MAPLETREE

MOOREBANK

Concept Design Report

SEPTEMBER 2023

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nettletontribe

Client

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architecture

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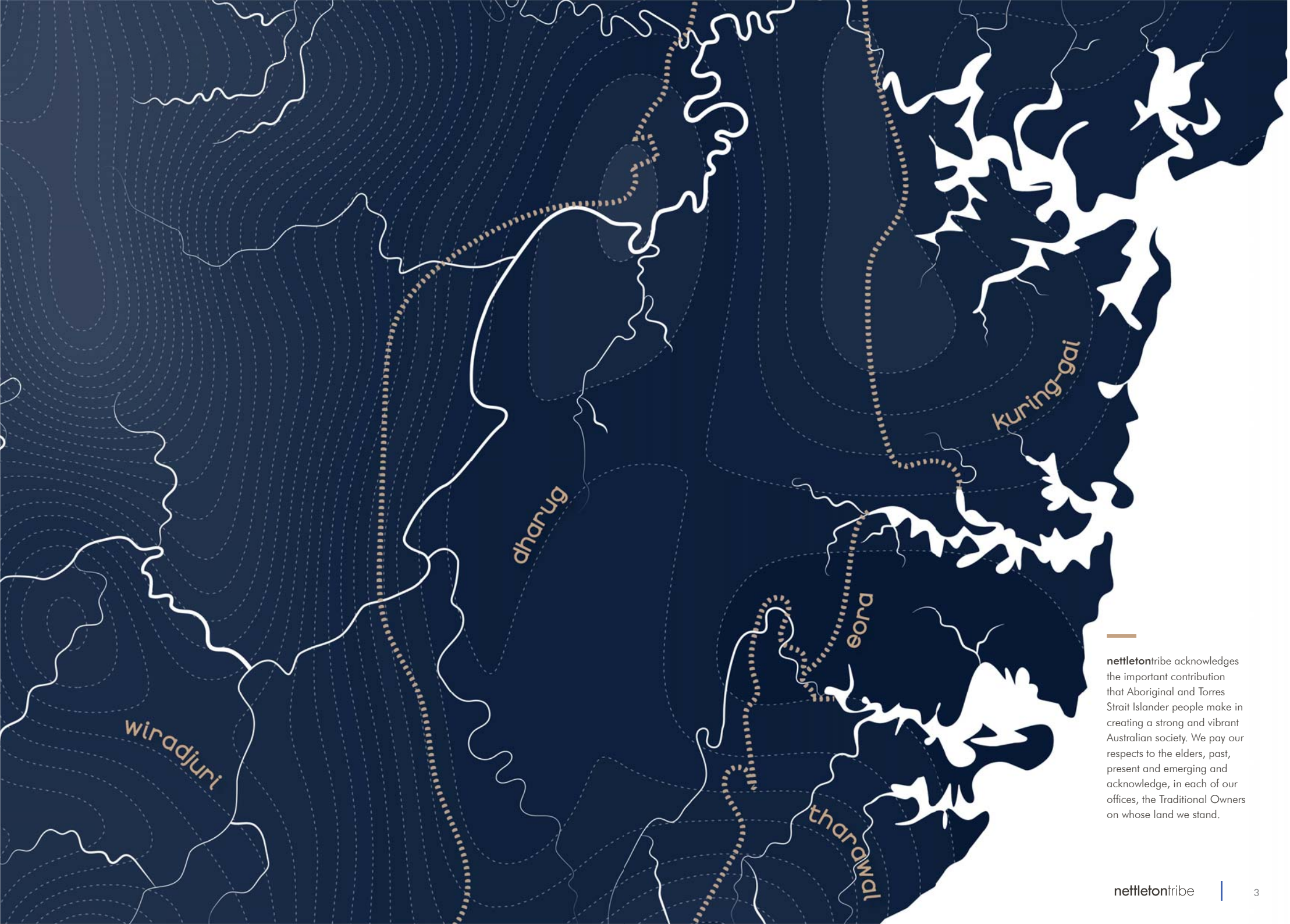


nettletontribe acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society. We pay our respects to the elders, past, present and emerging and acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

Contents

01

INTRODUCTION

Executive Summary

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

The Proposal

Construction of a multi-level warehouse comprising 37,800m^2 of warehouse GLA with 2,400m^2 office space, landscaping at ground and multi-level carparking.

The proposal comprises the redevelopment of the site as summarised below:

- Construction, fit-out and operation of a two-storey warehouse comprising approximately 37,800m^2 GLA including:
- Provision of end-of-trip spaces and 180 car parking spaces.

Development Summary

35,190m^2
Site Area

37,800m^2
Warehouse

2,400m^2
Office

10.0%
Site Landscape Coverage

180
Staff & Visitor Car Parking

Compliance with SEAR's

This document has been prepared in consideration of the Planning Secretary's Environmental Assessment Requirements (SEARs). Table 3 and 4 below summaries all key issues relevant to this report and how they have been responded to.

Reference	Requirements	Response/Reference
Issue and Assessment Requirements		
3	Design Quality Demonstrate how the development will achieve: – design excellence in accordance with any applicable EPI provisions. – good design in accordance with the seven objectives for good design in *Better Placed*. Where required by an EPI or concept approval, demonstrate how the development has been subject to a competitive design process or reviewed by the State Design Review Panel (SDRP). Recommendations are to be addressed prior to lodgement.	Refer to Section 3.0 Design Proposal - This section demonstrates how the building responds to design excellence and the 7 objectives for good design in the Better Placed guidelines.
4	**Built Form and Urban Design** – Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach. – Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality. – Demonstrate how the building design will deliver a high-quality development, including consideration of façade design, articulation, materials, finishes, colours, any signage and integration of services.	Refer to Section 3.0 Design Proposal - This section demonstrates how the building responds to built form and urban design.

Compliance with LLEP & LDCP

The Liverpool Environmental Control Plan 2008 (LLEP 2008) is the primary Environmental Planning Instrument that applies to the subject site and is statutory.

The Liverpool Development Control Plan 2008 (LDCP 2008) provides a non-statutory instrument to guide development in the Liverpool Local Government Area (LGA) and supports the planning controls of the LLEP 2008.

Below is a table that summarises key controls from both planning policies and checks the developments compliance with them.

LLEP 2008

CONTROL	REQUIREMENT	COMPLIANCE	PROPOSED
ZONING	**E4 – General Industrial** To provide a range of industrial, warehouse, logistics and related land uses.	✓	Multi-level Warehouse facility for Distribution Services or General Industries
MINIMUM LOT SIZE	**2,000m²**	✓	**35,190m²**
HEIGHT OF BUILDINGS	**30m**	✓	**28m**
FSR	**N/A**		

Compliance with LLEP & LDCP

LDCP 2008 - *General Controls for Development*

CONTROL	REQUIREMENT	COMPLIANCE	PROPOSED
TREE PRESERVATION / INCORPORATION OF EXISTING TREES	An application to remove a tree may be refused by Council if the tree: - Form(s) a prominent part of the streetscape.	✓	All existing trees at the street frontages are intended to be retained. a replacement strategy for trees removed within the site will also form part of the development proposal.
FLOODING RISK	Habitable and general commercial floor levels to be as high as practical but no lower than the 1% AEP flood plus 500mm freeboard unless justified by site specific assessment.	✓	1% AEP flood plus 500mm freeboard level at RL 9.00 as advised by Flood Engineer. Lowest habitable floor level at RL 10.00. Crest level at RL 9.00 for Basement Carpark
CARPARKING AND ACCESS	Good design integrates vehicle access and car parking into the development concept so that it is convenient for the users and safe for pedestrians and vehicles. Access and car parking needs to be carefully considered so that it is balanced with landscape elements and does not dominate the appearance or character of a development.	✓	Carparks are placed in the most suitable locations of the development concept. The front carpark structure although in a prominent location – has been made visually recessive by architectural treatments and landscaping. It also plays a strategic part in screening off the heavy vehicle access ramp.
CARPARKING AND ACCESS – PARKING RATES	**Office** – 1 space per 35m^2 of LFA **Warehouse** – 1 space per 250m2 GFA. Total Carparks Required – **180**	✓	Total Carparks proposed in development concept – 180

