



# Architectural Design Report

## **SSDA Submission**

Proposed development for Mapletree  
Marvel Warehouse & Distribution Centre  
Moorebank, NSW 2170

Prepared by: Pace Architects

Date: 10/10/25

Revision: 2

# **P/ACE** ARCHITECTS

Suite 5 & 6, 100 Alexander St,  
Crows Nest, NSW 2065  
02 9425 1400  
0404 450 317  
info@pacearchitects.com.au  
www.pacearchitects.com.au

ABN: 72 159 266 350  
Nominated Architect : Patrick Pace #7815  
Registered Architect in NSW, VIC & QLD.

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# 1. Qualifications

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LOCATION PLAN - Moorebank, NSW, 2170.

NORTH

## 1. Qualifications

PACE ARCHITECTS have been engaged by Mapletree to undertake the design of two new multi-level Warehouses in Moorebank, NSW.

PACE ARCHITECTS are a Sydney based architectural firm founded in 2009 by Patrick Pace, with over 25+ years experience within the Industrial / Warehousing sector and is recognised as an Architectural leader in the field in the within sector.

PACE ARCHITECTS are A+ members of the Australian Institute of Architects (AIA). Patrick Pace is the nominated architect no.7815, he is currently registered as a practicing architect in NSW, VIC + QLD.

PACE ARCHITECTS continually strive to remain the premier provider of design excellence and innovation in design; whilst producing sensible design solutions for our clients and building a dynamic, educative, challenging environment for our employees. We build long-term client relationships on mutual trust, respect and collaboration.



### Qualifications

Bachelor of Architecture, University of Sydney 2000

Bachelor of Science (Architecture), University of Sydney 1998

Institute of Architects A+ member

Registered Architect NSW 7815, VIC 18614 & QLD 5143



Sincerely yours,

A handwritten signature in black ink, appearing to read 'Patrick Pace'.

Patrick Pace  
Director/ Registered Architect

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maple<sup>tree</sup>

## 2. Architectural Design Statement

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## Executive Architectural Statement - Revised Design

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This revised architectural design submission is a direct response to the feedback received from DPHI, Council and other government agencies to result in a better outcome. This includes the following key improvements:

- Breakdown of large bulky building and facade
- Efficient warehouse configuration
- Increased setback to Kelso Crescent
- Improved visual impact
- Improved pedestrian safety
- Simplified vehicle circulation
- Increased retention of existing trees – 7
- Improved flood storage and stormwater management
- Increased sustainability and environmental outcome

We believe this design represents a significant advancement from the original scheme — a solution that more effectively utilises the site better, responds to DPHI's expectations, and enhances flexibility to meet evolving occupier demands.

In comparison to original single bulky large warehouse envelope, the new layout comprises two smaller multi-level warehouse buildings seamlessly connected via a central shared loading zone operating across both levels. This reconfiguration achieves far greater efficiency in site use, improves loading functionality, and enables flexible tenancy arrangements — allowing this facility to cater to a broader range of occupiers and accommodate future reconfigurations as market needs evolve.

The hardstand has been relocated between the warehouses to provide centralised loading arrangement, in contrast to the previous scheme where all loading was concentrated along the western boundary.

The central loading areas have been carefully designed to provide a generous 50-metre-wide apron, an improvement over the previous 36 metres. This wider configuration supports shared loading scenarios, allows for both reversing and side-loading operations, and provides greater flexibility and ease of manoeuvring for various loading conditions. On the ground floor, the revised scheme now incorporates four recessed docks, meeting standard operational requirements — compared to an excess of eight docks in the earlier design — optimising functionality while reducing redundancy.

Architecturally, the revised design adopts a refined and deliberate approach to addressing both street frontages. The façades are articulated to create rhythm and scale, utilising a robust material palette of masonry and profiled metal cladding consistent with the quality expected of high-end industrial developments. Areas associated with office and pedestrian interfaces are enhanced with glazing, introducing natural light, providing façade relief, and reinforcing a commercial and contemporary aesthetic aligned with Mapletree's brand identity and international portfolio standards.

## Executive Architectural Statement - Revised Design

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Office components have been carefully positioned to provide strong street presence, optimal solar orientation, and enhanced workplace amenity.

Architectural sun-shading elements are integrated throughout to strengthen visual interest, improve environmental performance, and contribute to comfort, sustainability, and long-term energy efficiency.

Office spaces are now integrated within the warehouse footprint, enhancing the visual appearance of the building and simplifying pedestrian movement to and from Warehouse 1, creating a cohesive and practical interface for both pedestrian and vehicular access. This integration result in building Setback from Kelso Crescent increased to 25m in lieu of the original 10m and also reduces the need for over-excavation, addressing earlier civil and stormwater detention challenges identified in the previous design.

Above ground and basement car parking have been replaced with on grade car parking closer to office areas evenly distributed across the site to improve accessibility and convenience access to various tenancies. The undercroft car park below Warehouse 2 supports a more sustainable and efficient design for mechanical and lighting services, while also enhancing natural light and ventilation. Light vehicle circulation to undercroft car parking is provided via new drive isle with permeable paving finish supporting water-sensitive urban design.

The design also introduces a more efficient truck maneuvering flow, ensuring clear directional movement and improved operational efficiency across the site. The truck ramp to level 1 has been relocated to the east of the building, simplifying heavy vehicle circulation and improving visual impact from Kelso Crescent in response to Department feedback. Car and truck movements are strategically separated, creating a safer and more efficient traffic environment that supports simultaneous operations without conflict. The site also benefits from dual road access points, allowing convenient ingress and egress from both main frontages.

In summary, the revised scheme delivers an alternative scheme to best address the feedback received in submissions and planning/design recommendations for compliance as part of this SSDA submission.

## 2. Architectural Design Statement

### EXECUTIVE SUMMARY

MAPLETREE are seeking to establish a state-of-the-art multi-level industrial development located at 20 Kelso Crescent, Moorebank, NSW.

### VISION

The vision is to create a highly functional and accessible multi-storey warehouse, increasing the usable floor space ratio per square meter of land.

### SITE

The site is located at 20 Kelso Street, Moorebank, NSW 2170, within the Liverpool Local Government Area (LGA). The site has an area of 35,190 sqm.

### OPPORTUNITY

To date, the concept of a multi-level warehouse has had limited take up in Australia due to availability of relatively cheap and developable land. However in other countries like Hong Kong & Singapore, limited land availability has led to multi-level warehouses up to 20 storeys tall. Mapletree is now looking to expand their multi-level warehouse portfolio in Sydney, Australia.

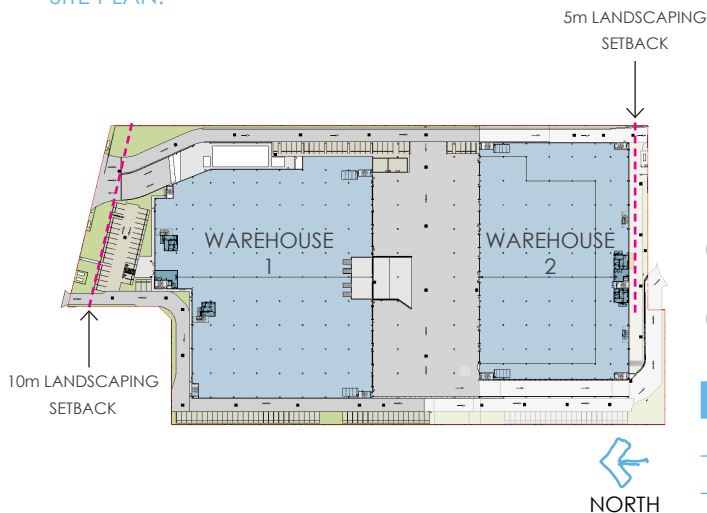
### THE PROPOSED DEVELOPMENT:

Construction of a multi-level warehouse with a Gross Floor Area (GFA) of 32,269 sqm and an Office with a GFA of 1,480 sqm, including landscaping, loading areas and on-site parking.

### PROJECT DETAILS:

The Warehouse and Distribution Centre comprises of two storeys totalling approximately 32,269 square meters including the provision of end-of-trip facilities and 160 car parking spaces.

