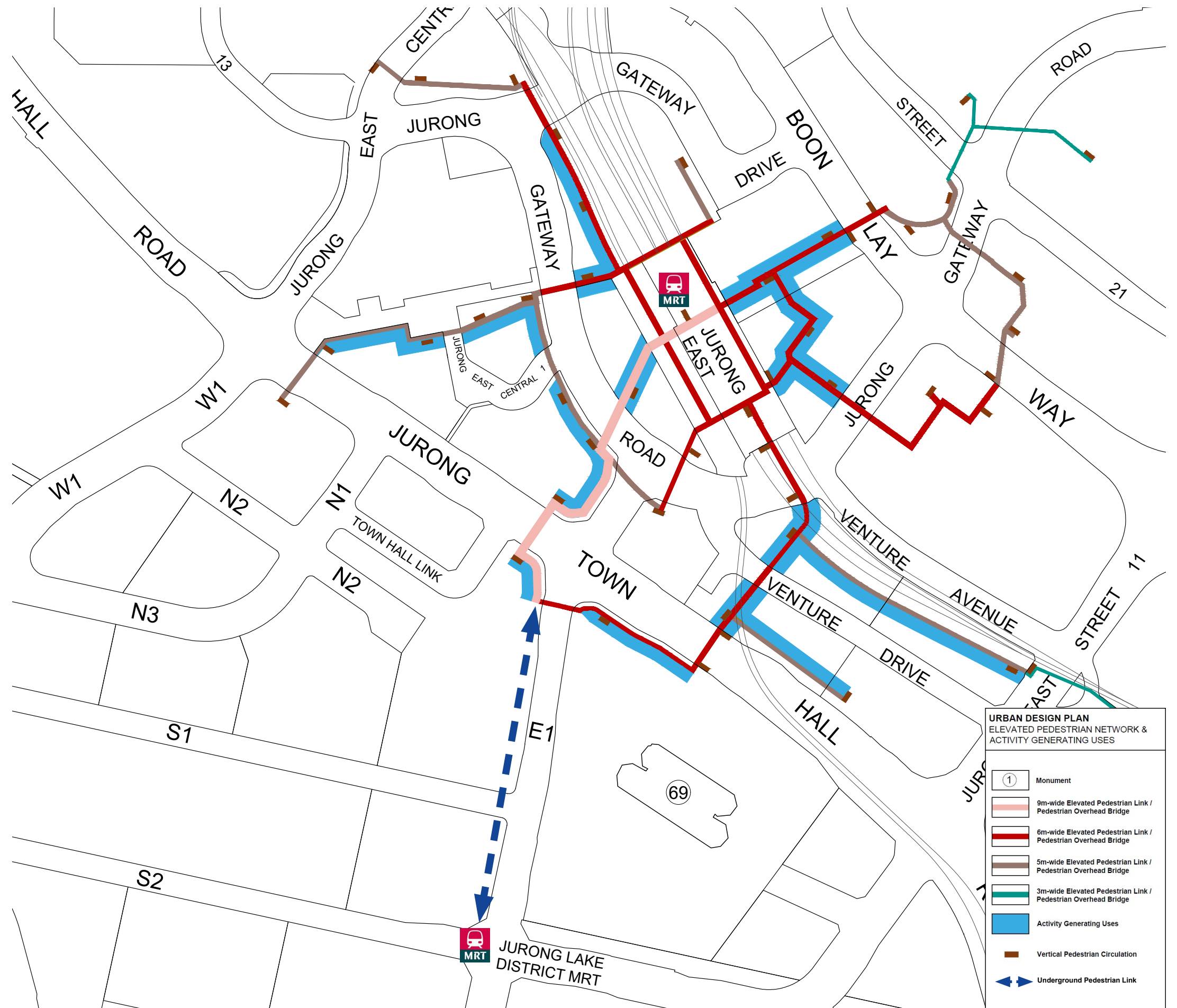
Seamless multi-level pedestrian network

Elevated and underground pedestrian links provide a seamless, sheltered pedestrian connection between the existing Jurong East MRT Station and the future Jurong Lake District MRT Station. Commuters using these links do not need to cross traffic junctions when walking between the two MRT stations that are located 700 metres apart.

The elevated pedestrian network, also known as the J-Walk, offers a comfortable walking experience, with seating provided at intervals for restful breaks for users of all ages and abilities. The J-Walk utilises consistent wayfinding signage to assist users in navigating the extensive network.



View of the J-Walk that connects Westgate and Ng Teng Fong General Hospital
Jurong Lake District Planning and Urban Design Guide



Conceptual plan showing the elevated pedestrian network (J-Walk), underground pedestrian link and location of activity generating uses in the district