Compliance with LLEP & LDCP

LDCP 2008 - *Development in Industrial Zones*

CONTROL	REQUIREMENT	COMPLIANCE	PROPOSED
SETBACKS	Primary Setback (Ground Floor) – **10m** Primary Setback (First Floor) – **7.5m** Secondary Setback – **5m**	✓	The development concept achieves a 10m setback from Kelso Crescent on the north and a 9m setback to Seton Road on the south.
LANDSCAPED AREA	A minimum of **10%** of the site is to be landscaped at ground level. Minimum Landscape Width (primary setback) – **10m** Minimum Landscape Width (secondary setback) – **5m**.	✓	The development concept achieves 10% landscaped area at ground level and has a minimum of 10m and 5m landscape setbacks at the primary and secondary frontages respectively.
CAR PARKING AND ACCESS	1. The layout of driveways to loading docks must enable heavy vehicles to: - Enter and exit the site in a forward direction. - 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.	✓	The development concept has been designed in accordance with these carparking and access requirements. The access ramp for heavy vehicles to the Level 1 loading areas / hardstand is also screened off by the office and carparking structure fronting Kelso Crescent.

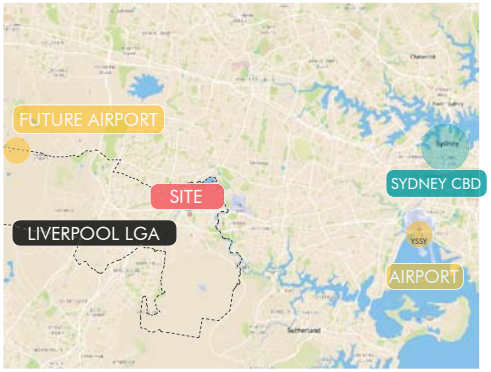
Liverpool Local Strategic Planning Statement 2020

The Liverpool Local Strategic Planning Statement titled 'Connected Liverpool 2040' also applies to the subject site and recognises that the prospects for industrial and employment projects in Liverpool are "strong". This is due to the proximity to transport links such as the M5 and M7, large projects including Western Sydney International Airport and the Moorebank Intermodal Terminal. The development proposed is hence also consistent with these long term strategic planning initiatives.

02

LOCATION & CONTEXT

Locality - Moorebank & The Greater Sydney Context



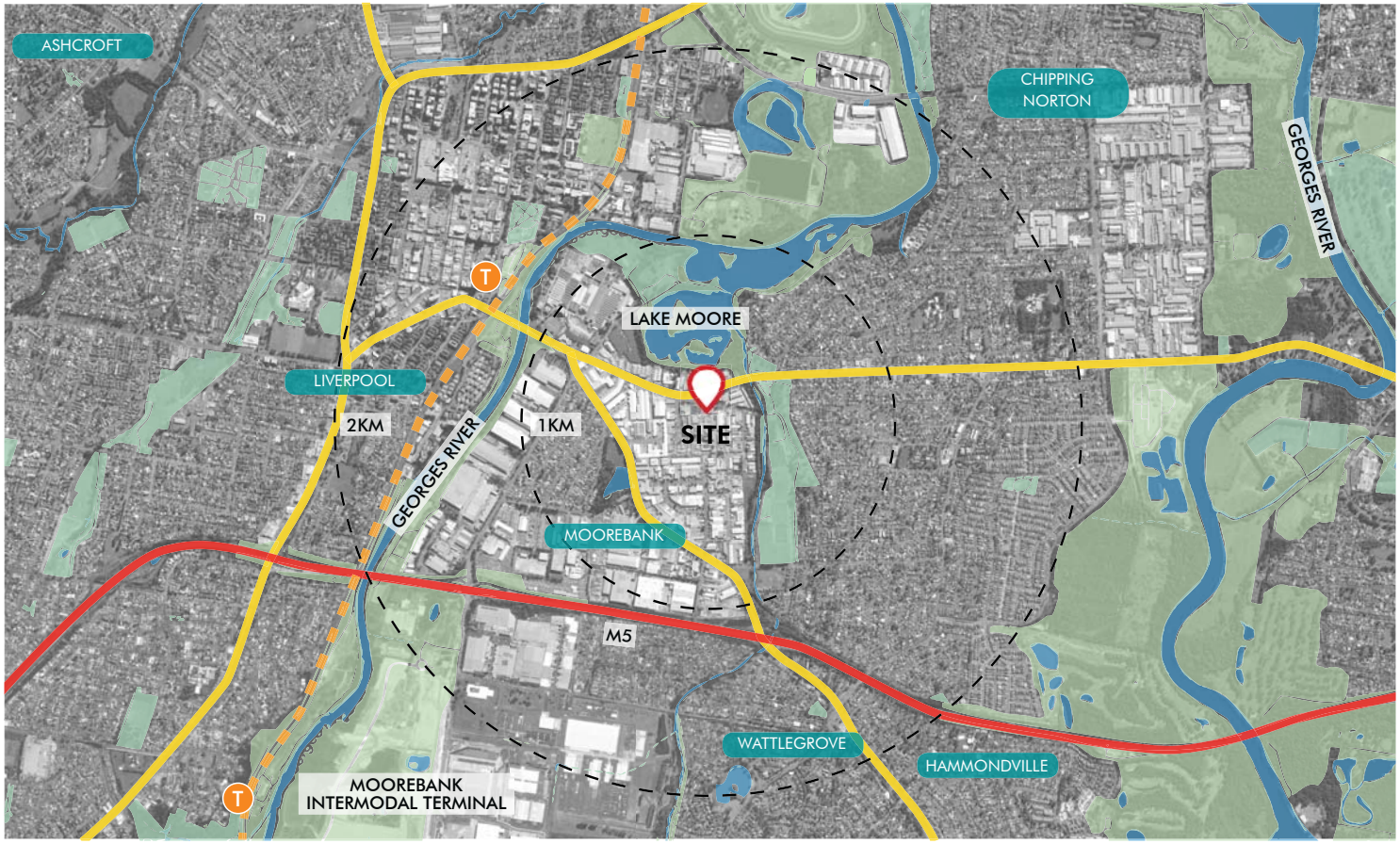
The site is located within the suburb of MOOREBANK which is located inside the Liverpool City Council Local Government Area.

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.



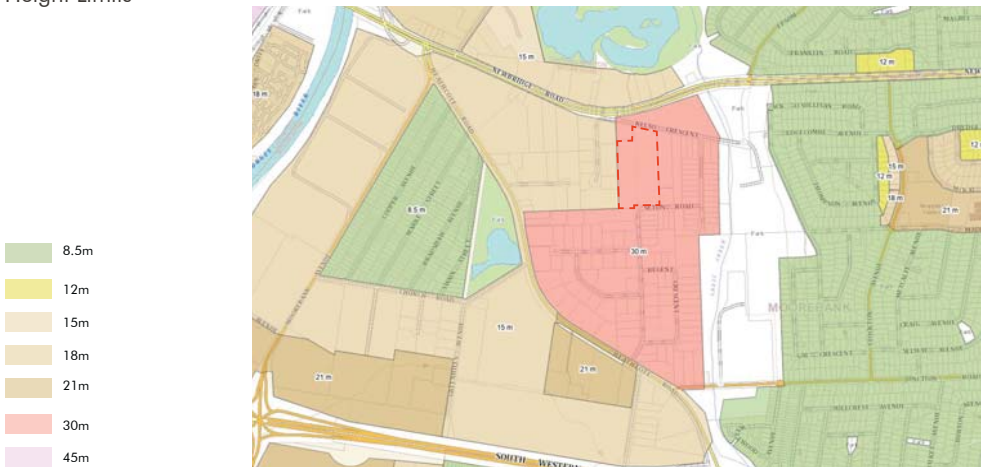
Major Road
Minor Road
Train Line
Train Station

