

310 TERRIGAL DRIVE, TERRIGAL

URBAN DESIGN STUDY



Architecture | Planning | Interiors

June 2024

Nominated Architects: Caine King NSWARB 7974 / Stuart Campbell NSWARB 7545

310 TERRIGAL DR, TERRIGAL



CKDS

Architecture | Planning | Interiors

NEWCASTLE	CENTRAL COAST
3/23 Watt St (P.O. Box 958)	1/28 Adelaide St (P.O. Box 4400)
Newcastle NSW 2300	East Gosford NSW 2250
P 02 4929 1843	P 02 4321 0503

www.ckds.com.au E admin@ckds.com.au ABN 12 129 231 269
Nominated Architects: Caine King NSW ARB 7974 / Stuart Campbell NSW ARB 7545

Contents

1.0 INTRODUCTION

Introduction	03
Site Description	04
Planning Framework	05
Planning Proposal	06

2.0 CONTEXT ANALYSIS

Context: Regional Plan	08
Context: 30min Strategic Centres	12
Context: 15min Neighbourhoods	13

3.0 SITE ANALYSIS

Site Analysis: Land Zoning	16
Site Analysis: Maximum FSR	17
Site Analysis: Maximum Height	18
Site Analysis: Neighbourhood Land Use	19
Site Analysis: Pedestrian Movement	20
Site Analysis: Vehicle Movement	21
Site Analysis: Vegetation	22
Site Analysis: Bushfire	23
Site Analysis: Flooding	24
Site Analysis: Waterway	25

4.0 DESIGN APPROACH

Developable Area: Site Constraints	27
Developable Area: VRZ Averaging	28
Developable Area: Compliant Concept	29
Developable Area: Proposed Concept	31
Concept Comparison	32
Urban Design Principles	33
Architectural Approach	35
Environmental Design Principles	39

5.0 INDICATIVE DESIGN

Architecturals: Plans	41
Architecturals: Elevations	49
Architecturals: Section	53
SEPP 65 Indicative Compliance	54
Indicative Shadow Diagrams	56
Setbacks	57
Indicative VRZ Offsets	60

An aerial photograph of a suburban neighborhood. The image shows a mix of residential housing, including single-family homes and some larger apartment-style buildings. There are numerous trees and green spaces throughout the area. A prominent feature is a large, open grassy field, possibly a sports field or park, located in the lower-left quadrant. A winding road or path cuts through the center of the image. In the upper-right corner, a body of water, likely a river or lake, is visible, bordered by dense trees. The overall scene depicts a typical suburban environment with a blend of built and natural spaces.

1.0 INTRODUCTION

Introduction

This Urban Design Study has been prepared as part of a Planning Proposal for 310 Terrigal Dr, Terrigal (Lot 27 DP 1223375). The Planning Proposal seeks to increase the height and FSR allowances for the site as set out in the Central Coast Local Environmental Plan 2022 (CCLEP), to facilitate better outcomes for both the site and greater local area.

This study has been prepared to demonstrate the strategic merit of the proposed variations, and presents an indicative design to illustrate how positive outcomes may be achieved.

This study is to be read in conjunction with:

- Due Diligence Report for Aboriginal Objects, prepared by Integrated Site Planning, June 2023
- Acoustic Assessment, prepared by Acoustics Consultants Australia, 28/05/23
- Arboricultural Impact Assessment, prepared by Michael Shaw Consulting Arborist, 01/06/23
- Bushfire Assessment Report, prepared by Integrated Site Planning, June 2023
- DCP Amendment, prepared by URBIS, May 2023
- Ecological Assessment Report, prepared by Integrated Site Planning, June 2023
- Stormwater, Servicing and Civil Infrastructure Assessment, prepared by Tagro Engineering Consultants, Rev. 3, May 2023
- Floodplain Risk Management Plan, prepared by Rienco Consulting, 11/05/23
- Landscape Strategy, prepared by OG Urban, 02/06/23
- Preliminary Site Investigation Report, prepared by Geo-Logix, 17/05/23
- Transport Assessment, prepared by Arc Traffic + Transport, Rev. 4, 04/07/23
- Visual Impact Assessment, prepared by OG Urban, 06/06/23



Site Description

The site is located on the Central Coast, NSW, between Terrigal and Erina town centres. Situated at the intersection of two main roads, Terrigal Drive and Charles Kay Drive – a key 'point of choice' when headed towards Terrigal town centre – the site is highly visible, giving it the potential to serve as a welcoming landmark for Terrigal.

Currently undeveloped, the site consists of a cleared area nearest the road and established vegetation and mature trees backing onto an adjacent watercourse. As a rare vacant infill site within an existing high-amenity neighbourhood, and with ready access to existing infrastructure and public transport, the site presents an immediate opportunity for strategic densification.

While the surrounding neighbourhood is primarily low-density residential development, the site has no immediate neighbours itself to relate to, being isolated by a watercourse and dense vegetation to the south-east, major roads to the north and west, and a sporting precinct beyond that. Buffered to all sides by approximately 30m, the site is effectively an 'island,' relating to the scale of more immediate features such as the major intersection and backdrop of mature trees than to any neighbouring buildings.

The site is uniquely suited to handle a larger-scale development and presents a unique opportunity for strategic densification and increase in housing stock. The current planning controls for the site do not reflect this, however, and it is for this reason variations to the allowable height and FSR are being sought.

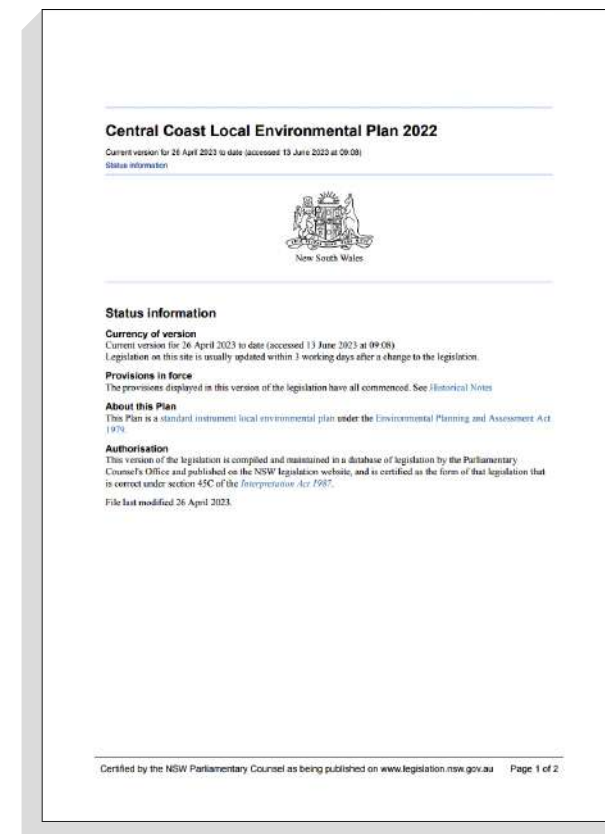
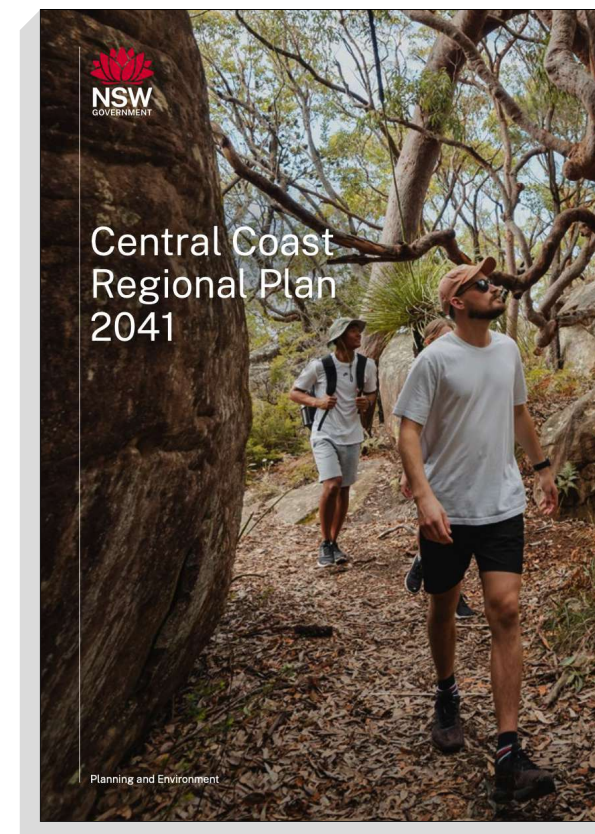
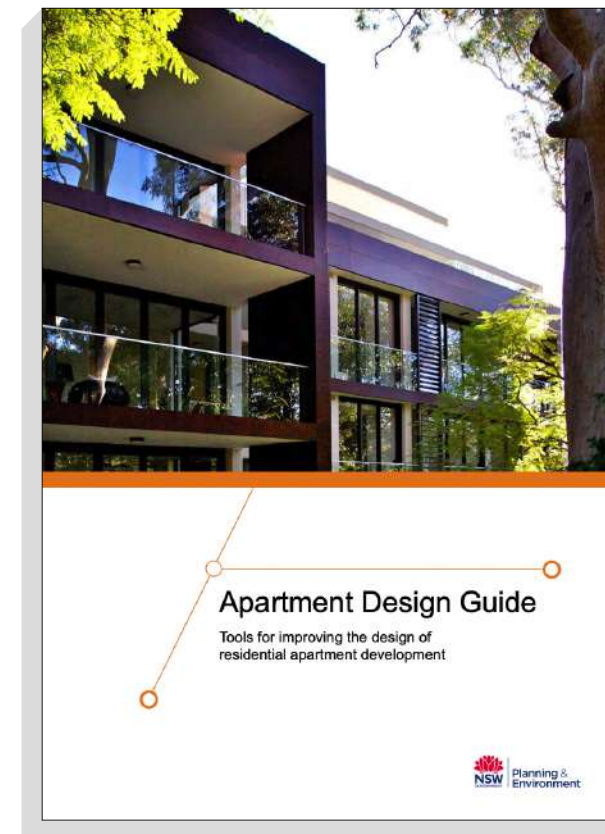
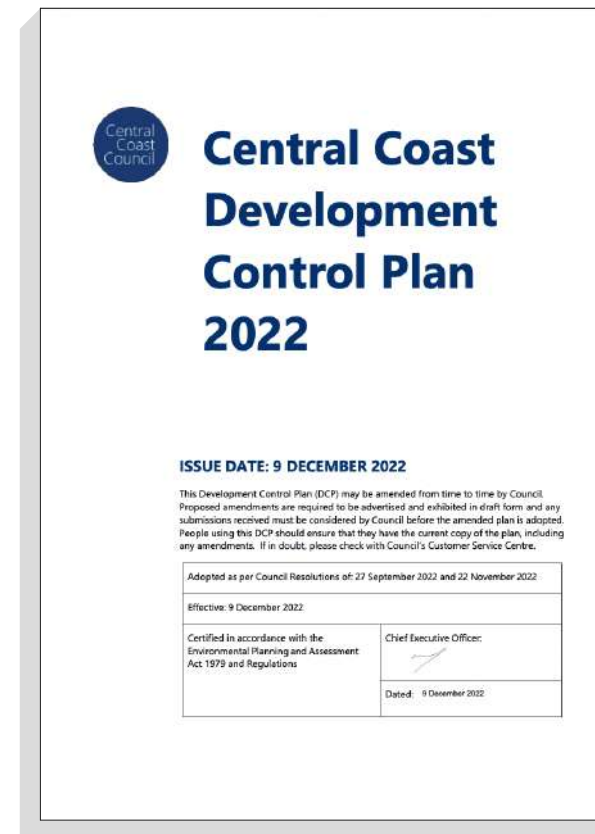


Planning Framework

This document is focused on addressing the site and planning proposal's relation to the following planning regulations and strategic documents:

- Central Coast LEP 2022
- Central Coast DCP 2022
- Central Coast Regional Plan 2041
- SEPP 65 - Design Quality of Residential Apartment Development

In particular, this document explores the planning proposal's variance from the Central Coast LEP 2022, with regards to Maximum FSR and Height, in order to better meet strategic outcomes.



Planning Proposal

Analysis of the site's opportunities and constraints (explored in more depth in the following chapter) indicate the site has the capacity to handle more dense development than allowed by current planning controls.

The proposed variations are considered in-keeping with the objectives of both local planning controls and strategic plans for the region, particularly in regards to housing. The proposed variations are:

- Maximum Allowable FSR from 0.5 : 1* to 1.3 : 1
- Maximum Allowable Height from 8.5m to 25m

An indicative design has been prepared to demonstrate the potential of the site and suitability of the proposed controls.

The indicative mixed-use development consists of:

- 38 residential units
- a neighbourhood cafe
- basement parking (85 car spaces)
- extensive greenspace

** 0.7:1 in specific circumstances; refer CCLEP 4.4A*

An aerial photograph of a suburban neighborhood. The image shows a mix of residential housing, including single-family homes and some larger apartment-style buildings. There are numerous trees and green spaces. A river or creek flows through the upper right portion of the image. In the lower left, there is a large open field, possibly a sports field, with some buildings and parking areas nearby. A road with a roundabout is visible in the center. A semi-transparent white box is overlaid on the right side of the image, containing the text '2.0 CONTEXT ANALYSIS'.

2.0 CONTEXT ANALYSIS

Context: Regional Plan

CENTRAL COAST REGIONAL PLAN 2041

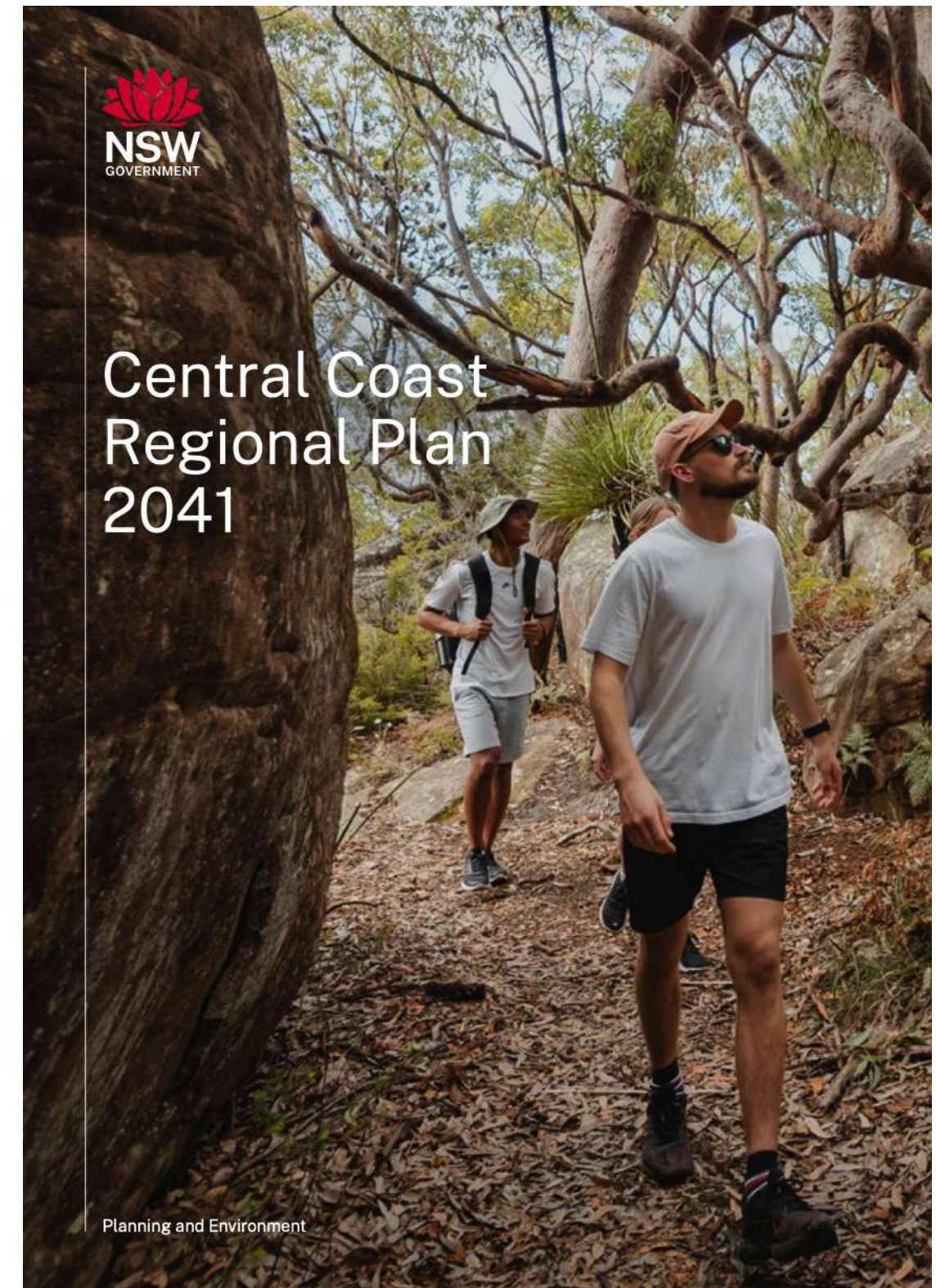
The *Central Coast Regional Plan 2041* sets out a strategic framework to guide the future direction of the Central Coast. The Regional Plan identifies several key objectives, and outlines performance outcomes to achieve them.

The planning proposal is in-line with several of the key objectives, in particular:

Objective 3: *Create 15-minute neighbourhoods to support mixed, multi-modal, inclusive and vibrant communities*

Objective 4: *An inter-connected Central Coast without car-dependent communities*

Objective 5: *Plan for 'nimble neighbourhoods', diverse housing and sequenced development*



Context: Regional Plan

CENTRAL COAST REGIONAL PLAN 2041

Objective 3: Create 15-minute neighbourhoods to support mixed, multi-modal, inclusive and vibrant communities

Regional Plan Performance Outcomes

1. Urban settlement patterns maximise the use of existing infrastructure and reduce travel demand, especially by car.
2. Neighbourhoods maximise mobility independence and active and public transport opportunities.
3. Neighbourhoods provide local access to education, jobs, services, open space and community activities.
4. Neighbourhoods encourage healthy lifestyles with opportunities to experience and engage in the cultural, entertainment, sport and recreation, and educational activities.
5. Neighbourhoods establish or reinforce local identity.
6. Public spaces are designed to invite community interactions and economic, social and cultural activity. They enable a sense of social inclusion, wellbeing, comfort and belonging.
7. Places are designed to be greener to support the regeneration of and connection to the natural environment.

Planning Proposal Outcomes

1. The site is in an established neighbourhood and connected to existing infrastructure and services; the planning proposal will contribute to local amenity by providing a service not well catered for in walkable area
2. The site is adjacent a shared cycleway and bus transit corridor, encouraging both active and public transport options
3. The neighbourhood provides open space and for community activities, and is within 30min of the strategic centres Erina and Gosford, providing access to education, jobs and services
4. The local sporting precinct and shared cycleway encourage exercise; the local high school provides educational opportunities, and nearby Terrigal town centre and Erina Fair provide cultural and entertainment
5. The planning proposal aims to serve as a welcoming landmark and help strengthen the identity of the area
6. The planning proposal aims to provide an active street frontage that engages with the community, and helps support social and economic activity
7. The proposal intends to protect and improve the condition of the adjacent vegetated waterway.

Context: Regional Plan

CENTRAL COAST REGIONAL PLAN 2041

Objective 4: An inter-connected Central Coast without car-dependant communities

<u>Regional Plan Performance Outcomes</u>	<u>Planning Proposal Outcomes</u>
1. Access is provided to housing, jobs and services by walking, cycling and public transport.	1. The site is located in an existing residential area, and adjacent a shared cycleway connecting to nearby town centres providing access to jobs and services
2. Urban areas and densities support the efficient and viable operation of public transport services.	2. The proposed development will increase residential density around existing public transport services
3. Key transit corridors provide for the efficient movement of freight.	3. N/A, the development does not involve freight
4. A robust digital infrastructure network to service business and social interaction.	4. NBN is available to the site

Context: Regional Plan

CENTRAL COAST REGIONAL PLAN 2041

Objective 5: Plan for 'nimble neighbourhoods', diverse housing and sequenced development

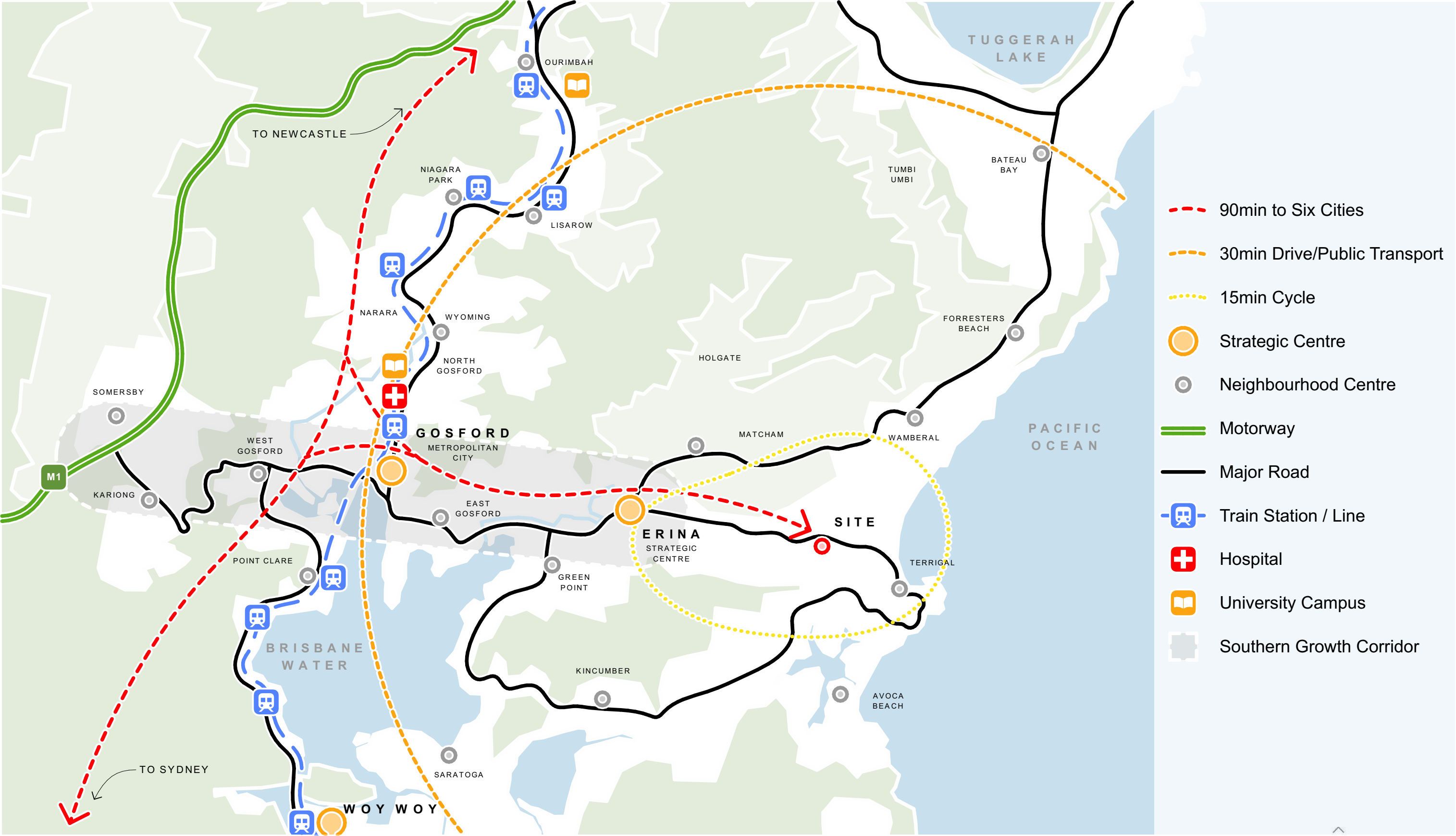
Regional Plan Performance Outcomes

- 1. Efficient use of existing infrastructure and services.
- 2. Appropriate access to employment, goods, services and infrastructure.
- 3. A variety and choice of housing types for existing and future housing needs.
- 4. Densities support local business and public transport services.
- 5. Protection of agricultural, environmental, resource and industrial lands.
- 6. Maintains scenic and recreational values of natural, rural and coastal landscapes.
- 7. A diversity of housing provides for choice, independence and affordability to match the specific needs of different communities.

