PLANNING INGENUITY

AMENDED STATEMENT OF ENVIRONMENTAL EFFECTS

Demolition of existing buildings and structures, amalgamation of lots and the construction of a part five, part six storey residential flat building with associated basement car parking and landscaping

1 Gatacre Avenue and 5 Allison Avenue, Lane Cove

Prepared for: WINIM Developments Pty Ltd

REF. M200409

DATE: 27 May 2022



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1. Introduction

1.1 OVERVIEW

This Amended Statement of Environmental Effects ('Statement') has been prepared on behalf of WINIM Developments Pty Ltd, the applicant for the proposed development. This is prepared for the Land and Environmental Court, *Gatacre LC Pty Ltd v Lane Cove Council*. This Amended Statement seeks consent for the demolition of existing buildings and structures, amalgamation of lots and the construction of a residential flat building with associated basement car parking and landscaping at Nos. 1 Gatacre Avenue and 5 Allison Avenue, Lane Cove ('site').

More specifically, the amended proposal involves the construction of a part five, part six storey residential flat building fronting both Gatacre and Allison Avenue with a total of 53 apartments, comprising 12 x one (1) bedroom, 14 x two (2) bedroom, 16 x three (3) bedroom and 11 x four (4) bedroom apartments. Vehicular access is provided via a ramp off Allison Avenue and will provide access two levels of basement parking which will accommodate 106 parking spaces, including 91 resident, 14 visitor and 1 carwash, of which 11 are accessible spaces. The proposal will also provide extensive landscaping and vegetation throughout the subject site, in addition to at-grade and rooftop communal open spaces.

The proposed residential flat building is permissible with consent in the R4 High Density Residential zone, aligns with the objectives of the zone and is largely consistent with relevant development standards and planning controls. Importantly, the proposal will contribute to the quantum of housing in an area that is well serviced by public transport.

The proposal complies with the relevant provisions of *Lane Cove Local Environmental Plan 2009* (LCLEP 2009) with the exception of a breach in height for the lift overruns on the eastern and western wings, in addition to roof and ancillary elements. A Clause 4.6 statement has been provided at **Annexure C** justifying the variation. The proposal is generally compliant with the provisions of the *Apartment Design Guide* (ADG) and *Lane Cove Development Control Plan* (LCDCP), and is a suitable form of development within the site context.

1.2 SUPPORTING DOCUMENTS

This application is accompanied by the following supporting information:

- Amended Architectural Package - prepared by *Rothelowman*;
- Amended Design Verification Statement – prepared by *Rothelowman*;
- Survey Plan – prepared by *MetWest Surveys*;
- Amended Landscape Plan– prepared by *Ground Ink Landscape Architects*;
- Geotechnical Assessment – prepared by *Martens Consulting Engineers*;
- Preliminary Site Investigation – prepared by *Martens Consulting Engineers*;
- Addendum Detailed Site Investigation prepared by *Martens Consulting Engineers*;

- Civil and Stormwater Plans – prepared by *Greenview Consulting*;
- Amended BASIX and NatHERS - prepared by *Greenview Consulting*;
- Amended Access Report – prepared by *iAccess Consulting*;
- Amended BCA Report – prepared by *Modern Building Certifiers*;
- Addendum Acoustic Report – prepared by *JHA Engineers*;
- Construction Noise and Vibration Management Plan – prepared by *JHA Services*;
- Addendum Arboricultural Impact Assessment Report – prepared by *Blues Bros Arboriculture*;
- Operational Waste Management Plan - prepared by *Elephants Foot*;
- Amended Traffic Report - prepared by *Greenview Consulting*;
- Amended Swept Path Analysis - prepared by *Greenview Consulting*;
- Amended Erosion and Sediment Control Plan - prepared by *Greenview Consulting*; and
- Quantity Surveyors Report - prepared by *WT Partnership*.

1.3 PURPOSE OF STATEMENT

The purpose of this Statement is to address the planning issues associated with the development proposal and specifically to assess the likely impact of the development on the environment in accordance with the requirements of Section 4.15 of the *Environmental Planning & Assessment Act, 1979* (EP&A Act).

This Statement has been divided into five sections. The remaining sections include an analysis of the site and locality; a description of the proposal; an environmental planning assessment pursuant to s.4.15 of the EP&A Act; and a conclusion.

2. Site Analysis and Context

2.1 THE SITE

The subject site is known as Nos. 1 Gatacre Avenue and 5 Allison Avenue, Lane Cove and has a legal description of Lot A in DP 415448 and Lots 45 and 46 in DP 11416. The subject site is an 'L' shaped allotment with a dual street frontage, located on the southern side of Gatacre Avenue and the northern side of Allison Avenue. The subject site is zoned *R4 High Density Residential.*

The location of the subject site and its immediate surrounds is outlined red in the aerial image provided at **Figure 1** below.



Figure 1 Aerial image of the subject site and surrounds. (Source: Six Maps)

The allotment has a primary street frontage to Gatacre Avenue of 38.25m and a secondary street frontage to Allison Avenue of 27.43m. The site has a (combined) north-eastern (side) boundary of 92.1m shared with the R4 High Density Residential zone and a staggered south-western (side) boundary of 91.9m shared with the R2 Low Density Residential Zone, with an indent of 11.19m to the centre of the site. The combined area of the site is 2965.8m$^{2.}$

The subject site contains a steep and varied topography which undulates across all boundaries. From Gatacre to Allison Avenue, the site falls by approximately 2m to 3m along the length of the site. From the northern to western corner, the site has a cross fall of approximately 5.5m, whilst from the eastern to southern corner, a cross fall of 4.5m.

Currently, the subject site contains a mixture of commercial and residential land uses. No. 1 Gatacre Avenue contains a part two, part three storey motel premises known as the *Comfort Inn – North Shore,* which has a dual

street frontage with vehicular and pedestrian entrance afforded from both Gatacre and Allison Avenue. Vehicle parking is provided at ground level, with accommodation spread across throughout the site.

To the south-east of the site at No. 5 Allison Avenue is a single storey detached residential dwelling. The dwelling contains a tiled pitch roof, driveway to the northern (side) boundary and a front retaining wall comprising masonry brick and hedging.

Photographs of the subject site are provided at **Figures 2** to **4**.



Figure 2 Subject site viewed from Gatacre Avenue (No. 1 Gatacre Avenue)



Figure 3 Subject site viewed from Allison Avenue (No. 1 Gatacre Avenue)



Figure 4 Subject site (No. 5 Allison Avenue)

2.2 SURROUNDING DEVELOPMENT

The surrounding locality is characterised by a mixture of commercial and residential land uses. The surrounding residential developments range from low to high density, reflective of the sites interface between R2 and R4 zoning. The locality consists of an emerging higher density residential character along Pacific Highway and Longueville Road, with an established low density residential area to the west and south of the subject site.

Adjoining the site to the north is Nos. 382-386 Pacific Highway, which contains a part 2, part 3 commercial premises with ground level parking, currently occupied by *99 Bikes Artarmon* **(Figure 5)**. However, approval was granted on 13 November 2020 under DA45/2020 for a boarding house development, comprising 54 boarding rooms including manager's room.



Figure 5 Nos. 382-386 Pacific Highway (*99 Bikes Artarmon*)

Also adjoining the site to the north-east is No. 378 Pacific Highway which contains a *Shell Coles Express* petrol station, comprising two vehicle crossovers at the intersection of Pacific Highway and Allison Avenue (**Figure 6**). The neighbouring property is located on a corner allotment, with a frontage to Pacific Highway and Allison Avenue. The site contains a total area of approximately 1,160m^2 which is suitable to accommodate a residential flat building despite falling short of the DCP requirement. That is, given the dual northern and eastern frontages, an appropriate built form can be provided to achieve a high quality contemporary development. Further, the neighbouring property is also capable of accommodating a boarding house development under the *State Environmental Planning Policy (Housing) 2021*, as was recently approved at No. 382 Pacific Highway.



Figure 6 No. 378 Pacific Highway (*Shell Coles Express*)

Adjoining the site to the south is No. 7 Allison Avenue, which contains part 1, part 2 storey single detached dwelling due to the steep on-site topography. The site is located within the R2 Low Density Residential zone and includes a garage at lower ground floor (**Figure 7**). Adjoining the site to the south-west is No. 2A Gatacre Avenue, which comprises a part 1, part 2 single detached dwelling (**Figure 8**). This neighbouring property contains an approval under DA178/2014 for alterations and additions to the rear of the dwelling, including a secondary dwelling and two vehicle carport at the street frontage.



Figure 7 No. 7 Allison Avenue (single detached dwelling)



Figure 8 No. 2A Gatacre Avenue

On the opposite side of Gatacre Avenue are a row of single detached residential dwellings at Nos. 3, 5 and 7 Gatacre Avenue (**Figure 9**). All three dwellings are of federation era period and contain a driveway and garage/carport to their respective southern boundaries. It is noted that this land is zoned R4 High Density Residential and is earmarked for redevelopment.



Figure 9 Nos. 3, 5 and 7 Gatacre Avenue

On the opposite side of Allison Avenue is No. 17 Haldane Crescent. The site contains a two storey detached dwelling, featuring extensive landscaping and tree coverage across the site (**Figure 10**).



Figure 10 No. 17 Haldane Crescent

2.3 CHARACTER OF THE LOCALITY

To the north of the subject site and along Pacific Highway, the character of the locality is undergoing change to encourage increased population density. The *Lane Cove Local Environmental Plan 2009* has identified land along the Pacific Highway and Longueville Road corridors as R4 High Density Residential as to encourage increased housing density within highly accessible locations.

As mentioned, adjoining the subject site to the north-east is Nos. 382-386 Pacific Highway which was recently approved under DA45/2020 for a five-storey boarding house development above basement level parking area (**Figure 11**).

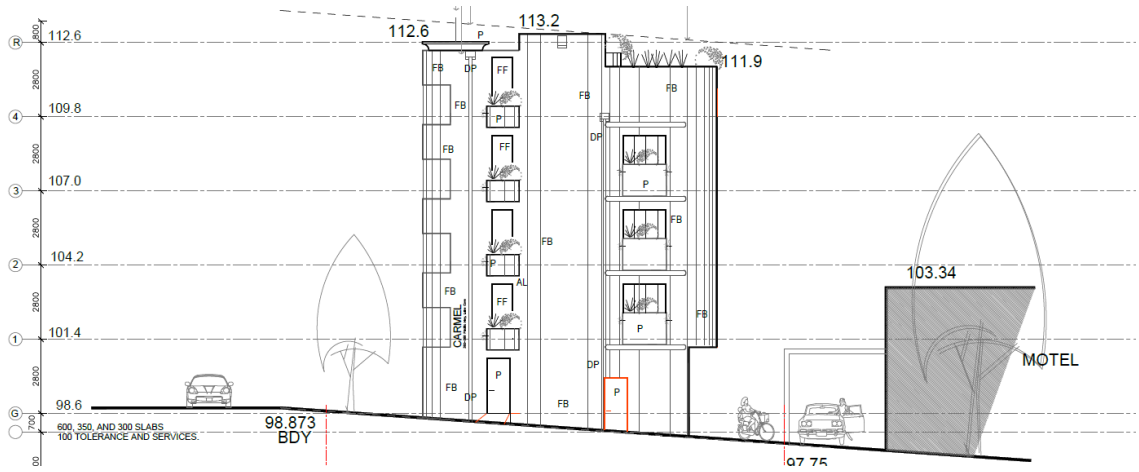


Figure 11 Boarding House approved at Nos. 382-386 Pacific Highway

To the north-west at Nos. 390-392 Pacific Highway, development approval was granted under DA175/2014 for the construction of an eight storey residential flat building comprising 69 dwellings above basement car parking. Further to the north-west, is No. 9 Mafeking Avenue which contains a 7 storey residential flat building with basement parking. Photographs of these properties are provided in **Figures 12** to **14** below.



Figure 12 Residential flat buildings at Nos. 390-392 Pacific Highway and No. 9 Mafeking Avenue viewed from Pacific Highway



Figure 13 Residential flat building at Nos. 390-392 Pacific Highway and 9 Mafeking Avenue viewed from Mafeking Avenue (looking east)



Figure 14 Residential flat building at Nos. 390-392 Pacific Highway and 9 Mafeking Avenue viewed from Mafeking Avenue (looking west)

Approval was also granted under DA33/2016 at Nos. 2-4 Burley Street, Lane Cove North for the development of an eight-storey Residential Flat Building above basement parking (**Figure 15**).



Figure 15 Residential flat building at Nos. 2-4 Burley Street viewed from Pacific Highway

The R4 zoning along the Pacific Highway and Longueville Road provides a transition in density and character from the arterial roads and opposing industrial land uses into the R2 Low Density Residential zone to the west. Located

800m further afield to the west is Lane Cove Local Centre, which includes public, retail and hospitality establishments. Kimberley Reserve is also located 400m to the south-west of the subject site and offer a public open space for the use of future residents.

2.4 CONNECTIVITY

The subject site is located within a highly accessible locality. Two bus stops are located to the east along the Pacific Highway and provide public transport connectivity across the North Shore and into the Sydney Central Business District. Bus routes which depart from the site include 144, 252, 254, 286, 287, 290 and 291. These routes provide regular services to destinations including Chatswood, North Sydney, Macquarie Park, Manly and Wynyard.

3. Description of the Proposal

3.1 OVERVIEW OF PROPOSAL

The amended development proposes the demolition of the existing dwelling houses and ancillary structures on the site and the construction of a residential flat building with two levels of basement car parking and associated landscaped works.

Specifically, the proposal comprises of 53 apartments within a part five, part six storey residential flat building fronting Allison and Gatacre Avenue (respectively). This includes 12 x 1 bedroom, 14 x 2 bedroom, 16 x 3 bedroom and 11 x 4 bedroom apartments, including 11 adaptable units. The amended proposal will also include the provision of 14 dual level, townhouse apartments. The proposed basement parking will provide for a total of 106 car parking spaces, including 91 resident, 14 visitor and 1 carwash space, of which 11 are accessible. The basement will also provide a total of 7 motorcycle spaces and 21 bicycle spaces.

The amended proposal is depicted on the plans prepared by *Rothelowman* and is described in detail below.

3.2 DEMOLITION AND EXCAVATION

The existing *Comfort Inn Hotel* located on No. 1 Gatacre Avenue and residential dwelling located on No. 5 Allison Avenue are proposed to be demolished as part of this application. Demolition detail is illustrated on the Demolition Plan provided with the architectural plan set. Demolition will comply with *AS 2601-1991: Demolition of structures*.

The site is to be excavated to facilitate basement car parking and building services.

All demolition and excavation will be undertaken using conventional construction techniques and appropriate sediment control, safety fencing and hoardings, traffic management, waste management, tree protection, noise and dust control, and protection of public and adjoining properties will be undertaken during demolition, excavation and construction.

Any hazardous waste (e.g. asbestos) that is found during the construction phase of the development will be disposed of in accordance with the relevant NSW EPA regulations and procedures.

3.3 TREE REMOVAL

Thirteen (13) trees are located on the subject site, with six (6) trees located on the neighbouring property to the south and 1 street tree. Of the abovementioned, five trees are identified as exempt species. In order to enable redevelopment, the amended proposal will seek to remove all 13 trees within the subject site which will be replaced according to the Amended Landscape Plan prepared by *Ground Ink Landscape Architects* which is submitted with this application.

Importantly, the proposal will have no adverse impact to the street tree or trees on neighbouring properties in accordance with the recommendations of the Amended Arborist Report prepared by *Blues Brothers Arboriculture*.

3.4 BUILDING ARRANGEMENT AND CONFIGURATION

The amended proposal has been designed with two wings, one fronting Gatacre Avenue (the 'western' wing) and the other fronting Allison Avenue (the 'eastern' wing). The proposed development is described on the submitted architectural plans prepared by *Rothelowman* and is detailed as follows:

Basement Level 2:

The proposed basement Level 2 is accessed via the internal ramp from basement Level 1 and has an RL of 85.1. This basement level contains parking for a total of 64 parking spaces, including 47 resident vehicles (including 4 accessible spaces), 17 visitor (including 1 accessible space), 3 motorcycle and 8 bicycle spaces. This basement level also comprises of apartment storage areas, building services and contains access to the upper levels via four lifts and two stairs.

The proposed vehicular access and parking arrangement has been designed to comply with AS2890.1.

Basement Level 1:

Access to basement level 1 is provided via a 6m wide driveway located on the south-eastern corner of the site from Allison Avenue. This level is located at RL 88.1 and contains parking for a total of 42 vehicles, comprising 31 resident (6 of which are accessible), 10 visitor spaces, 1 carwash bay, 3 motorcycle spaces and 13 bicycle spaces and 1 loading bay (which is to be utilised for waste collection and the like). It is noted that the carwash bay can also be used for visitor parking. Apartment storage, waste storage (including bulky waste) and various building services are also located on this level. Pedestrian access to basement level 2 and the upper levels is provided via four lifts and two stairs.

The proposed vehicular access and parking arrangement will comply with AS2890.1.

Ground Floor:

Western Wing (Gatacre Avenue):

Pedestrian access to the western wing lobby and ground floor apartments is provided from the western corner of the site from Gatacre Avenue. Access is provided along the southern (side) boundary and is characterised by dense landscaping and vegetation. The access pathway also links to the ground floor apartments and lobbies contained within the eastern wing.

The ground floor of the western wing will comprise of 9 apartments, including 1 x 1 bedroom, 2 x 2 bedroom, 3 x 3 bedroom and 3 x 4 bedroom apartments. It is noted that 7 of the proposed apartments are provided as dual level town houses with internal stair access to level 1. Private open spaces are provided to each apartment at ground level (and on level 1 for the town houses) in accordance with the ADG, with four apartments fronting Gatacre Avenue. The lobby for the western wing contains two lift shafts and one stair case.

Eastern Wing (Allison Avenue):

Pedestrian access to the lobby serving the eastern wing is provided from the southern corner of the site from Allison Avenue. Access is provided along the southern (side) boundary and is characterised by dense landscaping and vegetation. This pathway also provides access to the western wing via the central lobby. It is also noted that vehicular access to the basement is provided from Allison Avenue at the south-eastern corner of the site.

As detailed, the eastern wing (at ground level) contains a single lobby with two separate lifts. In total, the ground floor of the eastern wing will comprise of 6 apartments, including 1 x 2 bedroom, 4 x 3 bedroom and 1 x 4 bedroom apartments. It is noted that all of the proposed apartments (within this wing) are provided as dual level town houses

with internal stair access to level 1. Private open spaces are provided to each apartment at ground level in accordance with the ADG.

At ground level, one apartment has been designed as an adaptable dwelling in accordance with the relevant standards. The remainder of the ground floor is occupied by deep soil planting and landscaped works. A casual communal open space is provided along the southern (side) boundary which includes a variety of vegetation and landscaped elements.

Level 1:

Western Wing (Gatacre Avenue):

The level 1 western wing is accessed via two lift shafts and a staircase. This level contains a total of 9 apartments, of which 7 are designed as dual level townhouse apartments as accessed from the ground level. Level 1 will consists of 1 x 1 bedroom, 1 x 2 bedroom, 4 x 3 bedroom and 3 x 4 bedroom apartments (inclusive of the townhouse apartments as accessed from ground level). Each apartment contains its own private open space in the form of a balcony in accordance with the ADG, with four apartments fronting Gatacre Avenue.

Eastern Wing (Allison Avenue):

The level 1 eastern wing contains a total of 6 apartments, of which all are designed as dual level townhouses with internal access to the ground level. This floor is accessed via two separate lift and stair cores. This level consists of 1 x 2 bedroom, 4 x 3 bedroom and 1 x 4 bedroom apartments (inclusive of the townhouse apartments as accessed from ground level). Each apartment contains its own private open space in the form of a balcony in accordance with the ADG, with two apartments fronting Allison Avenue.

Across the entire level 1, two apartments have been designed as adaptable dwellings in accordance with the relevant standards.

Level 2:

Western Wing (Gatacre Avenue):

Within the western wing, level 2 contains a total of 8 apartments consisting of 4 x 1 bedroom, 2 x 2 bedroom, 1 x 3 bedroom and 1 x 4 bedroom apartments. Each apartment contains its own private open space in the form of a balcony in accordance with the ADG, with three apartments fronting Gatacre Avenue.

Access to this level within the western wing is provided via two lifts and staircase located within the central lobby.

Eastern Wing (Allison Avenue):

As identified, the eastern wing contains two lobbies with separate lift and stair access. On level 2, the eastern wing contains 4 apartments, consisting 2 x 2 bedroom 1 x 3 bedroom and 1 x 4 bedroom apartments. Each apartment contains its own private open space in the form of a balcony in accordance with the ADG, with one apartment fronting Allison Avenue.

Across level 2, three apartments are provided as adaptable dwellings in accordance with the relevant standards.

Level 3:

Western Wing (Gatacre Avenue):

Within the western wing, level 3 contains a total of 8 apartments consisting of 4 x 1 bedroom, 2 x 2 bedroom, 1 x 3 bedroom and 1 x 4 bedroom apartments. Each apartment contains its own private open space in the form of a balcony in accordance with the ADG, with three apartments fronting Gatacre Avenue.

Access to this level within the western wing is provided via two lifts and staircase located within the central lobby.

Eastern Wing (Allison Avenue):

As identified, the eastern wing contains two lobbies with separate lift and stair access. On level 3, the eastern wing contains 4 apartments, consisting 2 x 2 bedroom, 1 x 3 bedroom and 1 x 4 bedroom apartments. Each apartment contains its own private open space in the form of a balcony in accordance with the ADG, with one apartment fronting Allison Avenue.

Across this level, one apartment is provided as an adaptable dwelling in accordance with the relevant standards.

Level 4:

Western Wing (Gatacre Avenue):

The western wing contains a total of 7 apartments, consisting of 3 x 1 bedroom, 2 x 2 bedroom, 1 x 3 bedroom and 1 x 4 bedroom apartments. It is noted that 1 x 2 bedroom apartment is provided as a dual level townhouse with internal access to level 5. Each apartment contains its own private open space in the form of a balcony in accordance with the ADG, with three apartments fronting Gatacre Avenue.

Access to these levels within the western wing are provided via two lifts and staircase located within the central lobby. 1

Eastern Wing (Allison Avenue):

The eastern wing contains a total of 3 apartments accessed via two separate lift and stair cores. This consists of 1 x 2 bedroom, 1 x 3 bedroom and 1 x 4 bedroom apartments. Each apartment contains its own private open space in the form of a balcony in accordance with the ADG, with one apartment fronting Allison Avenue.

Across this level, two apartments have been designed as adaptable dwellings in accordance with the relevant standards.

Level 5:

Western Wing (Gatacre Avenue):

The western wing contains a total of 3 apartments, consisting of 1 x 2 bedroom and 2 x 3 bedroom apartments (of which, the single 2 bedroom apartment is provided a dual level town house with internal access to level 4). Each apartment contains its own private open space in the form of a balcony in accordance with the ADG, with two apartments fronting Gatacre Avenue. It is noted that two apartments are provided as adaptable.

Access to these levels within the western wing are provided via two lifts and staircase located within the central lobby.

Rooftop communal open space:

A rooftop communal open space is provided within the eastern and western wings which contains a variety of active and passive communal open spaces. These are accessed via the stair and lift shafts within both wings.

Within the western wing, the proposal provides one smaller (passive) communal space. The eastern wing contains an outdoor gym, swimming pool (with associated decking), outdoor dining area and yoga lawn. The entirety of the communal open space is characterised by a variety of landscaping and vegetation to improve the quality and privacy of residents and neighbouring properties.

3.5 DEEP SOIL AND LANDSCAPING

Details of the proposed landscaping are shown on the Amended Landscape Plan prepared by *Ground Ink Landscape Architects* which accompanies the development application. The Landscape Plan concentrates deep soil planting throughout the site with emphasis on the Gatacre and Allison Avenue setbacks and to the side boundaries, particularly on the edge shared with the R2 Low Density Residential zone. The proposed landscaping will provide a balance between the natural and built features of the site and will assist with softening the built form and separation of adjoining properties. Of relevance, the basement has been designed to provide suitable deep soil landscaping around the periphery of the subject site where it adjoins the public domain and neighbouring properties. That is, the amended proposal will accommodate a suitable range of vegetation which will complement the transition in character between the R4 and R2 Zone.

The amended proposal will provide 1,468.8m^2 or 49.5% of the site area as soft landscaped area, which includes 667.1m^2 (22.5% of the site area) as deep soil landscaped area and achieves the objectives of the Design Criteria contained within the Apartment Design Guide (ADG). That is, the proposal provides a deep soil area of 369.6m^2 (12.5%) with a minimum dimension of 6m and 297.5m^2 (10%) with no minimum dimension and will provide high quality soft and deep soil landscaping throughout the site. The proposal will be capable of supporting a wide variety of vegetation, including mature trees, shrubs and grasses

In terms of soft landscaping, the proposal is technically non-compliant with the controls set out in the LCDCP, which requires a total landscaped area of 40%, including 25% deep soil and 15% podium landscaping. In accordance with the discussion provided in Section 4.2.7.4 of this Amended Statement, the proposal will meet the 40% landscaped requirement, however will provide a mixture of 667.1m^2 (22.5%) deep soil and 801.7m^2 (27%) soft and podium landscaping, for a total of 1,468.8m^2 or 49.5%. Despite a variation in the mixture of deep soil and podium landscaping, the proposal provides considerable landscaping which is proportionate to the scale of built form proposed.

The Landscape Plan details that the subject site will contain of mature trees and shrubs which will grow to a mature height of 6 - 10m, which are located in the deep soil landscaped areas throughout the site. Additional shrubs, ground cover and podium landscaping will be proposed throughout the site to improve the landscaped character. As such, the density of the site will increase, so will the range of tree specifics within suitable locations that will ensure their long term retention.

The site also includes the provision of two communal open spaces, comprising a casual area along the southern (side) boundary and roof top area located on level 5. Both communal open spaces will include a variety of vegetation and recreational features to improve the amenity of future residents.

3.6 PROJECT DATA

The project data for the proposed development is provided in the table below.

Table 1 Project Data

Site Area	2965.8m^2
Gross floor area	Total GFA: 6,183.9m^2
FSR	Total floor space ratio of 2.08:1.

Table 1 Project Data	
Number of apartments	Total of 53 apartments (of which 14 are dual level townhouses), including; 12 x 1 bedroom 14 x 2 bedroom apartments 16 x 3 bedroom apartments 11 x 4 bedroom apartments
Adaptable Dwellings	11 adaptable dwellings
Building Height	16.6m to the lift overrun for the eastern wing, Allison Avenue 16.2m to the bin chute and 15.5m to the lift overrun for the western wing, Gatacre Avenue
Deep Soil Landscaping	369.6m^2 or 12.5% with minimum 6m dimension 297.5m^2 or 10% with no minimum dimension
Total Soft Landscaping	1,468.8m^2 or 49.5%
Residential Parking	106 car parking spaces provided, including 91 resident, 14 visitor spaces, 11 accessible spaces, 1 carwash and 1 loading bay space. The proposal also provides 7 motorcycle and 21 bicycle spaces.

3.7 WATER MANAGEMENT

Amended Civil and Stormwater Plans have been prepared by *Greenview Consulting* and are submitted with the development application and demonstrate that stormwater can be appropriately managed on site. Rainwater from the development will drain to subsoil, a rainwater tank or to an OSD tank in the basement.

4. Environmental Planning Assessment

4.1 PREAMBLE

This section of the Statement provides a planning assessment of the proposed development covering all relevant heads of consideration under Section 4.15 of the EP&A Act, 1979.

4.2 STATUTORY AND POLICY COMPLIANCE

The relevant matters for consideration under Section 4.15(1)(a) of the EP&A Act, 1979, are identified in Table 2.

TABLE 2 Section 4.15 Matters For Consideration

EP&A Act, 1979.	Matters for Consideration	OK	See Comments	N/A
S.4.15(1)(a)(i)	SEPP Resilience and Hazards 2021	✓	✓	
"	SEPP (Transport and Infrastructure) 2021	✓	✓	
"	SEPP No. 65 – Design Quality of Residential Apartment Development	✓	✓	
"	SEPP (Biodiversity and Conservation) 2021	✓	✓	✓
"	SEPP (Building Sustainability Index: BASIX) 2004	✓	✓	
"	Lane Cove Local Environmental Plan 2009	✓	✓	
S.4.15(1)(a)(iii)	Lane Cove Development Control Plan 2010	✓	✓	
S.4.15(1)(a)(iv)	Any other prescribed matter: – AS 2601-1991: Demolition of structures.	✓		

The matters identified in the above Table as requiring specific comment are discussed below. The primary statutory documents that relate to the subject site and the proposed development are the *State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development* and *Lane Cove Local Environmental Plan 2009 (LCLEP 2009)*.

The primary non-statutory documents relating to the subject site and proposed development are the *Apartment Design Guide (ADG)* and *Lane Cove Development Control Plan 2010 (LCDCP 2010)*. An assessment of the applicable provisions of these documents and other relevant planning instruments is provided below.

4.2.1 SEPP Resilience and Hazards 2021

State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) commenced on 1 March 2022, repealing and replacing three former SEPPs related to coastal management, hazardous and offensive development and remediation of land.

Of relevance to the proposed development as the following chapter(s):

- *Chapter 4 Remediation of Land*.

Chapter 4 Remediation of Land

Chapter 4 of the Resilience and Hazards SEPP 2021 provides planning controls for the remediation of contaminated land and requires an investigation to be made if land contamination is suspected.

In accordance with Chapter 4, the subject site has been utilised for residential purposes for a considerable period of time. However, given the subject site adjoins a petrol station a Preliminary Site Investigation prepared by *Martens Consulting Engineers* has been prepared and is submitted. The Investigation included on-site testing including soil sampling with elements which were laboratory tested for contaminated soils. The investigation concluded the following:

> *Overall, the extent of hydrocarbon impacted soils appears to be localised and limited only to the southern portion of the site in the vicinity of MW01 and MW02. Due to limited sampling and restricted access on site, additional investigations will be required to further delineate the extent of hydrocarbon impacted soils (including 5 Allison Avenue).*
>
> *All groundwater samples collected for this PSI reported concentrations below the laboratory detection limit for hydrocarbon contaminants. However due to the December 2020 hydrocarbon detection in MW01, additional groundwater monitoring rounds are recommended to measure site groundwater trends.*
>
> *It is recommended that a detailed site investigation (DSI) is completed for the site to address site data gaps and confirm site suitability for the proposed development. The DSI should be prepared to meet the requirements outlined in NSW EPA (2020) Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites and the NSW EPA (1995) Contaminated Sites: Sampling Design Guidelines.*

It follows that a Detailed Site Investigation (DSI) has also been prepared by *Martens Consulting Engineers* and is submitted with this Amended Statement. The DSI provides the following conclusions:

> *Overall, site soil and groundwater were all below the adopted SAC. Minor detections in hydrocarbon were considered to be localised in shallow fill layers and unlikely attributed to the adjacent service station. The site is therefore suitable for the proposed residential development.*
>
> *As part of site demolition works (including the existing residential dwelling at 5 Alison Ave), MA recommend that a qualified environmental consultant is present to make inspections beneath existing site buildings and collect additional soil samples to form part of the formal waste classification works which will be required for proposed excavation works and ensure that no additional contaminated material is present.*
>
> *If any unexpected finds (such as PACM, odours or soil staining) are encountered following site demolition or at any time during future site works, the unexpected finds protocol provided in Attachment H is to be followed and the unexpected find is to be investigated by a qualified environmental consultant to determine requirements for additionalinvestigation and / or remedial action.*
>
> *Where any soil material is to be removed from site, a formal waste classification assessment shall be required in accordance with the NSW EPA Waste Classification Guidelines (2014).*

Accordingly, the proposal is considered to be consistent with the requirements of Chapter 4.

4.2.2 State Environmental Planning Policy (Transport and Infrastructure) 2021

State Environmental Planning Policy (Transport and Infrastructure) 2021 commenced on 1 March 2022, repealing and replacing four former SEPPs related to infrastructure, transport, education and childcare. Of relevance to the proposed development are the following chapter(s):

- *Chapter 2 Infrastructure*

Chapter 2 Infrastructure

Chapter 2 Infrastructure seeks to facilitate the effective and timely delivery of infrastructure and protect existing infrastructure from incompatible development. The development has been assessed against the relevant Clauses of Chapter 2, as outlined below. It is noted that Pacific Highway is identified as a SP2 Classified Road.

Clause 2.119 of the Transport and Infrastructure SEPP deals with the impact of road noise or vibration on non-road development, and states that:

> *(1) This section applies to development for any of the following purposes that is on land in or adjacent to the road corridor for a freeway, a tollway or a transit way or any other road with an annual average daily traffic volume of more than 20,000 vehicles (based on the traffic volume data published on the website of TfNSW) and that the consent authority considers is likely to be adversely affected by road noise or vibration—*
>
> > *(a) residential accommodation,*
> >
> > *(b) a place of public worship,*
> >
> > *(c) a hospital,*
> >
> > *(d) an educational establishment or centre-based child care facility.*
>
> *(2) Before determining a development application for development to which this section applies, the consent authority must take into consideration any guidelines that are issued by the Secretary for the purposes of this section and published in the Gazette.*
>
> *(3) If the development is for the purposes of residential accommodation, the consent authority must not grant consent to the development unless it is satisfied that appropriate measures will be taken to ensure that the following LAeq levels are not exceeded—*
>
> > *(a) in any bedroom in the residential accommodation—35 dB(A) at any time between 10 pm and 7 am,*
> >
> > *(b) anywhere else in the residential accommodation (other than a garage, kitchen, bathroom or hallway)—40 dB(A) at any time.*
>
> *(4) In this section, freeway, tollway and transit way have the same meanings as they have in the Roads Act 1993.*

The proposal is defined under the Lane Cove LEP as a form of *Residential Accommodation.* As such, the development is subject to Clause 2.119 of the Transport and Infrastructure SEPP, Chapter 2. The RMS has calculated that Pacific Highway has an Average Annual Traffic Volume (AADT) of greater than 40,000 vehicles. As such, the development is subject to Clause 2.119.

An Acoustic Report is submitted with the application which demonstrates that it is possible for the development to comply with the requirements of the SEPP subject to a range of recommendations. It is anticipated that these recommendations will be incorporated into the conditions of consent.

4.2.3 SEPP No. 65 – Design Quality of Residential Apartment Development

SEPP No. 65 – Design Quality of Residential Flat Buildings (SEPP 65) was gazetted on 26 July 2002 and applies to the assessment of Development Applications for residential flat developments of three or more storeys in height and containing at least four dwellings. Amendment 3 to SEPP 65 commenced on 17 July 2015 and implemented various changes including the introduction of the Apartment Design Guide (ADG) to replace the Residential Flat Design Code. Due to the composition of the proposed development SEPP 65 applies to the proposal.

Schedule 1 of the Policy sets out the 9 'Design Quality Principles' and Clause 28(2) requires that the consent authority, in determining a development application to take into consideration:

- The advice (if any) of a relevant design review panel;
- The design quality of the residential flat development when evaluated in accordance with the design quality principles; and The Apartment Design Guide.
- A Design Verification has been submitted with the application detailing compliance with the design quality principles and in satisfaction of Clause 50 of the EP&A Act.

A compliance table is provided at **Annexure A** detailing compliance with the applicable Design Criteria contained within the Apartment Design Guide. The compliance table identifies that the proposal is consistent with the relevant design criteria or is acceptable on merit for the reasons detailed in the compliance table.

An Amended Design Verification Statement has been submitted with this development application by *Rothelowman* detailing compliance with the design quality principles and in satisfaction of Clause 50 of the EP&A Act.

Furthermore, Clause 6A of the SEPP states that development control plans cannot be inconsistent with the Apartment Design Guide in relation to:

> *"(a) visual privacy,*
>
> *(b) solar and daylight access,*
>
> *(c) common circulation and spaces,*
>
> *(d) apartment size and layout,*
>
> *(e) ceiling heights,*
>
> *(f) private open space and balconies,*
>
> *(g) natural ventilation,*
>
> *(h) storage."*

In addition, Clause 30(1) of the SEPP states that a development application cannot be refused if it complies with the prescribed criteria of the Apartment Design Guide in relation to ceiling heights, parking and internal apartment sizes.

4.2.3.1 Visual Privacy

Design Criteria 1 of Part 3F of the ADG prescribes separation (setback) requirements between proposed buildings and the side or rear boundaries of an allotment which are reproduced at **Table 4**. The objective of the design criteria is to ensure adequate separation distances are shared equitably between neighbouring sites to achieve reasonable levels of external and internal visual privacy. It is pertinent to note that the objective relates solely to visual amenity and is satisfied by the proposed development.

Table 3 Setback distances prescribed by the ADG and DCP

Building height	Habitable rooms & balconies	Non-habitable rooms	DCP Requirements	Proposal
Up to 12m (4 storeys)	6m	3m	6m up to 4 storeys	<u>*Southern Elevation*</u>: *Ground Floor*: 6m-7m to external façade, 4.2m to 6m to balcony *Level 1*: 6m to external façade and balconies *Level 2:* 9m to external façade, 7.5m to balconies *Level 3*: 9m to external facades and balconies <u>*Northern Elevation*</u>: *Ground*: 3m to external façade, 3m-6m to habitable rooms, nil setback to private open spaces *Level 1*: 3m to external facade (or high sill windows), 3m-6m to habitable areas *Level 2:* 3m to external façade (or high sill windows), 3.5m-6m to habitable *Level 3*: 3m to external facade (or high sill windows), 3.5m-6m to habitable
Up to 25m (5-8 storeys)	9m	4.5m	9m for 5-8 storeys	<u>Southern Elevation</u>: *Level 4:* 12m to external façade, 10.5m to 12m balconies *Level 5:* 12m to edge of communal open spaces, 15m to external facades <u>*Northern Elevation*</u>: *Level 4:* 3m to external façade (or high sill windows), 3.5m-6m to habitable *Level 5:* 3m to external façade (or high sill windows), 3.5m-6m to habitable and 6m to edge of communal open space (3m to edge of planter boxes)
Over 25m (9+ storeys)	12m	6m	-	-
	Additional 3m separation distance when adjacent to different zone		Boundary shared with R2 Zone, 9m to habitable rooms	

Part 3F to the ADG states that no building separation is required between blank walls. The Design Guidance under Part 3F also stipulates that '*Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria 1) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping'*. It is pertinent to note that the Design Guidance is not to be imposed in the same manner as Design Criteria, rather and as reproduced from the ADG, *'provides advice on how the objectives and design criteria can be achieved through appropriate design responses, or in cases where design criteria cannot be met'*. Furthermore and as identified in Clause 6A of SEPP No. 65, the visual privacy criteria contained within the ADG override any controls contained within the DCP.

<u>Northern Elevation and Setback:</u>

At ground level and to the northern (side) boundary, the proposal provides a 3m setback to the external walls across the entirety of the façade, with a number of courtyard and landscaped open spaces located between this façade and the site boundary. Importantly, a number of the walls along the eastern and western wings of the development

are provided with blank facades and are therefore technically compliant. Where the proposal provides openings on this façade and private open spaces, the encroachment is considered acceptable on the basis that these spaces are located at or below natural ground as a result of the steep topographical incline of the site and contain high level windows. That is, the ground level of the approved boarding house to the north and petrol station are generally located above the proposed ground level (and align with level 1) which mitigates any visual privacy impact. The provision of landscaping and existing boundary fencing will provide a visual and acoustic buffer to the neighbouring properties and is therefore acceptable in this regard (**Figure 16**). Importantly and as discussed further, where openings are provided from habitable rooms they are provided with a 6m setback, purposeful orientation or appropriate screening elements.

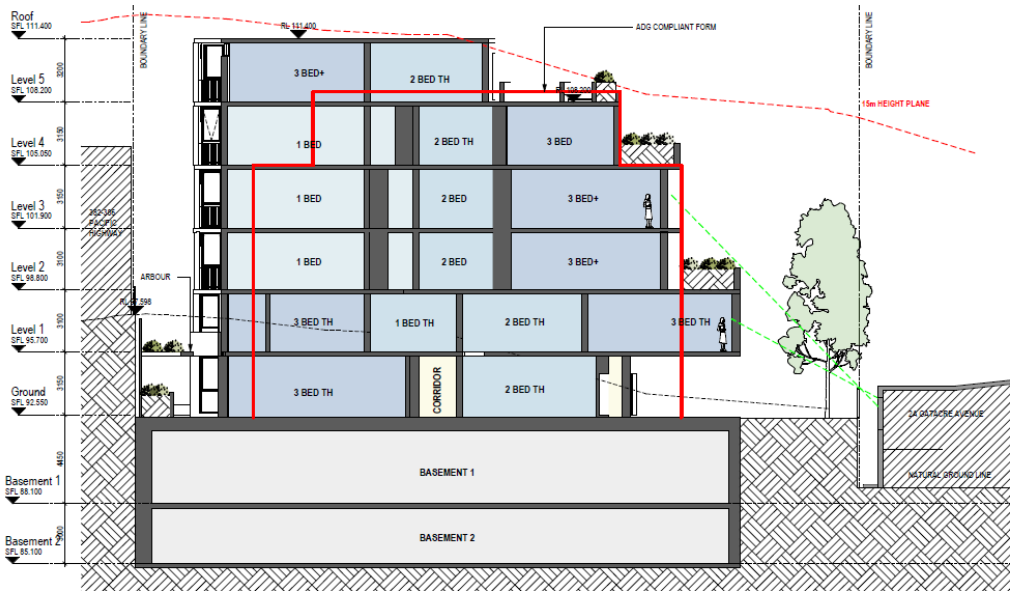


Figure 16 Section through western wing of proposal

To the northern (side) boundary and to level 1, given the topography of the subject site and of the neighbouring properties to the north, visual privacy is considered to be appropriately retained. On this level, the proposal provides a 3m setback to a series of blank facades (or high sill windows) and 3m to 6m setbacks to balcony areas and habitable rooms, noting this varies within each wing. As the proposal also provides openings to external walls and balconies within the 6m setback, these have been purposefully orientated to the respective frontages or away from the neighbouring boarding house and are inclusive of privacy screens. It is noted that where openings are provided directly opposing the side boundary, these are high level windows as to mitigate any privacy impact whilst improving solar access. Although these abovementioned spaces are technically non-compliant, these have been orientated to maximise solar gain and limit overlooking. Notwithstanding and per **Figure 16** above, boundary fencing and landscaping will lessen any privacy impacts to the approved boarding house, noting no privacy issues are to result from the existing petrol station.

As with level 1, levels 2 to 3 are designed with a 3m setback to a series of blank facades and is therefore technically compliant with the ADG. Where openings are proposed these facades, they are provided with high level sills as detailed. It is noted however that the amended proposal will also provide balconies and openings (within the western wing), with 3.5m-6m setbacks and is in-part non-compliant. Notwithstanding and per the above, these spaces are orientated to the respective street frontages or away from the neighbouring properties and include privacy screens as to reduce any adverse overlooking concerns to the boarding house development. As such, the non-compliances pertaining to levels 2 to 3 are considered acceptable given the purposeful orientation away from the approved boarding house development. It is also relevant to note that the boarding house has been conditioned for the

provision of privacy screens along its south-western façade opposing the subject site. As stipulated, the commercial nature of the petrol station is considered to mitigate any privacy concerns between the eastern wing and neighbouring property and is therefore acceptable with regards to Objective 3F-1.

To the northern (side) boundary on level 4, the proposal maintains a 3m setback to the blank facades across the eastern wing of the development. Although falling short of the 4.5m requirement, the provision of blank facades and high level windows achieves the Objective of 3F-1 and is therefore considered acceptable given no overlooking will result. Where 6m setbacks with openings are provided in the eastern wing, they overlook the petrol station and are considered acceptable. Despite not meeting the 9m requirement, it is noted that these openings are provided from the kitchen or bedrooms to enable solar access whilst minimising impacts. As such, the proposal is considered to be acceptable with regards to Objective 3F-1.

To the western wing, the proposal continues to provide blank facades with a 3m setback, however also includes the 3.5m to 6m setback as stipulated in **Table 3** and above. In this regard and as detailed, the orientation and provision of privacy screens limits the extent overlooking. As such, despite falling short of the 9m requirement, it is noted that the proposed setbacks provides building separation which is consistent with (or superior to) the approved 3m of the boarding house. That is, the proposal integrates greater measures to protect the privacy of residents on both properties. This directly satisfies objective 3F-1, which requires separation to be *shared equitably between neighbouring sites* and is therefore acceptable despite non-compliance.

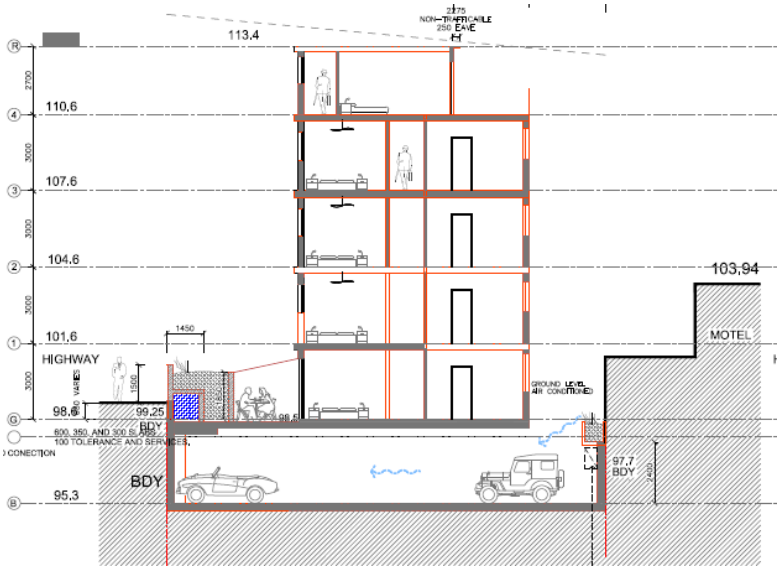


Figure 17 Section through approved boarding house development

With regards to level 5, the proposal maintains the setbacks to the western wing of the development, as detailed. Despite not meeting the requirement, these integrate orientation and privacy screens to limit overlooking. Furthermore, the openings and balconies on these levels are generally from lower trafficked bedrooms which are not to be utilised at the same degree as a living area. Furthermore and as detailed, the proposal will also provide separation which is consistent with (or greater) than the neighbouring property, which will maintain the visual privacy of both residents.

To the eastern wing and centrally, the proposal provides a roof top communal area, which is predominately setback by 6m to the edge of the open space, increasing in some instances to 7m. Despite not meeting the 9m requirement, the communal open space will be provided with landscaping and the like to provide a visual and physical privacy buffer to neighbouring properties, namely, the boarding house development. In terms of the swimming pool, this is

located centrally, setback significantly from all boundaries and given the nature and use of this space, direct overlooking will be eliminated. As such, despite technical non-compliance Objective 3F-1 is achieved.

Furthermore and in the event of redevelopment of the property to the north (that is, the petrol station), it is not anticipated that any significant openings would be proposed along the side boundary shared with the subject site given the property to the north-east (No. 378 Pacific Highway) is benefitted by two street frontages and superior orientation. That is, a superior design for this property would orientated future dwellings to the public domain to maximise solar gain as opposed to orientating dwellings to the boundary shared with the subject site.



Figure 18 Northern elevation of proposed development

Southern Elevation and Setback:

As identified, the proposal adjoins a R2 Low Density Residential zone to the south and has been designed to minimise overlooking to the neighbouring dwellings as far as practicable. At ground level and to the eastern and western wings of the development, the proposal provides a consistent 6m to 7m setback to external facades and 4.2m to 6m setback to balconies. This is in-part compliant with the ADG Design Criteria and is considered acceptable given the provision of dense vegetation (and boundary fencing) along the southern (side) boundary which will appropriately minimise any opportunity for overlooking onto the adjoining residential dwellings. Although it is noted that an additional 3m setback is advised per the Design Guidance of Part 3F and DCP, the encroachments into the 9m setback at ground floor will not result in any adverse overlooking given the provision of vegetation and boundary fencing.