| Seamless multi-level pedestrian network

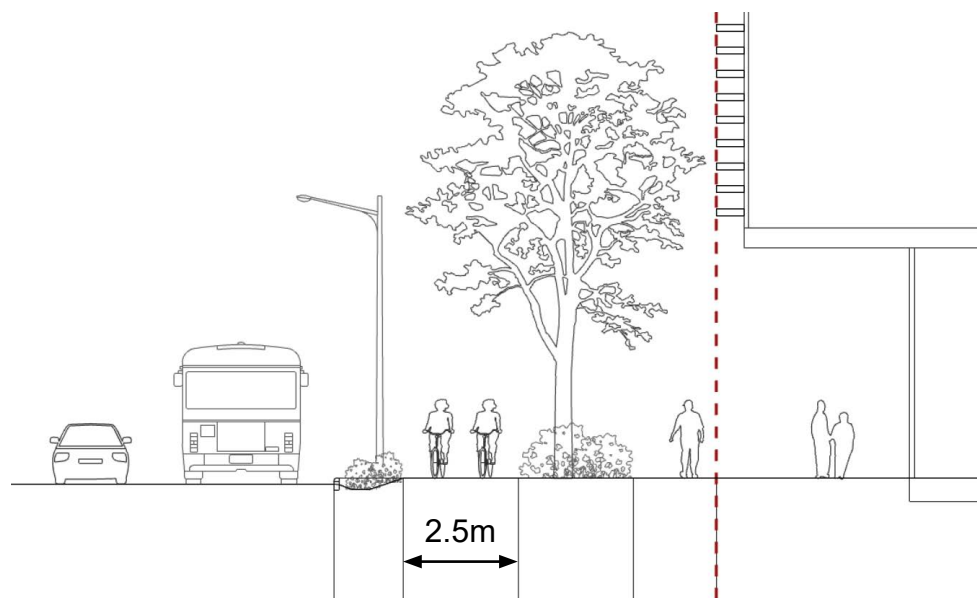


Artist's impression of the elevated, at-grade and underground pedestrian networks coming together to form a fast-lane pedestrian route between the existing Jurong East MRT Station and the future Jurong Lake District MRT Station

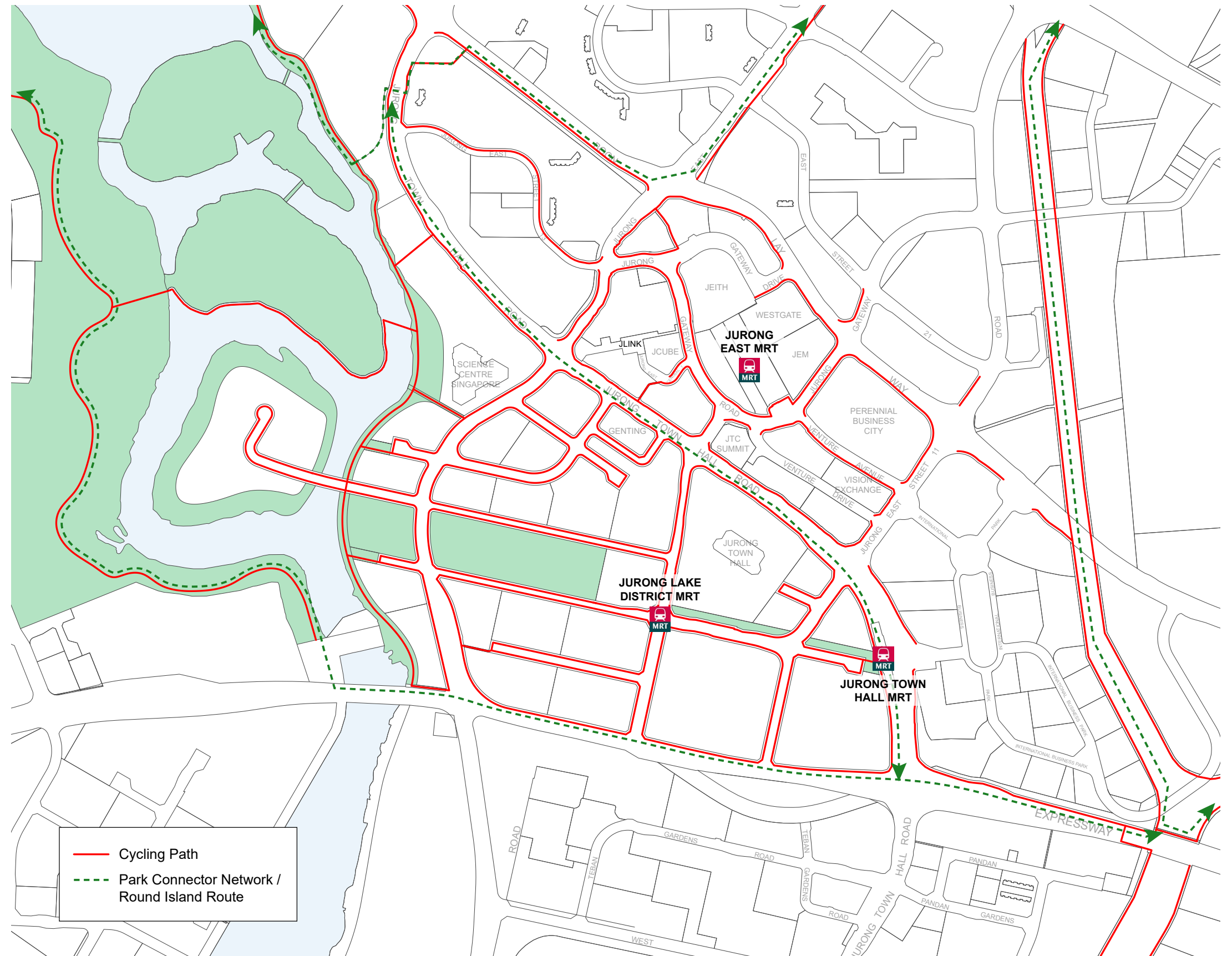
Easy and enjoyable cycling

Cycling paths will be provided along all streets in the new precinct on both sides of the road so that every development is accessible via cycling. Cyclists are separated from pedestrians and vehicles to improve safety, minimise collisions, allow for higher cycling speeds and to cater for higher cycling traffic.

The 2.5 metre-wide cycling paths will be wider than the standard 2 metre width today, which will accommodate cyclists coming from opposing directions, allow for overtaking and allow for a parent and child to cycle alongside one another. Lush landscaping will shade the cycling paths, which makes cycling more attractive and comfortable.



