



Station Character Area and Stage 1 DA Works Urban Design Report

for Landcom

Hill Thalys A+UP

REVC 18 December 2024



Acknowledgement of Country

The design team acknowledges the traditional custodians of the land, seas and skies on which we live and work, and that Dharawal/Tharawal land was never ceded. We pay respect to Elders and knowledge holders, and seek to honour and learn from the rich, continuous culture and practice that is generously shared with us.

This scene is believed to depict an Indigenous family camping on the grounds of Glenfield House on the Throsby Estate. Records indicate that during the c.1816 conflicts some Tharawal families were able to take refuge on Throsby's Glenfield estate. This included Gogy and Nighgingull with their families, Budbury (son of Pemulwuy), Young Bundle and others.

Station Character Area and Stage 1 DA Works Concept Development Application

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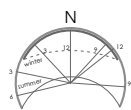
Station Character Area and Stage 1 DA Works

Section 1 | Introduction

Section 1 Introduction



Location plan identifying development lots (for enlarged plan please see Section 3.2)



1.1 Purpose

This Urban Design report is submitted to Campbelltown City Council as part of a Concept Development Application and Stage 1 DA works Glenfield West referred to as the Station Character Area.

1.2 Legal Site description

The Concept Development Application involves the following allotments

- Part of Lot 2 DP 1293342
- Part of Lot 1617 DP 1282799 (TAM land)
- Glenfield Road Reservation

1.3 Development description

The Concept Development Application includes -

- General arrangement of future roads, development lots and land to be dedicated as open space and drainage;
- Stormwater detention and stormwater treatment works
- Allocation of Gross Floor Area (GFA) to each future development lot; and
- Strategy to meet the affordable housing requirements under Campbelltown LEP 2015

The Stage 1 DA works include -

- Earthworks
- Construction and dedication of new streets,
- Construction of stormwater infrastructure (water quality and quantity)
- Subdivision to create 6 development lots and 1 residue lot for open space, conservation and drainage to be dedicated at a later stage.
- Associated works (installation of services, tree removal, landscaping)

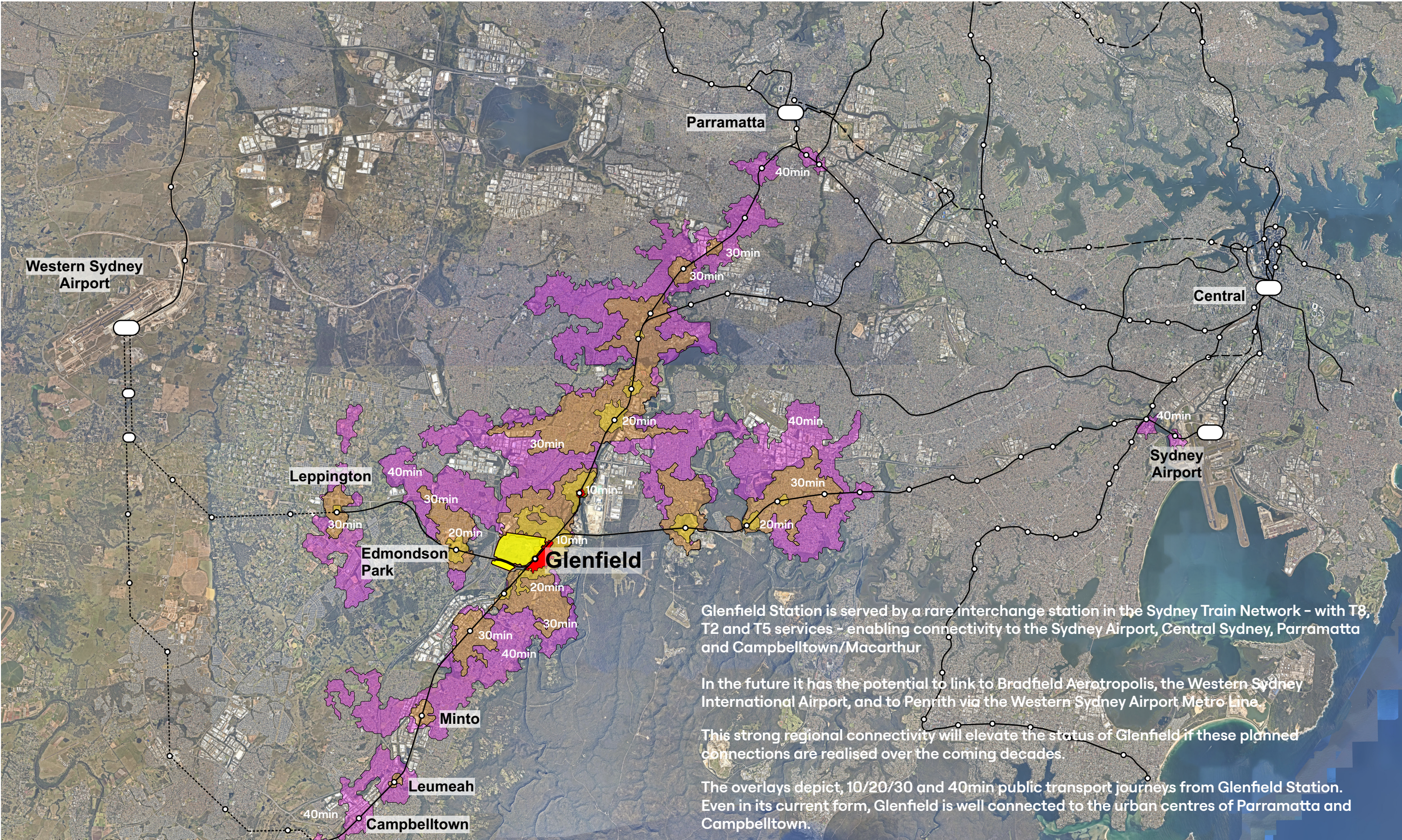
The Concept Development Application excludes the following works which are the subject of prior applications -

- Demolition of existing structures
- Site remediation

Temporary Street names are used in this report for referencing purposes only. The naming of streets is excluded from this Concept Development Application.

Station Character Area and Stage 1 DA Works

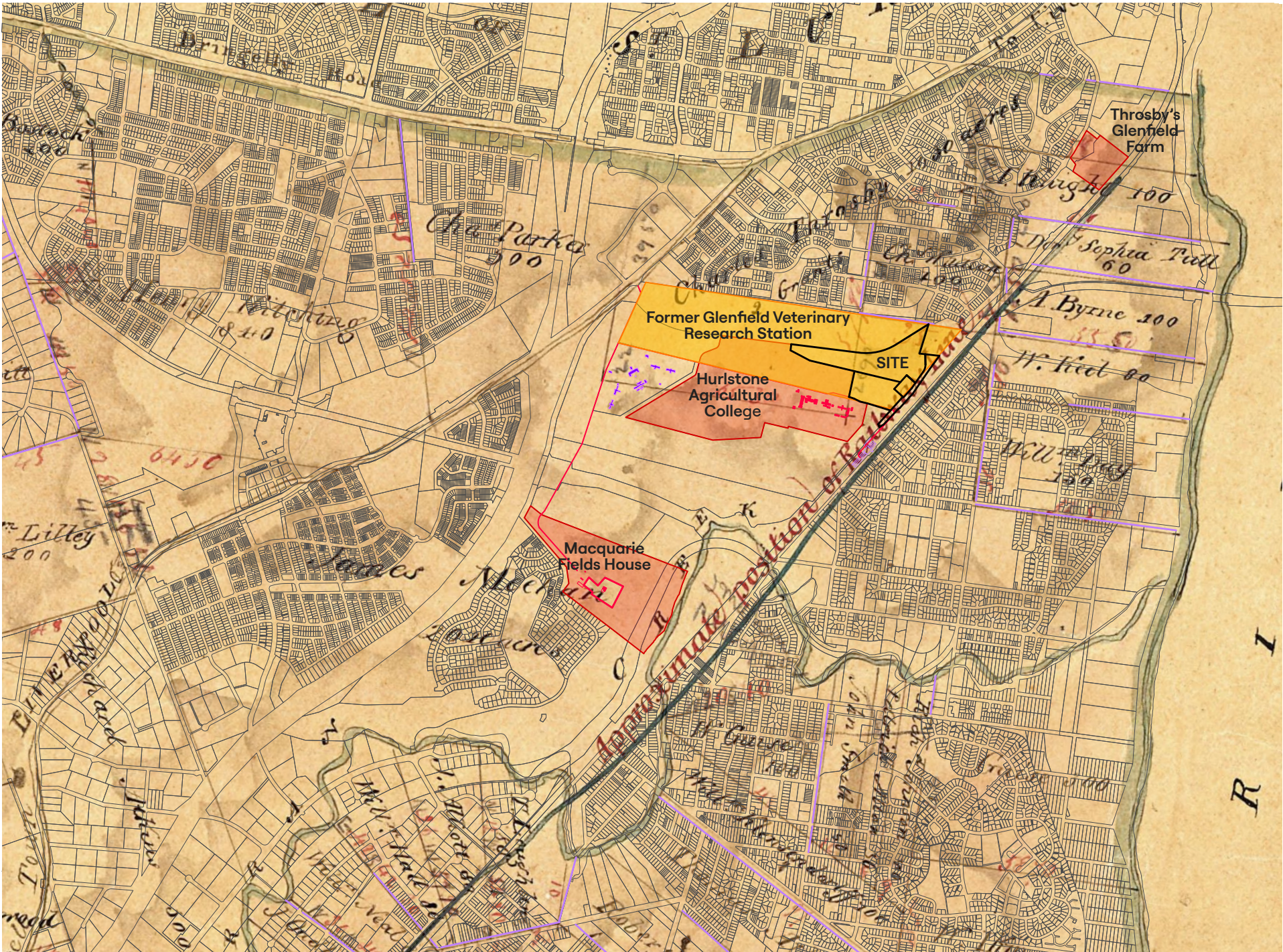
Section 2 | Site



Location plan identifying the site in its regional context

Section 2 Site

2.2 Broader Site analysis Culture and Heritage



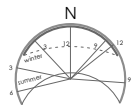
The site occupies the unceded lands of the Dharawal/Tharawal people.

The historical record indicates that the process of clearing for farming and agriculture began as early as 1817 at Throsby's Glenfield Farm to the north, and Meehan's Castle (that occupied the future site of Macquarie Fields House to the south) from 1816.

The site contained the Glenfield Veterinary Research Station from 1923 to the 1990s. Specimens were delivered to the site from across NSW via the adjacent railway. Research focused on veterinary and agricultural concerns of economic importance to the State, including the use of viruses for feral animal control, the exploration of plants poisonous to livestock and drought research. Roy Watts Road is named in memory of RM Watts who was a Director of the Research Station.

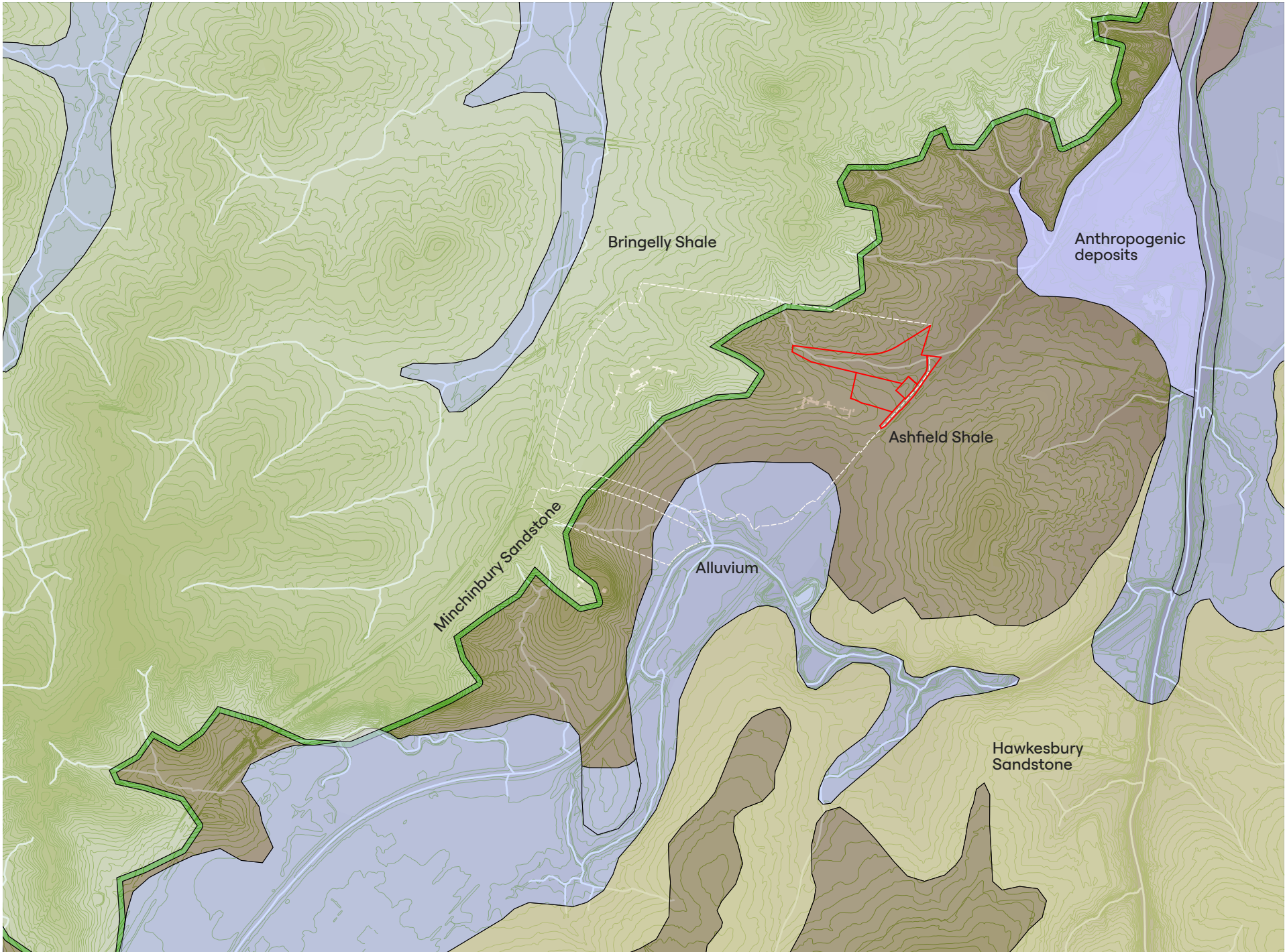
Hurlstone Agricultural High School has occupied the site since 1926 (after relocation from its inner city location) and continued this pattern of agricultural uses.