On level 1, the proposal provides a 6m setback to the external façade and balconies across all levels. As above, this is technically compliant with the ADG Design Criteria, however does not meet the Design Guidance. Given this only pertains to the first floor, the extent of variation is not considered to result in any adverse overlooking to the dwellings. Furthermore, level 1 only includes the provision of lower trafficked bedrooms and has orientated higher use areas to the street frontages as to reduce overlooking. On level 2, the proposal provides a compliant 9m setback to the external façade, noting that minor (7.5m) non-compliances to balcony spaces are proposed. In this regard, the balconies include podium landscaped screening as to mitigate overlooking concerns. Furthermore, it is anticipated that views will be obtained over and across the neighbouring properties to the surrounding district views. With regards to level 3, the balconies and external façades are entirely compliant with the 9m setback requirement.

On levels 4 and 5, the proposal provides a 12m setback to the external façade and balconies and is therefore compliant, however it is noted that minor variations of 10.5m are proposed to the balconies on level 4. It follows that proposal has purposefully integrated the 12m setbacks to ensure compliance with the ADG is achieved and the proposal will satisfy the desired future character of the locality. Where 10.5m setbacks are proposed, this is technically compliant with the ADG Design Criteria, however does not meet the additional 3m requirement under the Design Guidance. Given the height difference and design measures (including vegetation and orientation) implemented ensures that views will be projected over the neighbouring dwellings and therefore visual privacy impacts mitigated. Specifically, balconies have been designed to obtain views over the roof forms of the low density

neighbours. The separation therefore provides a physical privacy buffer to the immediately neighbouring properties and orientate views to the surrounding district.



Figure 19 Southern elevation proposed development

Despite (in-part) numerical non-compliance with the ADG Design Criteria and Design Guidance, the objective stipulates that separation distances are to be *shared equitably between neighbouring sites* with regard to internal and external amenity. To the north, No. 382 Pacific Highway contains an approved boarding house development with 3m setback. The proposal is consistent with or superior with regards to its separation, particularly to habitable rooms and or balcony spaces. To the south and given the transition in zoning, the proposal provides a recessed built form with setbacks ranging from 6m to 12m in accordance with building height. When shared with the neighbouring dwellings, this provides considerable separation as is envisaged by the ADG and DCP and is therefore considered acceptable. Furthermore, the increased separation is integrated with appropriate design measures to further mitigate potential overlooking. Accordingly, the proposal is considered to provide compatible separation between the neighbouring properties, and is therefore consistent with the objective of Part 3-1 of the ADG.

When considering the Planning Principle established in *Meriton vs. City of Sydney Council* [2004] NSWLEC 314, the following needs to be considered:

> *(i) The ease with which privacy can be protected is inversely proportional to the density of development.*
>
> *(ii) Privacy can be achieved by separation. The required distance depends upon density and whether windows are at the same level and directly facing each other.*
>
> *(iii) The use of a space determines the importance of its privacy. Within a dwelling, the privacy of living areas, including kitchens, is more important than that of bedrooms. Conversely, overlooking from a living area is more objectionable than overlooking from a bedroom where people tend to spend less waking time.*
>
> *(iv) Overlooking of neighbours that arises out of poor design is not acceptable.*
>
> *(v) Where the whole or most of a private open space cannot be protected from overlooking, the part adjoining the living area of a dwelling should be given the highest level of protection.*
>
> *(vi) Apart from adequate separation, the most effective way to protect privacy is by the skewed arrangement of windows and the use of devices such as fixed louvres, high and/or deep sills and planter boxes.*
>
> *(vii) Landscaping should not be relied on as the sole protection against overlooking.*
>
> *(viii) In areas undergoing change, the impact on what is likely to be built on adjoining sites, as well as the existing development, should be considered.*

In relation the principles above, the following response is provided in relation to the privacy of the properties to the north and south:

- The site is located within a high density residential zone (R4) which is undergoing transition from lower density to residential flat building development. The density of the locality makes privacy harder to protect for the properties to the north.
- The approved boarding house development at No. 382 Pacific Highway provides a 3m setback to the boundary shared with the subject site. The proposal will provide consistent or greater setbacks to this boundary, including privacy screening elements, high light windows and orientation, to ensure visual privacy is maintained.
- The existing petrol station at No. 378 Pacific Highway is of commercial nature and no adverse privacy impacts will result. Given the location of this property, upon redevelopment it is reasonably anticipated that dwellings will be orientated to the public domain and away from the boundary shared with the subject site.
- The subject site is located adjoining a R2 low density residential zone, which requires certain measures to be implemented to protect the privacy of the neighbouring dwellings as evident in the amended design.
- To the south, the proposed development has provided 6m setbacks at ground and first floor and 9m to 12m setbacks on upper levels to protect the privacy of No. 2A Gatacre Avenue and No. 7 Allison Avenue. The proposal includes a variety of design measures to protect the amenity of neighbours.
- The proposed development is not considered a poor design with all practicable measures taken to minimise direct overlooking through separation, design solutions and screening.
- The primary area of private open space for the apartments are orientated to the street frontages as far as practicable, noting alternative measures have been implemented where required to maximize solar gain.

The central requirement of the ADG is the achievement of the relevant objective rather than achieving the numeric requirements. If it is not possible to satisfy the design criteria, applications must demonstrate what other design responses are used to achieve the objective. As such, for the reasons discussed above the proposed development is considered to satisfy the only objective of Part 3F-1 and will provide satisfactory building separation distances that *are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy*.

4.2.4 SEPP (Biodiversity and Conservation 2021

State Environmental Planning Policy (Biodiversity and Conservation) 2021 (Biodiversity and Conservation SEPP) commenced on 1 March 2022, repealing and replacing 11 previous SEPPs.

Of relevance to the proposed development are the following chapter(s

- *Chapter 2 Vegetation in non-rural areas; and*
- *Chapter 10 Sydney Harbour Catchment.*

Chapter 2 Vegetation in non-rural areas

Chapter 2 Vegetation in non-rural areas replaces the previous SEPP (Vegetation in Non-Rural Areas) 2017. The primary aims and objectives of Chapter 2 are related to the protection of the biodiversity values of the trees and other vegetation on the site in non-rural areas. This chapter works together with the *Biodiversity Conservation Act*

2016 and the *Local Land Services Amendment Act 2016* to create a framework for the regulation of clearing of native vegetation in NSW.

Chapter 2 regulates clearing that is not ancillary to development requiring consent. Whereas, clearing that is ancillary to development requiring consent will be assessed as part of the development assessment process. As such, this chapter is not applicable to the proposed development as the proposed removal of trees is ancillary to development requiring consent. It follows that the proposed removal of trees will be assessed by Council's Tree and Landscape Officer.

Details of tree removal proposed are provided within Section 3.2 and 4.3.4 of this Statement.

Chapter 10 Sydney Harbour Catchment

Chapter 10 Sydney Harbour Catchment replaces the previous *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (Sydney Harbour Catchment SREP) and applies to the subject site. Chapter 10 aims to establish a balance between promoting a prosperous working harbour, maintaining a healthy and sustainable waterway environment and promoting recreational access to the foreshore and waterways by establishing planning principles and controls for the catchment as a whole.

The site is not located on the foreshore or adjacent to a waterway and therefore, with the exception of the objective of improved water quality, the objectives of Chapter 10 are not applicable to the proposed development. It is noted that the objective of improved water quality is achieved through the Amended Stormwater Plans and can also be achieved through the imposition of suitable conditions. As such, the development is consistent with the controls contained within Chapter 10.

4.2.5 SEPP (Building Sustainability Index: BASIX) 2004

An Amended BASIX Certificate is to accompany the application and will outline various sustainability commitments will be met as part of the proposed development. The BASIX certificate(s) will demonstrate compliance with the requirements of the BASIX scheme and will be consistent with the SEPP.

4.2.6 Lane Cove Local Environmental Plan 2009

The Lane Cove Local Environmental Plan 2009 (LCLEP 2009) applies to the subject site. Under the LEP the subject site is within Zone R4 High Density Residential, as indicated on the Land Zoning Map. The proposed development is characterised as a *residential flat building* which is permissible with consent in Zone R4 under LCLEP 2009. The objectives of the R4 Zone are as follows:

- *To provide for the housing needs of the community within a high density residential environment.*
- *To provide a variety of housing types within a high density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To provide for a high concentration of housing with good access to transport, services and facilities.*
- *To ensure that the existing amenity of residences in the neighbourhood is respected.*
- *To avoid the isolation of sites resulting from site amalgamation.*
- *To ensure that landscaping is maintained and enhanced as a major element in the residential environment.*

The amended proposal will meet the objectives of the zone through the provision of a high quality residential flat building development which offers a variety of dwelling types to meet the needs of the community within a high density residential environment. The subject site is located in a highly accessible area with good access to public transport, services and facilities and will serve the needs of future residents. The built form will present to the public domain as a contemporary development with substantial articulation and vegetation, particularly given the relationship to the neighbouring properties. Furthermore, the amended proposal has also been designed to ensure all occupants will receive a high level of internal amenity whilst retaining the amenity of the adjoining R2 Low Density Residential zone.

A Compliance Table which considers the proposal against the provisions of LCLEP 2009 is provided at **Annexure B**. The proposal seeks a variation to the building height standard, which is provided in a Clause 4.6 Variation statement at **Annexure C**.

4.2.7 Lane Cove Development Control Plan 2010

The *Lane Cove Development Control Plan 2010* (LCDCP 2010) applies to all land to which the Lane Cove Local Environmental Plan 2009 applies, including the subject site. A Compliance Table is provided at **Annexure D** and considers the proposal against the relevant controls of the DCP. The compliance table demonstrates that the proposal is largely consistent with relevant DCP controls. Areas of non-compliance are discussed below and justified within the compliance table.

Of relevance, it is noted that Section 4.15(3A) of the *Environmental Planning and Assessment Act 1979 (EP&A Act 1979)* stipulates the following with regards to Development Control Plans:

> *(3A) Development control plans - If a development control plan contains provisions that relate to the development that is the subject of a development application, the consent authority—*
>
> *(a) if those provisions set standards with respect to an aspect of the development and the development application complies with those standards—is not to require more onerous standards with respect to that aspect of the development, and*
>
> *(b) if those provisions set standards with respect to an aspect of the development and the development application does not comply with those standards—is to be flexible in applying those provisions and allow reasonable alternative solutions that achieve the objects of those standards for dealing with that aspect of the development, and*
>
> *(c) may consider those provisions only in connection with the assessment of that development application.*
>
> *In this subsection, standards include performance criteria.*

Given the above, it is requested that DCP be applied in the appropriate manner.

4.2.7.1 Front Setback

Within *Part C – Residential Development* of the LCDCP 2010, Clause 3.5.1(a) establishes the front setback requirement for residential flat buildings. The following is stipulated within the DCP;

> *a) The front setback of the building shall be consistent with the prevailing setback along the street (refer Diagram No.1). However, Special Residential Areas subject to Block Plans should comply with the setback stated therein. Where there is no predominant setback within the street, and no Block Plan for the locality, the setback should be a minimum of 7.5m.*
>
> *b) The front setback area shall comprise terraces and gardens to the ground floor dwellings, deep soil zones, driveways and pathways*

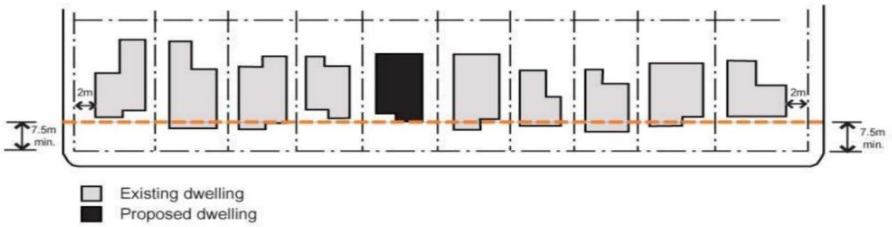


Diagram No. 1 – Predominant street setback

In accordance with the above, the proposed development has been designed with a front setback as follows:

Table 4 Front setback

	Predominant Setback	Proposal
Gatacre Avenue	6m *Note; 6 dwellings contain a 6m front setback, with 4 dwellings containing an increased setback* *Note; 2m setback to boarding house* *Note; Existing hotel setback 2m (minimum)*	*Across all levels*: 4.5m to north-eastern corner 7.5m to north-western corner
Allison Avenue	5.2m *Note; Nil to 5m setback for Petrol Station* *Note; Existing hotel setback 3m (minimum)*	*Ground level:* 6m to external façades *Remaining (upper) levels:* 6m to external façade, with increased setback to external facade in location of balconies *Note; Driveway occupying south-eastern edge*

As detailed above, the proposed development seeks to provide a front setback which responds to the transitioning character of both Gatacre and Allison Avenue. As discussed in further detail below, the setbacks are a result site topography, relationship to the R4 Zone to the north and transition to the R2 Zone at the south. Under *Section 3.5 Setbacks*, the objectives of the control are as follows:

> *1 To establish the desired spatial proportions of the street and define the street edge and provide a transition between public and private space.*
>
> *2 To assist in achieving visual privacy to dwellings from the street.*
>
> *3 To allow for street landscape character*

In accordance with the above, the proposed development has been designed to reflect the established built form of development within the R4 Zone (to the north), whilst providing an appropriate transition to the R2 Zone (to the south). That is, the front setback along both Gatacre and Allison Avenue provide setbacks which respond to the R4 and R2 Zone alike.

When considering the setback to Gatacre Avenue, per **Table 4** above, the proposal provides a 4.5m setback to the north-eastern corner and 7.5m setback to the north-western corner. Although it is noted that Council does not consider the reduced setback of the approved boarding house (at No. 382 Pacific Highway) as applicable to

informing the design, it is onerous to require a significantly increased front setback to north-eastern corner of the built form given the varying character and density of development as anticipated per the LEP. That is, the approved boarding house provides a 2m setback in which the proposed 4.5m setback (to the north-eastern corner) is consistent with and greater. Although this varies from the predominant setback (of the dwellings to the south), the proposals relationship to the setback of the approved boarding house is vital to establishing the transition in bulk, scale and character. Where the site adjoins the R2 Zone, the proposal will provide an appropriate transition of built form between the zones with the increased 7.5m setback to the north-west as is consistent with (and greater) than the predominant setback of the neighbouring dwellings.

It follows that the proposed transition is consistent in terms of bulk, scale and character when considering the different character of the zones as anticipated by the LEP and relevant development standards. Insisting on strict compliance with the 6m setback across the entirety of the site would result in an abrupt transition between the approved boarding house, proposed development and R2 Zone. The proposed 4.5m to 7.5m setback, although in-part non-compliant, achieves an appropriate relationship between the anticipated building forms within both zones. This is further supported by the 6m to 12m side setback to the external façade from the southern boundary. Importantly, the existing hotel premises on the subject site provides a similar setback as is proposed, albeit with an ageing and detracting built form.

To Allison Avenue, the proposal provides a front setback of 6m at ground level, to the external façade, as located centrally within the site. On the upper levels, the proposal similarly provides a consistent 6m setback to the external façade, however incorporates an increased setbacks to the façade where the terraces are proposed. In accordance with **Table 4**, the proposal is considered compliant across all levels. Importantly and as detailed, the proposal provides a 6m to 12m setback to the southern (side) boundary ensure the appropriate transition of bulk and scale. Furthermore and upon redevelopment of No. 378 Pacific Highway, a similar setback along Allison Avenue will be provided as is consistent with the approved boarding house, given this will also be considered a secondary frontage. Of relevance to Allison Avenue, the proposal also provides driveway access along the north-eastern boundary which enables the provision of physical and visual separation to the existing petrol station.

Accordingly, the proposed setback along Gatacre and Allison Avenue is generally compliant with the requirement, however includes relatively minor variations which directly satisfy the objectives of the control. As discussed, the proposal will reflect the established and desired streetscape proportions as envisaged by the zones. Given the unique relationship of the subject site and neighbouring properties, including the topography, built form and zoning, a degree of flexibility should be considered when imposing the DCP controls (as stipulated per Section 4.15(3A) of the EP&A Act 1979). It therefore considered that the stepped façade, particularly along Gatacre Avenue, will enable the successfully transition in zoning and between public and private spaces. Similarly, the proposal will also enable the provision of a variety of landscaping which will transition from Pacific Highway to the Low Density Residential zone.

Accordingly, the proposal is considered acceptable and achieves the objectives of the control.

4.2.7.2 Southern Setback

Within *Part C – Residential Development* of the LCDCP 2010, Clause 3.5.2(a) and (b) provides side setback requirement for residential flat buildings. The following is stipulated within the DCP;

> *a) To the boundary within the R4 zone, the minimum side and rear setback shall be: 6m up to 4 storeys 9m for 5-8 storeys 12m for 9 storeys and above.*
>
> *b) To the boundary shared with R2 and R3 zones the minimum set back will be 9m if habitable rooms/balconies orient this side.*

Per the above, the following setbacks to the southern (side) boundary are proposed:

Table 5 Setback distances prescribed DCP and proposed

Building height	DCP Requirements	Proposal	Compliance
Up to 12m (4 storeys)	6m up to 4 storeys	*Ground:* 6m-7m external façade, 4.2m to 4.5m to balcony spaces *Level 1:* 6m to external façade and balconies *Level 2:* 9m to external façade, 7.5m to balconies *Level 3:* 9m to external façade and balconies	*Ground:* Non-compliant *Level 1:* Non-compliant *Level 2:* Non-compliant to balconies, compliant to external facade *Level 3:* Compliant
Up to 25m (5-8 storeys)	9m for 5-8 storeys	*Level 4:* 12m to external façade, 10.5m to 12m to balconies *Level 5:* 12m to edge of communal open space, 15m to external facade	*Level 4:* Compliant per DCP, noting variation per ADG to balconies *Level 5:* Compliant with DCP and ADG
Boundary shared with R2 Zone, 9m to habitable rooms			

Accordingly, the proposal is generally compliant with regards to the DCP setback requirements, excluding parts of the ground and first floor as this pertains to the external façade and balconies. From levels 2 to 5, the proposal is compliant with the 9m setback as required to the R2 zone, for the external facades, noting encroachments with regards to the balconies on level 2. The following objectives also apply to side setbacks, as follows:

> *1 To establish the desired spatial proportions of the street and define the street edge and provide a transition between public and private space.*
>
> *2 To assist in achieving visual privacy to dwellings from the street.*
>
> *3 To allow for street landscape character.*

When considering the visual impact, being the spatial proportions and definition of the street edge, the proposed setbacks to the external facades and balconies at ground and first floor are consistent with the desired bulk and scale of the DCP and relationship between the two zones. Importantly and per **Table 5** above, the proposal provides compliant 9m to 12m setbacks from levels 2 to 5 to ensure an appropriate transition of bulk and scale between the zones. At ground and first floor, encroachments are integrated into the overall built form through framing, horizontal and vertical features and vegetation. These encroachments are adequately setback from the respective frontages to Gatacre and Allison Avenue to ensure they will not define bulk and scale of the development from the public domain. These elements will also be buffered by considerable landscaping and boundary fencing.

Above this, the proposal provides setbacks to the southern (side) boundary which increase in accordance with the building height. This ensures the delivery of stepped built form which recesses with density as it adjoins the R2 zone. Therefore, despite non-compliance to the external façade at lower levels and select balconies on the upper levels, the spatial proportioning and streetscape character of the subject site and its relationship to the R2 Zone will be both protected and enhanced. Importantly and per **Table 5**, the upper levels are entirely complaint with (or greater than) this requirement, noting that the DCP requires a minimum 9m setback requirement to all levels as the site adjoins the R2 Zone. That is, the DCP control differs from the ADG, in that it is a minimum 9m requirement applies to all levels under the DCP, whereas the ADG requires an additional 3m separation which increases according to building height. In this regard and when considering visual privacy (per Objective 3F-1 of the ADG), this has been discussed in depth under Section 4.2.3.1 of this Statement.

Accordingly, the proposal is considered acceptable despite the minor variations proposed.

4.2.7.3 Basement Setbacks

Within *Part C – Residential Development* of the LCDCP 2010, Clause 3.5.3(A)(I) provides requirements for the extent of basements on a site. The following is stipulated within the DCP;

> *I. Encroachments into the setback zone of up to 2m may be permitted for underground parking structures no more than 1.2m above ground level (existing), where there is no unreasonable effect on the streetscape. Refer to Diagram 10.*

The amended proposal provides setbacks to the basement of approximately 3m to 7.5m to Gatacre Avenue, 3m to Allison Avenue, 3m to 18m to the southern boundary and a nil setback to the northern boundary. Per the above, the proposal is therefore non-compliant to portions of the basement footprint. However, it is important to note that the site is subject to specific constraints, including topography, the street dual frontage, elongate and relatively narrow allotment width and zoning interface. The site specific constraints significantly limit potential compliance with this control. That is, strict compliance would require multiple levels of basement excavation which would inhibit development feasibility, whilst imposing adverse limitations on the provision of parking, building services and achievement of the relevant Australian Standards.

It follows that the proposed extent of the basement excavation is not uncommon with regards to residential developments of this scale as anticipated by the R4 zone. Given the number of units proposed, a considerable amount of on-site parking is required to achieve the DCP requirements. As detailed, the provision of additional excavation and basement levels is considered inferior to the proposed outcome, particularly given the proposal will provide significant deep soil and podium landscaping throughout the site. Furthermore, per the discussions in this Amended Statement, the extent of excavation will have no streetscape character and spatial proportions, amenity of neighbours and provision of landscaping.

Accordingly, despite the numerical variation the proposal is acceptable in this regard.

4.2.7.4 Landscaped Area

Within *Part C – Residential Development* of the LCDCP 2010, Clause 3.18(a) provides requirements for the provision of landscaped area on a site. The following is stipulated within the DCP;

> *a) A minimum of 40% of the site area is to be planted, comprising 25% landscaped area and a further minimum of 15% planting on structures or landscaped area.*

The proposed development provides a total landscaped area of 1,468.8m^2 or 49.5% and is therefore technically complaint with the overall requirement. However, the proposed development seeks a minor alteration to the required mix of deep soil and podium landscaping, being 22.5% (667.1m^2) deep soil and 27% (801.7m^2) podium landscaping. Despite strictly not meeting the 25% deep soil requirement, the proposal satisfies the Design Criteria of the ADG and is in accordance with the objectives of the control. That is, the development significantly exceeds the 7% ADG Criteria (and 15% Design Guidance for sites over 1,500m^2), providing a total deep soil area of 22.5%.

Despite the minor shortfall as it pertains to the 25% requirement, the proposal will provide sufficient vegetation of differing mature heights in accordance with the Amended Landscape Plan. As detailed in this Amended Statement, the proposal has concentrated deep soil landscaping around the periphery of the subject site, with particular emphasis on the street frontages and side boundary shared with the R2 Low Density Zone. When considering the extent of podium landscaping proposed, it is noted that *Section 4P Planting on Structures* of the ADG stipulates the following with regards to the provision of soil depths and volumes;

- *Large Trees*: 12-18m high, soil volume (150m^3), soil depth (1.2m), soil area (10mx10m);
- *Medium Trees*: 8-12m high, soil volume (35m^3), soil depth (1m), soil area (6m x 6m); and
- *Small Trees*: 6-8m high, soil volume (9m^3), soil depth (0.8m), soil area (3.5m x 3.5m).

In accordance with the above, the proposal (despite falling short of the DCP requirement) is entirely capable of supporting a variety of trees within the podium landscaped area. The Amended Landscape Pan, which includes a variety of vegetation types reflective of the desired future character of the locality, will provide suitable vegetation in the podium areas where it meets the abovementioned soil depths, volumes and areas. Accordingly and as envisaged by the ADG, the proposal will provide a suitable amount of vegetation despite the variation. The following objectives of Clause 3.18 and a response is provided in the table below.

Table 6 Objectives and Response

Objective	Response
1 To provide privacy and amenity.	The proposed development, despite falling short of the DCP requirement, will provide considerable deep soil landscaping to the site boundaries, particularly to the R2 zone. When considering the relationship of the development to the north, the proposal will achieve suitable visual and acoustic privacy through separation, orientation and privacy screens. Vegetation, where possible, has been utilised to maximise privacy. Importantly, the interface between the subject site and the residential dwellings to the south includes the provision of considerable deep soil and podium landscaping to provide a visual and physical buffer between the high and low density zone. The proposal has purposefully included the provision increased separation to the southern facade (in addition to increased basement setbacks) to enable the provision of a heavily vegetated southern setback. This will limit potential overlooking from the casual communal open space and lower level dwellings. Similarly, planter boxes and the like situated throughout the southern façade, namely on the roof top terrace, will also provide additional privacy buffers to the neighbouring properties. Accordingly, the shortfall of deep soil area will not impact the privacy or amenity of future occupants or neighbouring residents.
2 To retain and provide for significant vegetation, particularly large and medium sized trees and to provide continuous vegetation corridors.	The proposed development has been designed to retain the street trees and existing vegetation on the neighbouring properties. Although vegetation on the subject site is to be removed (per the Arborist Report), the proposal will include the provision of substantial vegetation commensurate to the scale of the development. As detailed in this Amended Statement, the relationship of the R4 to R2 Zone results in the provision of a unique streetscape and landscaped character. In order to account for the difference in zoning, the proposal will provide considerable vegetation within each front setback and along the southern side boundary. Per the Amended Landscape Plan, this will include the provision of a variety of vegetation ranging in mature heights. The proposal will establish a continuous canopy which will soften the overall built form and ensure the shortfall will have no bearing on the achievement of this objective.
3 To conserve significant natural features of the site.	The subject site does not contain any significant natural features. Existing vegetation will be replaced according to the Amended Landscape Plan and will significantly improve the character of the subject site. Importantly, the proposal has been designed to retain the topography of the site as far as practicable, particularly around the periphery where it adjoins neighbouring properties and the public domain.
4 To assist with management of the water quality and water table.	The proposal will include significant vegetation and permeable surfaces to enable water filtration throughout the site. As far as practicable, the proposal has also minimised hard paved surfaces to assist in the management of water quality.
5 To conserve and create buildings in a landscaped setting.	As detailed under Objective 1, the proposal has been purposefully designed to provide a landscaped character which is commensurate to the scale of the development and representative of the transition between the R4 and R2 Zone. The proposal, despite falling short of the deep soil requirement, will enable the provision

Table 6 Objectives and Response	
	of considerable vegetation throughout the site. The Amended Landscape Plan details the location and provision of landscaping throughout the site. This will include vegetation within both front setbacks and throughout the development via planter boxes and the like. On the uppermost floor, the proposal will also include the provision of landscaping surrounding the roof top communal terrace which will assist in the provision of a vertical garden to relate to the R2 Zone despite the significant difference in zoning and development standards.

As such, despite the numerical non-compliances with regards to the 25% deep soil area, the proposed development is consistent with the objectives of the controls in the LCDCP.

4.3 IMPACTS ON NATURAL & BUILT ENVIRONMENT

4.3.1 Topography & Scenic Impacts

The proposal requires excavation to accommodate the two levels of basement car parking. The basement is contained below natural ground line, will be directly accessible from Allison Avenue (eastern corner of the site) and will not protrude as viewed from the periphery of the site or public domain, despite the undulating topography. The completed building will occupy majority of the excavated basement area which represents an efficient use of the site for the provision of on-site parking and other facilities necessary for the building to function.

However, it is noted that proposed basement will extend beyond the footprint of the building above as a result of the site arrangement (and constraints), parking rates as required under the LCDCP and essential building services. Importantly, the footprint of the basement is consistent with a development of this scale as envisaged in the R4 High Density Residential zone. Regardless, all walls are purposefully contained below natural ground thus ensuring that the excavation will not have any adverse impact on the topography or character of the area. As part of the design, the proposal has provided sufficient setbacks (as far as practicable) from the basement to the respective site boundaries as to permit a variety of deep soil vegetation in addition to improve water permeability. This is specifically concentrated to Gatacre Avenue, Allison Avenue and the south-western (side) boundary.

It is also noted that a degree of excavation and modification to the landform is required within the western wing of the development. This is a direct result of the undulating topography and provision of basement access from Allison Avenue, which is level across the site. As such, unavoidable excavation is required in location of the western wing which will resultantly accommodate the ground floor units. Although below natural ground, these units are provided with multiple aspects or are dual level and incorporate appropriate design measures (including articulation and landscaping) to mitigate any scenic impact. Importantly, the dual level units provide living areas on the upper floor as to maximise amenity despite the required excavation. It follows that a significantly lesser degree of excavation is required along the eastern wing ground level apartments and is predicated on the significant topographical undulations across the site.

To protect the character of the locality, the topography around the periphery of the site has been maintained. This is also integrated with podium landscaping and the like to reduce the extent of hard surfaces and maximise permeability. It follows that despite the proposed excavation, a proportionate quantum of landscaped area and deep soil planting will be provided which is consistent with the ADG (and DCP) and is therefore considered acceptable. Where the excavation is located in close proximity to neighbouring properties, appropriate measures will be undertaken in accordance with the recommendations provided in the Geotechnical Assessment prepared by *Martens Consulting Engineers*. Dilapidation Reports are also anticipated to be imposed as a condition of consent to ensure the protection of the neighbouring properties during excavation.

In terms of scenic impacts, the proposal is considered to be consistent with the desired future character of the area and changing density of the locality. The proposed excavation and building design will not adversely impact the amenity of neighbouring sites or the structural integrity of nearby buildings. It is noted that the existing hotel and dwelling on the subject site are dilapidated and do not provide any scenic benefit to the locality.

4.3.2 Micro-climate Impacts

The proposed development will have no significant adverse impact on surface or ground water regimes. Therefore no significant impact on local micro-climate is anticipated. The retention of trees (where practicable) and replacement planting proposed across the site will contribute towards enhancing the urban tree canopy and assist in climate control throughout the site.

4.3.3 Water & Air Quality Impacts

During construction, appropriate sediment and erosion controls will be installed and maintained to prevent migration of sediment from the site. Once constructed, roof and surface water from the development will be captured within on-site detention and rainwater tanks at basement level.

Amended Civil and Stormwater plans prepared by *Greenview Consulting* are submitted. The plans demonstrate that stormwater can be appropriately managed on site to ensure that there is no adverse rainwater run-off from the site and water quality in the surrounding area is maintained. Therefore, the proposal will have positive impacts on the water quality of the locality.

In terms of air quality, the site will be managed during construction to mitigate any potential impacts on air quality, particularly during excavation. It is expected that appropriate dust mitigation measures will be employed during excavation, which can be secured via conditions of consent. Once complete, the proposed development is unlikely to have any notable impact on air quality.

4.3.4 Flora & Fauna Impacts

An assessment of trees on or in the vicinity of the site has been prepared by *Blue Bros Arboriculture*. There are a total of 13 trees located on the site, 6 trees on the neighbouring properties to the south and 1 street tree along Gatacre Avenue. The proposal necessitates the removal of all trees and vegetation within the site to accommodate the proposed development. In total, 13 trees will be removed from the site, of which 5 are exempt species. The street tree on Gatacre Avenue and all adjacent trees on the neighbouring property will be retained as part of the proposal. Details of tree protection are contained within the Amended Arborist Report and are anticipated to be required by conditions of consent. It is noted that the Arborist Report provides specific commentary regarding the protection of the Gatacre Avenue street tree ('Brushbox' (T15)) and removal of the 'Norfolk Island Pine' (T13).

To mitigate the loss of trees on site, extensive tree planting is proposed on site, as demonstrated in the accompanying Amended Landscape Plans prepared by *Ground Ink Landscape Architects*. The landscape plans include the provision of extensive tree and vegetation planting throughout the site, including the addition of indigenous canopy trees. Screen tree planting adjacent to site boundaries will also assist in protecting the visual and aural amenity of neighbouring properties and future occupants of the proposed development, specifically to the low density residential zone. Furthermore, additional podium planting is also proposed throughout the development and on the upper levels to complement the character of the area and further soften the built form.

It is unlikely that the subject site contains any protected flora or fauna species. Landscaping design, including species selection throughout the site will provide potential future habitats for a variety of fauna. In summary, due to the significant proposed new native plantings and increased habitat opportunities, the development is considered to have a positive impact on flora and fauna within the site and locality.

4.3.5 External Appearance & Design

The amended proposal represents an excellent response to the site constraints and reasonable permitted density on the site. The proposal, being a contemporary residential flat building, is consistent with the desired built form anticipated by the applicable planning controls and objectives of the R4 zone. The architectural language of the proposal specifically utilises a high quality, simplified design to ensure the development will not be visually alarming or obtrusive as viewed from the public domain or lower density zone. Specifically, given the transition of the zoning, the proposal provides a built form with 'calm' architectural elements and facade undulations to ensure compatibility with both the existing and desired future character of the locality. Importantly, this is integrated with a built form which provides considerable setbacks from the boundary shared with the R2 zone. That is, the building envelope provides setbacks which increase in accord with building height and ultimately result in a sensitive terrace form and recessed uppermost level (with communal open space).

Further, the building mass has been arranged to appropriately address Gatacre Avenue and Allison Avenue, whilst providing an appropriate transition of built form to the neighbouring R2 Low Density Residential zone to the south (as detailed above). Fronting both Gatacre and Allison Avenue, the built form has utilised façade undulations, framed elements, glazing and balcony articulation to create visual interest and depth. Importantly, the proposal has responded to the topography of the site and recessed the uppermost level (with the inclusion of a communal open space) as to reduce the visual bulk and scale of the development when viewed from the public domain. This has been purposefully integrated with contemporary materials including precast and patterned concrete, brick and bronze vertical cladding through a neutral colour scheme which ensures the provision of a high quality development as viewed from the public domain.

Given the location of the lower density dwellings to the south, the increased southern (side) setbacks result in the provision of an appropriately designed terrace form, which is correlated with the communal open spaces and parapet roofing as to mitigate the bulk and scale of the development as viewed from the neighbouring properties. This articulation, in conjunction with the recessed uppermost floor, ensures the provision of sympathetic built form when viewed from the R2 zone. Furthermore, the built form along the southern elevation, which also incorporates framing, balcony articulation, glazing and vertical elements, provides visual depth to the façade and is vital in ensuring the sense of enclosure to the neighbouring dwellings is mitigated.

When considering the non-compliant building height (as discussed in **Annexure C** of this Amended Statement), this only pertains to the building cores and is purposefully located away from the adjoining R2 Zone. Photomontages of the proposed development are provided in **Figures 20** to **21** below.



Figure 20 Photomontage of proposed development from Gatacre Avenue



Figure 21 Photomontage of proposed development from Allison Avenue

Integral to the proposal is also the provision of high quality landscaping throughout the site, which provides a visual and physical relationship between the transitions from the higher to the lower density character. The proposal has

concentrated landscaping to both frontages, with a significant landscaped buffer to the properties adjoining to the south. Given the undulating topography and steep incline from the southern boundary to the neighbouring dwellings, the provision of the landscaping along this edge further mitigates the bulk and scale of the development from the public domain.

The internal design and layout of the amended residential flat building achieves a high level of amenity for residents via considerable solar gain and natural cross ventilation. The proposal has also provided outlooks to the public domain and has been designed to ensure visual privacy from neighbouring properties. The proposal will also be constructed in accordance with the Acoustic Report recommendations to ensure high levels of aural privacy.

Accordingly, the proposed development will provide a high quality architectural design which is compatible with the character of the locality.

4.3.6 Solar Access

Amended shadow diagrams and view from sun diagrams have been prepared by *Rothelowman* and show the extent of shadows cast by the development between 9am and 3pm on 21 June. The shadow diagrams demonstrate shadows cast by the proposed development, a predominately DCP compliant envelope and the existing building. Importantly, the zoning of the locality, being the immediate transition between the R4 and R2 zone, steep topographical incline of the site (and neighbouring properties) and general east-west orientation results in unavoidable overshadowing to the dwellings to the south. Notwithstanding and as discussed below, it is considered that the proposed development will retain adequate solar access to the neighbouring properties in accordance with *Section 1.8.1 Solar access and overshadowing* of the LDCP controls, which state the following:

> *a) Dwellings or additions shall be so designed and orientated so as to give reasonable sunlight to the habitable rooms and recreational areas of the subject site and adjoining premises between 9.00am and 3.00pm on 21st June. In particular, dwellings are to be so located and designed that a portion of windows of neighbouring dwellings receive at least 3 hours of sun between 9am and 3pm on 21st June.*
>
> *b) Council may accept reduction in solar access for the subject site and adjacent development if the topography and lot orientation is such that the 3 hour standard is considered unachievable.*
>
> *c) Where adjacent dwellings and their open space already receive less than 2 hours of sun then new development should seek to maintain this solar access where practicable.*

In order to protect the amenity of neighbouring properties, as detailed below, the proposal has provided considerable southern (side) setbacks and a predominately compliant building height. The proposal limits the extent of built form on Level 5 as far as practicable to maintain solar access to the dwellings to the south. To No. 2A Gatacre Avenue, the proposed development will retain approximately 3 hours of solar access to 42m^2 to 130m^2 rear private open space from 11am to 3pm during mid-winter. With regards to the windows serving primary living areas, it is reasonably anticipated that openings of this dwelling are provided to the south-east as accessed from the private open space and therefore will not be adversely impacted by the proposed, beyond existing. It is considered that any openings on the northern façade of this dwelling will be impacted to a degree as is existing, by the steep topographical incline, retaining wall and existing structures on-site.

With regards to No. 7 Allison Avenue located to the south-east, the proposal will retain solar access to greater than 100m^2 of private open space from 12pm to 3pm during mid-winter. This is a direct result of the increased setbacks, (predominately) compliant building height and recessed built form and uppermost level. Importantly and when considering the difference between the proposed and a compliant built form, the increase to solar access is negligible. Furthermore, the proposal will also retain 3 hours of solar access to the north-western façade of the dwelling which is anticipated to house the primary openings serving living areas, from 12pm to 3pm. Importantly, a

comparison between the proposed envelope and a DCP compliant envelope demonstrates a negligible difference in overshadowing impact to both abovementioned properties and should be considered.

To the south-east of the subject site and on the opposite side of Allison Avenue, the proposal will result in additional overshadowing to No. 17 Haldane Crescent from 12pm to 3pm during mid-winter to varying degrees. Notwithstanding, this neighbouring property will receive in excess of 3 hours of solar access to the private open spaces and living areas from through-out mid-winter and is therefore acceptable in this regard.

Although it is noted that additional overshadowing will be cast onto the neighbouring properties, this is unavoidable given zoning, specifically the anticipated increase of density, topography and the site orientation. Importantly, the non-compliance pertaining to building height (specifically, the building cores) will not adversely impact the solar gain of the existing residential dwellings.

In terms of solar access to the proposed development, it is noted that 27 of 53 apartments (50.9%) will receive 2 hours of solar access from 9am to 3pm during mid-winter and will therefore not-comply with the ADG Design Criteria. As detailed, this is a result of the site specific constraints including site orientation, topography, location of the Pacific Highway and sensitive relationship of zone and is ultimately considered acceptable as is discussed. As such, it is considered that the proposal will not result in any unreasonable impact to overshadowing or solar access.

4.3.7 Views

There are no significant views obtained from the public domain or neighbouring properties through the subject site that are likely to be unreasonably obscured by the development. The proposed building massing is considered to be acceptable with regards to the LCLEP 2009 development standards, LCDCP 2010 building controls and ADG. As such, any incidental loss of views is considered to be a result of a compliant building envelope and form as is reasonably anticipated within the R4 High Density Residential zone.

4.3.8 Aural & Visual Privacy

In terms of privacy, the amended proposal has been designed to minimise, as far as practicable, the likelihood of any adverse overlooking or invasion of aural privacy of neighbouring properties. When considering the visual and acoustic privacy of the neighbouring sites, this is achieved by providing appropriate setbacks, orientation of views, highlight windows and privacy screens as discussed in Section 4.2.3.1 of this Amended Statement.

To the north, the amended proposal is setback consistently with or greater than the approved boarding house development at No. 382 Pacific Highway and is considered to provide equitable separation to maintain visual and aural privacy for future residents on both properties. Specifically, the proposal provide 3m to 6m setbacks to external facades and balconies which include blank walls, high sill windows, purposeful orientation and the utilisation of privacy screens to protect privacy of all residents. To the north-east, the proposal adjoins a petrol station and therefore no visual privacy concerns will result. As identified in Section 4.2.3.1, in the event of redevelopment, it is reasonably anticipated that views will be orientated to the public domain and away from the boundary shared with the subject site. It is also noted that appropriate acoustic measures will be implemented in accordance with the submitted Amended Acoustic Report which ensures the privacy of future residents will be protected.

To the south, the proposal has been purposefully designed with a staggered built form utilising 6m to 12m setbacks which increase in accordance with building height, as discussed in Section 4.2.3.1 of this Amended Statement. The proposed design purposefully orientates views over the roof form of the neighbouring dwellings to capture the district views afforded from the site. The utilisation of specific measures including setback balustrades, solid elements, privacy screens and landscaping limits the opportunity for overlooking. This is also provided in accordance with dense landscaping along the southern (side) boundary to provide a further visual privacy buffer.

An Amended Acoustic Report also provides a number of recommendations to mitigate any potential adverse noise impacts on the proposed development from the neighbouring petrol station and Pacific Highway. As detailed, the proposal has been designed to respond to the potential amenity impacts created by Pacific Highway with purposeful orientation of the built form.

In light of the above, the development will not have any adverse impacts on visual privacy of neighbouring properties or that of future occupants. Furthermore, the ongoing operation of the development will not adversely impact on neighbouring occupants existing levels of acoustic privacy.

4.4 ECONOMIC & SOCIAL IMPACTS

The proposal will have no adverse economic impacts. Undertaking the construction works will have some short-term positive economic impacts through employment generation, both direct employment and multiplier effects. The proposed development will add to the existing housing stock in the locality, providing much needed higher density accommodation in an accessible location. This will have positive social impacts.

Furthermore, the development is of a high quality design that is compatible with the desired future character of the locality and will have long term visual amenity impacts on the local streetscape.

4.4.1 Crime Prevention through Environmental Design

Part B of the Department of Urban Affairs and Planning's (now Department of Planning and Environment) Crime Prevention and the Assessment of Development Applications: Guidelines under Section 4.15 of the Environmental Planning and Assessment Act 1979 identify four Crime Prevention through Environmental Design (CPTED) principles (Table 2). Each of the principles seeks to reduce opportunities for crime and have been used to inform the NSW Police Safer by Design Guidelines for Crime Prevention. The principles are:

- Surveillance;
- Access control;
- Territorial reinforcement; and
- Space management

The subject development performs well in terms of achieving the safer by design guidelines for crime prevention. The development is deemed to be either safe or safe subject to the implementation of the following recommendations:

- The provision of ground level and higher level apartments facing Gatacre Avenue and Allison Avenue will provide for natural surveillance;
- The main pedestrian access points to the development are provided via the pedestrian pathway located along the south-wester corner of the site from Gatacre Avenue and southern corner from Allison Avenue, and is to be controlled by secure entry points with access being restricted by an intercom, key, code or card lock system;
- The entries to the pathways leading to the building lobbies off Gatacre Avenue and Allison Avenue are to be illuminated during the evening to a level that allows clear lines of sight from the street frontage;
- Vehicular access to the basement is to be restricted via a security door with access being controlled by an intercom, key, code or card lock system;
- A security alarm is to be linked to the basement entry, pedestrian entry lobbies and ground floor apartments to be activated in the event of forced entry;
- The street number of the subject building is to be readily identifiable from Gatacre Avenue and Allison Avenue;
- Vehicular access to the basement car park is to be illuminated by a sensor light during the evening;

- All painted surfaces on the external parts of the ground floor level are to be treated with a graffiti resistant coating; and
- Building management is to be responsible for the maintenance of common property including landscaping and removal of any graffiti.

4.5 THE SUITABILITY OF THE SITE

4.5.1 Access to Services

The subject site is located within walking distance of a number of bus stops on Pacific Highway and Longueville Road which are served by regular bus routes to various local and metropolitan centres and railway stations throughout Greater Sydney, as well as providing access to North Sydney and Sydney CBD's. Pacific Highway also provides convenient private vehicular access to the wider Sydney region and the Sydney CBD. This provides access to a range of services and facilities, including employment, shops, banks, community and recreational services, and medical services.

The site is also conveniently located within 800m walking distance to the Lane Cove Town Centre which is served by a number of local shops, community and commercial facilities. To the east of the site is the IN2 Light Industrial zone which is dominated by commercial premises and suitably offers employment opportunities for future residents. Additionally, the site is also suitably located in proximity to public open spaces and recreational facilities including Pottery Green Oval and Lane Cove Aquatic Centre.

As the site is within an established area, electricity, telephone, gas, water and sewerage is readily available to the subject site.

4.5.2 Car parking

Vehicular access is provided from the eastern corner of the site from Allison Avenue via a two-way driveway which consolidates the two existing driveways serving this front boundary. The proposed development will also remove the existing driveway currently providing access from Gatacre Avenue. The proposed development has been designed with 106 car spaces, consisting of 91 resident (10 being accessible) and 14 visitor spaces (1 being accessible and 1 as carwash) as required by the LCDCP. It is noted that the development elicits a total of 101 spaces, which the proposal complies. The proposed development also provides for considerable bicycle storage within the basement levels in accordance with the DCP requirements, in addition to motorcycle parking.

The design and layout of the on-site parking and vehicular access/egress is compliant with relevant Australian Standards and will not give rise to any traffic or parking issues in the locality.

An Amended Traffic and Parking Assessment Report has been prepared by *Greenview Consulting* and is submitted with this application.

4.5.3 Hazards

The subject site is not on bush fire prone, prone to land slip or flood affected land. The proposed development is not likely to increase the likelihood of such hazards occurring and is considered appropriate in this instance.

4.6 THE PUBLIC INTEREST

The amended development will increase the supply of housing diversity in the area and will meet the housing needs of the community through the provision of various 1, 2, 3 and 4 bedroom apartments. The proposed development

will provide high quality housing compatible with the scale and character of development in the R4 zone and has incorporated specific measures to ensure the amenity and character of the dwellings within the neighbouring R2 zone are retained.

Per the above, the amended development has been designed to protect the amenity of adjoining low density residential development, as well as to provide a high degree of amenity for residents within the proposed residential flat building. This includes high quality private and communal spaces which will promote social interaction and well-being. The proposed development is in an accessible location (determined by virtue of the R4 zone), with good access to local amenities, employment and services.

The proposal is consistent with the LCLEP 2009 provisions, other than the height non-compliance which is justified in **Annexure C**. The proposal is considered to have largely positive social and economic impacts, and manageable impacts on the environment. As such, the proposed development is considered to be in the public interest.

5. Conclusion

This Amended Statement accompanies an application for the demolition of existing buildings and structures, amalgamation of lots and the construction of a residential flat building with associated basement car parking and landscaping at Nos. 1 Gatacre Avenue and 5 Allison Avenue, Lane Cove. The proposed development has been assessed pursuant to Section 4.15 of the Environmental Planning & Assessment Act, 1979 and Council's relevant planning Guidelines and Policies.

The proposed residential flat building is permissible with Council's consent in the R4 – High Density Zone under Lane Cove LEP 2009. The proposed development generally complies with the applicable provisions of Council's LCLEP with exception to the maximum height of buildings development standard to the lift overruns, roof and ancillary elements. In this regard, justification pursuant to Clause 4.6 of the LCLEP is provided at **Annexures C** demonstrating why strict compliance is both unreasonable and unnecessary. The proposal is also consistent with the objectives and/or Design Criteria of the Apartment Design Guide and Council's LCDCP.

The siting, design and external appearance of the amended proposal is compatible with the existing and desired future character of the locality and will not result in any unreasonable amenity impacts to adjoining or neighbouring properties, particularly the dwellings within the R2 Low Density Residential zone. Furthermore, it will provide a variety of high quality apartments in a highly accessible location.