Conceptual section showing an "Urban" street with 2.5m-wide cycling paths
Jurong Lake District Planning and Urban Design Guide



Conceptual plan showing the proposed cycling paths on both sides of the road in the new precinct together with existing and planned Park Connectors

ENVIRONMENT

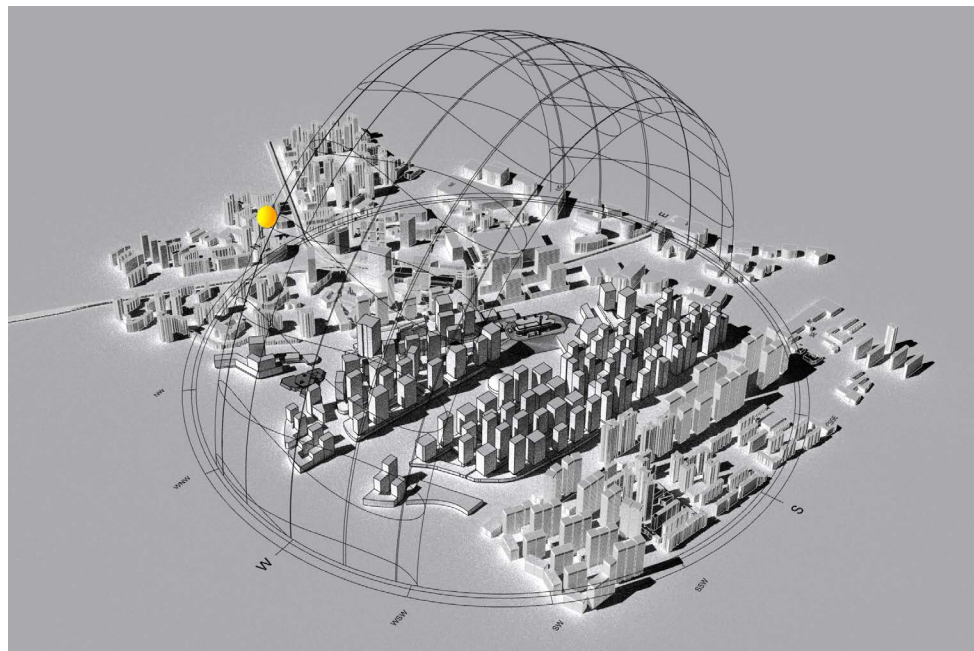
Sustainable living

Inspiring a better tomorrow

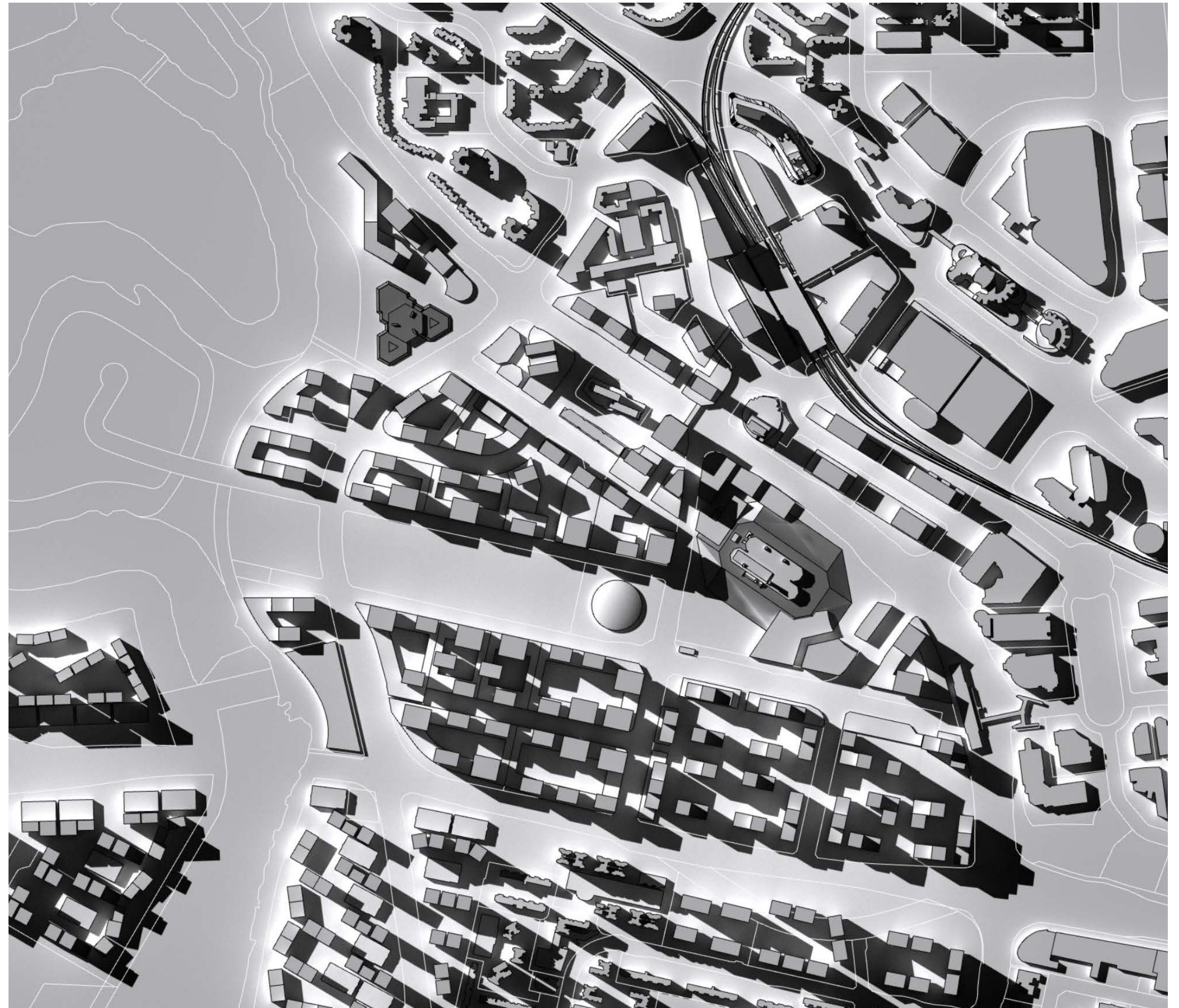
Heat mitigation strategies

The urban design of Jurong Lake District incorporates a range of heat mitigation strategies at the precinct level and for individual developments, so that the precinct remains resilient in the face of climate change.