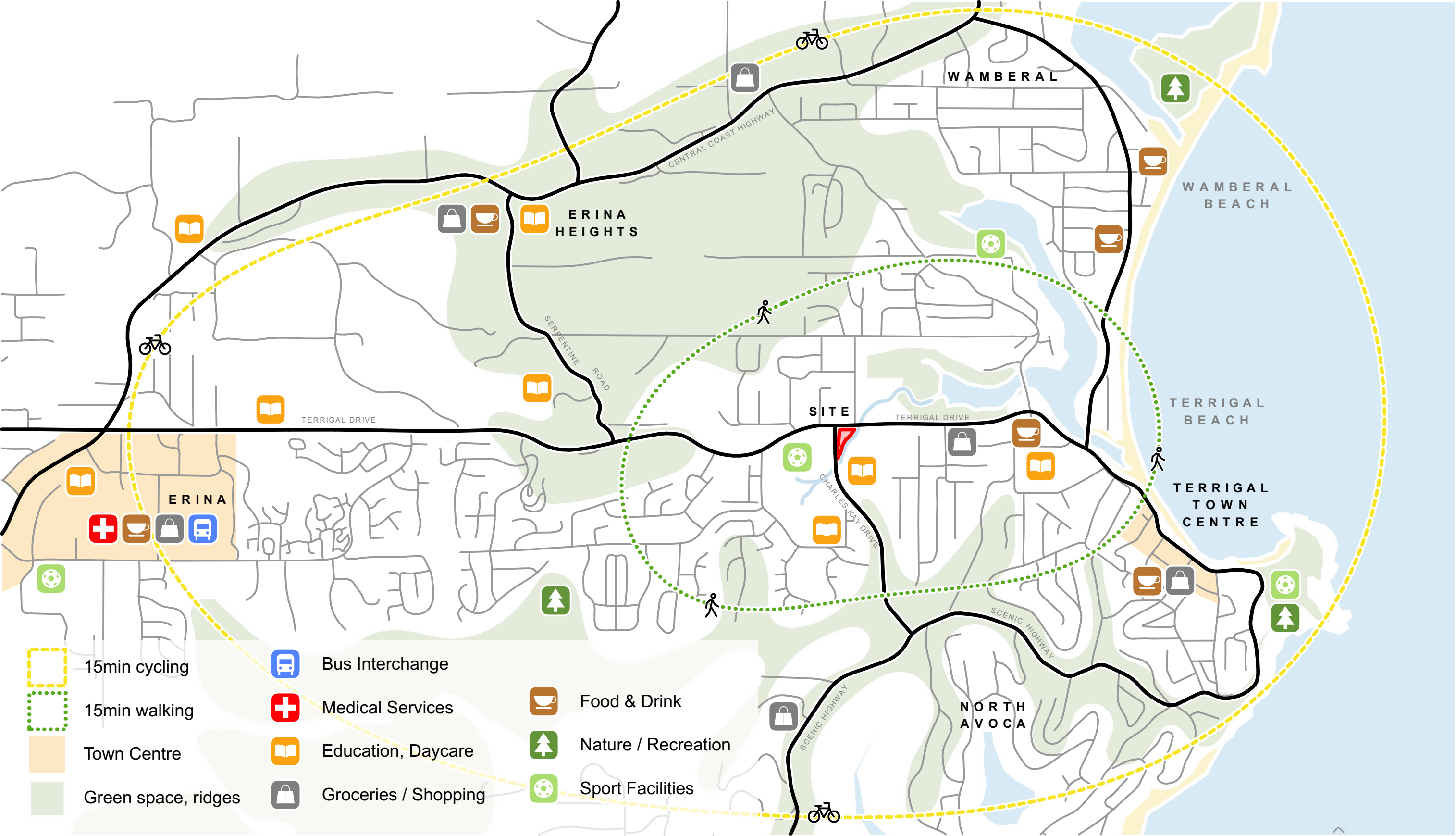
Planning Proposal Outcomes

- 1. The proposal is located along an existing transit corridor, and in close proximity to a strategic centre and services
- 2. The proposal will provide access to food and drink services to the neighbourhood (currently few options in walkable area), and is in close proximity to Erina and Terrigal
- 3. The proposal will increase housing stock and diversity, helping the neighbourhood cater to a range of housing needs
- 4. The site is well located to make use of existing public transport services, and
- 5. The site is not environmentally zoned but has environmental value. The proposal takes this into consideration, and aims to balance development with environmental preservation.
- 6. The proposal intends to protect and improve the condition of the adjacent vegetated waterway, maintaining and enhancing its scenic and recreational value.
- 7. The proposal provides a range of housing sizes, and a typology not currently catered for in the immediate neighbourhood.

Context: 30min Strategic Centres



Context: 15min Neighbourhoods



Context: Summary

The proposal is in keeping with the Regional Plan's objective to create less car-dependant communities. The site is located in a high-amenity area, connected by active and public transport networks to strategic centres and other regions, making it well-suited for strategic densification.

15-minute neighbourhood (walking/cycling)

Schools, Daycares	Terrigal Public School Terrigal High School Aspect Central Coast School + several daycares
Recreation / Playgrounds	Duffy's Oval Sporting Precinct Terrigal Rotary Park Terrigal Beach The Haven Oval
Everyday Services	Erina Fair Shopping Centre Terrigal Town Centre Shell Coles Service Station / Convenience Store
Food and Drink	Terrigal Town Centre
Shop	Erina Fair Shopping Centre Terrigal Town Centre Erina Heights Shopping Strip

30-minute strategic centres (public transport)

Hospitals	Gosford Hospital Gosford Private Hospital, North Gosford Proposed Northside Medical Precinct, Gosford
University	Newcastle University, Gosford Campus Newcastle University, Ourimbah Campus
Work	Gosford CBD Erina Town Centre

90-minute regions (mass public transport)

Six Cities	The site is within 30min to mass public transport connecting to the surrounding city areas
------------	--



An aerial photograph of a suburban neighborhood. In the center, there is a large green field, possibly a sports field, with a road intersection nearby. To the right, a river flows through a wooded area. The surrounding area is filled with residential houses and trees. A semi-transparent white box is overlaid on the right side of the image, containing the text '3.0 SITE ANALYSIS'.

3.0 SITE ANALYSIS

Site Analysis: Land Zoning

The site is zoned R1 – General Residential.

The proposed residential flat building with neighbourhood shop is permitted with consent, and in-keeping with the land use objectives as below:

Central Coast LEP 2022





R1 – General Residential

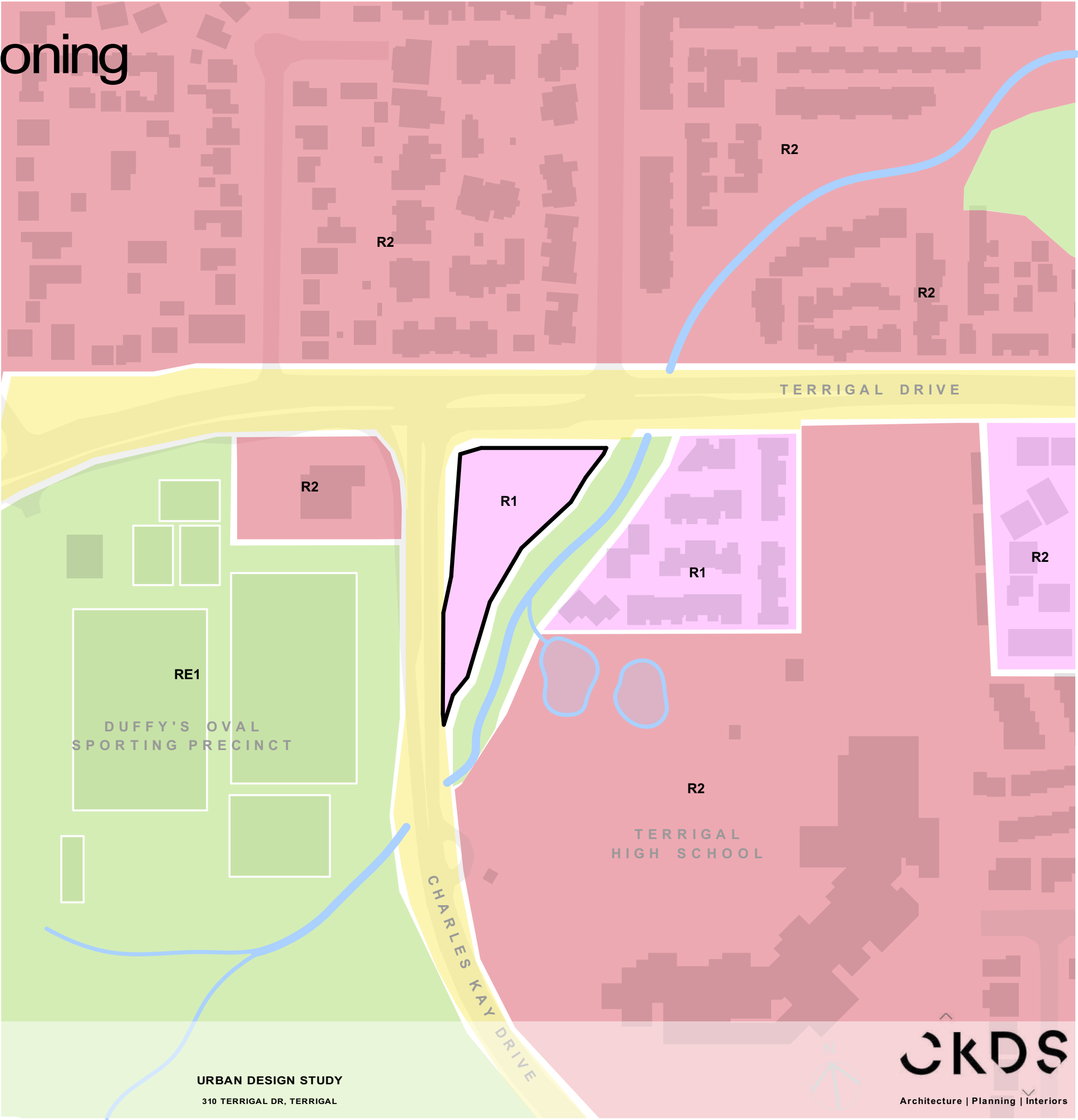
1 Objectives of the Zone

- To provide for the housing needs of the community.
- To provide for a variety of housing types and densities.
- To enable other land uses that provide facilities or services to meet the day to day needs of the residents.
- To promote best practice in the design of multi dwelling housing and other similar types of development.
- To ensure that non-residential uses do not adversely affect residential amenity or place unreasonable demands on services

3 Permitted with consent

... Multi dwelling housing, Neighbourhood shops, Residential flat buildings, Shop top housing

-  R1 - General Residential
-  R2 - Low Density Residential
-  SP2 - Infrastructure
-  RE1 - Public Recreation



Site Analysis: Maximum FSR

Most residential land within the surrounding area has no specific control, but the site and several others along Terrigal Drive have been given specific controls and noted as sites for strategic densification.

The site and several others are noted as 0.5:1 Maximum FSR, but also as "Area 1" with regards to exceptions to FSR controls (CCLEP Clause 4.4A) which allows additional FSR when certain conditions are met and the land is used for multi dwelling development.

The controls suggest the site has been identified as suitable for additional densification. Further site-specific investigation has shown the site has greater capacity to accommodate additional density, in part due to its isolation from other developable land.

Central Coast Local Environmental Plan 2022

4.4A Exceptions to floor space ratio – general

(1) The objectives of this clause are as follows –

(a) to encourage the consolidation of smaller lots to –

- (i) reduce the possibility of fragmented development, and
- (ii) encourage shared facilities, and
- (iii) manage traffic movements,

(b) [not applicable]

(c) to promote the provision of affordable housing,

(d) encourage lot consolidation and new development forms in Zone R1 General Residential with car parking below ground level.

(4) the maximum floor space ratio of a building on land identified as "Area 1" on the Floor Space Ratio Map is –

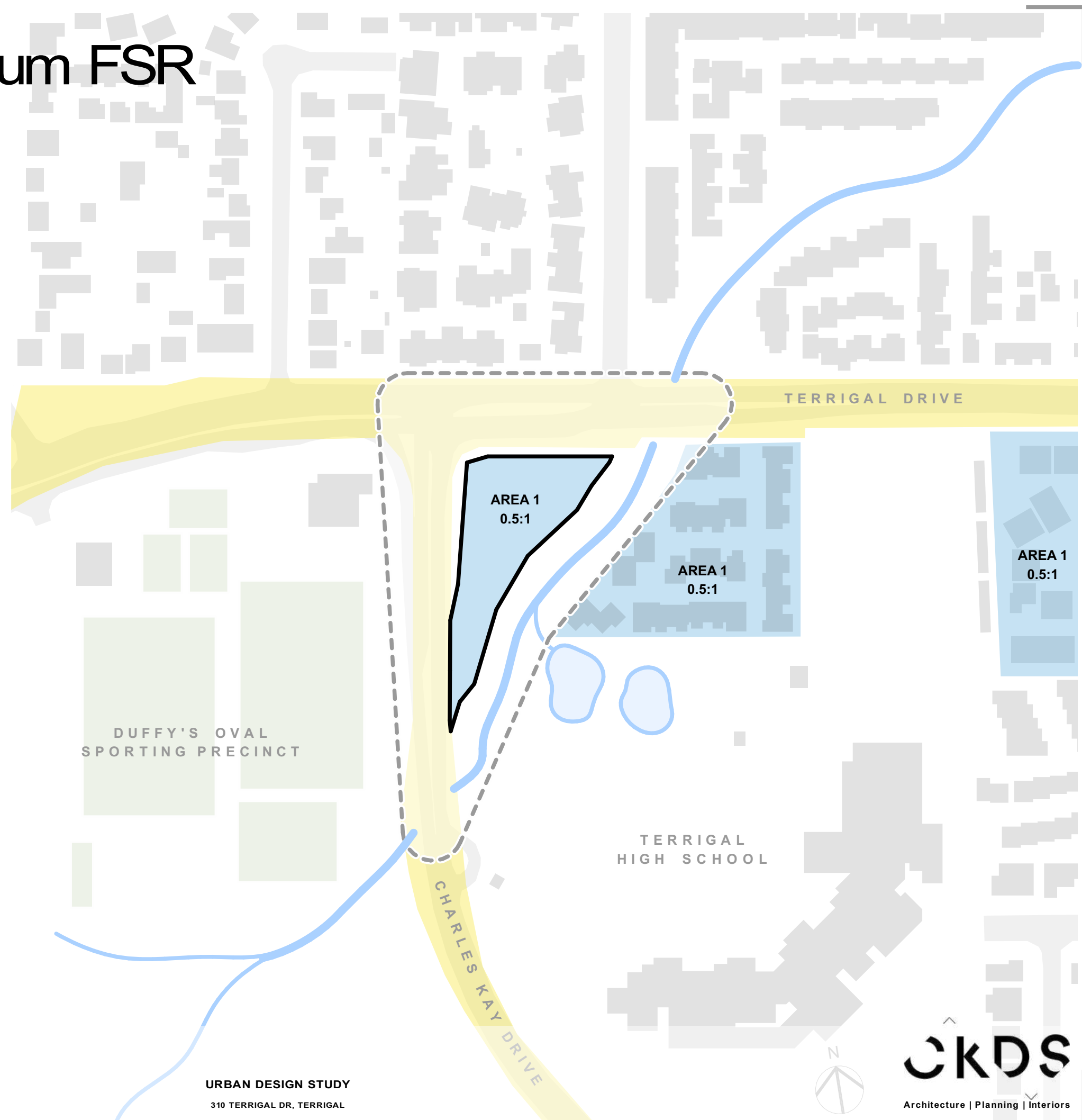
(a) 0.7:1, if all the following applies –

- (i) the building is to be used for the purposes of a residential flat building or multi dwelling housing,
- (ii) all on-site parking is located in the basement of the building,
- (iii) the site area is at least 1,000m²...

--- Site Separation



0.5:1



Site Analysis: Maximum Height

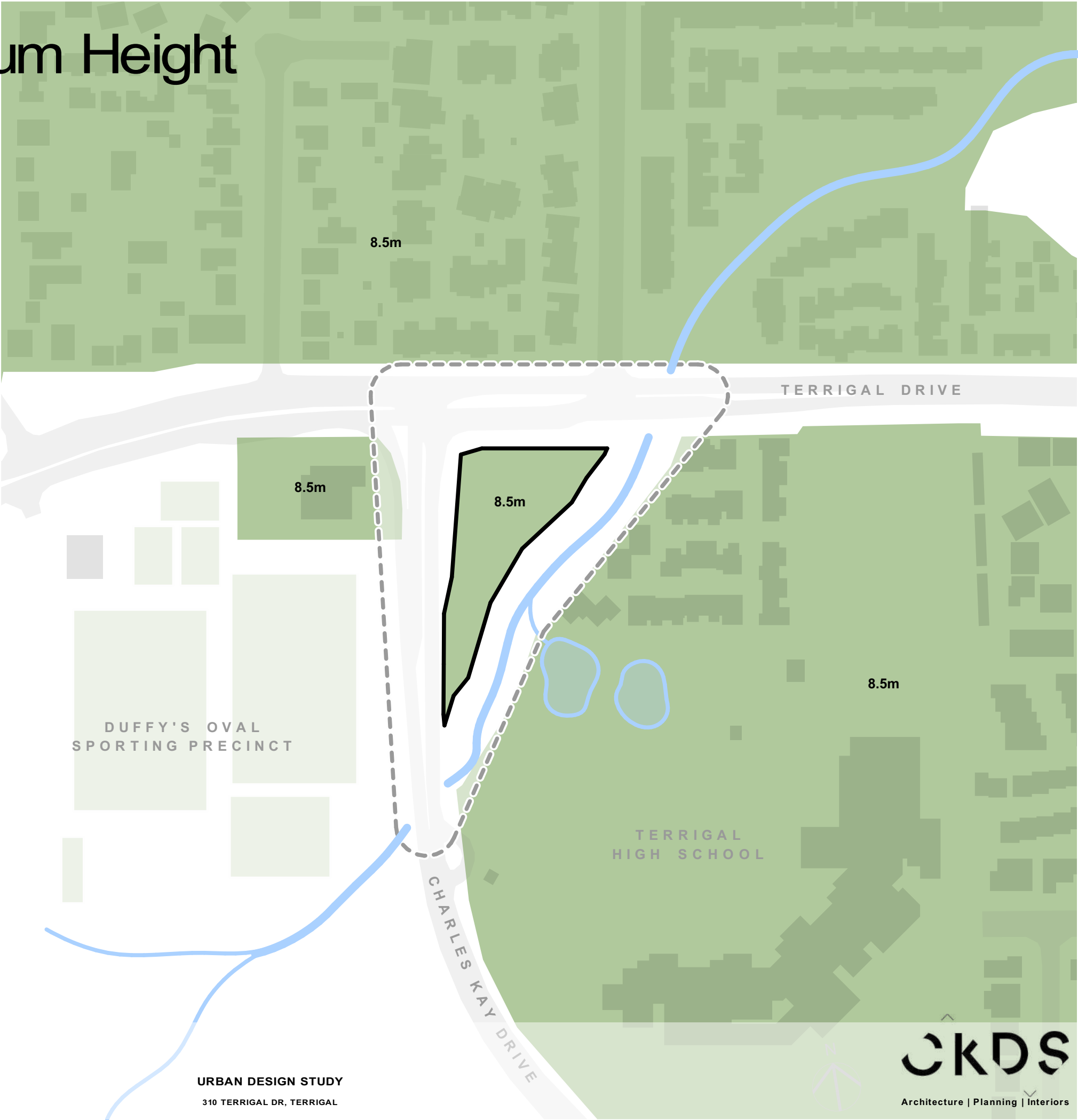
A blanket 8.5m height limit has been applied to all local residential zoned land, including the site.

The proposed development does not comply with the current maximum allowable height, however it is in-keeping with CCLEP height limit objectives.

The significant separation between the site and nearest developable land ensures minimal impact on solar access and privacy of other properties.

Central Coast Local Environmental Plan 2022
4.3A Exceptions to height of buildings – general

- (1) The objectives of this clause are as follows –
- (a) to ensure the height of buildings encourage high quality urban form,
 - (b) to ensure the height of buildings protects the amenity of neighbouring properties in terms of visual bulk, access to sunlight, privacy and views,
 - (c) to ensure the height of buildings is compatible with the height, bulk and scale of the existing and desired future character of the locality,
 - (d) to encourage the consolidation of smaller lots to –
 - (i) reduce the possibility of fragmented development, and
 - (ii) encourage shared facilities, and
 - (iii) manage traffic movements
 - (e) [not applicable]



Site Analysis: Neighbourhood Land Use

The surrounding land is used for residential, recreational, educational and nature reserve purposes.

The immediate area provides sports and recreation facilities and a high school, and is within a 15-minute walk to shops and cafes in Terrigal town centre.

The proposed development aims to increase amenity in the immediate area, by providing food and drink options within the residential catchment and adjacent a popular sporting venue.

--- Site Separation

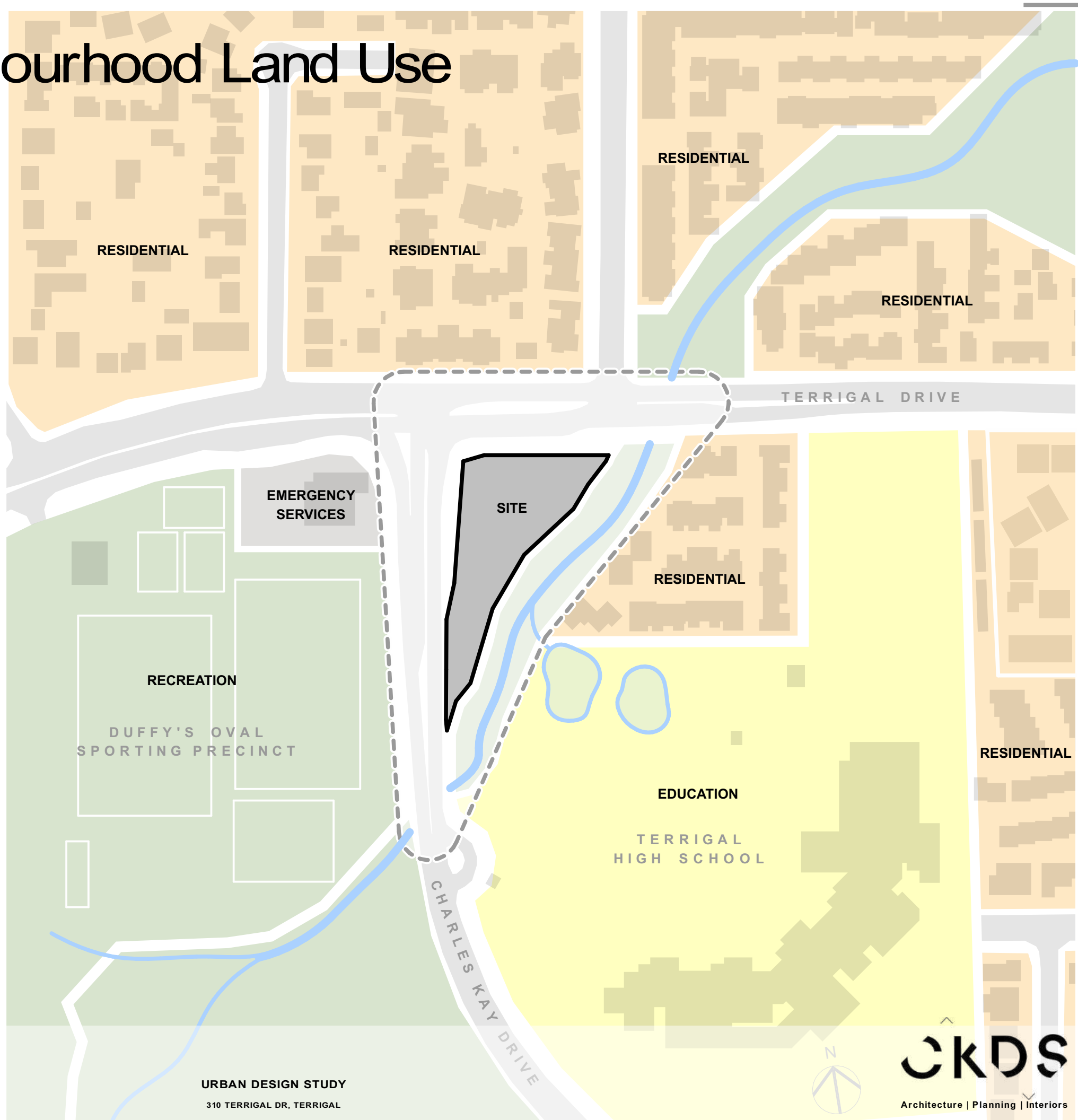
Recreational

Residential

Education

Services

Waterway



Site Analysis: Pedestrian Movement

The local area is well-suited for walking and cycling with gentle grades. The site is connected to a network of footpaths and a shared cycleway, and is near to several bus stops, encouraging active and public transport options.