Planning Controls

Zoning

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

Height Limits

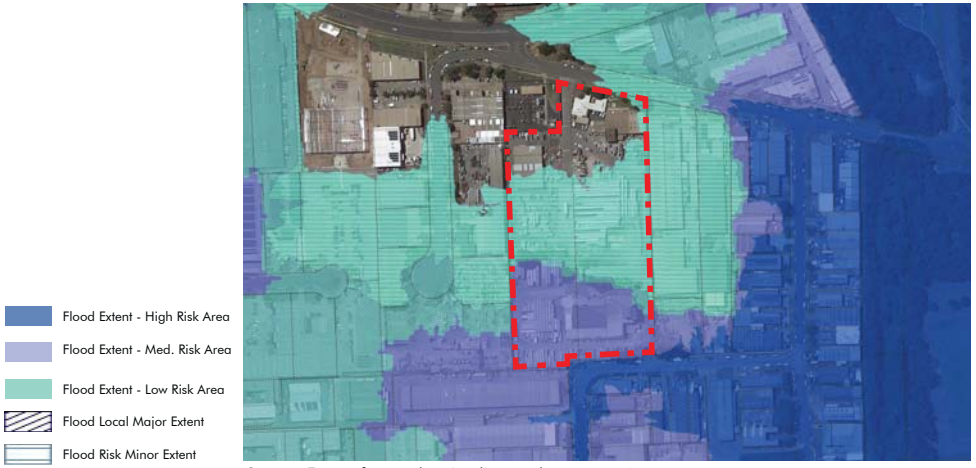


(Source: Extract from www.planningportal.nsw.gov.au)

Heritage & Environmental Significance

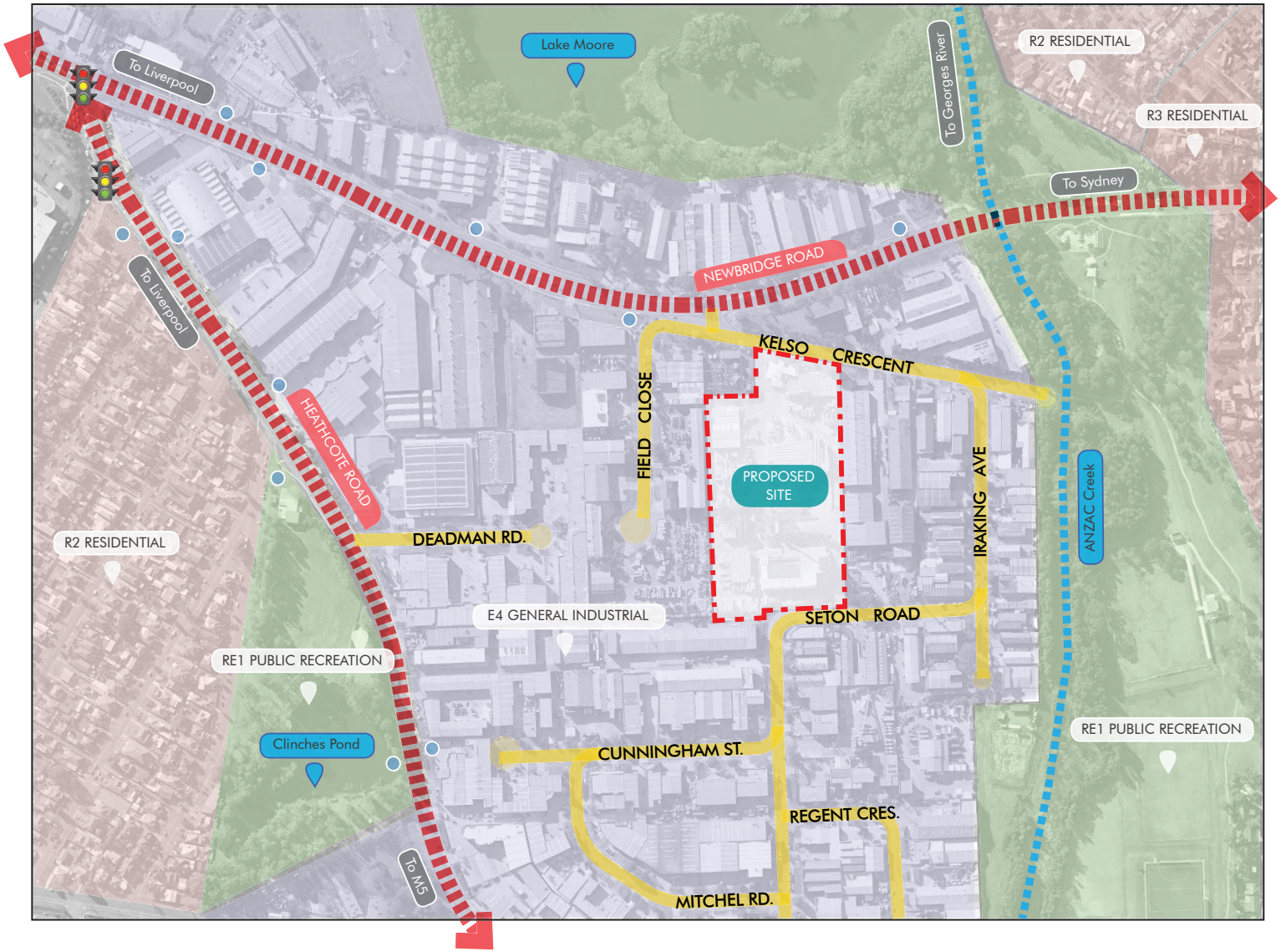
(Source: Extract from www.planningportal.nsw.gov.au)

Flood Risk



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

Site Analysis



Site Context

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:

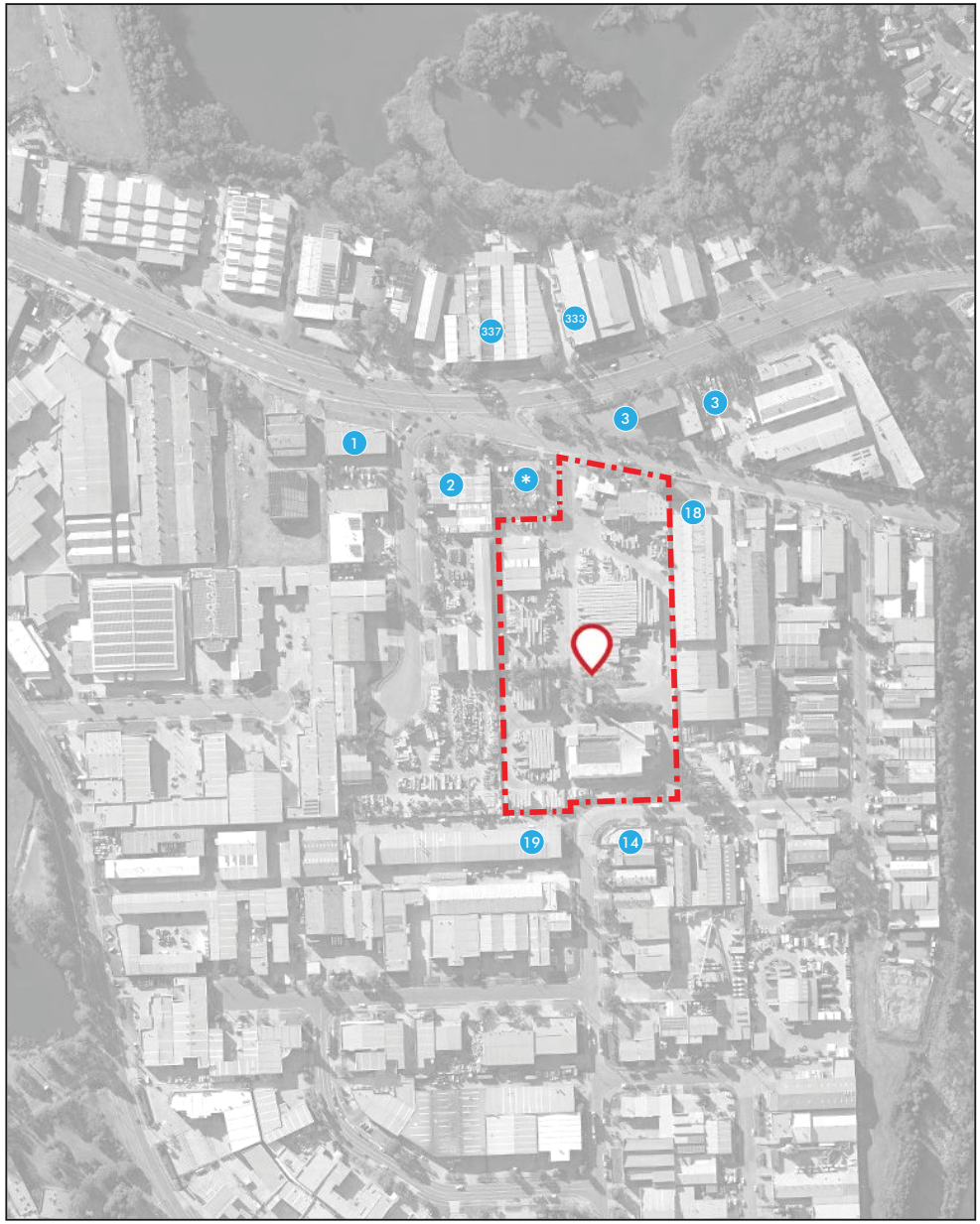
The site itself has two street frontages,Kelso Crescent on the North and Seton Road to the South. Kelso Crescent is accessed via a primary road being Newbridge Road. This is foreseen to be the primary access route to the site.