The design of the building form and massing is to respond sensitively to the local equatorial climate. Developments will harness prevailing winds and utilise self-shading, to mitigate the Urban Heat Island effect and improve outdoor thermal comfort. High-density developments with multiple towers shall ensure that the public spaces and courtyards at the first storey are well shaded.



Sun path diagram of the precinct based on the sun's position on 21 June at 4pm
Jurong Lake District Planning and Urban Design Guide



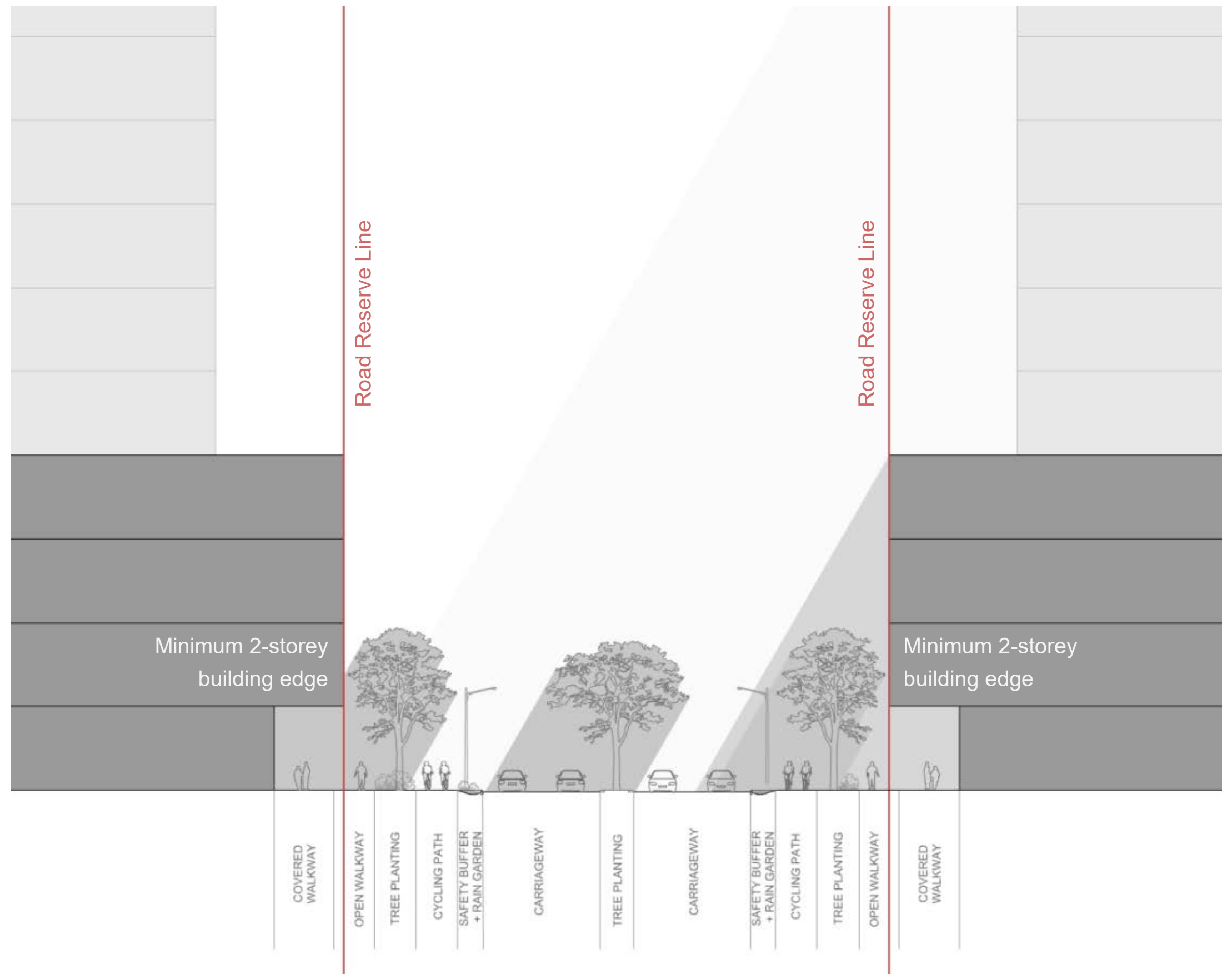
Shadow simulation of the precinct based on the sun's position on 21 June at 4pm

Well-shaded and comfortable streets

Most developments in the new precinct are planned to have no building setbacks, where the building abuts the lines of the Road Reserve. In addition, a minimum building edge of two storeys will be required to support covered walkways along all streets.

Narrower streets with a defined building edge create a higher aspect ratio, which supports a well-shaded streetscape. By minimising heat gain and improving thermal comfort, the street experience could become cooler and more pleasant.