By foot, the site is:

- 3min to entry of Duffy's Oval Sporting Precinct
- 3min to Terrigal High School
- 7min to service station/convenience store
- 15min to Terrigal Beach & Town Centre







By bicycle, the site is:

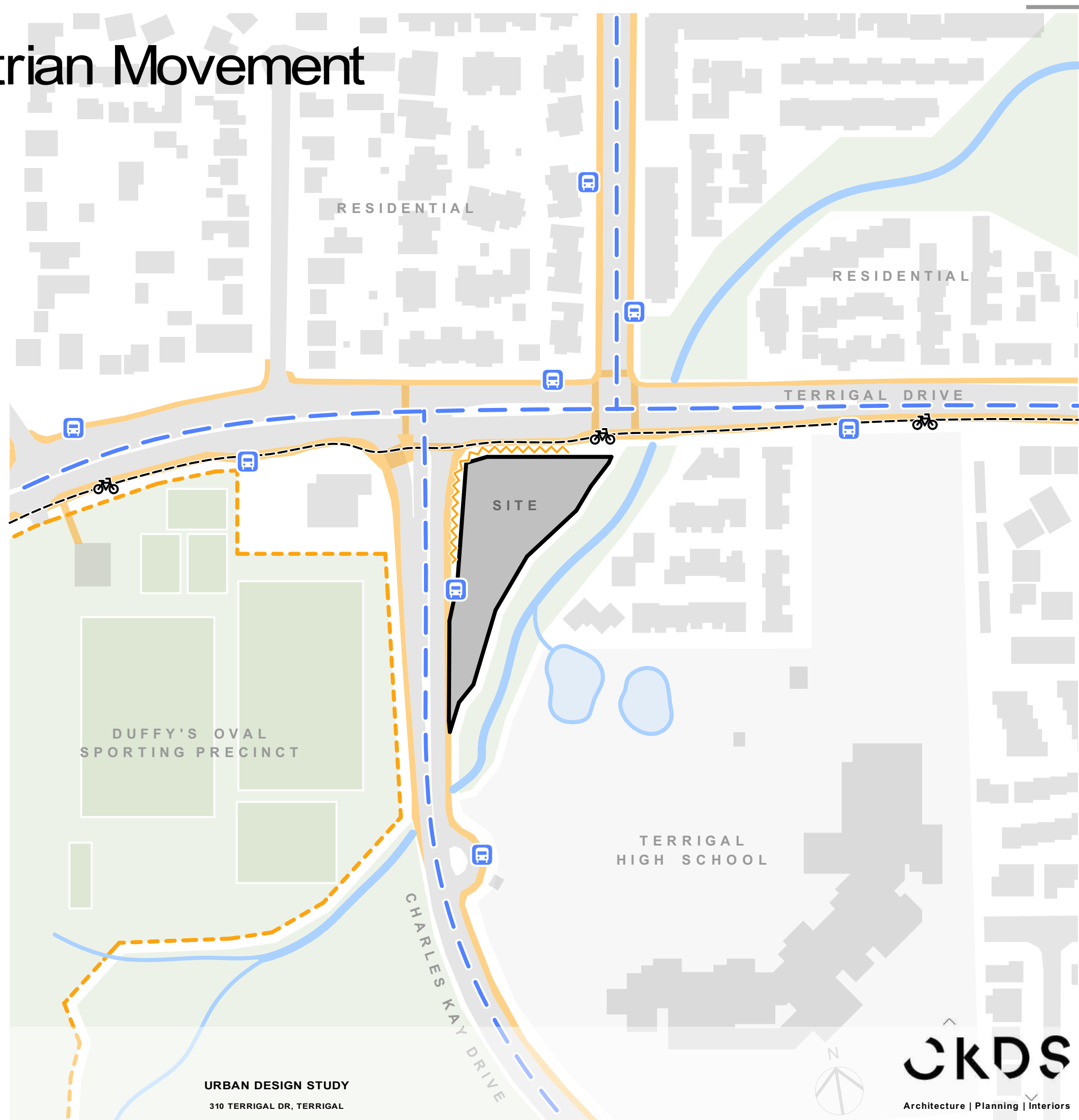
- 7min to Terrigal Beach & Town Centre
- 15min to Erina Fair Shopping Centre

By bus, the site is:

- 10min to Terrigal Town Centre
- 15min to Erina Fair Shopping Centre
- 30min to Gosford CBD and Train Station

The proposal also aims to serve as a destination for short local walks or a way-point for longer walks, by including a cafe that engages with the cycleway.

-  Recreation Area
-  Footpath
-  Potential Street Activation
-  Cycleway
-  Bus Stop
-  Bus Route



Site Analysis: Vehicle Movement

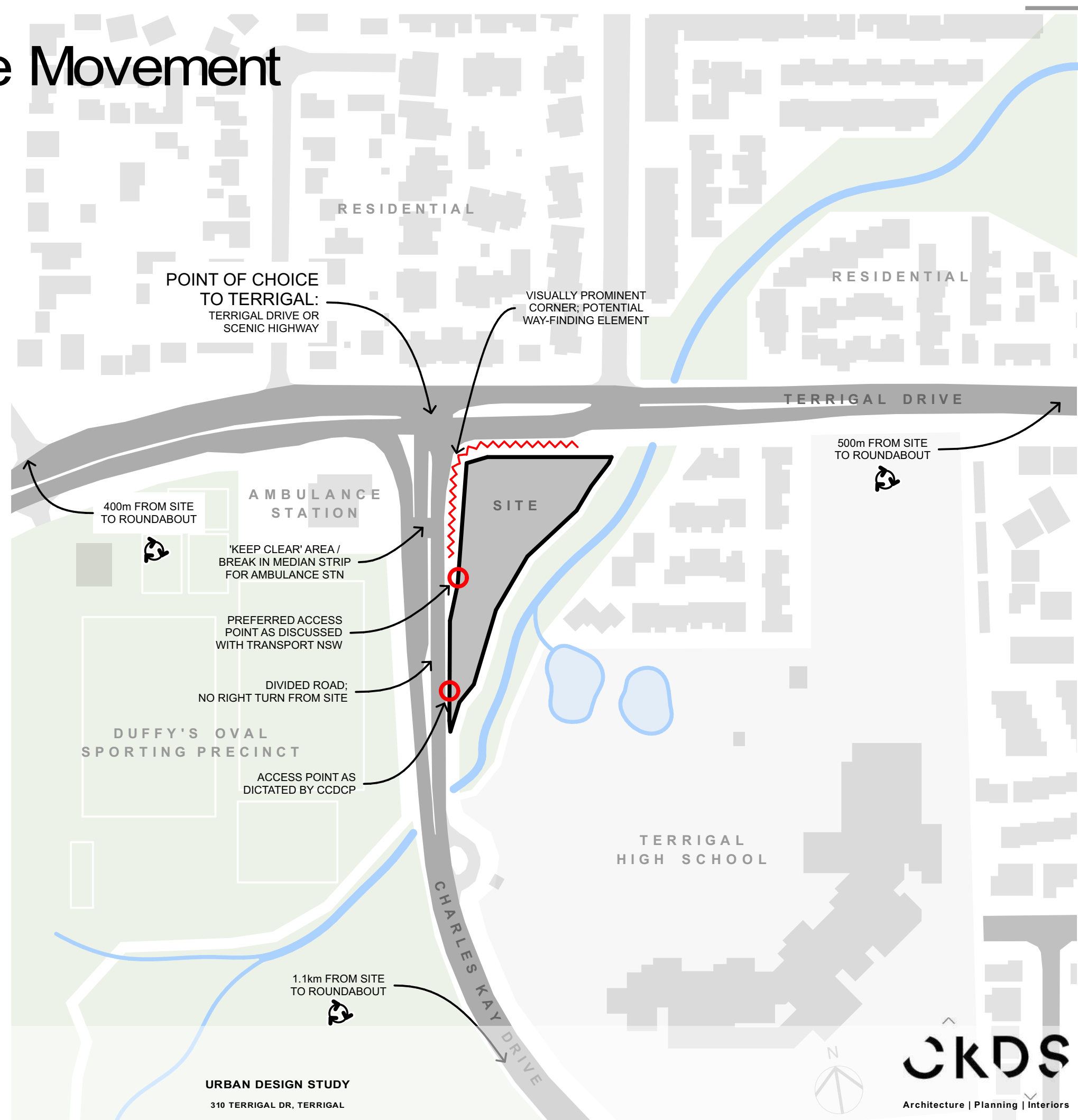
Located at the intersection of Terrigal Drive and Charles Kay Drive – a key 'point of choice' when entering Terrigal – the site has the potential to serve as a wayfinding and welcoming landmark for visitors to the area.

CCDCP Chapter 5.11 outlines specific requirements for the site, particularly regarding site access. The CCDCP states only a single point of entry from Charles Kay Drive is to be allowed, as far from the intersection as possible, with no auxiliary turning lanes.

The southern tip of the site – where the site access point is prescribed by the CCDCP – is heavily constrained (VRZ, significant vegetation). In early discussions with Transport NSW, it was indicated that site access further north on Charles Kay Drive could be supported.

Vehicle access is to be limited to 'left-in' and 'left-out' only, with nearby roundabouts providing opportunities to turn around to access and exit the site as necessary.

- State Road
- Local Road
- Visually Prominent Corner
- Site Access Point








Site Analysis: Vegetation

Vegetation mapping identifies much of the site as 'Disturbed - Underscrubbed' - Underscrubbed.' No significant ecological communities are mapped on site, however it is noted that the site is downstream of an Alluvial Paperbark Sedge Forest and may contain specimens.

An Arboricultural Impact Assessment has been prepared by Michael Shaw Consulting Arborist; please refer for further details.

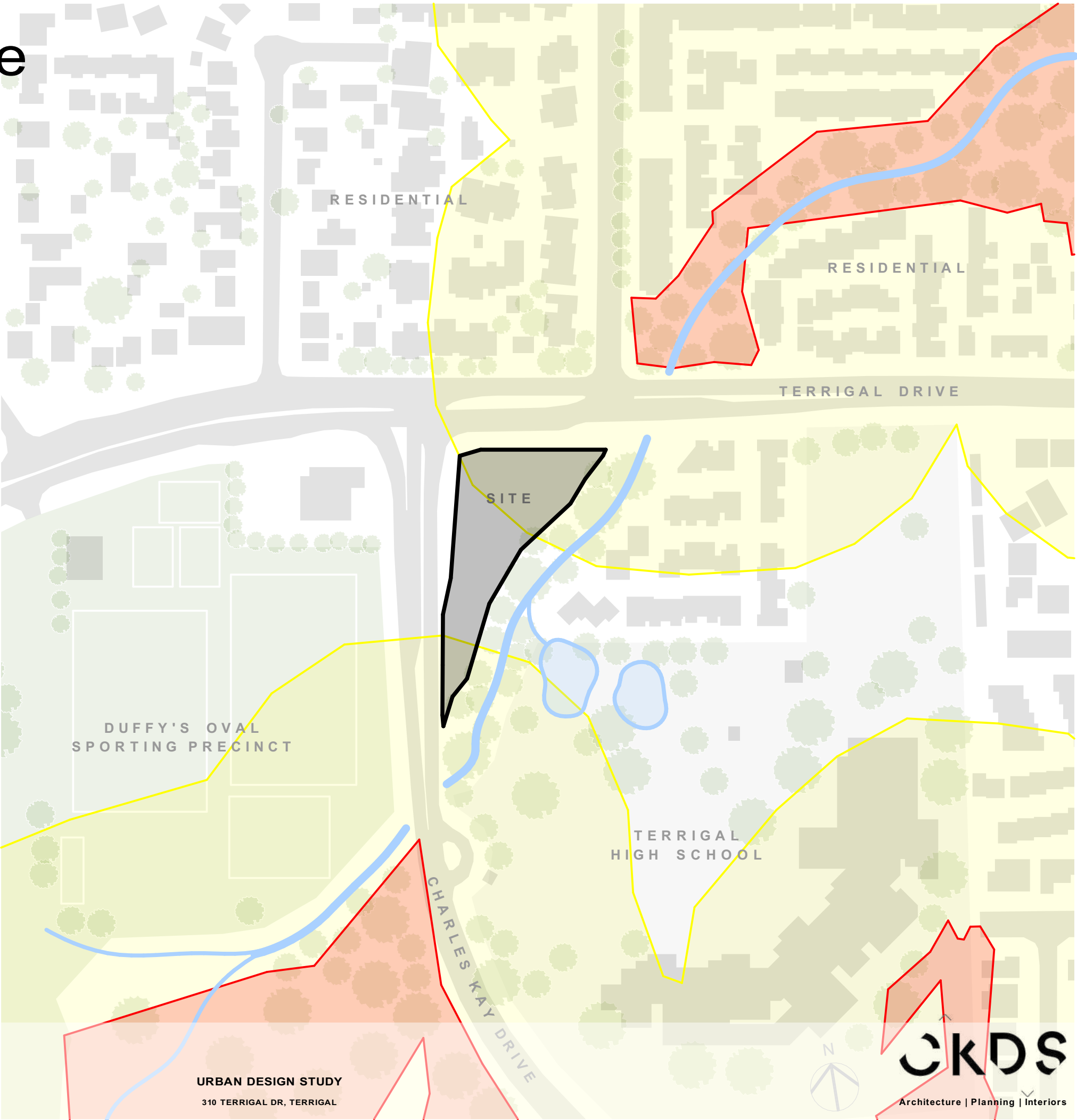




-  Disturbed - Underscrubbed
-  Narrabeen Coastal Blackbutt Forest
-  Coastal Narrabeen Moist Forest
-  Alluvial Paperbark Sedge Forest
-  Greenspace

Site Analysis: Bushfire

The vegetation on site is not identified as a bushfire hazard; the nearest bushfire hazards are to the north-east and south-west and portions of the site are within the buffer zone.

A Bushfire Assessment Report has been prepared by Integrated Site Planning; please refer to for further details.

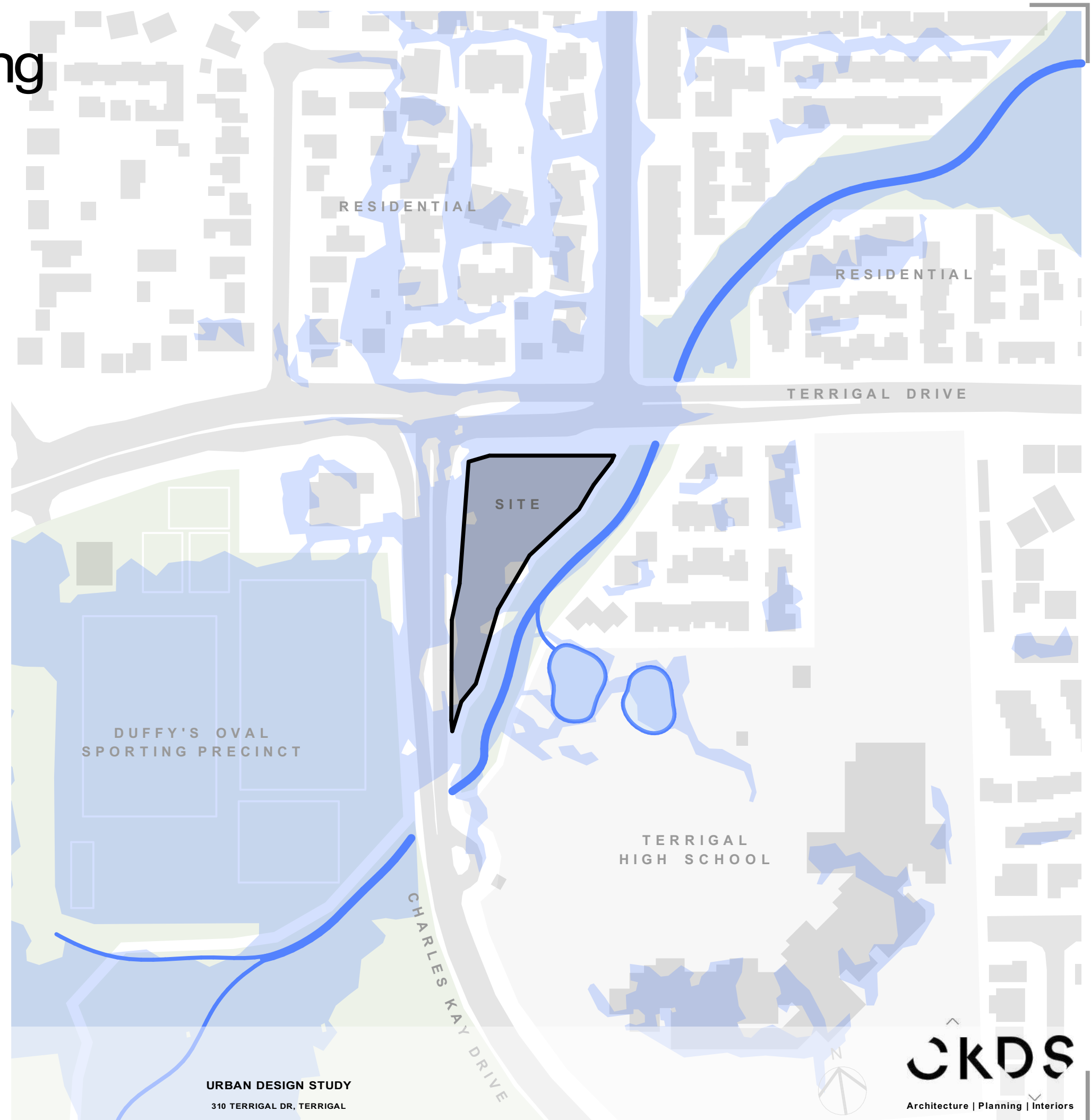


-  Vegetation Category 1
-  Vegetation Buffer

Site Analysis: Flooding

The majority of the site is affected by flooding.

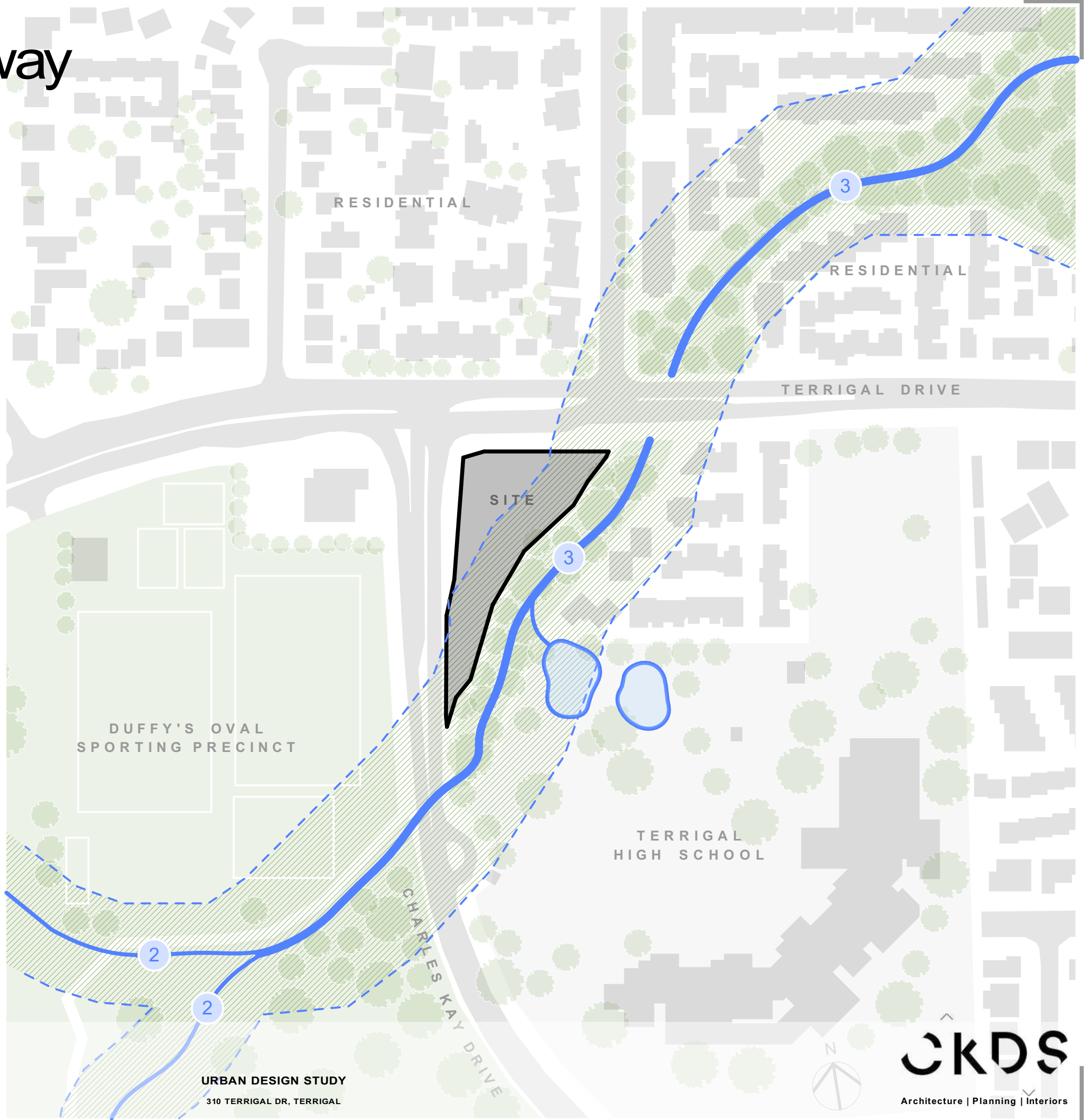
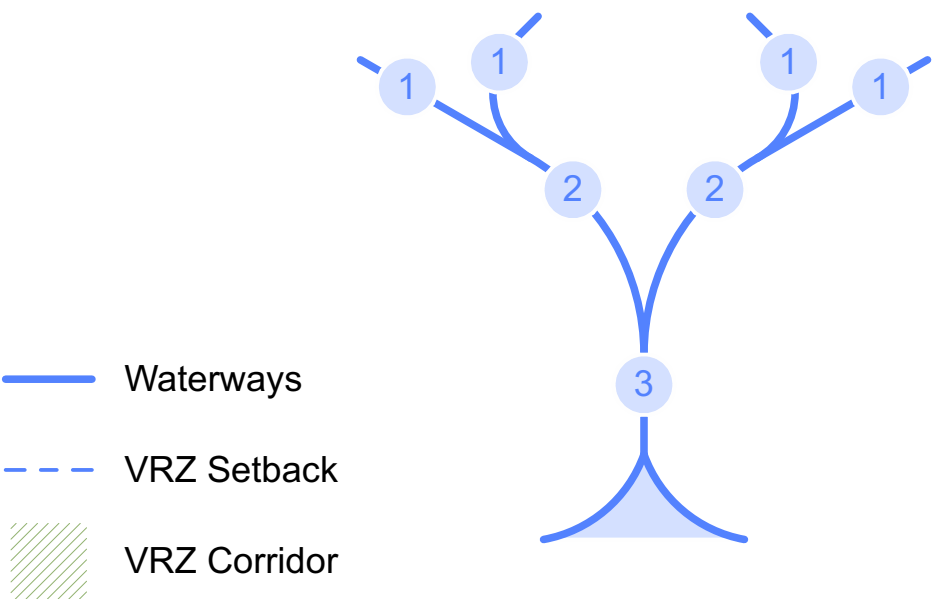
A detailed Floodplain Risk Management Plan has been prepared by Rienco; please refer for further details.