### SITE PLAN:



Warehouse & Office GFA Summary	SQM
Warehouse	32,269 sqm GFA
Office	1,480 sqm GFA
Total Warehouse & Office Area	33,749 sqm GFA
Proposed Heavy Duty Pavement	15,893 sqm
Proposed Light Duty Pavement	2,733 sqm
Proposed Staff & Visitor Car Parking	160 spaces
Proposed Bicycle Parking Bays	16 spaces

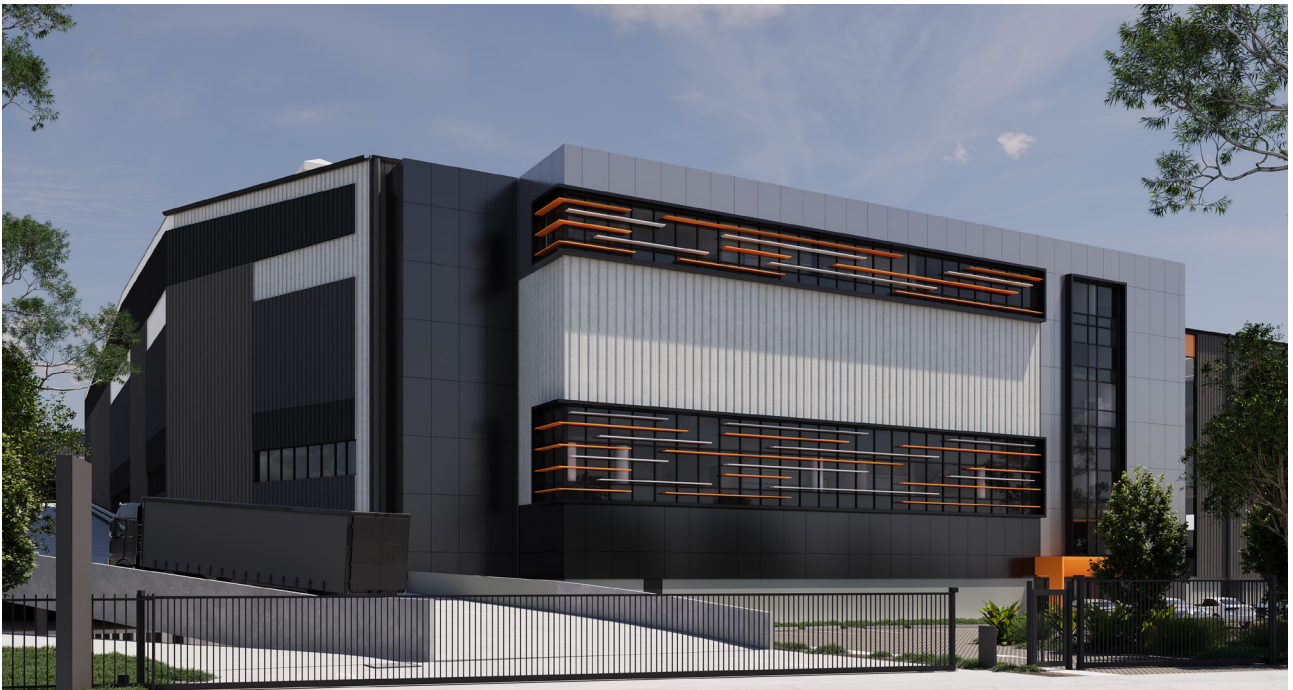
### DESIGN PARAMETERS:

- (i) Building heights levels:  
The site analysis demonstrates site characteristics and site opportunities that support the following building heights:  
Warehouse: 30m maximum ridge height
- (ii) Building Setbacks: variable setbacks are applicable – all are achieved.  
Primary Setback (Ground Floor): 10m  
Primary Setback (First Floor): 7.5m  
Secondary Setback: 5m
- (iii) Landscaped Area: 10% Minimum
- (iv) Carparking and Access: The layout of driveways to loading docks must enable heavy vehicles to:
  1. Enter and exit the site in a forward direction
  2. Park within designated loading areas.
 When possible, loading docks are to be located in areas that:
  - a. Are not exposed to public streets
  - b. Are generally separate from and do not interfere with car parking areas.
- (v) On site parking provided
- (vi) Floor Space Ratio (FSR): N/A

Controls Compliance Table	Control
Maximum Building Height	30m
Ground Floor - Primary Setback	10m
Ground Floor - Secondary Setback	5m
First Floor - Primary Setback	7.5m
Minimum Landscaped area	10%

## 3D Renders

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ENTRANCE



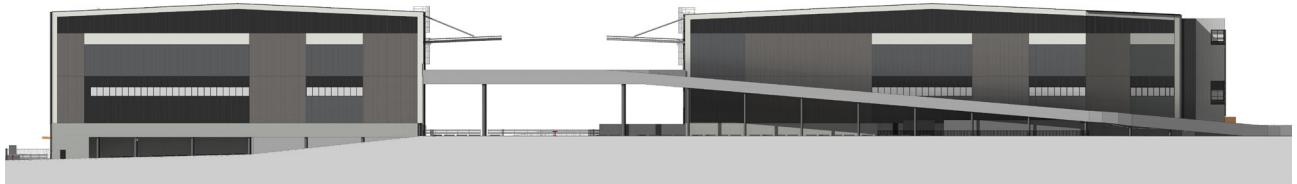
WAREHOUSE REAR



CARPARK

Indicative 3D perspectives (work in progress)

## 2.1 Architectural Statement



### SEARS DESIGN DEVELOPMENT (SSD-36138263)

The Secretary's Environmental Assessment Requirements (SEARs) is a guide to control the Architectural quality of urban and built form design. Consideration of these requirements is crucial in designing proposals that positively respond and impact the surrounding environment. The proposed design excellence response aims to meet these criteria, specifically Item 3 and item 4 of the Key Issue and Assessment requirements.

In response to SEARs item 3 - Design Quality, it is acknowledged that a design competition was not required for the project. Therefore, only the 'good design in Better Placed' assessment requirements are applicable for this project.

This proposal has reviewed, considered and implemented the aims of the criteria of SEAR's Item 4 Built form and Urban Design, in order to achieve a high quality architectural response. Throughout the design statement each area will highlight and address different criteria relating to the SEAR's guidelines.

### SEAR'S DESIGN QUALITY: BETTER PLACED OBJECTIVES

"Better Placed" is an integrated design policy organised by the GANSW (Government Architects New South Wales). It is a set of seven objectives that aims to set aspirations and expectations for designing a built environment of high quality architecture and public domains for work and lifestyle.

The policy has a focus on providing good architecture which promotes amenity as well as an emphasis on the sustainable management of built and cultural heritage. Our design was developed through the consultation of these seven objectives as per the following summary and as expanded on throughout the report



NORTH

## 2.2 Architectural Statement



### BETTER FIT

#### CONTEXTUAL, LOCAL AND OF ITS PLACE

The considerations made surrounding both the built form and intended usage of the proposed development offer a better fit for the sensitive local and natural context through an evolution of the site usage.

Transforming a site from one engaged in pollutant industry into an innovative two storey, low-impact operations distribution centre will harmoniously integrate within the suburban and nearby natural landscape.

The multi-storey form assists to compact the distribution centre design, allowing for increased contribution to the local economy with decreased land-use and impact on surrounding sites.



### BETTER PERFORMANCE

#### SUSTAINABLE, ADAPTABLE AND DURABLE

The design has considered a sustainable landscape in an urban setting and sought to improve and organise the existing urban realm and streetscape, responding to the desired future character.

The built form and function has considered practical and effective sustainable measures, relating to shading, ventilation, power generation, landscaping and water.

Material selections, durability and their relationships have been considered as has the detailing and weather implications to ensure the quality of the finished form and its life cycle into the future.



### BETTER FOR COMMUNITY

#### INCLUSIVE, CONNECTED AND DIVERSE

The redevelopment of this site, though our understanding that it has been relatively unchanged for the last 45 years and was previously used for manufacturing industries, will provide a positive service to the connection and experience within the Moorebank community.

This evolution of use provides an opportunity for local economic growth. Strategically located in close proximity to the M5 and the future Moorebank Intermodal Terminal, the site improves connectivity and enhances the future community outlook.



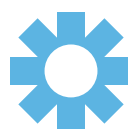
### BETTER FOR PEOPLE

#### SAFE, COMFORTABLE AND LIVEABLE

The built form has a clear identity and its uses and components have been clearly defined for ease of operations and use.

Considerations for natural lighting for areas of high-density activity (Offices and Staff Recreational Areas) have been made to increase the amenity and wellbeing of users.

The evolution of site use has broader reaching positive consequences in reducing the exposure to noise and chemical pollutants to the nearby residential areas.



### BETTER WORKING

#### FUNCTIONAL, EFFICIENT AND FIT FOR PURPOSE

The design seeks to balance the needs of the user efficiently and effectively.

Space and purpose have been designed to respond to a well thought through relationship and ease of what these spaces are used.

Space have been made as flexible and as adaptive as possible to minimise possible future modifications and maximise the life cycle of the development.



### BETTER VALUE

#### CREATING AND ADDING VALUE

The design has successfully responded with the provision of a variety of uses, proximity to supporting amenity as well as optimising internal and external amenity for the users.

The use of the multi-storey warehouse, a new industrial typology introduced to Australia allows for an increased level of industry and commercial activity to occur within the confines of the site.

As Western Sydney continues to develop, we see a need for similar building types that bring value to communities like Moorebank and that set a precedent and benchmark for future developments within the local and broader region.



### BETTER LOOK & FEEL

#### FUNCTIONAL, EFFICIENT AND FIT FOR PURPOSE

The proposed development serves as a benchmark for

future industrial developments in the Moorebank industrial precinct. It demonstrates how multi-storey developments can contribute positively to the visual character of the place whilst maintaining optimal functionality and operational efficiency.