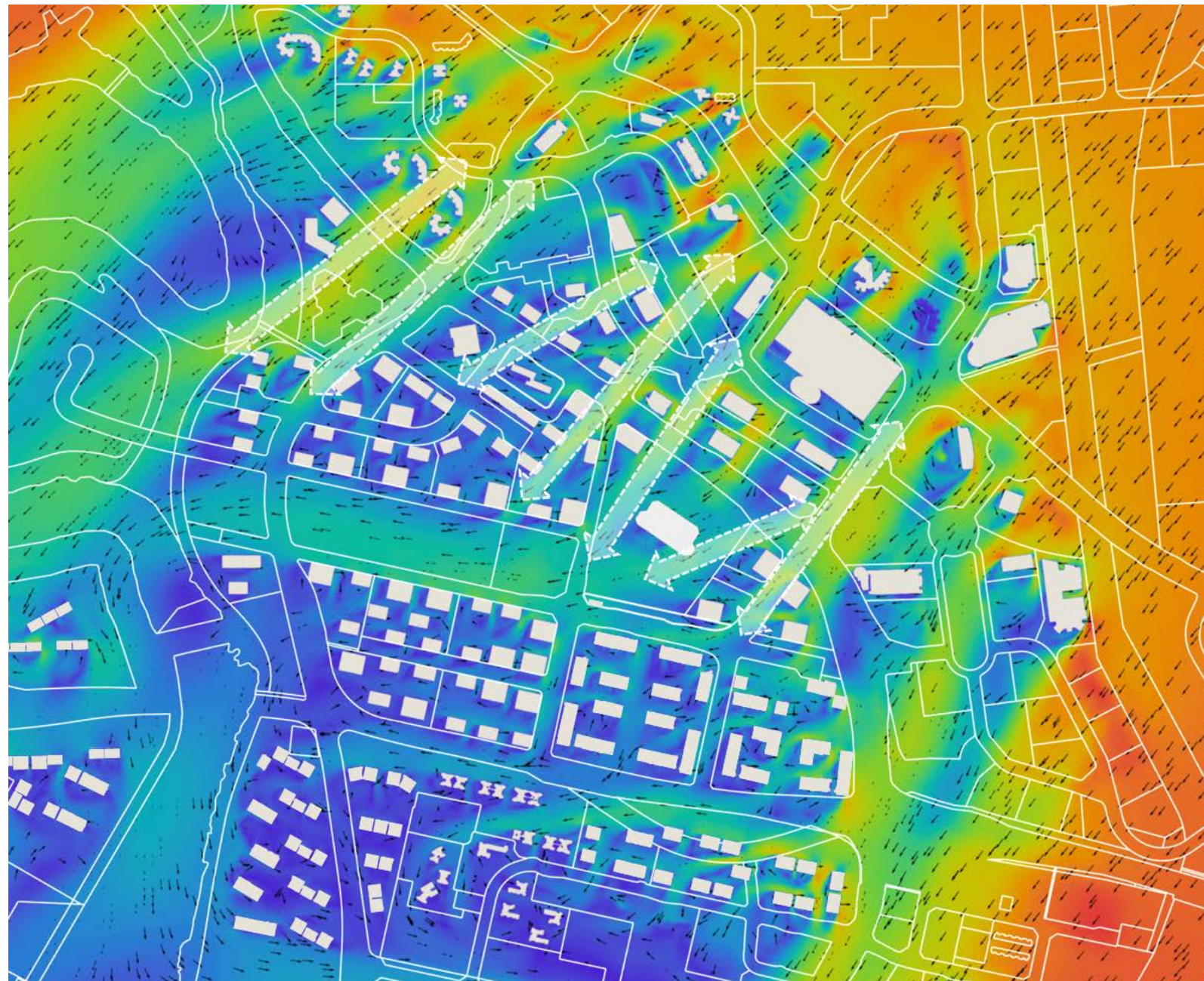
To address the potential Urban Heat Island effect experienced along wider major arterial roads, these streets are planned to have a wider planting verge to support multi-tiered planting. Trees with larger crowns will also be planted along the centre median to reduce solar exposure along these streets.



Conceptual section showing how narrower streets with defined building edges contribute towards a well-shaded streetscape