Despite the significant changes to the site, the creekline holds strong meaning for Indigenous people, with the casuarina plantings and weaving plants being important elements marking the continuation of Indigenous culture, use and understandings of Country. There is a strong desire from Indigenous knowledge holders for the creek to be restored to health - to repair Country.



Section 2 Site

2.3 Broader site analysis Geology



In areas that have been shaped by substantial clearing, cues to the site’s earlier ecologies can be interpreted through an understanding of the site’s geological conditions.

The geology of Glenfield West reveals an unexpected complexity.

The ridgeline is marked by a seam of Minchinbury Sandstone which separates two distinct types of Wianamatta Shale.

To the west is Bringelly Shale and to the East is Ashfield Shale.

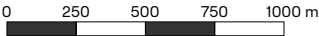
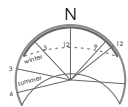
The lower reaches of the broader site are Alluvium, reflecting previous inundation in the south eastern corner of the Glenfield West Place Strategy Area.

These geological conditions give us important cues about how to articulate a cultural response to the urban structure.

Landscape choices within Glenfield West will explore and celebrate differences in character between eastern and western parts of the site.

The Station Character Area and Stage 1 DA Works lands, identified in red, occupy the Ashfield Shale zone.

Location plan identifying geological mapping of the region

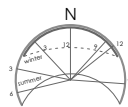


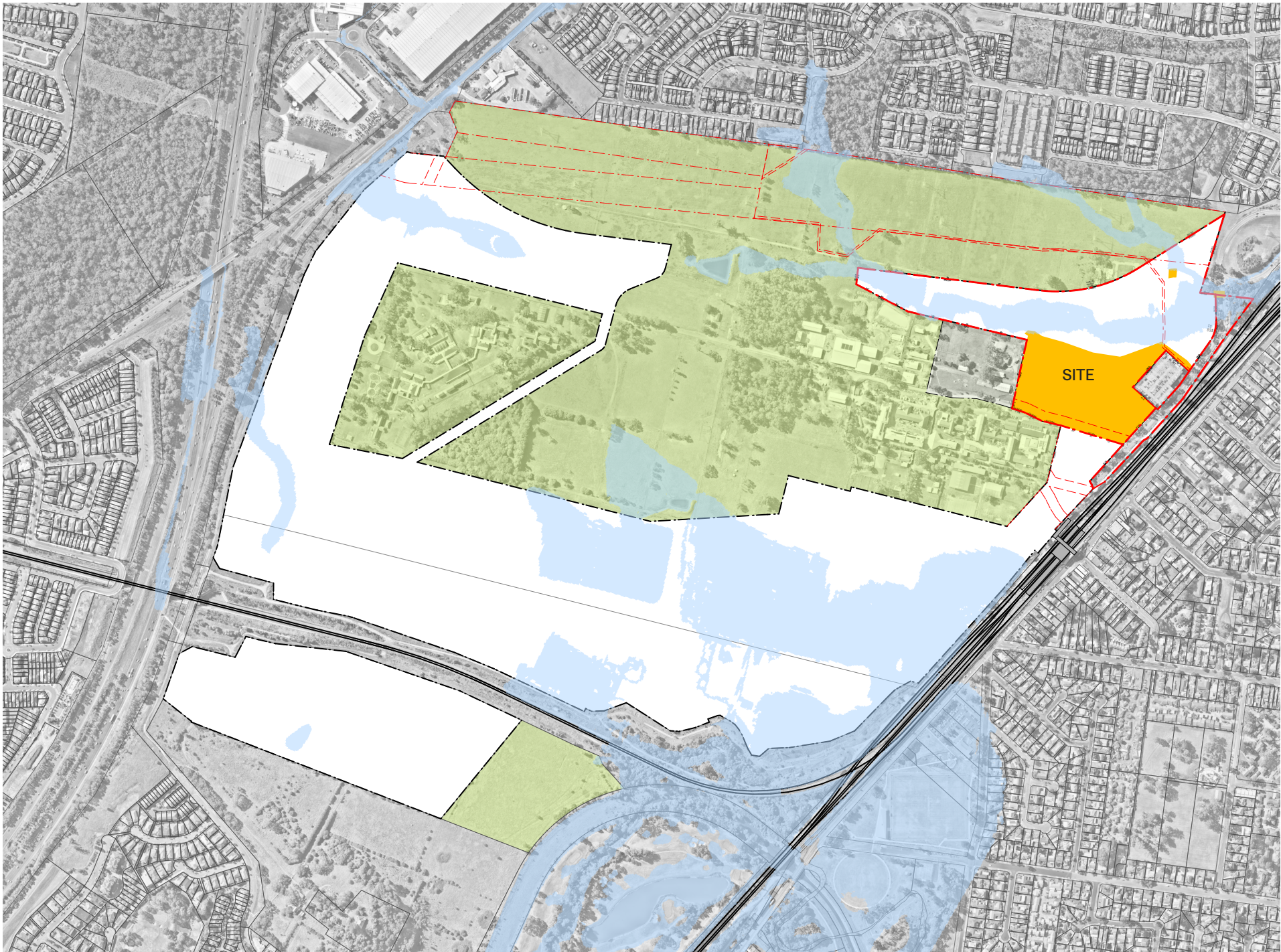


The creek corridor, and a small portion of the northern edge of the proposed Station Character Area and Stage 1 DA Works Lands are mapped as Bushfire Risk Vegetation Category 3, with an associated buffer along the edges.

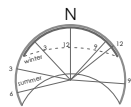
New development on areas identified as bush fire prone are subject to the development and planning controls of the RFS Planning for Bush Fire Protection and must be designed to improve the survivability of the development and the occupants that are exposed to a bush fire hazard.

Location plan identifying regional bushfire mapping





Location plan identifying 1% AEP event



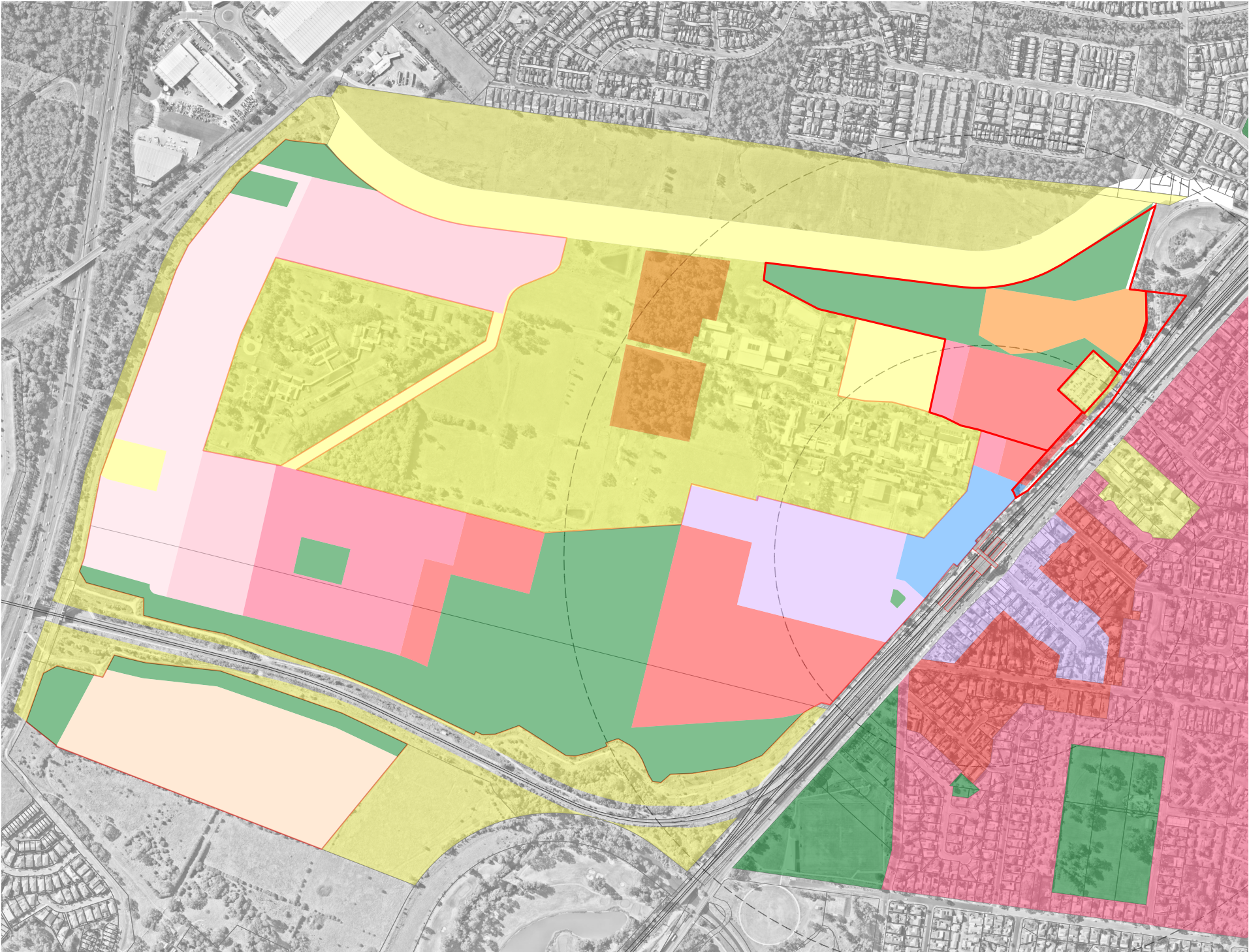
Existing flood modelling indicates that flows over-top the existing roadway in the 1% AEP flood event, which is an undesirable outcome for the existing infrastructure and the community.

Landcom propose to undertake flood mitigation works by up-sizing the existing culvert infrastructure and potentially detaining flows further upstream (if required) to ensure that post development impacts are nullified downstream of the development site, whilst improving safety and resilience of the existing road infrastructure to the hazardous major flood events

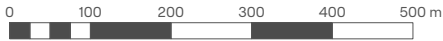
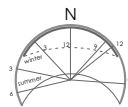
Key findings from the flood modelling found

- Proposed residential and open-space land uses elevate developed areas above the 1% AEP flood level, with no adverse impact on the catchment’s flood storage or conveyance.
- Flood mitigation works, including upgraded culverts under Glenfield Road, effectively prevent over-topping during storm events up to the 1% AEP flood.
- Modelling confirms all building pads can be designed above the 1% AEP flood level, with a 500mm freeboard.
- Effective flood evacuation plans are crucial, particularly for Probable Maximum Flood (PMF) events. The detailed design phase will refine flood evacuation strategies to ensure safety and resilience.
- Overall, the flood modelling demonstrates that the proposed development complies with flood management objectives, mitigating impacts while ensuring site safety and functionality. Further detailed design phases will enhance flood resilience and refine mitigation measures.

1% AEP



Location plan identifying existing planning context



2.6.1 Glenfield Place Strategy

The CDA Station Character Area and Stage 1 DA Works are located within the Glenfield Place Strategy. Glenfield was rezoned in July 2021.

This CDA sets site specific planning provisions for the subject site within the Station Character Area.

2.6.2 Consistency

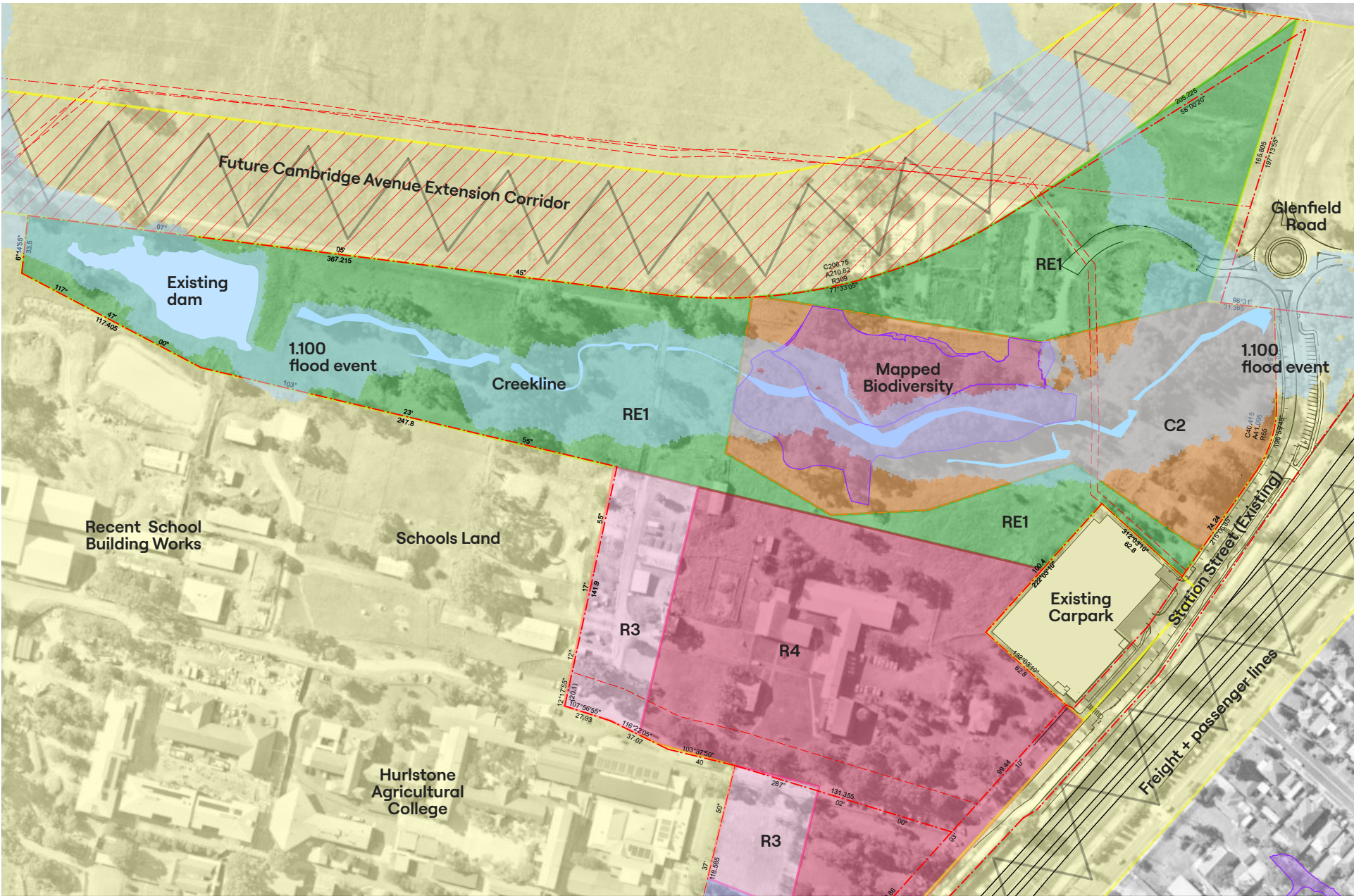
The Station Character Area and Stage 1 DA Works are being prioritised by Landcom to increase housing supply in response to current housing pressures across NSW.