Conclusively, the site is suitable for the proposed development and satisfies the objectives of Zone R4. The development will positively contribute to the quality of housing stock in the locality and will have manageable impacts on both the natural and built environment in the locality. There will be no adverse impacts on the natural environment the locality and the proposed development will have positive social and economic impacts for the area.

Accordingly the proposal is considered to be in the public interest and worthy of support.

ANNEXURE A

Apartment Design Guide –
Compliance Table



Apartment Design Guide - Compliance Table

<table>
<tr><th>Clause / Control</th><th>Requirement</th><th>Proposal</th><th>Satisfies Objective</th></tr>
<tr><td colspan="4">Part 3 Siting the development</td></tr>
<tr><td rowspan="2">3D Communal Open Space</td><td>1. Communal open space has a minimum area equal to 25% of the site (site area = 2965.8m^2). Minimum required = 764.4m^2</td><td>Communal open space is provided at ground level (685.6m^2) and on the roof top (509.1m^2), and therefore has a total area of 1,194.8m^2 or 40%.
It is noted that the proposal has included the area along the southern boundary as a casual area of interaction between future residents. This space is provided with significant vegetation and quality landscaping to encourage casual social interaction between residents. This spaces acts as ancillary to the primary communal open space on the roof top.</td><td>Yes</td></tr>
<tr><td>2. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter)</td><td>The proposed communal open spaces will achieve 2 hours of solar access to 40% to 49.4% of area from 1pm to 3pm during mid-winter. Although not strictly complying, this is considered acceptable as the development will provide a variety of useable spaces including at-grade and roof top areas.</td><td>On merit</td></tr>
<tr><td>3E Deep Soil Zones</td><td>1. Deep soil zones are to meet the following minimum requirements:
<table><tr><th>Site Area</th><th>Minimum Dimension</th><th>Deep Soil Zone</th></tr><tr><td>Less than 650m^2</td><td>-</td><td rowspan="3">7% of the site area</td></tr><tr><td>650m^2 to 1,500m^2</td><td>3m</td></tr><tr><td>Above 1,500m^2</td><td>6m</td></tr></table></td><td>The proposal will provide 12.5% (369.6m^2) of deep soil landscaped area with a minimum dimension of 6m.</td><td>Yes</td></tr>
<tr><td>3F Visual Privacy</td><td>1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:</td><td>The amended proposal provides the following setbacks to side boundaries:</td><td>On merit – refer to</td></tr>
</table>

Apartment Design Guide - Compliance Table			
	<table><tr><th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></tr><tr><td>Up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr><tr><td>Up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr><tr><td>Over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr></table> No building separation is necessary where building types incorporate blank party walls. Typically, this occurs along a main street or at podium levels within centres. **Design Guidance:** Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria 1) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping.	*Southern Elevation*: *Ground Floor*: 6m-7m to external façade, 4.2m to 6m to balcony *Level 1*: 6m to external façade and balconies *Level 2:* 9m to external façade, 7.5m to balconies *Level 3*: 9m to external facades and balconies *Level 4:* 12m to external façade, 10.5m to 12m to balconies *Level 5:* 12m to edge of communal open spaces, 15m to external facades *Northern Elevation*: *Ground*: 3m to external façade, 3m-6m to habitable rooms, private open spaces to boundary *Level 1*: 3m to external facade (or high sill windows), 3m-6m to habitable *Level 2:* 3m to external façade (or high sill windows), 3.5m-6m to habitable *Level 3*: 3m to external facade (or high sill windows), 3.5m-6m to habitable *Level 4:* 3m to external façade (or high sill windows), 3.5m-6m to habitable *Level 5:* 3m to external façade (or high sill windows), 3.5m-6m to habitable and 6m to edge of communal open space (3m to edge of planter boxes)	Section 4.2.3.1
3J Bicycle and Car Parking	1. For development in the following locations: • on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or • on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre	Not applicable. LCDCP parking rates apply.	N/A

Apartment Design Guide - Compliance Table			
	the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments (GTTGD), or the car parking requirement prescribed by the relevant council, whichever is less.		
Part 4 Designing the Building			
4A Solar Access and Daylight	1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	27 of the 53 apartments (50.9%) receive required degree of solar access as per the ADG. Although non-compliant, as discussed in this Amended Statement his is a direct response to the site constraints including orientation, topography, location of Pacific Highway and sensitive zone interface. Specifically and per the ADG, it is noted that solar access cannot be achieved on some sites, given the following: • *where greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source* • *on south facing sloping sites* • *where significant views are oriented away from the desired aspect for direct sunlight* In accordance with the above, the design has orientated spaces away from the Pacific Highway, is located on a site with a considerable southern boundary and has orientated spaces towards desirable district and skyline views. In this regard, the shortfall is a direct result of the site constraints and represents the most skilful response to the site constraints.	On merit

<table>
<tr><th colspan="4">Apartment Design Guide - Compliance Table</th></tr>
<tr><td>4B Natural Ventilation</td><td>1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed</td><td>37 of the 53 apartments (69.8%) and will the satisfy cross ventilation requirements despite the 0.2% shortfall.</td><td>On merit</td></tr>
<tr><td></td><td>2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line</td><td>Refer to architectural plans.</td><td>Yes</td></tr>
<tr><td>4C Ceiling Height</td><td>1. Measured from finished floor level to finished ceiling level, minimum ceiling heights are:<table><tr><th colspan="2">Minimum ceiling height</th></tr><tr><td>Habitable rooms</td><td>2.7m</td></tr><tr><td>Non-habitable rooms</td><td>2.4m</td></tr></table></td><td>2.7m floor-to-ceiling heights proposed throughout.</td><td>Yes</td></tr>
<tr><td>4D Apartment Layout</td><td>1. Apartments are required to have the following minimum internal areas:<table><tr><th>Apartment type</th><th>Minimum internal area</th></tr><tr><td>Studio</td><td>35m^2</td></tr><tr><td>1 bedroom</td><td>50m^2</td></tr><tr><td>2 Bedroom</td><td>70m^2</td></tr><tr><td>3 Bedroom</td><td>90m^2</td></tr></table>The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m^2 each.</td><td>All apartments comply with the minimum dimensions and areas.

Apartments with additional bathrooms are provided the additional 5m^2. Refer to data sheet and dimensions provided on plan set.</td><td>Yes

Yes</td></tr>
</table>

Apartment Design Guide - Compliance Table			
	2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms	Each habitable room has a sufficiently sized window/s for solar access and natural ventilation.	Yes
	1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height.	Dimensions provided on the submitted plan set demonstrate that rooms are appropriately proportioned to comply with the numeric requirements of the ADG and to permit entry of sunlight and natural ventilation throughout internal spaces.	Yes
	2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.	Dimensions indicated on plans demonstrate that living area depths comply with numeric requirements. Where the living area depth exceeds 8m (as identified on the submitted plans) it is noted large glazed openings are provided which ensure adequate solar access and ventilation into the apartments. Furthermore, these areas are provided with generous internal living areas which result in non-compliance. That is, compliance could be numerically achieved however would result in a reduction of internal area therefore representing an inferior outcome. It is also noted that the extent of non-compliances is measured to the furthest edge of the kitchen.	Yes On merit
	1. Master bedrooms have a minimum area of $10m^2$ and other bedrooms $9m^2$ (excluding wardrobe space)	Refer to plan set which demonstrates that each bedroom is sized to comply with the numeric requirements of the AGD.	Yes
	2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	Each bedroom has a minimum dimension of 3m to allow for typical furniture layouts.	Yes
	3. Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments • 4m for 2 and 3 bedroom apartments	Each living room has a minimum dimension which accords with the ADG to allow for varied furniture layouts.	Yes

<table>
<tr><th colspan="4">Apartment Design Guide - Compliance Table</th></tr>
<tr><td></td><td>4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts</td><td>Refer to architectural plans.</td><td>Yes</td></tr>
<tr><td>4E Open Space</td><td>All apartments are required to have primary balconies as follows:
<table><tr><th>Dwelling type</th><th>Minimum area</th><th>Minimum depth</th></tr><tr><td>Studio</td><td>4m^2</td><td>-</td></tr><tr><td>1 bedroom</td><td>8m^2</td><td>2m</td></tr><tr><td>2 Bedroom</td><td>10m^2</td><td>2m</td></tr><tr><td>3 Bedroom +</td><td>12m^2</td><td>2.4m</td></tr></table>The minimum balcony depth to be counted as contributing to the balcony area is 1m.</td><td>Each apartment is provided with an area of private open space in the form of a balcony that is directly accessible from a primary living area and generally complies with the minimum area and depth requirements of the ADG.
The proposal is complaint with the relevant requirements. Where the proposal falls short, multiple balconies are provided with high levels of amenity.</td><td>Yes

Yes and On merit</td></tr>
<tr><td></td><td>2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m^2 and a minimum depth of 3m</td><td>Where possible, the ground level apartments have been provided with adequate courtyard spaces. Although it is noted that not all ground level courtyards achieve the 3m dimension, they meet the 15m^2 requirement and provide generous spaces with landscaping and the like to improve amenity. Furthermore, a number of these spaces include first floor balconies serving the two storey townhouse configuration.</td><td>On merit</td></tr>
<tr><td>4F Common Circulation Space</td><td>1. The maximum number of apartments off a circulation core on a single level is 8.</td><td>The maximum number of apartments off a circulation core is 9 (within the western wing), which is only located at ground and first floor. Given 6 of 9 apartments on the ground and first floor are provided as dual level townhouses, this will not create any significant strain on vertical access., Furthermore, the western wing also contains two lift cores to mitigate potential impact.</td><td>On merit

Yes</td></tr>
</table>

<table>
<tr><th colspan="4">Apartment Design Guide - Compliance Table</th></tr>
<tr><td></td><td></td><td>It is noted that the remainder of the development, being the upper levels of the eastern and western wing, contain a maximum of 8 apartments and is compliant.</td><td></td></tr>
<tr><td></td><td>2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.</td><td>Not applicable.</td><td>N/A</td></tr>
<tr><td>4G Storage</td><td>1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:
<table><tr><th>Dwelling type</th><th>Storage volume</th></tr><tr><td>Studio</td><td>4m^3</td></tr><tr><td>1 bedroom</td><td>6m^3</td></tr><tr><td>2 Bedroom</td><td>8m^3</td></tr><tr><td>3+ Bedroom</td><td>10m^3</td></tr></table>At least 50% of the required storage is to be located within the apartment.</td><td>Each apartment is provided with sufficient storage space, at least 50% is provided within the apartment.</td><td>Yes</td></tr>
</table>

ANNEXURE B

Lane Cove LEP 2009 –
Compliance Table



LANE COVE LEP 2009 – COMPLIANCE TABLE			
Clause / Control	Requirement	Proposal	Complies?
Part 2 Permitted or prohibited development			
2.2 Zone objectives and Land Use Table	Zone R4 High Density Residential	*Residential flat buildings* are permitted with consent. The proposal is consistent with the zone objectives as follows:	Yes
	• To provide for the housing needs of the community within a high density residential environment.	The proposed development will provide for the housing needs of the community through providing a mixture of apartment typologies within a high density environment.	Yes
	• To provide a variety of housing types within a high density residential environment.	As above, the proposed development will provide for a variety of apartment types including 12 x 1 bedroom, 14 x 2 bedroom and 16 x 3 bedroom and 11 x 4 bedroom apartments, including 11 adaptable dwellings.	
	• To enable other land uses that provide facilities or services to meet the day to day needs of residents.	This objective is not relevant to the proposal.	
	• To provide for a high concentration of housing with good access to transport, services and facilities.	The amended proposal will provide a proportionate increase of residential density within proximity to Pacific Highway (as anticipated by the zoning) and will offer future residents good access to public transport, open spaces, employment opportunities and commercial and retail facilities within the locality.	
	• To ensure that the existing amenity of residences in the neighbourhood is respected.	The proposed development has been purposefully designed to retain the amenity of the approved boarding house development to the north-east and residential dwellings to the south.	
	• To avoid the isolation of sites resulting from site amalgamation.	The proposal will occupy the remaining undeveloped allotments within the R4 zone and will not result in any form of site isolation. The existing petrol station to the north-east is anticipated to remain for a considerable period of time and can be redeveloped given it occupies an appropriate site area. Importantly, it is noted that the petrol station is of sufficient size with a dual frontage to permit redevelopment as a residential flat building or boarding house development as is permissible in the zone.	

LANE COVE LEP 2009 – COMPLIANCE TABLE			
	• To ensure that landscaping is maintained and enhanced as a major element in the residential environment.	The proposal will provide significant landscaping throughout the site and to both frontages which will enhance the residential environment through considerable improvements to the landscaped character over existing.	
Part 4 Principal development standards			
4.3 Height of buildings	(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map. *Maximum height = 15m*	The proposal also has a maximum height of 16.2m to the bin cute and 15.5m to the lift overrun of the western wing facing Gatacre Avenue and 16.6m to the lift overrun (core 2) of the eastern wing facing Allison Avenue which also does not comply. Refer to Clause 4.6 Variation in **Annexure C**.	No – Refer to Clause 4.6 Variation in **Annexure C**
4.4 Floor Space Ratio	(2) The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map. *Maximum FSR = 2.4:1* *Maximum GFA= 7,117.92m^2*	The proposed development comprises 6,189.3m^2 of GFA which equates to an FSR of 2.08:1.	Yes
Part 6 Additional Local Provisions			
6.1A Earthworks	(3) Before granting development consent for earthworks, the consent authority must consider the following matters— (a) the likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality, (b) the effect of the proposed development on the likely future use or redevelopment of the land, (c) the quality of the fill or the soil to be excavated, or both,	 Stormwater plans accompanying the application demonstrate that the proposal will not give rise to adverse drainage impacts on the site or surrounds. The proposed development is for high density residential development which is compatible with the desired future character of the site and locality. The excavation will not adversely affect the future use of the site. Any excavated materials will be reused on site where appropriate.	 Yes Yes Yes

LANE COVE LEP 2009 – COMPLIANCE TABLE			
	(d) the effect of the proposed development on the existing and likely amenity of adjoining properties,	It is anticipated that the earthworks can be undertaken without adversely impacting neighbouring properties, as per the submitted Geotechnical Report prepared by *Martens Consulting Engineers*. Dilapidation surveys are expected to be required as conditions of consent.	Yes
	(e) the source of any fill material and the destination of any excavated material,	All excavated material will be disposed of in accordance with the relevant NSW guidelines and requirements.	Yes
	(f) the likelihood of disturbing relics,	It is unlikely that the proposed excavation will disturb relics. If, during excavation works, relics are encountered, excavation works will cease until the relevant authorities have been notified in accordance with the relevant guidelines.	Yes
	(g) the proximity to and potential for adverse impacts on any watercourse, drinking water catchment or environmentally sensitive area.	The site is not located in the vicinity of any waterway, drinking water catchment or environmentally sensitive land.	Yes

ANNEXURE C

Clause 4.6 Variation Request –
Building Height



Clause 4.6 Variation Statement – Maximum Height (Clause 4.3)

1. Height of Buildings standard

Clause 4.3 (2) of LCLEP 2009 relates to the maximum height requirements and refers to the Height of Buildings Map. Building height is defined as:

> *(a) in relation to the height of a building in metres—the vertical distance from ground level (existing) to the highest point of the building, or*
>
> *(b) in relation to the RL of a building—the vertical distance from the Australian Height Datum to the highest point of the building,*
>
> *including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like*

The relevant map [sheet HOB_003] indicates that the maximum building height permitted at the subject site is 15m.



Figure 22 Extract from Height of Buildings Map [O=15m]

2. Proposed variation to height of buildings development standard

The architectural plans indicate that the proposed development has a maximum height of 16.6m to the lift overrun of building core (2) within the eastern wing fronting Allison Avenue in accordance with the definition of height under LCLEP 2009. Within the eastern wing, the proposal is also non-compliant to the lift overrun for building core (1), with a height of 16m. Within the western wing fronting Gatacre Avenue, the proposal also provides non-compliance to the bin chute enclosure of 16.2m, and a non-compliance to the lift overrun of 15.5m. Furthermore, throughout both the eastern and western wing, the proposal seeks minor non-compliances to roof elements, portions of the external façade and ancillary features such as balustrades. Refer to **Figure 23 to 26** below.

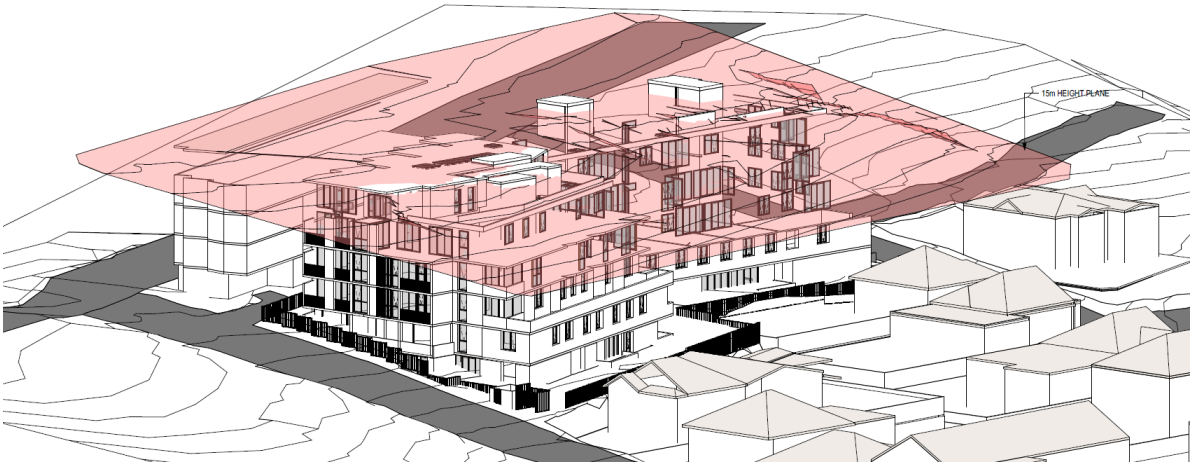


Figure 23 Height Blanket Diagrams

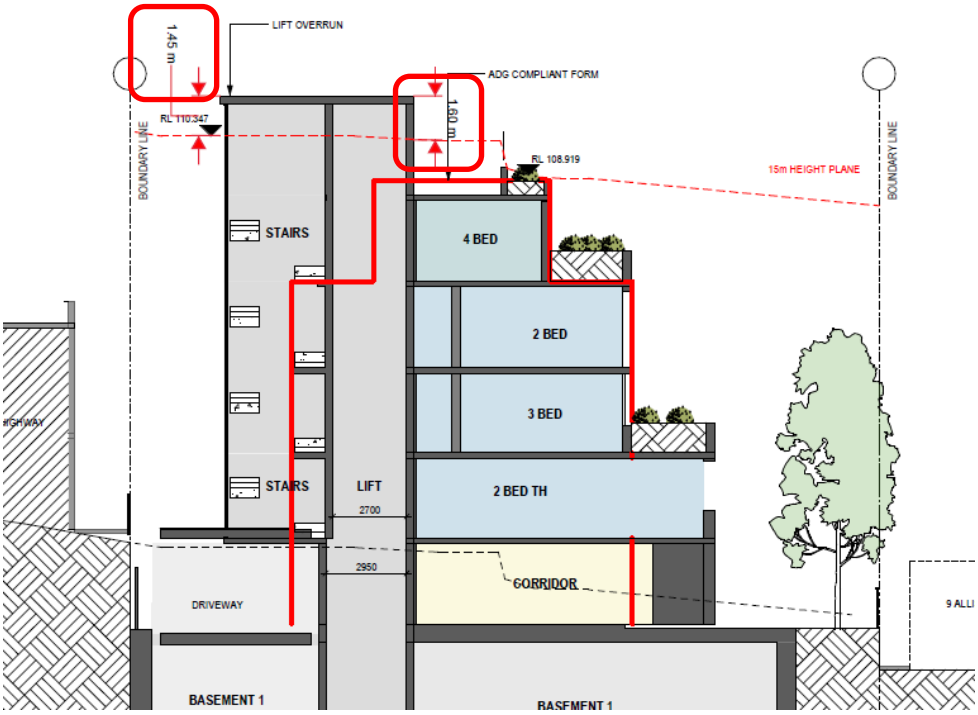


Figure 24 Section through building core (2) – eastern wing

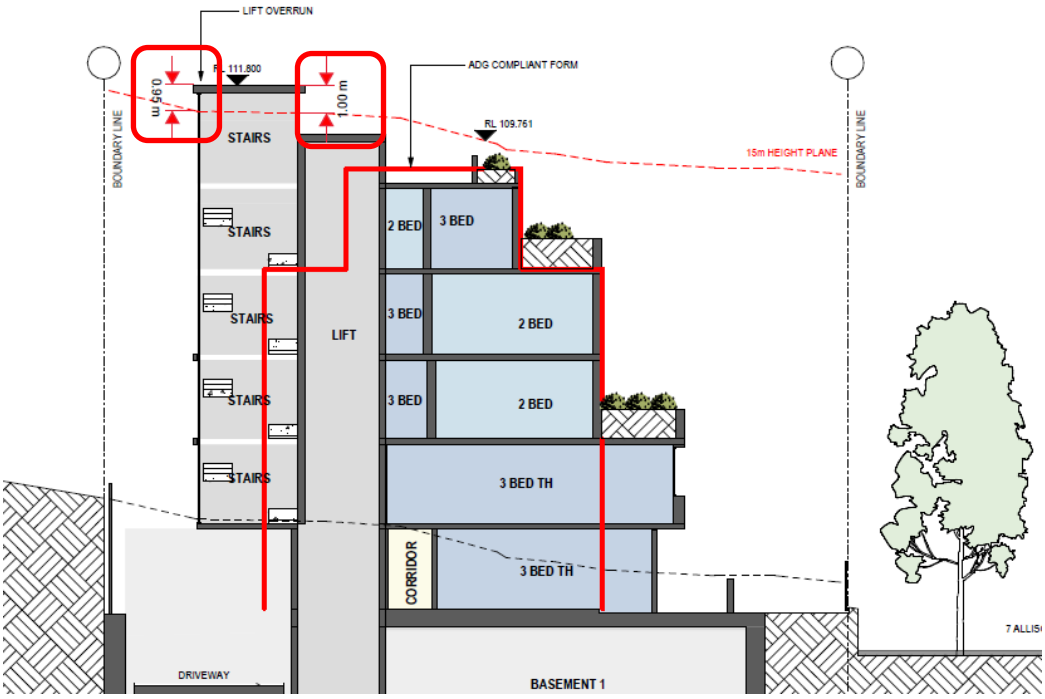


Figure 25 Section through building core (1) – eastern wing

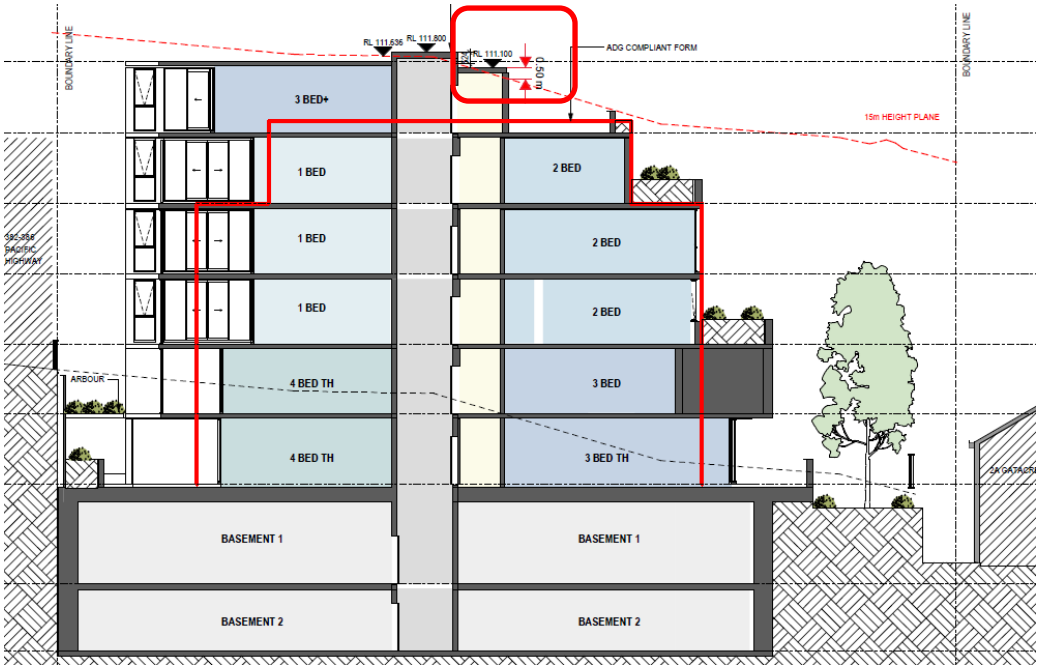


Figure 26 Section through building core – western wing

Accordingly, the proposal provides a maximum building height of 16.6m, being a variation of 1.6m or 10.6% to the lift overrun within building core (2) in the eastern wing fronting Allison Avenue.

3. Clause 4.6 to LCLEP 2009

The objectives and provisions of clause 4.6 are as follows:

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

(a) to provide an appropriate degree of flexibility in applying certain development standards to particular development,

(b) to achieve better outcomes for and from development by allowing flexibility in particular circumstances.

(2) Development consent may, subject to this clause, be granted for development even though the development would contravene a development standard imposed by this or any other environmental planning instrument. However, this clause does not apply to a development standard that is expressly excluded from the operation of this clause.

(3) Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating—

(a) that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and

(b) that there are sufficient environmental planning grounds to justify contravening the development standard.

(4) Development consent must not be granted for development that contravenes a development standard unless—

(a) the consent authority is satisfied that—

(i) the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and

(ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and

(b) the concurrence of the Planning Secretary has been obtained.

(5) In deciding whether to grant concurrence, the Planning Secretary must consider—

(a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and

(b) the public benefit of maintaining the development standard, and

(c) any other matters required to be taken into consideration by the Planning Secretary before granting concurrence.

(6) Development consent must not be granted under this clause for a subdivision of land in Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU3 Forestry, Zone RU4 Primary Production Small Lots, Zone RU6 Transition, Zone R5 Large Lot Residential, Zone E2 Environmental Conservation, Zone E3 Environmental Management or Zone E4 Environmental Living if—

(a) the subdivision will result in 2 or more lots of less than the minimum area specified for such lots by a development standard, or

(b) the subdivision will result in at least one lot that is less than 90% of the minimum area specified for such a lot by a development standard.

Note—*When this Plan was made it did not include Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU3 Forestry, Zone RU4 Primary Production Small Lots, Zone RU6 Transition, Zone R5 Large Lot Residential, Zone E3 Environmental Management or Zone E4 Environmental Living.*

(7) After determining a development application made pursuant to this clause, the consent authority must keep a record of its assessment of the factors required to be addressed in the applicant's written request referred to in subclause (3).

(8) This clause does not allow development consent to be granted for development that would contravene any of the following—

(a) a development standard for complying development,

(b) a development standard that arises, under the regulations under the Act, in connection with a commitment set out in a BASIX certificate for a building to which State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 applies or for the land on which such a building is situated,

(c) clause 5.4,

(ca) clause 4.1A,

(cb) Part 7, except clauses 7.1(4)(e) and 7.2.

The development standards in Clause 4.3 are not "expressly excluded" from the operation of Clause 4.6.

Objective 1(a) of Clause 4.6 is satisfied by the discretion granted to a consent authority by virtue of Subclause 4.6(2) and the limitations to that discretion contained in subclauses (3) to (8). This submission will address the requirements of Subclauses 4.6(3) & (4) in order to demonstrate to the consent authority that the exception sought is consistent with the exercise of "an appropriate degree of flexibility" in applying the development standard, and is therefore consistent with objective 1(a). In this regard, the extent of the discretion afforded by Subclause 4.6(2) is not numerically limited, in contrast with the development standards referred to in, Subclause 4.6(6).

It is hereby requested that a variation to this development standard be granted pursuant to Clause 4.6 so as to permit a maximum building height of 16.6m which equates to a numerical variation of 1.6m and a percentage variation of 10.6%, noting that the maximum height relates to the lift overrun of building core (2) within the eastern wing fronting Allison Avenue.

4. Compliance is unreasonable or unnecessary in the circumstances of the case (Clause 4.6(3)(a))

Of relevance to Clause 4.6(3)(a), in *Wehbe V Pittwater Council (2007) NSW LEC 827* Preston CJ sets out ways of establishing that compliance with a development standard is unreasonable or unnecessary. It states, inter alia:

" An objection under SEPP 1 may be well founded and be consistent with the aims set out in clause 3 of the Policy in a variety of ways. The most commonly invoked way is to establish that compliance with the development standard is unreasonable or unnecessary because the objectives of the development standard are achieved notwithstanding non-compliance with the standard."

The judgement goes on to state that:

" The rationale is that development standards are not ends in themselves but means of achieving ends. The ends are environmental or planning objectives. Compliance with a development standard is fixed as

the usual means by which the relevant environmental or planning objective is able to be achieved. However, if the proposed development proffers an alternative means of achieving the objective strict compliance with the standard would be unnecessary (it is achieved anyway) and unreasonable (no purpose would be served)."

Preston CJ in the judgement then expressed the view that there are 5 different ways in which an objection may be well founded and that approval of the objection may be consistent with the aims of the policy, as follows (with emphasis placed on number 1 for the purposes of this Clause 4.6 variation [our underline]):

1. *The objectives of the standard are achieved notwithstanding non-compliance with the standard;*
2. *The underlying objective or purpose of the standard is not relevant to the development and therefore compliance is unnecessary;*
3. *The underlying object of purpose would be defeated or thwarted if compliance was required and therefore compliance is unreasonable;*
4. *The development standard has been virtually abandoned or destroyed by the Council's own actions in granting consents departing from the standard and hence compliance with the standard is unnecessary and unreasonable;*
5. *The zoning of the particular land is unreasonable or inappropriate so that a development standard appropriate for that zoning is also unreasonable and unnecessary as it applies to the land and compliance with the standard that would be unreasonable or unnecessary. That is, the particular parcel of land should not have been included in the particular zone.*

Relevantly, in *Initial Action Pty Ltd v Woollahra Municipal Council [2018] NSWLEC 118* (paragraph 16), Preston CJ makes reference to Wehbe and states:

"…Although that was said in the context of an objection under State Environmental Planning Policy No 1 – Development Standards to compliance with a development standard, the discussion is equally applicable to a written request under cl 4.6 demonstrating that compliance with a development standard is unreasonable or unnecessary."

Clause 4.6(3)(a) requires that the written request to vary a development standard demonstrate that compliance with the development standard is unnecessary or unreasonable in the circumstances of the case. Requiring strict compliance with the standard is unreasonable or unnecessary because:

- the development is consistent with the standard and zone objectives, even with the proposed variation (refer to Section 7 below);
- there are no additional significant adverse impacts arising from the proposed non-compliance; and
- important planning goals are achieved by the approval of the variation.

On this basis, the requirements of Clause 4.6(3)(a) are satisfied.

5. Sufficient environmental planning grounds (Clause 4.6(3)(b))

Having regard to Clause 4.6(3)(b) and the need to demonstrate that there are sufficient environmental planning grounds to justify contravening the development standard. Specifically, Preston CJ in *Initial Action Pty Ltd v Woollahra Municipal Council [2018] NSWLEC 118* (paragraph 24) states:

The environmental planning grounds relied on in the written request under cl 4.6 must be "sufficient". There are two respects in which the written request needs to be "sufficient". First, the environmental planning grounds advanced in the written request must be sufficient "to justify contravening the development standard". The focus of cl 4.6(3)(b) is on the aspect or element of the development that

contravenes the development standard, not on the development as a whole, and why that contravention is justified on environmental planning grounds. The environmental planning grounds advanced in the written request must justify the contravention of the development standard, not simply promote the benefits of carrying out the development as a whole: see Four2Five Pty Ltd v Ashfield Council [2015] NSWCA 248 at [15]. Second, the written request must demonstrate that there are sufficient environmental planning grounds to justify contravening the development standard so as to enable the consent authority to be satisfied under cl 4.6(4)(a)(i) that the written request has adequately addressed this matter: see Four2Five Pty Ltd v Ashfield Council [2015] NSWLEC 90 at [31].

The assessment of this numerical non-compliance is also guided by the decisions of the NSW LEC *in Four2Five Pty Ltd v Ashfield Council [2015] NSWLEC 90* and *Four2Five Pty Ltd v Ashfield Council [2015] NSWCA 248* whereby Justice Pain ratified the original decision of Commissioner Pearson. The following planning grounds are submitted to justify contravening the maximum building height:

1. The height breach is at its greatest for the lift overrun of building core (2) fronting Allison Avenue. This results in a maximum height variation of 16.6m for the eastern wing of the development and is a maximum variation of 1.6m or 10.6%. The proposal also contains a variation of 16m to the lift overrun of building core (1), within the eastern wing, in addition to minor variations as they pertain to balustrades. With regards to the western wing, the maximum height breach is 16.2m to the bin chute enclosure and 15.5m to the lift overrun located fronting Gatacre Avenue. The western wing also contains non-compliances to roof elements and parts of the external facades.

   The topography is considered to be the site specific reasons for the extent of this variation, given the significant cross fall from the northern to southern (side) boundaries and fall from Gatacre to Alison Avenue. Importantly, given the dual frontage of the site and transition in zoning, the extent of non-compliances pertaining to the building cores or other elements will not be visually obtrusive or jarring from the public domain as discussed in further detail below.

2. With regards to both the eastern and western wing, the predominant built form which creates the perceived bulk and scale of the development is compliant with the 15m building height development standard. The non-compliances to the building cores and minor elements are a direct result of the significant cross fall of the site from the northern to southern side boundaries. Furthermore, the fall of the site from Gatacre to Allison Avenue also exacerbates the extent of non-compliance to the lift overruns serving the eastern wing. That is, the non-compliance is lesser within the western wing given the topography of the land, despite all lifts having the same maximum RL of 111.8. The numerical difference between the western and eastern wings demonstrates that the sites topography has worsened the extent of non-compliance and identifies that this is a site specific condition which Clause 4.3 of the LCLEP 2009 does not anticipate.

3. In relation to the proposed building cores, these have also been sensitively designed and located centrally within the site and contained within the building envelope. The external

façades of the respective cores are setback 23.5m from the frontage to Gatacre Avenue and 15.7m to 32m from the frontage to Allison Avenue. The building cores are also setback by 3.5m to 14m from the northern (side) boundary and 16.3m to 17m to the southern (side) boundary. Furthermore, the non-compliances are relatively minor in area when compared to the overall built form. The siting and design of the abovementioned elements also ensures that they will be generally obscured from the public domain, will be visually recessive and subordinate to the primary building mass that is compliant with the 15m height limit.

With regards to the balustrades, roof forms and minor portions of the external façade, again, these are integrated in the contemporary façade of the development which limits any concerning and adverse visual or amenity impact. When considering the location of these additional non-compliances, they are situated within the recessed uppermost level and orientated to the southern (side) boundary. As the proposal integrates a staggered built form which provides increased setbacks in accordance with building height (as it relates to the southern (side) boundary), the additional non-compliances will not be visually obtrusive or jarring. This ensures considerable visual and physical separation between 14.7m to 22m to the R2 zone and is therefore acceptable.

4. Importantly, the non-compliant elements of the development have been purposefully designed to integrate with the high quality, simplified contemporary character which utilises parapet roofing, framed elements, balcony articulation and glazed panelling. These elements have been integrated with the building cores (and other elements) which are located centrally and utilise increased setbacks from both street frontages and the southern (side) boundary. This ensures that the non-compliant elements, as viewed from the public domain, will not be visually obtrusive or jarring.

5. In accordance with the above and when viewed from Gatacre Avenue, the proposed lift overrun (and building core) has a maximum RL of 111.8 and bin chute enclosure of RL 111.1, which is lesser than the ridge height of the approved boarding house development at No. 382 Pacific Highway, being RL 113.3. Therefore despite non-compliance, the proposal will provide a consistent built form with the approved neighbouring building and will nestle comfortably in the R4 Zone.

   To Allison Avenue, the proposal also provides a maximum lift overrun height of RL 111.8. Given the location of the existing petrol station at No. 378 Pacific Highway, the extent of non-compliance will not be visually obtrusive given the lack of comparative building height. When viewed from the Pacific Highway, the built from of the eastern wing will be consistent with the boarding house at the neighbouring property and complaint with the development standard. Furthermore and in the event of redevelopment, the raised topography of No. 378 Pacific Highway will anticipate a maximum ridge which is also consistent with or greater than the

proposed development. This ensures consistency with the desired future character of the locality.

6. To the southern (side) boundary adjoining the R2 Low Density Residential zone, the proposal has been purposefully designed with setbacks which increase according to the building height in order to conceal the areas of non-compliance and minimise impact. Furthermore, the uppermost level also includes generous communal open spaces, which provide further separation between built form and the neighbouring residential dwellings. The utilisation of these increased setbacks ensures that the separation between the non-compliant elements and R2 Zone is acceptable. As such, the non-compliant elements are integrated into the contemporary form to reduce the physical and visual bulk and scale of the development and will provide an appropriate transition of built form despite non-compliance.

7. When viewed at the site boundaries, the non-complaint elements will be obscured from the public domain by the compliant built form. Although it is noted that the areas of non-compliance will be visible at a greater distance, the relatively minor bulk and scale of these elements ensures that they are subordinate to the compliant built form. In fact, to the casual observer, these non-compliant elements are not considered to be visually obtrusive or jarring from the public domain.

8. The non-compliances to the lift overruns provides an accessible path of travel to the communal open space. That is, the lift overruns exceeding the height limit provides direct disabled access to the high quality rooftop open space. Importantly, it is noted that the provision of the communal open space elsewhere on the site is restricted given the characteristics of the land, as envisaged by the zoning, relationship to lower density land and site topography. It follows that the proposed non-compliance represents the most efficient use of land to provide high level of amenity for future residents whilst ensuring equitable access.

   As such, insistence on compliance with the height limit will require deletion of the lift, lobbies and staircases which will effectively result in the removal of the communal open space. The social benefits of providing access to a high quality communal open space within a contemporary residential flat building in a highly sought after location should be given weight in the consideration of the variation request. It would be a loss to the community (and contrary to the public interest) to deny the variation and require the removal of building cores and communal open space due to the steep incline of the topography.

9. The elevations of the building fronting Gatacre and Allison Avenue are the parts of the building which will have the most bearing on character of the development in the locality and are predominately complaint with the building height development standard. Where non-compliant to Gatacre Avenue, this pertains to a minor portion of the roof form and external façade which will have no bearing on streetscape character. As mentioned, when viewed from the public

domain and neighbouring properties, the building will overwhelmingly appear as height compliant given the non-compliant elements are appropriately setback from the boundaries and are limited in overall footprint.

10. It is also noted that the proposal provides a built form which is predominately complaint with the LCDCP, ADG and character of the locality. Despite non-compliance to the building cores (and other minor elements), the proposal is compatible with the character of the approved boarding house to the north and numerous residential flat buildings within close proximity to the subject site. This includes the developments at Nos. 390-392 Pacific Highway, 9 Mafeking Avenue, and 5 Burley Street. Specifically, the proposal provides contemporary built form with compatible building setbacks, significant landscaping throughout the site and a compliant floor space ratio. This provides consistency with the existing and desired building pattern in the locality.

11. As identified, the subject site is located at the juncture between a R4 High Density and R2 Low Density Residential zone, which results in an eclectic mix of building and considerable transition in density. The proposal has therefore been appropriately designed with contemporary architectural features and increased separation to the R2 Zone (which is predominately complaint with the DCP and ADG). Although the proposal provides a built form greater than the immediate neighbours to the south, the design incorporates the relevant measures (as discussed) to reduce its visual impact, inclusive of the non-compliant elements.

    With regards to the neighbouring petrol station, in the event of redevelopment, it is reasonably anticipated that the height of the neighbouring property will be consistent with (if not greater) the height of the proposed development given the topographical incline of the locality. Accordingly, the proposal is considered to be sympathetic to the residential zone to the south and consistent with the bulk and scale of contemporary developments in the R4 Zone, despite non-compliance.

12. Per the above, the difference in built form is reasonably anticipated by the building typology, height and density of the R4 and R2 zone. Given the dramatic transition, the non-compliance is considered to be less apparent on the basis of different typological characters within close proximity to one another. That is, the non-compliant elements (which are consistent with the approved boarding house and relatively minor) will not appear as visually obtrusive to the casual observer given the considerable different in bulk, scale and density of the zones.

13. In accordance with the above, it is important to note that the proposed development is well below the permitted GFA and FSR for the subject site. That is, the proposal has a total GFA of 6,183.9m^2 (2.08:1) where a maximum GFA of 7,117.9m^2 (2.4:1) is permitted. Despite non-compliance with the building height development standard, the proposal has intentionally been designed with 934m^2 lesser GFA in order to reduce the bulk and scale of the development as

viewed from the public domain and neighbouring properties. This is achieved, as described, through large communal open space and limited internal floor area on each level, particularly with regards to the southern setbacks.

14. It is considered that there is an absence of any significant material impacts attributed to the breach on the amenity or the environmental values of surrounding properties, the amenity of future building occupants and on the character of the locality. Specifically:

    a. The extent of the additional height creates no adverse additional overshadowing impacts to adjoining residential dwellings when compared to a compliant building envelope. That is, despite the additional shadowing cast by the non-compliant element, the proposal will not adversely impact the solar gain of the properties to the south, which will achieve greater than 3 hours of solar access to the private open spaces and openings as discussed in this Amended SEE. As such, additional overshadowing caused by the non-compliant elements would be insignificant;

    b. The height breach does not result in any adverse additional privacy impacts given these pertain to a non-compliant elements and have increased setbacks to the side boundaries. This ensures that that any additional loss of privacy caused by the non-compliant elements would be insignificant; and

    c. The height of building breach does not result in view loss which is not reasonably anticipated within the planning controls and site context. When considering the extent of view sharing, it is noted that the height breach is a result of the site topography and there are no significant views enjoyed across the subject site. As such, it is anticipated the extent of view loss caused by the non-compliant element would be insignificant or nil.

15. The proposed development meets the objectives of the development standard and meets the objectives of the R4 High Density Residential zone (as further detailed in Section 7 below);

16. The proposed development achieves the objects in Section 1.3 of the EPA Act, specifically:

    a. The proposal promotes the orderly and economic use and development of land through the redevelopment of an underutilise site for residential uses (1.3(c));

    b. The proposed development promotes good design and amenity of the built environment through a well-considered design which is responsive to its setting and context (1.3(g)).

17. The variation to the height of buildings development standard will give better effect to the aims of *State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development* (SEPP 65). In particular:

    a. The proposed variation will provide more sustainable housing in social and environmental terms and better achieve urban planning policies (clause 2(3)(a)(i));

    b. to achieve better built form and aesthetics of buildings and of the streetscapes and the public spaces they define (clause 2(3)(b);

    c. to contribute to the provision of a variety of dwelling types to meet population growth (clause 2(3)(f);

    d. Approval of the proposed variation will support a variety of housing types by providing a well-located and compact development that will be a better choice for families (clause 2(3)(g)).

The above environmental planning grounds are not general propositions and are unique circumstances to the proposed development, particularly given the undulating and steep topographical incline of the site, location near Pacific Highway, high density neighbours to the north-east and low density residential neighbours to the south-west. The additional height does not significantly impact the amenity of the neighbouring properties (when compared to a compliant development) and has been designed in such a way to ensure the additional height is not visually jarring from the public domain.

It is noted that in *Initial Action Pty Ltd v Woollahra Municipal Council [2018] NSWLEC 118*, Preston CJ clarified what items a Clause 4.6 does and does not need to satisfy. Importantly, there does not need to be a "better" planning outcome:

> *86. The second way is in an error because it finds no basis in cl 4.6. Clause 4.6 does not directly or indirectly establish a test that the non-compliant development should have a neutral or beneficial effect relative to a compliant development. This test is also inconsistent with objective (d) of the height development standard in cl 4.3(1) of minimising the impacts of new development on adjoining or nearby properties from disruption of views or visual intrusion. Compliance with the height development standard might be unreasonable or unnecessary if the non-compliant development achieves this objective of minimising view loss or visual intrusion. It is not necessary, contrary to what the Commissioner held, that the non-compliant development have no view loss or less view loss than a compliant development.*

> *87. The second matter was in cl 4.6(3)(b). I find that the Commissioner applied the wrong test in considering this matter by requiring that the development, which contravened the height development standard, result in a "better environmental planning outcome for the site" relative to a development that complies with the height development standard (in [141] and [142] of the judgment). Clause 4.6 does not directly or indirectly establish this test. The requirement in cl 4.6(3)(b) is that there are sufficient environmental planning grounds to justify contravening the*

development standard, not that the development that contravenes the development standard have a better environmental planning outcome than a development that complies with the development standard.

As outlined above, it is considered that in many respects, the proposal will provide for a better planning outcome than a strictly compliant development. At the very least, there are sufficient environmental planning grounds to justify contravening the development standard.

6. The applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), (Clause 4.6(4)(a)(i))

Preston CJ in *Initial Action Pty Ltd v Woollahra Municipal Council* details how Clause 4.6(4)(a) needs to be addressed (paragraphs 15 and 26 are rephrased below):

The first opinion of satisfaction, in clause 4.6(4)(a)(i), is that a written request seeking to justify the contravention of the development standard has adequately addressed the matters required to be demonstrated by clause 4.6(3). These matters are twofold: first, that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case (clause 4.6(3)(a)) and, secondly, that there are sufficient environmental planning grounds to justify contravening the development standard (clause 4.6(3)(b)). This written request has addressed Clause 4.6(3)(a) in Section 4 above (and furthermore in terms of meeting the objectives of the development standard, this is addressed in Section 7 below). Clause 4.6(3)(b) is addressed in Section 5 above.

The second opinion of satisfaction, in clause 4.6(4)(a)(ii), is that the proposed development will be in the public interest because it is consistent with the objectives of the particular development standard that is contravened and the objectives for development for the zone in which the development is proposed to be carried out. The second opinion of satisfaction under cl 4.6(4)(a)(ii) differs from the first opinion of satisfaction under clause 4.6(4)(a)(i) in that the consent authority, or the Court on appeal, must be directly satisfied about the matter in clause 4.6(4)(a)(ii), not indirectly satisfied that the applicant's written request has adequately addressed the matter in clause 4.6(4)(a)(ii). The matters in Clause 4.6(4)(a)(ii) are addressed in Section 7 below.

7. The proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out (Clause 4.6(4)(a)(ii))

Height of Buildings Objectives

The objectives and relevant provisions of Clause 4.3 of LCLEP 2009 are as follows:

(a) to ensure development allows for reasonable solar access to existing buildings and public areas,

(b) to ensure that privacy and visual impacts of development on neighbouring properties, particularly where zones meet, are reasonable,

(c) to seek alternative design solutions in order to maximise the potential sunlight for the public domain,

(d) to relate development to topography.

In order to address the requirements of subclause 4.6(4)(a)(ii), each of the relevant objectives of Clause 4.3 are addressed in turn below.

(a) to ensure development allows for reasonable solar access to existing buildings and public areas,

The proposed development has been purposefully designed to protect the solar gain of the residential dwellings to the south of the subject site, specifically, No. 2A Gatacre Avenue and No. 7 Allison Avenue. Despite non-compliance, the building cores (and ancillary non-compliances) are limited in area and are setback considerably from the site boundaries to improve solar gain to the primary openings and private open spaces of these dwellings. Importantly, the non-compliant elements are relatively minor in overall area and do not reflect the predominant building envelope which is complaint with the building height development standard. That is, the quantum of overshadowing created by the proposal is a result of a compliant built form with the cores having little bearing on the extent of overshadowing. Of relevance, the LCDCP requires the following which pertains to the solar gain of residential dwellings:

> *a) Dwellings or additions shall be so designed and orientated so as to give reasonable sunlight to the habitable rooms and recreational areas of the subject site and adjoining premises between 9.00am and 3.00pm on 21st June. In particular, dwellings are to be so located and designed that a portion of windows of neighbouring dwellings receive at least 3 hours of sun between 9am and 3pm on 21st June.*
>
> *b) Council may accept reduction in solar access for the subject site and adjacent development if the topography and lot orientation is such that the 3 hour standard is considered unachievable.*
>
> *c) Where adjacent dwellings and their open space already receive less than 2 hours of sun then new development should seek to maintain this solar access where practicable.*

In accordance with the above requirements, the proposal will retain 4 hours of solar access to 42m^2 to 133m^2 of rear private open space of No. 2A Gatacre Avenue from 11am to 3pm during mid-winter. In terms of windows serving primary living areas, it is anticipated that openings of this dwelling are provided to the south-east as accessed from the private open space and therefore will not be further impacted by the proposed.