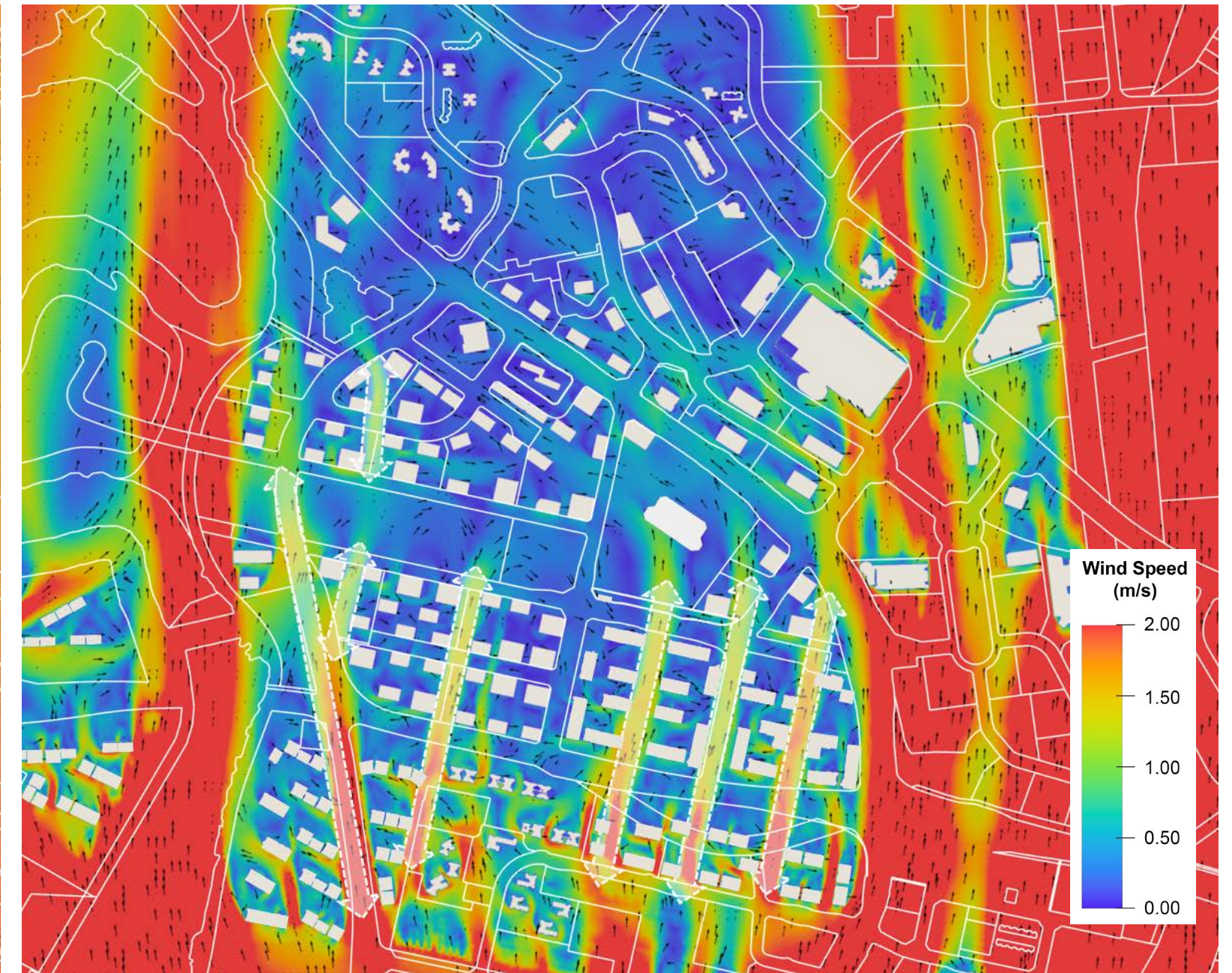
| Breezy wind corridors

Besides the provision of shade, optimising wind flow is another way of improving thermal comfort. Wind corridors are safeguarded throughout the district along the prevailing wind directions from the north-east and south. These wind corridors prevent winds from being blocked upstream so that other developments downstream can benefit from good air flow.



Wind flow environmental modelling of the precinct based on north-east wind
Jurong Lake District Planning and Urban Design Guide

The design of future developments shall incorporate the use of environmental modelling analysis to optimise shade provision, wind flow and thermal comfort. Developments shall also adopt passive design strategies so as to help reduce the cooling load and to create a more comfortable environment.



Wind flow environmental modelling of the precinct based on south wind

Model sustainable district

Jurong Lake District (JLD) will serve as a model district that promotes urban sustainability and a healthy living environment for residents, workers and visitors. The district also acts as a “living lab” and regulatory sandbox, providing opportunities to pilot new urban solutions and refine sustainability-centric initiatives.

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Pursuing **SUSTAINABLE TRANSPORT**
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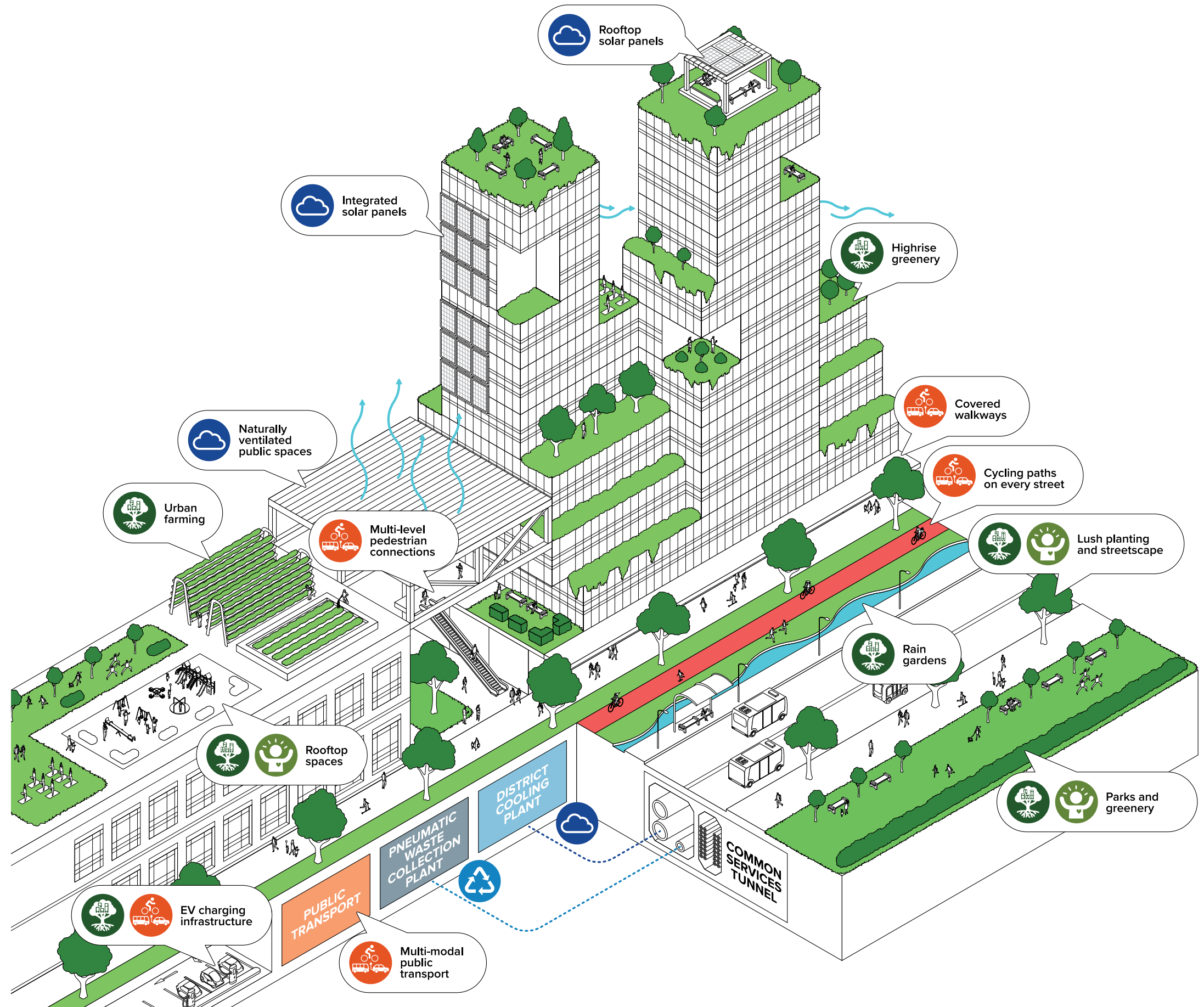
Enabling **HEALTHY LIVING**
- 