Site Analysis: Waterway

The site is adjacent a 3rd order stream which requires a 30m wide vegetated riparian zone (VRZ) to either side from top of bank.

As such, more than half the site (65%) forms part of the waterway's VRZ, limiting potential development to an irregular shaped area adjacent the intersection. As the footprint is difficult to develop efficiently, the proposed development uses the VRZ 'averaging rule' to achieve a more efficient footprint. Please refer to Section 5.0 Indicative Design for further detail.



An aerial photograph of a suburban neighborhood. The image shows a mix of residential areas with houses and gardens, a large green field in the center, a road with a roundabout, and a river or lake on the right side. The text '4.0 DESIGN APPROACH' is overlaid on the right side of the image.

4.0 DESIGN APPROACH

Developable Area: Site Constraints

While the site is sizeable at 4,262m² in area, only 27% (1,183m²) of the site is developable due to street and VRZ setbacks.

Site Area:	4,262m ²
Developable Area:	1,183m ² (27%)

With a height limit of 8.5m, a maximum of two storeys can be achieved. With two floors of the developable area, only 78% of the allowable FSR can be achieved.**

Max. Allowable FSR:	0.70 : 1* (GFA = 2,983m ²)
Max. Achievable** FSR:	0.55 : 1 (GFA = 2,366m ²)

The developable footprint is an irregular shape, making it inefficient to develop, likely significantly reducing yield further.

* Refer Clause 4.4A of CCLEP
** not allowing for GFA exclusions such as circulation, services, etc

- Outer VRZ

Inner VRZ

Waterway

Street Setback

VRZ Encroachment

VRZ Offset

Developable Footprint/Massing

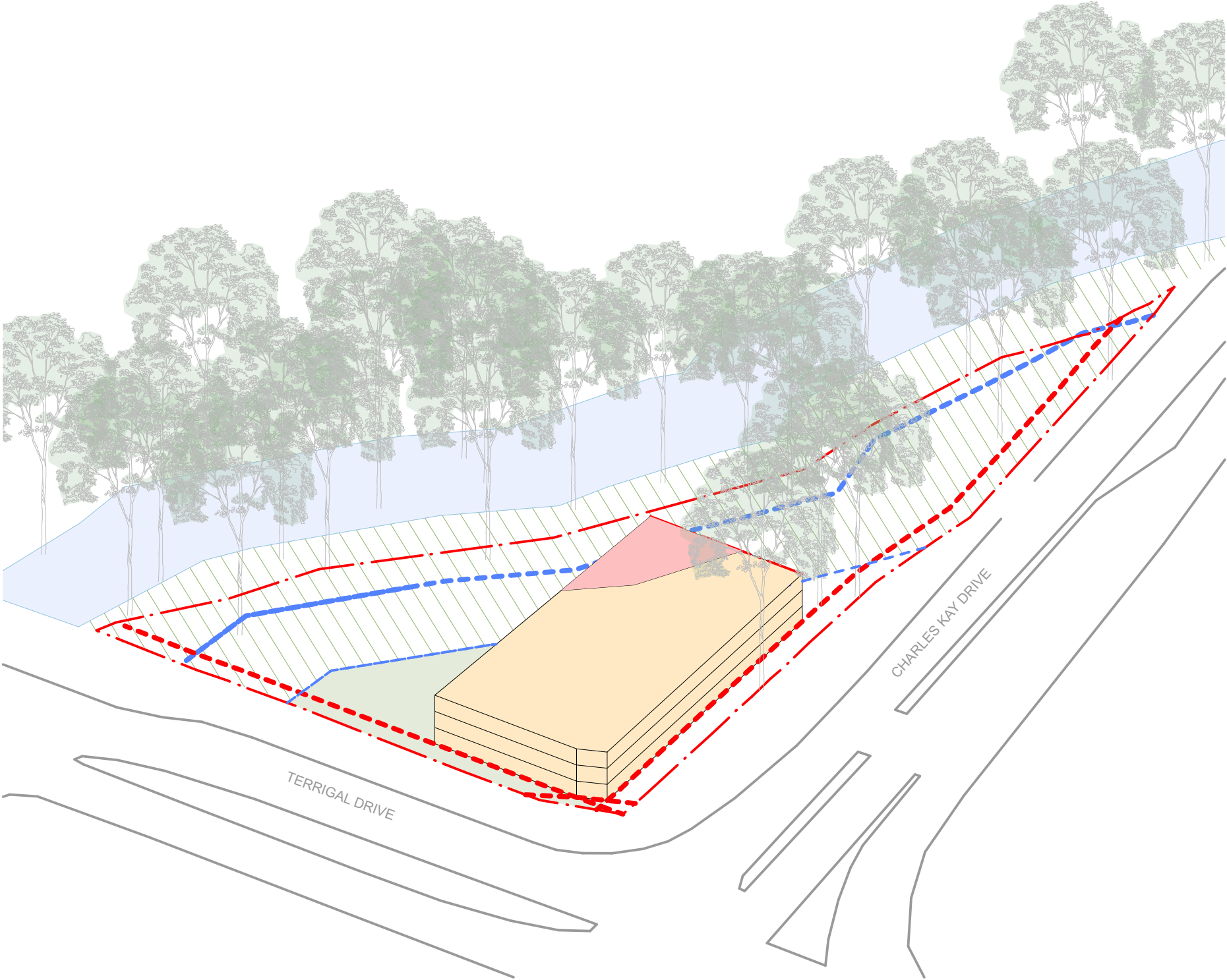
VRZ
-
- 27 | June 2024
Nominated Architects: Caine King NSW ARB 7974 / Stuart Campbell NSW ARB 7545
- URBAN DESIGN STUDY
310 TERRIGAL DR, TERRIGAL
- CKDS
Architecture | Planning | Interiors

Developable Area: VRZ Averaging

The developable footprint is an irregular shape, making it inefficient to develop.

To achieve a more efficient footprint, the VRZ 'averaging rule' was used, balancing encroachment with offsetting to arrive at a more regular footprint, improving potential efficiency.

- Outer VRZ
- Inner VRZ
- Waterway
- Street Setback
- VRZ Encroachment
- VRZ Offset
- Developable Footprint/Massing
- VRZ



Developable Area: Compliant Design

Initial investigations into a compliant scheme only achieved 5 townhouses, even using VRZ offsetting. Due to the small scale of the development, basement parking was not viable, disqualifying it from additional FSR provisions (CCLEP Clause 4.4A), reducing the max. allowable FSR to 0.5:1.

Max. Allowable FSR: 0.50 : 1* (GFA = 2,983m²)

Max. Achieved FSR: 0.22 : 1 (GFA = 954m²)

The compliant scheme only achieved an FSR of 0.22:1 (44% of the allowable FSR) - a density lower than most surrounding residential lots. Give the site was earmarked for strategic densification ("Area 1" in the CCLEP), the compliant scheme fails to achieve the intended strategic outcomes for the site.



- Outer VRZ
- Inner VRZ
- Waterway
- Street Setback
- VRZ Encroachment
- VRZ Offset
- Developable Footprint/Massing
- VRZ

Developable Area: Compliant Design

In addition, the compliant scheme also results in poor design outcomes.

Due to the risk of flooding, the townhouses and driveway access are elevated and disconnected from natural ground and the street.

With vehicle access only available from Charles Kay Drive and away from the intersection, the townhouses are oriented to face Charles Kay Drive to reduce the driveway length. The compliant design fails to address its primary street frontage, Terrigal Drive.

As basement parking is unviable for such a small scale development, much of the developable footprint is lost to exposed hardstand area.

The compliant scheme does not respond to the site's prominent location, and does not contribute to neighbourhood amenity.

** Refer Clause 4.4A of CCLEP*

- Outer VRZ

Inner VRZ

Waterway

Street Setback

VRZ Encroachment

VRZ Offset

Developable Footprint/Massing

VRZ
-
- 30 | June 2024
Nominated Architects: Caine King NSW ARB 7974 / Stuart Campbell NSW ARB 7545
- URBAN DESIGN STUDY
310 TERRIGAL DR, TERRIGAL
- CKDS**
Architecture | Planning | Interiors

Developable Area: Proposed Design

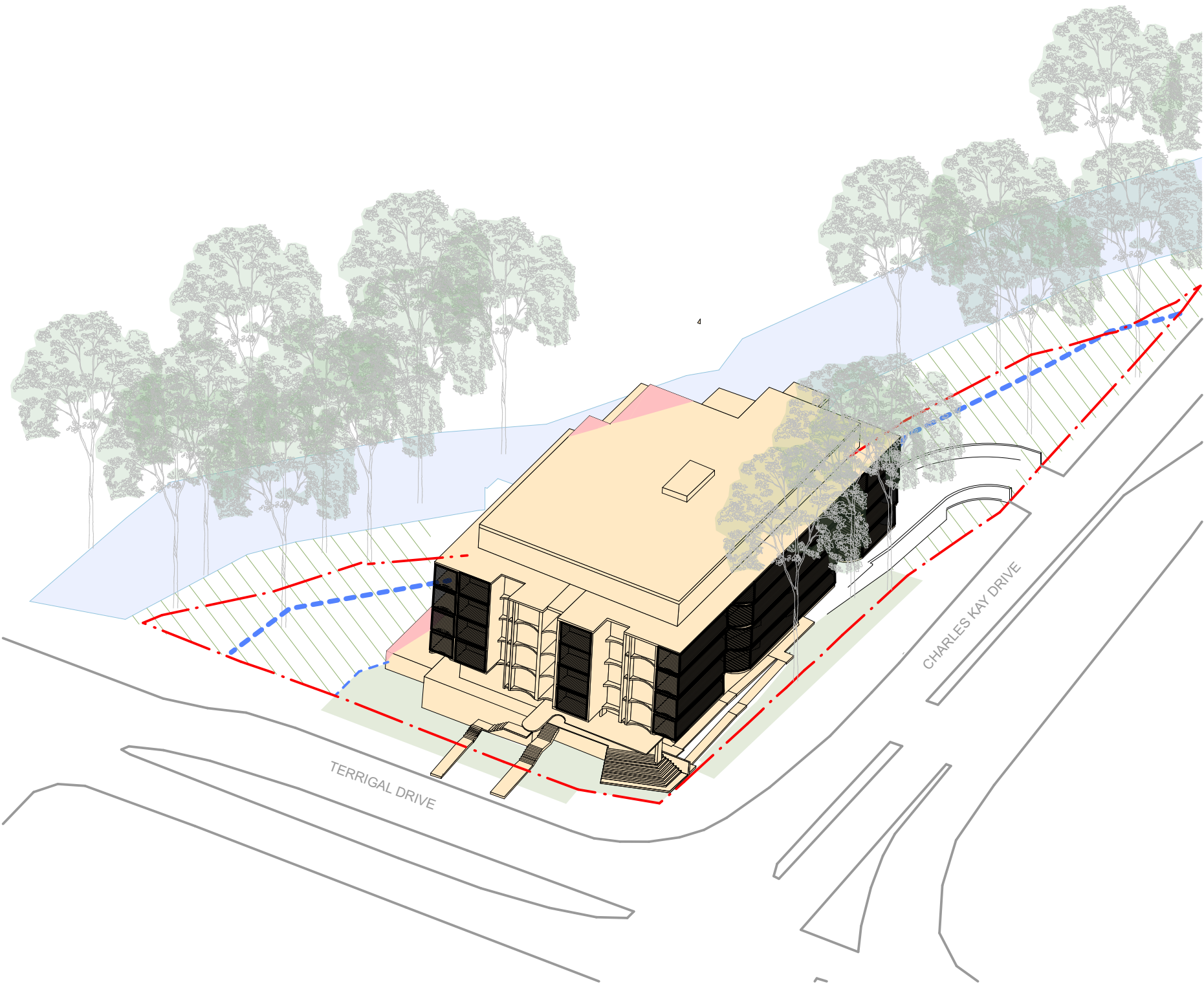
To achieve better design outcomes, a non-compliant option was investigated prioritising design outcomes over compliance.

Increasing the height and FSR allowed a shift from low-density townhouses to a denser mixed-use model.

The increased height allowed the ground floor to be freed up for more diverse uses and active street frontages.

The increased density and yield allowed for parking to be shifted to a basement, making more efficient use of the developable footprint.

Due to the site's isolation, the increase in height had minimal impact on the solar access of other developments.



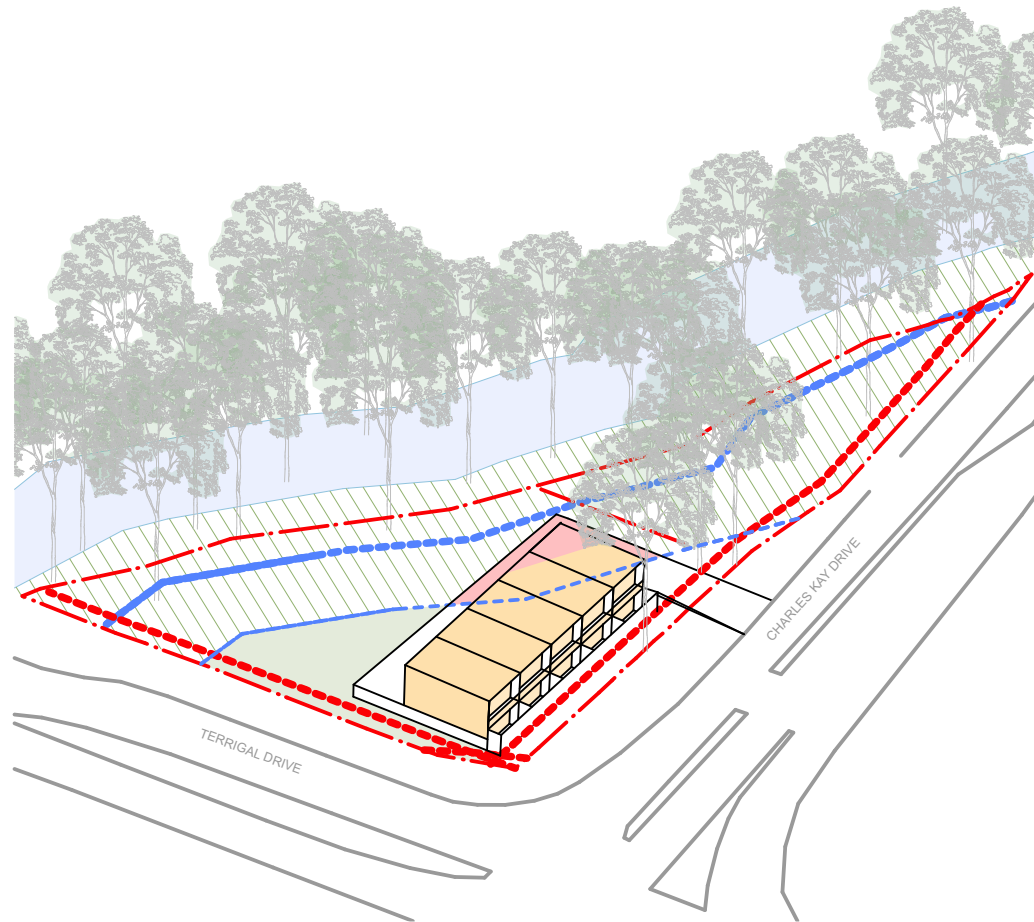
- Outer VRZ
- Inner VRZ
- Waterway
- Street Setback
- VRZ Encroachment
- VRZ Offset
- Developable Footprint/Massing
- VRZ

Concept Comparison

Compliant Development

Yield: 5 residences
FSR: 0.22 : 1
Height: 8.5m
Compliant: Yes (with CCLEP Height and FSR)

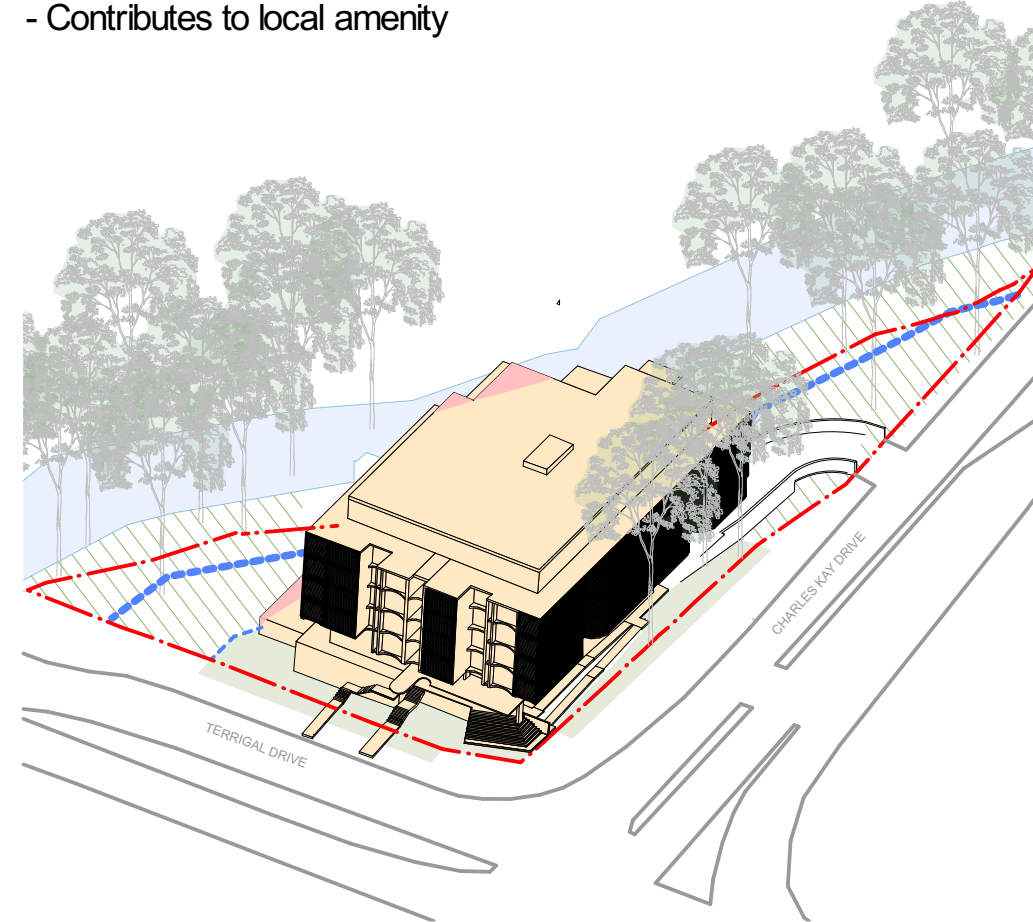
- Does not address intersection or primary frontage
- Disconnected from ground and street
- No active street frontages
- Does not contribute to strategic densification
- Does not contribute to local amenity



Proposed Development

Yield: 38 residences and retail tenancy
FSR: 1.3 : 1
Height: RL 26.95m [**Refer to Elevations - height varies from NGL Sits below 25m effective height**]
Compliant: No (with CCLEP Height and FSR)

- Addresses intersection and primary street frontage
- Transitions to ground and street
- Active street frontage
- Contributes to strategic densification
- Contributes to local amenity

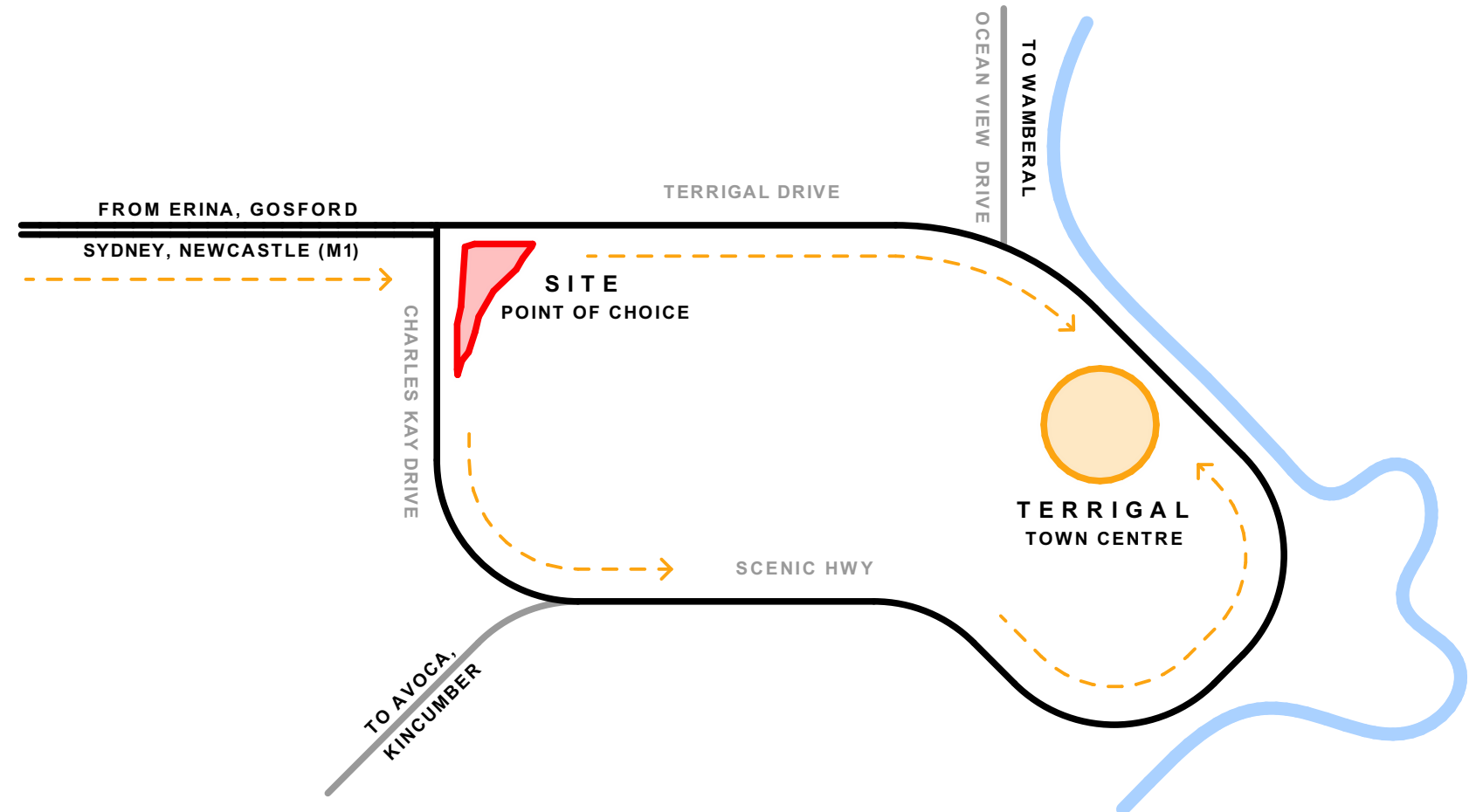


Urban Design Principles

PLACEMAKING

Located at a major intersection and point of choice when entering Terrigal, the proposal has the potential to serve as a local landmark and aid in wayfinding.