The contemporary form incorporates architectural features that act to 'soften the edges' on what can otherwise be quite a hard-edged building typology. The material selections are not only intended to be fit for buildings usage but are also intended to draw from and complement the surrounding

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maple<sup>tree</sup>

## 3. Urban Context and Site Analysis

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### 3.1 Urban Context & Site Analysis

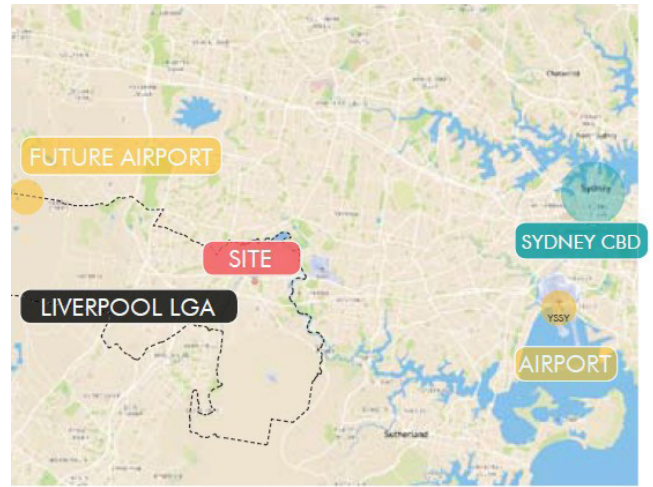
The site is located within the suburb of MOOREBANK which is located inside the Liverpool City Council Local Government Area.

The site is located approximately 26 km SW of the Sydney CBD, 22 km W of Sydney airport and 21km ESE of the New Western Sydney Airport site.

The site is located with frontage to Kelso Crescent adjoining Newbridge Road. The site is well connected to both of these roads with Truck and Car entrance/exit points from Kelso Crescent.

Other significant roads in the greater context include the M5 South-Western Motorway to the South, and the Hume Highway and Heathcote to the West .

The site is also situated within close proximity to Liverpool and Casula train stations, and the future Moorebank Intermodal Terminal to the south.



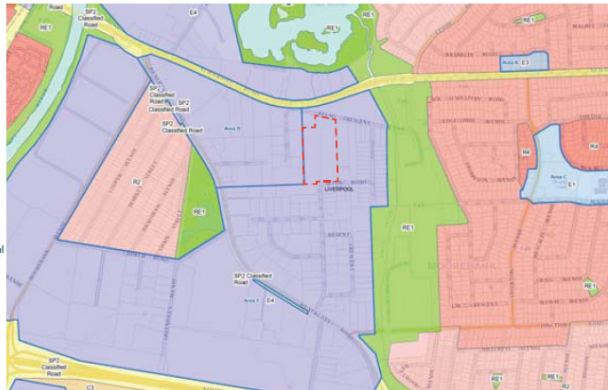
- Major Road
- Minor Road
- - - Train Line
- T Train Station

# 3.2 Urban Context & Site Analysis

## PLANNING CONTROLS

### Zoning

- E4 - General Industrial
- R2 - Low Density Residential
- R3 - Medium Density Residential
- R4 - High Density Residential
- RE1 - Public Recreation
- SP2 Infrastructure



(Source: Extract from www.planningportal.nsw.gov.au)

### Height Limits

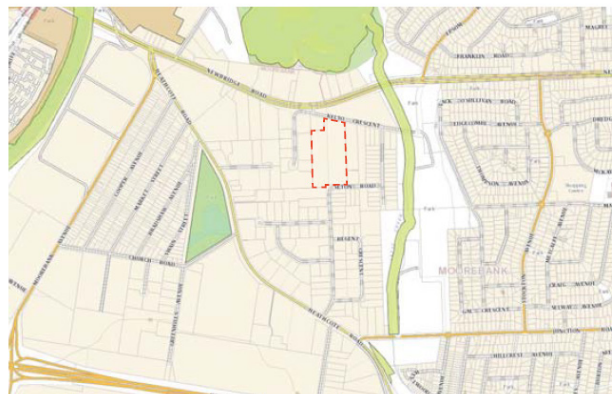
- 8.5m
- 12m
- 15m
- 18m
- 21m
- 30m
- 45m



(Source: Extract from www.planningportal.nsw.gov.au)

### Heritage & Environmental Significance

- Heritage - General
- Heritage - Landscape
- Environmentally Significant Land



(Source: Extract from www.planningportal.nsw.gov.au)

### Flood Risk

- Flood Extent - High Risk Area
- Flood Extent - Med. Risk Area
- Flood Extent - Low Risk Area
- Flood Local Major Extent
- Flood Risk Minor Extent



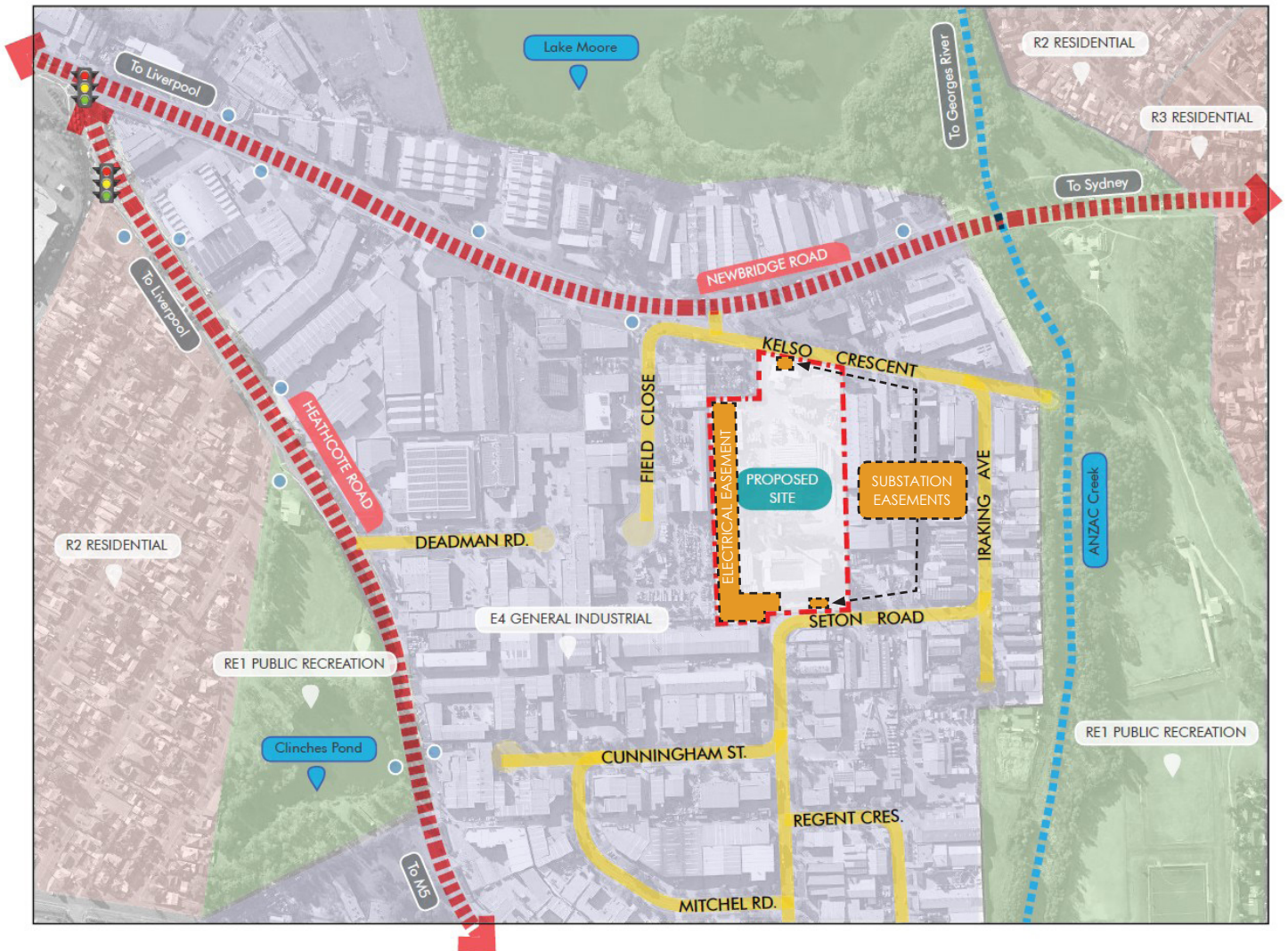
(Source: Extract from eplanning.liverpool.nsw.gov.au)

### 3.3 Urban Context & Site Analysis

The site is situated central within an E4 General Industrial zone and precinct. A number of natural features surround the industrial precinct, including Lake Moore to the North, ANZAC Creek to the East and Clinches Pond to the West. Beyond the natural features are residential pockets zoned R2 and R3 - Low & Medium Density Residential. The Industrial precinct extends further across Heathcote Road to the south.

In the immediate context: The site itself has two street frontages, Kelso Crescent on the North and Seton Road to the South. Kelso Crescent is accessed via a primary road being Newbridge Road. This is foreseen to be the primary access route to the site. As explored in the following pages, the site is situated amongst existing industrial and commercial buildings of varying typologies and style. The buildings are however of a similar scale, that being single to two storeys tall with a number of them incorporating red brickwork.