The Station Character Area and Stage 1 DA Works remain consistent with the LEP controls adopted as part of the Glenfield Place Strategy Rezoning undertaken by DPHI.

- LEP Zoning**
- B2
 - B4
 - C2
 - C4
 - E2
 - MU1
 - R2
 - R3
 - R4
 - R5
 - RE1
 - SP2 Classified Road
 - SP2 Detention Basin
 - SP2 Educational Establishment
 - SP2 Public Purposes Corridor
 - SP2 Road
 - SP2 Seniors Housing
 - SP2 Transport Facility

Section 2 Site

2.7 Site analysis – Adjacent conditions



Site analysis plan showing key adjacent conditions

The site is defined by linear corridors to its North and East -

- Existing freight and T8, T2 and T5 passenger heavy rail lines to its eastern edge
- An unnamed creek and riparian corridor to the north
- In future, an extension to Cambridge Avenue will be constructed to the north of the creek

The creek corridor expands during rain events. Currently during a 1.100 event it runs over the carriageway into Station Street. It is intended that Detention works in the Station Character Area and Stage 1 DA Works can mitigate this existing impact.

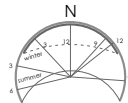
The western edge of the site is defined by existing and potential future school uses -

- Land owned by the NSW Education Department occupies the area immediately to the west of the western boundary
- Hurlstone Agricultural college occupies the area to the south west of the site.

The southern edge of the site will be framed by future development under the Glenfield Place Strategy, including -

- R3 lands immediately adjacent the school boundary
- R4 lands along the railway corridor
- E2 lands further south towards the future town centre

- SP2 Zone as marked
- RE1 Zone
- C2 Zone
- R3 Zone
- R4 Zone
- E2 Zone
- Potential noise source
- Mapped biodiversity



Section 2 Site

2.8 Site analysis – Arboriculture



Section 2 Site

2.9 Site analysis – Ecology



Site plan showing ecological assessment over project survey of proposed urban area

A Biodiversity Approvals Assessment Report has been undertaken for the Station Character Area and Stage 1 DA Works

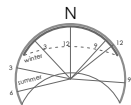
The area of proposed development is predominantly exotic vegetation in the form of lawn and scattered native and exotic trees and shrubs.

The report confirms that there are no patches of remnant, native vegetation within the development footprint.

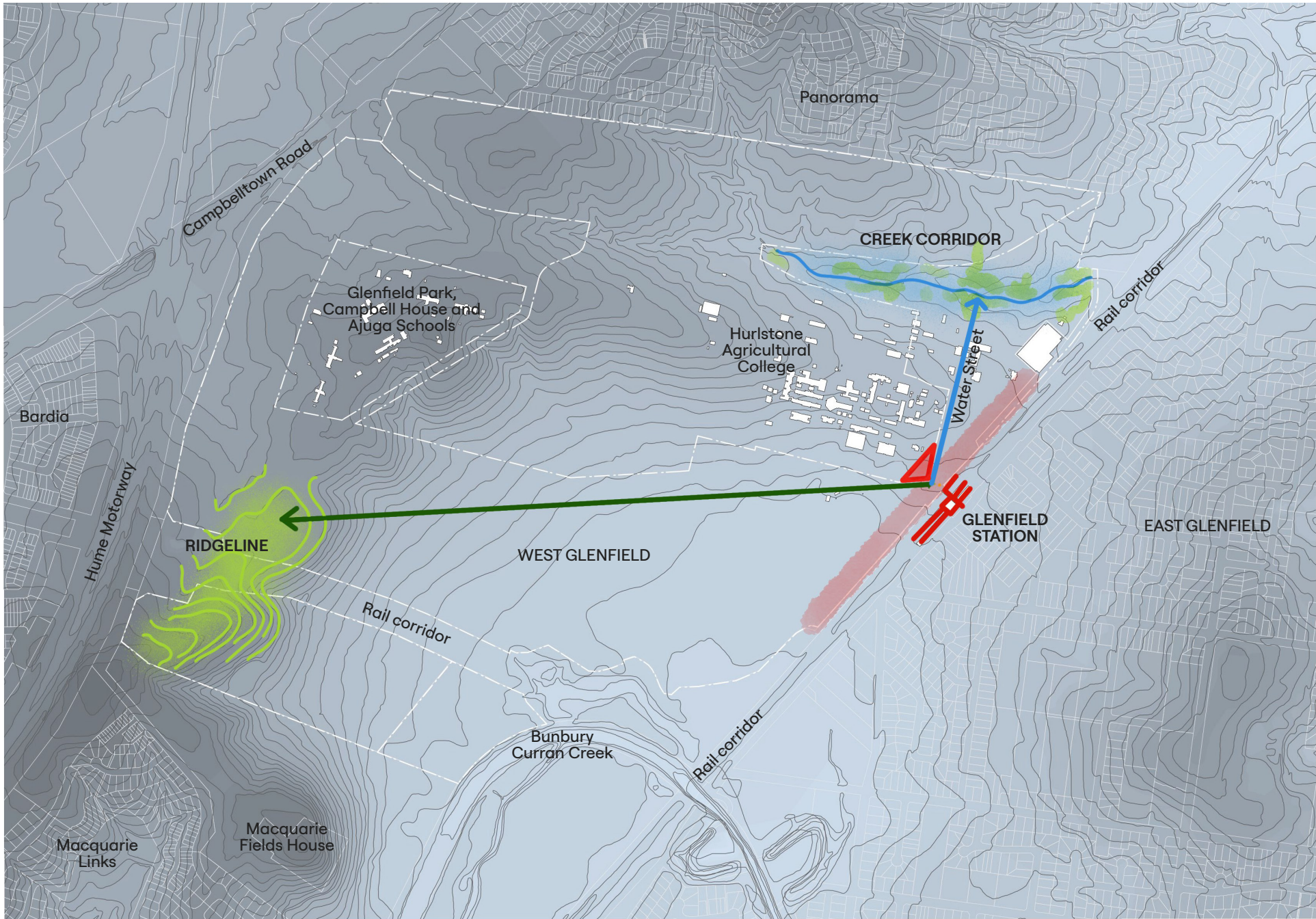
Planted native vegetation outside of the urban capable area was assessed as having the potential to provide foraging habitat for two threatened fauna species – the Swift Parrot and Grey-headed Flying Fox. An assessment has been undertaken and confirmed that significant impact to either species is unlikely to occur as a result of the proposed development.

A Koala Activity Assessment Report confirmed that the land does not contain core Koala habitat. The study identified potential Koala habitat (1 x Forest Red Gum) to be present within the assessable development footprint, however no koala activity was recorded during field surveys. Twenty replacement trees or monetary equivalent is required for its proposed removal.

A Biodiversity Management Plan and Weed Management Plan are required to be implemented.



- Exotic (EX)
- Planted Native Vegetation (PNV)
- Coastal Valleys Oak Riparian Forest (CVORF)
- Cumberland Shale Plains Woodland (CSPW)
- Planted Native/Exotic Vegetation (PNEX)



The Station Character Area and Stage 1 DA Works have been developed to remain consistent with the LEP provisions and the Glenfield Place Strategy. It is consistent with –

- LEP Height provisions
- LEP Zoning provisions
- LEP Floorspace provisions

The Station Character Area and Stage 1 DA Works are broadly consistent with the Glenfield Structure Plan. It retains –

- Roy Watts Road as the primary site address
- Edge Streets to the adjacent school and northern creekside lands to future proof flexibility and generous public access
- Subdivision that facilitates the future provision of R3 and R4 housing types consistent with the Place Strategy.

Since the completion of the Glenfield Place Strategy and Structure Plan, Landcom has commenced a Connection with Country process. This work has reinforced the importance of the creek and ridges as key cultural elements of the site.

In response to this work, Station Character Area and Stage 1 DA Works amends the Glenfield Structure Plan to facilitate –

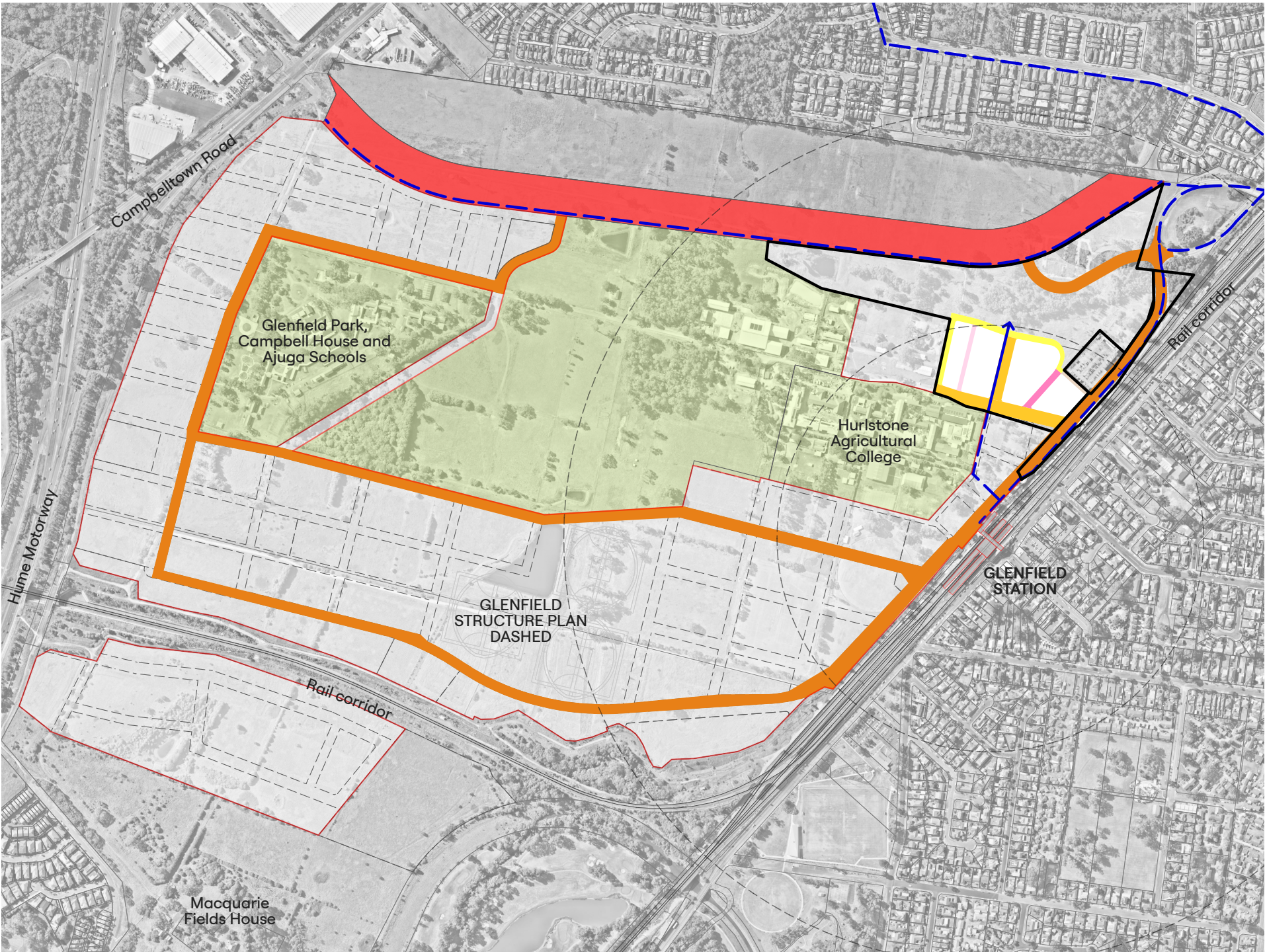
- The introduction of a new ‘Water Street’ that makes a strong visual connection and clear, open sky vista from the site entry point at the railway down to the Creek Corridor.
- Water Street seeks to celebrate the presence of water in the site, and facilitate a generous and direct connection from the future town centre to the creekland environment in subsequent stages
- Water Street makes a more generous buffer to the school boundary adjacent future R3, R4 and E2 development to the south of the Concept Development Plan.

Station Character Area and Stage 1 DA Works

Section 3 | Concept Development Plan

Section 3 Concept Development Plan

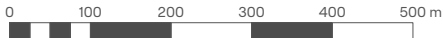
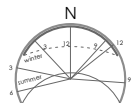
3.1 Transport movement and hierarchy



A suite of new streets has been set to integrate with the future Structure Plan. Key features include -

- Roy Watts Road, the key site address point, connects directly into the primary street in the Structure Plan
- The primary bus capable streets in the future Structure Plan passes along the eastern side of the Station Character Area facilitating future stops near the precinct
- The Station Character Area accommodates an active transport link along Water Street. It is intended that this can be extended south to the Town Centre for connection with the existing Active Transport link at Glenfield Station. There is also potential for further recreational connections in the future parkland.