The proposal aims to provide a development that responds to the scale of the intersection and the site's exposure, with a strong street presence and well-considered design that serves as a welcoming gesture to the area.



View of site from Terrigal Drive and Charles Kay Drive intersection, headed into Terrigal

Urban Design Principles

ACTIVE STREET FRONTAGES

To contribute to local amenity and generate social activity, the proposal is to include a cafe component and active street frontages.

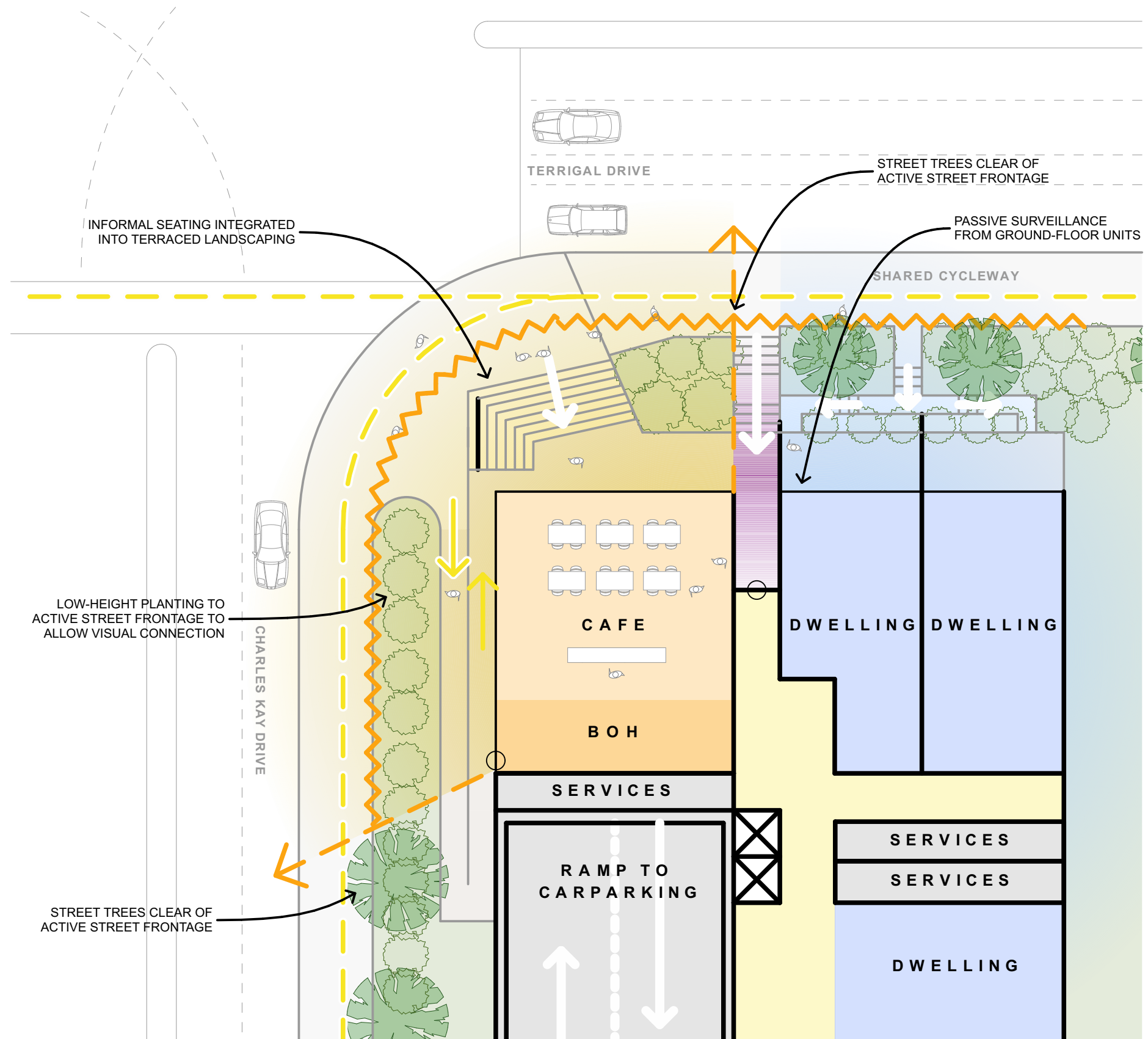
The cafe is to have good visual connectivity to the road and shared cycleway, and be inviting and accessible.

The raised plinth is to be softened with landscaped terraces, doubling as informal seating areas, to negotiate the step in elevation.

The floor-to-floor height of the ground level is to allow for future conversion of the residential units to commercial spaces, allowing for flexible growth as needed by the community.

The private areas – ground floor units and gardens – are to provide passive surveillance to the road and shared cycleway, improving local safety.

- Public Use: Shared
- Public Use: Cafe
- Private Use: Residential
- Pedestrian Access
- Sightlines
- Active Street Frontage



Architectural Approach

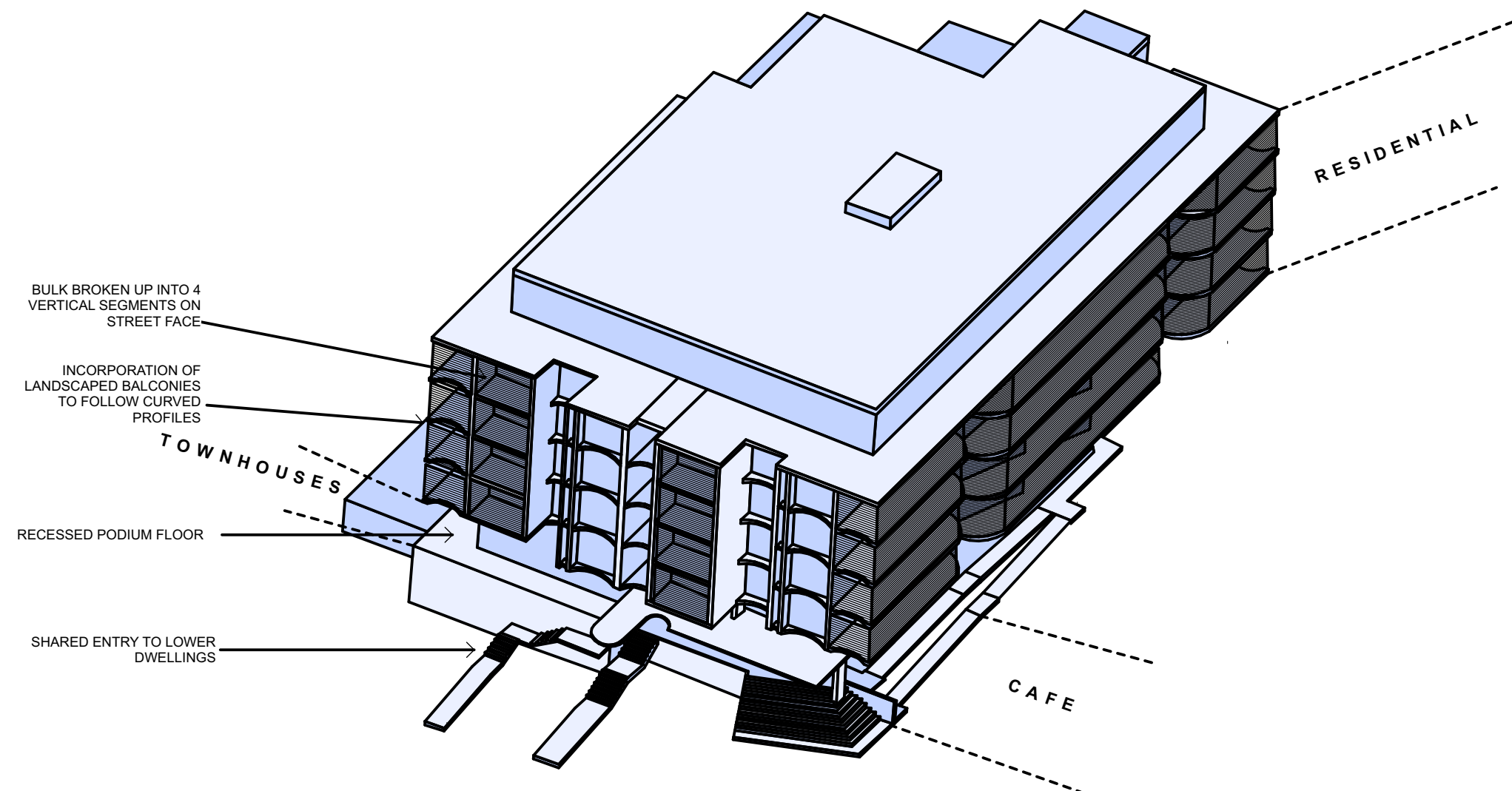
BUILDING SCALE & FORM

The bulk and scale of the proposed development is to be managed with articulation strategies such as:

- deep balconies
- vertical niches
- recessed floors
- textured surfaces

The design is to be visually organised into several key elements, each with their own distinctive language, to further break-down the scale of the building:

- Podium: Townhouse
- Podium: Cafe
- Residential



Architectural Approach

PODIUM: Retail

The cafe / retail component of the podium is to be Inviting and Accessible, and enable Social Activity in the neighbourhood.

INVITING

- Strong street presence and clear visual connection between cafe and adjacent road and shared cycleway
- Associated outdoor space sheltered by terrace above

ACCESSIBLE

- Cafe adjacent shared cycleway and on local bus transit corridor, accessible via active and public transport options
- Short walk and visible from local sporting precinct
- Clear point of entry with equitable access

SOCIAL ACTIVITY

- Cafe to serve as social hub, with outdoor space to engage with community
- Cafe to provide service not currently catered for within 15-minute walking radius



Architectural Approach

PODIUM: Townhouses

The design of the residential section of the podium is to be guided by the principles of Walkability, Safety, and Flexibility.

WALKABILITY

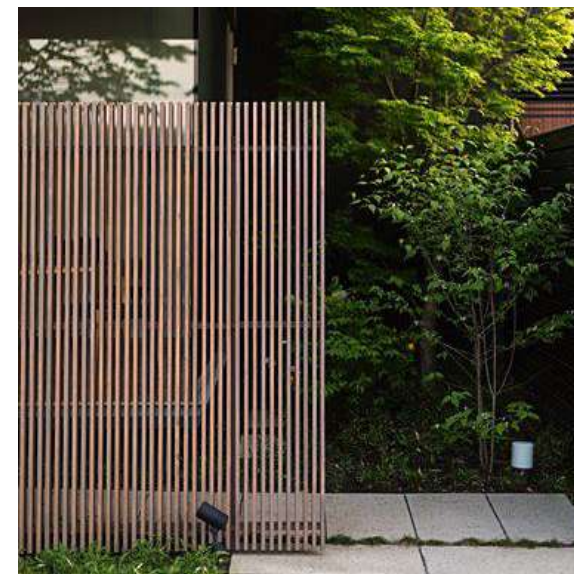
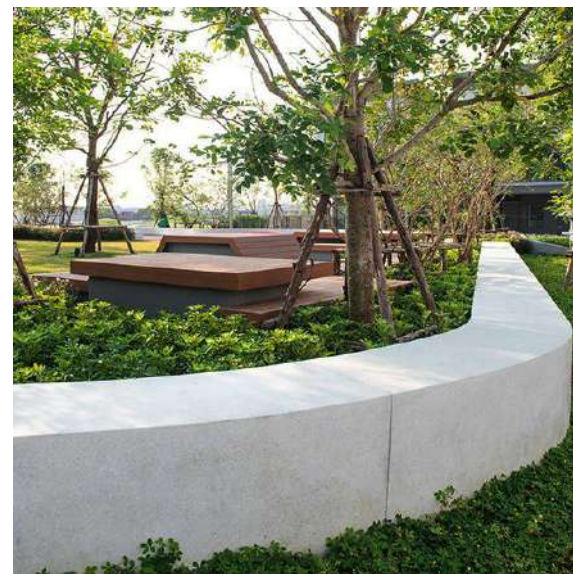
- Smaller, domestic-scale design elements to relate to suburban environment
- Facade to be textured and finely-detailed to provide visual relief to pedestrians
- Terraced landscaping to provide a soft transition to shared cycleway, creating comfortable and engaging atmosphere

SAFETY

- The elevated ground floor units to provide passive surveillance to the shared cycleway
- Private front yards to be secured by gated access and screened for privacy

FLEXIBILITY

- Floor-to-floor height allows for conversion of units to commercial/retail space, depending on future land-use demand



Architectural Approach

RESIDENTIAL

The design of the residential component is to achieve good Amenity, Privacy and Articulation.

AMENITY

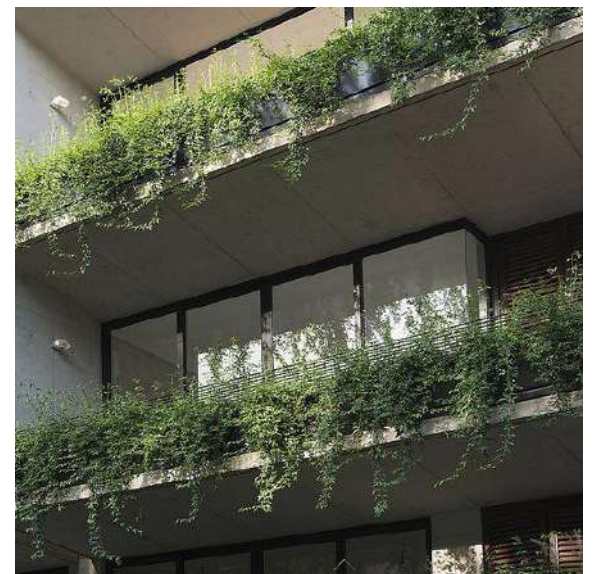
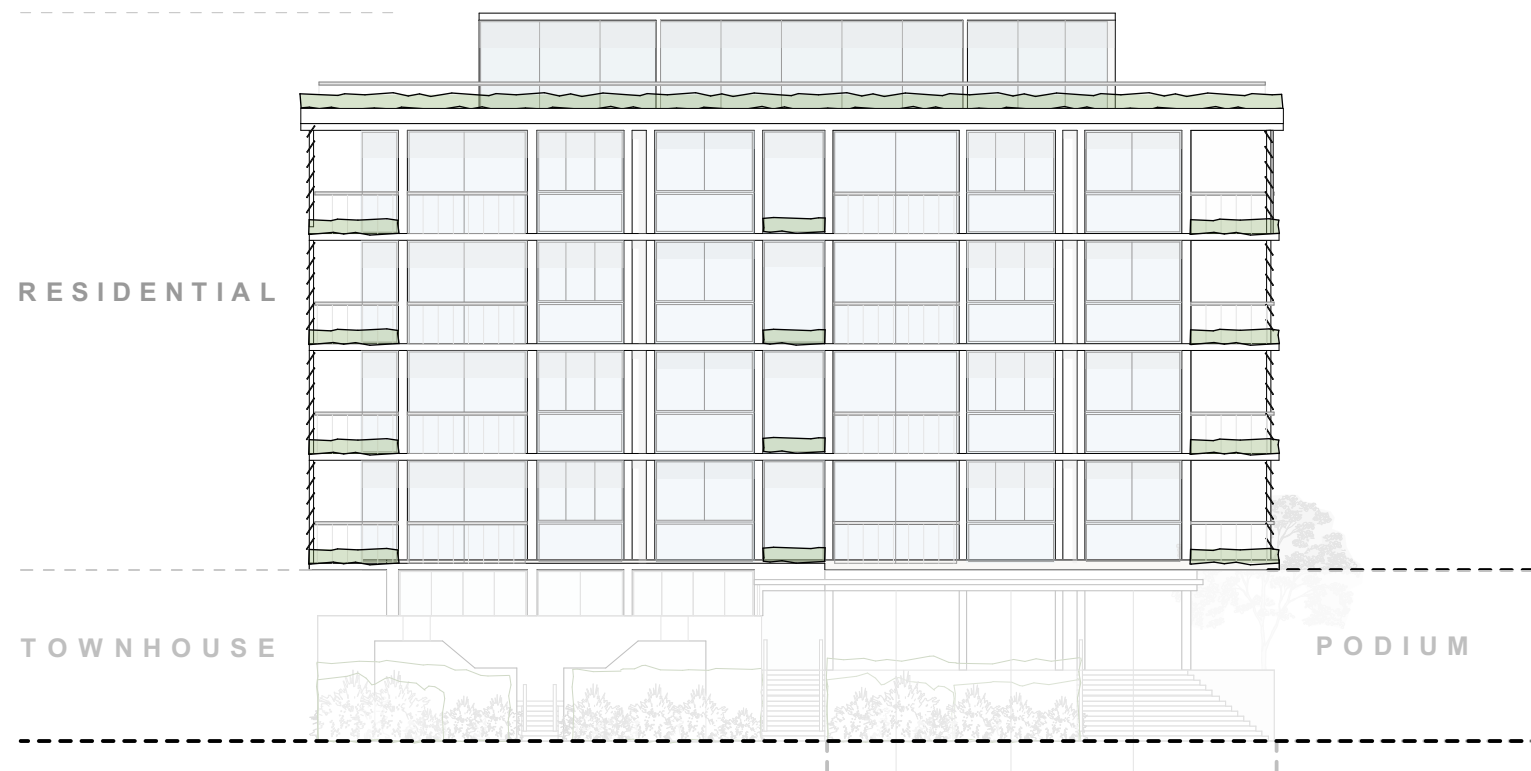
- Large, usable balcony spaces / Wintergardens
- Units and balconies oriented to maximise access to winter sun and views

PRIVACY

- Balcony depth to provide visual buffer to the road below
- Planters with cascading plants to soften and screen units and balconies

ARTICULATION

- Niches used to break up floor plates and manage horizontal bulk
- Rounded, softened edges to provide gentle transitions and strong form
- No multi-storey walls of glass, to minimise sense of verticality



Environmental Design Principles

The indicative design prepared as part of this planning proposal has been developed with environmentally sustainable design principles in mind. These principles are to be considered in more detail at further design stages.

ENERGY USE

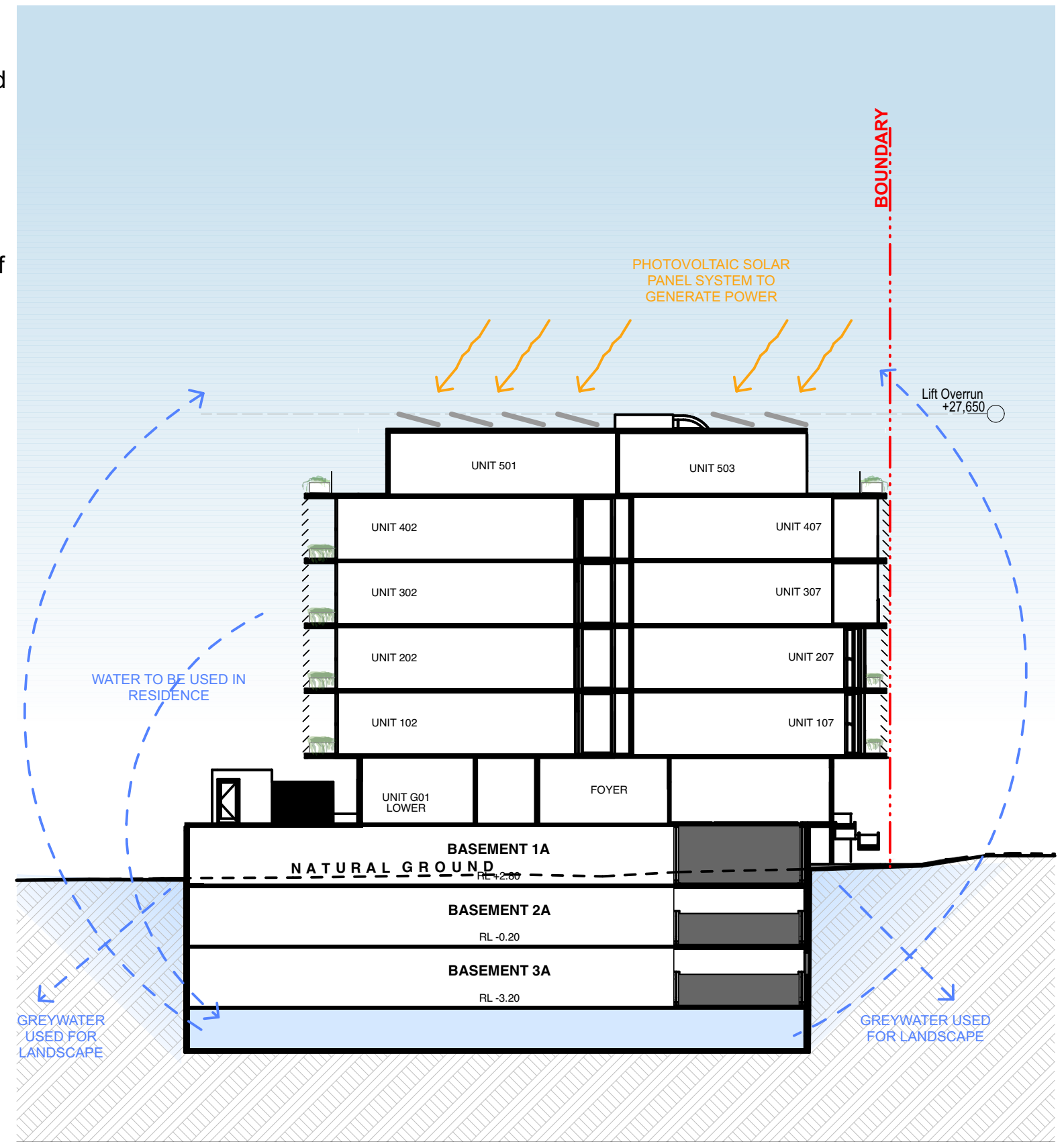
- Thermal efficiency – building envelope to be appropriately insulated, and make use of passive thermal, ventilation and lighting solutions (via orientation, solar-gain and shading, natural cross-ventilation, daylighting, etc)
- Energy-efficient appliances, fixtures, lighting, and supplementary heating/cooling systems
- Encourage and enable use of active and public transport options over private vehicle use (by supplying bicycle storage, easy access to cycleways and bus stops, etc)
- Provide electric vehicle charging stations to reduce reliance on non-renewable fuels
- Materials - low-embodied energy, local or recycled where possible
- Solar energy / water-heating to reduce reliance on non-renewable energy sources

WATER MANAGEMENT

- Rainwater to be collected and used on-site
- Grey water to be reused on-site for landscape irrigation