Similarly and with regards to No. 7 Allison Avenue, the proposal will retain solar access to greater than 100m^2 of private open space from 12am to 3pm during mid-winter, despite non-compliance. The proposal will also maintain 3 hours of solar access to the north-western façade of the dwelling, which is anticipated to house the primary openings serving living areas. To the south-east of the subject site and on the opposite side of Allison Avenue, the proposal will result in additional overshadowing to No. 17 Haldane Crescent from 12pm to 3pm during mid-winter. Notwithstanding, this neighbouring property will retain 3 hours of solar access to the private open spaces and living areas throughout mid-winter (per the architectural plans) and is therefore acceptable in this regard. Importantly, Nol. 17 Haldane will receive 3 hours of solar access to its northern façade from 9am to 12pm.

Given the zoning of the locality (being the immediate transition between the R4 and R2 zone), steep topographical incline and general east-west orientation results in unavoidable overshadowing to the dwellings to the south. Notwithstanding and as discussed above, despite non-compliance the proposal will ensure that adequate levels of solar access will be provided to the neighbouring properties. It is noted that the proposal will not result in any adverse impact to the solar gain of the public domain beyond what is reasonably anticipated by the development standards contained within the LCLEP 2009 and is therefore acceptable in this regard.

As such and despite non-compliance, the proposal will satisfy Objective (a).

(b) to ensure that privacy and visual impacts of development on neighbouring properties, particularly where zones meet, are reasonable,

The proposal has been purposefully designed to provide an appropriate transition between the R4 High Density Residential zone and R2 Low Density Residential zone to ensure that the visual privacy and impact of the development is sensitive to the residential dwellings in the locality.

With regards to visual privacy, the proposal has been designed with adequate setbacks between the neighbouring properties to the north and south. To both the eastern and western wing, the principal built form is complaint with the building height development standard and therefore any privacy impacts to the surrounding properties are a result of a complaint envelope. As detailed in this Variation, the non-compliant elements are non-habitable and therefore overlooking to the neighbouring properties will be minimised. It is noted that the proposed building cores, including lobby, lift overrun and staircase provide vertical access to the compliant rooftop communal open space and will not result in any privacy impacts in this regard. With regards to the non-compliant roof elements and external facades (inclusive of glazing), these are minor will not result in any additional overlooking beyond the compliant envelope.

In terms of visual impact, it is considered that the proposed height encroachments do not result in a building which is incompatible with the desired high density character of the R4 Zone and low density character of the R2 Zone, particularly given the relatively minor footprint of the non-compliant elements. The proposal will provide a high quality built form and a coherent streetscape appearance with building elements that complement the topography of the site and are appropriately setback from the low density zone. That is, the proposed building height (which is predominately complaint), is consistent with the ridge height of the approved boarding house development to the north and is setback appropriately from both street frontages. Where the non-compliance opposes the low density zone, significant setbacks are proposed to the building cores (and ancillary elements) which provide considerable visual and physical separation. Accordingly, the proposal provides a contemporary design which will successfully mask the extent of non-compliance when viewed form the neighbouring properties and public domain given increased setbacks and compatibility with the surrounding developments.

As identified, the height breaches have been minimised where practicable and have been integrated into the contemporary form so that the variation will not be jarring to the casual observer. The overall building design has integrated with various elements to reduce visual bulk and scale, including glazing, balcony articulation and framing elements as to ensure the proposal is visually compatible with the locality. This existing character must be acknowledged and it is considered the proposal responds to both the existing and desired future character of the locality.

Furthermore, it is also noted that the proposal provides setbacks which are consistent with the LCDCP, ADG and character of the locality. This ensures that the building cores will not be visually obtrusive and the proposal is consistent with the existing and desired building pattern in the locality. Importantly, the maximum variations are also setback appropriately from the respective boundaries. The burden of insisting on strict compliance would result in the removal of access to the communal open space which would be an unreasonable and unnecessary outcome given the scale of the proposal is compatible with the character of the locality.

The proposal is therefore consistent with objective (b), despite the height breach

(c) to seek alternative design solutions in order to maximise the potential sunlight for the public domain,

As identified under Objective (a), the subject site is not located within proximity to any significant public domain spaces. The proposal will result in additional overshadowing to the roadway of Allison Avenue which is considered to be reasonable in accordance with the development standards contained within the LCLEP 2009. That is, the extent of non-compliance will not result in any discernible increase to the overshadowing of this roadway which will impact the amenity of the local community and is therefore considered acceptable in this regard.

As such, the proposal will satisfy Objective (c) despite non-compliance.

(d) to relate development to topography

The proposed development has been designed to relate to the topography of the subject site as far as practicable. As indicated in this Variation, the subject site has a cross fall of approximately 3.4m to 4.3m from the northern to

southern side boundary and falls from Gatacre to Allison Avenue by approximately 4m across the length of the site. Per the above, the subject site contains an undulating topography which varies the extent of non-compliance across the entirety of the development.

As a result, the proposal has been designed to respond to the topography of the site as far as practicable and ultimately limit the extent of non-compliance to building cores, including lift overruns, staircases and lobbies. As demonstrated in the amended architectural plans, the proposal will require excavation to accommodate the basement levels below natural ground and to provide accessible vehicular entry from Allison Avenue. Given the undulating topography of the site, the basement level requires additional excavation fronting Gatacre Avenue as to ensure it will not be visually obtrusive from the public domain. As a result, the proposal provides ground floor apartments which are located partially below the natural ground line given the sites topography. Despite the provision of additional excavation, this arrangement is considered to be a superior outcome with regards to the building height development standard in that the proposal will nestle comfortably within the topography of the site and provide a built form which is predominately compliant with the development standard.

Further to the above, the proposal has also considered the higher natural ground of the properties to the north and lower natural ground of the properties to the south. That is, the proposal provides a complaint building envelope with the extent of non-compliance limited to non-habitable building cores and minor roof and façade elements. The design and proposed excavation ensures the non-compliant elements will achieve consistency with the approved boarding house development at No. 382 Pacific Highway. Similarly and to the south, the proposal incorporates additional setbacks throughout the southern façade and specifically to the non-compliant elements, which results in the provision of a sympathetic built form to the residential dwellings. When considering the existing petrol station at No. 378 Pacific Highway, in the event of redevelopment it is anticipated that the higher natural ground (of this property) will result in the provision of a residential flat building with a height which is consistent with (or greater) than the proposed development. This demonstrates that despite the minor non-compliances, the proposal is compatible with the topography of the site and surrounding properties.

As such, the proposal is satisfies Objective (d) despite non-compliance.

Objectives of the Zone

Clause 4.6(4)(a)(ii) requires that the consent authority be satisfied that the development is in the public interest because it is consistent with relevant zone objectives. The objectives of Zone R4 are as follows:

- *To provide for the housing needs of the community within a high density residential environment.*

The amended proposal will provide for the housing needs of the community through providing a mixture of apartments typologies within a high density environment.

- *To provide a variety of housing types within a high density residential environment*.

As above, the proposed development will provide for a variety of apartment types including 12 x 1 bedroom, 14 x 2 bedroom, 16 x 3 bedroom and 11 x 4 bedroom apartments, including 11 adaptable dwellings.

- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*

This objective is not relevant to the proposal.

- *To provide for a high concentration of housing with good access to transport, services and facilities.*

The proposal will provide a proportionate increase of residential density within proximity to Pacific Highway (as anticipated by the zoning) and will offer future residents good access to public transport, open spaces, employment opportunism and commercial and retail facilities within the locality.

- *To ensure that the existing amenity of residences in the neighbourhood is respected.*

The amended development has been purposefully designed to retain the amenity of the approved boarding house development to the north-east and residential dwellings to the south, as discussed in this Variation and Statement.

- *To avoid the isolation of sites resulting from site amalgamation.*

The proposal will occupy the remaining undeveloped allotments within the R4 zone and will not result in any form of site isolation. The existing petrol station to the north-east is anticipated to remain for a considerable period of time and can be redeveloped given it occupies an appropriate site area with a dual (corner) frontage.

- *To ensure that landscaping is maintained and enhanced as a major element in the residential environment.*

The amended proposal will provide significant landscaping throughout the site and to both frontages which will enhance the residential environment through considerable improvements to the landscaped character over existing.

The proposed development, including those parts of the building that breach the height of buildings development standard, is not antipathetic to the objectives for the zone and for that reason the proposed variation is acceptable.

8. The concurrence of the Secretary has been obtained (Clause 4.6(4)(b)

The second precondition in cl 4.6(4) that must be satisfied before the consent authority can exercise the power to grant development consent for development that contravenes the development standard is that the concurrence of the Secretary (of the Department of Planning and the Environment) has been obtained (cl 4.6(4)(b)). Under cl 64 of the Environmental Planning and Assessment Regulation 2000, the Secretary has given written notice, attached to the Planning Circular PS 20-002 issued on 5 May 2020, to each consent authority, that it may assume the Secretary's concurrence for exceptions to development standards in respect of applications made under cl 4.6, subject to the conditions in the table in the notice.

9. Whether contravention of the development standard raises any matter of significance for State or Regional environmental planning (Clause 4.6(5)(a))

Contravention of the maximum height development standard proposed by this application does not raise any matter of significance for State or regional environmental planning.

10. The public benefit of maintaining the development standard (Clause 4.6(5)(b))

As detailed in this submission, there are no unreasonable impacts that will result from the proposed variation to the maximum building height. As such there is no public benefit in maintaining strict compliance with the development standard. Whilst the proposed building height exceeds the maximum permitted on the site by 16.6m (10.6%), the proposed development is consistent with the objectives of the development standard and the objectives for development of the zone in which the development is proposed to be carried out. It is the proposed development's consistency with the objectives of the development standard and the objectives of the zone that make the proposed development in the public interest.

11. Conclusion

This written request has been prepared in relation to the proposed variation to the 15m height of buildings development standard contained in Clause 4.3 of LCLEP 2009.

Having regard to all of the above, it is our opinion that compliance with the maximum height development standard is unreasonable and unnecessary in the circumstances of this case as the development meets the objectives of that standard and the zone objectives. The proposal has also demonstrated sufficient environmental planning grounds to support the breach. Therefore, insistence upon strict compliance with that standard would be unreasonable. On this basis, the requirements of Clause 4.6(3) are satisfied and the variation supported.

ANNEXURE D

Lane Cove DCP –
Compliance Table



LANE COVE DCP - COMPLIANCE TABLE			
Clause / Control	Requirement	Proposal	Complies?
Part B – General Controls			
B2 Site Amalgamation and Development on Isolated Sites	a) Development for the purpose of residential flat buildings and high density housing should not result in the isolation of sites such that they cannot be developed in compliance with the relevant planning controls, including Lane Cove LEP 2009 and this DCP.	The proposed development utilises the remaining R4 Zoned sites within the block and therefore maximises site amalgamation. It is noted that the petrol station to the north-east is to remain and is not anticipated to be redeveloped for a considerable period of time. Furthermore, this allotment is sufficiently sized to cater for any potential redevelopment with two frontages to the public domain. The neighbouring site also contains an area of approximately 1,160m^2 which is sufficient to accommodate a boarding house development or the like. Refer to Section 2.2 of this Statement.	Yes
B3 View Sharing	a) Where existing views from public spaces are through the gaps between side setbacks of buildings, the length of the building and roof of any proposal should be oriented towards the view in order to minimise view obstruction.	No significant views are currently enjoyed across the subject site and therefore the proposal is considered acceptable in this regard.	Yes
	b) Existing or potential view corridors to the water from the street are to be protected as public view corridors by ensuring that fencing to the front boundary is open in character.	No views of the water from the public domain are enjoyed.	N/A
	d) Buildings on steeply sloping sites should adjust the height of the building envelope to follow the natural topography of the site	No significant views are gained across the subject site and therefore the proposal is acceptable.	Yes
	e) To facilitate view sharing for residential developments, flat roofs or low mono -pitched roofs can be used where the design of the building and roof is integrated architecturally and where its appearance would be appropriate given the character of the street.	A flat roof is proposed, although as above, it is noted no significant views are enjoyed across the subject site from the public domain or neighbours.	Yes

LANE COVE DCP - COMPLIANCE TABLE			
B.8 Safety and Security	a) Ensure that the building design allows for casual surveillance of access ways, entries and driveways. **8.1.1 General** a) Development is to be well connected to the street and contribute to the accessibility of the public domain. **8.1.2 Residential Development** a) All ground floor apartments, villas, townhouses and attached or detached dwellings that have a street frontage other than battle axe blocks are to have direct access or entries from the street and at least one habitable room with windows facing the street. **8.2 Passive Surveillance** a) All development at ground level is to offer passive surveillance for safety and security of residents and visitors.	The building entries from Gatacre and Allison Avenue will be overlooked by the proposed apartments, across multiple levels. The proposal will directly respond to each street frontage and will be accessible from the public domain. The proposed ground apartments fronting Allison Avenue and Gatacre are buffered by landscaping. Notwithstanding, all apartments have habitable areas fronting the street to maximise natural surveillance. Apartments overlook the building entries and common outdoor paths of circulation to maximise surveillance and safety.	Yes Yes Yes Yes
Part C Residential Development – Residential Flat Buildings			
C.3.2 Density	a) The minimum site area for residential flat developments is 1,500m2	Site area is 2965.8m^2.	Yes
C.3.3 Building Depth	a) The maximum residential flat building depth is to be 18 m. b) This depth is exclusive of balconies.	The built form significant exceeds the maximum depth given the elongated allotment as measured from Gatacre to Allison Avenue. In order to minimise the extent of non-compliance, the built form includes high quality articulation, landscaping and a stepped built form to lessen the extent of the façade. Furthermore, all apartments will receive a high level of internal amenity and is therefore considered acceptable.	No
C.3.4 Building Width	a) The maximum overall width of the building fronting the street shall be 40m. Greater widths may be permissible if the proposed building articulation is satisfactory in the streetscape.	The built form fronting Gatacre Avenue is 29m and 18.5m to Allison Avenue.	Yes

LANE COVE DCP - COMPLIANCE TABLE			
3.5 Setbacks	**3.5.1 Front/Street** a) The front setback of the building shall be consistent with the prevailing setback along the street (refer Diagram No.1). However, Special Residential Areas subject to Block Plans should comply with the setback stated therein. Where there is no predominant setback within the street, and no Block Plan for the locality, the setback should be a minimum of 7.5m.	The proposed development is consistent with the predominant front setbacks along Gatacre Avenue and Allison Avenue to a portion of the development. Refer to Section 4.2.7.1 of this Statement.	On Merit
	b) The front setback area shall comprise terraces and gardens to the ground floor dwellings, deep soil zones, driveways and pathways.	The proposal provides terraces, gardens and deep soil areas in the front setback.	Yes
	c) For corner allotments, the secondary setback requirement is the same as the side setback requirement for the proposed development.	Not applicable.	N/A
	3.5.2 Side and Rear a) To the boundary within the R4 zone, the minimum side and rear setback shall be: 6m up to 4 storeys 9m for 5-8 storeys 12m for 9 storeys and above.	The proposal is designed in accordance with Part 3F Visual Privacy of the ADG which overrides the DCP. However, the 9m setback requirements has been considered as part of this development. This is discussed in Section 4.2.3.1 and 4.2.7.2 of this Statement.	On merit
	b) To the boundary shared with R2 and R3 zones the minimum set back will be 9m if habitable rooms/balconies orient this side.	As above, the proposal is designed in accordance with the ADG and DCP and is discussed in Section 4.2.3.1 and 4.2.7.2 of this Statement.	Yes
	3.5.3 General a) In general, no part of a building or above ground structure may encroach into a setback zone. Exceptions are: I. Encroachments into the setback zone of up to 2m may be permitted for underground parking structures no more than 1.2m above ground level (existing), where there is no unreasonable effect on the streetscape. Refer to Diagram 10. II. Awnings, balconies, blade walls, bay windows and other articulation elements up to a maximum of 500mm. III. Setback variation may be required or permitted on merit to preserve existing trees.	Where the proposed basement encroaches into the side setbacks, these are located below natural ground (that is, no greater than 1.2m above NGL) and is therefore considered acceptable. The basement encroachment is buffered by suitable deep soil and landscaped area.	Yes

LANE COVE DCP - COMPLIANCE TABLE			
3.7 Fences	Solid fences a) permitted up to 900mm above ground level (existing) on the front boundary. Part solid and predominantly see through fences b) permitted up to 1200mm above ground level (existing) on the front boundary. c) permitted up to 1800mm above ground level (existing) setback at least 1m from the front boundary with the solid portion no higher than 600mm. d) for the see through portion, the width of the spacing between palings must be at least the same as the width of the palings. Materials/retaining walls/overland flow g) front and side return fence material is to be to Council's satisfaction and is not to be lapped & capped timber or powder coated metal ("Colorbond") fencing h) If required, retaining walls are to be integrated into the design of the fence. i) in areas of overland flow, fencing is to be of open construction and permit water flow 1.4.2 Side and rear fences a) Side fences behind the building line are to be a maximum of 1.8m in height above ground level. b) For corner allotments, the side return fences for the secondary street frontage is to match the height of the front fence back to the front building line. c) Powder coated metal ("Colorbond") fences are not permitted on corner blocks.	N/A –solid fence at street not proposed. The proposal provides an open fence as demonstrated on the submitted plans. This Will be a height of 1.5m and will step according to the topography. To comply. To comply. Noted, condition of consent can be imposed. Not applicable. Maximum of 1.8m to be proposed. Not applicable. Not applicable.	N/A Yes Yes Yes - N/A Yes N/A N/A
3.8 Excavation	a) All development is to relate to the existing topography of the land at the time of the adoption of this DCP.	The proposed basement parking is designed to relate to the topography and will not be visually obtrusive from the public domain. The proposal will also require a degree of excavation to accommodate ground level apartments within the western wing, however is considered acceptable given the steep and undulating topography of the site. It is noted that the ground	Yes

LANE COVE DCP - COMPLIANCE TABLE			
		apartments are provided as dual level to maximise solar gain and ventilation.	
	b) Excavation for major development is to be contained as close as practicable to the footprint of the development.	The proposed basement, although extending beyond the building footprint above, will not be visually obtrusive from the public domain and is located below natural ground. The proposal will also provide considerable deep soil area throughout the side in addition to podium landscaping. The basement is limited to parking, access and services necessary for the building to operate.	Yes
	c) For development within Centres, Council may consider full site coverage for underground excavation and podium footprints where it is demonstrated that mature landscaping, landscaped area and rainwater retention is able to be provided as roof terraces on podium structures.	Not applicable.	N/A
	d) Uses at ground level are to respond to the slope of the street by stepping frontages and entries to follow the slope.	The proposed ground level apartments require excavation to accommodate their location, which is a by-product of the basement. Given the topography of the site which varies significantly throughout, the degree of excavation varies across the site. As above, the apartments along the northern side boundary will be provided with dual levels.	Yes
	e) The extent of excavation proposed for underground uses should not compromise the provision of deep soil areas or landscaped areas for residential flat buildings.	Proposal provides deep soil in accordance with the ADG.	Yes
3.9 Design of Roof Top Areas	a) Roof top areas including podium area are to be designed for use as recreation facilities where practicable and should be of high standard of finish and design. A detailed landscape design and plan of roof top design is to be submitted with the DA.	The proposed roof top communal open space is to be of high quality with finished in accordance with submitted Amended Landscape Plan.	Yes
	b) The design of exterior private open space such as roof top gardens is to address visual and acoustic privacy, safety, security, and wind effects.	All private open spaces integrated into the overall built form to ensure the amenity of future occupants.	Yes

LANE COVE DCP - COMPLIANCE TABLE			
3.10 Size and Mix of Dwellings	a) In residential flat buildings and the residential component of mixed use buildings, studio dwellings are to have a minimum size of 40m^2. This dwelling size is a net area and is to be exclusive of balconies, common corridors and lobbies, car spaces, storage areas outside the dwelling, private and communal open spaces and lift and other services shafts. b) In residential flat buildings and the residential component of mixed use buildings, development should include a mix of 1, 2 and 3 bedroom units. At least 10% of each unit type should be provided.	No studio apartments are proposed. The proposed development provides a suitable mix of dwelling types. This equates to greater than 10% for each dwelling type.	Yes Yes
3.11 Private Open Space (Balconies and Terraces)	a) Provide primary balconies for all above ground dwellings with a minimum depth of 2m and minimum area of 10m2 . b) Provide a primary terrace for all ground floor dwellings with a minimum depth of 4m and minimum area of 16m2. All ground floor dwellings are to have direct access to a terrace or front garden area. c) Balconies and terraces shall not be enclosed under any circumstances.	The proposal is designed in response to the ADG Design Criteria. Refer to **Annexure A**. As above. Not proposed.	Refer to **Annexure A**
3.12 Ceiling Height	a) In residential flat buildings, including residential apartments in mixed use buildings, the floor to ceiling height shall be: I. for non-habitable rooms, a preferred minimum of 2.4m, however a minimum of 2.25m will be permitted II. for the upper level of a 2 storey apartment, a minimum of 2.4m provided at least 50% of the apartment has a minimum of 2.7m height and III. for all single level apartments, a minimum of 2.7m.	The floor to ceiling heights are in accordance with the ADG.	Refer to **Annexure A**
3.13 Storage	b) In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates: I. studio dwellings 6m^3 II. one-bedroom dwellings 6m^3 III. two-bedroom dwellings 8m^3	Storage is provided within each dwelling and the basement levels in accordance with the ADG.	Refer to **Annexure A**

LANE COVE DCP - COMPLIANCE TABLE			
	IV. three plus bedroom dwellings 10m³ A minimum of 50% of this storage volume is to be provided within the dwelling accessible from the hall or living area as hall cupboards.		
3.14 Solar Access	a) Habitable rooms in at least 70 percent of dwellings in high density residential developments, should receive a minimum of three hours direct sunlight between 9 am and 3 pm on 21st June, in total between any portions of those rooms. A reasonable proportion of both the common and private open space in those sites is also to receive sunlight during that period, according to the circumstances of the sites.	The proposal is designed in accordance with the ADG Design Criteria in terms of solar access to balconies and living areas. The variation per the ADG is discussed throughout this Statement and is a result of the site specific constraints.	Refer to **Annexure A**
	b) The number of single-aspect dwellings with a southerly aspect (SW-SE) should be limited to a maximum of 10 percent of the total dwellings within a high density residential development. Developments varying from the minimum standard due to site constraints and orientation must demonstrate how energy efficiency is addressed.	The proposal is designed in accordance with the ADG Design Criteria in terms of solar access and south facing units. As above.	Refer to **Annexure A**
	c) Where adjacent dwellings and their open space already receive less than the standard hours of sun, new development should seek to maintain this solar access where practicable.	Refer to Section 4.3.6 of this Statement.	Yes
	d) Council may accept a reduction in solar access for the subject site and adjacent development if the topography and lot orientation (as distinct from a preferred design) are such that the standard is considered unreasonable.	As above.	-
3.15 Natural Ventilation	a) Sixty percent (60%) of dwellings should be naturally cross ventilated.	The proposal is designed in accordance with the ADG Design Criteria. Refer to **Annexure A**.	Refer to **Annexure A**
	b) Ventilation provided to one end of a dwelling via windows onto an open access corridor does not satisfy this requirement due to privacy and acoustics' impacts.	No proposed.	N/A

LANE COVE DCP - COMPLIANCE TABLE			
	c) Twenty five percent (25%) of kitchens within a development should have access to natural ventilation.	All kitchens are located within proximity to openings.	Yes
3.16 Visual Privacy	a) Locate and orient new development to encourage visual privacy between buildings on site and adjacent buildings. b) Use detailed site and building design elements to increase privacy without compromising access to light and air. Detailing may include: I. Offset windows of dwellings in new developments in relation to adjacent development windows II. Recessed balconies and/or vertical fins between adjacent balconies III. Solid or semi-solid balustrades to balconies IV. Louvres or screen panels to windows and/or balconies V. Incorporating planter boxes into walls or balustrades to increase the visual separation between areas VI. Utilise pergolas or shading devices to limit overlooking of lower dwellings or private open space.	The proposed development has been purposefully designed to minimised overlooking impacts to neighbouring properties as far as practicable. Refer to Section 4.2.3.1 and 4.3.8 of this Statement. The proposed development has incorporated setbacks and design features including semi-solid balustrades, recessed balconies, vertical screening elements and setback balustrades to orientate views over the neighbouring properties.	Yes Yes
3.17 Communal Open Space	a) A minimum of 25% of the site area is to be provided as communal open space. b) For mixed use sites, communal open space can be provided on podiums and roof terraces subject to achieving privacy for adjoining users.	The proposal meets the 25% as required by the ADG. Not applicable.	Refer To **Annexure A** N/A
3.18 Landscaped Area	a) A minimum of 40% of the site area is to be planted, comprising 25% landscaped area and a further minimum of 15% planting on structures or landscaped area.	The proposal provides a total landscaped area, including podium landscaping, of 1,468.8m^2 or 49.5%. This includes 667.1m^2 or 22.5% as deep soil landscaping and 801.7m^2 or 27% as podium landscaping. Despite non-compliance with the DCP requirement, the proposal is designed to comply with the ADG. The proposal meets and exceeds this requirement to provide sufficient landscaping throughout the site which will accommodate a wide variety of vegetation. Furthermore, the proposal will concentrate	On merit – Refer to Section 4.2.7.4

LANE COVE DCP - COMPLIANCE TABLE			
		landscaping the site boundaries, with particular focus on the boundary shared with the low density zone. Refer to Section 4.2.7.4 of this Statement.	
	b) Exceptions may be made in centres for mixed use developments only. In these instances, stormwater treatment measures must be integrated with the design of the residential flat building and sufficient soil depth and volumes to be provided to ensure that mature trees are achievable. c) Landscaping to front boundaries shared with bicycle routes should be less than 900mm in height and should not impede pedestrian and bicycle routes or reduce visibility to these pathways.	Not applicable. Not applicable.	N/A N/A
Part F Access and Mobility			
3.5 Adaptable and Visitable Housing (residential flats and dual occupancies)	2. Adaptable housing to be equitably distributed throughout all types and sizes of dwelling units. 3. Adaptable housing to be provided at the rate of 20% of all dwellings in a Class 2 development.	Adaptable dwellings are dispersed amongst 1, 2, 3 and 4 bedroom dwellings. 11 adaptable dwellings (20%) is provided.	Yes Yes
	1. Access is to be provided in accordance with BCA Clause D3.1 and in accordance with Table 1 below. *Residential flat buildings: From a required accessible entrance to at least 1 floor containing SOU's and to the entrance doorway of each SOU on that level. To and within 1 of each type of room or space for use in common by the building occupants* 2. Access is to comply with the relevant Provisions of the BCA, and associated referenced Australian Standards. Demonstration is required in the form of an	An Amended Access Report prepared by *iAccess Consulting* is submitted. As above.	Yes Yes

LANE COVE DCP - COMPLIANCE TABLE			
	access report prepared by a suitably qualified access consultant as part of the DA documentation. 3. Buildings of a public nature are to have features in accordance with AS1428.2, when applicable, as follows: a. Tables, counters and worktops for use by public. b. Seating in pedestrian areas. c. Drinking fountains and water coolers. d. Gateways and checkouts.	Not applicable.	N/A
Part O: Stormwater Management			
2.1 Detailed Stormwater Plans	The plans for the development site and any drainage lines required external to the development site shall be prepared at a 1:100 scale, and include all the following items: a) The location of all buildings, driveways, and impervious surfaces. b) The location, trunk diameter and canopy size (drip line) of any trees on the site or adjoining properties which may be affected by the development. c) The location of all downpipes, surface channels, kerbs, pits, pipes, and sub-surface drainage. d) Location of any watercourse or bushland passing through or adjacent to the property. e) The size and class of all pipes and the dimensions, grades, invert levels and finished surface levels of all pits and pipes. f) Finished levels and cross-sectional details of any catch drains or swales. g) Finished floor/ground levels of buildings, garages, paved areas and unpaved areas. h) Contours at 0.5m intervals of the existing ground levels to AHD. i) Any overland flowpaths which drain through the property. j) The location, size and depth of easements or drainage pipelines.	Amended Stormwater Plans prepared by *Greenview Consulting* are submitted with this application.	Yes
Part Q: Waste Management and Minimisation			
	Site Waste Minimisation and Management Plan (SWMMP) required.	An Amended Construction and Demolition Waste Management Plan is submitted with this application. An Amended Operation	Yes

<table>
<tr><th colspan="4">LANE COVE DCP - COMPLIANCE TABLE</th></tr>
<tr><td></td><td>Each unit provided with an indoor waste/recycling cupboard for rubbish.
RFBs containing 4+ storeys provided with garbage chute system(s) for general waste from each storey to main waste storage/collection room(s). A dedicated service room on each floor must be designed to include a garbage chute and 2x240L recycling bins for the storage of recyclable materials.

Waste & Recycling Rooms – RFBs (10+units) - dedicated room or caged area provided for temporary storage of discarded bulky items which are awaiting removal.
>21 units - 30m².
Waste Collection Point - bins must be collected onsite from either their usual storage point or from an onsite temporary holding area located inside the property boundary (<10m). Owners' corporation to move bins to collection point. An open air on-site collection point for bulky waste including the path of travel from the storage area to the collection point is required.

On-Site Access - unobstructed and Continuous Accessible Path of Travel (AS1428) from waste/recycling storage area(s) or room(s) to entry to any Adaptable Housing, the principal entrance to each residential flat building and the point at which bins are collected/emptied. On-site access by garbage collection vehicles which can enter and exit the site in a forward direction in accordance with AS2890.2 Parking Facilities
Off-Street Commercial Vehicle Facilities – 2002.</td><td>Waste Management Plan prepared by Elephants Foot is submitted with this application.
Waste storage provided in each unit.
A garbage chute is provided to the eastern and western wing of the development which is considered acceptable.

Bulky waste and regular waste storage is provided in the basement. Bulky waste is an area of 36.6m^2 in the basement.

An on-site waste storage loading area is provided within basement. This will be collected by waste services in accordance with the Amended OWMP prepared by Elephants Foot.

Refer to Amended Access Report prepared by iAccess Consulting.</td><td>
Yes
Yes

Yes

Yes

Yes</td></tr>
<tr><td colspan="4">Part R: Traffic, Transport and Parking</td></tr>
<tr><td>2.2 Car parking Rates</td><td>a) Developments should comply with on-site car parking rates in Table 1;

Resident Visitor</td><td><table><tr><th>Apartment</th><th>Required spaces</th><th>Proposed spaces</th></tr><tr><td>12 x 1 bedroom</td><td>12</td><td rowspan="5">91 spaces proposed (including 10 adaptable)</td></tr><tr><td>14 x 2 bedroom</td><td>21</td></tr><tr><td>27 x 3/4 bedroom</td><td>54</td></tr><tr><td>Total Resident</td><td>87</td></tr><tr><td>Adaptable units</td><td>11 spaces</td></tr></table></td><td>Yes</td></tr>
</table>

LANE COVE DCP - COMPLIANCE TABLE

	<table><tr><td>Residential flat buildings</td><td>0.5 spaces per studio 1 space per 1-bedroom unit 1.5 spaces per 2-bedroom unit 2 spaces per 3+ bedroom unit 1 disabled space for each adaptable housing unit 1 onsite removalist truck space per 100 residential units (as per relevant Australian Standards) 1 car wash bay per 50 units for developments over 20 units</td><td>1 space per 4 units 1 disabled space per 50 visitor spaces (minimum 1 disabled space)</td></tr></table> b) Deviation from the car parking rates in Table 1 will only be considered in special circumstances mentioned previously; c) Each residential dwelling with one or more bedrooms must be provided with a minimum of 1 allocated car parking space; d) Small car spaces, with minimum dimensions of 2.3m x 5.0m (as detailed in AS2890.1) are not permitted in private car parks and must form no more than 10% of the overall parking provision in public car parks.	<table><tr><td>53 units / 4 for visitors</td><td>13.25 (1 disabled space)</td><td>14 visitor spaces provided (1 being accessible) 1 carwash bay is provided, which duplicates as a visitor bay</td></tr><tr><td></td><td></td><td>1 loading bay is provided</td></tr></table> The proposal complies. All dwellings will have at least one parking space. Not applicable.	Yes Yes N/A
2.6 Bicycle Parking	Refer to Section 4.2 – Bicycle facilities and Table 3 – Bicycle parking rates. Residents: 1 per 4 dwellings Visitors: 1 rack + 1 rack per 10 dwellings	13.25 spaces required for residents, 15 proposed 5.3 spaces for required for visitors, 6 proposed.	Yes
2.7 Motorcycle Parking	a) Developers shall provide 1 motorcycle parking space per 15 car spaces for all types of development. b) Motorcycle parking spaces are to have an area of 1.2m x 3m	7 motorcycle parking spaces required, 7 provided. Proposal complies.	Yes Yes
2.8 Disabled parking provision	a) For disabled car parking rates refer to Table 1 and Table 2 b) Disabled parking spaces must be built in accordance with AS/NZS 2890.6:2009 Parking facilities—Off-street parking or people with disabilities.	Disabled parking is provided in accordance with the adaptable dwellings. Refer to Amended Access Report.	Yes Yes

LANE COVE DCP - COMPLIANCE TABLE			
2.9 Tandem and mechanical stacked parking	a) That the use of tandem parking configurations will enable a reduced level of excavation to preserve existing significant tree(s) and or natural landscape features on the site; AND b) That the site's shape is physically constrained, such that conventional parking arrangements would not enable compliance with the parking provision requirements of this DCP; AND c) That the number of spaces in the tandem parking configuration does not exceed 10% of the overall parking stock.	Tandem parking will have no impact to trees or natural landscape. Tandem parking is only proposed to a number of dwellings. Tandem parking accounts for 6 of the overall parking.	Yes Yes Yes
2.10 Parking and access for service vehicles	a) Parking areas shall be provided and designed to allow for access and loading by Council's waste collection contractor. b) All parking areas for delivery and service vehicles must be designed in accordance with AS 2890.2:2002 Parking facilities—Off-street commercial vehicle facilities. On site delivery and service areas for residential flat buildings must be large enough to accommodate removal trucks. c) Developers should refer to Part Q - Waste Management & Minimisation for relevant dimensions and requirements.	Parking provided within the basement loading bay for waste collection contractor. Refer to Amended Traffic Report. Refer to Amended Traffic Report and Amended Operational Waste Management Plan.	Yes Yes Yes
2.11 Parking Area, Access and Design	a) All parking areas, including access ramps and driveways, must be designed in accordance with AS/NZS 2890.1:2004 Parking facilities—Off-street car parking b) Developers shall refer to relevant other sections of Council's Development Control Plan.	Refer to Amended Traffic Report prepared by *Greenview Consultants*.	Yes
4.3 Bicycle facilities and infrastructure	a) Refer to Table 3 – Bicycle parking rates; and b) Design bicycle parking in accordance with AS 2890.3 c) Bicycle lockers are intended for use by residents or workers in the development, and should therefore be included in secure areas of the building. d) Provide adequate end of trip facilities where more than five bicycle lockers are provided in commercial and industrial development. e) Provide at least one bicycle locker per five with a charging point for electric bicycles.	Proposal complies. Refer to Amended Traffic Report. Secure bicycle parking provided within the basement for residents. Not applicable. Not applicable.	Yes Yes Yes N/A N/A

LANE COVE DCP - COMPLIANCE TABLE			
	f) Make reference to the Lane Cove Bicycle Plan. Shared user paths and bicycle paths identified in the Bicycle Plan within the vicinity of the development will be considered by Council as necessary cycling infrastructure improvements. g) Fund necessary cycling infrastructure improvements either fully or partly or provide as works in kind prior to Occupation Certificate. h) Facilitate the future implementation of planned shared paths and cycle paths for example, by providing building setbacks from the footpath.	Not applicable. Not applicable. Not applicable.	N/A N/A N/A
6.1 Traffic Impact Assessment	a) Developments that are forecast to generate 10 or more peak hour vehicle trips are required to submit a Traffic Impact Assessment (TIA) at the DA stage.	Amended Traffic Impact Assessment prepared by *Greenview Consulting* and submitted with this application.	Yes

Drawing Register

No.	Title	Rev
TP00.00	COVER SHEET	C
TP00.01	DEVELOPMENT SUMMARY	J
TP00.02	SITE PLAN	C
TP00.03	SURVEY	B
TP00.04	DEMOLITION PLAN	B
TP00.05	EXCAVATION AND FILL PLAN	B
TP01.01	BASEMENT 2	L
TP01.02	BASEMENT 1	L
TP01.03	GROUND	N
TP01.04	LEVEL 1	M
TP01.05	LEVEL 2	M
TP01.06	LEVEL 3	E
TP01.07	LEVEL 4	M
TP01.08	LEVEL 5	M
TP01.09	ROOF	G
TP02.01	EAST AND WEST ELEVATION	C
TP02.02	NORTH & SOUTH ELEVATION	C
TP03.01	SECTIONS	H
TP03.02	SECTIONS 2	F
TP03.03	SECTIONS 3	E
TP03.04	SECTIONS 4	D
TP03.05	SECTIONS 5	C
TP03.10	BOUNDARY SECTIONS	C
TP04.01	GFA	C
TP04.02	SEPP65	E
TP04.03	HEIGHT PLANE	B
TP04.08	SHADOW DIAGRAMS	B
TP04.09	DEEP SOIL, COMMUNAL OPEN SPACE	E
TP04.10	LANDSCAPED AREA	D
TP04.12	STORAGE PLANS AND SCHEDULE	B
TP04.20	ADAPTABLE PLANS	B
TP04.21	ADAPTABLE PLANS	C
TP04.22	ADAPTABLE PLANS	A
TP04.30	SOLAR ELEVATIONS	B
TP04.31	SOLAR ELEVATIONS	B
TP04.32	SOLAR ELEVATIONS	B
TP04.33	SOLAR ELEVATIONS	B
TP04.34	SOLAR ELEVATIONS	B
TP04.35	SOLAR ELEVATIONS	B
TP05.02	NOTIFICATION PLANS	B
TP05.03	SETBACK DIAGRAM	B
TP06.00	SUN VIEW - 8AM	-
TP06.01	SUN VIEW - 9AM	C
TP06.05	SUN VIEW - 10AM	C
TP06.09	SUN VIEW - 11AM	C
TP06.13	SUN VIEW - 12PM	C
TP06.17	SUN VIEW - 1PM	C
TP06.21	SUN VIEW - 2PM	C
TP06.25	SUN VIEW - 3PM	C
TP06.26	SUN VIEW - 4PM	-



1 Gatacre Ave & 1-5 Allison Ave, Lane Cove

Project
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Client
Winim

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PRELIMINARY
NOT FOR CONSTRUCTION

Project No	Date
221002	**07.05.21**
Drawing No.	Revision
TP00.00	**C**

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27/05/2022 2:42:56 PM

LEVEL	RESIDENTIAL	RESIDENTIAL AMENITIES	PARKING	CIRCULATION/ SERVICES	TERRACE	APARTMENTS									TOTAL UNITS	AMENITY			
						No. 1 BEDS	No. 1 BEDS PLUS	No. 2 BEDS	No. 2 BEDS PLUS	No. 3 BEDS	No. 3 BEDS PLUS	No. 4 BEDS	No. 4 BEDS PLUS	No. 5 BEDS		No. ADAPTABLE	No. LHA	No. SOLAR	No. VENTILATION
Basement 2	0.0 m²	0.0 m²	1875.8 m²	141.8 m²	0.0 m²	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Basement 1	0.0 m²	0.0 m²	1696.7 m²	302.8 m²	0.0 m²	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ground	1114.5 m²	0.0 m²	0.0 m²	195.6 m²	240.9 m²	1	0	2	1	7	0	4	0	0	15	1	7	5	9
Level 1	1229.2 m²	0.0 m²	0.0 m²	91.0 m²	98.7 m²	0	0	0	0	1	0	1	0	0	2	2	2	0	2
Level 2	1074.0 m²	0.0 m²	0.0 m²	126.3 m²	129.2 m²	4	0	4	0	1	1	2	0	0	12	3	12	4	8
Level 3	1034.2 m²	0.0 m²	0.0 m²	126.0 m²	127.2 m²	4	0	4	0	1	1	2	0	0	12	1	12	6	8
Level 4	858.3 m²	0.0 m²	0.0 m²	116.2 m²	118.0 m²	3	0	3	0	2	0	1	1	0	10	2	8	10	8
Level 5	298.6 m²	0.0 m²	0.0 m²	87.0 m²	55.7 m²	0	0	0	0	0	2	0	0	0	2	2	2	2	2
	5608.8 m²	0.0 m²	3572.6 m²	1186.7 m²	769.8 m²	12	0	13	1	12	4	10	1	0	53	11	43	27	37

SITE AREA	PERMISSIBLE FSR	Permissible GFA
2965.8 m²	4.8	7117.9 m²

Gross Floor Area	
Level	Area
Ground	1294.9 m²
Level 1	1308.9 m²
Level 2	1175.8 m²
Level 3	1133.0 m²
Level 4	935.4 m²
Level 5	335.8 m²
Grand total	6183.9 m²

SOLAR COMPLIANT	CROSS VENT COMPLIANT
50.9%	69.8%

Level	CARPARKS			Carwash	Motorbike/ Scooter Park	Bicycle Parks
	Residential	Visitor	Total			
Basement 2	64	0	64	0	4	8
Basement 1	27	14	41	1	3	13
	91	14	105	1	7	21

* CARWASH BAY TO BE COUNTED TOWARDS VISITOR CARPARK

PARKING REQUIREMENTS (PART R - TRAFFIC AND PARKING)

RESIDENTS/ EMPLOYEES
0.5 SPACES PER STUDIO
1 SPACE PER 1 BEDROOM UNIT
1.5 SPACES PER 2 BEDROOM UNIT
2 SPACES PER 3+ BEDROOM UNT
1 DISABLED SPACE FOR EACH ADAPTABLE HOUSING UNIT

CUSTOMERS/VISITORS
1 SPACE PER 4 UNITS
1 DISABLED SPACE PER 50 VISITOR SPACES (MINIMUM 1 DISABLED SPACE)

REQUIRED PARKING

1 BED	1*12 = 12 CARSPACES
2 BED	1.5*14 = 21 CARSPACES
3&4 BED	2*27 = 54 CARSPACES
VISITOR	53/4 = 14 CAPSPACES
TOTAL	12+21+54+14 = 101 CARPSPACES

UNIT NUMBER	UNIT AREA	TERRACE	TOTAL AREA
U101	123.0 m²	13.0 m²	136.0 m²
U102	152.9 m²	15.7 m²	168.6 m²
U201	62.1 m²	8.0 m²	70.1 m²
U202	60.1 m²	8.0 m²	68.1 m²
U203	63.1 m²	10.1 m²	73.2 m²
U204	80.3 m²	10.1 m²	90.4 m²
U205	108.1 m²	12.0 m²	120.1 m²
U206	82.5 m²	12.6 m²	95.1 m²
U207	138.2 m²	15.2 m²	153.4 m²
U208	65.9 m²	8.0 m²	73.9 m²
U209	121.3 m²	12.3 m²	133.6 m²
U210	81.6 m²	10.2 m²	91.8 m²
U211	95.0 m²	10.2 m²	105.2 m²
U212	115.7 m²	12.5 m²	128.2 m²
U301	62.1 m²	8.0 m²	70.1 m²
U302	60.1 m²	8.0 m²	68.1 m²
U303	63.1 m²	10.2 m²	73.3 m²
U304	80.3 m²	10.1 m²	90.4 m²
U305	108.1 m²	12.6 m²	120.7 m²
U306	82.6 m²	9.4 m²	92.0 m²
U307	123.9 m²	14.1 m²	138.0 m²
U308	65.9 m²	8.0 m²	73.9 m²
U309	113.4 m²	12.5 m²	125.9 m²
U310	76.3 m²	10.4 m²	86.7 m²
U311	89.2 m²	10.4 m²	99.6 m²
U312	109.0 m²	13.5 m²	122.5 m²
U401	63.0 m²	8.0 m²	71.0 m²
U402	60.1 m²	8.0 m²	68.1 m²
U403	61.8 m²	10.3 m²	72.1 m²
U404	88.4 m²	18.8 m²	107.2 m²
U405	95.1 m²	12.3 m²	107.4 m²
U406	84.7 m²	10.0 m²	94.7 m²
U407	135.4 m²	20.9 m²	156.3 m²
U408	94.7 m²	12.0 m²	106.7 m²
U409	100.0 m²	12.0 m²	112.0 m²
U410	119.1 m²	12.5 m²	131.6 m²
U501	131.0 m²	23.2 m²	154.2 m²
U502	123.7 m²	12.1 m²	135.8 m²
UG01	185.5 m²	49.2 m²	234.7 m²
UG02	124.7 m²	32.9 m²	157.6 m²

UNIT NUMBER	UNIT AREA	TERRACE	TOTAL AREA
UG03	68.1 m²	14.3 m²	82.4 m²
UG04	127.0 m²	21.4 m²	148.4 m²
UG05	130.2 m²	15.4 m²	145.6 m²
UG06	149.7 m²	15.1 m²	164.8 m²
UG07	99.9 m²	15.1 m²	115.0 m²
UG08	124.8 m²	36.0 m²	160.8 m²
UG09	187.0 m²	27.3 m²	214.3 m²
UG10	144.2 m²	14.7 m²	158.9 m²
UG11	162.2 m²	15.3 m²	177.5 m²
UG12	154.2 m²	15.0 m²	169.2 m²
UG13	161.0 m²	15.1 m²	176.1 m²
UG14	120.7 m²	11.3 m²	132.0 m²
UG15	128.3 m²	13.2 m²	141.5 m²
	5608.3 m²	756.5 m²	6364.8 m²

Compliant LHA		
Level	Name	Number
Ground	4 BED TH	UG01
Ground	3 BED TH	UG02
Ground	2 BED TH	UG04
Ground	2 BED+	UG07
Ground	4 BED	UG08
Ground	4 BED TH	UG09
Ground	3 BED TH	UG13
Ground: 7		
Level 1	3 BED	U101
Level 1	4 BED	U102
Level 1: 2		
Level 2	1 BED	U201
Level 2	1 BED	U202
Level 2	1 BED	U203
Level 2	2 BED	U204
Level 2	3 BED+	U205
Level 2	2 BED	U206
Level 2	4 BED	U207
Level 2	1 BED	U208
Level 2	3 BED	U209
Level 2	2 BED	U210
Level 2	2 BED	U211
Level 2	4 BED	U212
Level 2: 12		
Level 3	1 BED	U301
Level 3	1 BED	U302
Level 3	1 BED	U303
Level 3	2 BED	U304
Level 3	3 BED+	U305
Level 3	2 BED	U306
Level 3	4 BED	U307
Level 3	1 BED	U308
Level 3	3 BED	U309

Compliant LHA		
Level	Name	Number
Level 3	2 BED	U310
Level 3	2 BED	U311
Level 3	4 BED	U312
Level 3: 12		
Level 4	1 BED	U401
Level 4	1 BED	U402
Level 4	1 BED	U403
Level 4	3 BED	U405
Level 4	2 BED	U406
Level 4	2 BED	U408
Level 4	3 BED	U409
Level 4	4 BED	U410
Level 4: 8		
Level 5	3 BED+	U501
Level 5	3 BED+	U502
Level 5: 2		
Grand total: 43		