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 Cresent (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

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

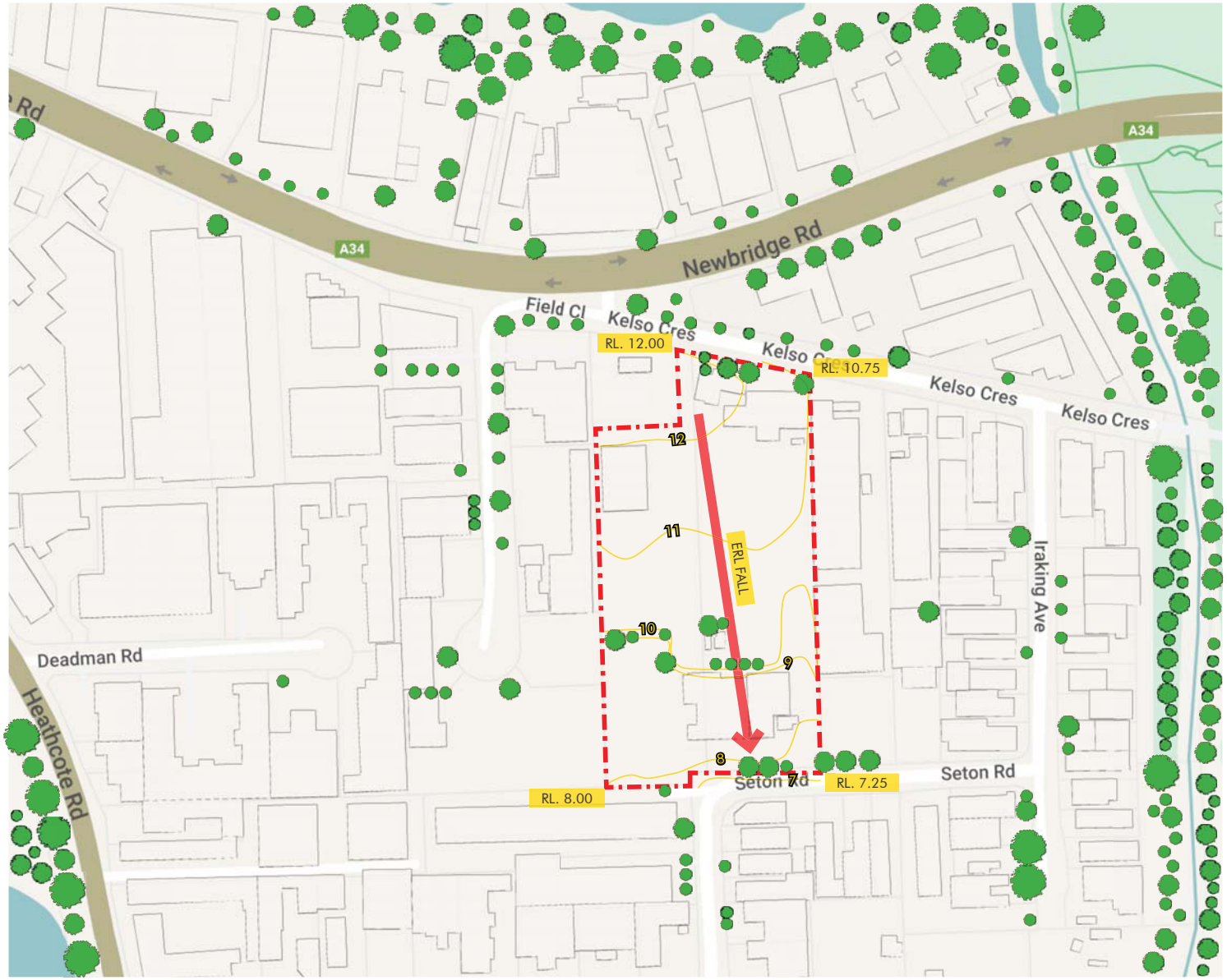
* Moorbank Substation

18 Kelso Crescent - E4 General Industrial

19 Seton Road - E4 General Industrial

14 Seton Road - E4 General Industrial

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.