Plan showing relationship of Station Character Area to the broader Glenfield Structure Plan



Section 3 Concept Development Plan

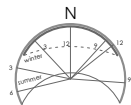
3.2 Works Areas



Plan of the site – identifying urban area and creek area works

The Concept Development Plan for the Station Character Area and Stage 1 DA Works consists of two works areas –

- Proposed urban subdivision across R3, R4, RE1 and C2 zoned lands (identified in orange)
- Flood mitigation works and associated road works within the subject site, Lot 2 DP 1293342 and Glenfield Road reservation (identified in blue) across RE1 and C2 zoned lands



Section 3 Concept Development Plan

3.3 New Streets



Plan of urban area showing street types and reservation widths

The Concept Development Plan for the Station Character Area and Stage 1 DA Works consists of the following elements -

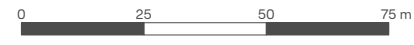
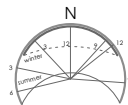
- Formalisation of Roy Watts Road (24.6m reservation narrowing to 18m at the western end) and the retention of existing mature trees at the site's entry point
- Creation of Water Street (22m reservation) as the major future connection from the future town centre to a future creek parkland
- School Street (11m Reservation) and Creekside Street (13m Reservation) that retain public access and future flexibility along the site's key interfaces
- Walkway (8m reservation) maintaining pedestrian connectivity into the site and creek corridor, enabling the retention of existing screen vegetation along the existing adjacent carpark
- Laneway (8m reservation) and Link Street (12m reservation) providing discrete access for parking and servicing of residential lots.

Streets in the Station Character Area prioritise the following objectives -

- Retention of mature existing canopy wherever possible
- The provision of urban shade, cooling and biodiversity
- The integration of urban water treatment and passive irrigation of landscape wherever possible
- Safe and generous access for pedestrians and cyclists
- Controlled, efficient and safe provision for low speed vehicle movements within the site
- Pedestrian priority through raised thresholds along primary pedestrian routes
- Facilitate north south connectivity to future town centre

The streets in the Concept Development Plan area have been fully documented by qualified Civil Engineers and Landscape Architects in compliance with these objectives.

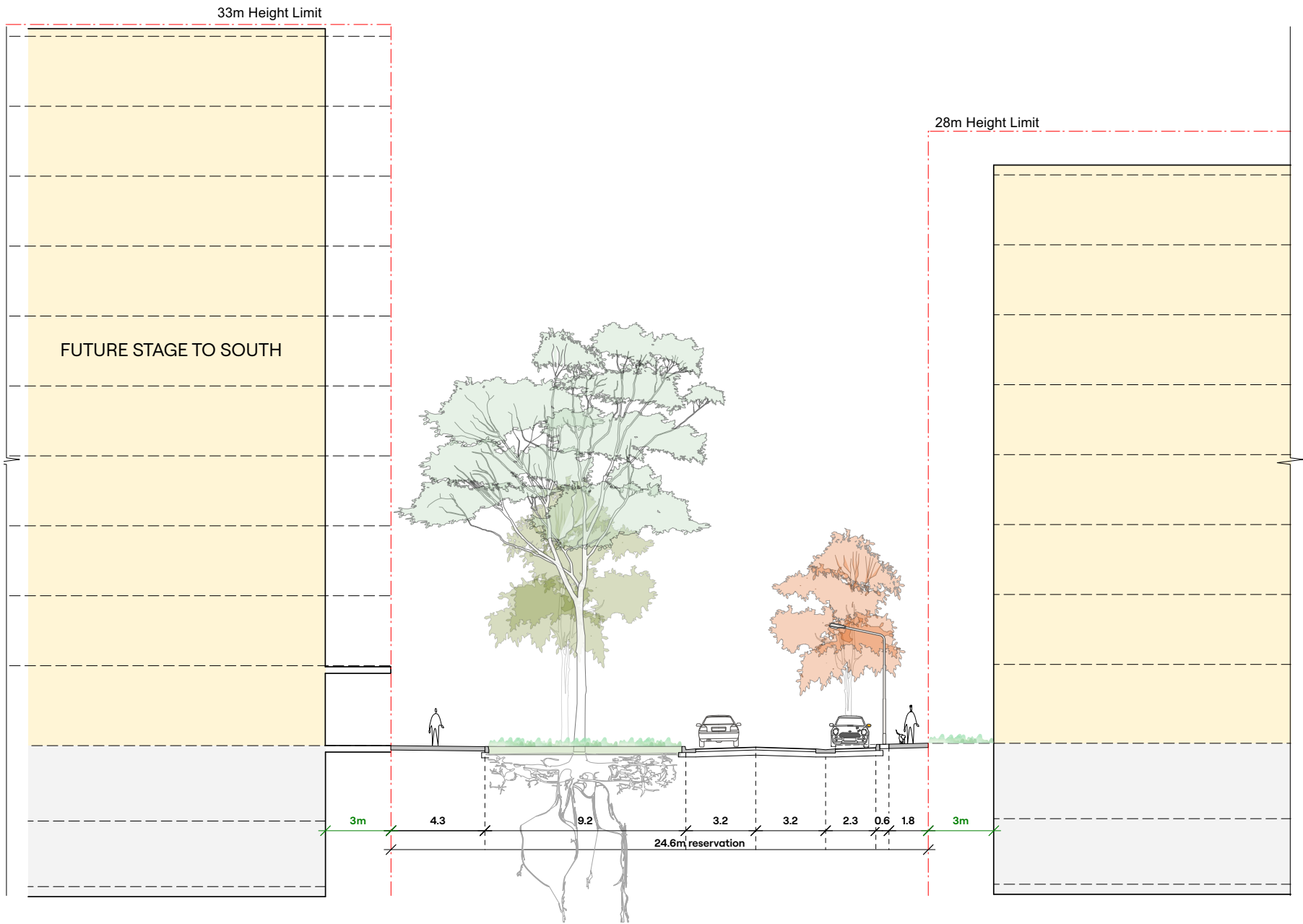
All streets must be implemented in accordance with the submitted documents or an amended application submitted demonstrating improved outcomes against all the Street Objectives listed above.



Section 3 Concept Development Plan

3.3 New Streets

3.3.1 Roy Watts Road (18m - 24.6m)



Character

The major entry street into the Station Character Area. A 24.6m reservation to reflect its importance in the street hierarchy and to provide a 9.2m zone for retention of mature trees on the sunnier southern side of the street. The street tapers to 18m adjacent the school entry.

Traffic

Two way 40kmph limit

Parking

On northern side of the street, with tree planting between every two spaces

Pedestrian

4.3m to south side of street, 1.8m to north side

Cycles

NA

Landscape

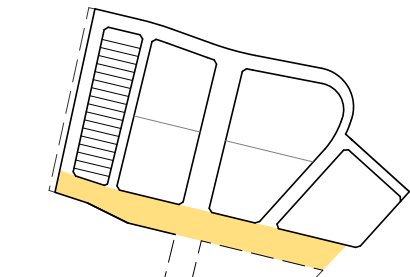
65% canopy cover. New trees to supplement retained trees. Includes Port Jackson Figs, Spotted Gum and Red Ironbark. Refer to Landscape Architect's detailed setout plans and schedules.



Spotted gum



Red Iron Bark



Section 3 Concept Development Plan

3.3 Streets

3.3.2 Street types - Water Street (22m)

Character

A generously scaled street that allows the Station Character Area to acknowledge the importance of Country . A vista towards the open sky of the Creekline from the entry to the site at Glenfield Station. A street that collects expresses urban water in a central swale.

Traffic

Two way 30kmph limit

Parking

Parking on eastern and western sides with street tree planting between.

Pedestrian

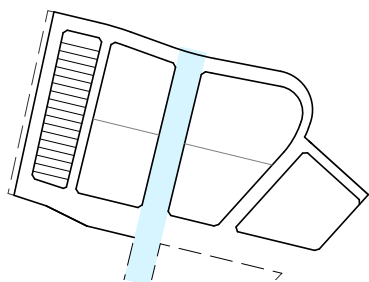
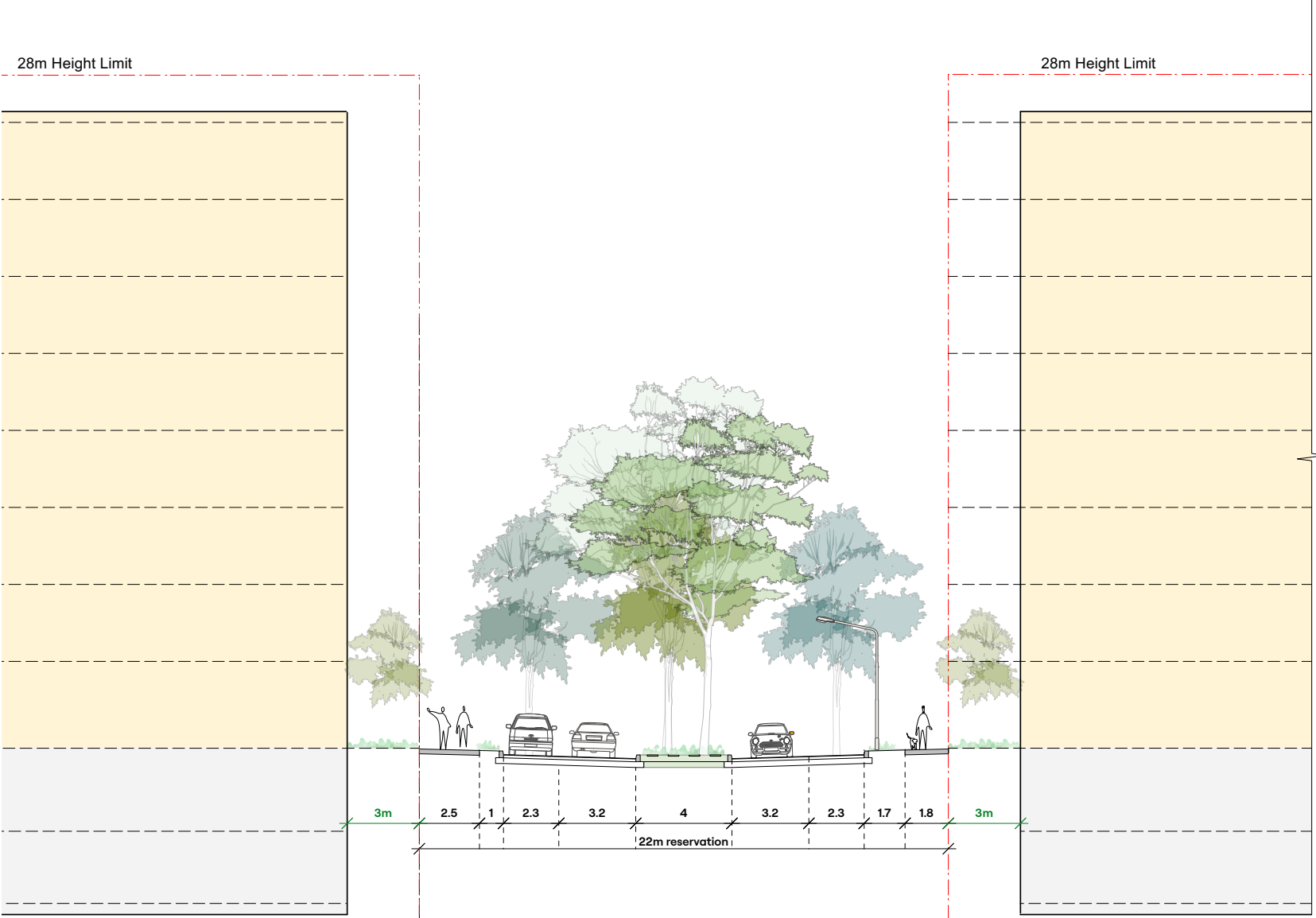
A 2.5m share path on the western side of the street, and 1.8m pedestrian path on the eastern side.

Cycles

Shared path to western side of the street

Landscape

66% Canopy cover. Reflecting the ‘water’ theme of the street. Water gum and Forest Red gum in central swale. Supplemented by Angophora and Tuckeroo verge planting. Refer to Landscape Architect’s detailed setout plans and schedules.



Water gum



Forest Red gum

Section 3 Concept Development Plan

3.3 Streets

3.3.3 Street types - Link Street (12m)

Character

A minor street in the hierarchy that facilitates the servicing of the multiple housing lots with an open vista to the north.

Traffic

Two way 30kmph limit

Parking

Parking on eastern side of the street with tree planting between

Pedestrian

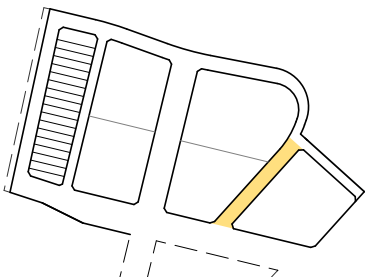
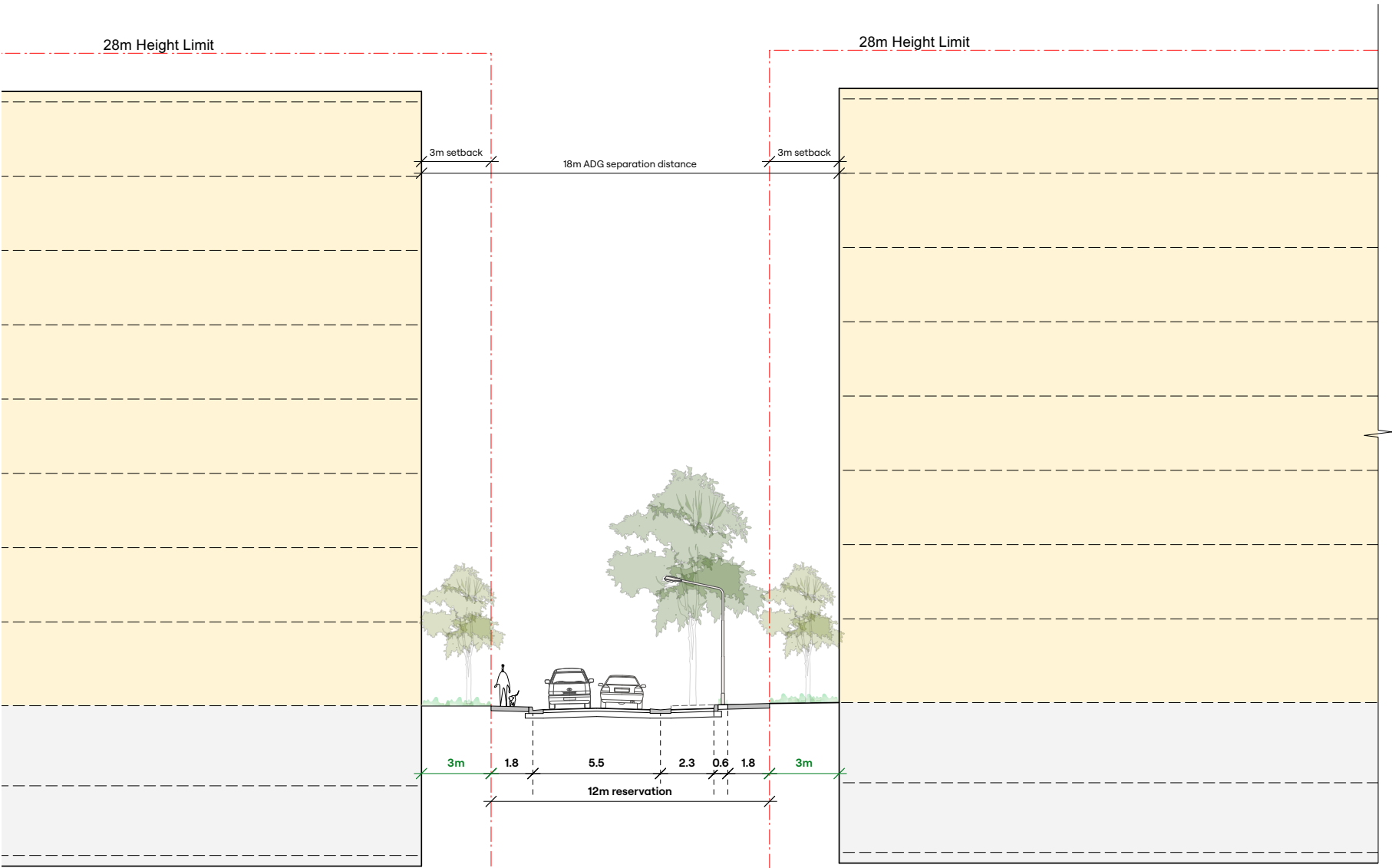
A 1.8m pedestrian path on each side of the street.