SUPPORT BIODIVERSITY

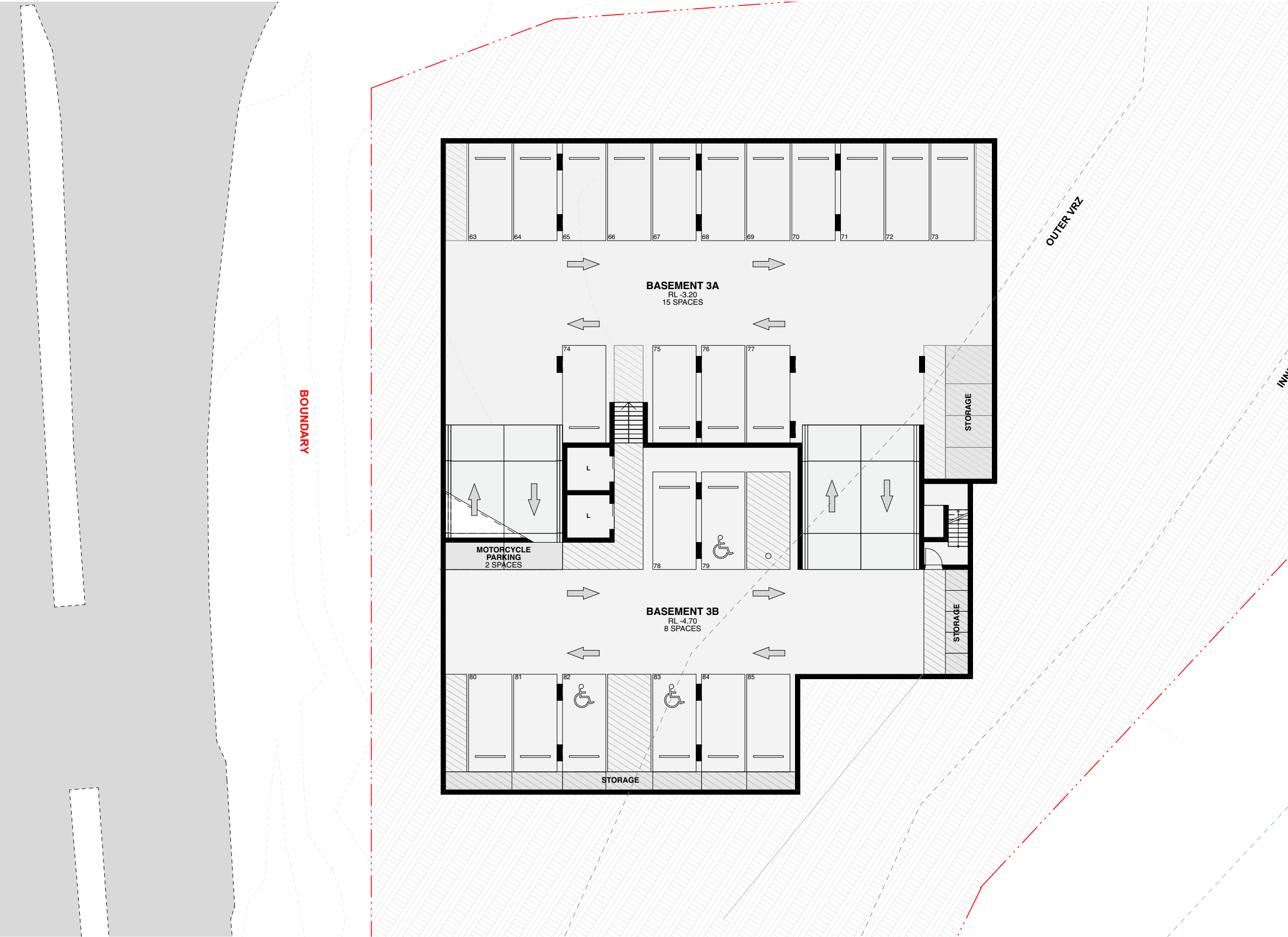
- Remediation and ongoing protection of adjacent waterway
- Use of indigenous plant species in-keeping with local ecosystem



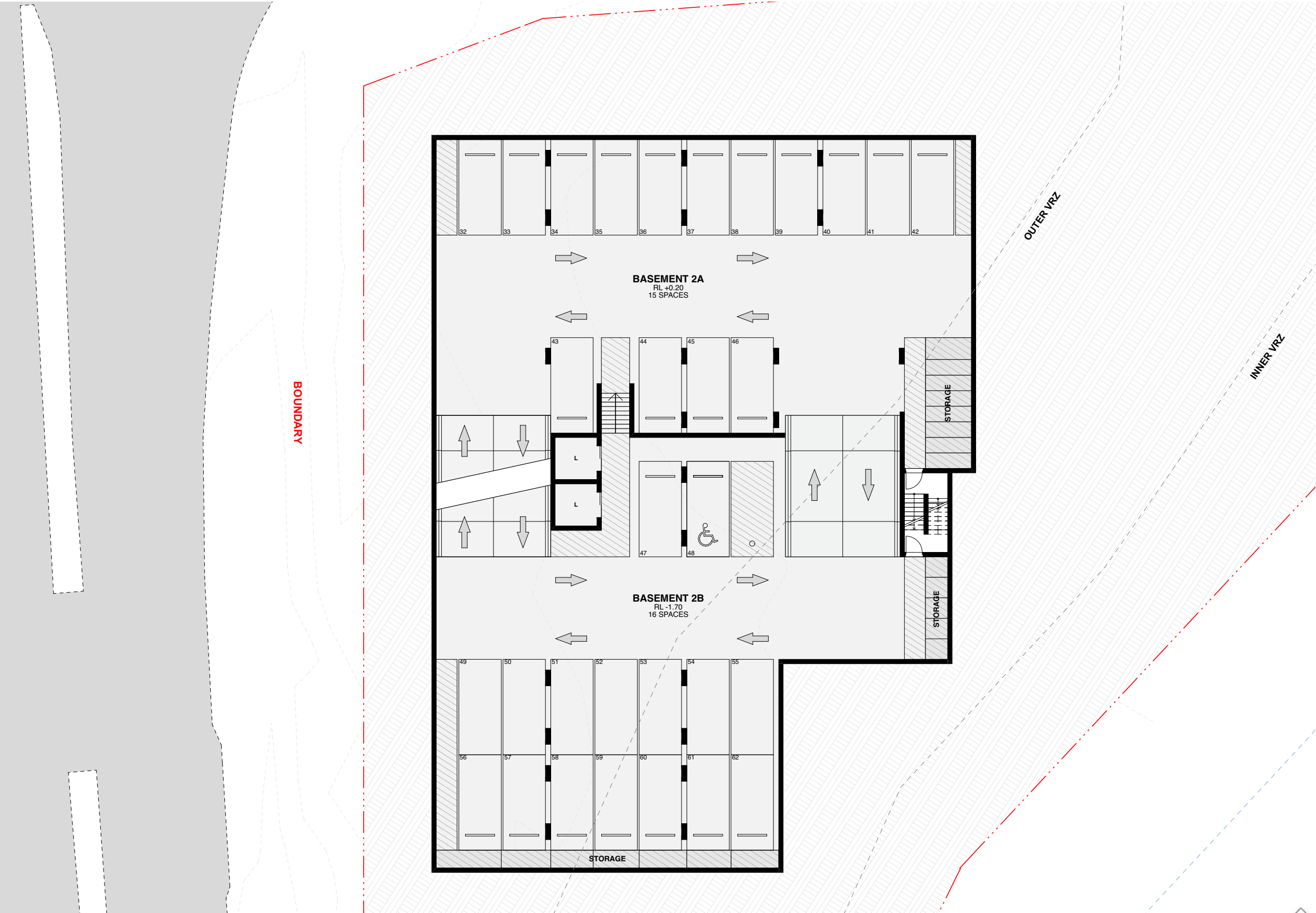
An aerial photograph of a suburban neighborhood. The image shows a mix of residential areas with houses of various roof colors (brown, grey, white) and some swimming pools. There are large green trees scattered throughout, particularly in the center and right. A road with a roundabout is visible in the lower-left quadrant. A large, open green field, possibly a sports field or park, is located in the lower-left. In the upper-right, there is a body of water, likely a lake or reservoir, surrounded by dense forest. A semi-transparent white rectangular box is overlaid on the right side of the image, containing the text '5.0 INDICATIVE DESIGN'.