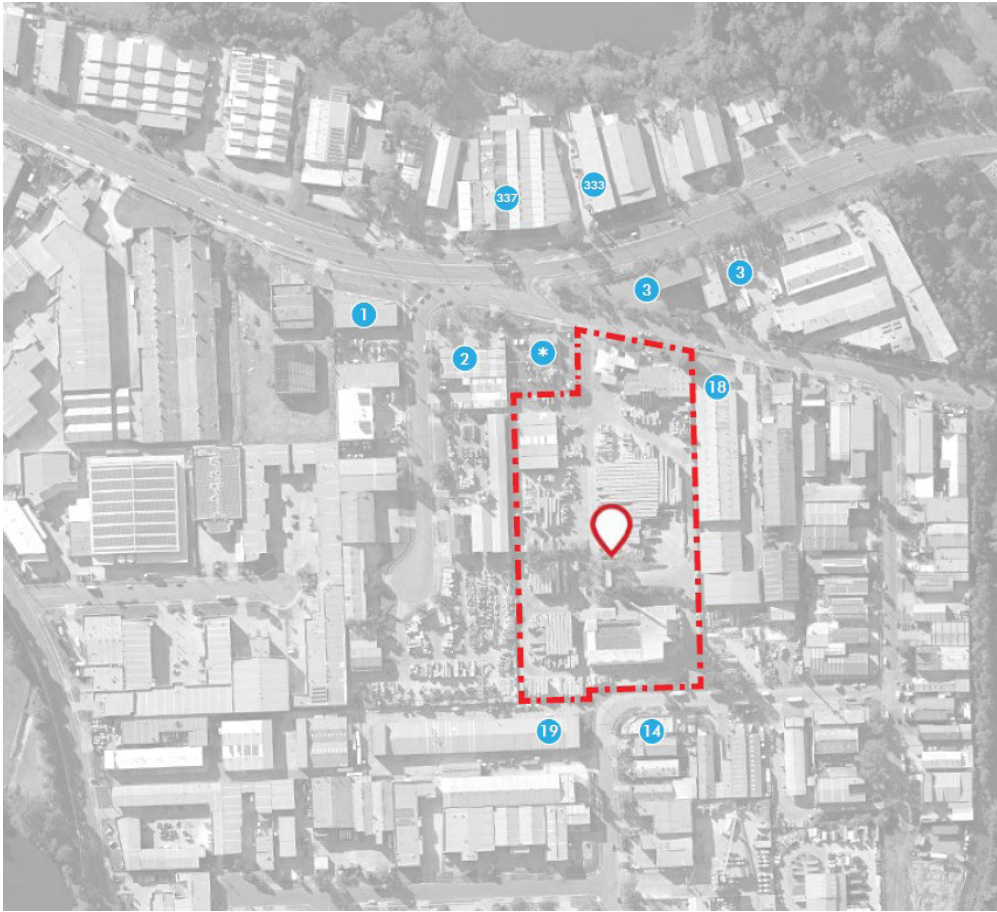
Newer developments like that of 3 Kelso Crescent (Kennards Self-Storage facility) demonstrate a much larger building typology and suggest the pattern for future built form for the precinct.



- Major Road
- Minor Road
- Signalised Intersection
- Bus Stop
- Cul-de-sac
- E4 - General Industrial
- R2 - Low Density Residential
- R3 - Medium Density Residential
- RE1 - Public Recreation

### 3.4 Urban Context & Site Analysis

#### CONTEXT ANALYSIS



3 Kelso Crescent - E4 General Industrial



3 Kelso Crescent - E4 General Industrial



337 Newbridge Road - E4 General Industrial



333 & 331 Newbridge Road - E4 General Inds.



1 Field Close - E4 General Industrial



2 Field Close - E4 General Industrial



\* Moorbanks Substation



18 Kelso Crescent - E4 General Industrial



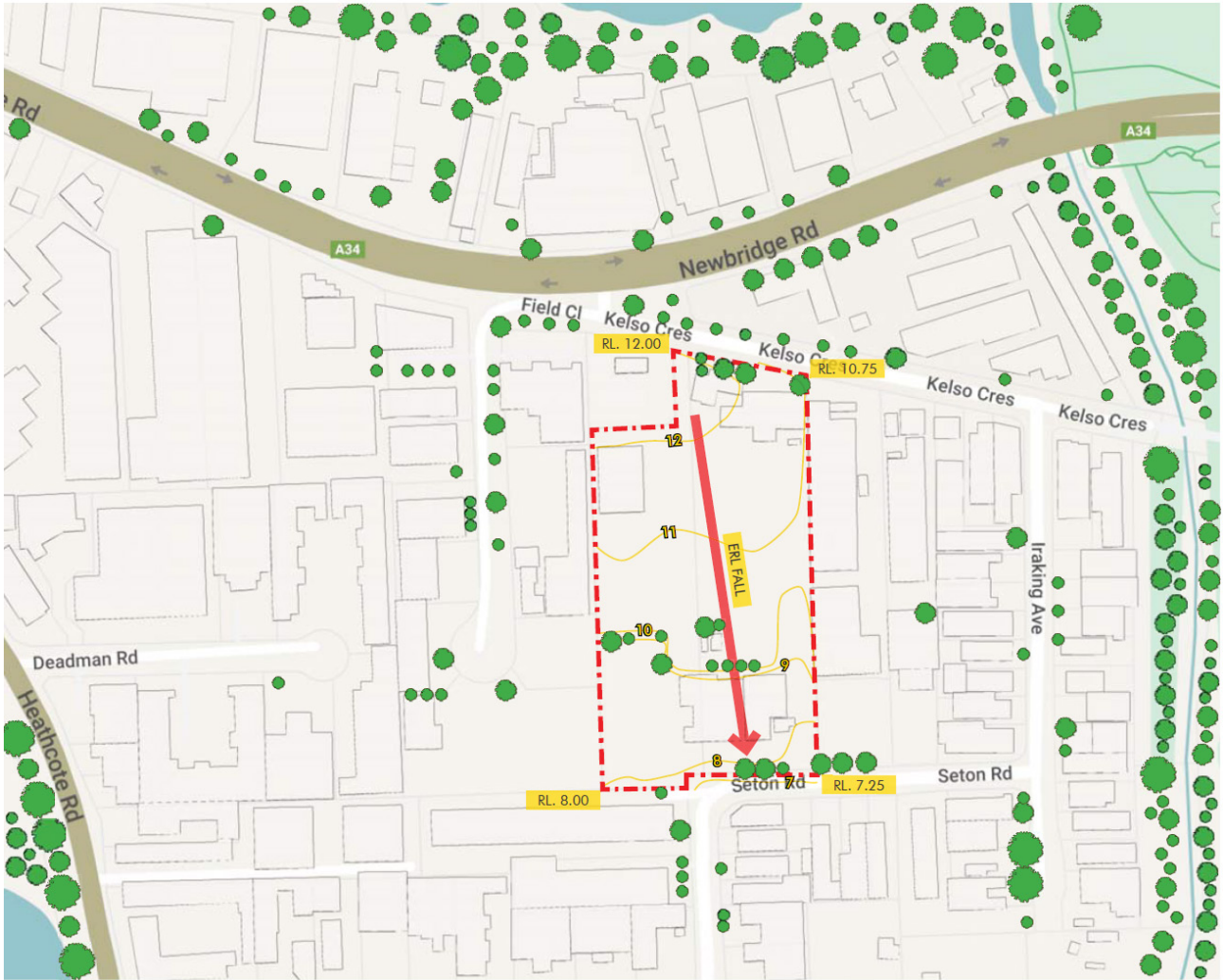
19 Seton Road - E4 General Industrial



14 Seton Road - E4 General Industrial

### 3.5 Urban Context & Site Analysis

#### TOPOGRAPHY & EXISTING TREES



#### Existing Topography

The site possesses a moderate elevation change in the North to South direction.

The Northern boundary sits an RL of 12.0m and falls to the south to an RL of 8.0m and 7.0m on Seton Road. This entails a level difference of approximately 4.5m.