Cycles

NA

Landscape

Crows Ash with Port Jackson fig at walkway junction. Refer to Landscape Architect's detailed setout plans and schedules.



Crown Ash



Port Jackson Fig

Section 3 Concept Development Plan

3.3 Streets

3.3.4 Street types - Park Edge (13m*)

Character

An edge street that retains flexibility and generous visibility and public access to the future Creekland Park. This street is a perimeter street and provides an 8m clear carriageway to allow for the passing of fire trucks.

Traffic

Two way 30kmph limit

Parking

No parking on the park-side edge of street to preserve access for bushfire fighting.

Pedestrian

A 1.8m pedestrian path on the southern side of the street.

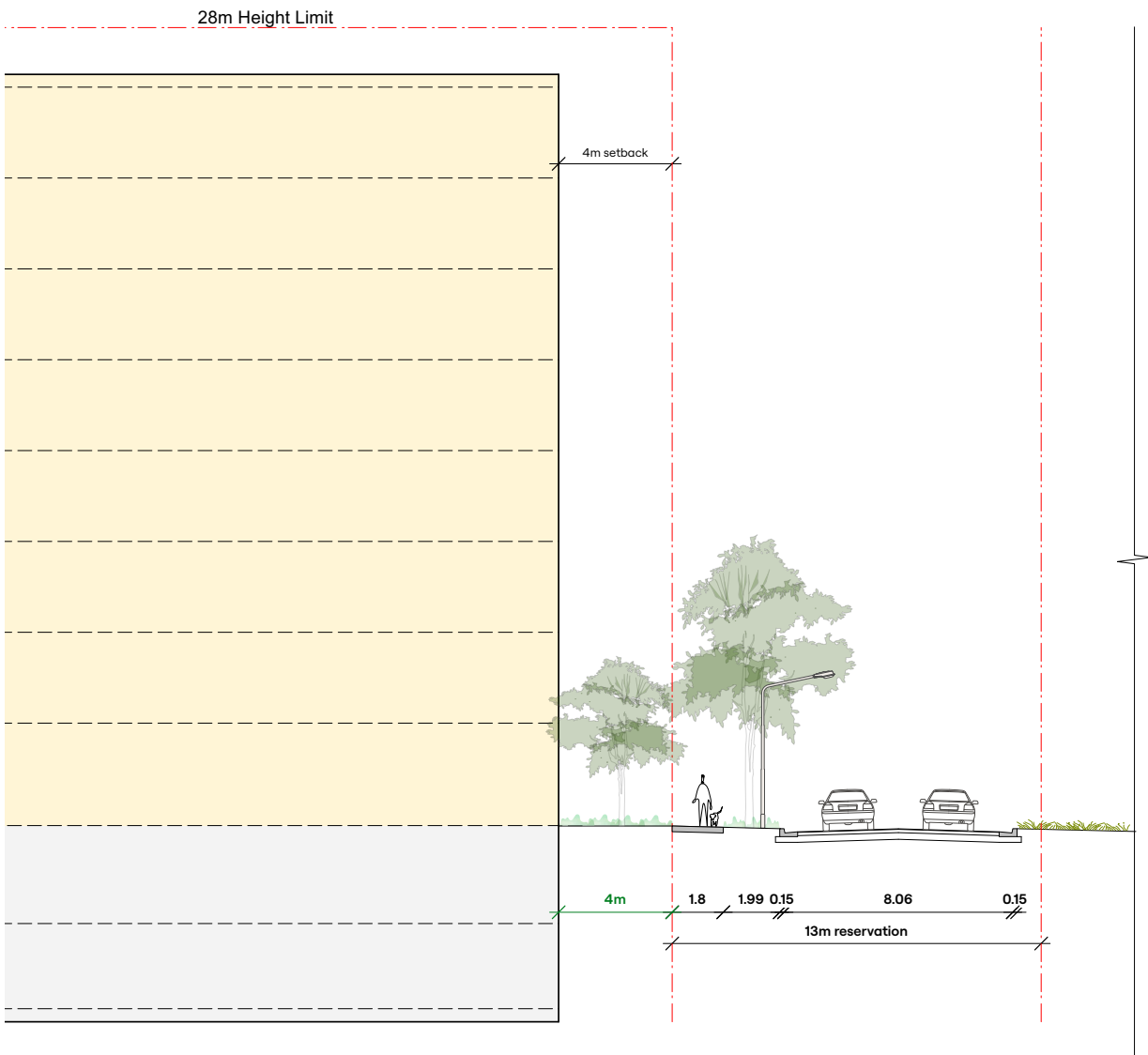
Cycles

NA

Landscape

Alternating Lilly Pilly and Forest Red Gum. Refer to Landscape Architect's detailed setout plans and schedules.

* Varies in dimension along curved transition to Link Street



Lilly Pilly



Forest Red gum

Section 3 Concept Development Plan

3.3 Streets

3.3.5 Street types - School Street (11m)

Character

An edge street that provides an address to the row housing facing the Department of Education lands. A driveway free frontage.

This street is able to be widened on the western side of the site boundary in response to Department of Education needs in the future.

Traffic

Two way 30kmph limit

Parking

Parking on eastern side of the street with tree planting between.

Pedestrian

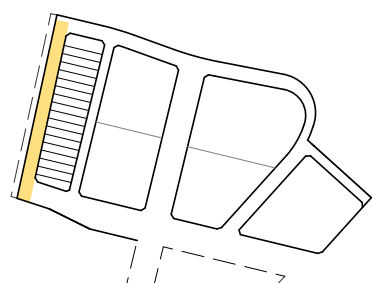
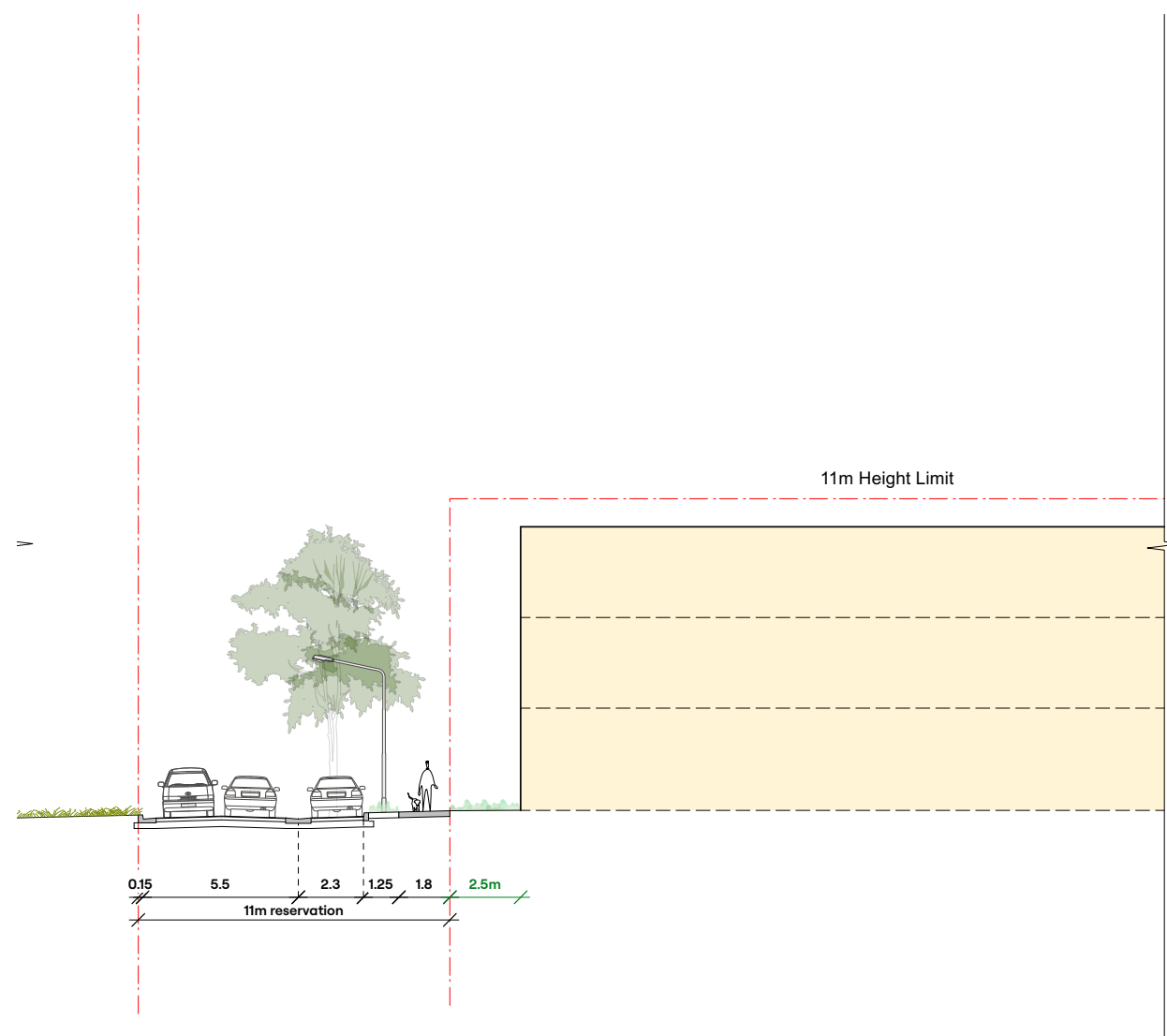
A 1.8m pedestrian path on the eastern side of the street.

Cycles

NA

Landscape

Angophora planting, with Port Jackson Fig at park end. Refer to Landscape Architect's detailed setout plans and schedules.



Angophora



Port Jackson Fig

Section 3 Concept Development Plan

3.3 Streets

3.3.6 Street types - Laneway (8m)

Character

A laneway to provide for the servicing of row housing and apartments.

Traffic

One way travel south to north - 30kmph limit

Parking

No parking.

Pedestrian

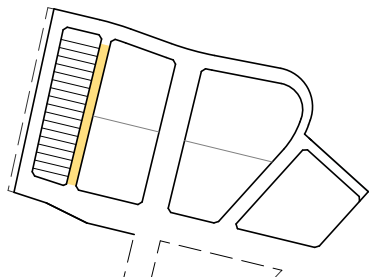
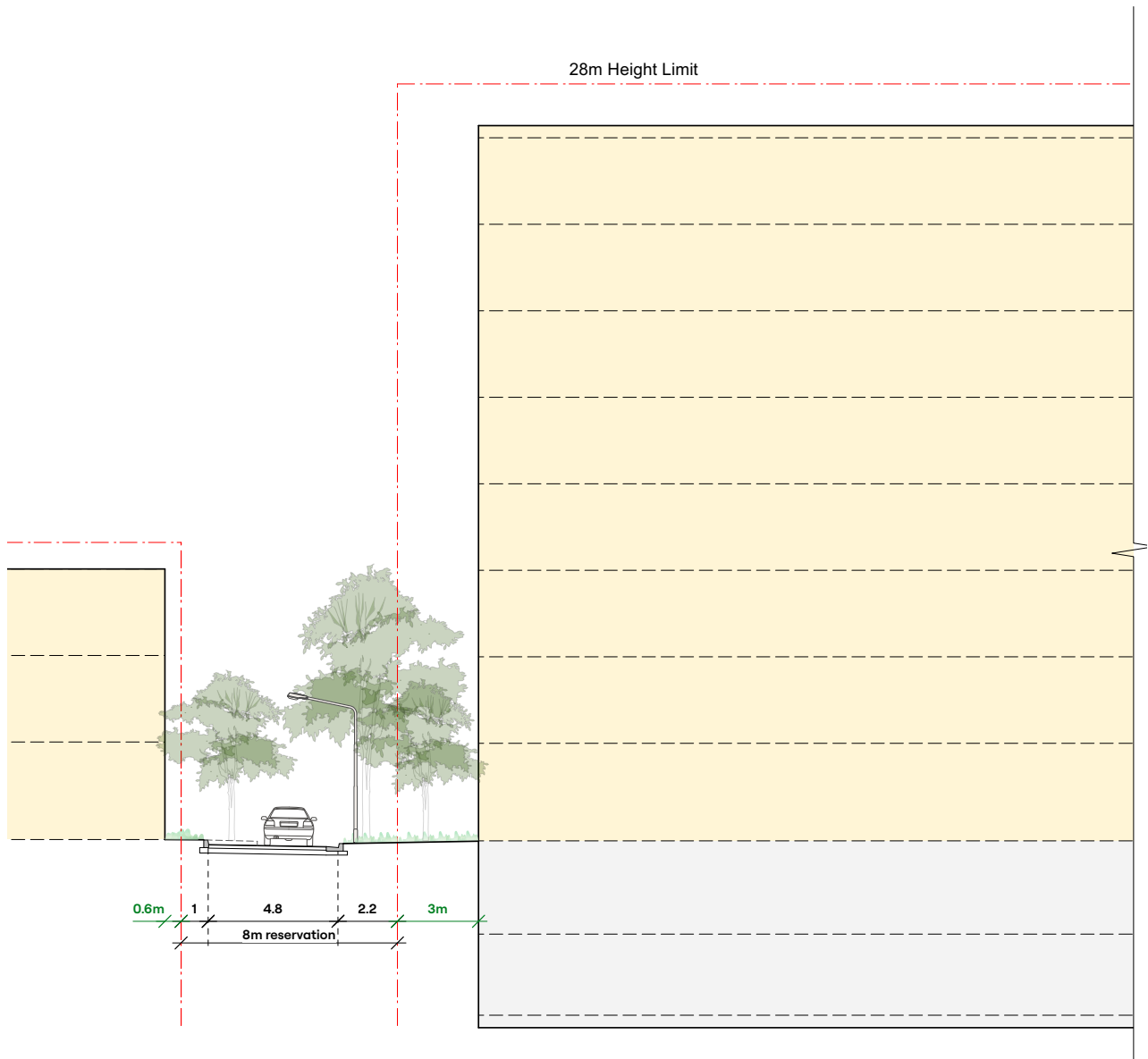
No formal pedestrian access.