Adaptable Units		
Level	Name	Number
Ground	2 BED+	UG07
Ground: 1		
Level 1	3 BED	U101
Level 1	4 BED	U102
Level 1: 2		
Level 2	1 BED	U202
Level 2	4 BED	U207
Level 2	3 BED	U209
Level 2: 3		
Level 3	1 BED	U302
Level 3: 1		
Level 4	1 BED	U402
Level 4	4 BED	U410
Level 4: 2		
Level 5	3 BED+	U501
Level 5	3 BED+	U502
Level 5: 2		
Grand total: 11		

TOWN PLANNING

Revisions			
E	02.02.22	S34 Submission	GT
F	29.02.22	Without Prejudice	GT
G	13.05.22	Updated For Review	NE
H	19.05.21	For Coordination	GT
J	27.05.22	LEC Issue	NE

27/05/2022 2:33:54 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **DEVELOPMENT SUMMARY**

Project No: **221002** Date: **03.02.21** Author: **GT** Scale: @ A1 **1 : 1**

Drawing No.: **TP00.01 J**

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Revisions				
	P1	07.05.21	DA Issue	NE
	-	13.08.21	RFI Submission	GT
	A	02.02.22	S34 Submission	GT
	B	18.05.22	For Information	GT
	C	27.05.22	LEC Issue	NE

27/05/2022 2:34:02 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SITE PLAN**

Project No: **221002**

Date: **02.02.21**

Author: **GT**

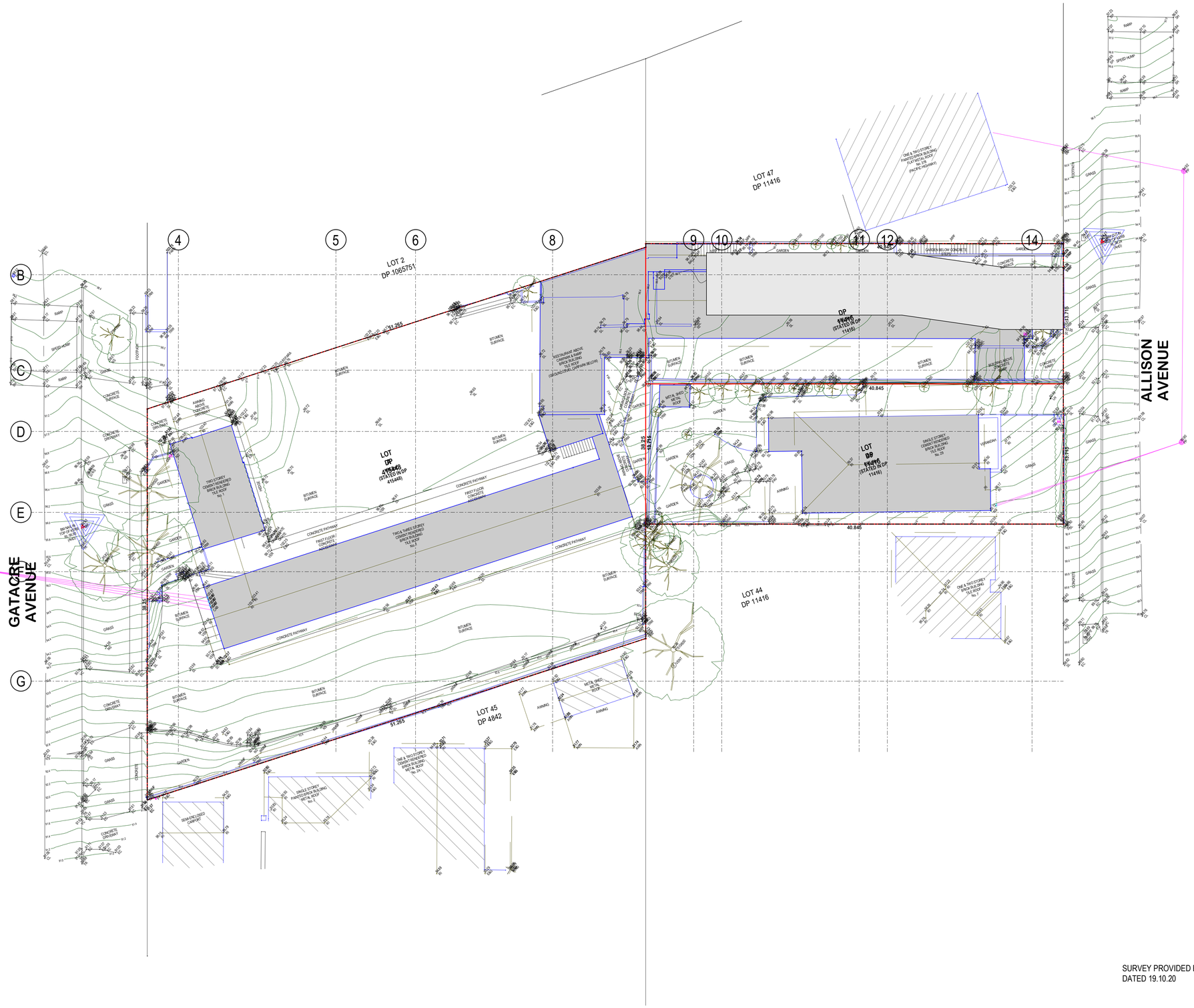
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Drawing No.: **TP00.02 C**

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SURVEY PROVIDED BY METWEST SURVEYORS
DATED 19.10.20

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Revisions			
P1	07.05.21	DA Issue	NE
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	26.05.22	LEC Issue	NE

26/05/2022 5:52:29 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SURVEY**

Project No: **221002**

Date: **15.02.21**

Author: **GT**

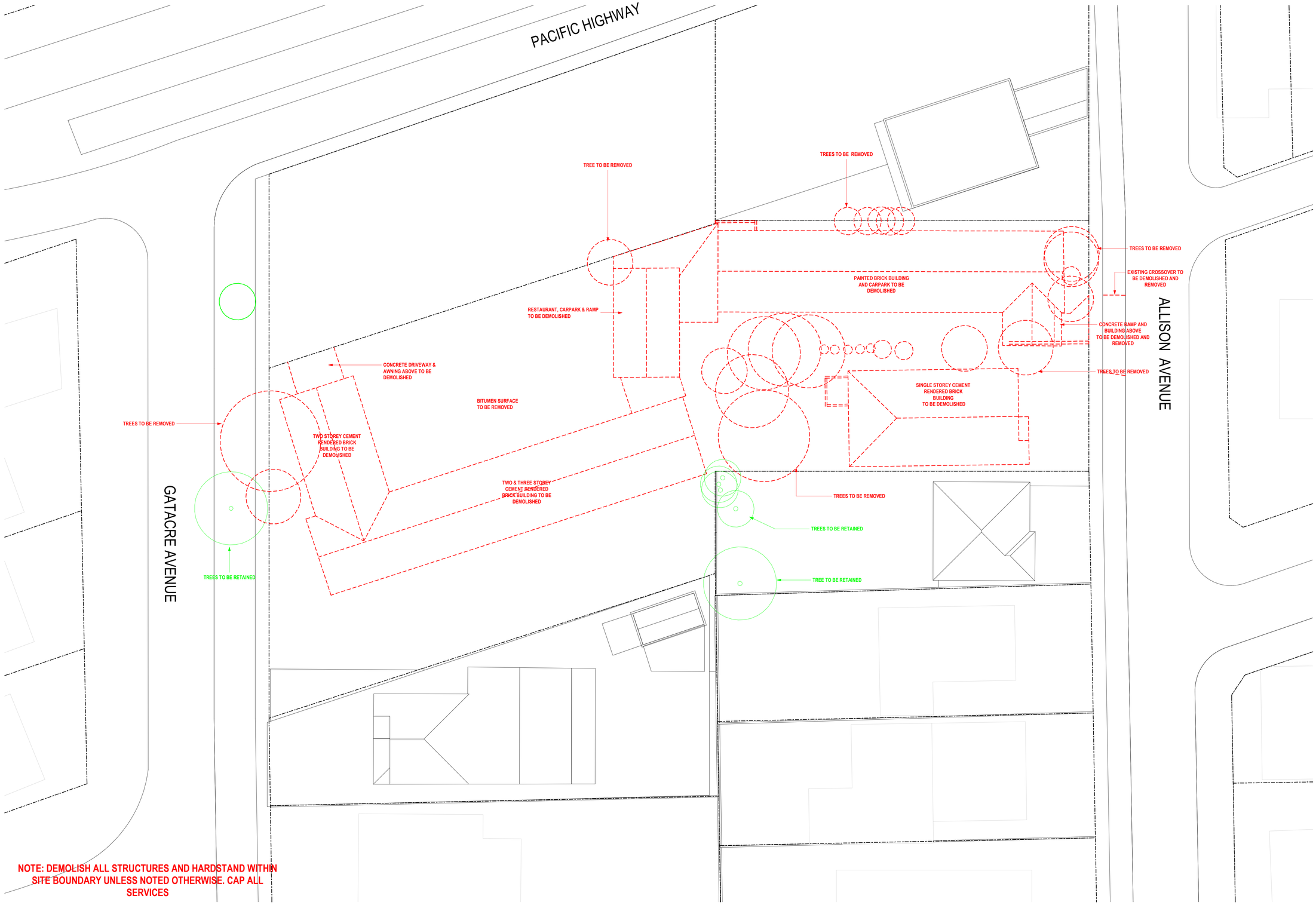
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Drawing No.: **TP00.03 B**

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NOTE: DEMOLISH ALL STRUCTURES AND HARDSTAND WITHIN SITE BOUNDARY UNLESS NOTED OTHERWISE. CAP ALL SERVICES

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Revisions			
P1	07.05.21	DA Issue	NE
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	27.05.22	LEC Issue	NE

27/05/2022 2:34:10 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **DEMOLITION PLAN**

Project No: **221002**

Date: **15.02.21**

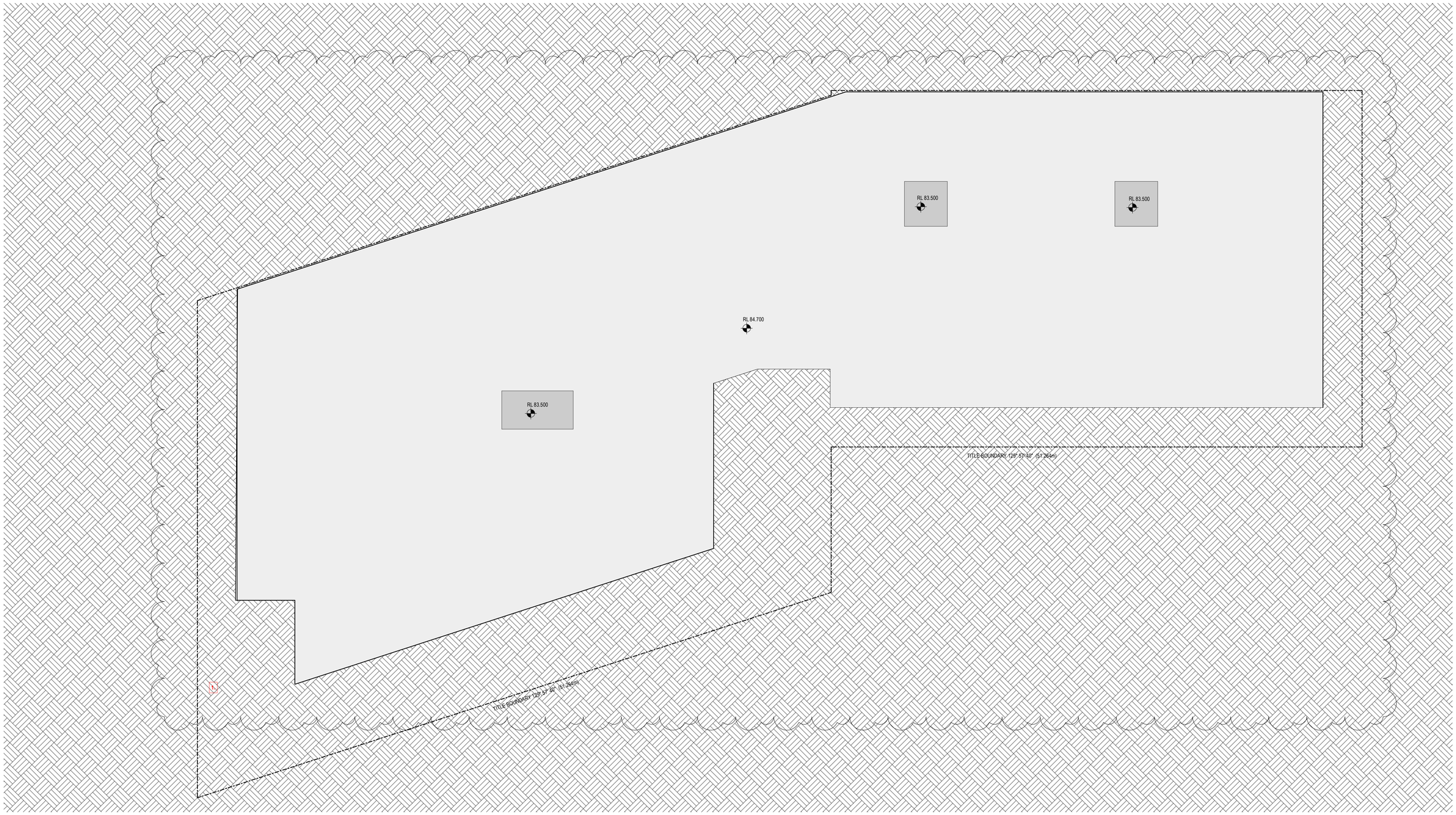
Author: **GT**

Scale: @ A1: **1 : 200**

Drawing No.: **TP00.04 B**

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	A	02.02.22	S34 Submission	GT
	B	27.05.22	LEC Issue	NE

27/05/2022 2:34:14 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **EXCAVATION AND FILL PLAN**

Project No: **221002**

Date: **07/05/21**

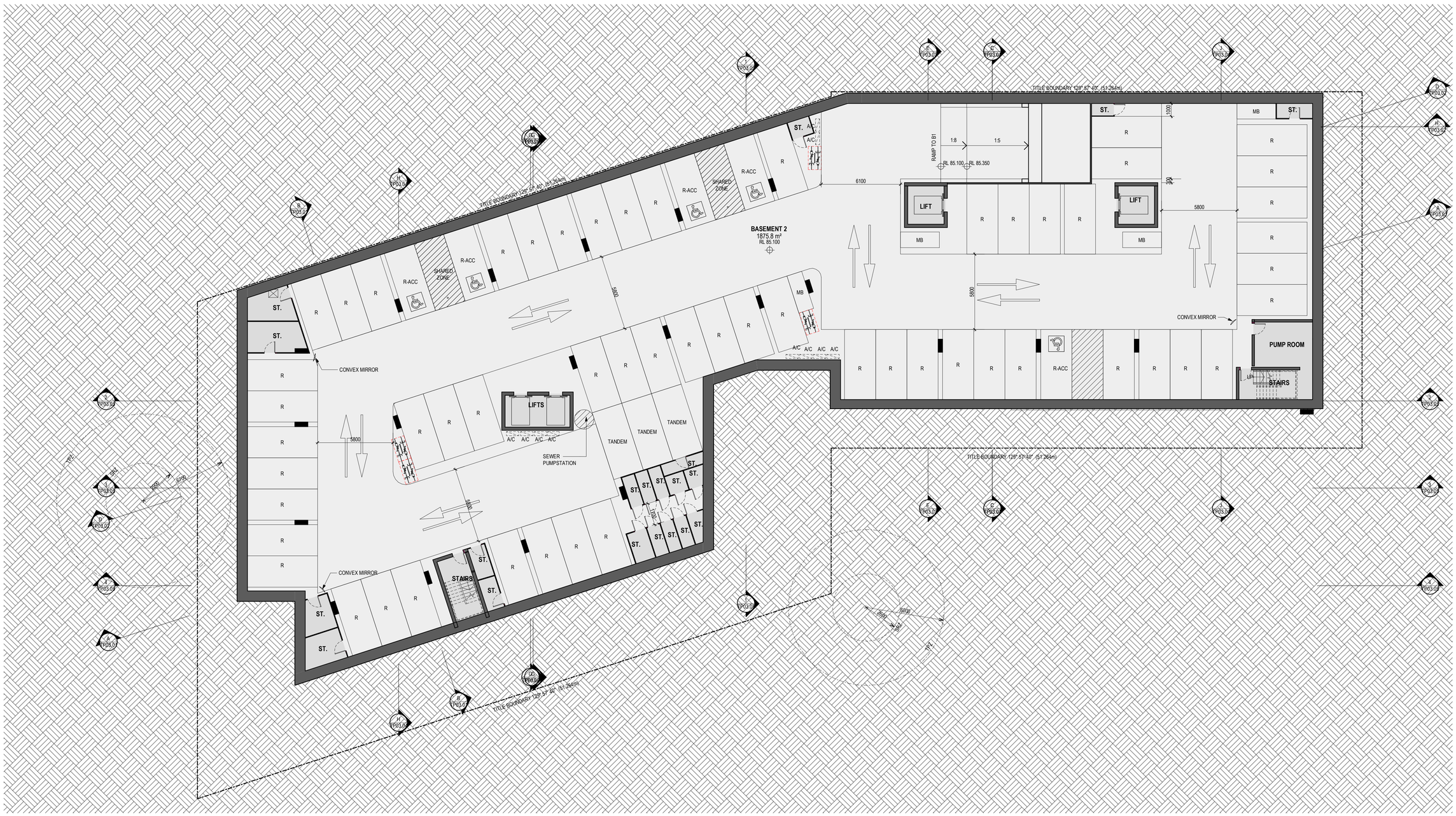
Author: **NE**

Scale: @ A1 **1 : 150**

Drawing No.: **TP00.05 B**

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Revisions			
G	29.02.22	Without Prejudice	GT
H	13.05.22	Updated For Review	NE
J	19.05.22	For Information	GT
K	19.05.21	For Coordination	GT
L	27.05.22	LEC Issue	NE

27/05/2022 2:34:18 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **BASEMENT 2**

Project No: **221002**

Date: **08.02.21**

Author: **GT**

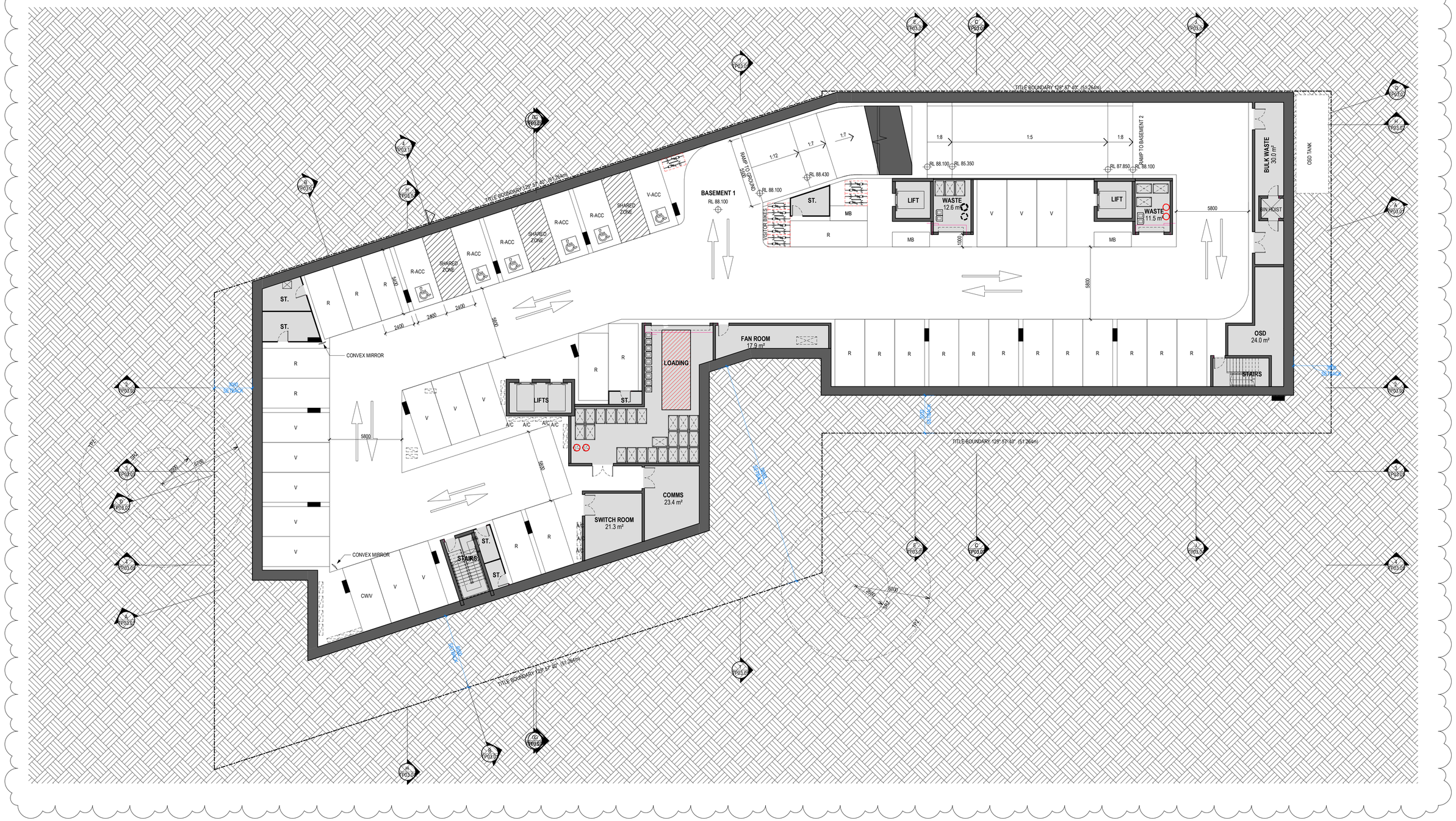
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Drawing No.: **TP01.01 L**

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Revisions				
	G	29.02.22	Without Prejudice	GT
	H	13.05.22	Updated For Review	NE
	J	19.05.22	For Information	GT
	K	19.05.21	For Coordination	GT
	L	27.05.22	LEC Issue	NE

27/05/2022 2:34:23 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **BASEMENT 1**

Project No: **221002**

Date: **02/04/21**

Author: **NE**

Scale: @ A1: **1 : 150**

Drawing No.: **TP01.02 L**

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TOWN PLANNING

Revisions			
J	13.05.22	Updated For Review	NE
K	16.05.22	To Landscape	GT
L	19.05.22	For Information	GT
M	19.05.21	For Coordination	GT
N	27.05.22	LEC Issue	NE

27/05/2022 2:34:35 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **GROUND**

Project No: **221002**

Date: **1.02.21**

Author: **GT**

Scale: @ A1 **1 : 150**

Drawing No.: **TP01.03 N**

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TOWN PLANNING

Revisions			
H	13.05.22	Updated For Review	NE
J	16.05.22	To Landscape	GT
K	19.05.22	For Information	GT
L	19.05.21	For Coordination	GT
M	27.05.22	LEC Issue	NE

27/05/2022 2:34:45 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **LEVEL 1**

Project No: **221002**

Date: **01.02.21**

Author: **GT**

Scale: @ A1 **1 : 150**

Drawing No.: **TP01.04 M**

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TOWN PLANNING

Revisions			
H	13.05.22	Updated For Review	NE
J	16.05.22	To Landscape	GT
K	19.05.22	For Information	GT
L	19.05.21	For Coordination	GT
M	27.05.22	LEC Issue	NE

27/05/2022 2:34:57 PM

Project
1 Gatacre Ave & 1-5 Allison Ave, Lane Cove
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing **LEVEL 2**

Project No **221002** Date **05/05/21** Author **NE** Scale: @ A1 **1 : 150** Drawing No. **TP01.05 M**

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TOWN PLANNING

Revisions			
A	13.05.22	Updated For Review	NE
B	16.05.22	To Landscape	GT
C	19.05.22	For Information	GT
D	19.05.21	For Coordination	GT
E	27.05.22	LEC Issue	NE

27/05/2022 2:35:08 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **LEVEL 3**

Project No: **221002**

Date: **02/21/22**

Author: **GT**

Scale: @ A1: **1 : 150**

Drawing No.: **TP01.06 E**

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TOWN PLANNING

Revisions			
	H	13.05.22 Updated For Review	NE
	J	16.05.22 To Landscape	GT
	K	19.05.22 For Information	GT
	L	19.05.21 For Coordination	GT
	M	27.05.22 LEC Issue	NE

27/05/2022 2:35:17 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **LEVEL 4**

Project No: **221002**

Date: **01.02.21**

Author: **GT**

Scale: @ A1 **1 : 150**

Drawing No.: **TP01.07 M**

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TOWN PLANNING

Revisions			
H	13.05.22	Updated For Review	NE
J	16.05.22	To Landscape	GT
K	19.05.22	For Information	GT
L	19.05.21	For Coordination	GT
M	27.05.22	LEC Issue	NE

27/05/2022 2:35:24 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **LEVEL 5**

Project No: **221002**

Date: **04.02.21**

Author: **GT**

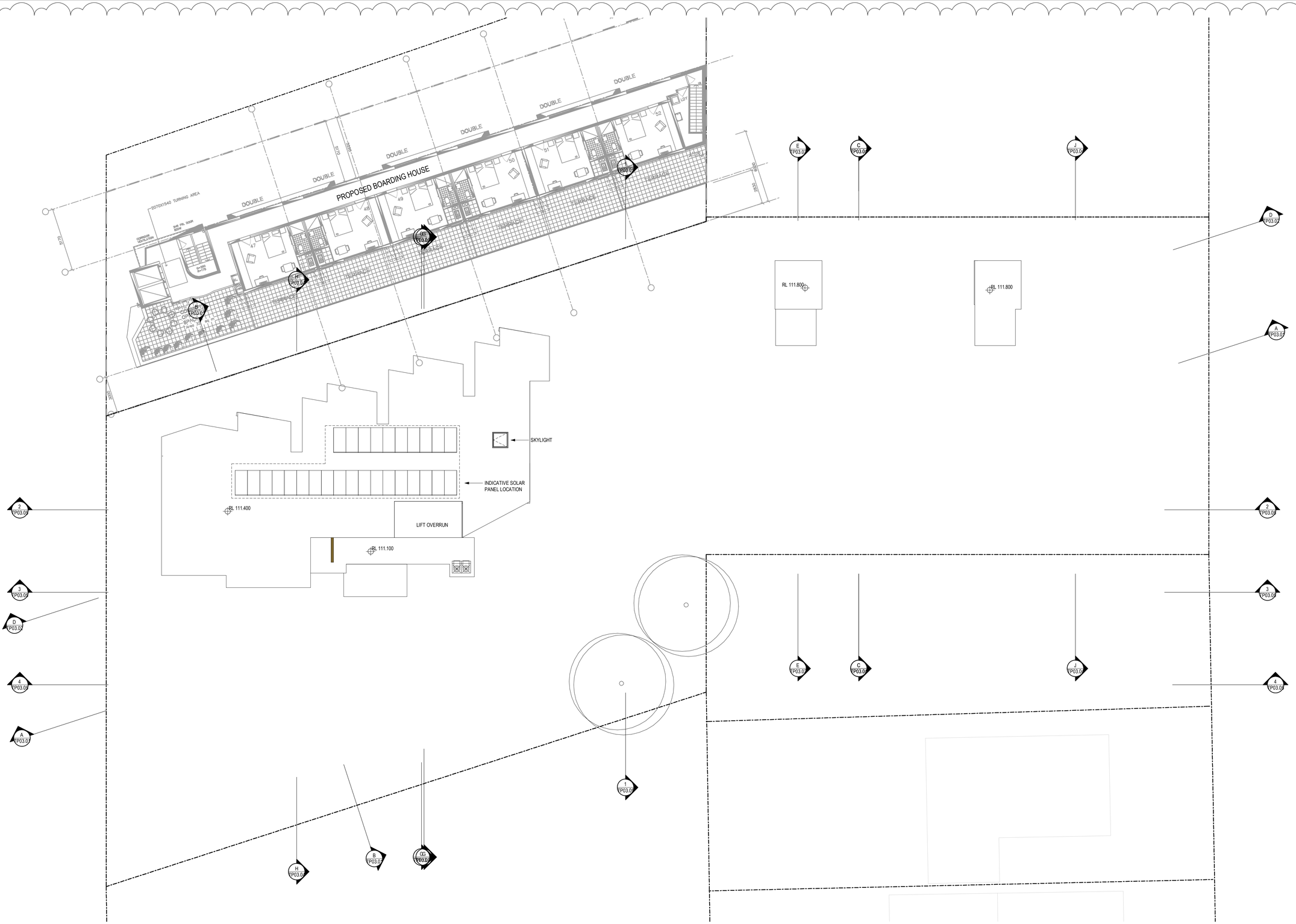
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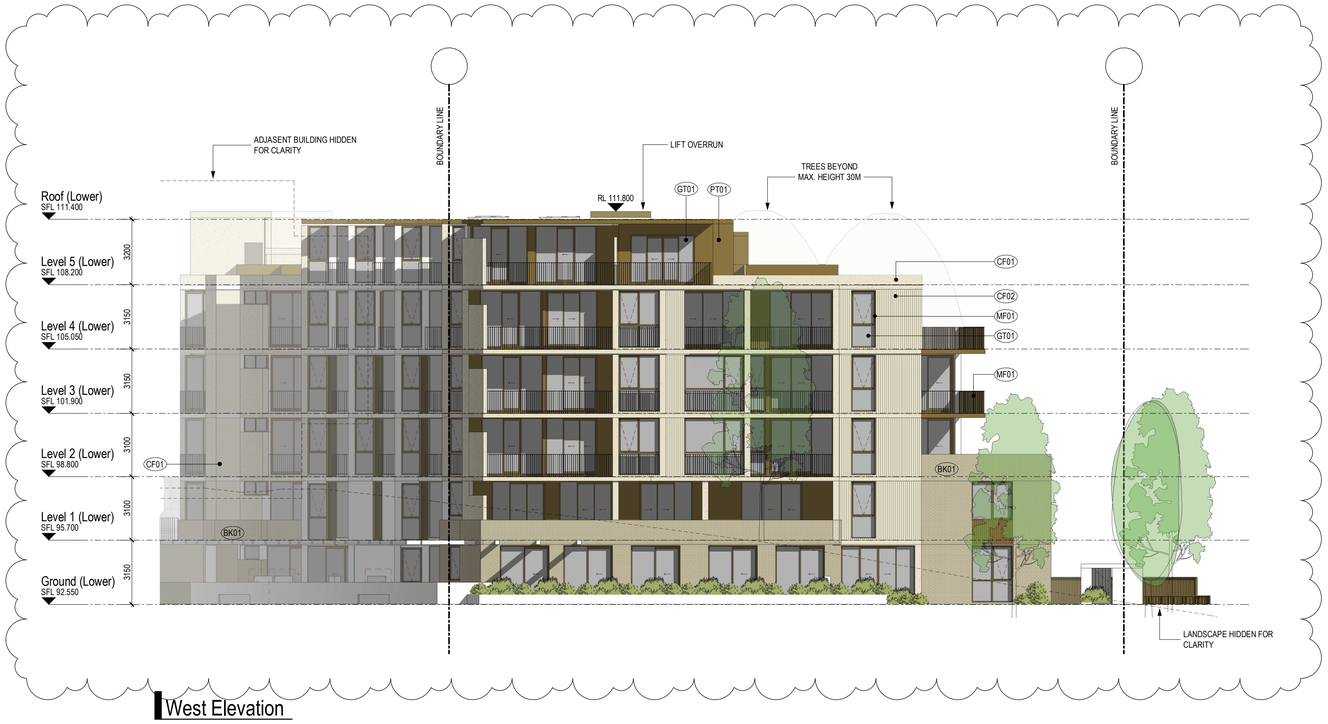
Drawing No.: **TP01.08 M**

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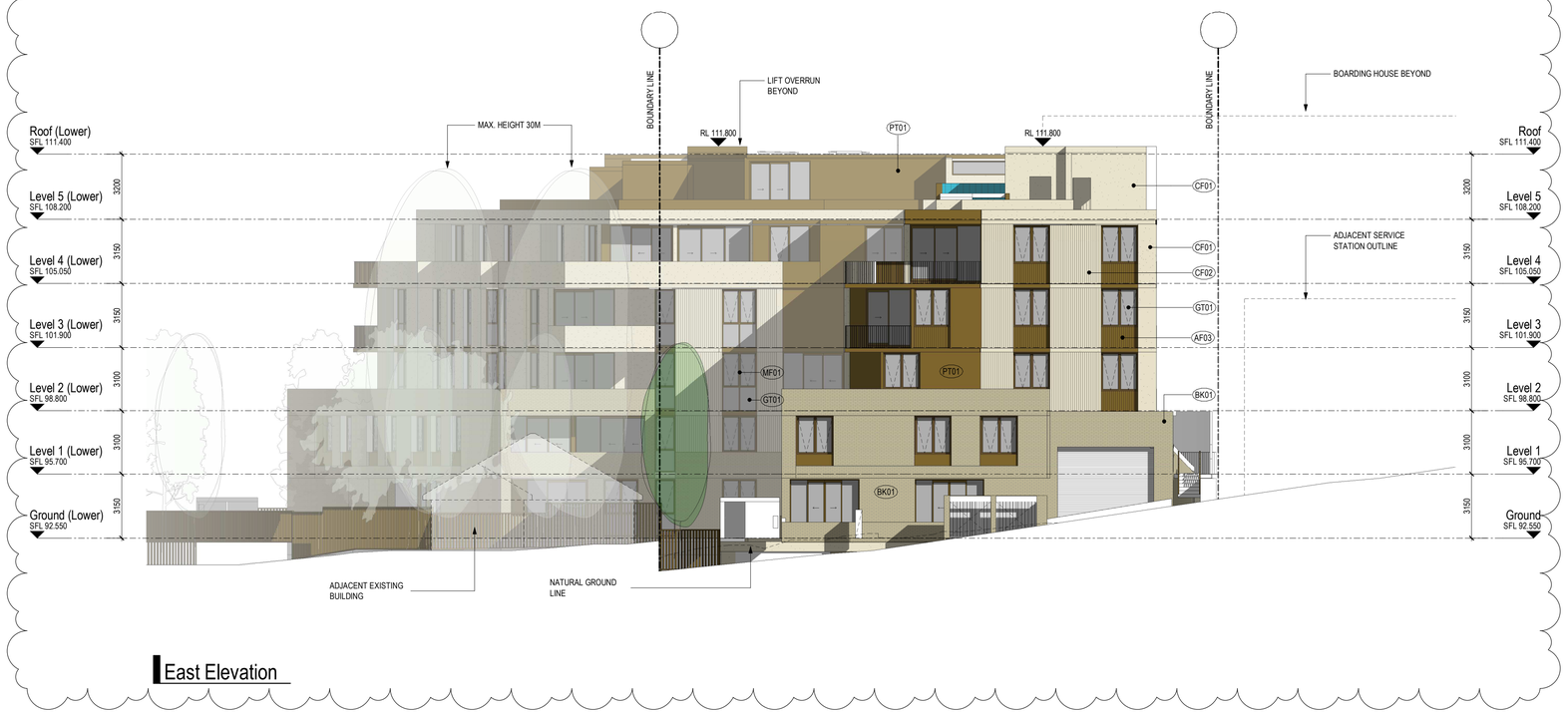
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PROPOSED BOARDING HOUSE
DOUBLE
DOUBLE
DOUBLE
DOUBLE
DOUBLE
DOUBLE
20.70X15.40 TURNING AREA
SERVICE
SERVICE
SERVICE



West Elevation



East Elevation

TOWN PLANNING

Revisions

P2	20.05.21	Amended DA Issue	NE
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	19.05.21	For Coordination	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:35:39 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

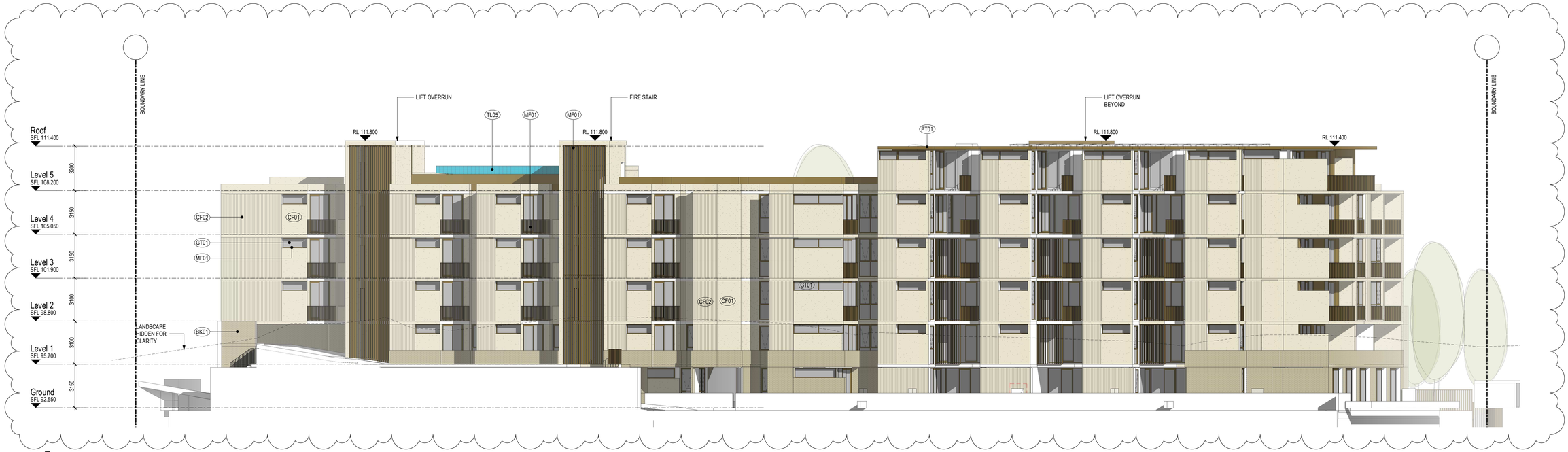
Drawing: **EAST AND WEST ELEVATION**

Project No: **221002** Date: **06/03/13** Author: **GT** Scale: @ A1 **1 : 150** Drawing No.: **TP02.01 C**

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North Elevation



South Elevation

TOWN PLANNING

Revisions

P1	07.05.21	DA Issue	NE
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	19.05.21	For Coordination	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:35:56 PM

Project
1 Gatacre Ave & 1-5 Allison Ave, Lane Cove
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing
NORTH & SOUTH ELEVATION

Project No. **221002**

Date **15.02.21**

Author **GT**

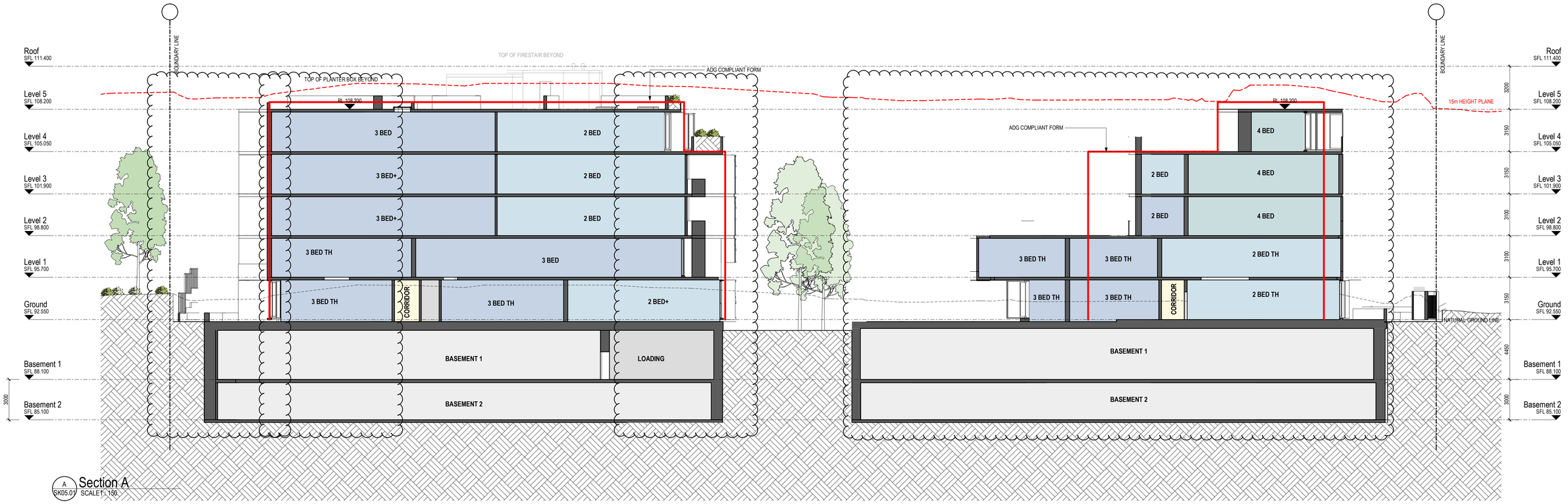
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Drawing No. **TP02.02 C**

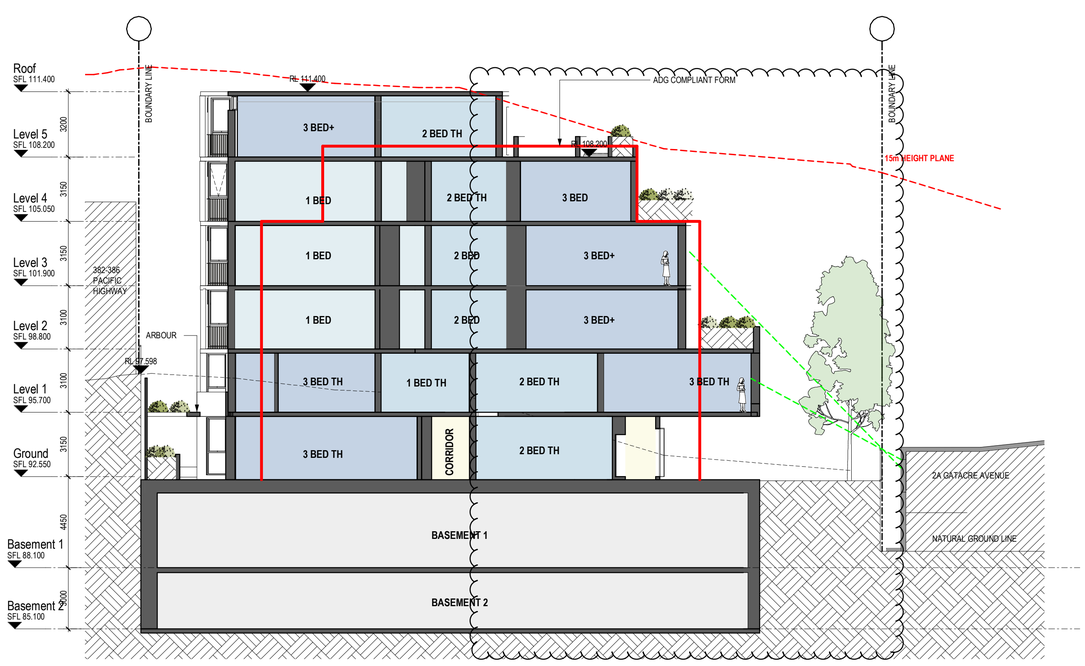
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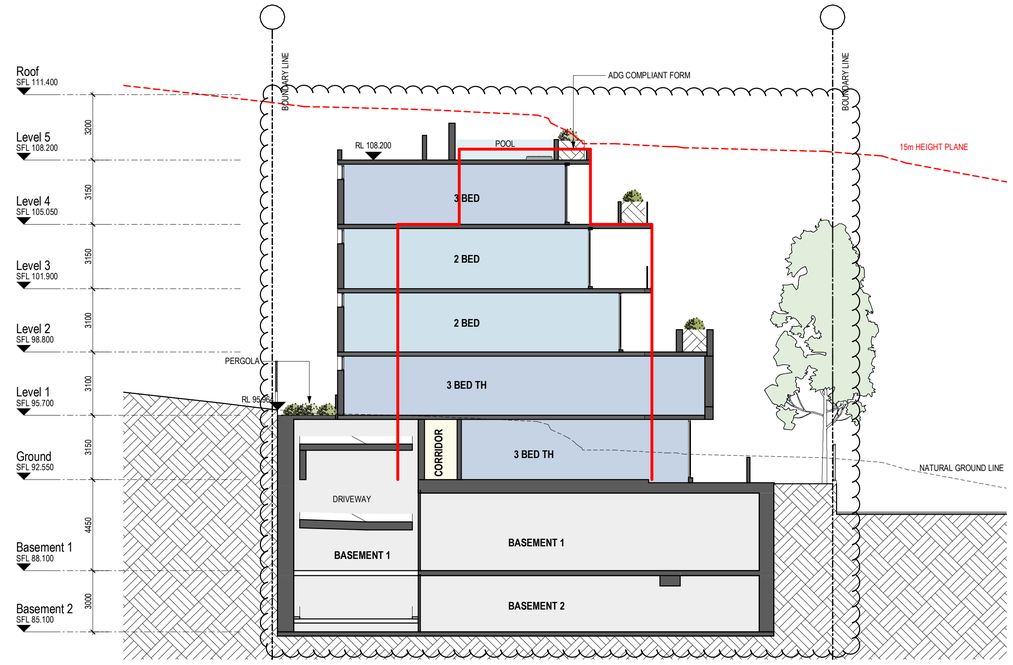
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A Section A
SK05.01 SCALE1 : 150



B Section B
SCALE1 : 150



C Section C
SCALE1 : 150

TOWN PLANNING

Revisions

D	02.02.22	S34 Submission	GT
E	29.02.22	Without Prejudice	GT
F	13.05.22	Updated For Review	NE
G	19.05.21	For Coordination	GT
H	27.05.22	LEC Issue	NE

26/05/2022 7:18:56 PM

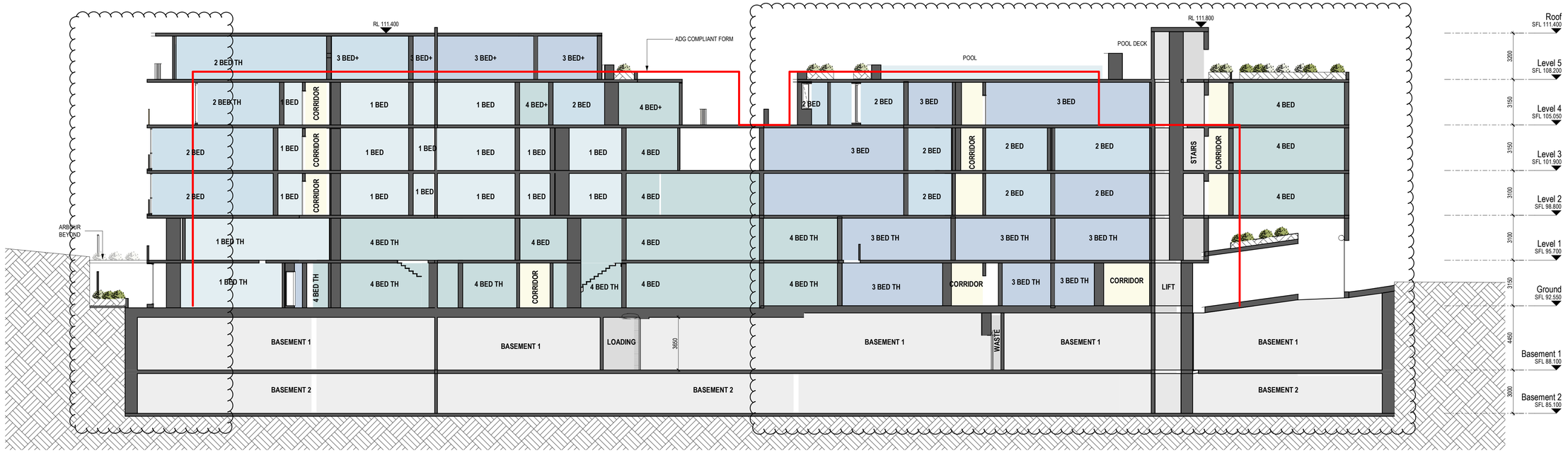
Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SECTIONS**