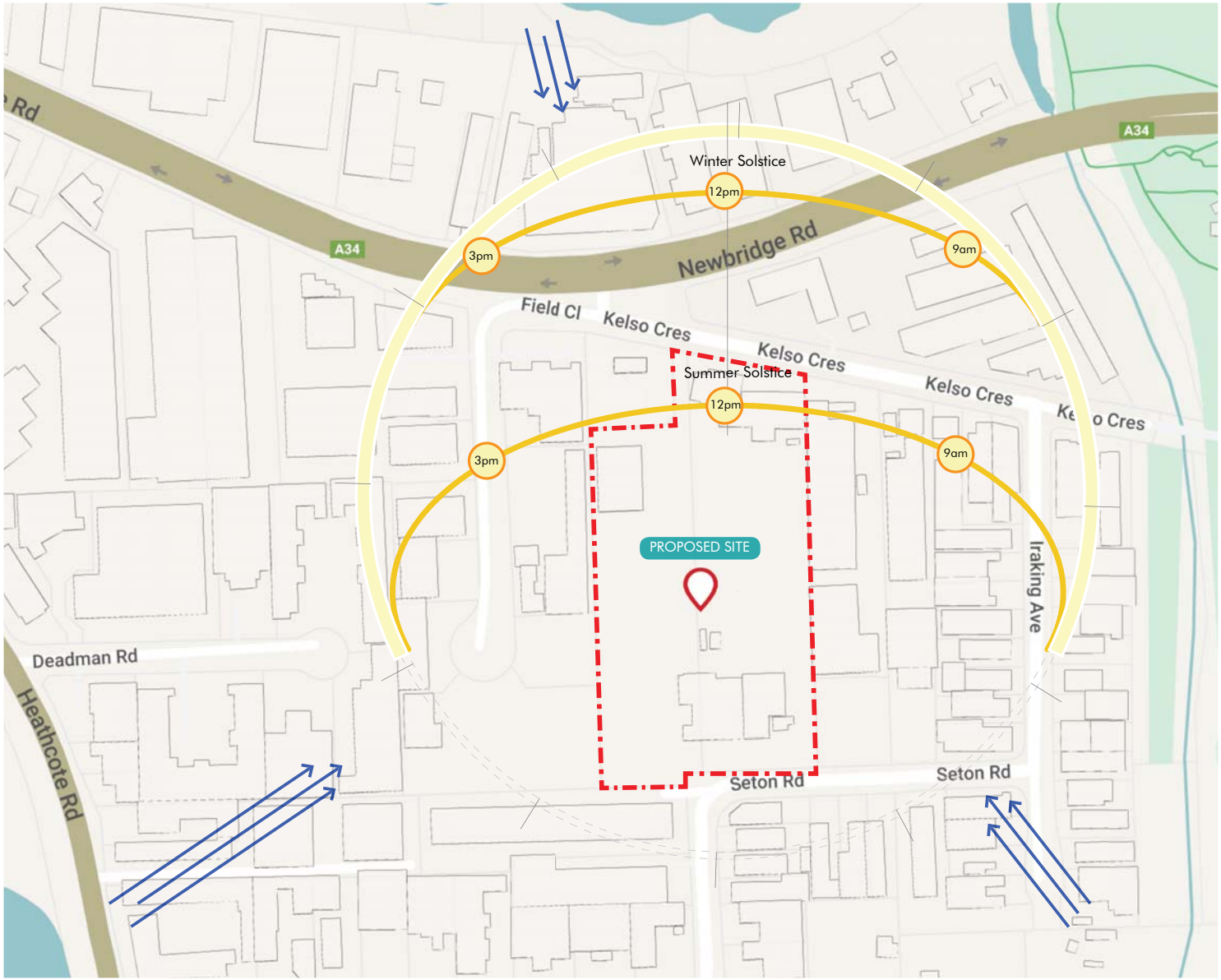
Site Boundary

Existing Building Outlines

Elevation Contour

Existing Trees

Environmental Analysis

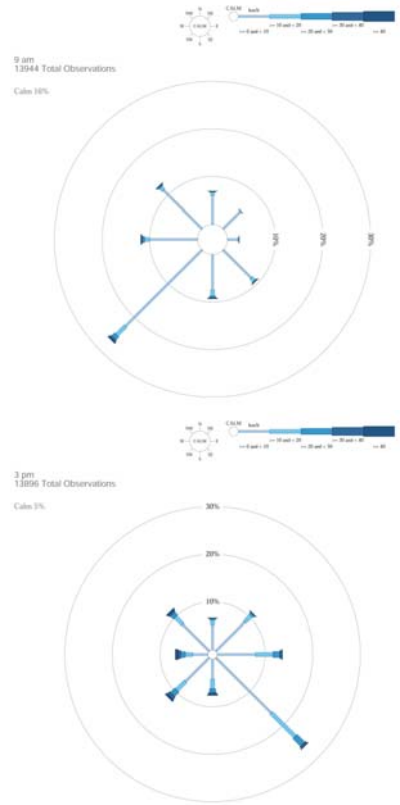


Solar Access

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

Wind Activity

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



(Source: Bureau of Meteorology Climate Data)

03

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 multi-level 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.


6 Fishery Port Road Singapore - Mapletree Logistics

21 Benoi Precicnt Jurong Singapore - Mapletree Logistics

Pioneer Logistics Hub Singapore - Mapletree Logistics

Local Multi-storey Warehouse Precedents


45 Burrows Road Alexandria - Axis Alexandria

2-8 Baker Street Banksmeadow - Stockland


520 Gardeners Road Alexandria - Ascent on Bourke


28 Yarrunga Street - Favco Industrial Park

International Multi-storey Warehouse Precedents

LOGOS Tianjin Jinnan Logistics Park - China

Fifteen-storey Warehouse - Hong Kong


Four-storey Warehouse in Sakai - Japan

Six-storey warehouse in Amagasaki - Japan

Design Benchmark - MAPLETREE Logistics Park, Crestmead QLD

Design Principles

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.

Design Principles

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 AND FEEL

Engaging, inviting and attractive

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 context.

Movement and Connection

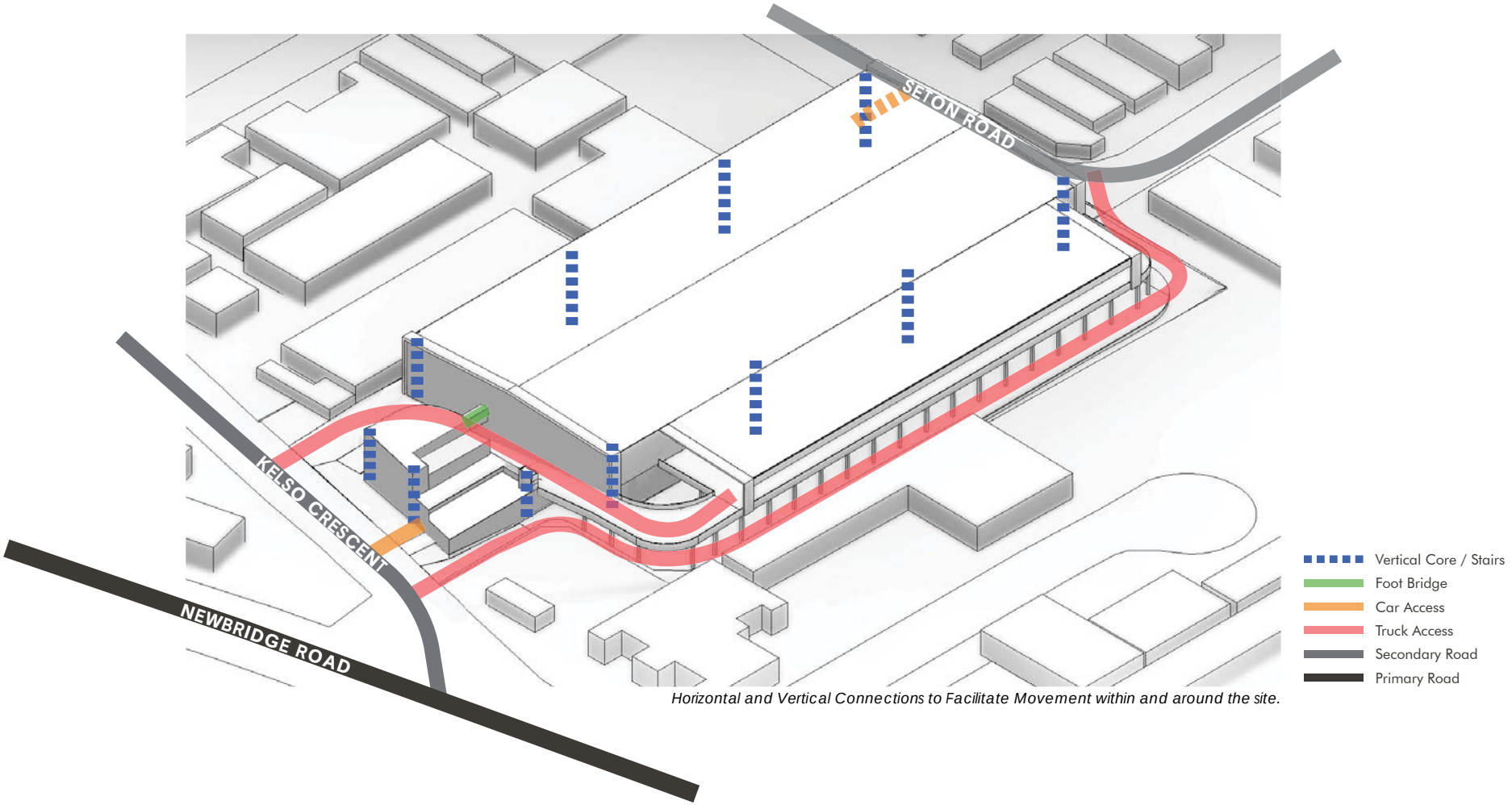
Moorebank Industrial Precinct - Sydney

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.