Cycles

NA

Landscape

Brush Box planted along the east, Blueberry Ash to west. Refer to Landscape Architect's detailed setout plans and schedules.



Brush Box

Blueberry Ash

Section 3 Concept Development Plan

3.3 Streets

3.3.7 Street types - Walkway (8m)

Character

A pedestrian only link from Station Street to the future Creekland Park ensuring generous connectivity to future open space behind the commuter carpark.

Ramped access from Station Street facilitates negotiates the site’s retained levels for equitable access.

Traffic

Pedestrian only

Parking

NA

Pedestrian

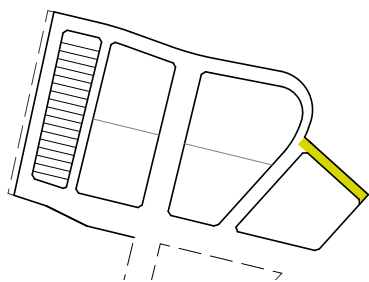
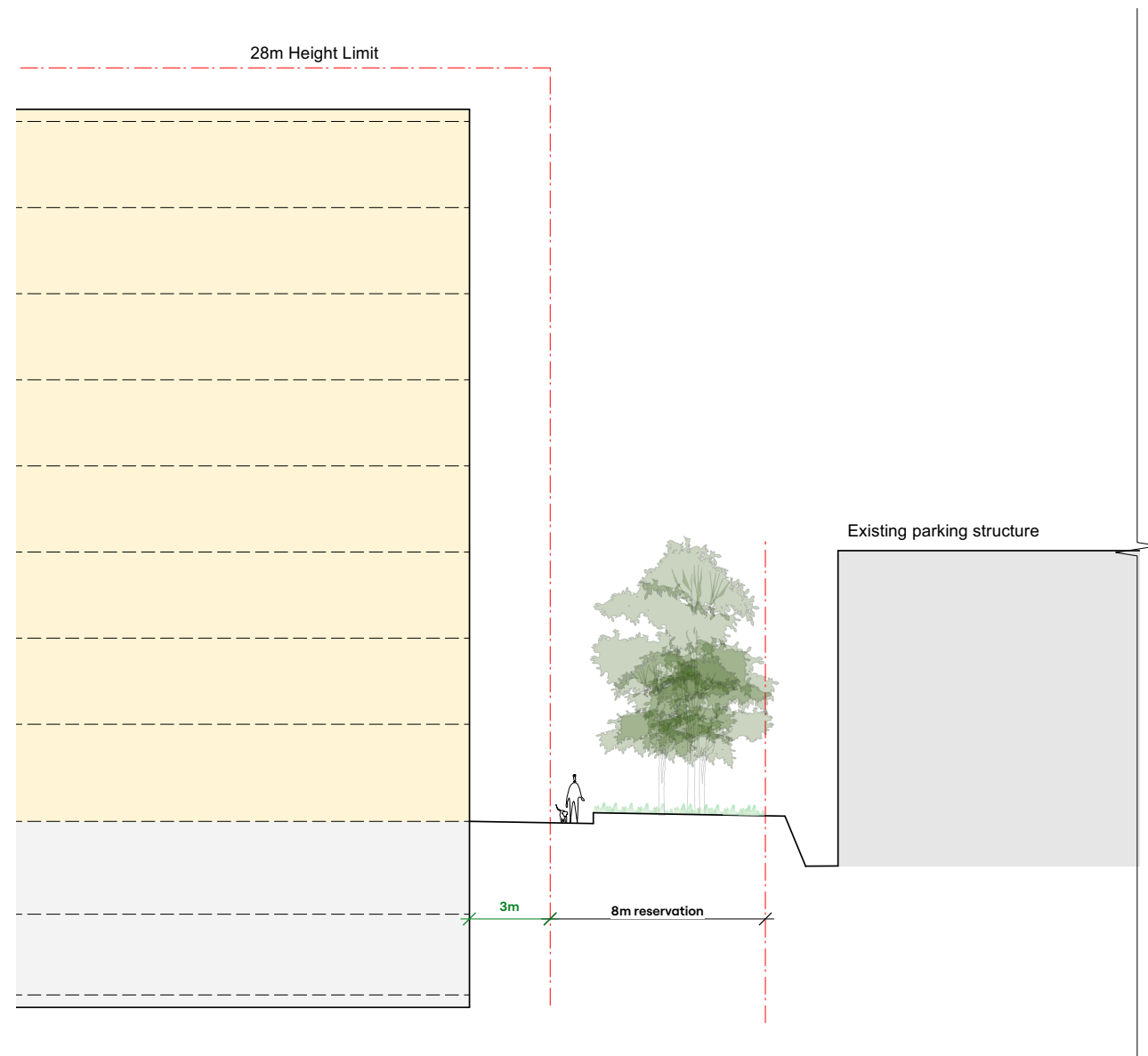
A variable width pathway adjacent retained trees.

Cycles

NA

Landscape

Existing screen planting to be retained along commuter car parking structure, supplemented with Illawarra flame trees. A series of low benches and walls to accommodate good levels for tree retention and passive use of walls. Refer to Landscape Architect’s detailed setout plans and schedules.



Illawarra Flame Tree

Section 3 Concept Development Plan

3.4 Landscape Strategy



Plan showing relationship of Station Character Area to the landscape structure of the Glenfield Structure Plan

The Concept Development Plan for the Station Character Area integrates with the future structure plan by -

- Making a positive address to a future Creekline Park
- Making a porous structure of streets and walkways that maximise connectivity to a future Creekline Park
- Transforming Roy Watts Road into a green entry street
- Creating Water Street that will allow the future town centre to link directly to the future creekline park

The landscape structure in the Station Character Area responds to the following future objectives -

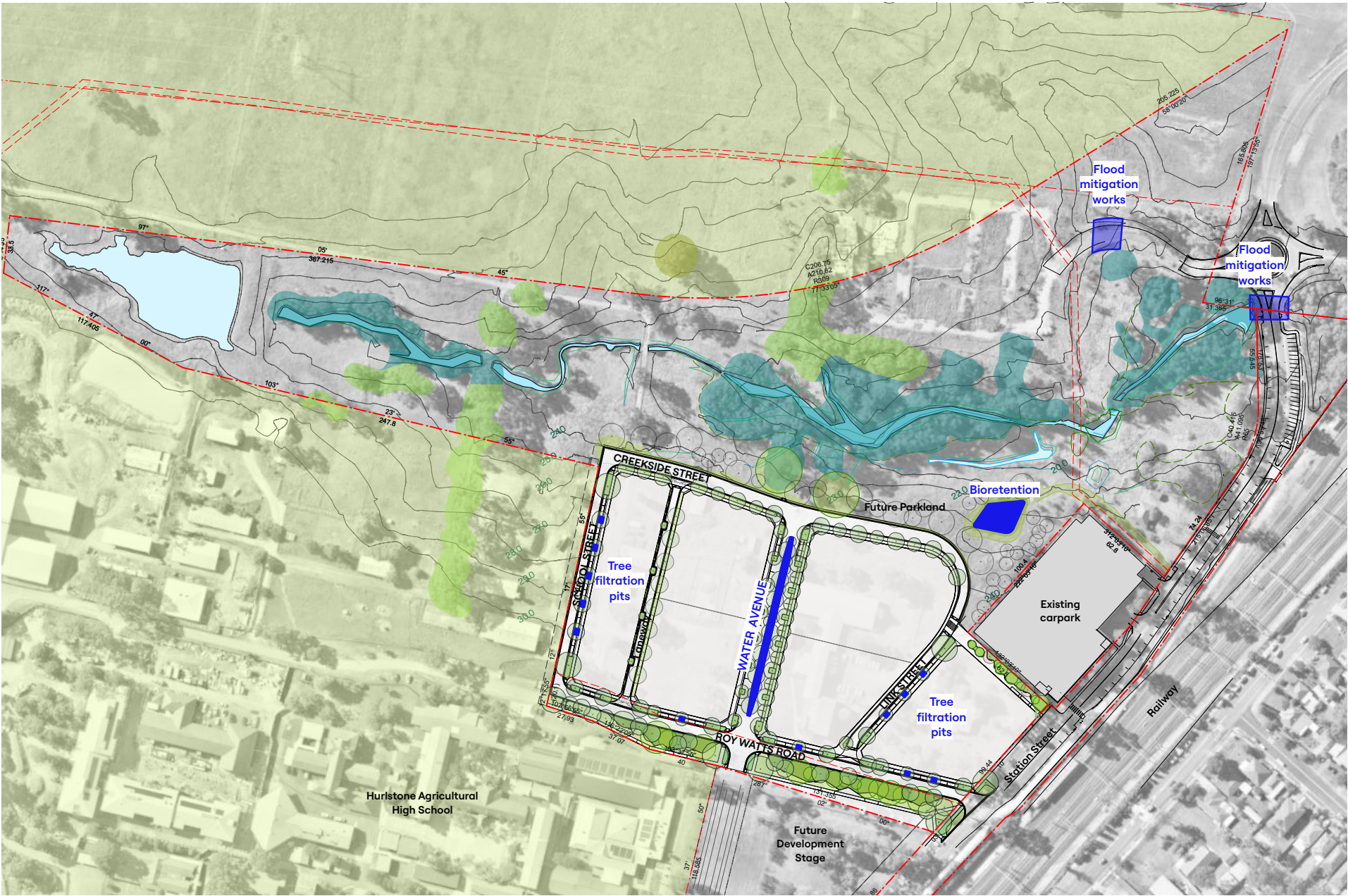
- Support healthy Country for all
- Create opportunities for future residents to engage with the natural world
- Protect First Nations cultural values
- Provide opportunities for storytelling and cultural education
- Support the health of the waterway, riparian plants and animal kin
- Make Country visible at the entry points to each precinct
- Meet the 3-30-300 target for healthier and greener cities. 3 mature trees visible from every home, min 30% canopy cover to the neighbourhood, max. 300m from all dwellings to the nearest high quality public space.

The future Creekline park will support the following future objectives -

- Incorporate and protect existing conservation value native vegetation to the creekline
- Provide buffer from existing vegetation to development and allow for consolidation of bushland cover
- Conserve and consolidate Coastal Valleys Swamp Oak Riparian Forest
- Provide habitat for local fauna
- Provide immersive bushland and 'On Country' experiences
- Incorporate sensitively designed recreational facilities along the southern edge
- Generate a low impact recreation character
- Allow for integration of recreational open spaces and recreational trails network
- Include informal passive recreation including bird watching, bush walking
- Develop a bushland conservation node for the district

Section 3 Concept Development Plan

3.5 Stormwater and water quality



Plan of the site – identifying urban water management elements

The Concept Development Plan for the Station Character Area + Stage 1 works include the following water management –

CULTURAL AND INTERPRETIVE

- Water Avenue as a street that links the town centre to the street and interprets Country by reinforcing and interpreting movement to the creekline, and the integration of a swale providing passive irrigation and urban cooling.

WATER QUALITY MANAGEMENT

- Small-scale, engineered stormwater tree pit filters integrate vegetation street trees, with a specialised filtration media to treat urban runoff.
- A GPT and bioretention basin. The basin is proposed to have a minimum treatment area of 350m2 and be integrated as part of the proposed Landscape Masterplan for the site.

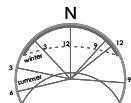
The results of the MUSIC analysis indicate that the treatment systems will achieve significant pollutant reductions, exceeding Campbelltown City Council’s minimum removal targets for Total Suspended Solids, Total Phosphorus, and Gross Pollutants, and meeting the Georges River Keeper (GRK) Guidelines for Total Nitrogen and Total Phosphorus.

DETENTION + FLOOD MITIGATION

- Upgrade to the existing culverts beneath Glenfield Road,
- Minor earthworks to the north by creating a passage for upstream flows through an opening in a private roadway.

The existing terrain is already characterised by high imperviousness due to the presence of buildings, concrete paths, driveways, and roads. While the proposed development will marginally increase imperviousness, the change represents a near negligible percentage when considered in the context of the broader catchment.

Consequently, no detention storage volume will be required to meet the pre-to-post development impact requirements (TUFLOW assessment).



Station Character Area and Stage 1 DA Works

Section 4 | Subdivision

Section 4 Subdivision

4.1 Lots



Plan of urban area showing subdivision

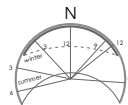
The Station Character Area and Stage 1 DA Works involve the creation of the following lots -

- 1 superlot within the R3 Zone
- 5 apartment parcels within the R4 zone above the minimum lot size of 2000sqm in the Campbelltown LEP

All of the apartment lots have a minimum of three public street frontages and are sized to accommodate sustainable building envelopes that can respond effectively to solar and site constraints.