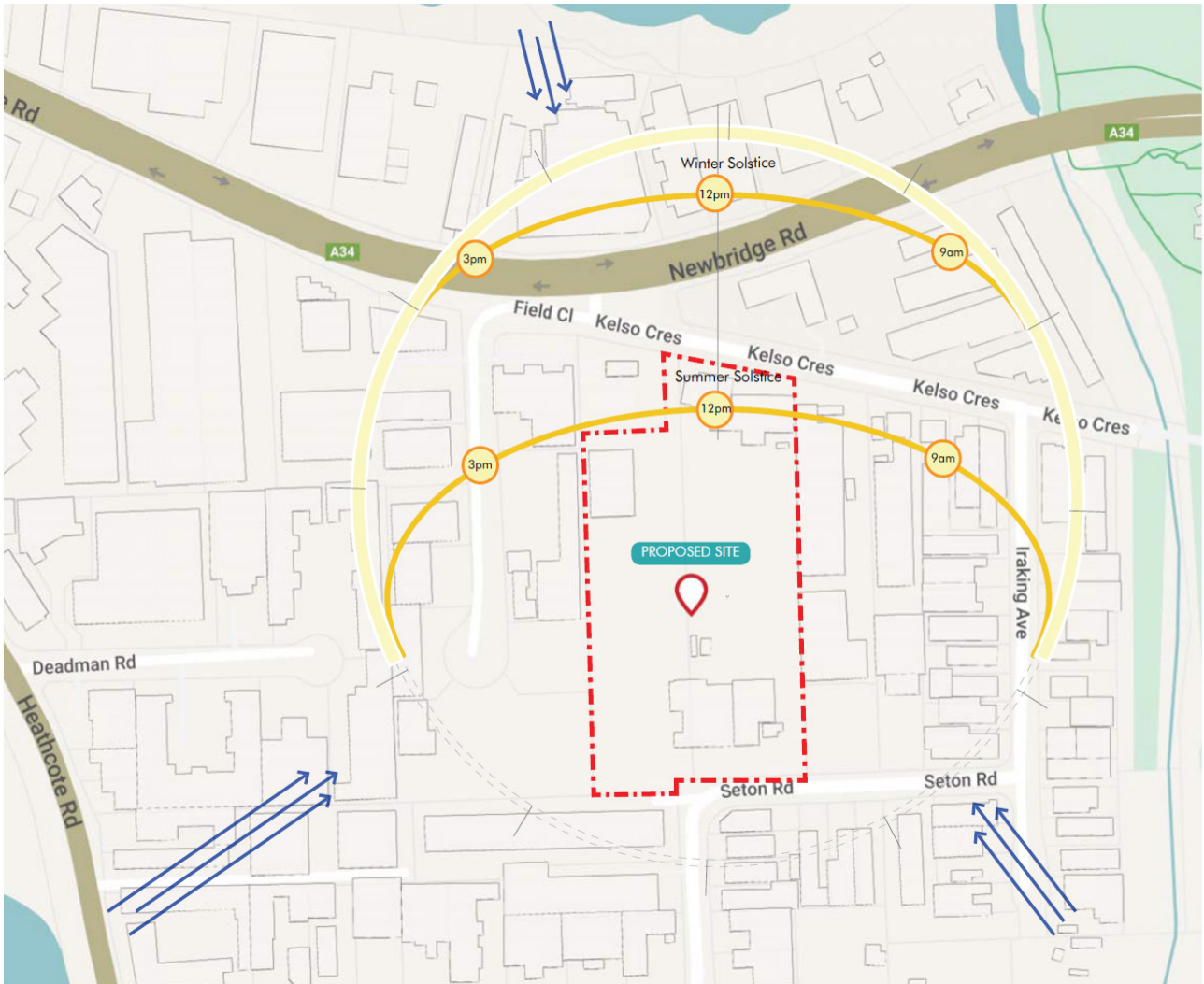
#### Existing Trees

There are a few large trees to the Northern and Southern ends of the site, as well as some clusters of smaller trees and shrubs within the site. Trees in the surrounding context are sparse to the exception of the public recreation areas where they are numerous and form part of the natural watercourse habitats.

- - - Site Boundary
- Existing Building Outlines
- Elevation Contour
- Existing Trees

### 3.6 Urban Context & Site Analysis

#### ENVIRONMENTAL ANALYSIS

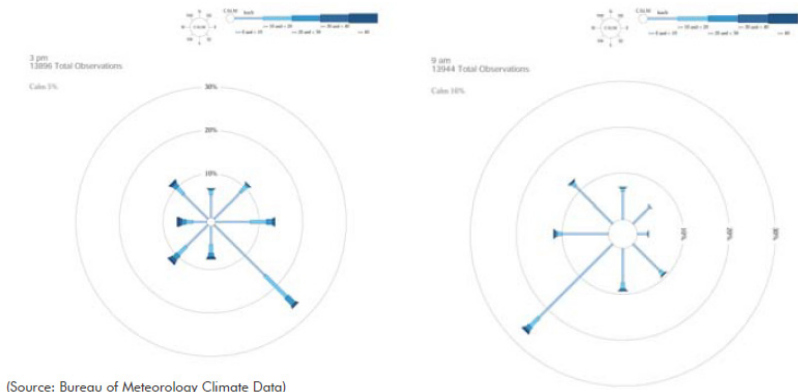


#### Existing Topography

The site is oriented in the North to South direction and enjoys good solar access throughout the day. The site is subject to some overshadowing from the neighbouring buildings on the western and eastern sides of the site.

#### Existing Trees

The site generally receives wind from the SE and SW. Minimal Wind is experienced from all other directions.



(Source: Bureau of Meteorology Climate Data)

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maple<sup>tree</sup>

## 4. Design Proposal

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## 4.1 Design Proposal

### DESIGN PROPOSITION



A Multi-level warehouse is a development consisting of more than one level, increasing the usable floor space per square metre of the land and creating more efficient and sustainable design.

To date, the concept has seen limited take-up in Australia due to availability of relatively cheap and developable land. However in many countries like Hong Kong & Singapore limited land availability has led to developments of several multilevel warehouses, at times 20 storeys tall.

Another driver in demand for multi-level warehousing is the growing need for occupiers to be located close to ports and the consumer base.

In Sydney, with the airport and sea ports expanding in output, along with infrastructure projects and the changing use of land, the demand for space in Western Sydney is high, especially along Major Motorways as they provide an intrinsic gateway to Sydney and surrounding regional and state hubs, ports and airports. Multi-level warehousing is one way to deal with diminishing land supply without impacting the consumer whilst delivering a development that can contribute positively to the local area.

With a number of multi-level warehouse facilities already within the clients international portfolio, MAPLETREE now looks to develop this opportunity in Sydney.



## 4.2 Design Proposal

### LOCAL MULTI-STOREY WAREHOUSE PRECEDENTS



## 4.3 Design Proposal

### INTERNATIONAL MULTI-STOREY WAREHOUSE PRECEDENTS



### 4.3 Design Proposal

#### INTERNATIONAL MULTI-STOREY WAREHOUSE PRECEDENTS



## 4.4 Design Proposal

DESIGN BENCHMARK - MAPLETREE LOGISTICS PARK, CRESTMEAD QLD



## 4.4 Design Proposal

DESIGN BENCHMARK - MAPLETREE LOGISTICS PARK, CRESTMEAD QLD



## 4.5 Design Proposal

### MOVEMENT AND CONNECTION



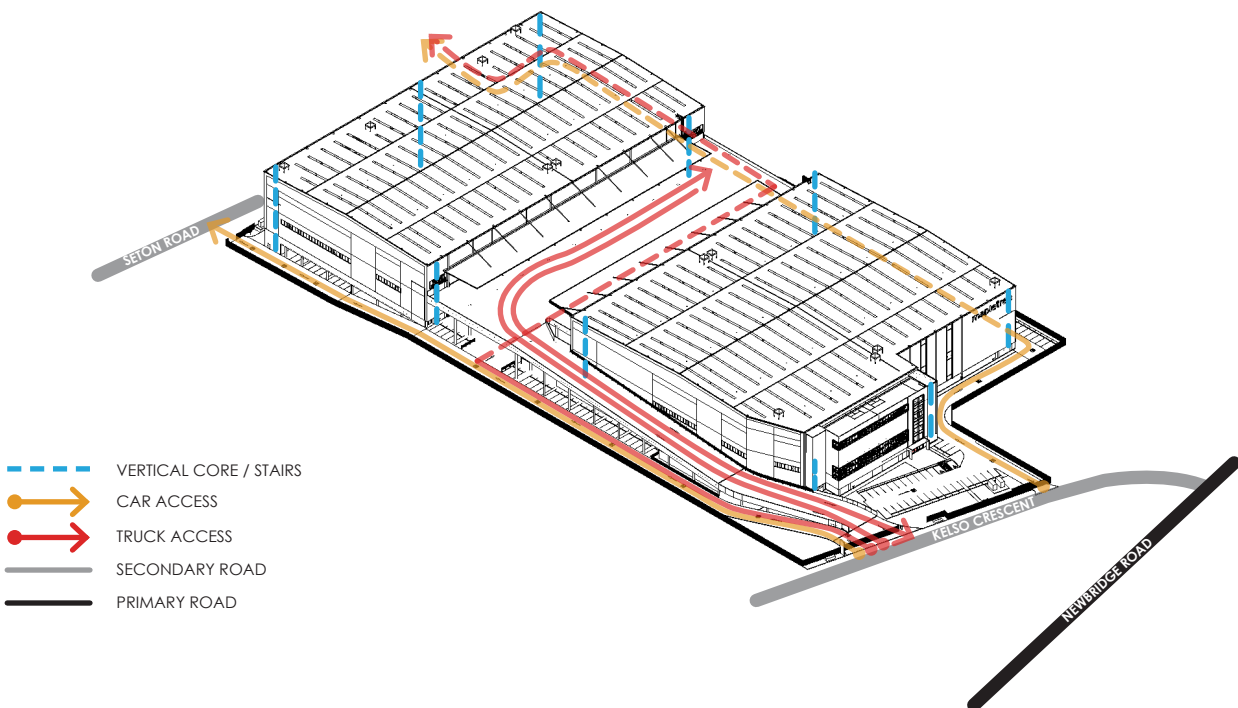
The subject site is bound by movement paths - both natural and man-made. These movement paths create both separation - in the form of 'islands' - as well as connections that bridge between these entities.