Towards **NET ZERO EMISSIONS**
- 

Towards **ZERO WASTE**
- 

Building a **CITY IN NATURE**
- 

Advancing sustainability through **PARTNERSHIP AND TECHNOLOGY**



Artist's impression of how the sustainability aspirations for JLD come together in a typical development

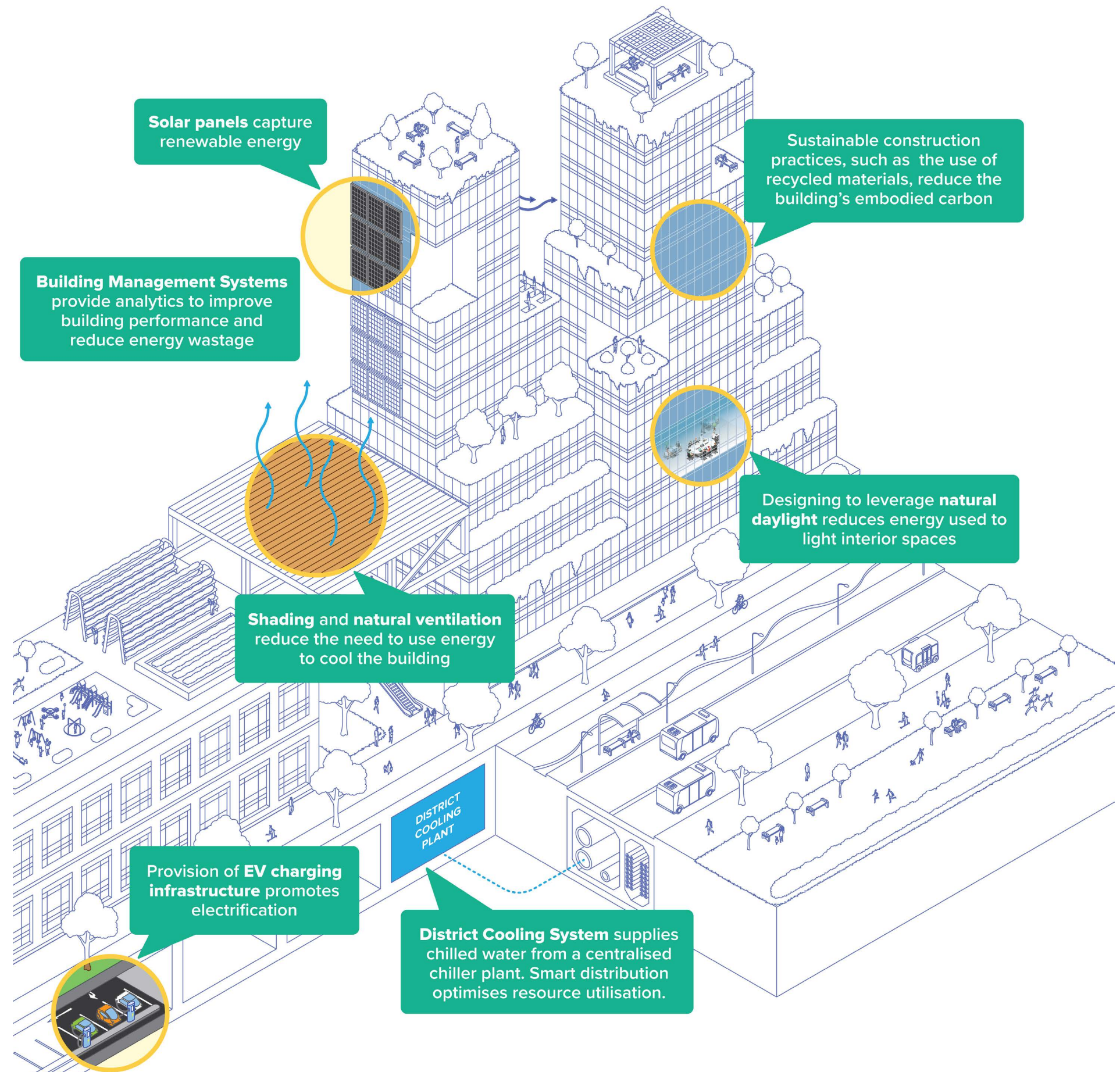
Net zero ambitions

All new developments, including residential developments, in Jurong Lake District will be required to achieve BCA's Green Mark Platinum Super Low Energy (SLE) rating with the Maintainability Badge, with some, if not all, new developments achieving Zero Energy Rating as new technologies and systems evolve over time.

In addition, all new Government Land Sales (GLS) developments will be required to achieve additional Whole Life Carbon and Intelligence Green Mark 2021 Badges, beyond the legislated minimum requirements.

Solar energy deployment will be optimised on all suitable building surfaces within the district, not only on rooftops and building facades, but also on vacant land within the district, as a transitory measure to offset the district's emissions while the national grid is decarbonised over time.

Sustainability alliances can be formed among existing stakeholders in the district to adopt and share best practices, and to work together to deploy solutions that address commonly encountered issues. Businesses can tap on urban technologies to operate more efficiently and sustainably, and collectively demonstrate a greener way of life in an innovative district.