The dimensions and areas of the lots are formalised in a Plan of Subdivision prepared by the project surveyor that accompanies the application.

Any further subdivision into additional development parcels would be subject to a future Subdivision Development Application.



Station Character Area and Stage 1 DA Works

Section 5 | Development Controls

Section 5 Development Controls

5.1 Height Controls



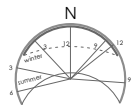
Plan or urban area showing height controls

Height controls in the Station Character Area and Stage 1 DA Works must meet the maximum heights in the Campbelltown LEP.

Where a development qualifies for a bonus floor space ratio and/or building height under an environmental planning instrument, this would be calculated in addition to the GFA determined for each development lot where it can be demonstrated that the bonus is appropriate with no unacceptable impacts.

Typically, any permissible additional height should be located along Station Street, Roy Watts Road, or Water Street where indicated by the pink lines on the diagram left to -

- reinforce the street hierarchy,
- limit overshadowing of adjacent landholdings or development parcels, and
- maximise solar access within development sites.



Section 5 Development Controls

5.2 Floorspace Redistribution



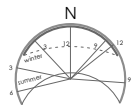
Plan or urban area showing floorspace capture

The Campbelltown LEP 2015 nominates floorspace over the full urban capable area of the Station Character Area .

This Concept Development Application redistributes the permissible floorspace from the area of new streets and allocates it to adjacent development parcels in accordance with the accompanying diagram (left) and table (following page).

The captured floorspace rates demonstrate a maximum permissible floorspace. To utilise floorspace capture future Development Applications must demonstrate compliance with the height, solar access and overshadowing provisions of the following instruments as applicable -

- Campbelltown LEP 2015 maximum heights
- Solar access and overshadowing provisions in this CDA for medium density row housing in Lot 1
- Solar access and overshadowing provisions in SEPP Housing 2021, including the NSW Apartment Design Guide as referenced therein, for Lots 2.1, 2.2, 3.1, 3.2 and 4



Section 5 Development Controls

5.2 Floorspace Redistribution

FSR CAPTURE	AREA	EXISTING FSR	FLOORSPACE	ALLOCATED TO		
FSC1	2624	1	2624.0	L1		
FSC2	399	1.6	638.4	L2.1		
FSC3	1267	1.6	2027.2	L2.2		
FSC4	835	2.1	1753.5	L2.1		
FSC5	1277	2.1	2681.7	L2.2		
FSC6	2567	2.1	5390.7	L3.1		
FSC7	1754	2.1	3683.4	L3.2		
FSC8	2086	2	4172.0	L4		
LOT NAME	AREA	FSR	FLOORSPACE	ADDITIONAL ALLOCATION	TOTAL	NET FLOORSPACE
L1.1	3896	1	3896.0	2624.0	6520.0	1.67
L2.1	2348	1.6	3756.8	638.4	4395.2	2.45
L2.2	1139	2.1	2391.9	1753.5	4145.4	3.14
	2293	1.6	3668.8	2027.2	5696.0	
L3.1	1143	2.1	2400.3	2681.7	5082.0	3.12
	5267	2.1	11060.7	5390.7	16451.4	
L3.2	3450	2.1	7245.0	3683.4	10928.4	3.17
L4.1	4462	2.1	9370.2	4172.0	13542.2	3.04

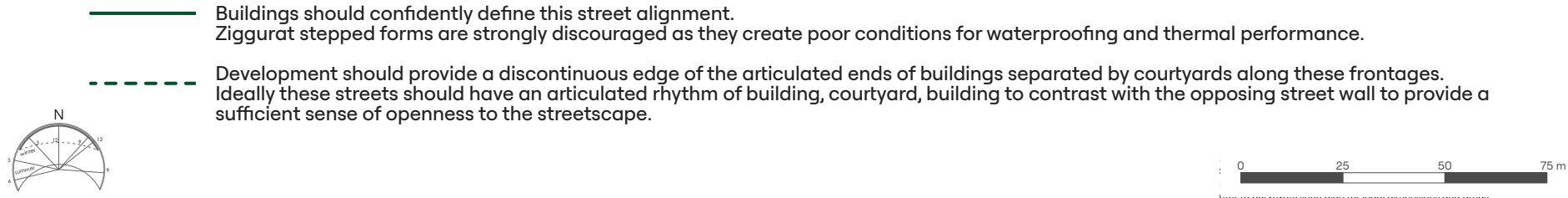
The table on the left sets out the maximum floorspace areas for each lot following floorspace redistribution.

Section 5 Development Controls

5.3 Landscape and Setback controls



Plan or urban area showing minimum setbacks, landscape and deep soil requirements



Minimum front facade setbacks to streets are nominated on the drawing to the left.

Two types of street setbacks are shown – solid and dashed. These are described in more detail in the legend, and indicate a desire for two, distinct conditions – a strong, confident street wall language, and a more porous street condition comprising the slim ends of buildings separated by courtyards.

Built form and all articulation zones must remain behind the setback lines, with the exception of

- Projections of 450mm max. for building elements providing weather and solar protection. (Attachments to the building only – no floorspace elements may protrude.)
- Projecting balconies along School Street for housing on Lot 1 to a maximum of 1.2m.
- Front walls or fences to a maximum height of 1.2m

Minimum street setbacks also apply to basement levels. Front garden areas should be fully available for tree planting in full deep soil and must exclude all basement structures. If required, substations must be enclosed within built form and may not occupy front garden areas.

Typically street interfaces should be designed as individual gardens and private dwelling entries to each ground floor dwelling where possible. An additional buffer has been provided to Station Street, due to the intensity of movement on that street in the short and long term.

Minimum garden and deep soil requirements are set on the drawing to the left. Deep soil is to be calculated as a percentage of the whole site area, and may include front garden areas where they are a minimum of 3m, full deep soil and not impeded by basements, footing/retaining structures, fire escapes or services zones.

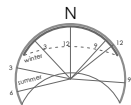
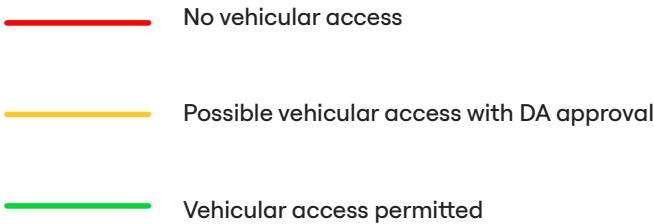
This CDA requires all new development to work towards urban cooling by prioritising deep soil landscape and tree planting and exceeding the minimum requirements wherever possible.

Section 5 Development Controls

5.4 Vehicular Access



Plan or urban area showing vehicular access and servicing locations



The street hierarchy for the Station Character Area and Stage 1 DA Works clearly distinguish primary streets from service streets through dimension and character.

All vehicular access and servicing should take place in the areas identified in the green Vehicular access permitted zones.

Frontages identified in red are key pedestrian or recreational street interfaces and should not be diminished by the appearance of parking/servicing entries.

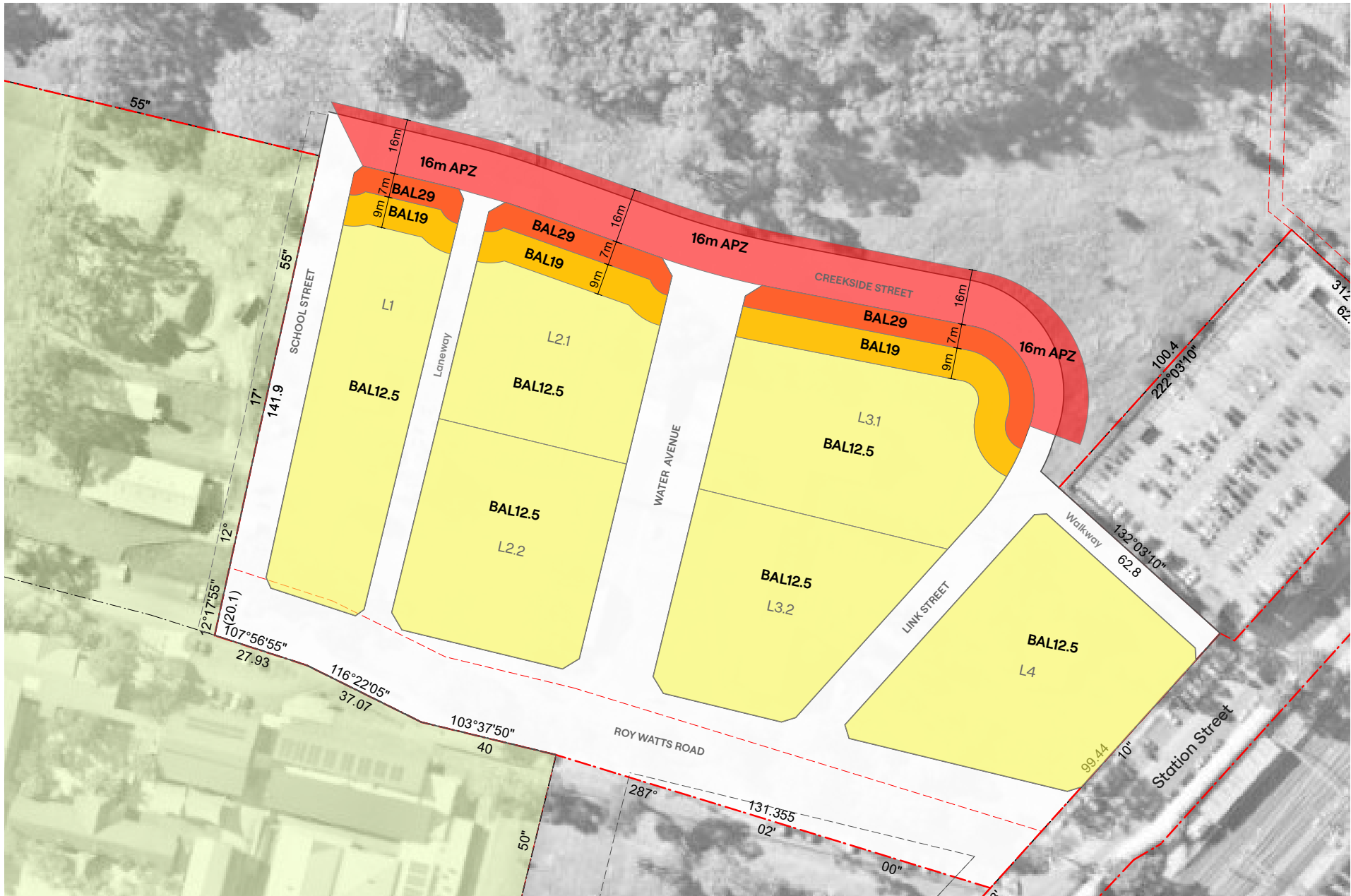
Three frontages are marked in orange as Possible Vehicular access with Development Approval. These frontages are not favoured, but are offered as potential options for vehicular entries if it can be demonstrated that this arrangement is affords advantages in terms of -

- Particular development types and arrangements
- Fall of the land

Possible Vehicular access with Development Approval is for car parking access only. All garbage servicing must be from Vehicular Access Permitted zones.

All vehicular access points within the Station Character Area must be -

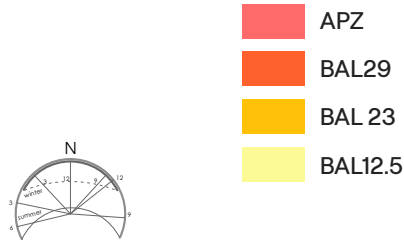
- Fully contained within built form (i.e. no open ramps)
- Designed to statutory minimums to minimise their presence visually and acoustically
- Of high design quality and integrated architecturally
- Located with good sight lines to adjacent pedestrian pathways
- Compliant with AS2890 Parts 1 and 2



Plan or urban area showing required BALs and APZs

The Bushfire Assessment requires implementation of the following -

- A perimeter road condition between the developed area and the creek corridor with 8m clear carriageway
- An associated 16m Asset Protection Zone along the creekside street frontage
- A minimum construction standard of BAL29 to be maintained for development 16>23m along the Creekside Street frontage
- A minimum construction standard of BAL19 to be maintained for development 23>32m along the Creekside Street development frontage
- The bushfire report recommends that a minimum construction standard of BAL 12.5 be maintained for the development as a whole.



Section 5 Development Controls

5.5 Parking + Servicing

5.5.1 Parking Provision

The Station Character Area has excellent access to Glenfield Railway Station, although it is noted that the precinct will not be fully catered for services and local retail until the later parts of the Glenfield Structure Plan are implemented.

Underground parking is a costly and environmentally intensive form of construction, so its use should be limited to future needs. Accordingly, in the short term, a share parking regime is recommended with priority on-street parking for share cars in the Station Character Area.

The Station Character Area has been identified as a Category 2 area under the Guide to Traffic Impact Assessment (GTIA) . Maximum parking provision is as follows –

Development Type	Rate
Small lot housing (under 220sqm)	Maximum 2 spaces per lot (incl. secondary dwellings)
Detached/Attached housing over 220sqm	Maximum 2 spaces per lot (incl. secondary dwellings)
Secondary dwellings	Not required. Maximum 1 space
Studio Apartments	Maximum 0.6 spaces per dwelling
1 Bedroom Apartments	Maximum 0.6 spaces per dwelling
2 Bedroom Apartments	Maximum 0.9 spaces per dwelling
3+ Bedroom Apartments	Maximum 1.4 spaces per dwelling
Apartment Visitor Parking	Maximum 1 per 5 dwellings
Apartment Bicycle Parking	Minimum 1 per 5 dwellings lockable
Apartment Motor Cycle Parking	Minimum 1 per 25 dwellings
Other permissible uses	
Neighbourhood shops	Maximum 1 space per 40sqm GFA
Childcare	As per GITA requirements

Provision for the charging of Electric Vehicles in all new apartment buildings should be made in accordance with the NCC.

5.5.2 Above Grade Parking

The provision of basement parking can be an expensive and environmentally intensive option in many parts of Sydney, and where Housing Affordability is a priority.

Some at grade or above grade parking could be an appropriate solution, but must be well designed to preserve the amenity of all adjacent development and streetscapes.