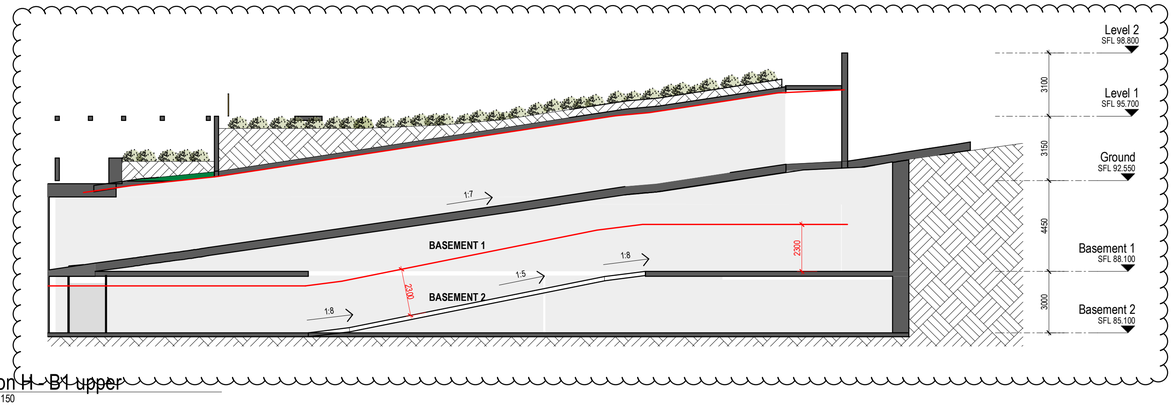
Project No: **221002** Date: **02.02.21** Author: **GT** Scale: @ A1 **1 : 150** Drawing No.: **TP03.01 H**

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D SK05.01 Section D
SCALE1 : 150



H SK05.01 Section H - B1 upper
SCALE1 : 150

TOWN PLANNING

Revisions

B	02.02.22	S34 Submission	GT
C	29.02.22	Without Prejudice	GT
D	13.05.22	Updated For Review	NE
E	19.05.21	For Coordination	GT
F	27.05.22	LEC Issue	NE

26/05/2022 7:19:08 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SECTIONS 2**

Project No: **221002**

Date: **16.03.21**

Author: **GT**

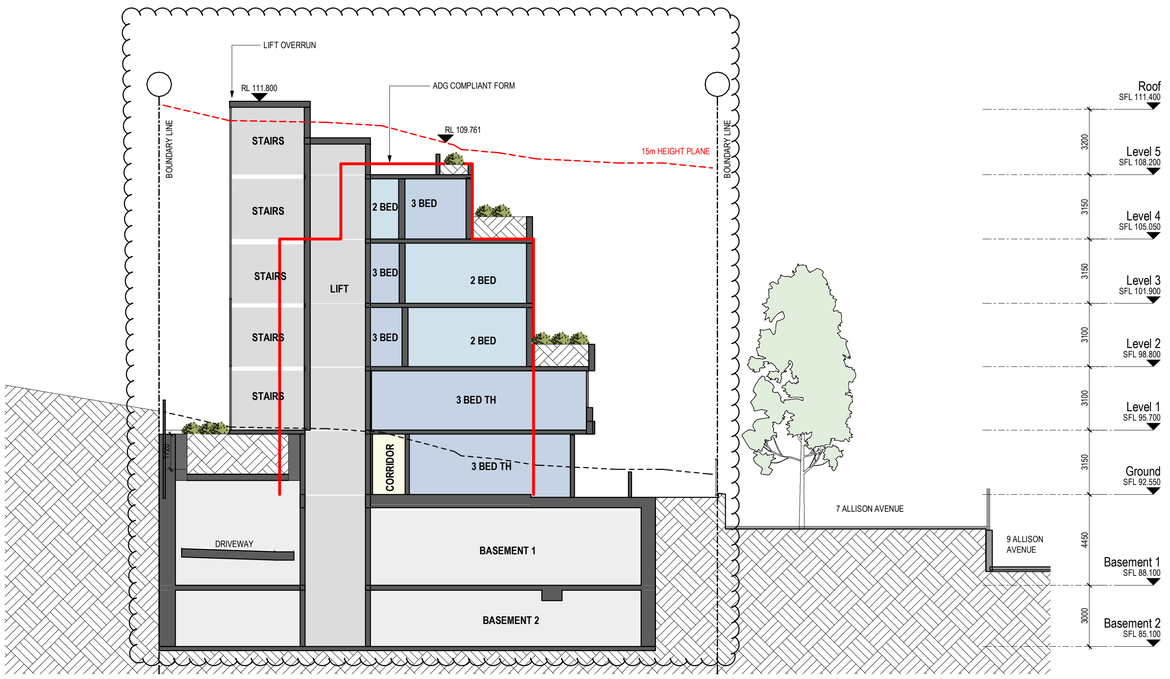
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Drawing No.: **TP03.02 F**

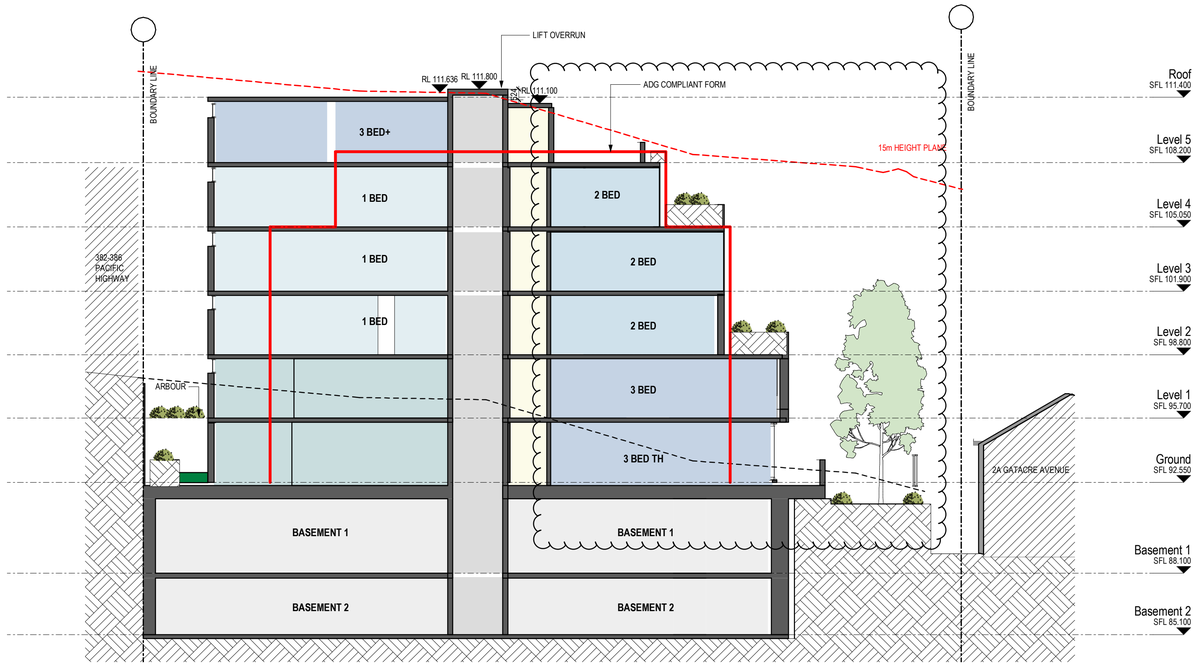
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E
-
Section E (East Wing Core)
SCALE1 : 150



G
-
Section G (West Wing Core)
SCALE1 : 150

TOWN PLANNING

Revisions

A	02.02.22	S34 Submission	GT
B	29.02.22	Without Prejudice	GT
C	13.05.22	Updated For Review	NE
D	19.05.21	For Coordination	GT
E	27.05.22	LEC Issue	NE

26/05/2022 7:19:20 PM

Project
1 Gatacre Ave & 1-5 Allison Ave, Lane Cove
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing **SECTIONS 3**

Project No **221002**

Date **21.01.22**

Author **GT**

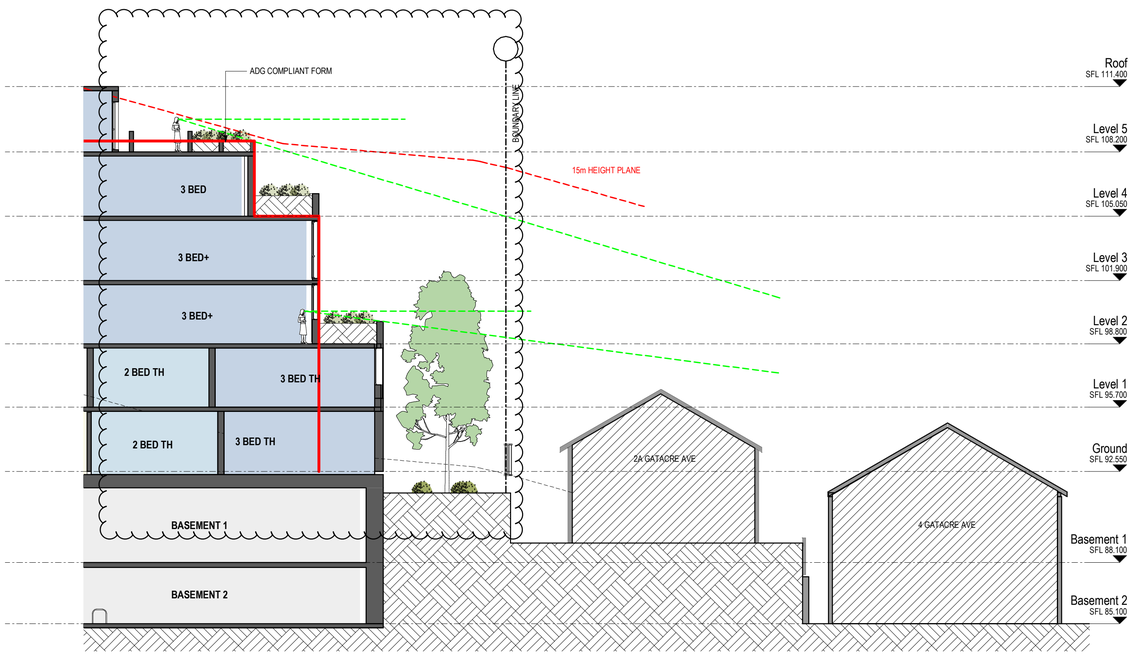
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Drawing No. **TP03.03 E**

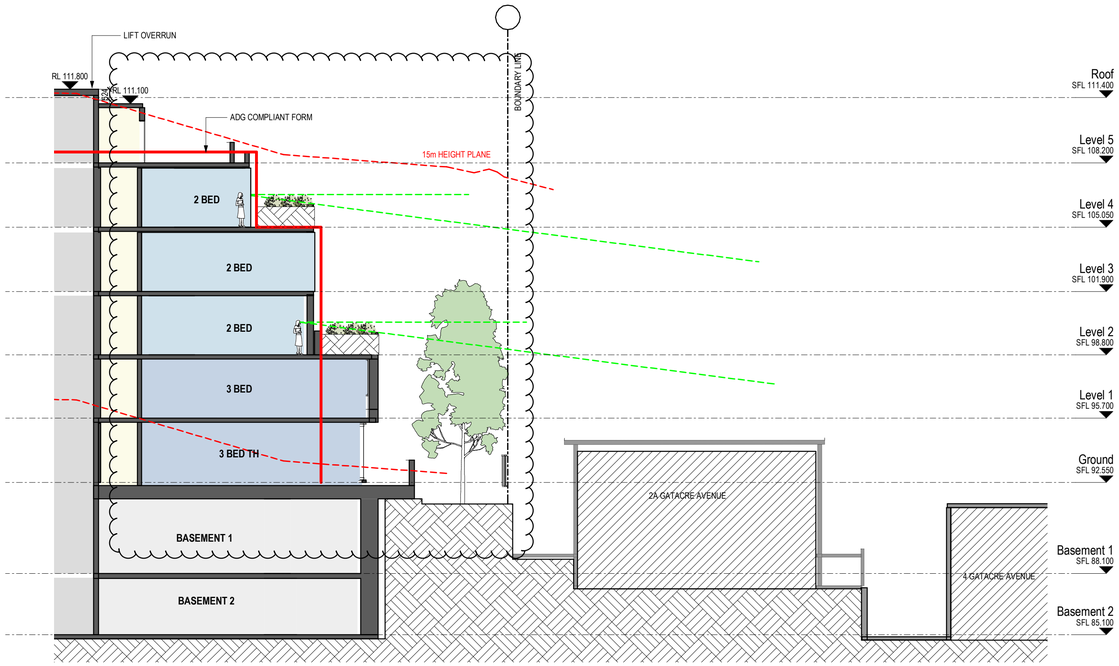
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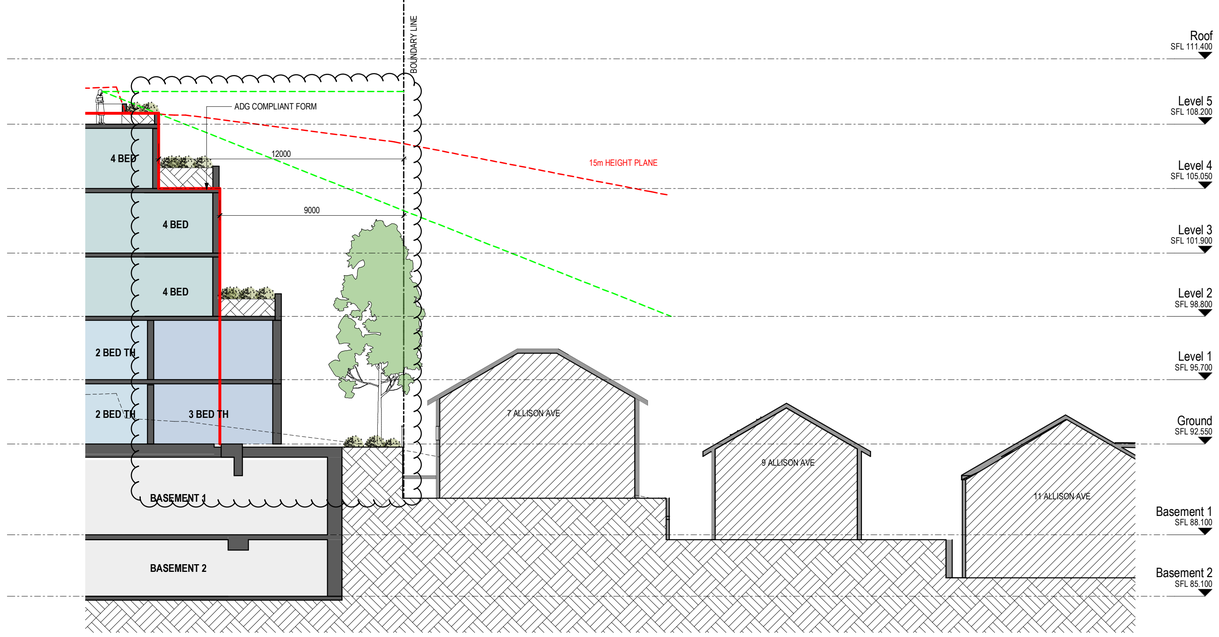
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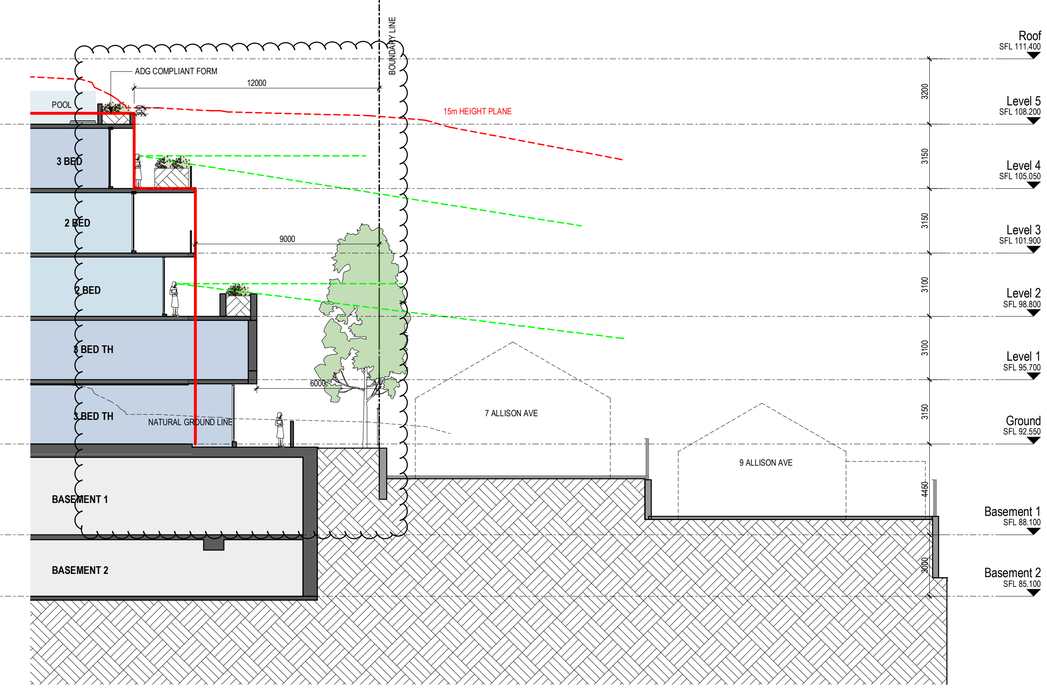
H SK05.07 Section H (2A Gatacre Ave)
SCALE1 : 150



G SK05.07 Section G (2A Gatacre Ave)
SCALE1 : 150



J SK05.07 Section J (7 Allison Ave)
SCALE1 : 150



C SK05.07 Section C (7 Allison Ave)
SCALE1 : 150

TOWN PLANNING

Revisions

-	25.02.22	S34 Resubmission	GT
A	29.02.22	Without Prejudice	GT
B	13.05.22	Updated For Review	NE
C	19.05.21	For Coordination	GT
D	27.05.22	LEC Issue	NE

26/05/2022 7:19:39 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SECTIONS 4**

Project No: **221002**

Date: **02/21/22**

Author: **GT**

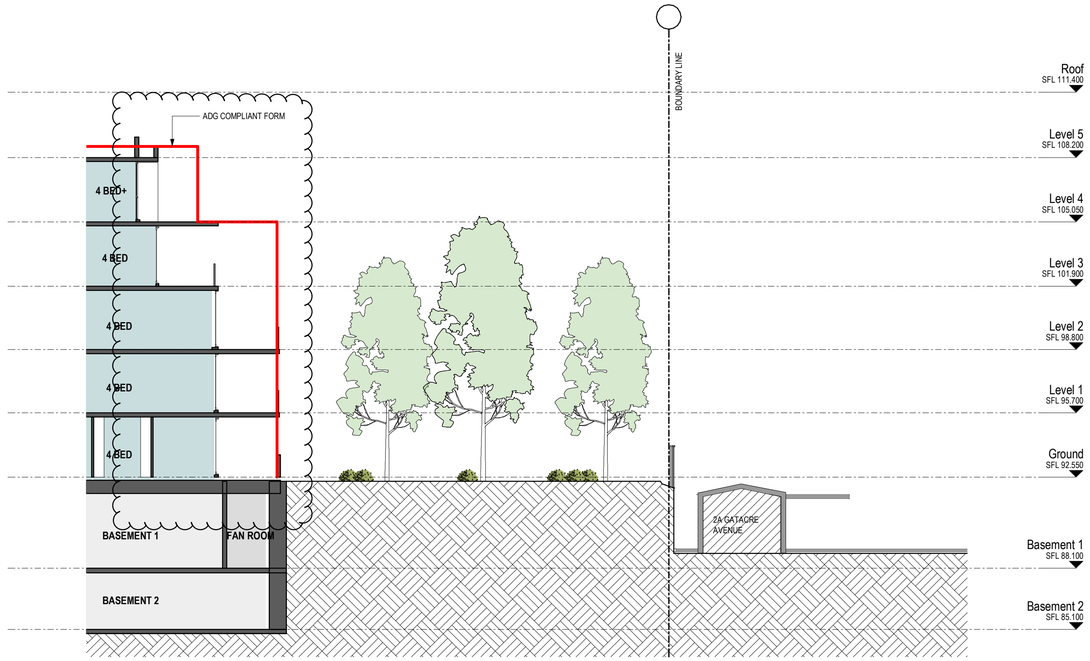
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Drawing No.: **TP03.04 D**

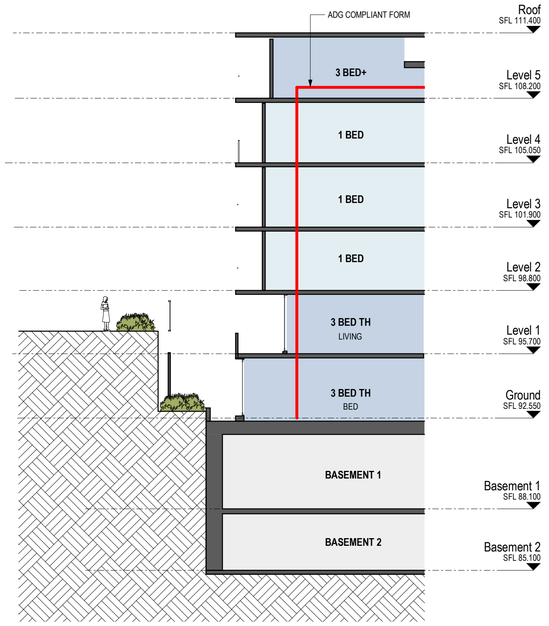
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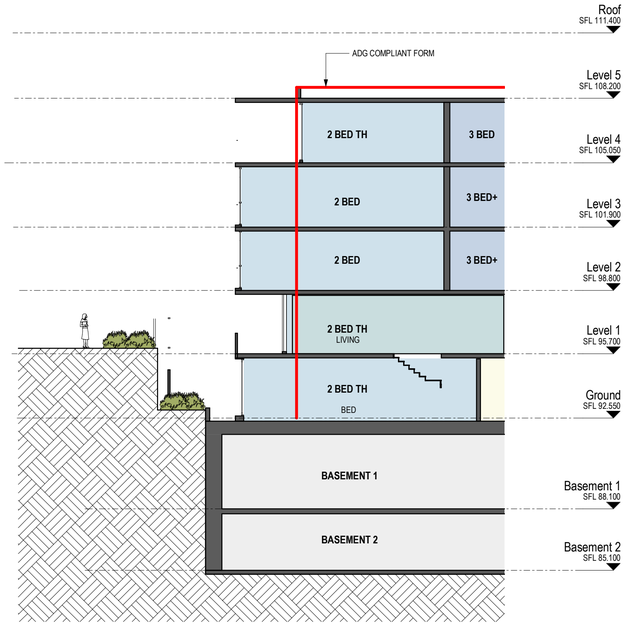
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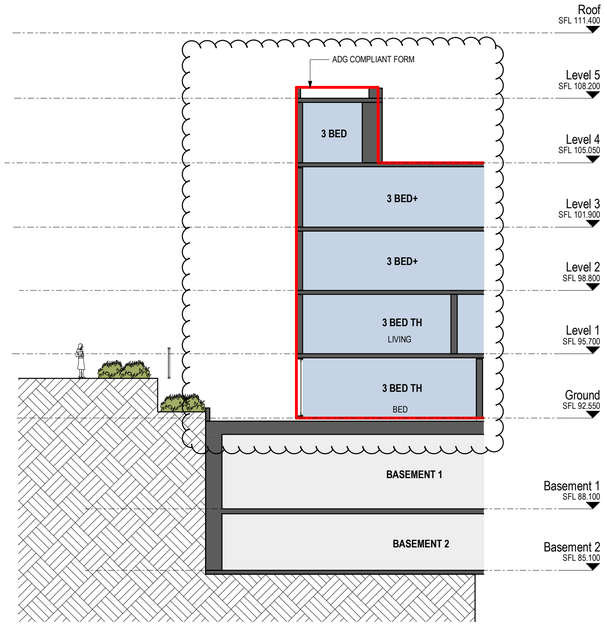
1 SK05.01 Section K (2A Gatacre Ave)
SCALE1 : 150



2 SK05.01 Gactacre Ave TH Section 01
SCALE1 : 150



3 SK05.01 Gactacre Ave TH Section 02
SCALE1 : 150



4 SK05.01 Gatacre Ave TH Section 03
SCALE1 : 150

TOWN PLANNING

Revisions				
	-	29.02.22	Without Prejudice	GT
	A	13.05.22	Updated For Review	NE
	B	19.05.21	For Coordination	GT
	C	27.05.22	LEC Issue	NE

26/05/2022 7:19:55 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SECTIONS 5**

Project No: **221002**

Date: **04/19/22**

Author: **GT**

Scale: @ A1 **1 : 150**

Drawing No.: **TP03.05 C**

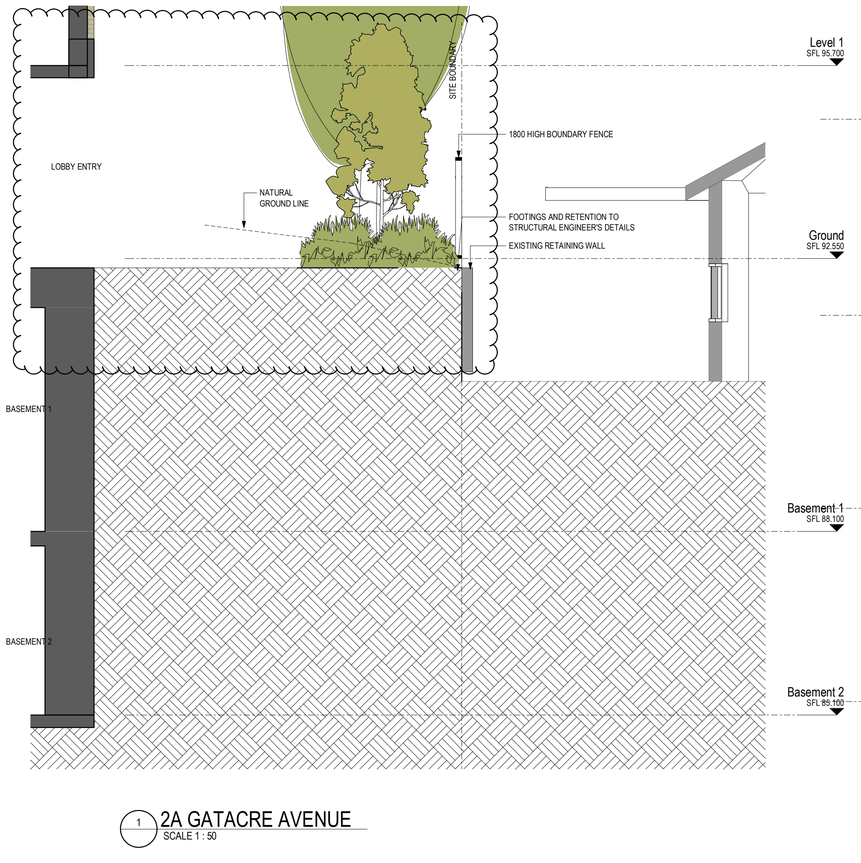
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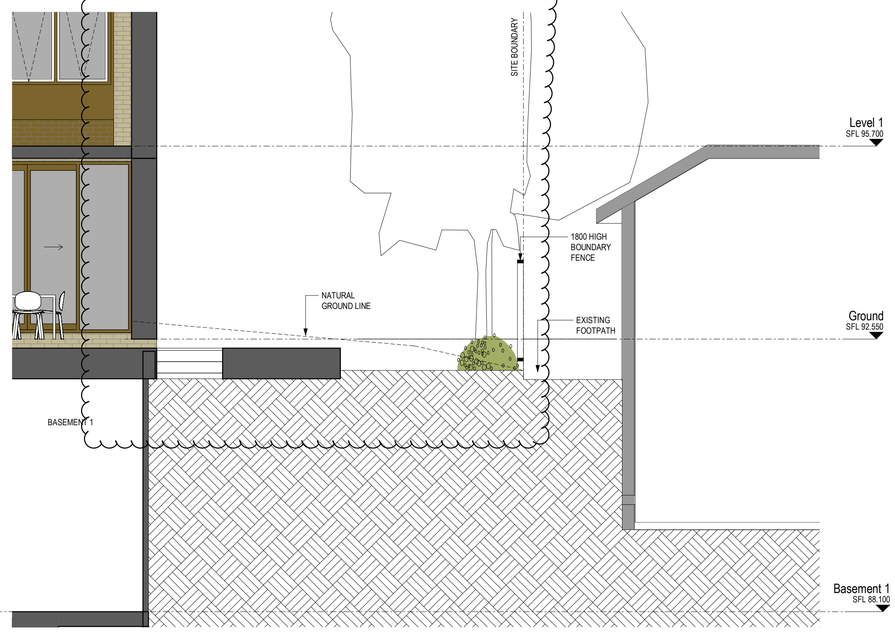
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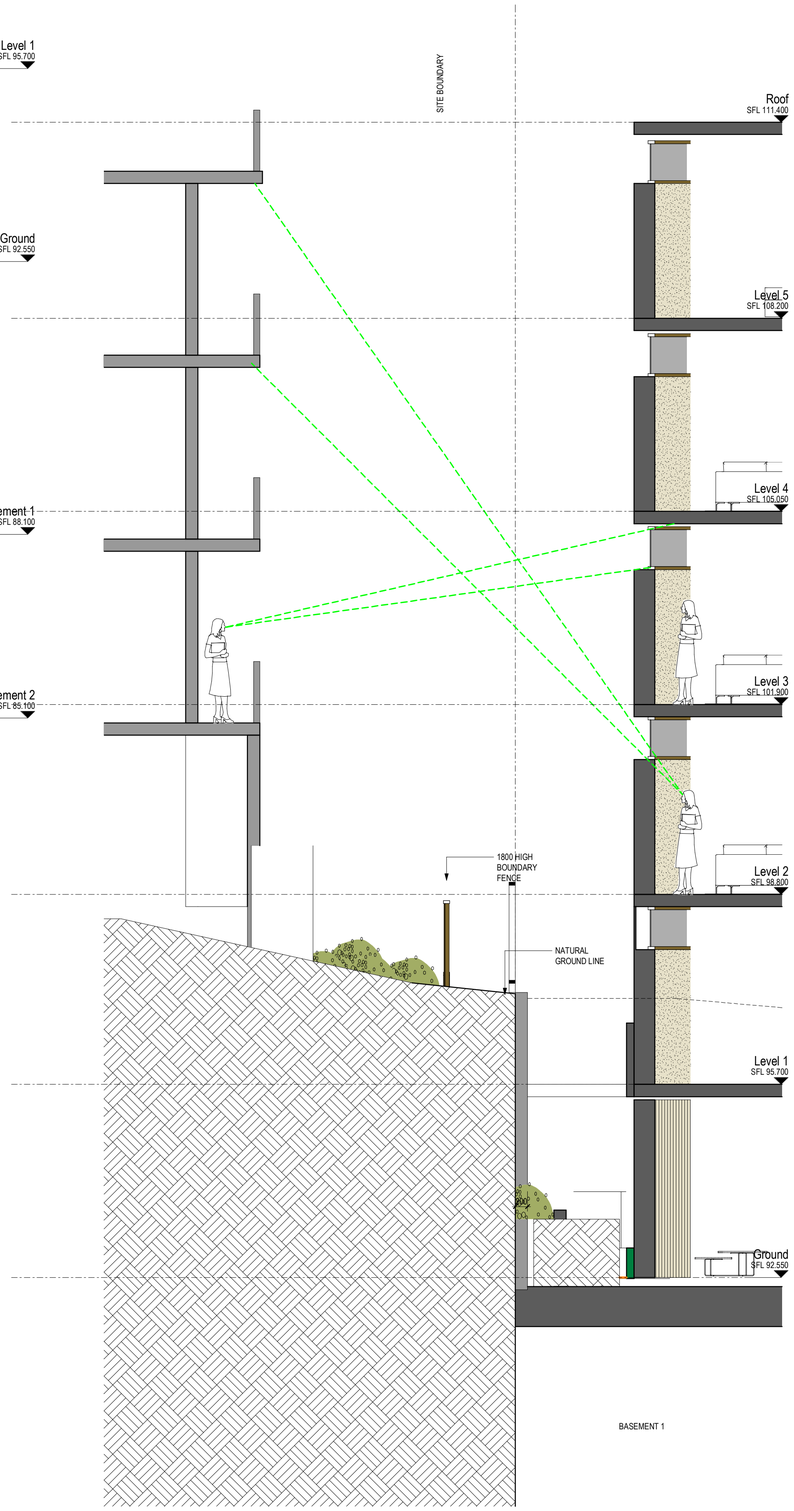
2 7 ALLISON AVENUE - WEST
SCALE 1 : 50



1 2A GATACRE AVENUE
SCALE 1 : 50



3 7 ALLISON AVENUE - NORTH
SCALE 1 : 50



4 TP01.02 PROPOSED BOARDING HOUSE
SCALE 1 : 50

TOWN PLANNING

Revisions			
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	29.02.22	Without Prejudice	GT
C	27.05.22	LEC Issue	NE

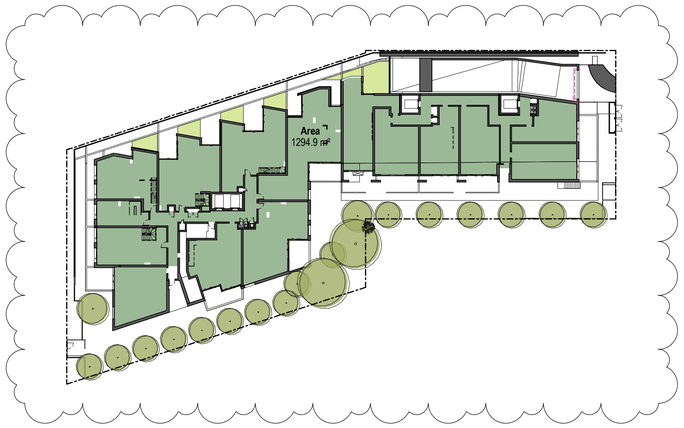
26/05/2022 7:20:06 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

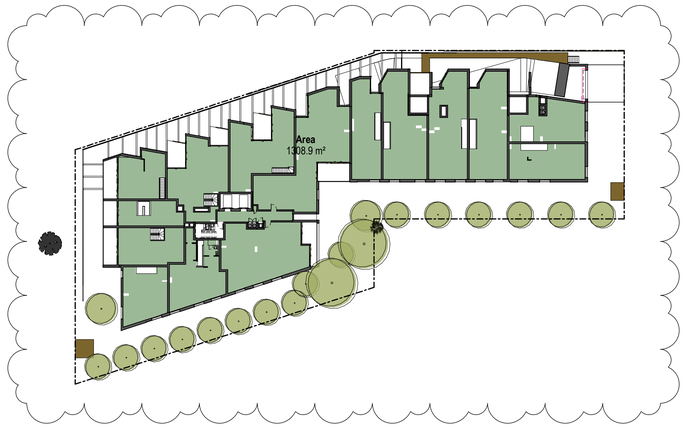
Drawing: **BOUNDARY SECTIONS** Project No: **221002** Date: **13/08/21** Author: **NE** Scale: @ A1 **1 : 50** Drawing No.: **TP03.10 C**

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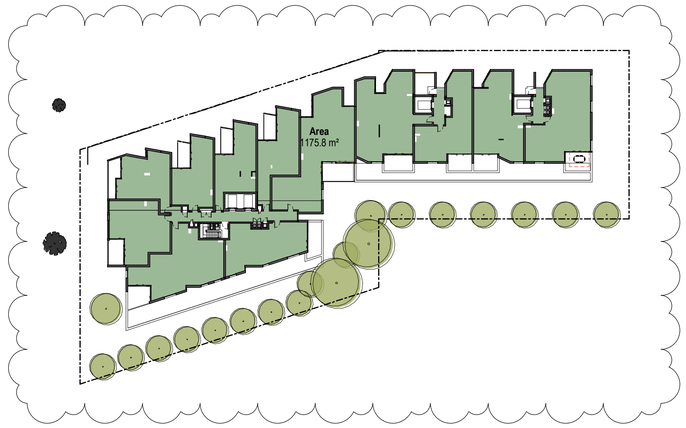
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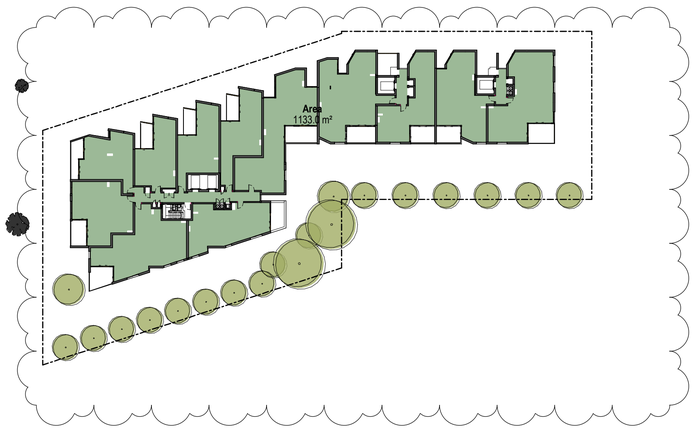
Ground



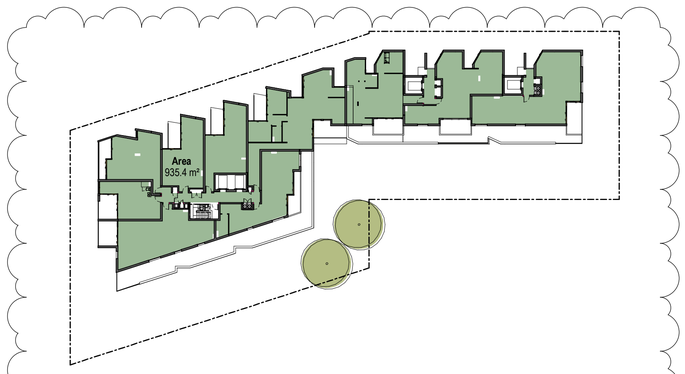
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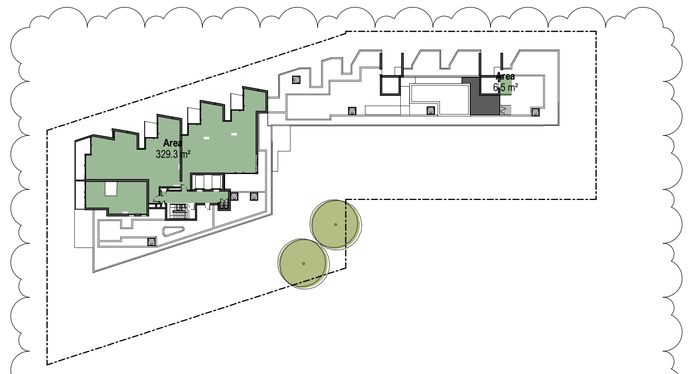
Level 2



Level 3



Level 4



Level 5

Gross Floor Area	
Level	Area
Ground	1294.9 m²
Level 1	1308.9 m²
Level 2	1175.8 m²
Level 3	1133.0 m²
Level 4	935.4 m²
Level 5	335.8 m²
Grand total	6183.9 m²

SITE AREA	PERMISSIBLE FSR	Permissible GFA
2965.8 m²	4.8	7117.9 m²

TOWN PLANNING

Revisions

P1	07.05.21	DA Issue	NE
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	29.02.22	Without Prejudice	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:36:10 PM

Project
1 Gatacre Ave & 1-5 Allison Ave, Lane Cove
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing **GFA**

Project No **221002**

Date **03.02.21**

Author **GT**

Scale: @ A1 **1 : 500**

Drawing No. **TP04.01 C**

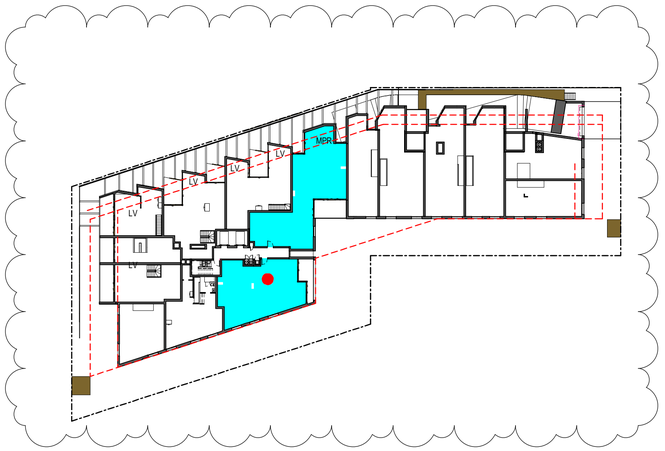
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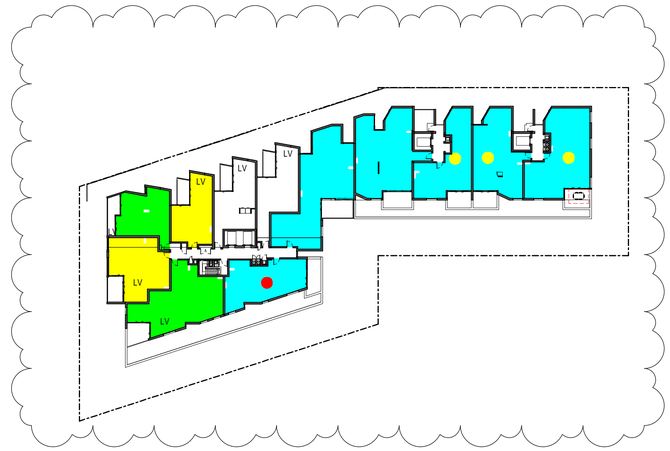
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Ground



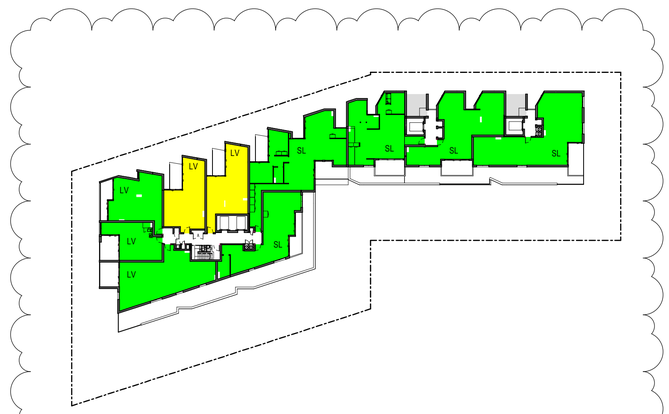
Level 1



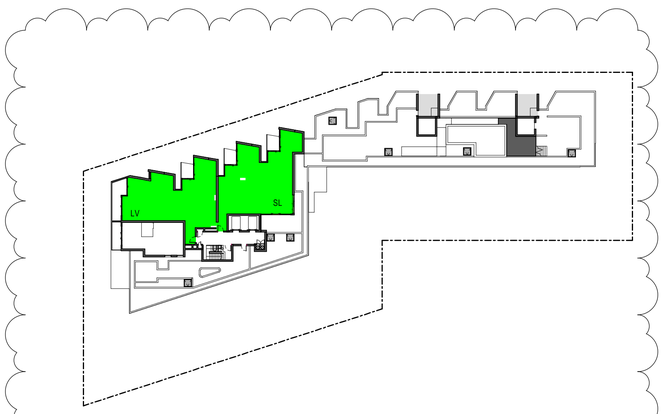
Level 2



Level 3



Level 4



Level 5

LEVEL	No. SOLAR
Basement 2	0
Basement 1	0
Ground	5
Level 1	0
Level 2	4
Level 3	6
Level 4	10
Level 5	2
	27

LEVEL	No. VENTILATION
Basement 2	0
Basement 1	0
Ground	9
Level 1	2
Level 2	8
Level 3	8
Level 4	8
Level 5	2
	37

SOLAR COMPLIANT
50.9%

CROSS VENT COMPLIANT
69.8%

Zero Sun Apartment
Total: 7 Apartments (13.2%)

Units with bedrooms that get 2 hours sun
Total (including solar compliant apartments): 34 Apartments (64%)

TOWN PLANNING

Revisions			
A	25.01.22	For Review	GT
B	02.02.22	S34 Submission	GT
C	29.02.22	Without Prejudice	GT
D	13.05.22	Updated For Review	NE
E	27.05.22	LEC Issue	NE

27/05/2022 2:36:20 PM

SOLAR & VENTILATION COMPLIANT

SOLAR COMPLIANT

VENTILATION COMPLIANT

SL - SKYLIGHT MPR - MULTI PURPOSE ROOM

VS - VENTILATING SKYLIGHT LV - LIVING ROOM

Project **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing **SEPP65**

Project No **221002**

Date **08.02.21**

Author **GT**

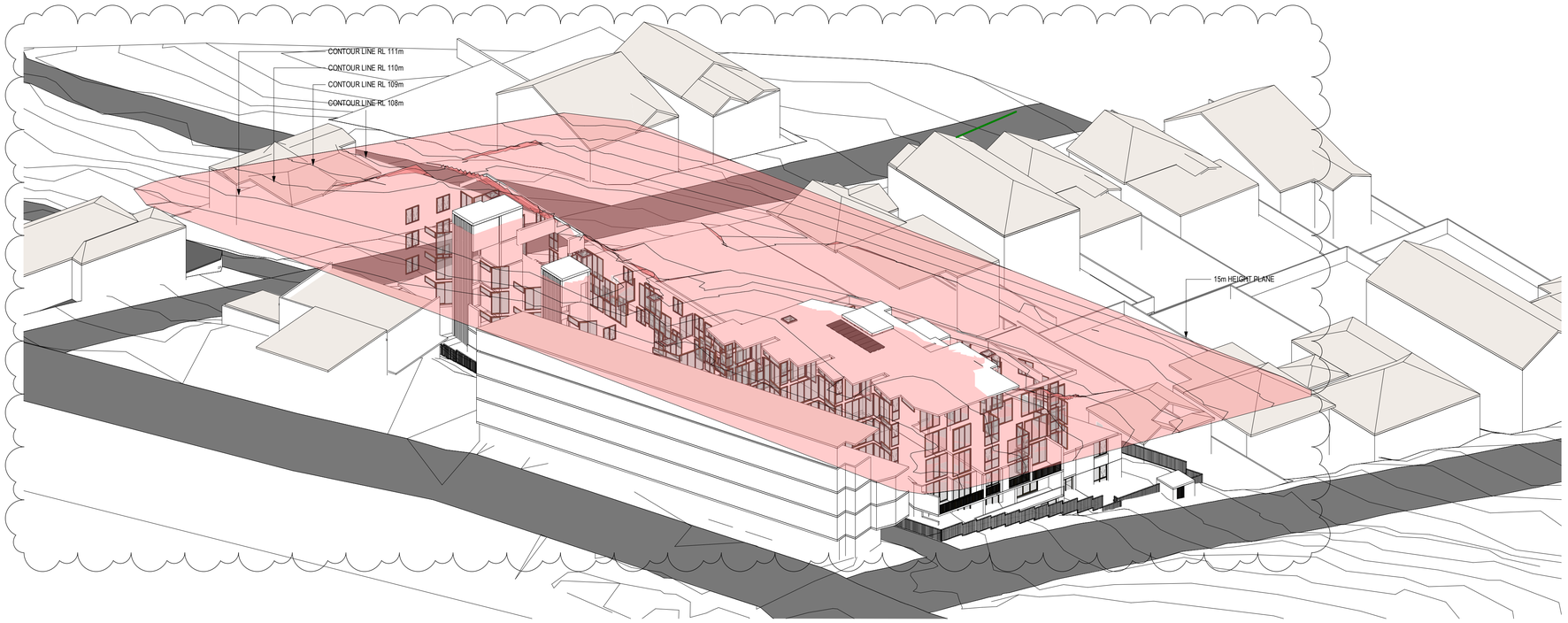
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Drawing No. **TP04.02 E**