Movement and Connection

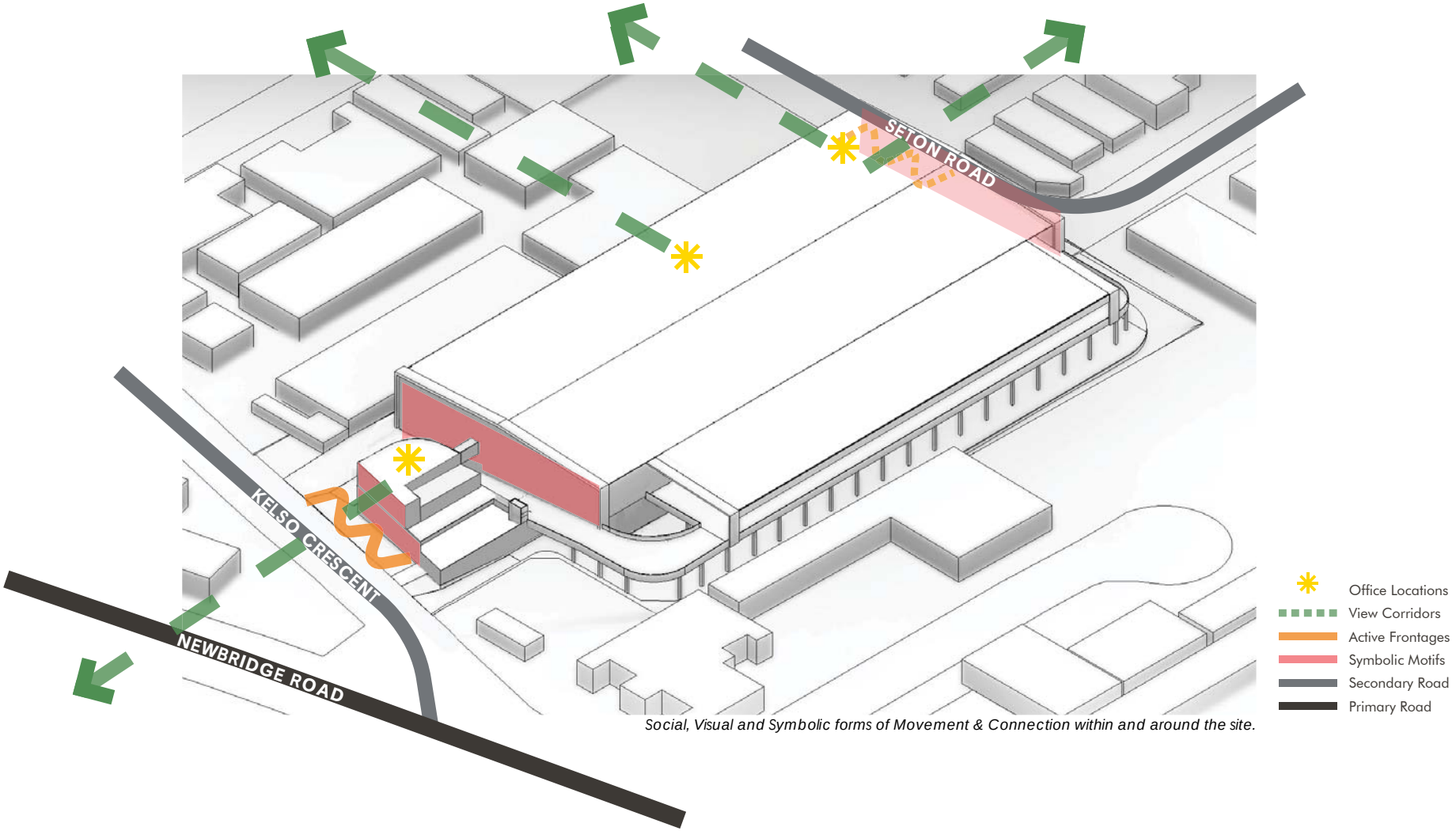
Physical



Horizontal and Vertical Connections to Facilitate Movement within and around the site.

Movement and Connection

Experiential



Social, Visual and Symbolic forms of Movement & Connection within and around the site.