Considerations should include –

- Sleeving or screening any parking areas from public streets with other uses
- The provision of natural light and ventilation wherever possible
- The use of skylights, or voids that can permit growth of mature trees in genuine deep soil at parking level that can grow through the carpark level to reach podium landscape areas above
- Setting floor to floor heights to accommodate future retrofit and adaptive reuse

5.5.3 Waste Provision

Waste Collection and storage must be well designed and screened from public interfaces. Waste provision should be in accordance with –

- Section 3.4.5 of the Campbelltown (Sustainable) DCP 2015 for row housing.
- Section 5.4.8 of the Campbelltown (Sustainable) DCP 2015 for apartment buildings.

Taking Waste Collection Vehicles into basements and buildings involves costly spatial and structural solutions to meet vertical and horizontal clearances. It also exposes large doors and unsightly undercrofts to adjacent public spaces.

It is strongly recommended that developments provide a garbage collection area at ground level that facilitates collection on site or on street adjacent the site boundary with Laneway or Link Street.

As medium and higher density housing types increase in Western Sydney into the future, Council fleets could diversify to provide smaller vehicles, as they have in many inner urban areas.

Garbage collection is an intermittent activity and should not unduly impact building design or the adjacent public domain in the short term. Nonetheless, arrangements must facilitate efficient and simple collection for service providers.

Provide bin enclosure and storage areas that are considered in terms of their design and unified with the language of the building. They should adequately screen bins from public interfaces.

Section 5 Development Controls

Small lot housing

Small lot housing is an increasingly attractive housing option due to its ability to provide high amenity living in compact areas and its associated affordability benefits.

The dimensions of small lot row housing can make compliance with traditional solar access and overshadowing controls a challenge. Given the limited width of lots, even the presence of side fencing can make the achievement of mid winter sun challenging.

This Concept Development Application seeks to consider the flexible ways that private open space can be achieved in small lot development. In doing so – it treats small lot row housing much more like apartments – understanding that a mix of gardens, terraces, balconies and roof terraces can achieve what was once traditionally only considered possible in rear gardens.

5.6.1 Private Open Space

All small lot housing must achieve a combined minimum total of 40sqm of private open space provided through a combination of one or more of the following means –

- Courtyard and Rear Gardens
- Roof Terraces
- Verandas and Balconies

The minimum dimension of areas that can be used to calculate the total provision of Private Open Space

- Courtyard Gardens min. 12 sqm and min. 3m dimension
- Rear Gardens min. 18sqm and min. 3m dimension
- Roof Terraces min. 12sqm and min. 3m dimension
- Verandas/Balconies min. 8sqm and min. 1.2m dimension

5.6.2 Gardens and Deep Soil Landscape

Gardens and deep soil landscape are to be provided through one or a combination of courtyard gardens (in the centre of a house) and/or rear gardens (at the rear of the house or separating house/garage).

Gardens must provide urban cooling, rainwater infiltration and deep soil planting.

Rear and courtyard gardens cannot be provided over basements/structure, and the area measured must be open to the sky.

Site Area	Min garden area	% deep soil within garden area
200-220sqm	32sqm	60%

5.6 Particular provisions R3 zoning Small lot housing (up to 220sqm)

5.6.3 Solar Access to Living Areas

All small lot housing must achieve a cumulative minimum 2 hours of solar access between 9am and 3pm in mid winter into its living spaces (living rooms and family/rumpus rooms).

Proponents are encouraged to work the cross section of small lot row housing to use innovative means to introduce sun and light. Voids, top lights, atria and courtyard gardens are useful design devices.

5.6.4 Solar Access and Shade to Private Open Space

All small lot housing must achieve a cumulative minimum 2 hours of solar access to 40% of its private open spaces between 9am and 3pm in mid winter. These may include the areas listed in 5.6.1.

Each house should equally demonstrate that a minimum of 20% of private open space can achieve shading between 9am and 4pm in mid summer. This may be through shade created by the house itself, landscape planting, adjustable shading and/or permanent fixed shading structures.

5.6.5 Overshadowing

All small lot housing must be designed to preserve the minimum mid winter solar access outlined above to the Living Areas and Private Open Space of any neighbouring dwelling as set out in 5.6.3, 5.6.4, 5.7.3 or 5.7.4.

5.6.6 Secondary dwellings over garages

Secondary dwellings are required to have a private open space of minimum 4sqm area as a balcony or roof terrace.

Secondary dwellings do not require car parking, but may include a maximum of 1 space, provided the number of spaces on site does not exceed 2 in total.

Proponents are encouraged to work the cross section and roofs to introduce sun, light and air into the living spaces of secondary dwellings.

Section 5 Development Controls

Lots greater than 220sqm

These provisions apply to land within Lot 1 R3 zoning if subdivided for lots greater than 220sqm.

5.7.1 Private Open Space

All houses in R3 zone on lots greater than 220sqm should provide private open space in the form of usable external area ta minimum of 40sqm that relates directly to primary internal living areas.

The design of private open space should balance the need for winter sun and summer shade.

The minimum dimension of areas of Private Open Space

- Courtyards min. 12 sqm and min. 3m dimension
- Gardens min. 18sqm and min. 3m dimension
- Verandas min. 12sqm and min. 2.4m dimension

5.7.2 Gardens and Deep Soil Landscape

Gardens and deep soil landscape may be provided through one or a combination of courtyard gardens (in the centre of a house) and/or rear gardens (at the rear of the house or separating house/garage).

Gardens must provide urban cooling, rainwater infiltration and deep soil planting.

Rear and courtyard gardens cannot be provided over basements/structure, and the area measured must be open to the sky.

Site Area	Min. % of Lot Garden Area	Min. Deep Soil % of Lot
220sqm – 300sqm	25%	15%
300sqm – 400sqm	30%	20%
400sqm+	35%	25%

5.7 Particular provisions R3 zoning Lots over 220sqm

5.7.3 Solar Access to Living Areas

All houses must achieve a cumulative minimum 2 hours of solar access between 9am and 3pm in mid winter into its living spaces (living rooms and family/rumpus rooms).

5.7.4 Solar Access/Shade to Private Open Space

All housing must achieve a cumulative minimum 2 hours of solar access to 50% of its private open spaces between 9am and 3pm in mid winter. These may include the areas listed in 5.6.7

Each house should equally demonstrate that a minimum of 25% of private open space can achieve shading between 9am and 4pm in mid summer. This may be through shade created by the house itself, landscape planting, adjustable shading and/or permanent fixed shading structures.

5.7.5 Overshadowing

All houses must be designed to preserve the minimum mid winter solar access outlined above to the Living Areas and Private Open Space of any neighbouring dwelling as set out in 5.6.3, 5.6.4, 5.7.3 or 5.7.4.

5.7.6 Secondary dwellings over garages

Secondary dwellings are required to have a private open space of minimum 4sqm area as a balcony or roof terrace.

Secondary dwellings do not require car parking, but may include a maximum of 1 space, provided the number of spaces on site does not exceed 2 in total.

Proponents are encouraged to work the cross section and roofs to introduce sun, light and air into the living spaces of secondary dwellings.

Station Character Area and Stage 1 DA Works

Section 6 | Desired Future Character

Section 6 Desired Future Character

6.1 Street Interface

Desired future character is focused on sustainable choices for living in a place that will be subject to severe climatic change in coming decades.



Slightly raised levels, gates and gardens create a generous street , and protected interiors. OneA, Erskineville, Kann Finch and BRKSPR Architects
<https://www.brkspr.com/projects/one-a-apartments/>



Gates, low walls, screening and planting make softened street interfaces. Nightingale Bowden, Breathe Architects
<https://www.nightingalehousing.org/project/nightingale-bowden>



Balfe Park by Kerstin Thompson Architects
<https://kerstinthompson.com/projects/balfe-park-nicholson-street>



Thick walls and recesses help generate a sense of engagement with a sense of safety inside and out. Balfe Park, Kerstin Thompson Architects.

Adapt NSW Climate Change Snapshot sets out projected regional climate changes in the near and far future. Western Sydney is subject to the greatest projected increase, with an additional 5 - 10 extreme heat days in the near future and an additional 10 - 20 additional hot days per year by 2070.

Public space in parklands and streets makes a strong contribution to urban cooling, but every new house and apartment building must also make a contribution. This CDA considers every setback zone as a potential contribution to landscape and biodiversity for the entire community. Front gardens can include small trees and understory planting that are an important complement to taller street planting in providing urban biodiversity to support birds and insect life.

The Station Character Area typically requires 3m - 5m street setbacks. These spaces should be developed as small private gardens with individual access to ground floor apartments wherever possible. Gardens should include a mix of native and exotic species. Native and endemic species are important for biodiversity and to encourage habitat for fauna. Exotic species can play an important role in extreme heat, where broad leaf species can provide deeper shade and transpiration.

The design of buildings and front fences should encourage interaction between private spaces and public streets, but in a way that also provides an appropriate sense of security and protection. Modest changes in level that lift private spaces above street level are useful for allowing a sense of connection without compromising the privacy of interior spaces.

Privacy can be maintained even along busy and intense public interfaces. Using the thickness of walls, and an arrangement of fencing and blinds an active and engaging dialogue between apartments and public space can be encouraged.

Front fences should be masonry, open timber or metal palisade or mesh style to encourage planting to grow up and through fencing. Solid Colorbond fencing is not permitted in any area visible from a public street.

Section 6 Desired Future Character

6.2 Expression – Low Rise

Desired future character is focused on sustainable choices for living in a place that will be subject to severe climatic change in coming decades.



Use of a strong, limited palette of materials, for excellent climatic response and a rich, relaxed and memorable streetscape. Well insulated lightweight construction can perform more environmentally responsively than thermal mass on the outside face of buildings in hot climate conditions. Maggie Street row housing, by Curious Practice <https://curiouspractice.com/Maggie-Street>



This CDA promotes housing design and material choices that respond to climatic conditions, orientation and perform in a resilient manner during periods of heat and storm intensity.

The use of dark coloured materials absorb heat and are not considered appropriate climatic choices in Western Sydney and are prohibited. The CDA promotes the use of light and durable building materials.

Metal roofing is strongly encouraged for storm resilience. All roofs must have a Solar Absorption ratio equal to or below 0.65. Detailing of roofing to provide shading and protection to walls and robust, fail-safe overflows to all guttering anticipating hail events is encouraged.

Every step or inset or junction in a building facade creates a potential weakness for waterproofing and thermal performance in extreme weather. Use material judiciously. Design strong, simple housing forms and utilise a limited palette of durable and climatically responsible materials. A limited number of strategically chosen materials is a far stronger design solution than unnecessary or applied complexity, and better for maintenance.

Consider ledges and overhangs for water/solar protection of walls, doors and windows. Rain, hail and prolonged periods of extreme weather is now challenging traditional detailing. Include fail-safes wherever possible. The exploration of reverse brick veneer is encouraged in low rise housing. By simply reversing the dominant method of construction of low rise housing in Western Sydney, significant environmental benefits can be achieved.

Prioritising the use of high quality window and doors systems is strongly encouraged. Double glazed and thermally broken windows and doors can make buildings more resilient and ensure that operational carbon for heating and cooling is minimised.

Consider the interaction of gardens and interior spaces. The ability to open rooms and seek ventilation from shaded garden spaces can have both physical and psychological effects in periods of severe heat.



Simple, repeating forms, robust materials derived from local place and traditions, simple timber and metal finishes with landscape a priority. Hope Street Housing by MDC Architects and Officer Woods Architects <https://www.officerwoods.com.au/work/58-stevens-street-narrow-rr4ff>



Section 6 Desired Future Character

6.3 Expression – Apartments

Desired future character is focused on sustainable choices for living in a place that will be subject to severe climatic change in coming decades.



Slim buildings, using depth, rhythm and screening
Botany Road, Candalepas Associates
<https://www.candalepas.com.au/home/projects/511-botany-road/>



Simple forms, strong materials, generous balconies
Nightingale Village, Kennedy Nolan Architects
<https://www.kennedynolan.com.au/work/nightingale-village>



Strong composition + limited palette used strategically
Nightingale Evergreen, Clare Cousins Architects
<https://clarecousins.com.au/projects/nightingale-evergreen/>

Apartment buildings should be carefully composed and develop scale responses that consider the scale of individual apartments, the apartment block and the hierarchy of the street in a clear and compelling manner.

Consider facades as a contribution to the community. Apartment buildings should use facade depth and thresholds to generate scale responses, provide privacy and modulate climatic responses to differing orientations.

The use of tinted glazing to achieve climatic performance is strongly discouraged. Designers should utilise appropriate solid to opening ratios and integral external shading devices calibrated to different solar orientations to achieve appropriate climatic responses. Having sufficient wall surfaces within apartments allows them to be appropriately and flexibly furnished.

High quality door and window systems are one of the most important material choices that can be made in apartment design. Thermal, wind and water performance requirements will increase over time. Along railway frontages, glazed winter-gardens may help alleviate freight rail noise and associated dust/pollution.



Use of depth for privacy, protection and scale
The Surry, Candalepas Associates
<https://www.candalepas.com.au/home/projects/the-surry/>



Light, airy, breezy, homecoming
Ferrars & York, Six Degrees Architects
<https://www.sixdegrees.com.au/projects/ferrars-york/>



Adjust solid/open ratios to orientation.
Huntington, Newcastle, SJB Architects
<https://sjb.com.au/projects/huntington/>

Apartment buildings should ensure sufficient wall to opening ratios for privacy as well as climatic response. The design of the facade should not require interior curtains or blinds to be constantly closed to provide comfort and privacy for occupants.

The use of rich and tactile materials in places of human contact, along street fronts, common spaces and in common stairs or accessways is strongly encouraged. Explore solutions where common circulation is an engaging and uplifting part of the daily life of occupants. Natural light and ventilation should be provided to every access gallery and corridor.

Balconies should be designed to balance the need for privacy and airflow. Fully glazed balustrades or aluminium framed glazed balustrades are prohibited. Well designed balustrades can be strong character elements in buildings.

Station Character Area and Stage 1 DA Works

Section 7 | Staging

Section 7 Staging

7.1 Staging Plan



Plan of urban area showing subdivision

The proposed staging for the Station Character Area is

- Stage 1 street construction, stormwater management works and subdivision
- Stages 2 - 7 development blocks

The staging of parcels 2 - 7 is indicative only, and may shift depending on subsequent proponent timeframes.