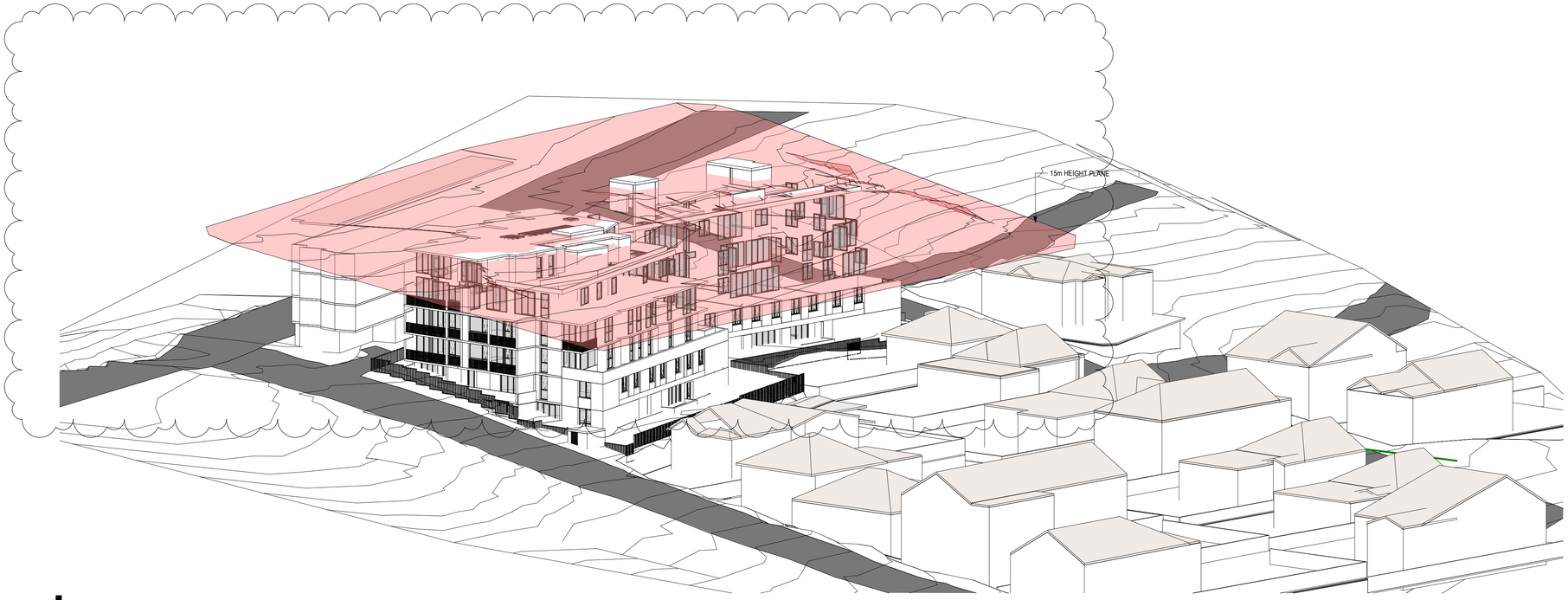
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Proposed Scheme - Height Plane



Proposed Scheme - Height Plane

TOWN PLANNING

Revisions			
P1	07.05.21	DA Issue	NE
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	27.05.22	LEC Issue	NE

27/05/2022 2:36:33 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **HEIGHT PLANE**

Project No: **221002**

Date: **04.02.21**

Author: **GT**

Scale: @ A1

Drawing No.: **TP04.03 B**

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0900



1000



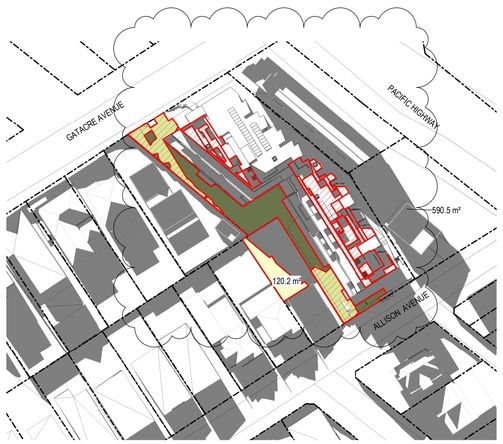
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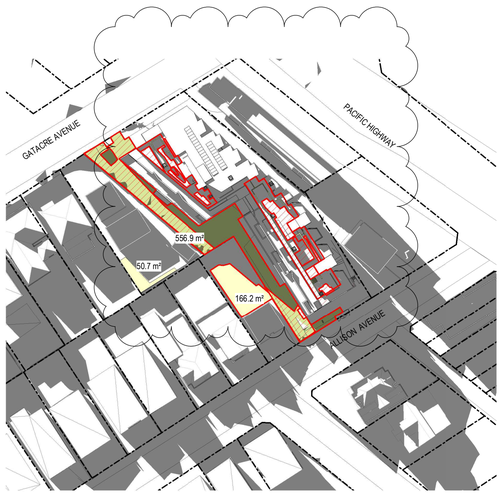
1200



1300



1400



1500

SOLAR - COMMUNAL OPEN SPACE

SOLAR - NEIGHBOURING OPEN SPACE

*MINIMUM REQUIRED AREA FOR COMMUNAL OPEN SPACE SOLAR COMPLIANCE - 370.7m²

Revisions			
P1	07.05.21	DA Issue	NE
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	27.05.22	LEC Issue	NE

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Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SHADOW DIAGRAMS**

Project No: **221002**

Date: **15.02.21**

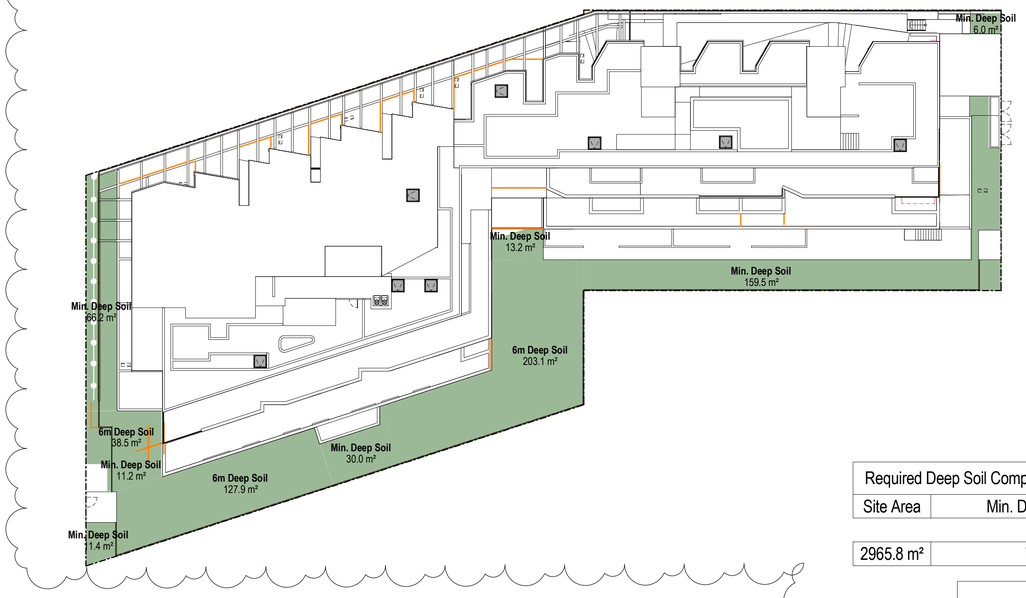
Author: **GT**

Scale: @ A1

Drawing No.: **TP04.08 B**

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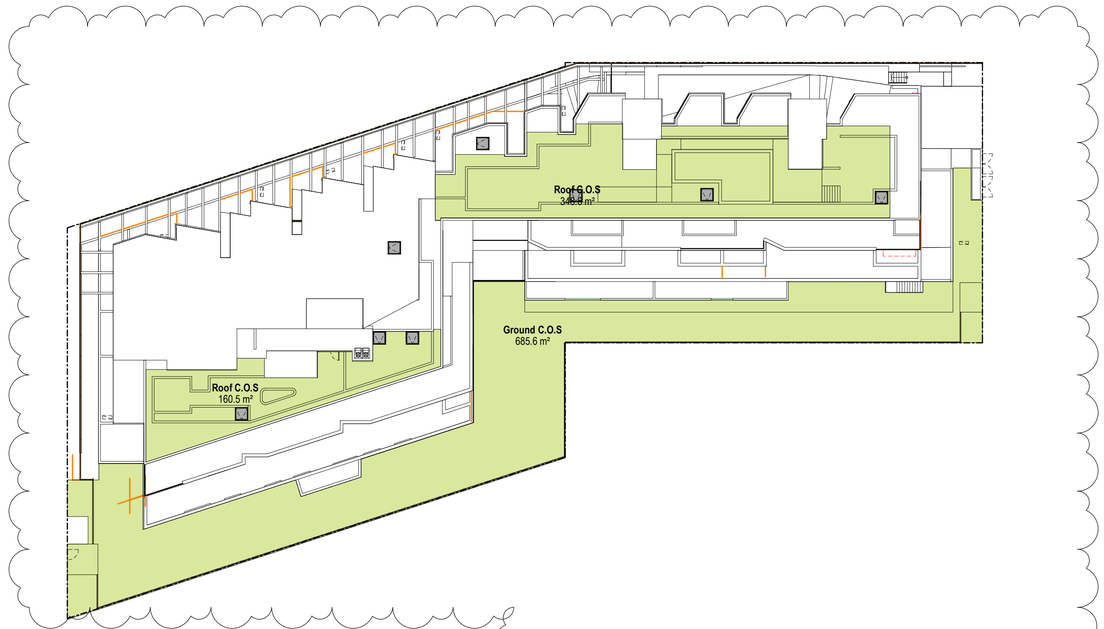
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Deep Soil

Required Deep Soil Compliance for Compliance	
Site Area	Min. Deep Soil (25%)
2965.8 m²	741.4 m²

Deep Soil	
Type	Area
6m Deep Soil	369.6 m²
Min. Deep Soil	297.5 m²
	667.1 m² (23%)



Communal Open Space

Communal Open Space Compliance		Communal Open Space
Site Area	Min. Communal Open Space (25%)	Area
2965.8 m²	741.4 m²	1194.8 m²
2965.8 m²	741.4 m²	

TOWN PLANNING

Revisions

A	19.01.22	For Review	JH
B	25.01.22	For Review	GT
C	02.02.22	S34 Submission	GT
D	29.02.22	Without Prejudice	GT
E	27.05.22	LEC Issue	NE

27/05/2022 2:36:52 PM

Project
1 Gatacre Ave & 1-5 Allison Ave, Lane Cove
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

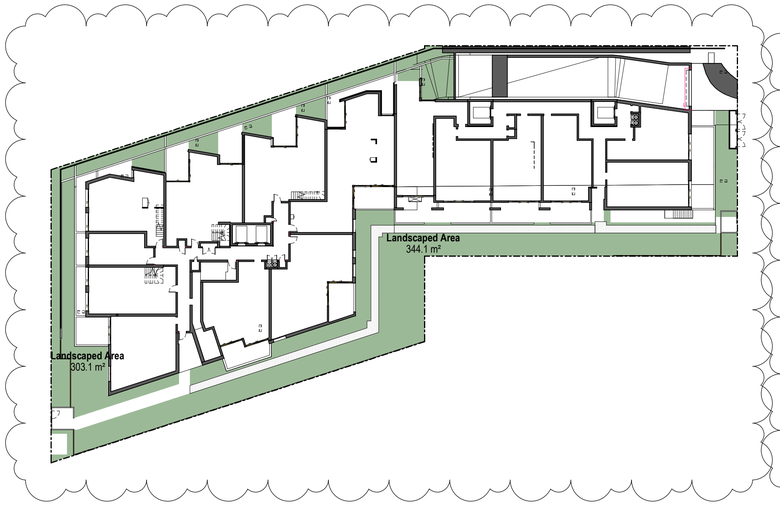
Drawing
DEEP SOIL, COMMUNAL OPEN SPACE

Project No. **221002** Date **15.02.21** Author **GT** Scale: @ A1 **1 : 300** Drawing No. **TP04.09 E**

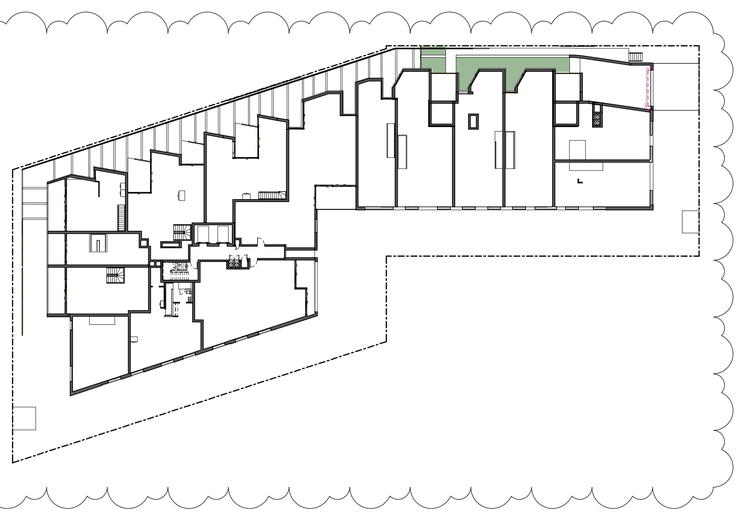
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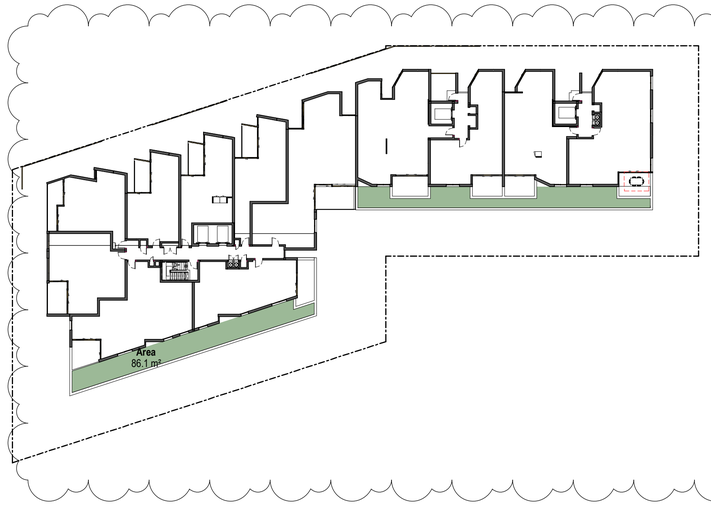
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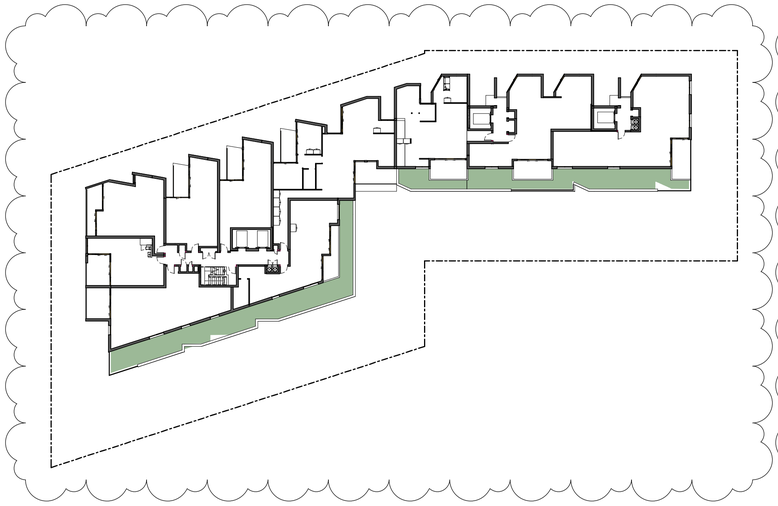
Ground



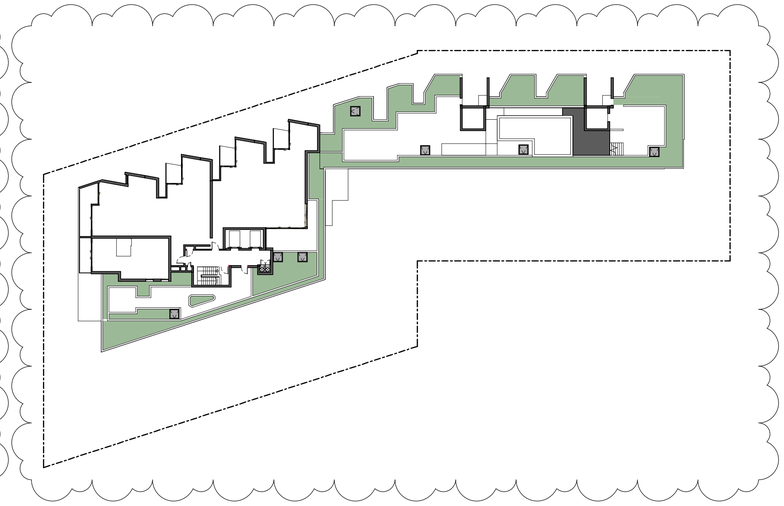
Level 1



Level 2



Level 4



Level 5

Landscaped Area Compliance	
Site Area	Min. Planted Area (40%)
2965.8 m²	1194.3 m²
2965.8 m²	1194.3 m²

Landscaped area	Landscaped - Planted Area
Area	Area
769.9 m²	1468.8 m²

COUNCIL DEFINITION - PART OF A SITE USED FOR GROWING PLANTS, GRASSES AND TREES, BUT DOES NOT INCLUDE ANY BUILDING, STRUCTURE OR HARD PAVED AREA

TOWN PLANNING

Revisions

-	13.08.21	RFI Submission	GT
A	25.01.22	For Review	GT
B	02.02.22	S34 Submission	GT
C	29.02.22	Without Prejudice	GT
D	27.05.22	LEC Issue	NE

27/05/2022 2:37:01 PM

Project **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing **LANDSCAPED AREA**

Project No **221002**

Date **30.04.21**

Author **GT**

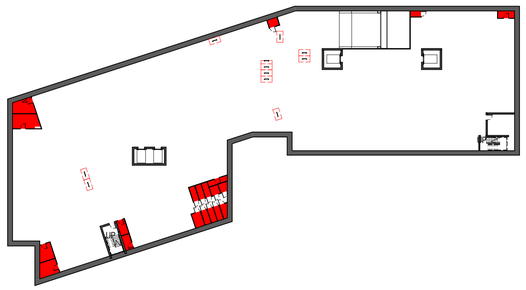
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Drawing No. **TP04.10 D**

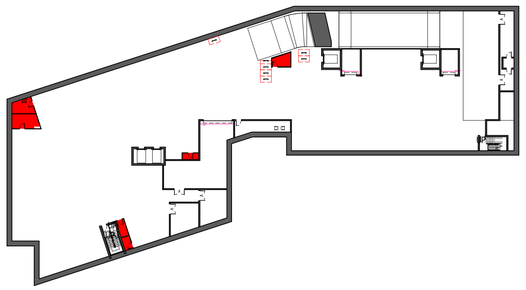
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Basement 2



Basement 1

Casework Storage			
Number	Name	Volume	
U101	3 BED	11.08 m³	
U102	4 BED	10.00 m³	
U201	1 BED	7.02 m³	
U202	1 BED	3.76 m³	3cbm
U203	1 BED	6.05 m³	
U204	2 BED	4.62 m³	4cbm
U205	3 BED+	10.40 m³	
U206	2 BED	5.08 m³	3cbm
U207	4 BED	10.00 m³	
U208	1 BED	9.16 m³	
U209	3 BED	5.65 m³	5cbm
U210	2 BED	4.58 m³	4cbm
U211	2 BED	10.83 m³	
U212	4 BED	7.67 m³	3cbm
U301	1 BED	7.02 m³	
U302	1 BED	3.76 m³	3cbm
U303	1 BED	6.05 m³	

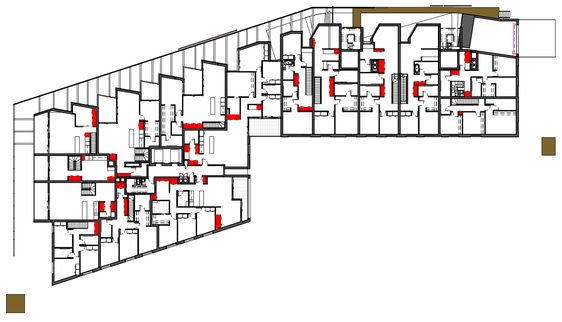
Casework Storage			
Number	Name	Volume	
U304	2 BED	4.62 m³	4cbm
U305	3 BED+	10.40 m³	
U306	2 BED	5.08 m³	3cbm
U307	4 BED	10.36 m³	
U308	1 BED	9.16 m³	
U309	3 BED	10.46 m³	
U310	2 BED	4.54 m³	4cbm
U311	2 BED	10.81 m³	
U312	4 BED	5.43 m³	5cbm
U401	1 BED	7.02 m³	
U402	1 BED	3.76 m³	3cbm
U403	1 BED	6.89 m³	
U404	2 BED TH	9.71 m³	
U405	3 BED	5.54 m³	5cbm
U406	2 BED	5.64 m³	3cbm
U407	4 BED+	10.26 m³	
U408	2 BED	4.36 m³	4cbm

Casework Storage			
Number	Name	Volume	
U409	3 BED	5.01 m³	5cbm
U501	3 BED+	10.21 m³	
U502	3 BED+	7.70 m³	3cbm
UG01	4 BED TH	11.39 m³	
UG02	3 BED TH	10.00 m³	
UG03	1 BED TH	6.05 m³	
UG04	2 BED TH	13.25 m³	
UG05	3 BED TH	11.23 m³	
UG06	3 BED TH	10.72 m³	
UG07	2 BED+	5.32 m³	3cbm
UG08	4 BED	5.81 m³	5cbm
UG09	4 BED TH	11.80 m³	
UG10	4 BED TH	14.87 m³	
UG11	3 BED TH	11.49 m³	
UG12	3 BED TH	13.43 m³	
UG13	3 BED TH	11.39 m³	
UG14	2 BED TH	8.85 m³	
UG15	3 BED TH	10.37 m³	

* MIN 50% STORAGE IN UNIT
ADDITIONAL STORAGE IN BASEMENT



Ground



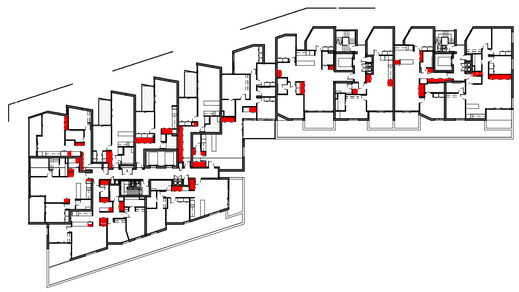
Level 1



Level 4

Basement Storage		
Level	Volume	Number
Basement 2	4 m³	U202
Basement 2	5 m³	U204
Basement 2	6 m³	U206
Basement 2	6 m³	U209
Basement 2	6 m³	U210
Basement 2	6 m³	U212
Basement 2	6 m³	U302
Basement 2	6 m³	U304
Basement 2	6 m³	U306
Basement 2	6 m³	U310
Basement 2	6 m³	U304
Basement 2	7 m³	U306
Basement 2	8 m³	U310
Basement 2	8 m³	U312
Basement 2	8 m³	U402
Basement 2	9 m³	U406
Basement 2	15 m³	U408
Basement 2	18 m³	U409
Basement 2	20 m³	U501
Basement 2	24 m³	U502
Basement 1	7 m³	U407
Basement 1	7 m³	UG01
Basement 1	9 m³	UG10
Basement 1	14 m³	UG09
Basement 1	20 m³	U410
Basement 1	24 m³	UG08

Grand total: 26



Level 2



8
SK00.01 SCALE 1 : 500
Level 3



Level 5

TOWN PLANNING

Revisions

P1	07.05.21	DA Issue	NE
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	27.05.22	LEC Issue	NE

STATEMENT OF CHANGES
1. STORAGE AREAS ADJUSTED

27/05/2022 2:37:12 PM

Project
1 Gatacre Ave & 1-5 Allison Ave, Lane Cove
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing
STORAGE PLANS AND SCHEDULE

Project No **221002**

Date **04/27/21**

Author **JH**

Scale: @ A1 **1 : 500**

Drawing No. **TP04.12 B**

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Revisions				
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	A	02.02.22	S34 Submission	GT
	B	27.05.22	LEC Issue	NE

27/05/2022 2:37:16 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **BASIX**

Project No: **221002**

Date: **07/05/21**

Author: **NE**

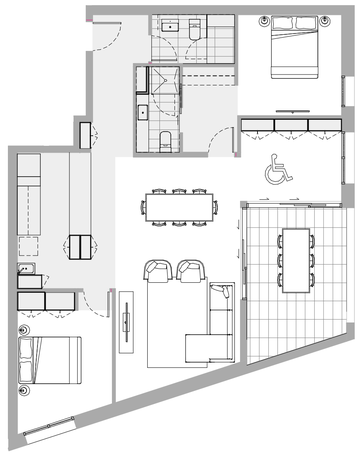
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Drawing No.: **TP04.13 B**

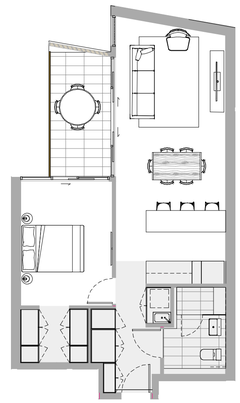
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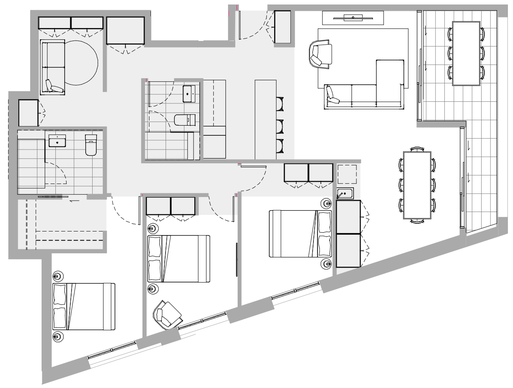
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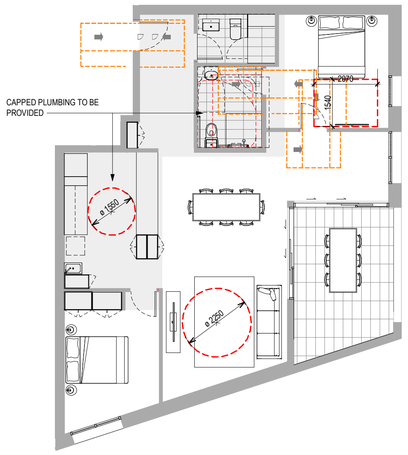
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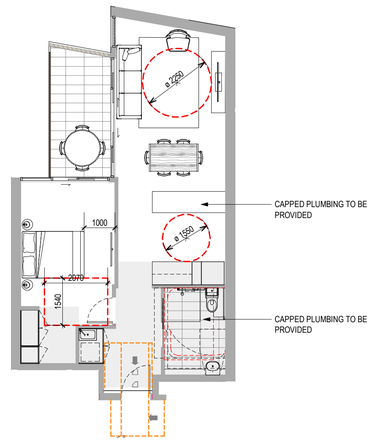
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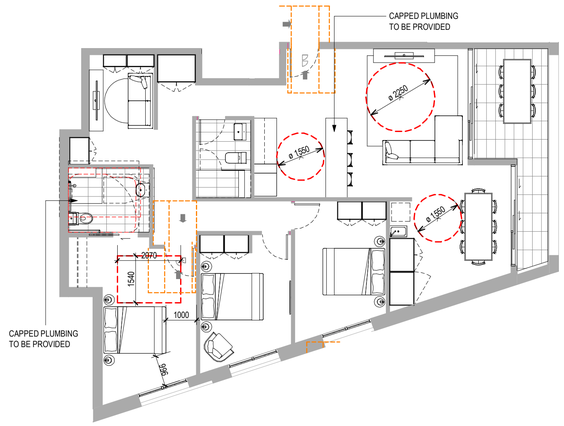
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SCALE 1 : 100



1 SK00.01 Apt UG07 Post Adaption
SCALE 1 : 100



4 SK00.01 Apt U202, U302, U402 Post Adaption
SCALE 1 : 100



6 SK00.01 Apt U101 Post Adaption
SCALE 1 : 100

TOWN PLANNING

Revisions			
P1	07.05.21	DA Issue	NE
-	02.02.22	S34 Submission	GT
A	19.05.21	For Coordination	GT
B	27.05.22	LEC Issue	NE

STATEMENT OF CHANGES

1. ADAPTABLE LAYOUTS ADJUSTED

27/05/2022 2:37:22 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **ADAPTABLE PLANS**

Project No: **221002**

Date: **05/05/21**

Author: **GT**

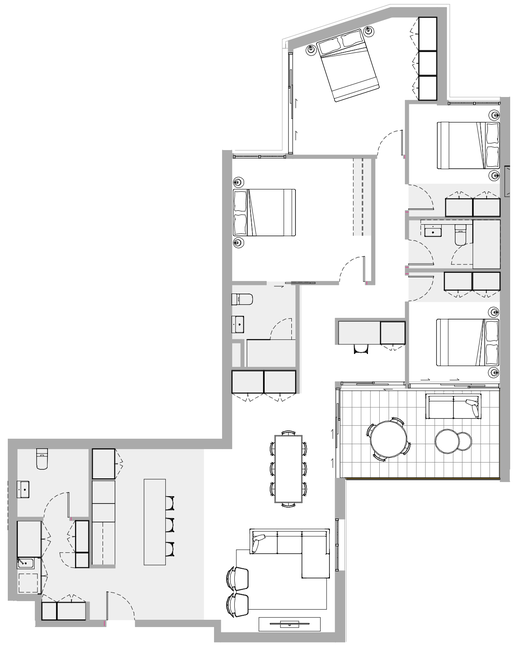
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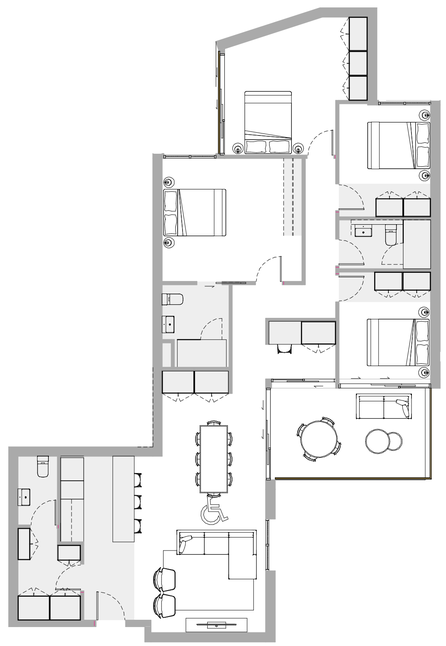
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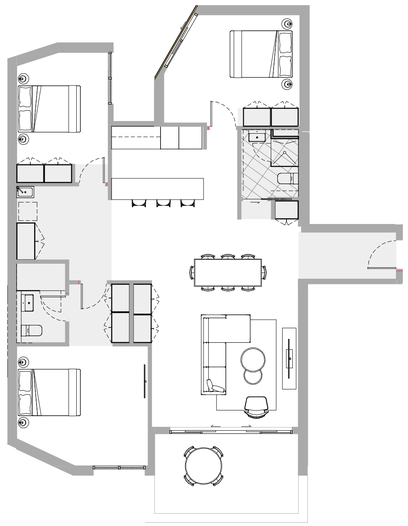
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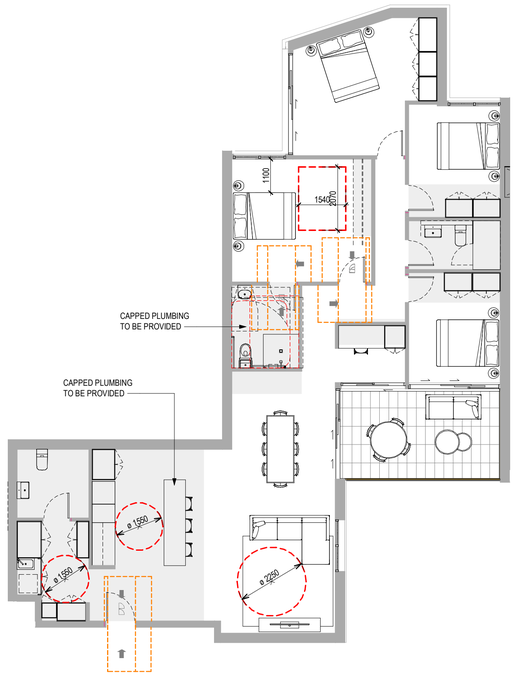
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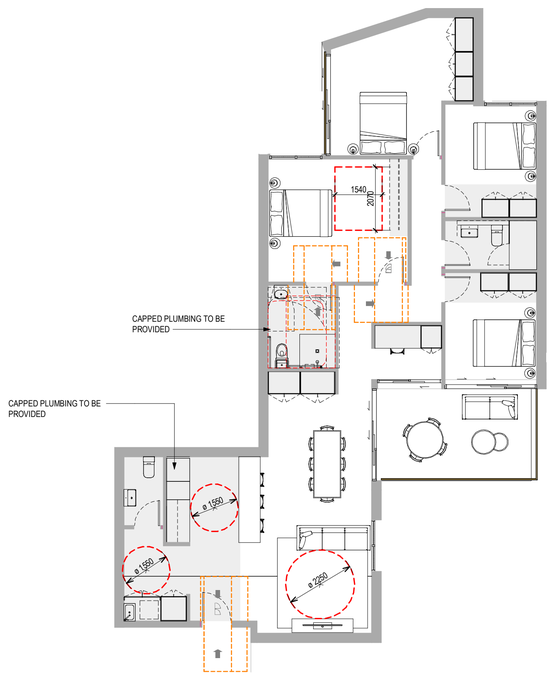
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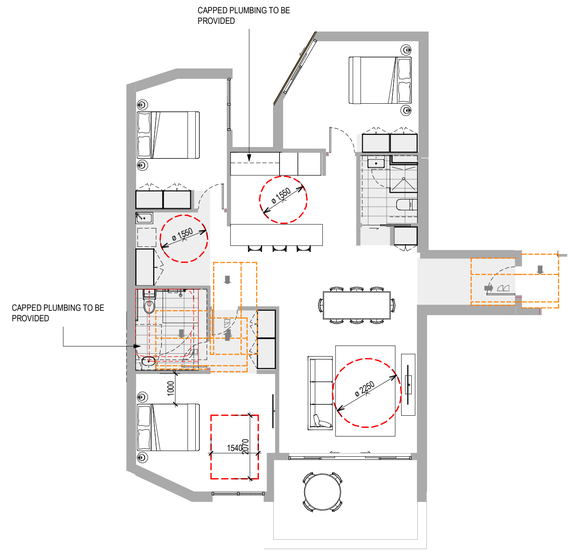
3 SK00.01 Apt U209 Pre-Adaptable
SCALE 1 : 100



6 SK00.01 Apt U102 Post Adaption
SCALE 1 : 100



2 SK00.01 Apt U207 Post Adaption
SCALE 1 : 100



4 SK00.01 Apt U209 Post Adaption
SCALE 1 : 100

TOWN PLANNING

Revisions

P1	07.05.21	DA Issue	NE
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	19.05.21	For Coordination	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:37:29 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **ADAPTABLE PLANS**

Project No: **221002**

Date: **05/05/21**

Author: **GT**

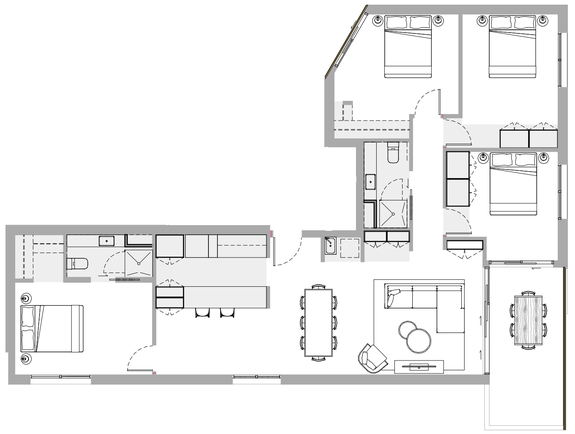
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Drawing No.: **TP04.21 C**

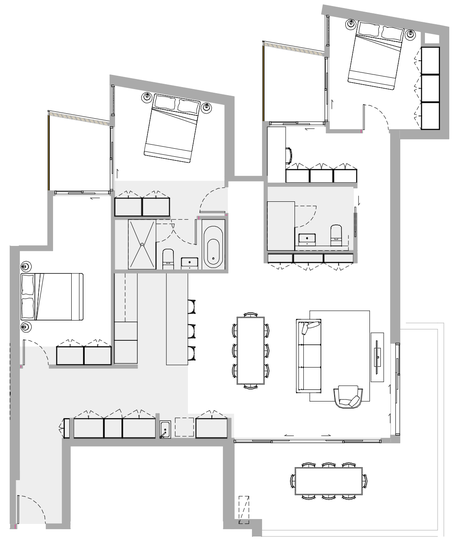
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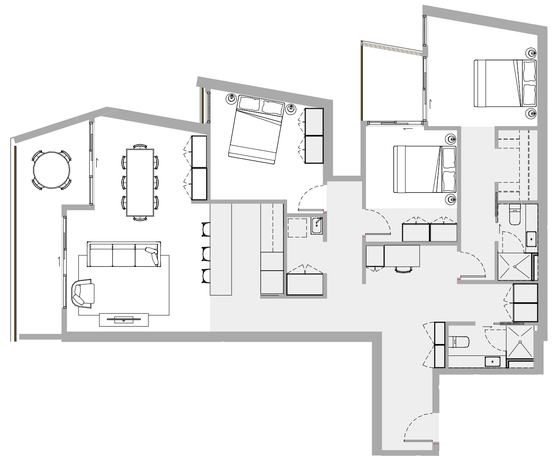
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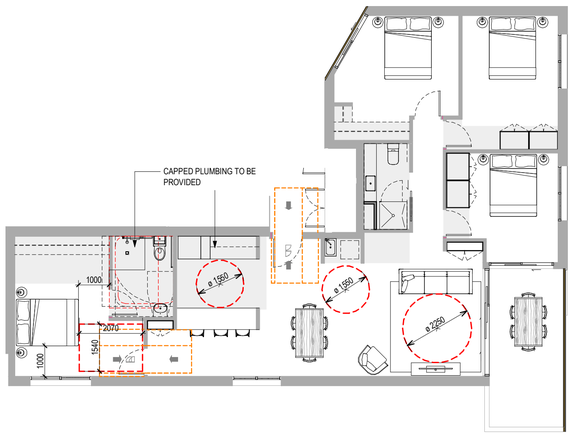
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SCALE 1 : 100



2 SK00.01 Apt U501 Pre Adaptable
SCALE 1 : 100



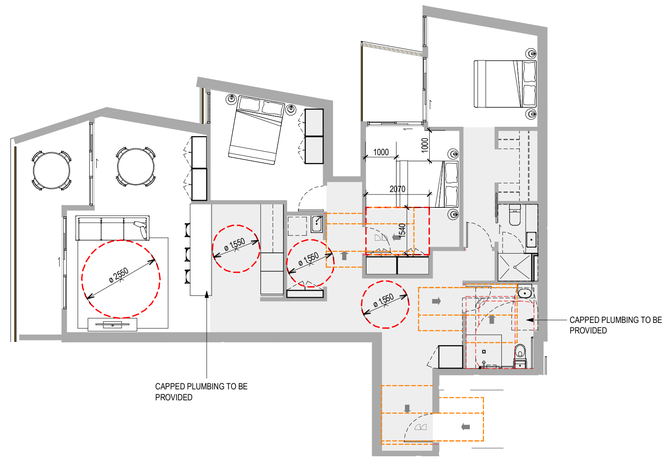
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SCALE 1 : 100



6 SK00.01 Apt U410 Post Adaption
SCALE 1 : 100



4 SK00.01 Apt U501 Post Adaption
SCALE 1 : 100



3 SK00.01 Apt U502 Post Adaption
SCALE 1 : 100

TOWN PLANNING

Revisions

-	19.05.21	For Coordination	GT
A	27.05.22	LEC Issue	NE

27/05/2022 2:37:35 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **ADAPTABLE PLANS**

Project No: **221002**

Date: **15.02.21**

Author: **GT**

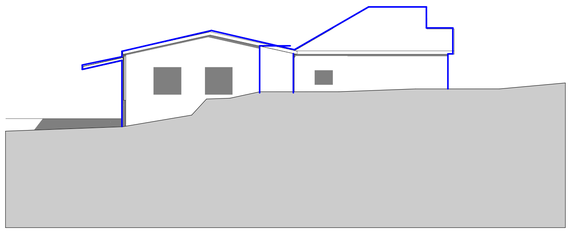
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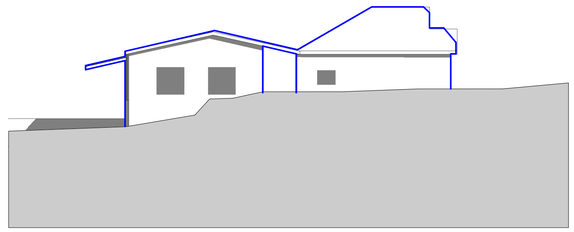
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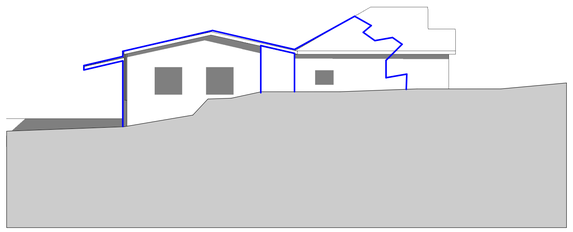
Brisbane, Melbourne, Sydney
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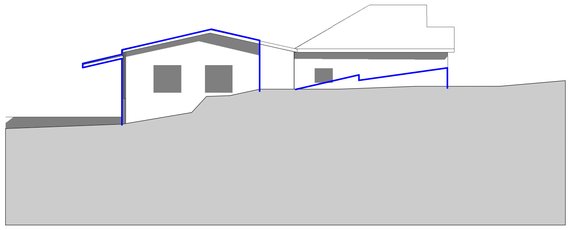
Solar Elevation 2A Gatacre 0900



Solar Elevation 2A Gatacre 1000



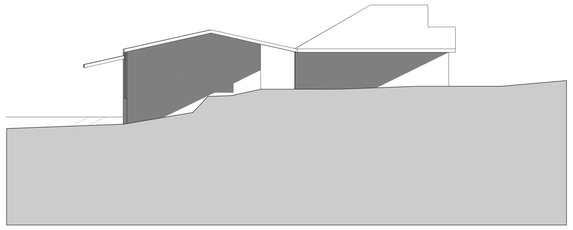
Solar Elevation 2A Gatacre 1100



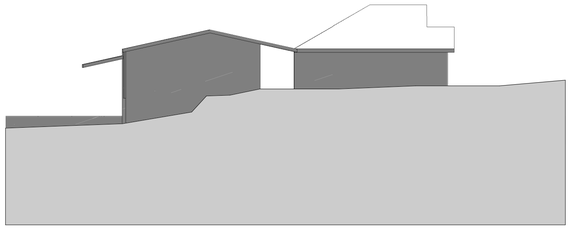
Solar Elevation 2A Gatacre 1200



Solar Elevation 2A Gatacre 1300



Solar Elevation 2A Gatacre 1400



Solar Elevation 2A Gatacre 1500

PROPOSED SCHEME SHADOW LINE

EXISITING BUILDING SHADOW LINE

TOWN PLANNING

Revisions				
	-	13.08.21	RFI Submission	GT
	A	02.02.22	S34 Submission	GT
	B	27.05.22	LEC Issue	NE

27/05/2022 2:37:42 PM

Project
1 Gatacre Ave & 1-5 Allison Ave, Lane Cove
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing **SOLAR ELEVATIONS**

Project No **221002**

Date **08/11/21**

Author **JH**

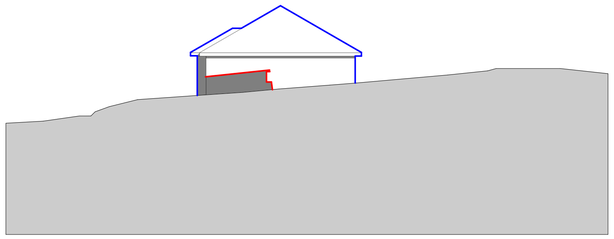
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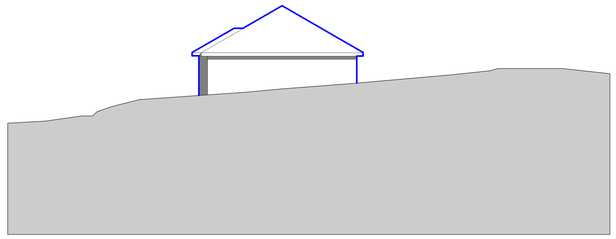
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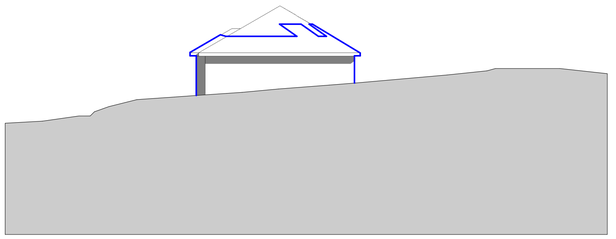
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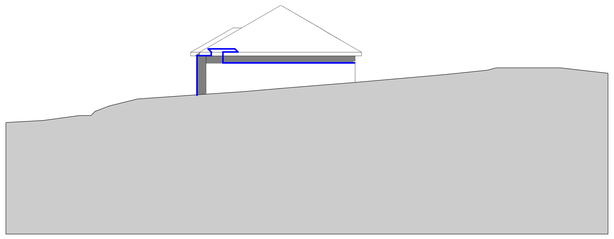
Solar Elevation 7 Allison East 0900



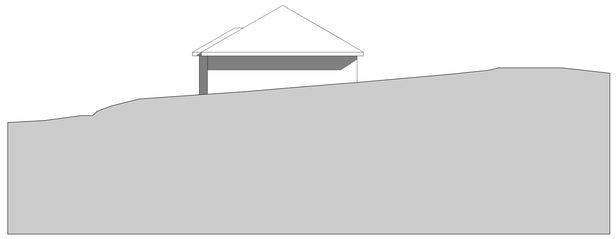
Solar Elevation 7 Allison East 1000



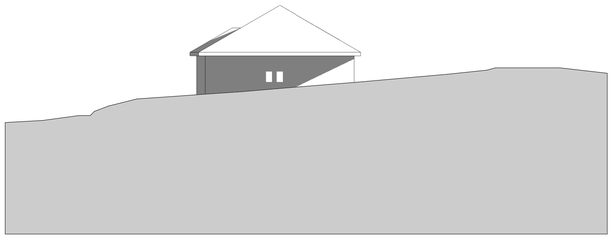
Solar Elevation 7 Allison East 1100



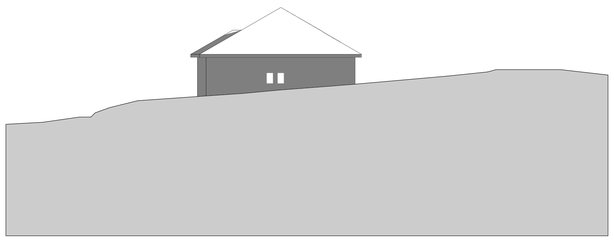
Solar Elevation 7 Allison East 1200



Solar Elevation 7 Allison East 1300



Solar Elevation 7 Allison East 1400



Solar Elevation 7 Allison East 1500

PROPOSED SCHEME SHADOW LINE

EXISITING BUILDING SHADOW LINE

TOWN PLANNING

Revisions

-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	27.05.22	LEC Issue	NE

27/05/2022 2:37:52 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SOLAR ELEVATIONS**