Architectural Inspiration

Form and Materiality

Architectural Expression of Horizontal and Vertical Connections

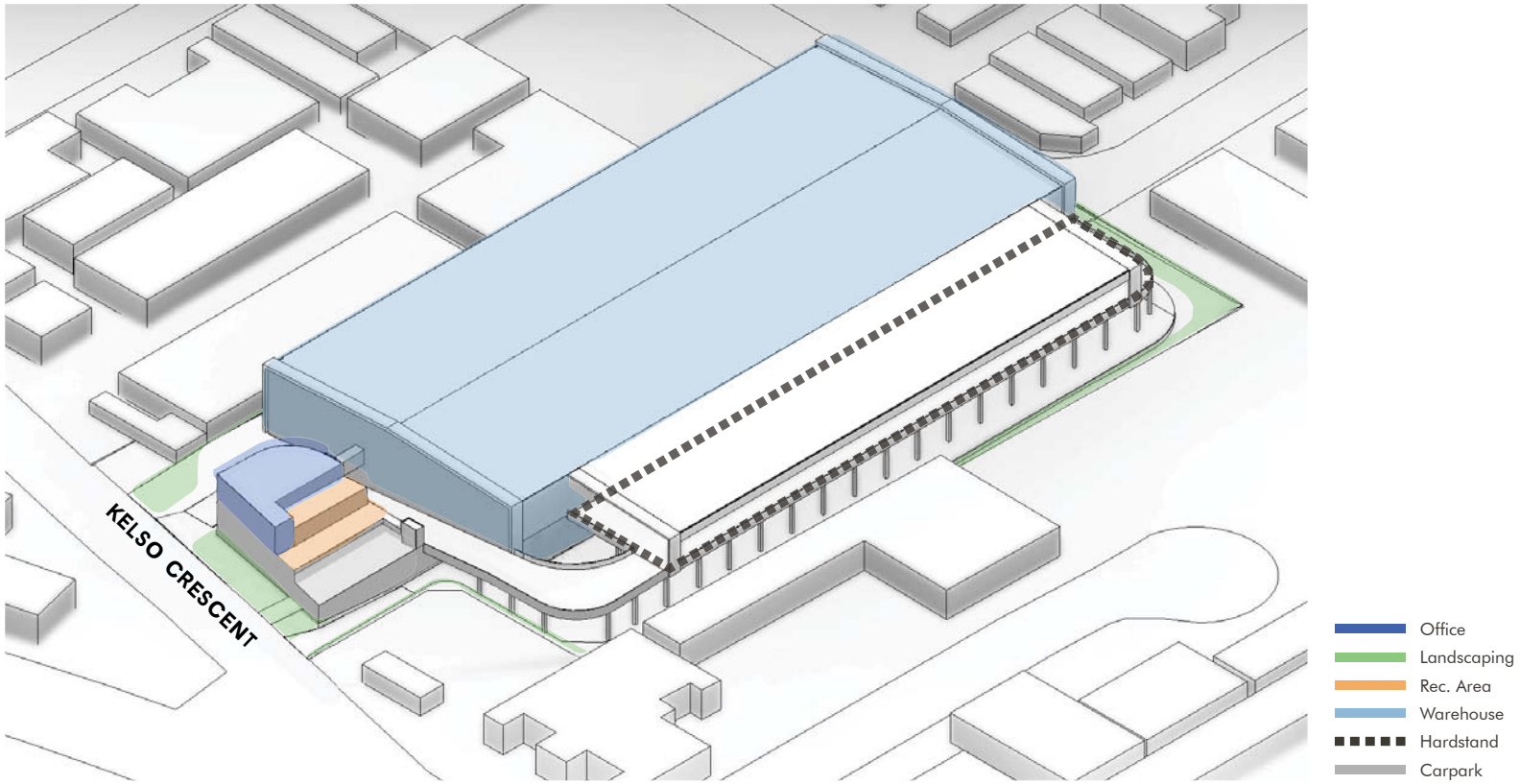
Foot Bridge

Lift Shaft

Ramps

Stairs

Proposed Building Configuration



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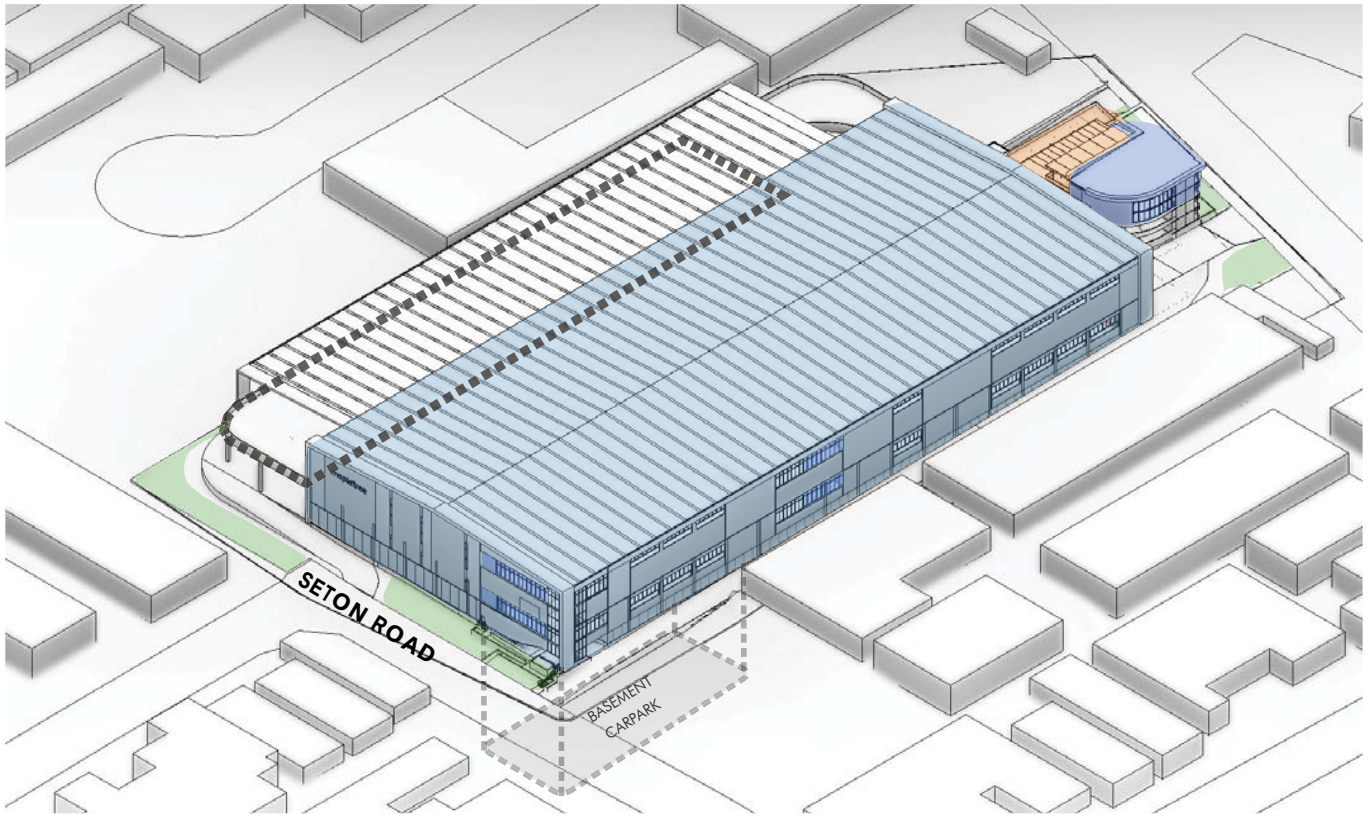
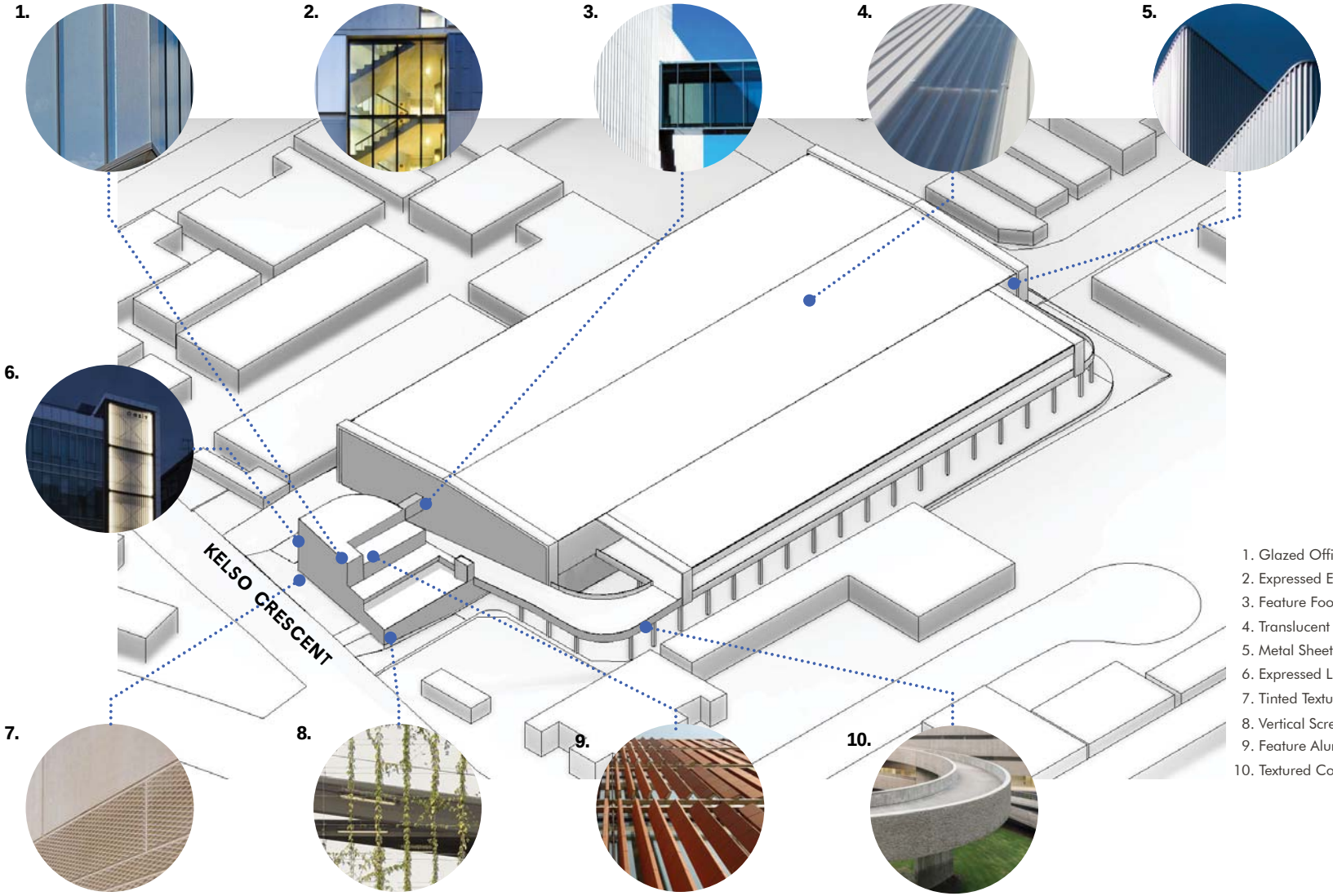