## 4.6 Design Proposal

### MOVEMENT AND CONNECTION

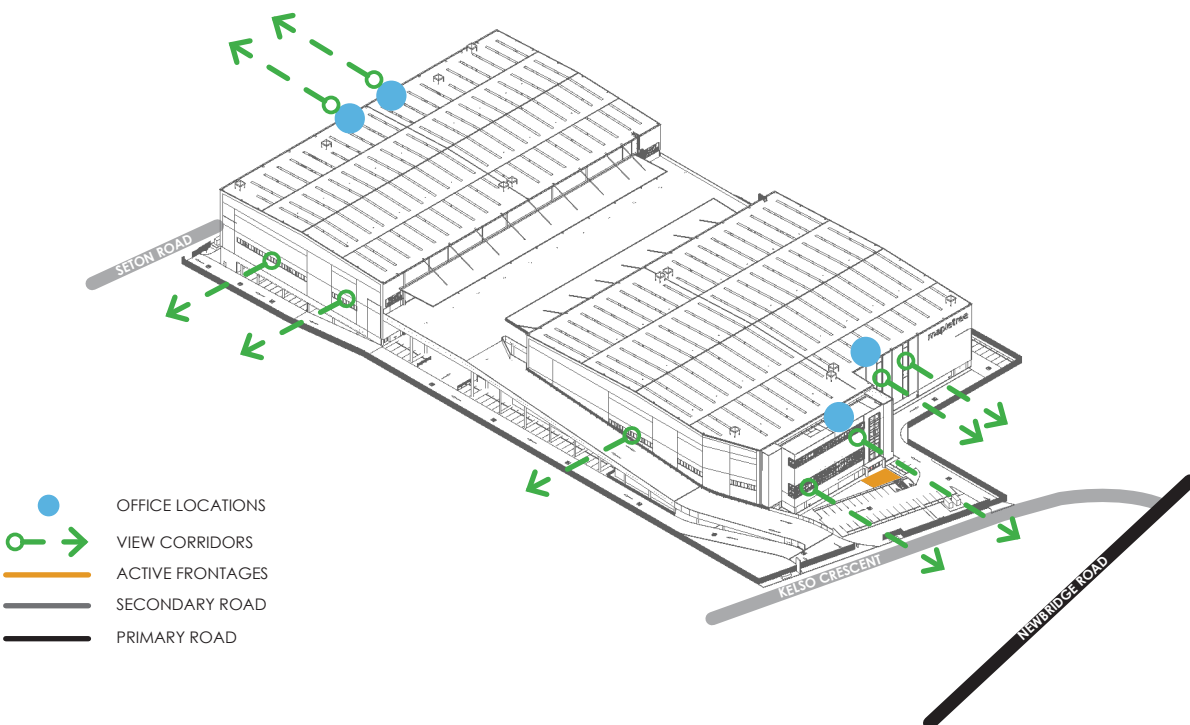
#### PHYSICAL

Horizontal and vertical connections to facilitate movement within and around the site.



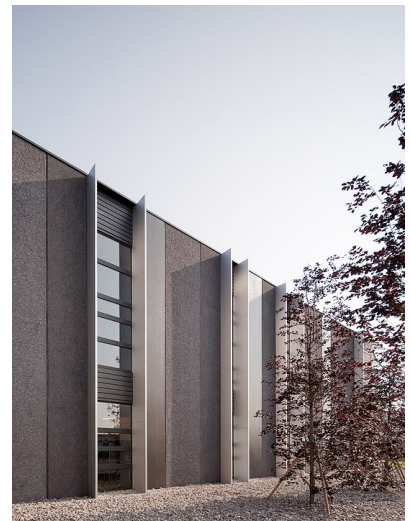
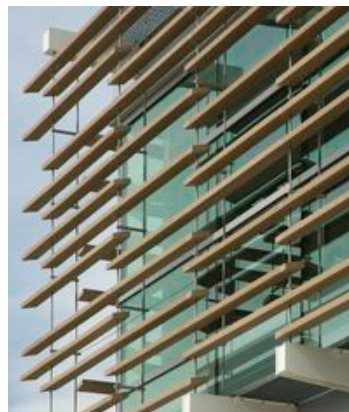
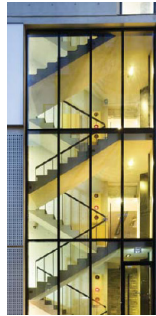
#### EXPERIENTIAL

Social, visual and symbolic forms of movement & connection within and around the site.



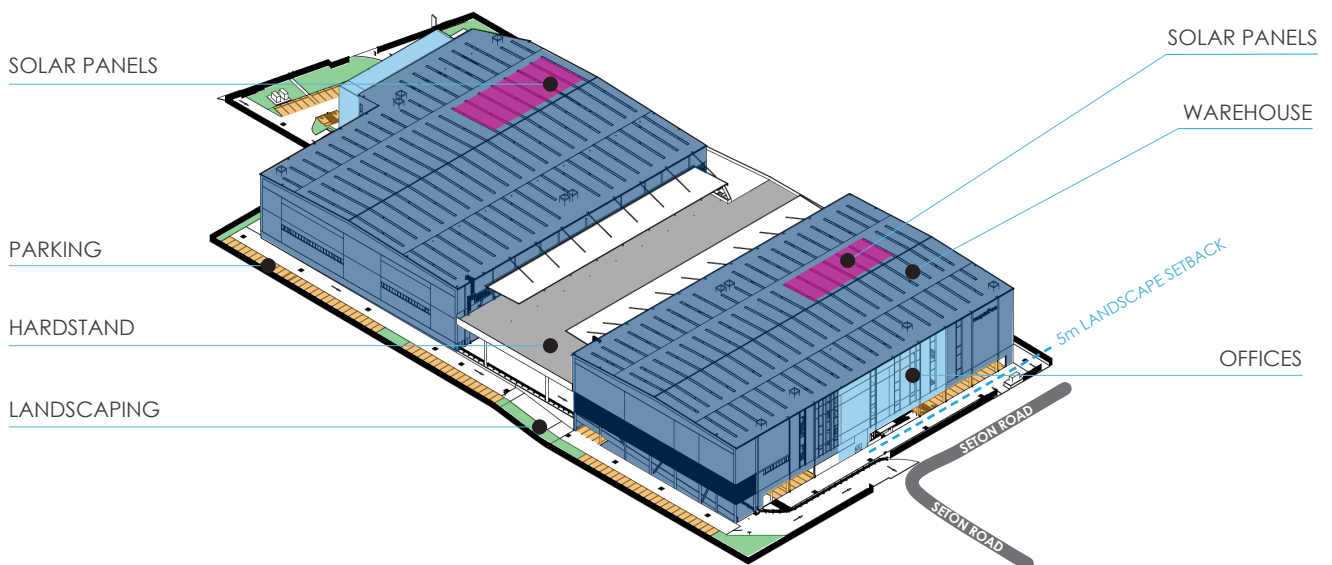
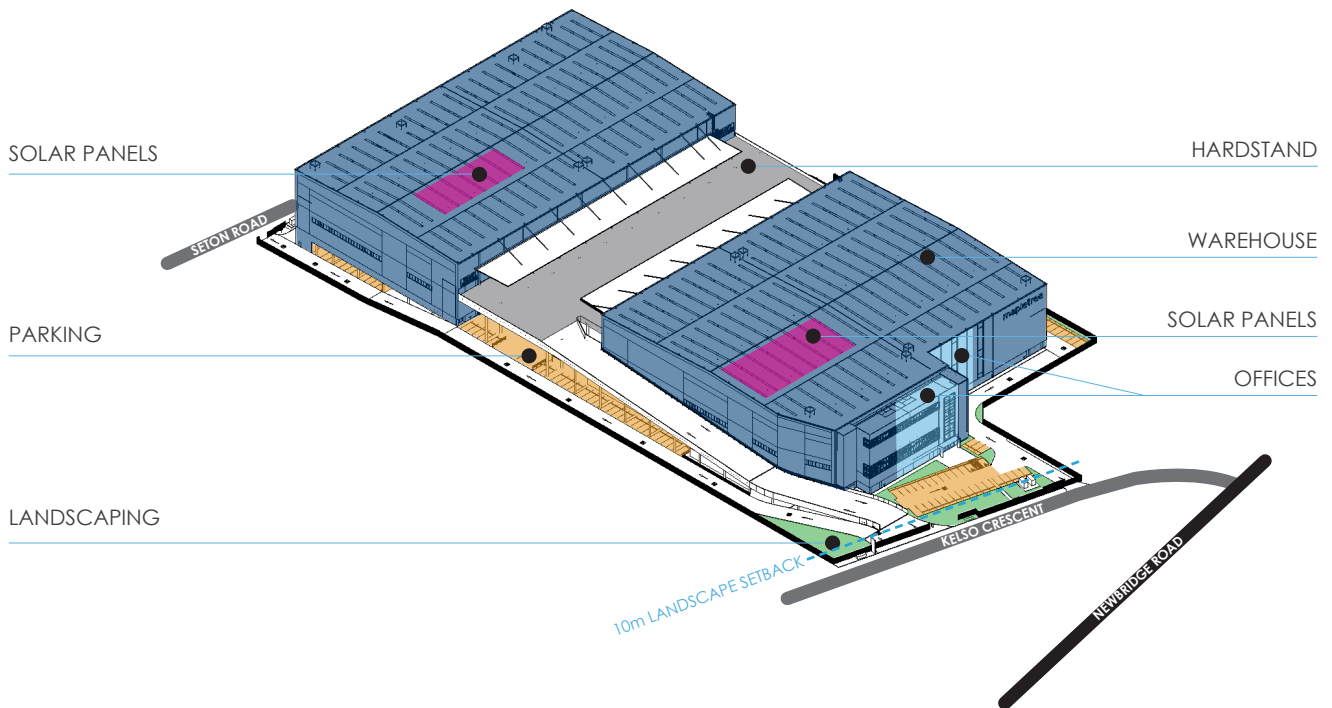
## 4.7 Design Proposal