5.0 INDICATIVE DESIGN

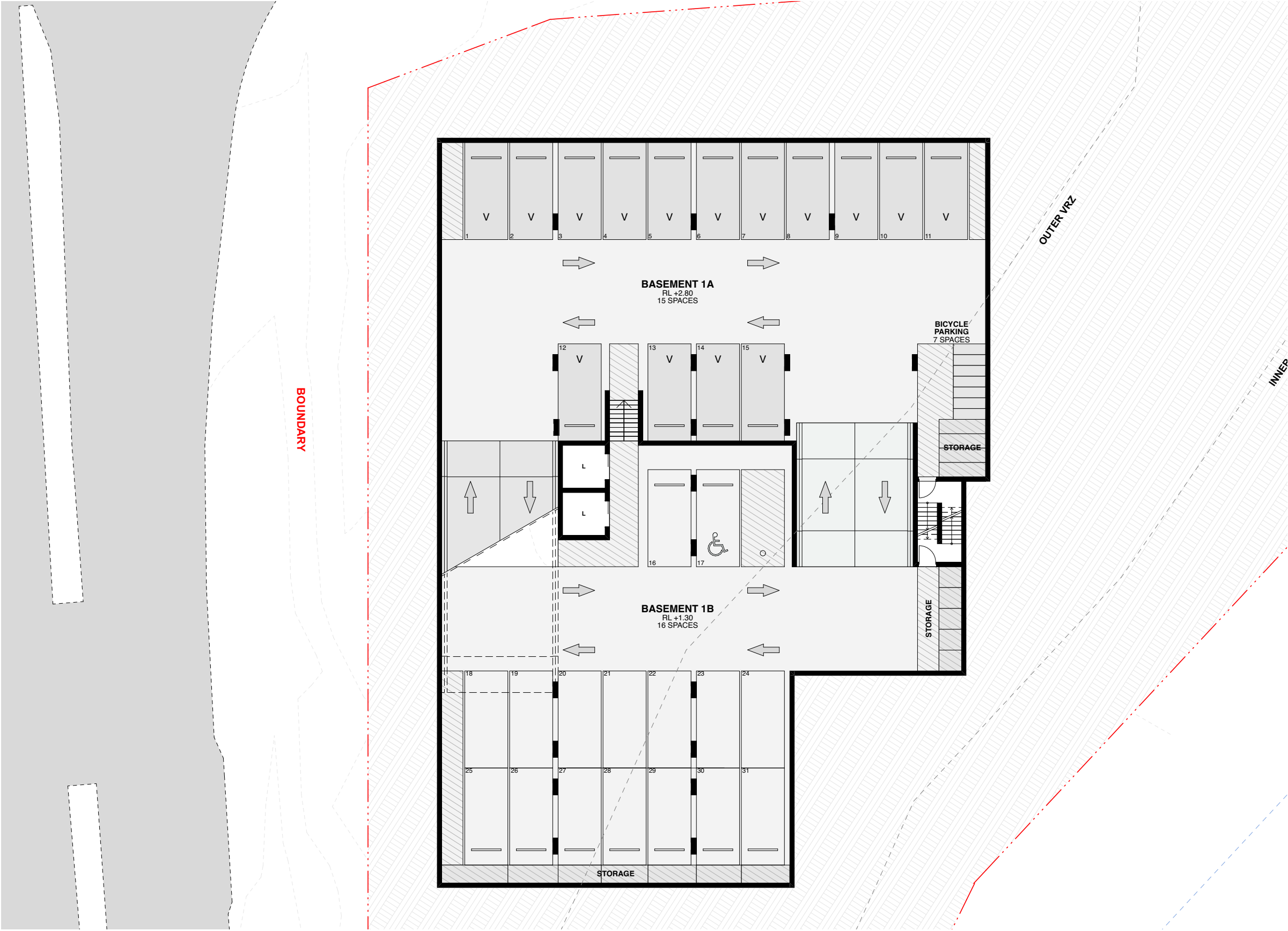
Architecturals: Basement 03



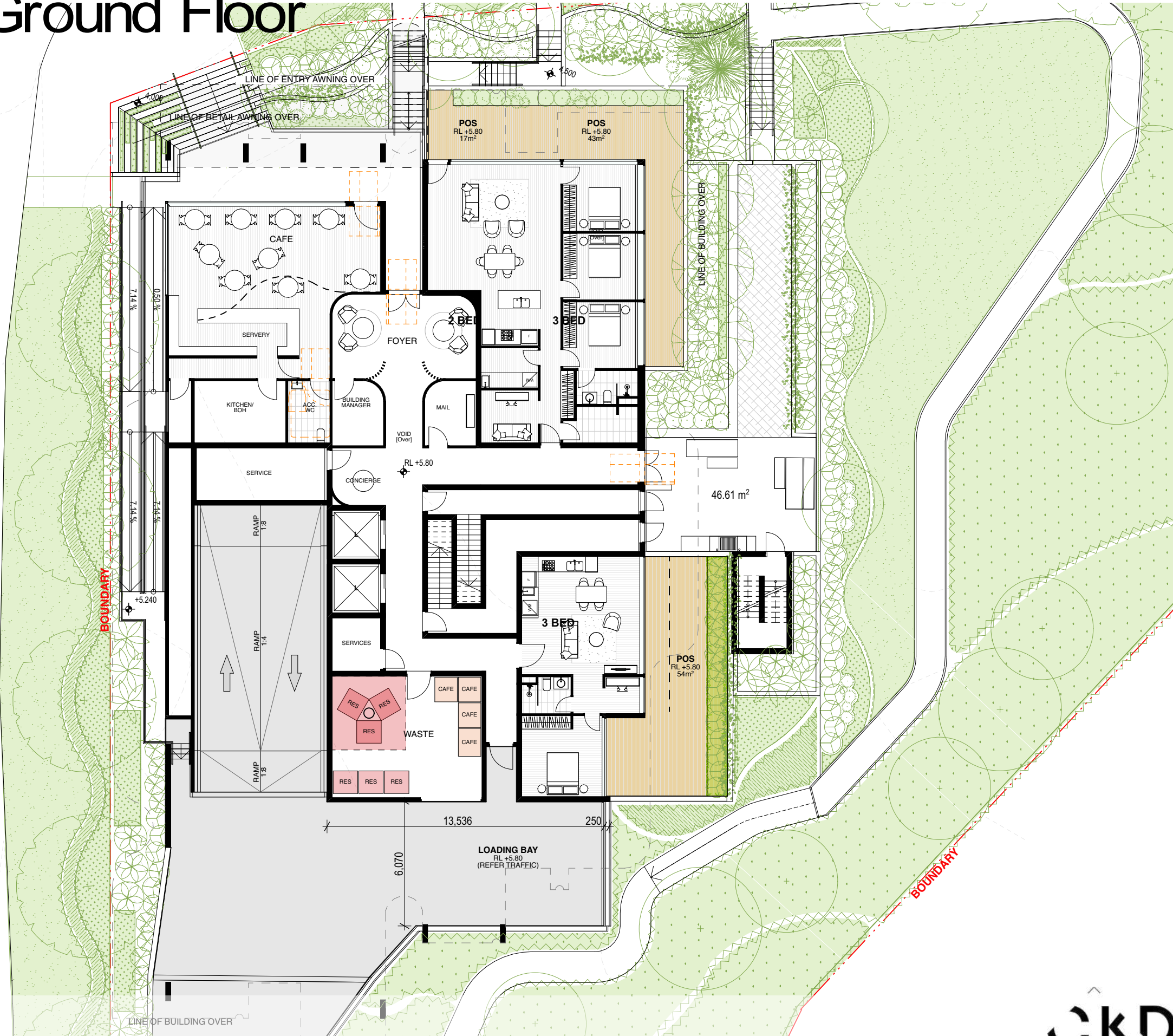
Architecturals: Basement 02



Architecturals: Basement 01



Architecturals: Ground Floor

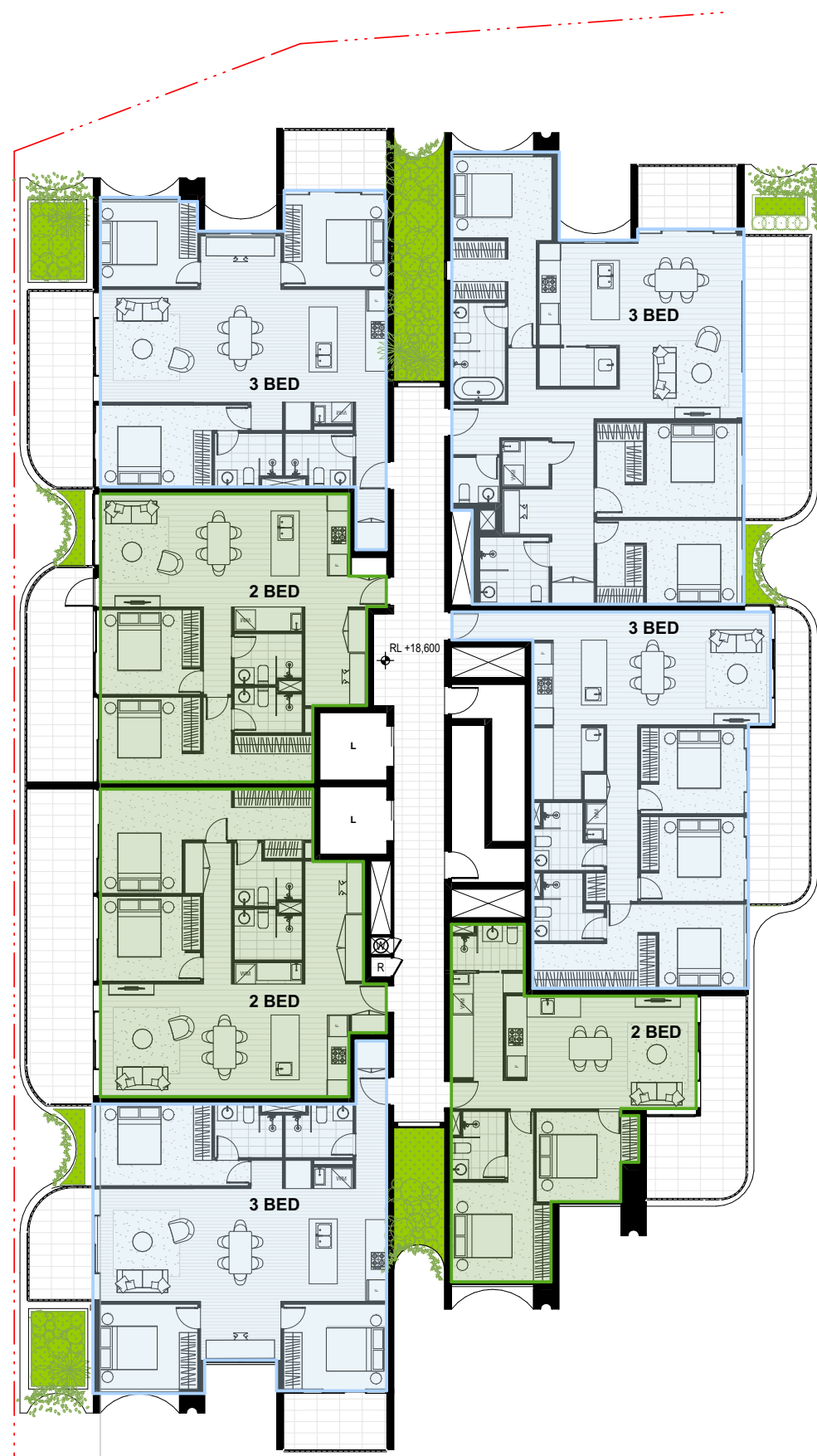


4 ground floor
SCALE 1:1 @ A3

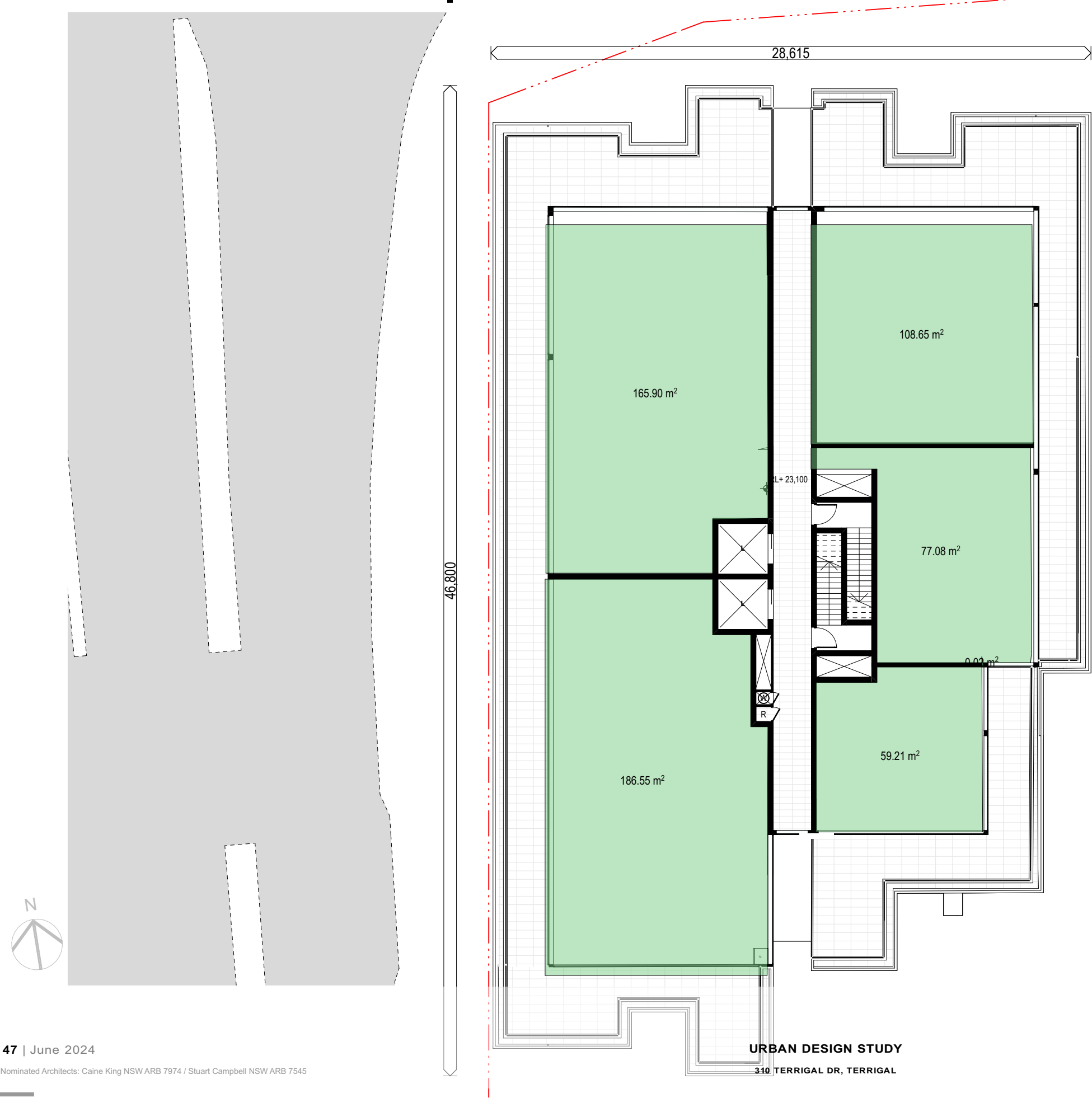
Architecturals: Typical Levels 1-2



Architecturals: Typical Levels 3-4



Architecturals: Top Floor



Architecturals: Elevation - North



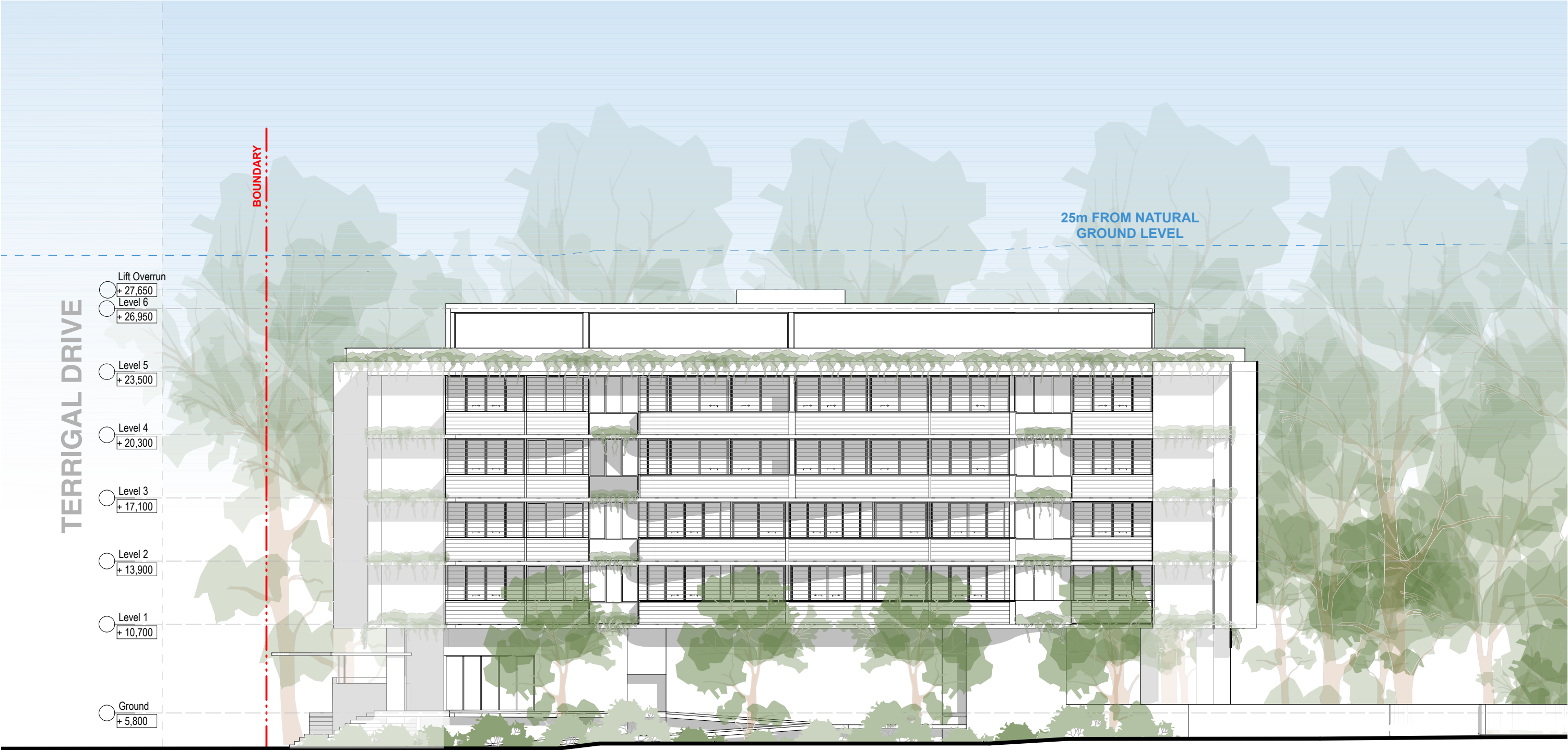
STREET TREES
AND PLANTING

WALK UP FOR
GROUND
UNITS

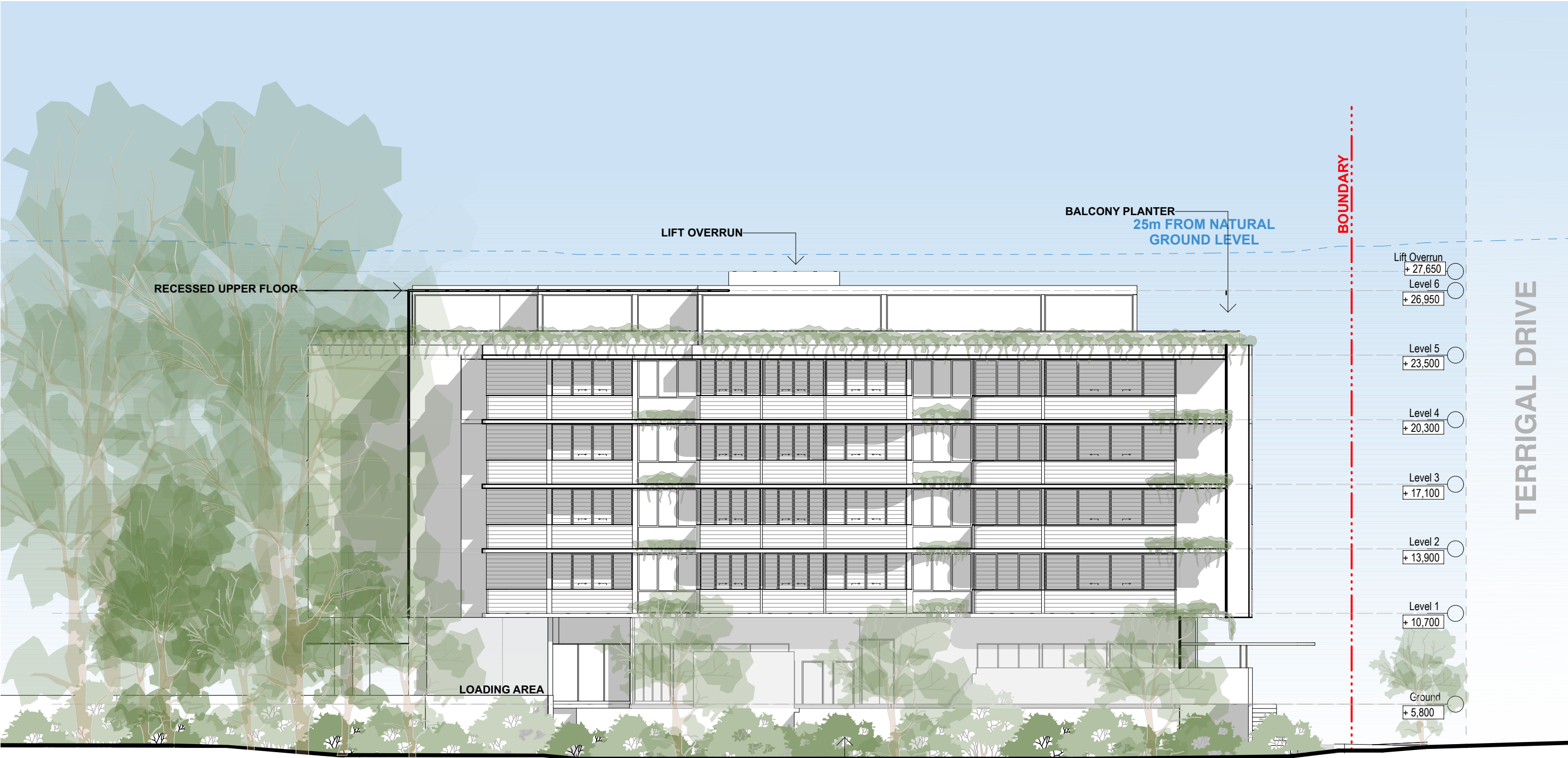
MAIN ENTRY
TO FOYER

FEATURE STAIR ADDRESSES
CORNER FRONTAGE AND LEADS
TO RETAIL

Architecturals: Elevation - West



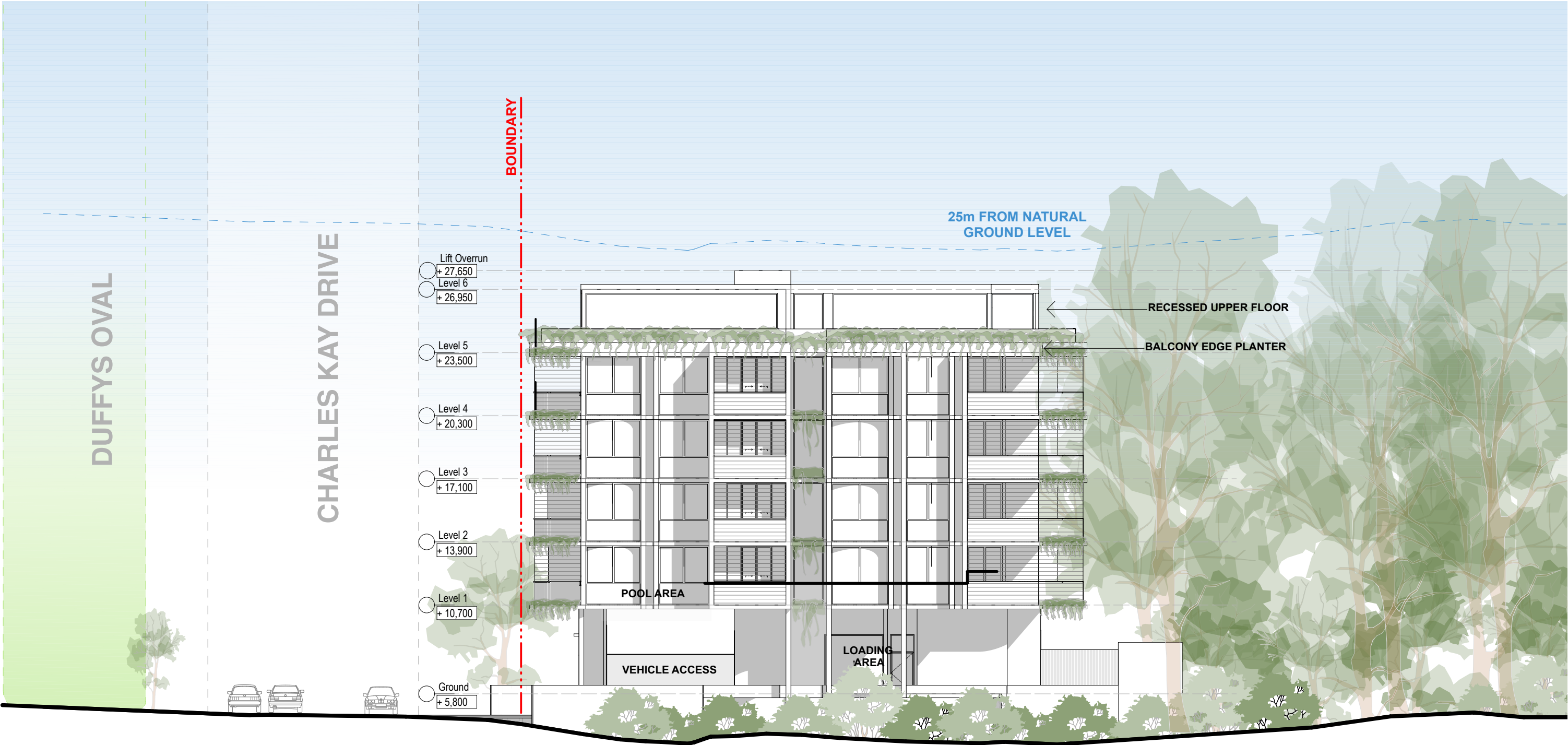
Architecturals: Elevation - East



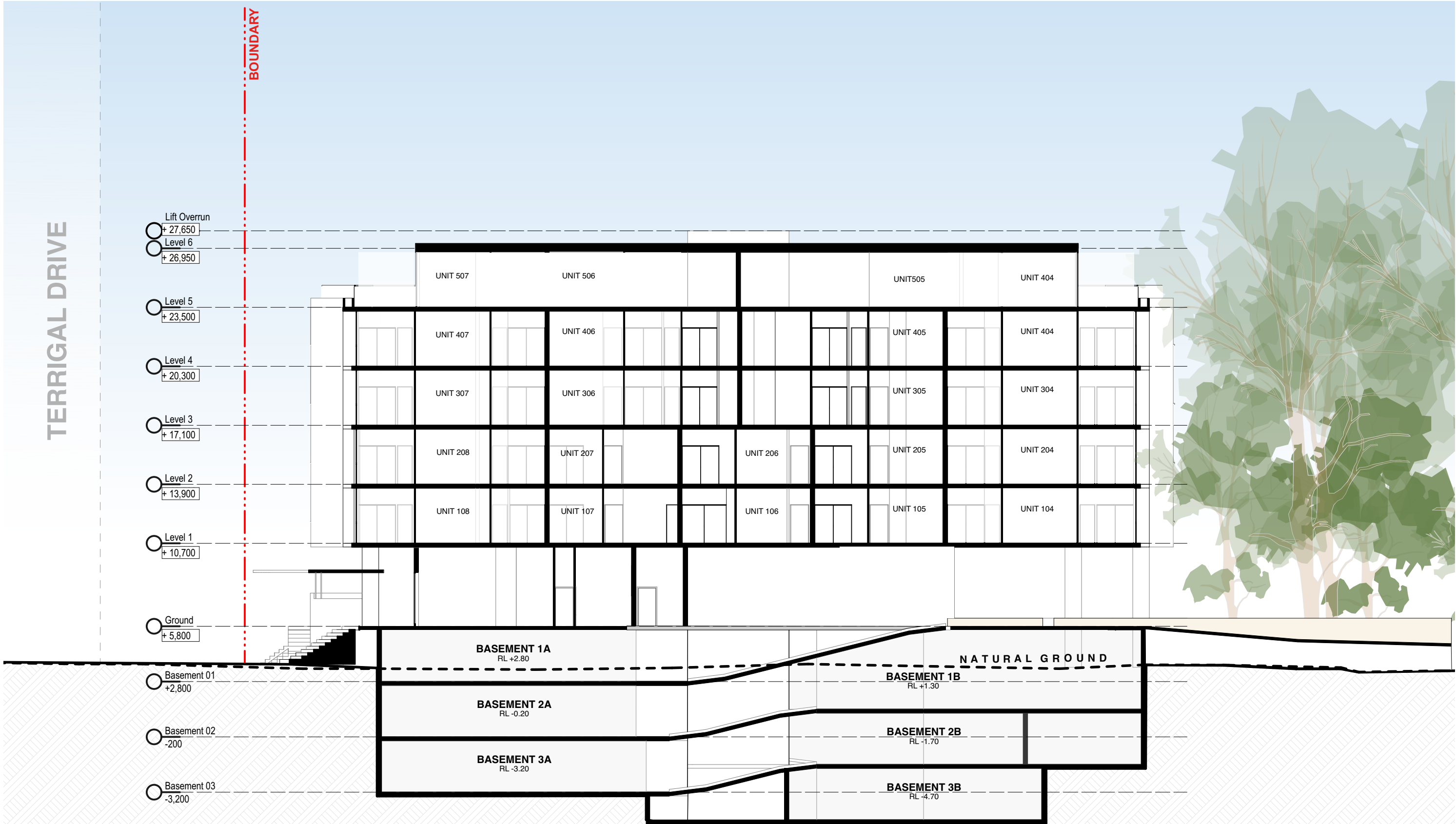
11 SK-210-002 East Elevation _ Layout
SCALE 1:1 @ A3

FIRE ESCAPES

Architecturals: Elevation - South



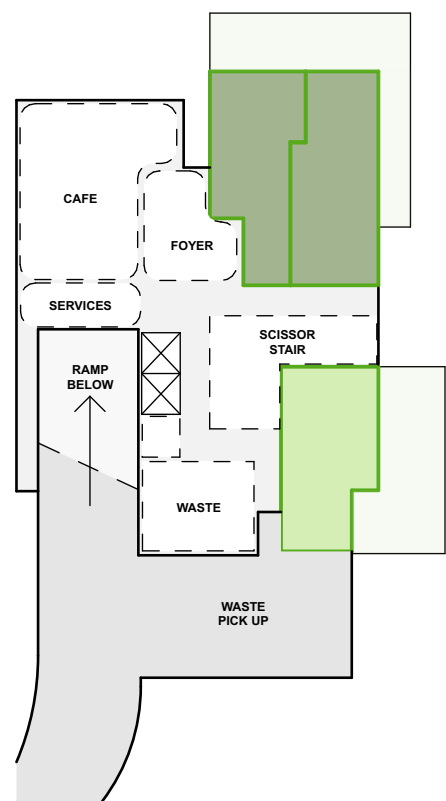
Architecturals: Section



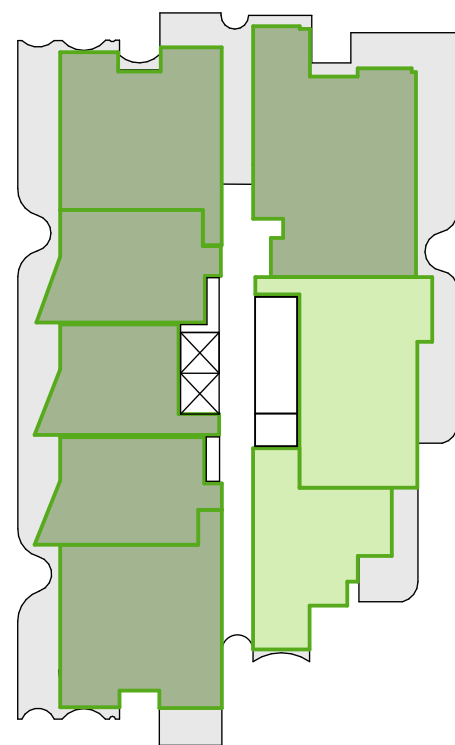
17 section
SCALE 1:1 @ A3

SEPP 65 Indicative Compliance

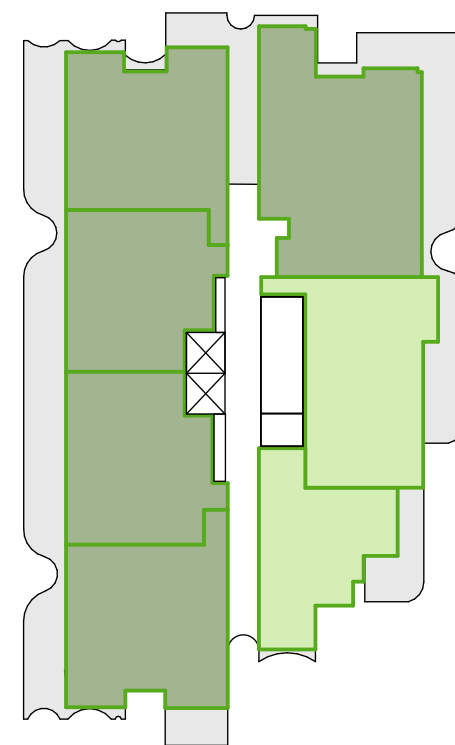
SOLAR ACCESS



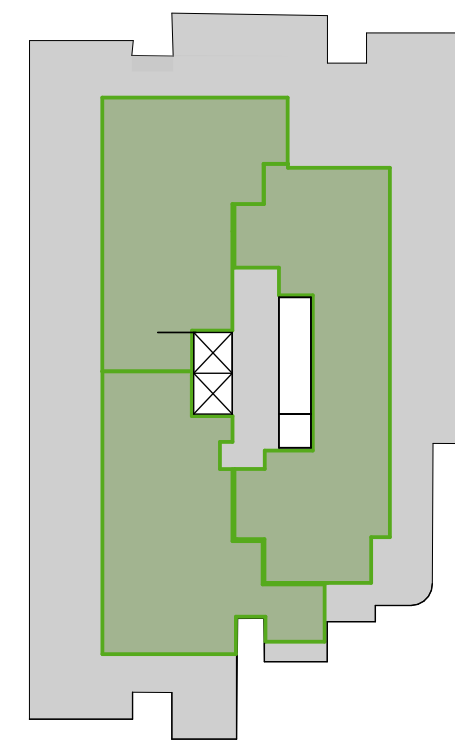
GROUND FLOOR



LEVELS 1-2






LEVELS 3-4



PENTHOUSES

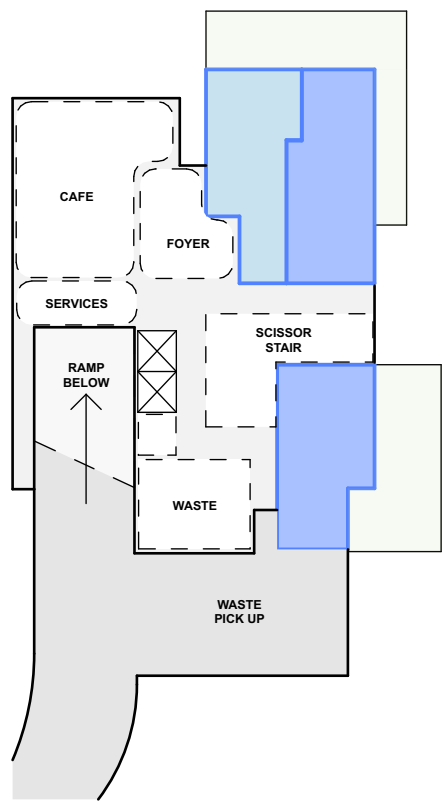


	3+ hours sunlight	27 units	71.2%
	under 3 hours sunlight	11 units	28.8%
	no sunlight	0 units	0%
		38 units	

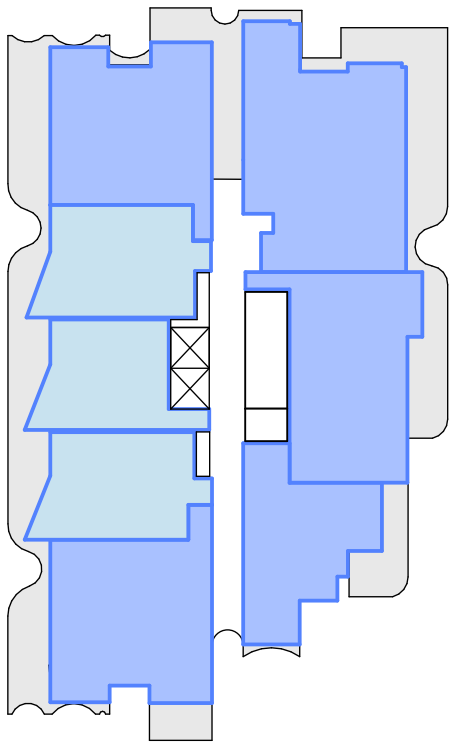
The concept design meets the ADG requirement for at least 70% of apartments to receive a minimum of 3 hours direct sunlight between 9am and 3pm during midwinter, and no more than 15% of apartments to receive no direct sunlight.