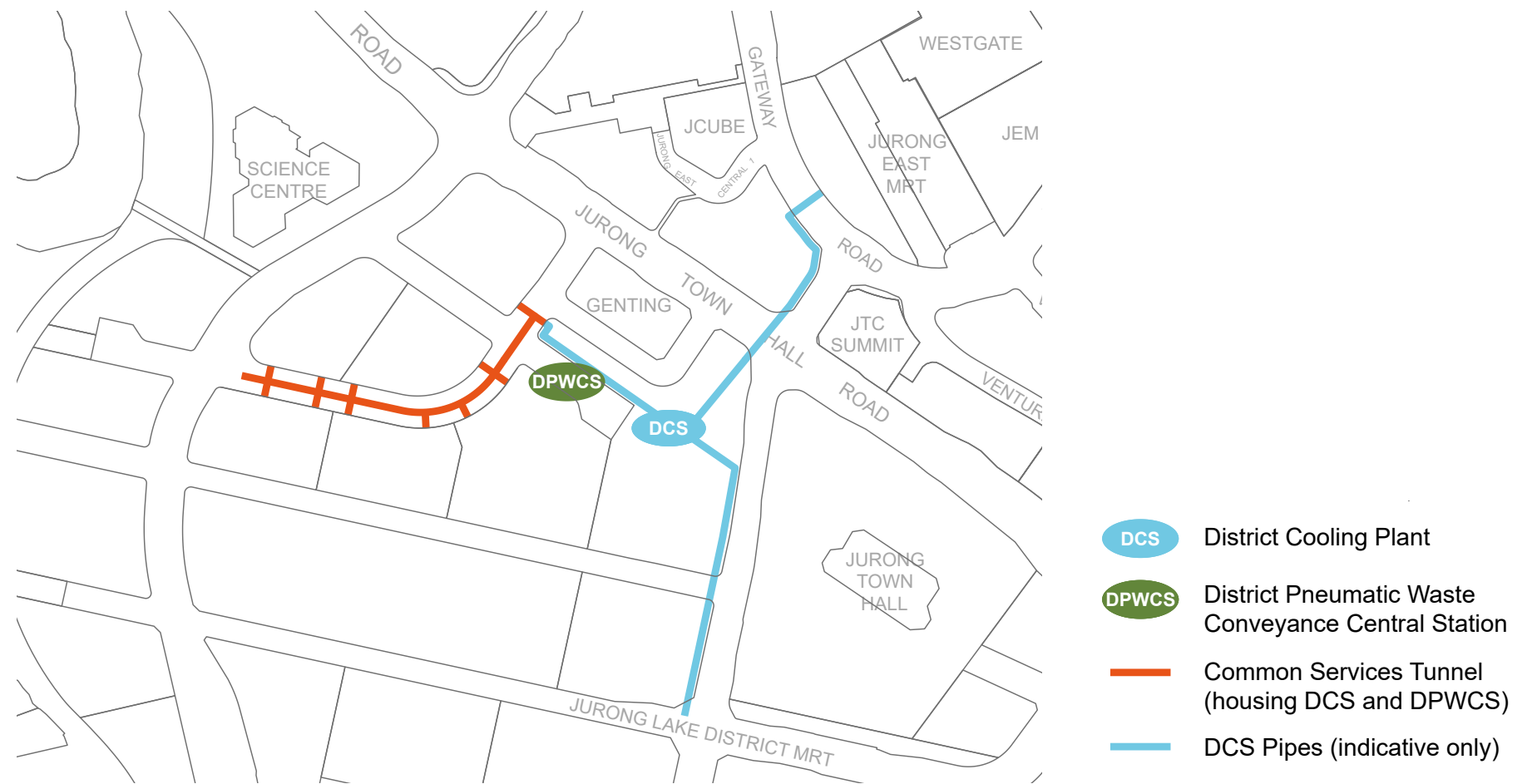
Artist's impression of how building design and management can contribute towards achieving net zero emissions

Centralised district infrastructure

All new developments, including residential developments, in Jurong Lake District (JLD) will be served by the District Cooling System (DCS). By capitalising on the varying cooling demands of different developments or customers at different times of the day, the DCS can help lower the aggregate peak cooling demand. The deployment of DCS in a mixed-use district like JLD, where there is a balanced mix of residential and office/ commercial uses, can effectively lower overall capital investment and increase overall efficiency.

The District Pneumatic Waste Conveyance System (DPWCS) enables waste and recycling management to be carried out with reduced manpower, fewer truck trips, lesser numbers of individual bin centres and contributes to an overall improvement in the quality of the urban environment.

DCS and DPWCS pipes will be housed in the Common Services Tunnels under specific stretches of road carriageways. Smaller watermains, telecommunications and electrical cables will be housed within Utility Specific Ducts located under the footpath within the road sidetable. These strategies provide cleaner and more efficient delivery of urban services to buildings and eliminate the need to repeatedly dig up roads to lay, repair and maintain services and utilities, which in turn minimises accidental damage to the cables and pipes during excavation works.



Conceptual plan showing the indicative location of centralised district infrastructure



Artist's impression of a building section for a development in JLD

| Primed for the green economy

In line with the Jurong Lake District (JLD)'s sustainability positioning, the Government hopes to attract companies that are interested to develop sustainability solutions and capabilities or identify with the sustainability branding, to consider locating their corporate offices and research facilities in JLD.

This will support the district's sustainability agenda and the growth of the sustainability economic sector under the Singapore Green Plan. It is envisioned that JLD will complement the Central Business District by providing high quality office spaces for sectors such as professional services, engineering and architecture,

infrastructure and building construction, maritime services, technology, e-commerce, wholesale trade, among others.

Government agencies leading Singapore's sustainability, environmental, development and transport strategies are planning their move to JLD in phases, supporting the government's commitment to JLD's sustained growth.



Artist's impression of the new precinct when viewed from Jurong Lake Gardens
Jurong Lake District Planning and Urban Design Guide

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<https://www.jld.gov.sg> today.