### ARCHITECTURAL INSPIRATION



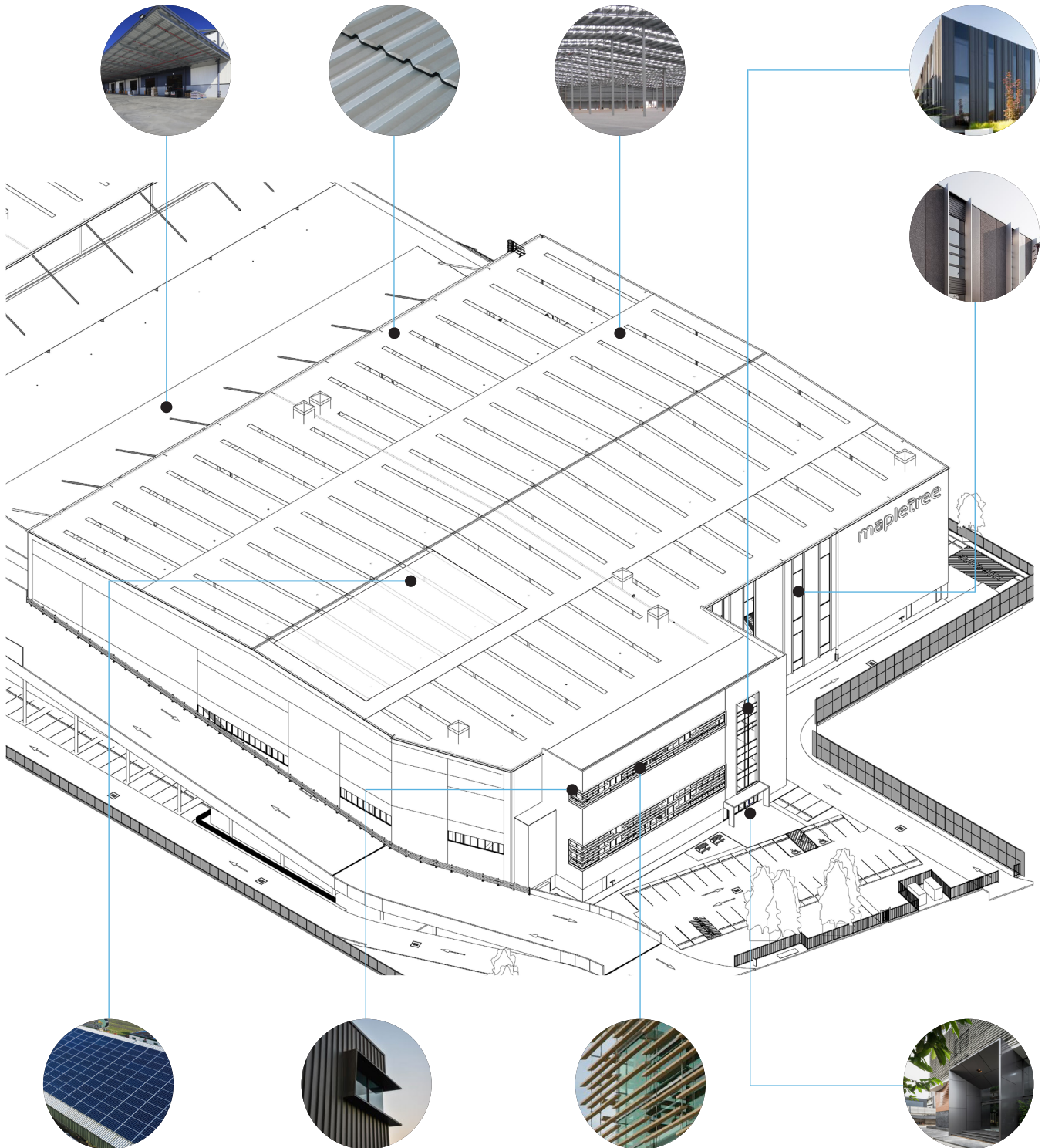
# 4.8 Design Proposal

## PROPOSED BUILDING CONFIGURATION



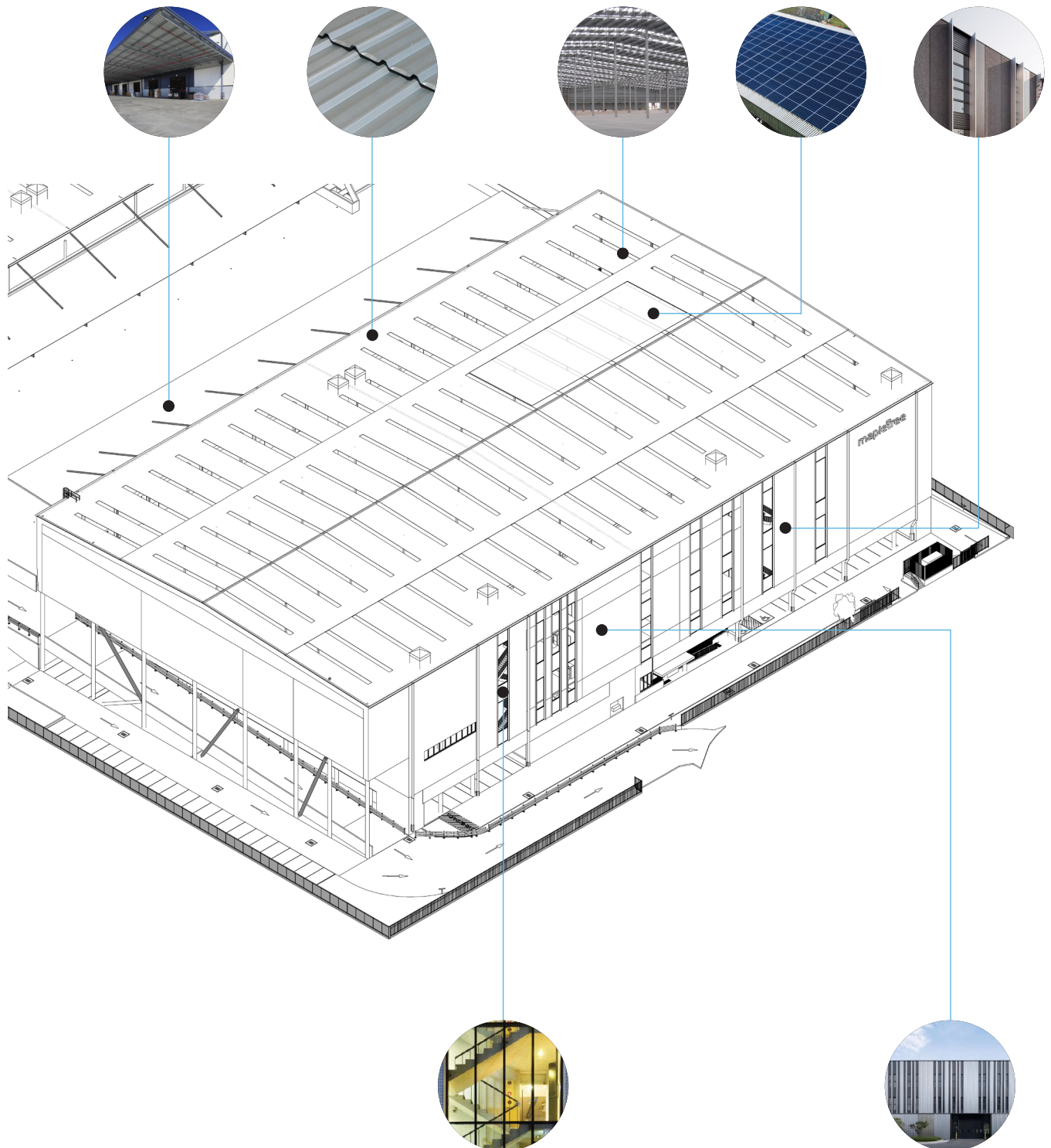
## 4.9 Design Proposal

### PROPOSED LOOK & FEEL - WAREHOUSE 1



## 4.10 Design Proposal

### PROPOSED LOOK & FEEL - WAREHOUSE 2



## 4.11 Design Proposal

### 3D PERSPECTIVE VIEWS



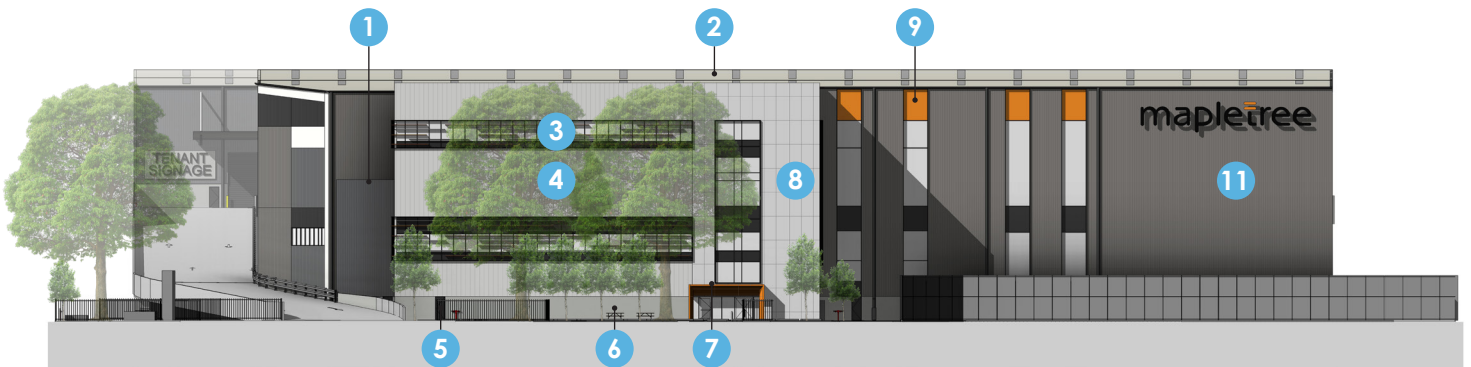
NORTH-EAST VIEW FROM KELSO CRESCENT



SOUTH-WEST VIEW FROM SETON ROAD