SEPP 65 Indicative Compliance

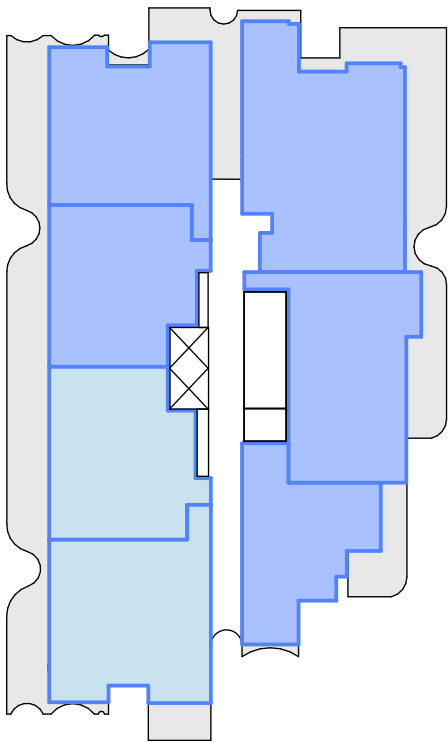
CROSS VENTILATION



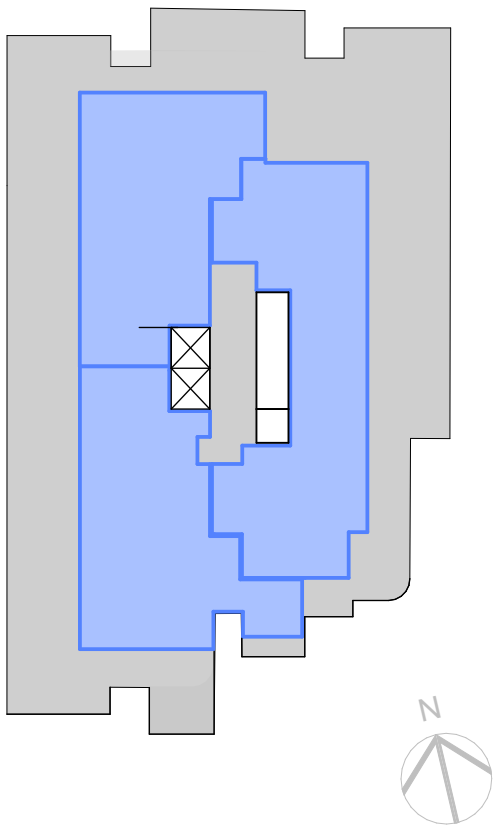
GROUND FLOOR





LEVELS 1-2



LEVELS 3-4

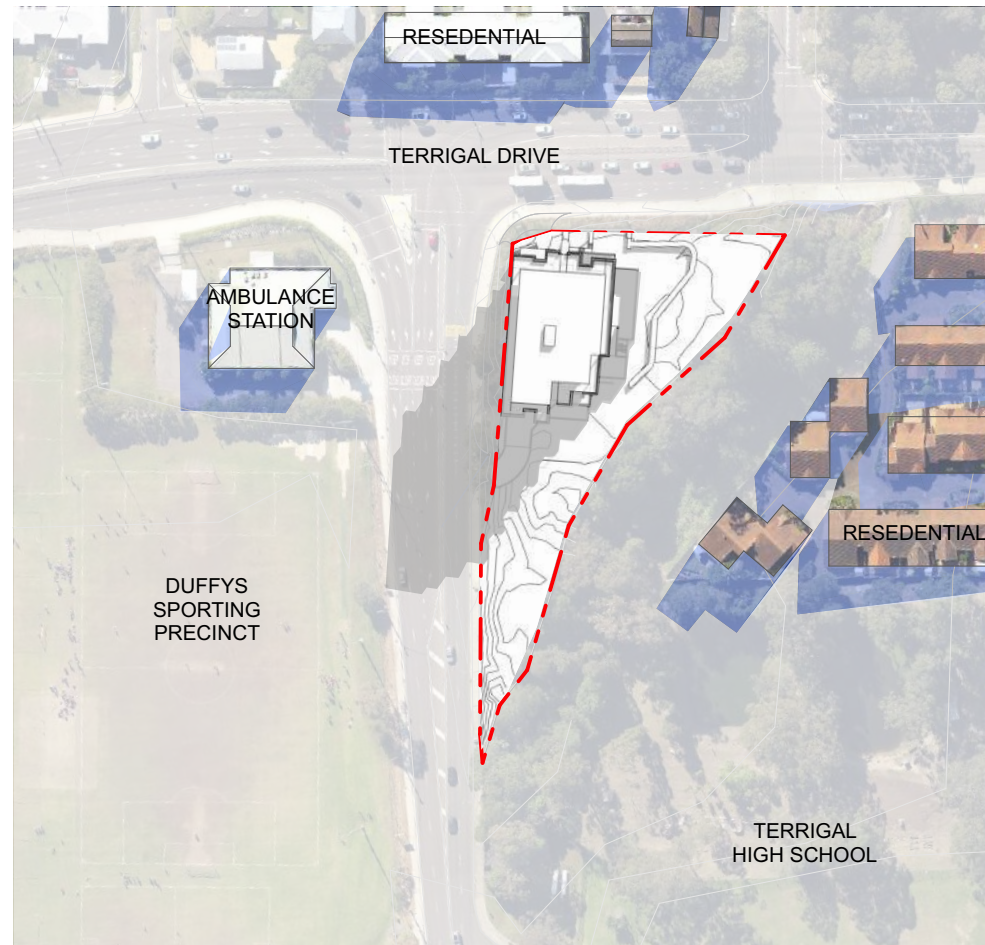


PENTHOUSES

	achieves cross ventilation	26 units	68%
	does not achieve cross ventilation	12 units	32%
		38 units	

The concept design meets the ADG requirement for at least 60% of apartments to be naturally cross ventilated.

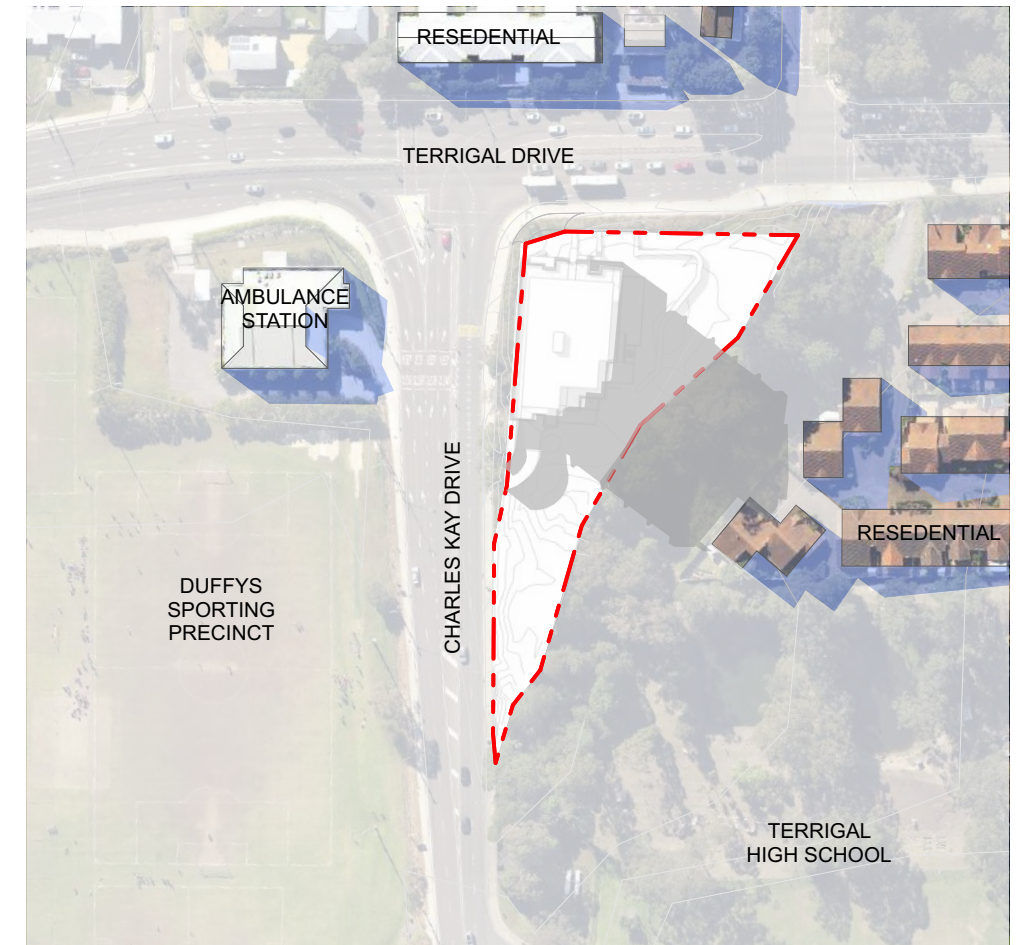
Indicative Shadow Diagrams



21 JUNE 09:00



21 JUNE 12:00



21 JUNE 15:00

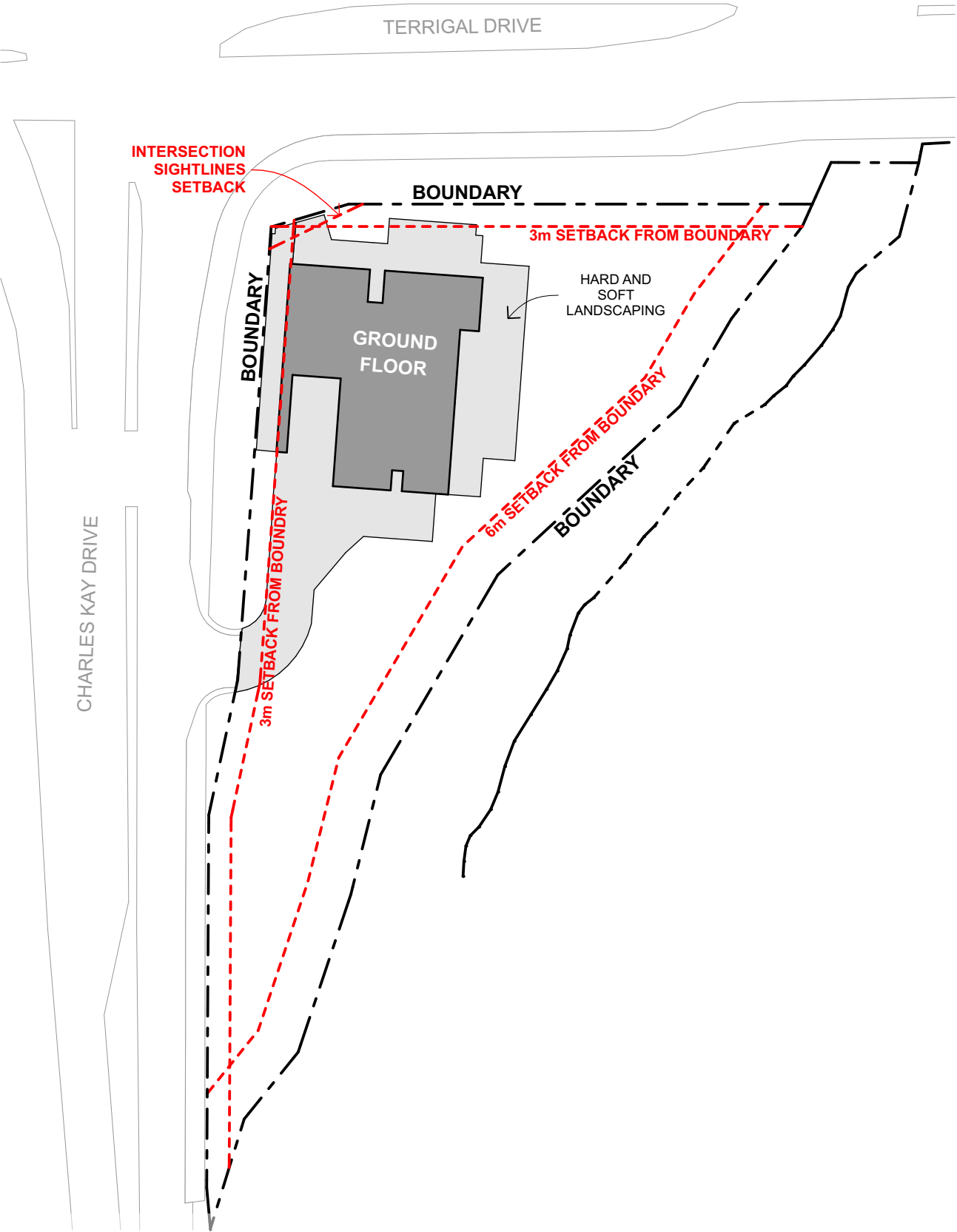


- existing shadows (approximate)
- proposed shadows

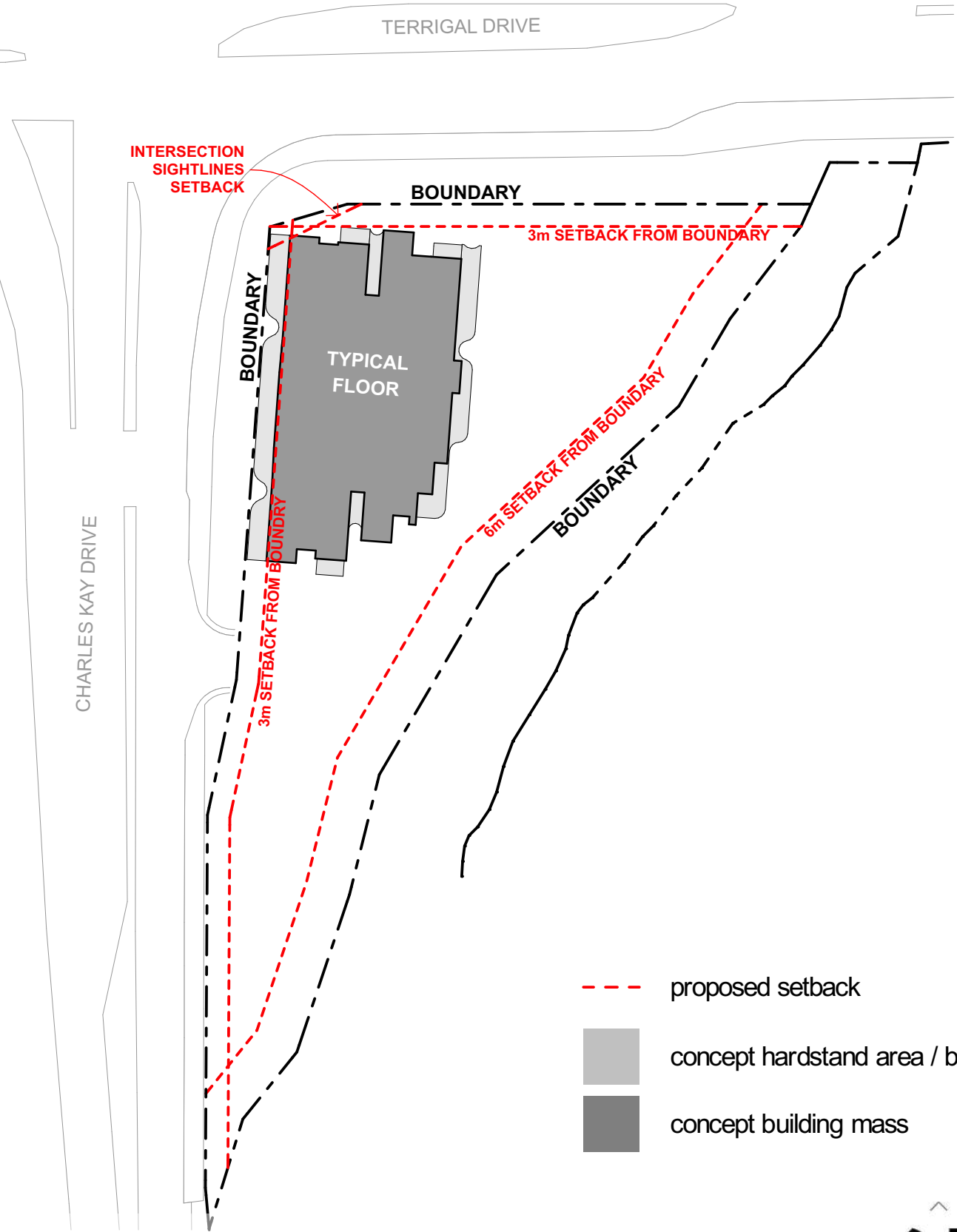
Despite the additional height, the concept design has minimal impact on the solar access of adjacent public and private space.

Setbacks

LOWER FLOORS



UPPER FLOORS



- proposed setback
- concept hardstand area / balconies
- concept building mass

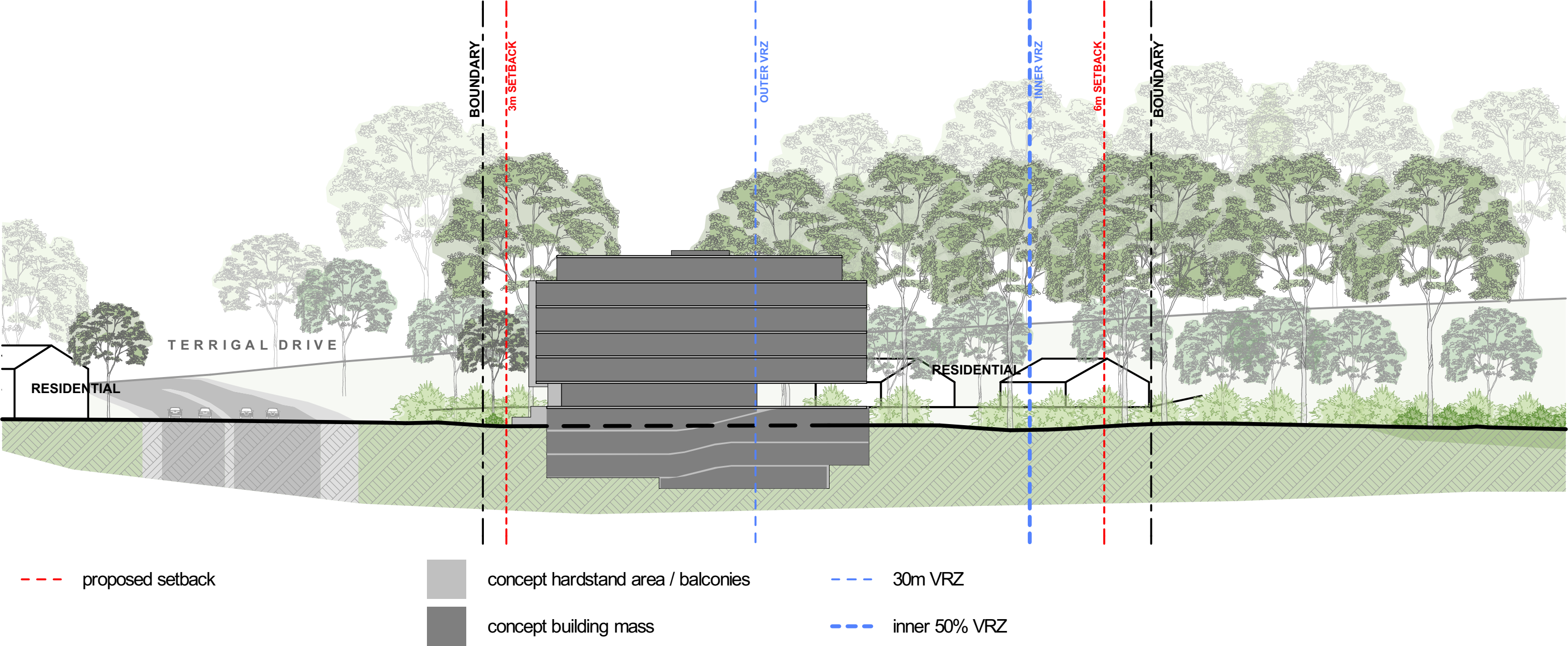
Setbacks

SITE SECTION - EAST-WEST



Setbacks

SITE SECTION - NORTH-SOUTH

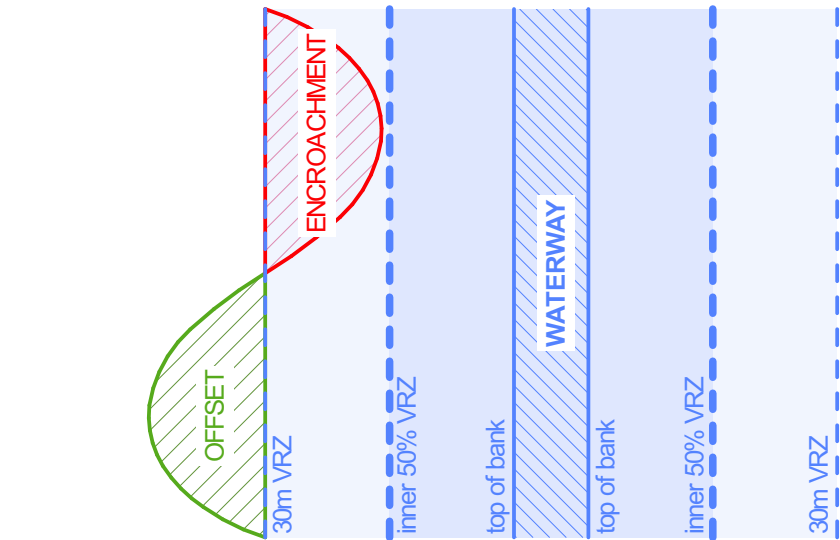


Indicative VRZ Offsets

Being adjacent a 3rd order stream, much of the site is affected by a 30m wide vegetated riparian zone (VRZ) extending from the top of the creek bank.

The unaffected area is an irregular shape, making it difficult to develop efficiently. *Guidelines for Riparian Corridors on Waterfront Land* outlines an 'averaging rule', allowing non-riparian uses within the outer 50% of the VRZ so long as that area is offset outside the VRZ.

The indicative design makes use of this rule to achieve a more useable building footprint, offsetting areas of encroachment with additional site landscaping.



--- 30m VRZ

--- inner 50% VRZ

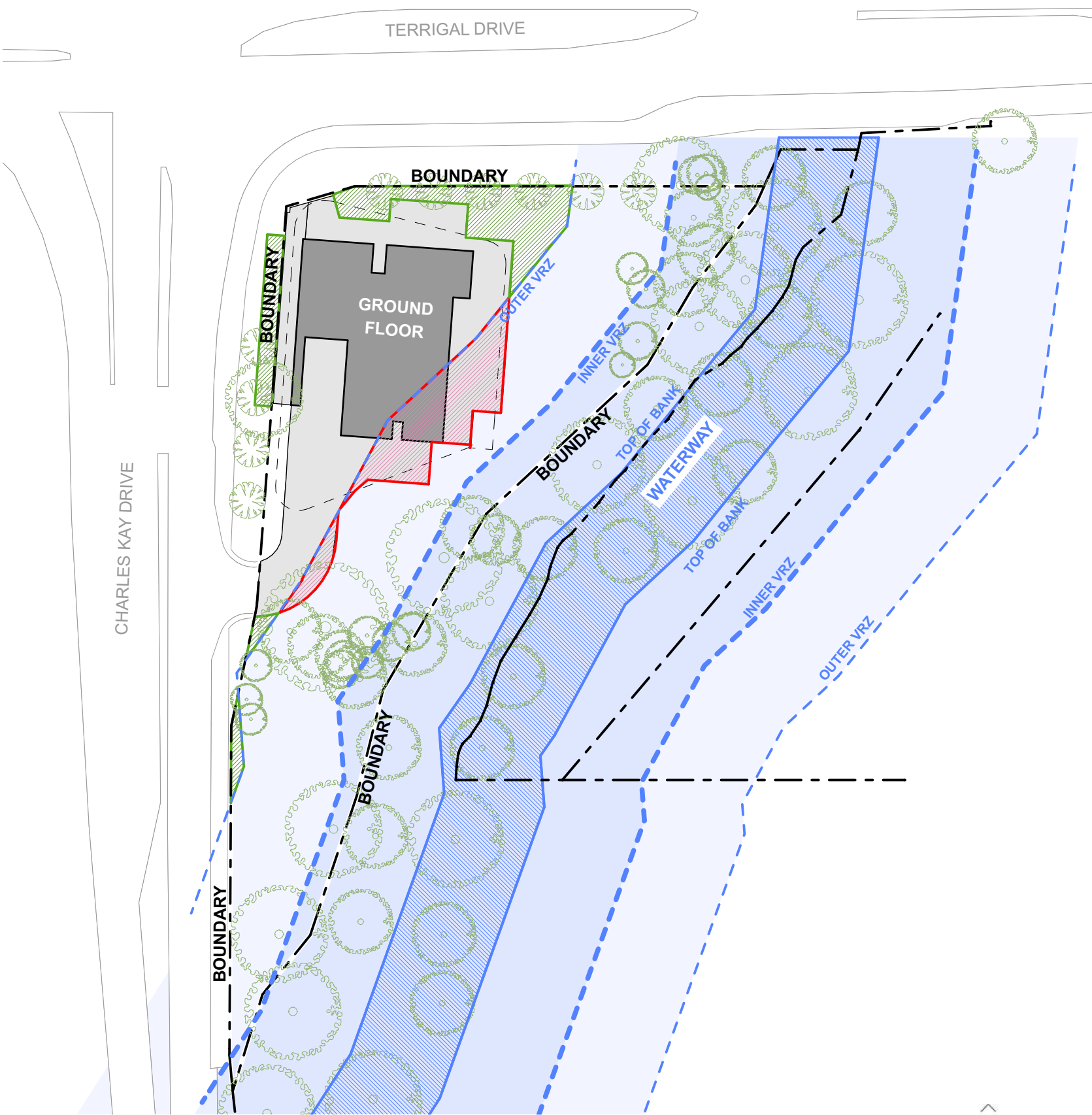
 VRZ encroachment

approx. 283m²

 VRZ offset

approx. 259m²

= -24m²





Architecture | Planning | Interiors

June 2023

Nominated Architects: Caine King NSW ARB 7974 / Stuart Campbell NSW ARB 7545