Proposed Look & Feel

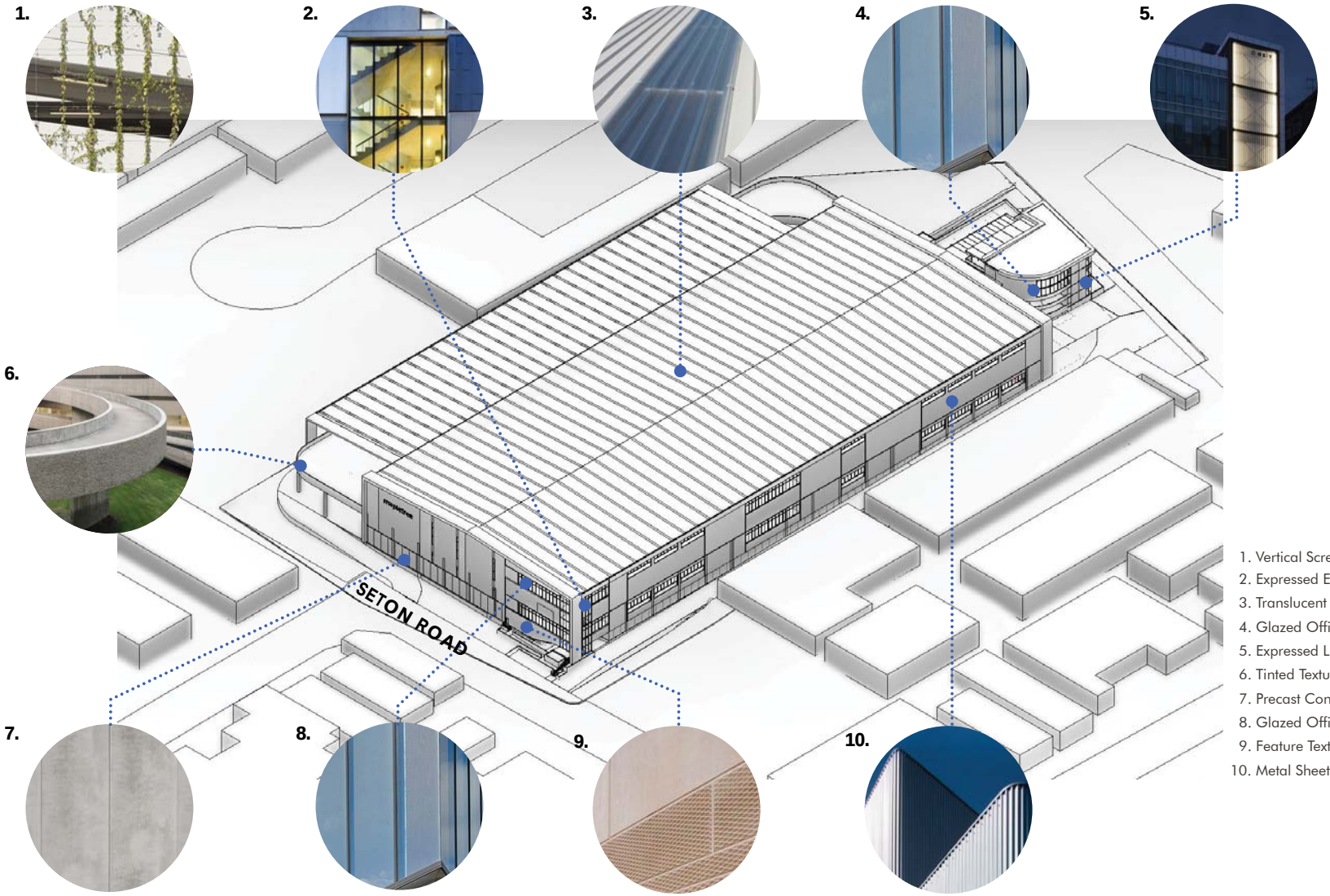
Potential Application of Architectural Inspiration



1. Glazed Office Facades
2. Expressed Egress Stairs
3. Feature Footbridge
4. Translucent Sheeting to Roof
5. Metal Sheet Cladding
6. Expressed Lift Shaft
7. Tinted Textured Precast Concrete
8. Vertical Screening Climbers
9. Feature Aluminium Shading Fins
10. Textured Concrete Upstands

Proposed Look & Feel

Potential Application of Architectural Inspiration



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2. Expressed Egress Stairs
3. Translucent Sheeting to Roof
4. Glazed Office Facades
5. Expressed Lift Shaft
6. Tinted Textured Precast Concrete
7. Precast Concrete Panels
8. Glazed Office Facades
9. Feature Textural Brick
10. Metal Sheet Cladding

Perspective Views

North West View Kelso Cr

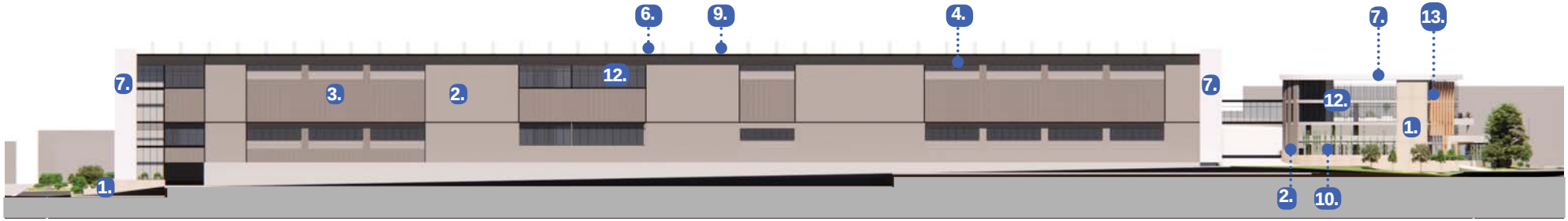
Perspective Views

North East View from Kelso Cr

Finishes Palette

Northern Elevation

Eastern Elevation



1. Tinted Textured Precast Concrete
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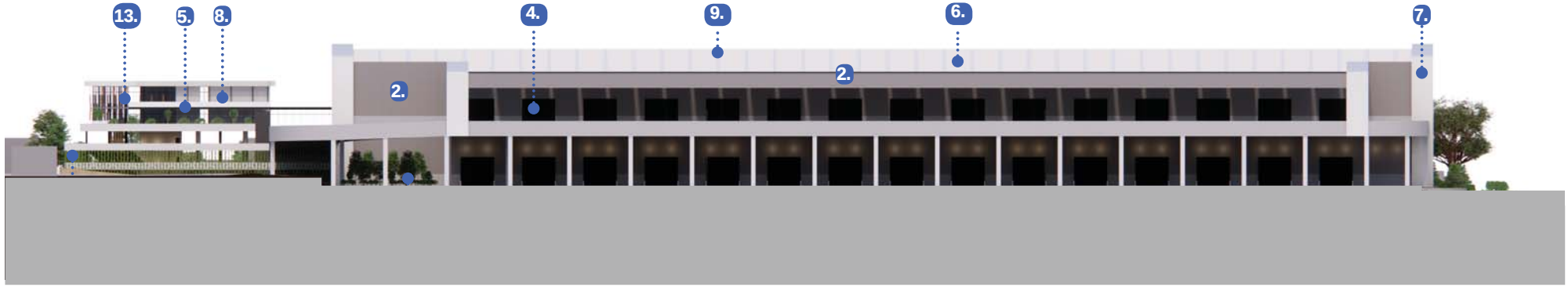
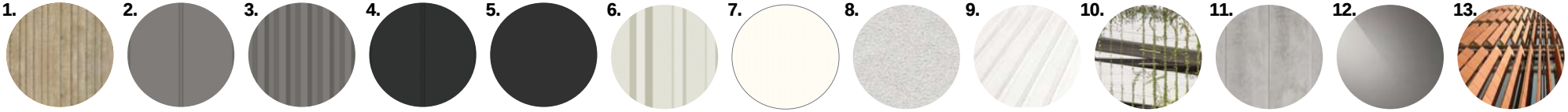
3. Spandek Metal Sheet Colorbond Wallaby
4. Longline Metal Sheet Colorbond Monument
5. Flat Metal Sheet / Powdercoat Colorbond Monument
6. Klip-lok Metal Sheet Colorbond Surfmist
7. Flat Metal Sheet/FC Colorbond Whitehaven
8. Textured Render / Paint
9. Translucent Roof Sheeting
10. Vertical Screening Climbing Plants
11. Precast Panels Natural Concrete Finish
12. Low-E Glazing Clear / Grey
13. Shading Fins Prefinished Aluminium Colour TBC

Finishes Palette

Southern Elevation

Western Elevation





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