## 4.12 Design Proposal

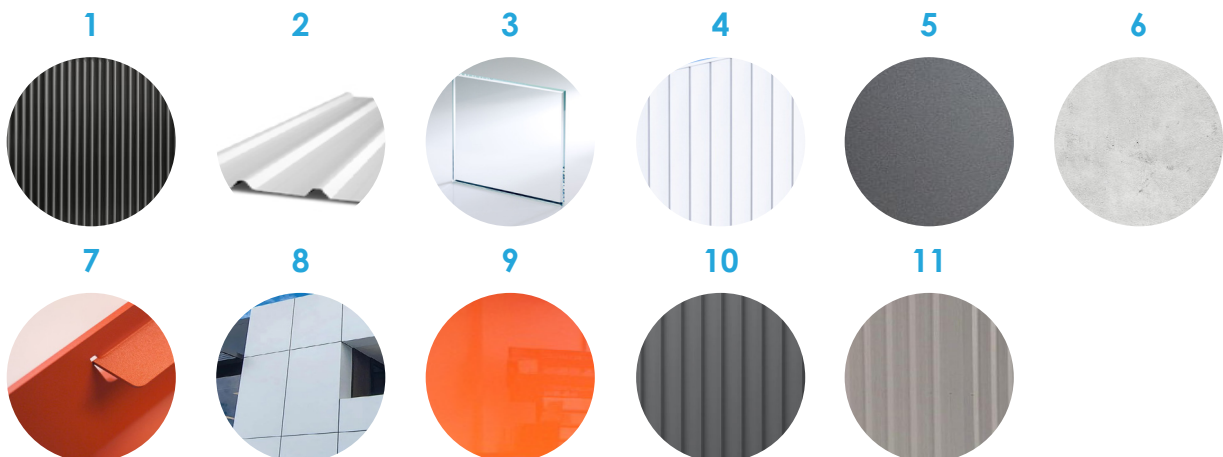
### FINISHES PALETTE



NORTHERN ELEVATION

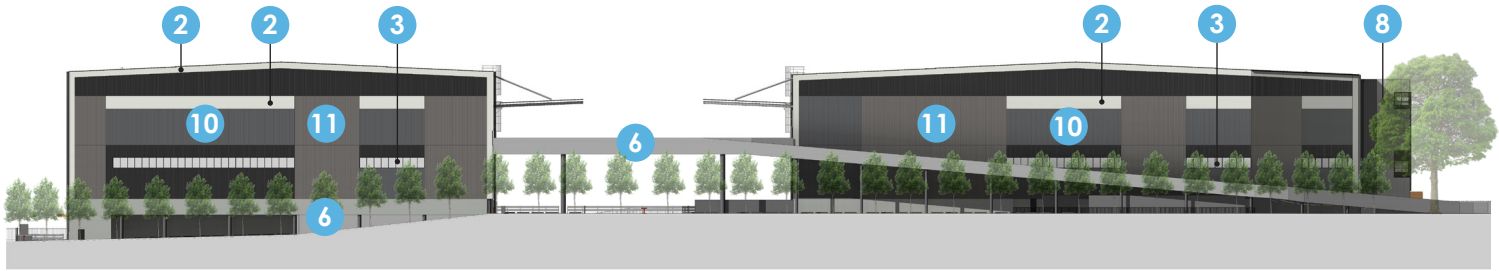


SOUTHERN ELEVATION

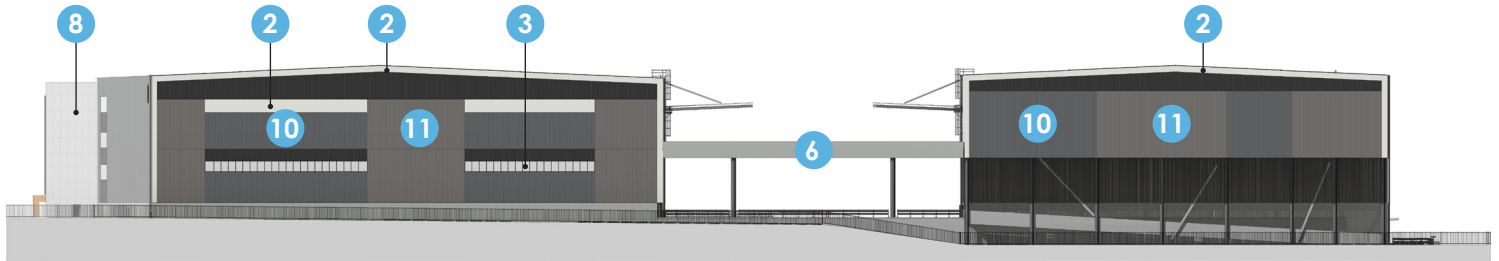


## 4.13 Design Proposal

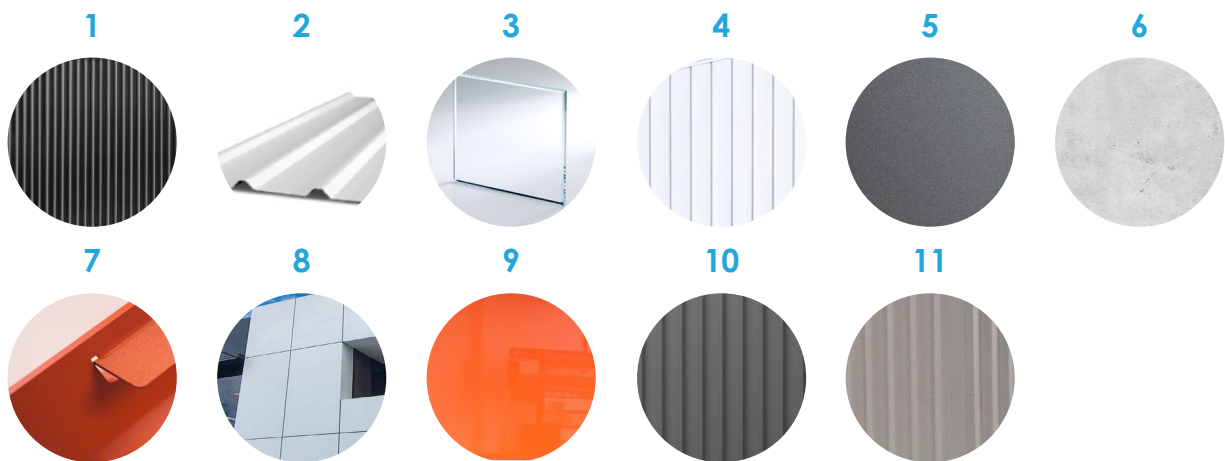
### FINISHES PALETTE



EASTERN ELEVATION



WESTERN ELEVATION





# PACEARCHITECTS

Suite 5&6, 100 Alexander St,  
Crows Nest, NSW 2065  
02 9425 1400  
0404 450 317  
ppace@pacearchitects.com.au  
www.pacearchitects.com.au