Project No: **221002**

Date: **08/11/21**

Author: **JH**

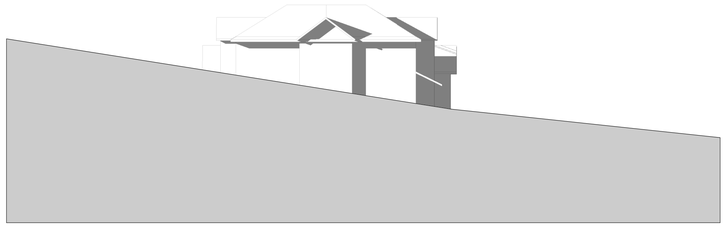
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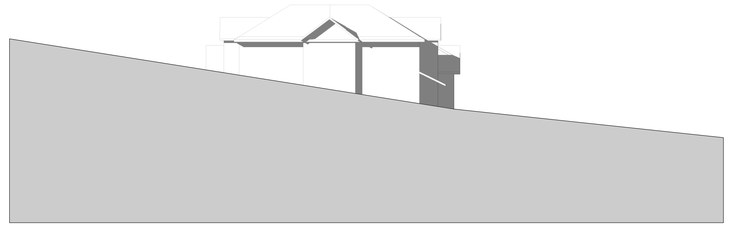
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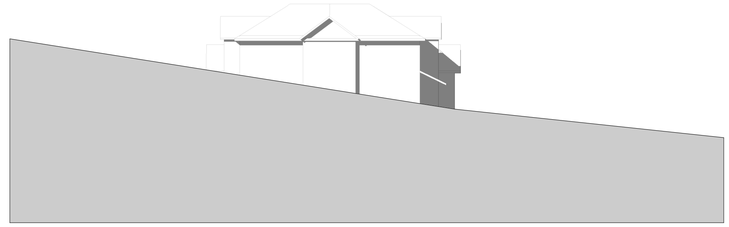
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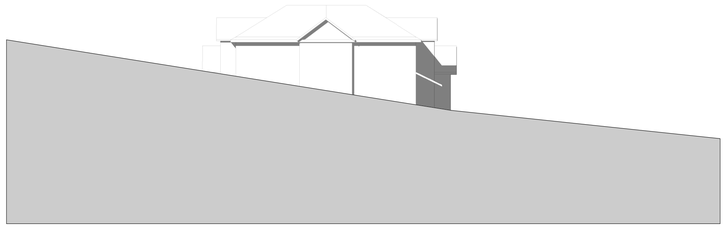
Solar Elevation 17 Haldane 0900



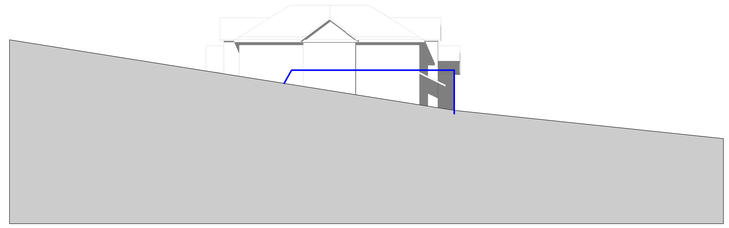
Solar Elevation 17 Haldane 1000



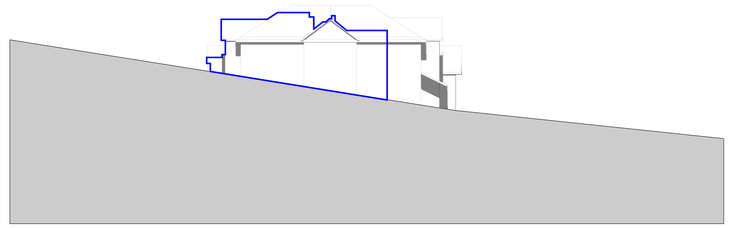
Solar Elevation 17 Haldane 1100



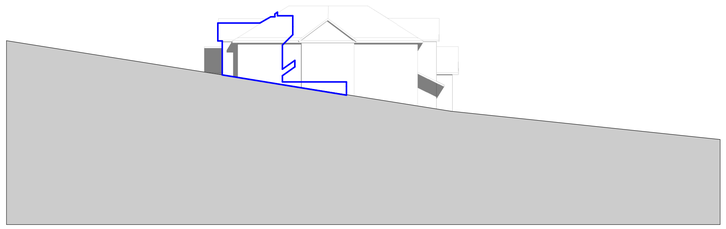
Solar Elevation 17 Haldane 1200



Solar Elevation 17 Haldane 1300



Solar Elevation 17 Haldane 1400



Solar Elevation 17 Haldane 1500

PROPOSED SCHEME SHADOW LINE

EXISITING BUILDING SHADOW LINE

TOWN PLANNING

Revisions

-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	27.05.22	LEC Issue	NE

27/05/2022 2:38:01 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SOLAR ELEVATIONS**

Project No: **221002**

Date: **08/11/21**

Author: **JH**

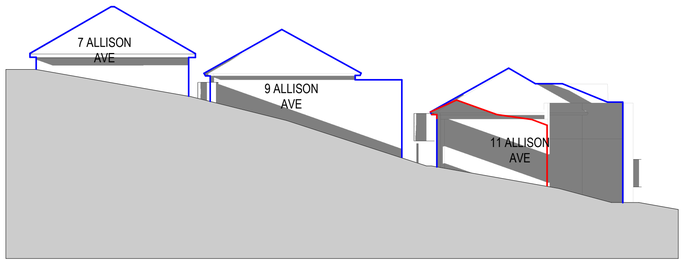
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Drawing No.: **TP04.32 B**

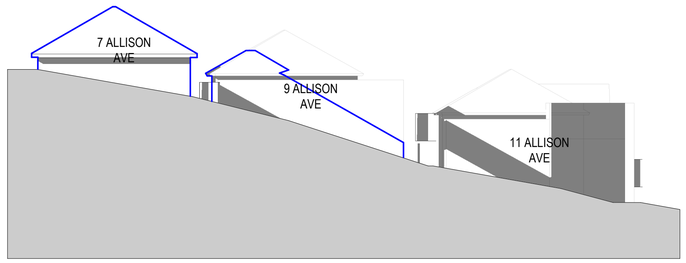
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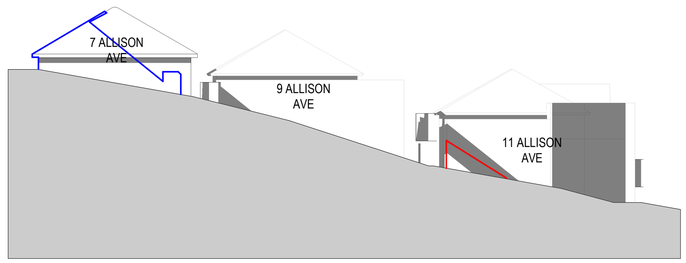
Brisbane, Melbourne, Sydney
www.rothelowman.com.au



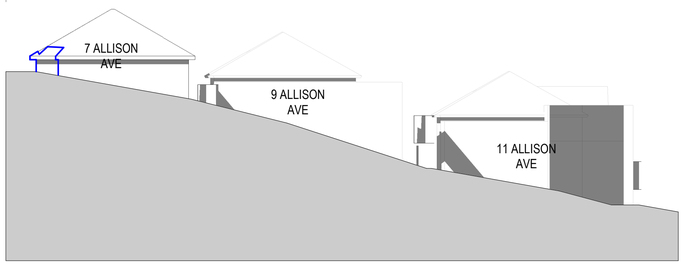
Solar Elevation Allison North 0900



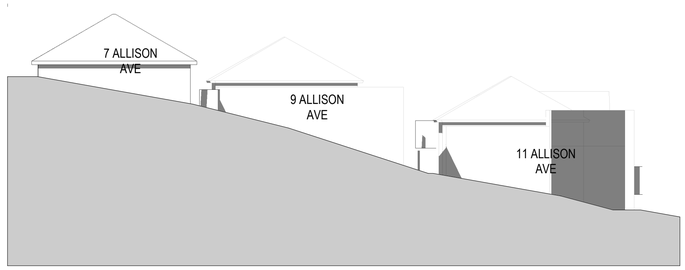
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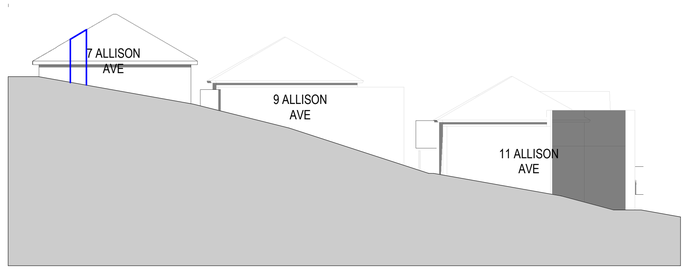
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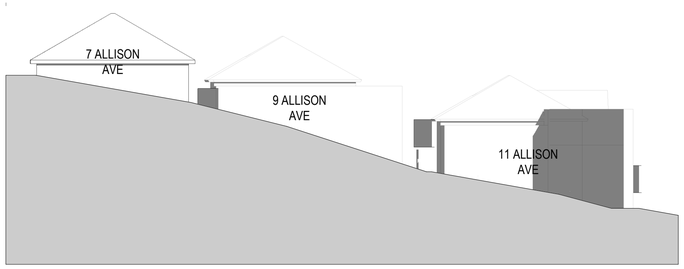
Solar Elevation Allison North 1200



Solar Elevation Allison North 1300



Solar Elevation Allison North 1400



Solar Elevation Allison North 1500

PROPOSED SCHEME SHADOW LINE

EXISITING BUILDING SHADOW LINE

TOWN PLANNING

Revisions

-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	27.05.22	LEC Issue	NE

27/05/2022 2:38:11 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SOLAR ELEVATIONS**

Project No: **221002**

Date: **08/11/21**

Author: **JH**

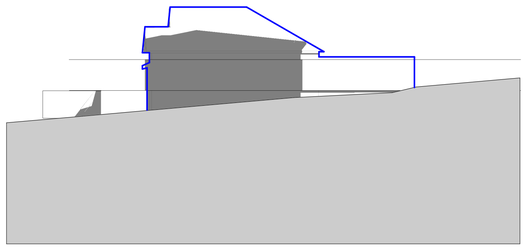
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Drawing No.: **TP04.33 B**

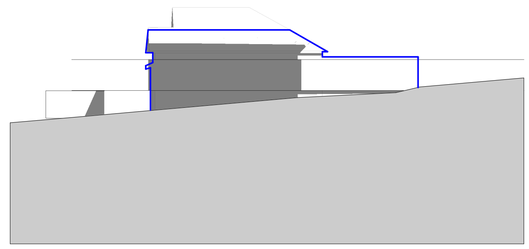
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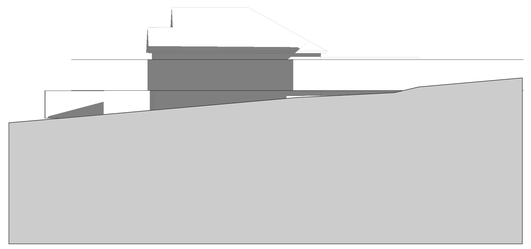
Brisbane, Melbourne, Sydney
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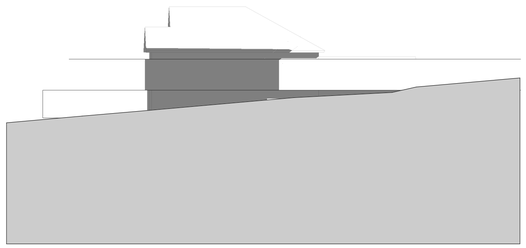
Solar Elevation 9 Allison East 0900



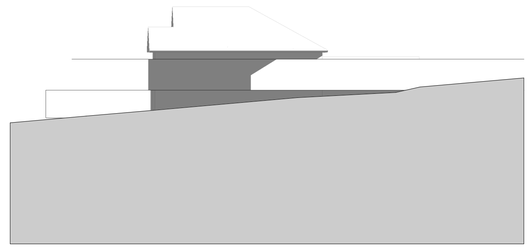
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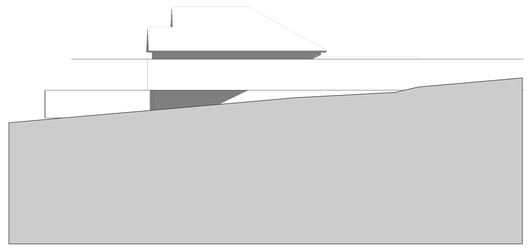
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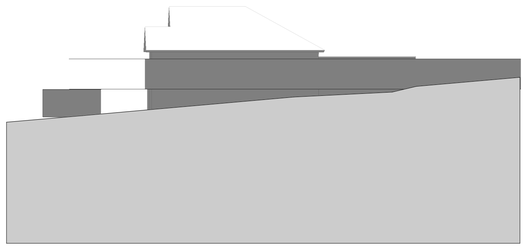
Solar Elevation 9 Allison East 1200



Solar Elevation 9 Allison East 1300



Solar Elevation 9 Allison East 1400



Solar Elevation 9 Allison East 1500

PROPOSED SCHEME SHADOW LINE

EXISITING BUILDING SHADOW LINE

TOWN PLANNING

Revisions			
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	27.05.22	LEC Issue	NE

27/05/2022 2:38:20 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SOLAR ELEVATIONS**

Project No: **221002**

Date: **08/11/21**

Author: **JH**

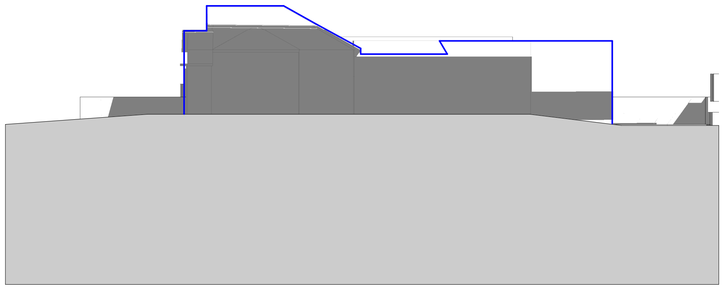
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Drawing No.: **TP04.34 B**

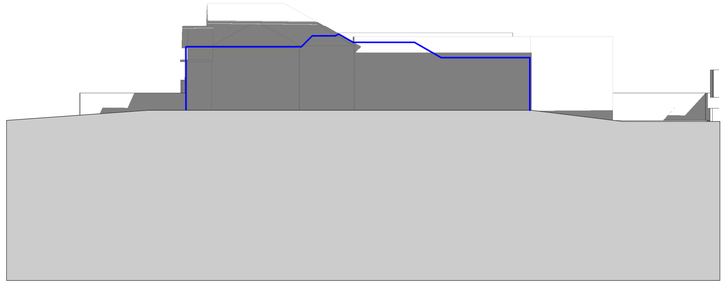
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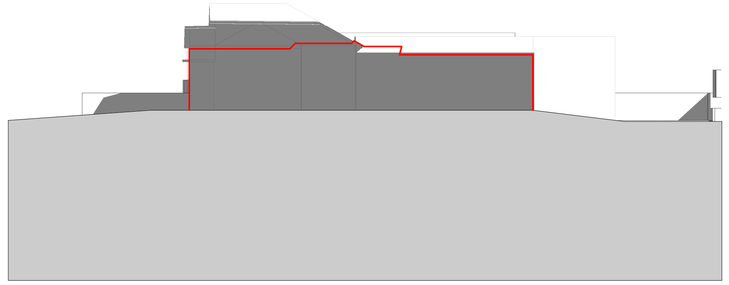
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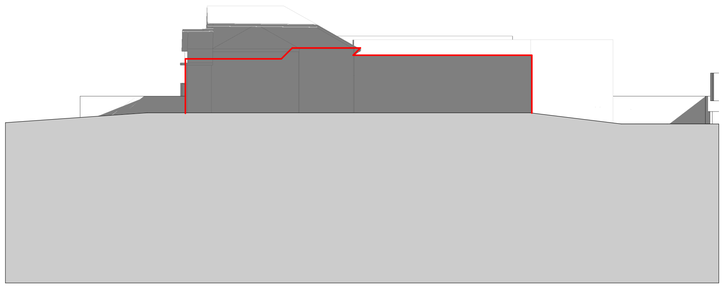
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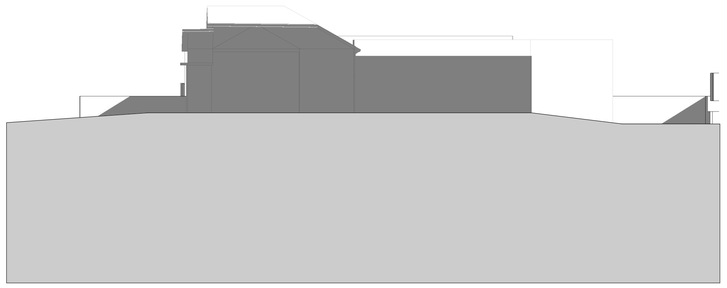
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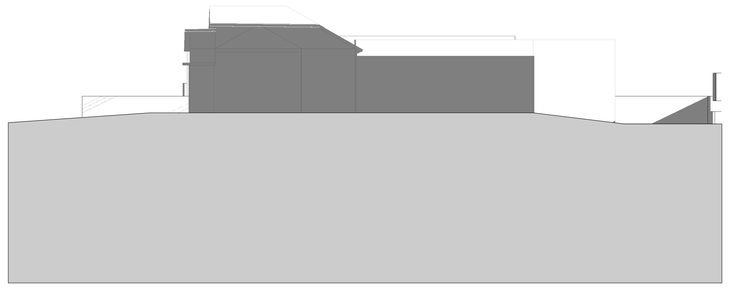
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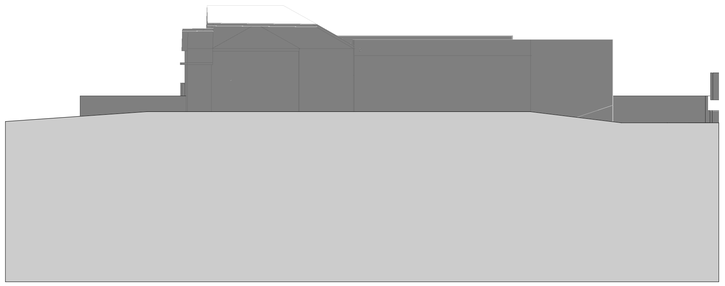
Solar Elevation 11 Allison East 1200



Solar Elevation 11 Allison East 1300



Solar Elevation 11 Allison East 1400



Solar Elevation 11 Allison East 1500

PROPOSED SCHEME SHADOW LINE

EXISITING BUILDING SHADOW LINE

TOWN PLANNING

Revisions				
	-	13.08.21	RFI Submission	GT
	A	02.02.22	S34 Submission	GT
	B	27.05.22	LEC Issue	NE

27/05/2022 2:38:30 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SOLAR ELEVATIONS**

Project No: **221002**

Date: **08/11/21**

Author: **JH**

Scale: @ A1

Drawing No.: **TP04.35 B**

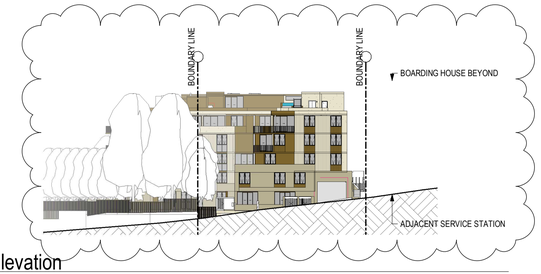
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1 SK00.01 **Notification Plan**
SCALE 1 : 500



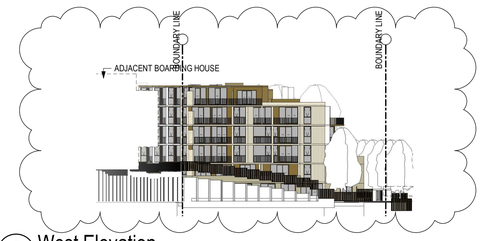
2 **East Elevation**
SCALE 1 : 500



3 **North Elevation**
SCALE 1 : 500



4 **South Elevation**
SCALE 1 : 500



5 **West Elevation**
SCALE 1 : 500

TOWN PLANNING

Revisions			
P1	07.05.21	DA Issue	NE
-	13.08.21	RFI Submission	GT
A	02.02.22	S34 Submission	GT
B	27.05.22	LEC Issue	NE

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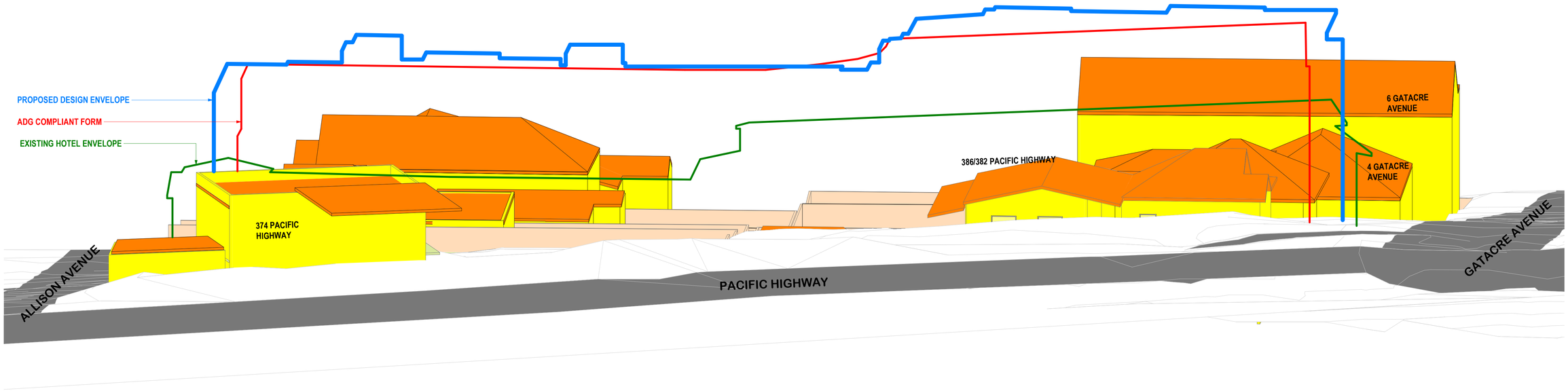
Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **NOTIFICATION PLANS** | Project No: **221002** | Date: **15.02.21** | Author: **GT** | Scale: @ A1 **1 : 500** | Drawing No.: **TP05.02 B**

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GATACRE AVENUE
PACIFIC HIGHWAY
ALLISON AVENUE
EXISTING TREE TO BE RETAINED
EXISTING TREE TO BE RETAINED
EXISTING TREES TO BE RETAINED
TITLE BOUNDARY 57° 55' 00" (58.20 m)
TITLE BOUNDARY 142° 57' 40" (41.194 m)
TITLE BOUNDARY 327° 57' 40" (57.706 m)
TITLE BOUNDARY 237° 55' 00" (111.166 m)
TITLE BOUNDARY 327° 57' 40" (40.943 m)
TITLE BOUNDARY 207° 55' 00" (77.064 m)
TITLE BOUNDARY 297° 55' 00" (77.442 m)
382-386 PACIFIC HIGHWAY
LOT 2
DP 1065751
378 PACIFIC HIGHWAY
LOT 47
DP 11416
2 GATACRE AVE
LOT 45
DP 4842
7 ALLISON AVE
LOT 44
DP 11416
6.00
6.00
6.00



TOWN PLANNING

Revisions
- 27.05.22 LEC Issue NE

27/05/2022 2:39:02 PM

Project
1 Gatacre Ave & 1-5 Allison Ave, Lane Cove
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing
SUN VIEW - 8AM

Project No
221002

Date
05/02/22

Author
AC

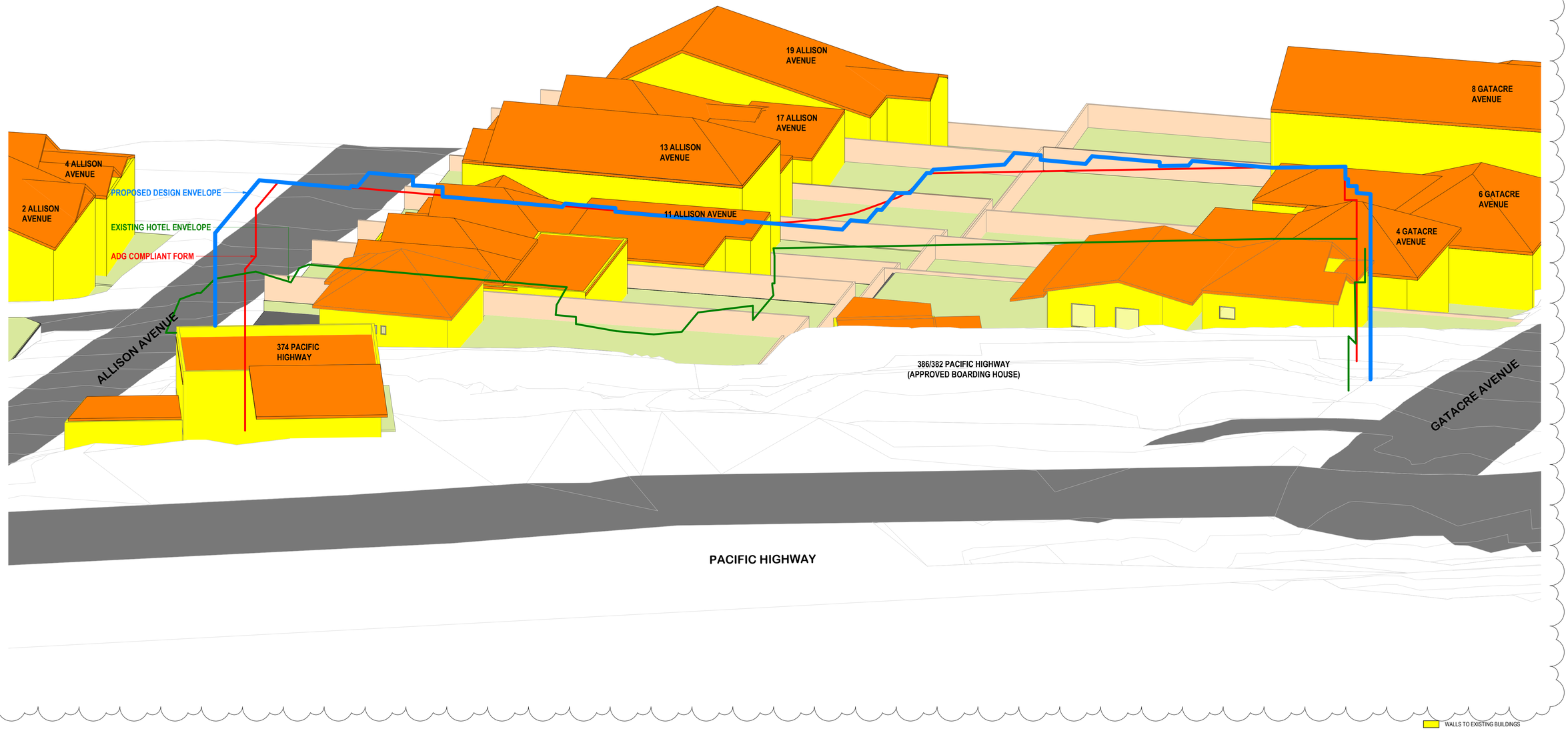
Scale: @ A1

Drawing No.
TP06.00 -

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Revisions			
-	02.02.22	S34 Submission	GT
A	25.02.22	S34 Resubmission	GT
B	29.02.22	Without Prejudice	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:39:07 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SUN VIEW - 9AM**

Project No: **221002**

Date: **02/01/22**

Author: **GT**

Scale: @ A1 **1 : 500**

Drawing No.: **TP06.01 C**

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Revisions

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A	25.02.22	S34 Resubmission	GT
B	29.02.22	Without Prejudice	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:39:12 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SUN VIEW - 10AM**

Project No: **221002**

Date: **02/01/22**

Author: **GT**

Scale: @ A1: **1 : 500**

Drawing No.: **TP06.05 C**

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Revisions			
-	02.02.22	S34 Submission	GT
A	25.02.22	S34 Resubmission	GT
B	29.02.22	Without Prejudice	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:39:17 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SUN VIEW - 11AM**

Project No: **221002**

Date: **02/01/22**

Author: **GT**

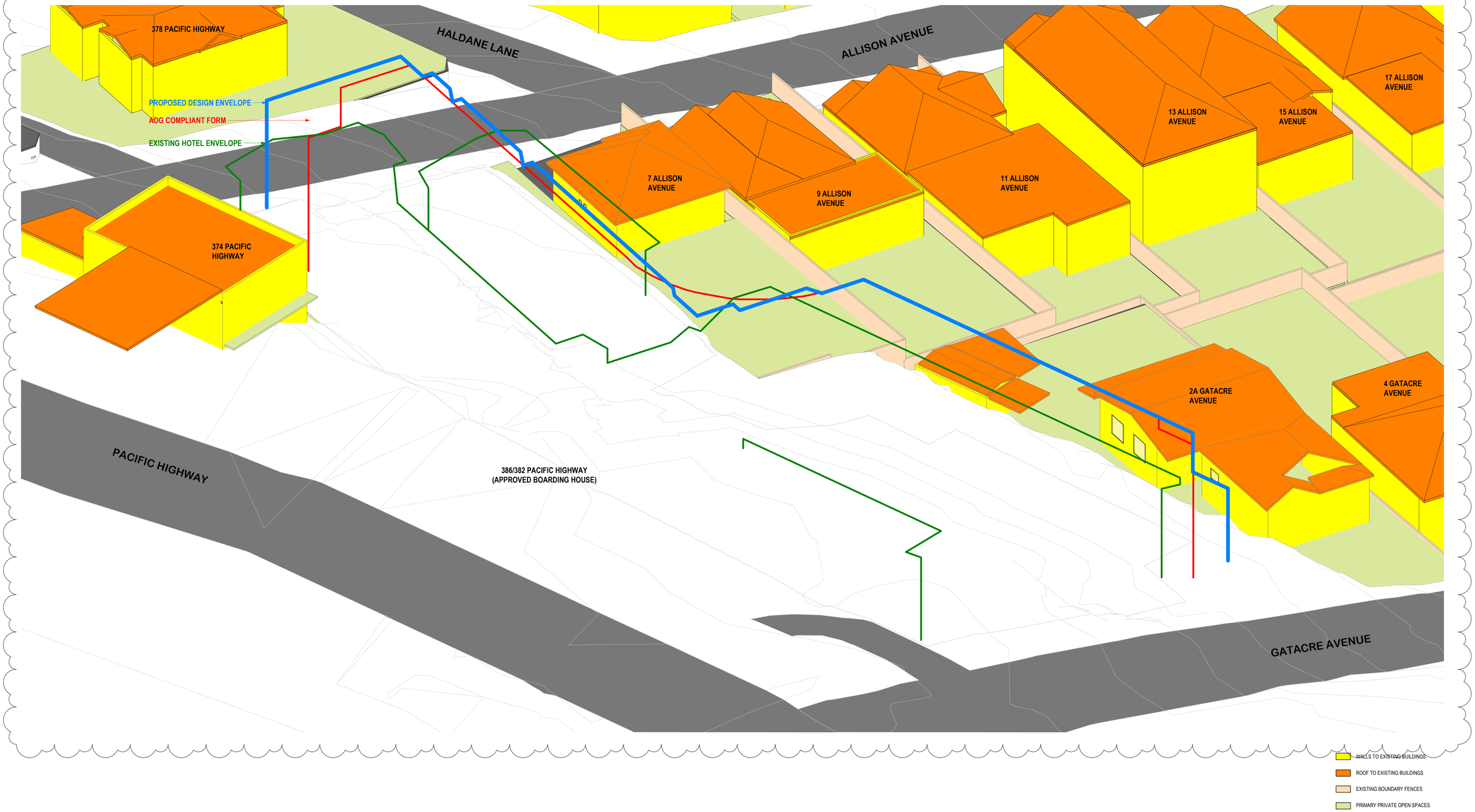
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Drawing No.: **TP06.09 C**

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Revisions

-	02.02.22	S34 Submission	GT
A	25.02.22	S34 Resubmission	GT
B	29.02.22	Without Prejudice	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:39:22 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SUN VIEW - 12PM**

Project No: **221002**

Date: **02/01/22**

Author: **GT**

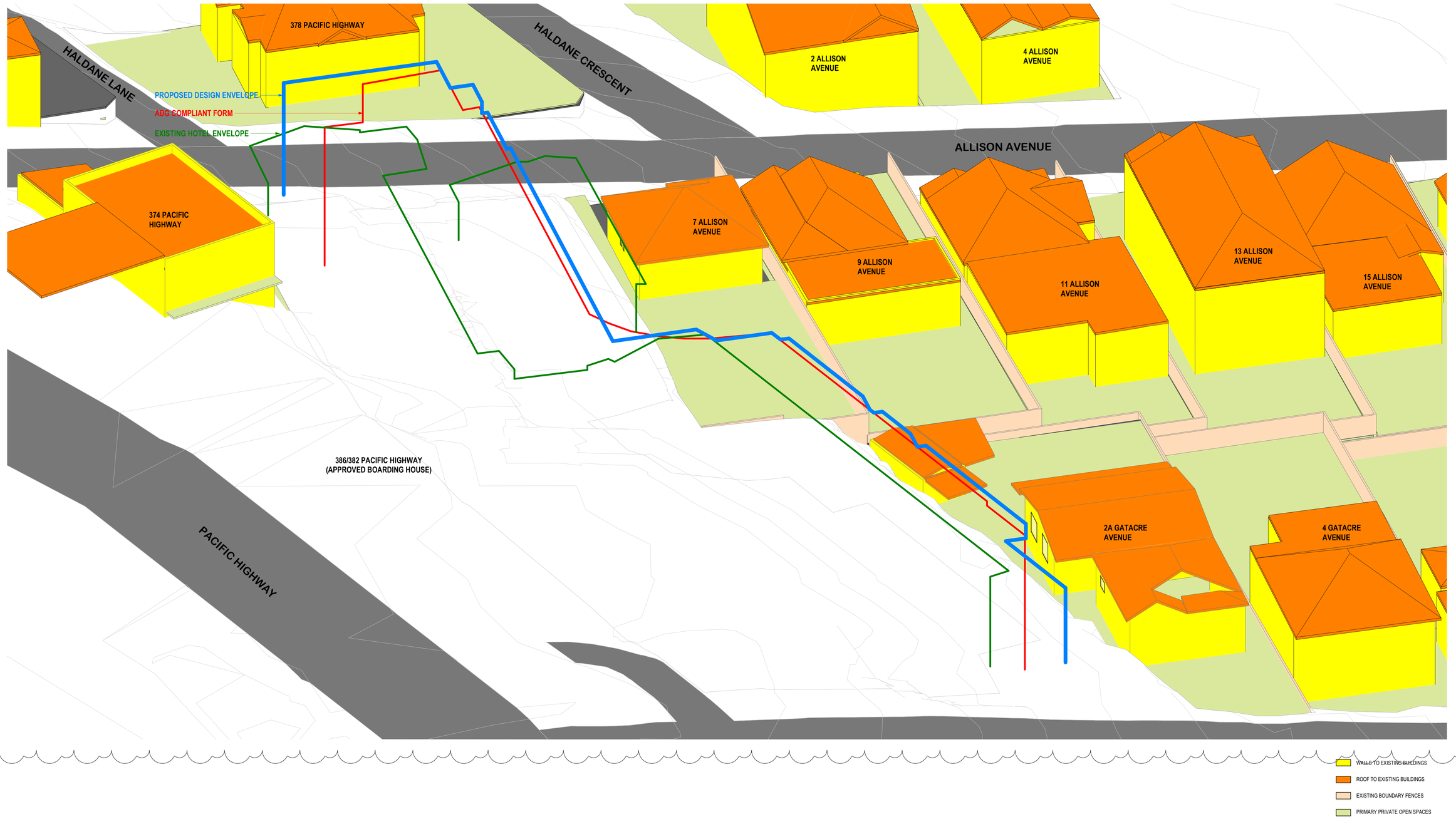
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Drawing No.: **TP06.13 C**

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-	02.02.22	S34 Submission	GT
A	25.02.22	S34 Resubmission	GT
B	29.02.22	Without Prejudice	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:39:27 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SUN VIEW - 1PM**

Project No: **221002**

Date: **02/01/22**

Author: **GT**

Scale: @ A1: **1 : 500**

Drawing No.: **TP06.17 C**

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-	02.02.22	S34 Submission	GT
A	25.02.22	S34 Resubmission	GT
B	29.02.22	Without Prejudice	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:39:32 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SUN VIEW - 2PM**

Project No: **221002**

Date: **02/01/22**

Author: **GT**

Scale: @ A1 **1 : 500**

Drawing No.: **TP06.21 C**

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-	02.02.22	S34 Submission	GT
A	25.02.22	S34 Resubmission	GT
B	29.02.22	Without Prejudice	GT
C	27.05.22	LEC Issue	NE

27/05/2022 2:39:37 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SUN VIEW - 3PM**

Project No: **221002**

Date: **02/01/22**

Author: **GT**

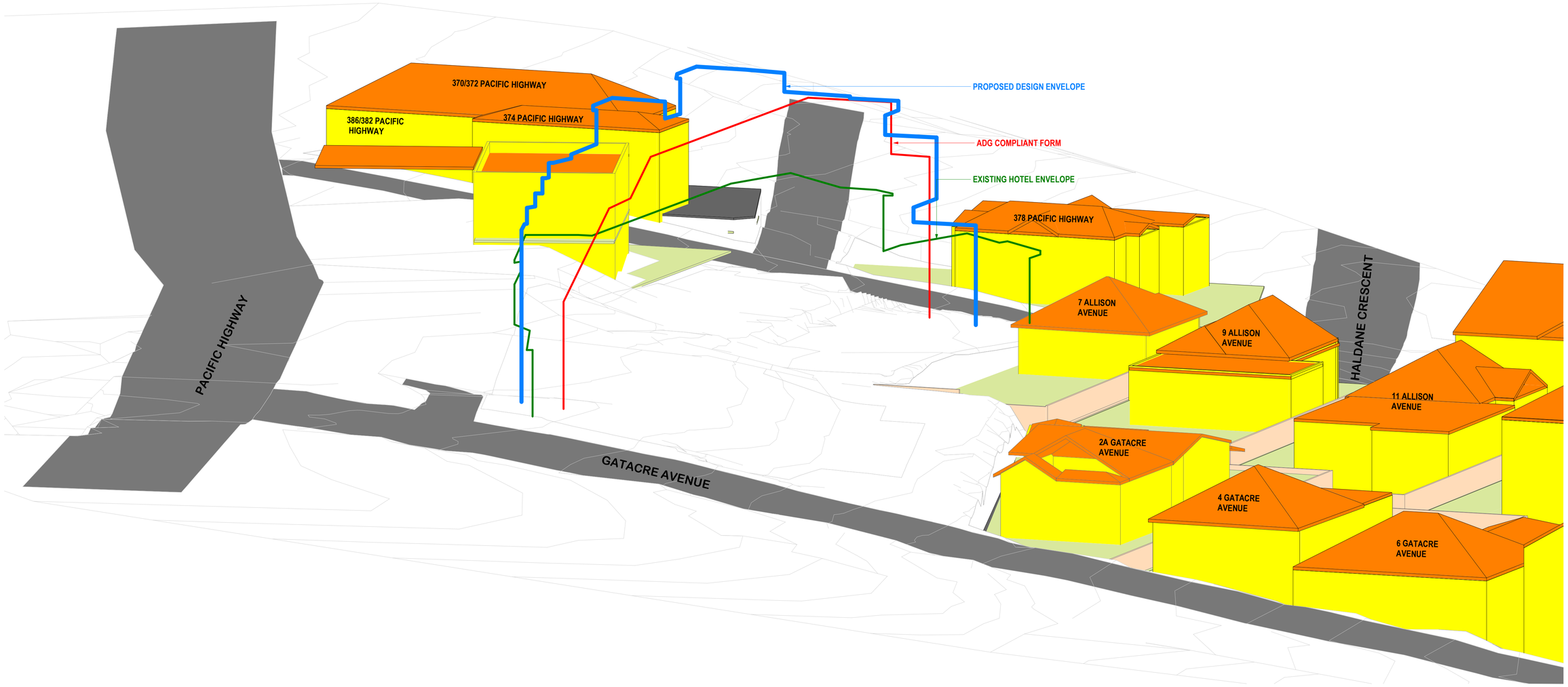
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Drawing No.: **TP06.25 C**

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TOWN PLANNING

Revisions
- 27.05.22 LEC Issue NE

27/05/2022 2:39:42 PM

Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **SUN VIEW - 4PM**

Project No: **221002**

Date: **05/02/22**

Author: **AC**

Scale: @ A1

Drawing No.: **TP06.26 -**

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1 Gatacre Ave & 5 Allison Ave

Lane Cove, NSW.

LEC

May 2022

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Renders

1.0 Renders / 1.01 Northern Facade - Gatacre Ave




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Boundary



Backyard



Balcony









CF01

Finish Pigmented precast concrete
Location Panels, walls, columns



CF02
Finish Pigmented patterned concrete
Location Wall panels



BK01

Finish Brick
Location Walls, planters



GT01

Finish Vision glazing
Location Residential glazing



MF01

Finish Burnished copper powdercoated aluminium
Location Window frames, balustrades and handrails



PT01

Finish Paint finish, burnished copper
Location Architectural finishes



AF03

Finish Bronze vertical profile cladding
Location Walls



TL05

Finish Tile finish, aqua colour
Location Roof top pool



1 GATACRE AVE, LANE COVE NSW

LANDSCAPE DA DOCUMENTATION

KEY PLAN



DRAWING REGISTER

DRAWING NUMBER	DRAWING NAME
LDA-00	LANDSCAPE COVER SHEET
LDA-01	EXISTING SITE
LDA-02	EXISTING TREE PLAN
LDA-03	LANDSCAPE AREAS AND DEEP SOIL
LDA-04	GROUND FLOOR LANDSCAPE PLAN
LDA-05	GROUND FLOOR SECTIONS
LDA-06	LEVEL 1 LANDSCAPE PLAN
LDA-07	LEVEL 2 LANDSCAPE PLAN
LDA-08	LEVEL 4 LANDSCAPE PLAN
LDA-09	ROOF LANDSCAPE PLAN
LDA-10	ROOF SECTIONS
LDA-11	SOUTHERN ELEVATION
LDA-12	INDICATIVE PLANT PALETTE
LDA-13	LANDSCAPE DETAILS

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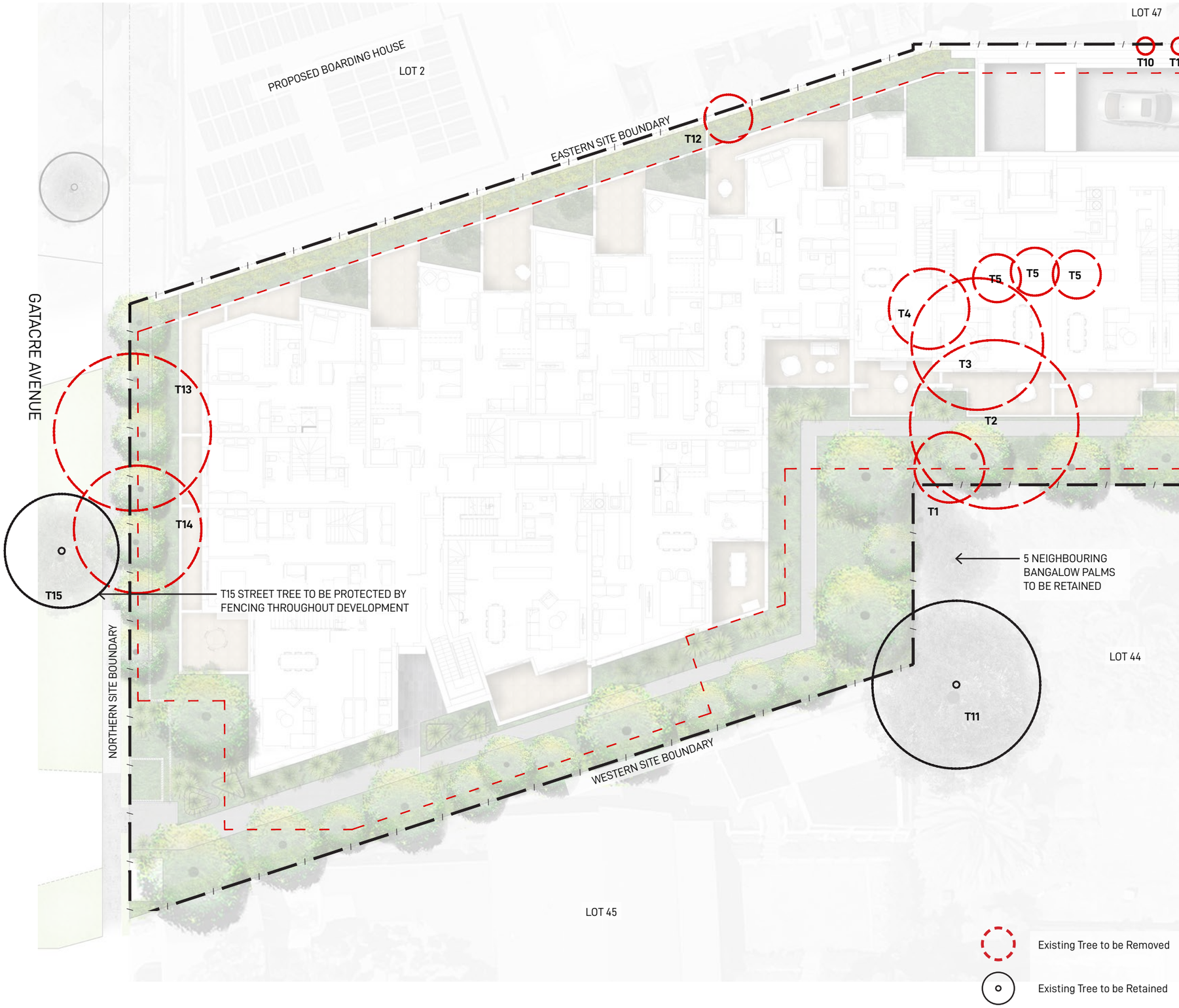


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EXISTING SITE

LDA-01



EXISTING TREE SCHEDULE

ID	DESCRIPTION	EXISTING HEIGHT	PROPOSED ACTION
T1	Syzygium spp.	8m	REMOVE
T2	Jacaranda mimisifolia	10.5m	REMOVE
T3	Syzygium spp.	6m	REMOVE
T4	Syzygium spp.	11m	REMOVE
T5	Cupressus leylandii	11m	REMOVE
T6	Syzygium spp.	8m	REMOVE
T7	Vibernum spp.	9m	REMOVE
T8	Syzygium spp.	9m	REMOVE
T9	Cupressus leylandii	11m	REMOVE
T10	Cupressus leylandii	10m	REMOVE
T11	Jacaranda mimisifolia	10m	RETAIN
T12	Cupressus leylandii	12m	REMOVE
T13	Araucaria heterophylla	22m	REMOVE
T14	Cupressus leylandii	15m	REMOVE
T15	Lophostemon confertus	13m	RETAIN

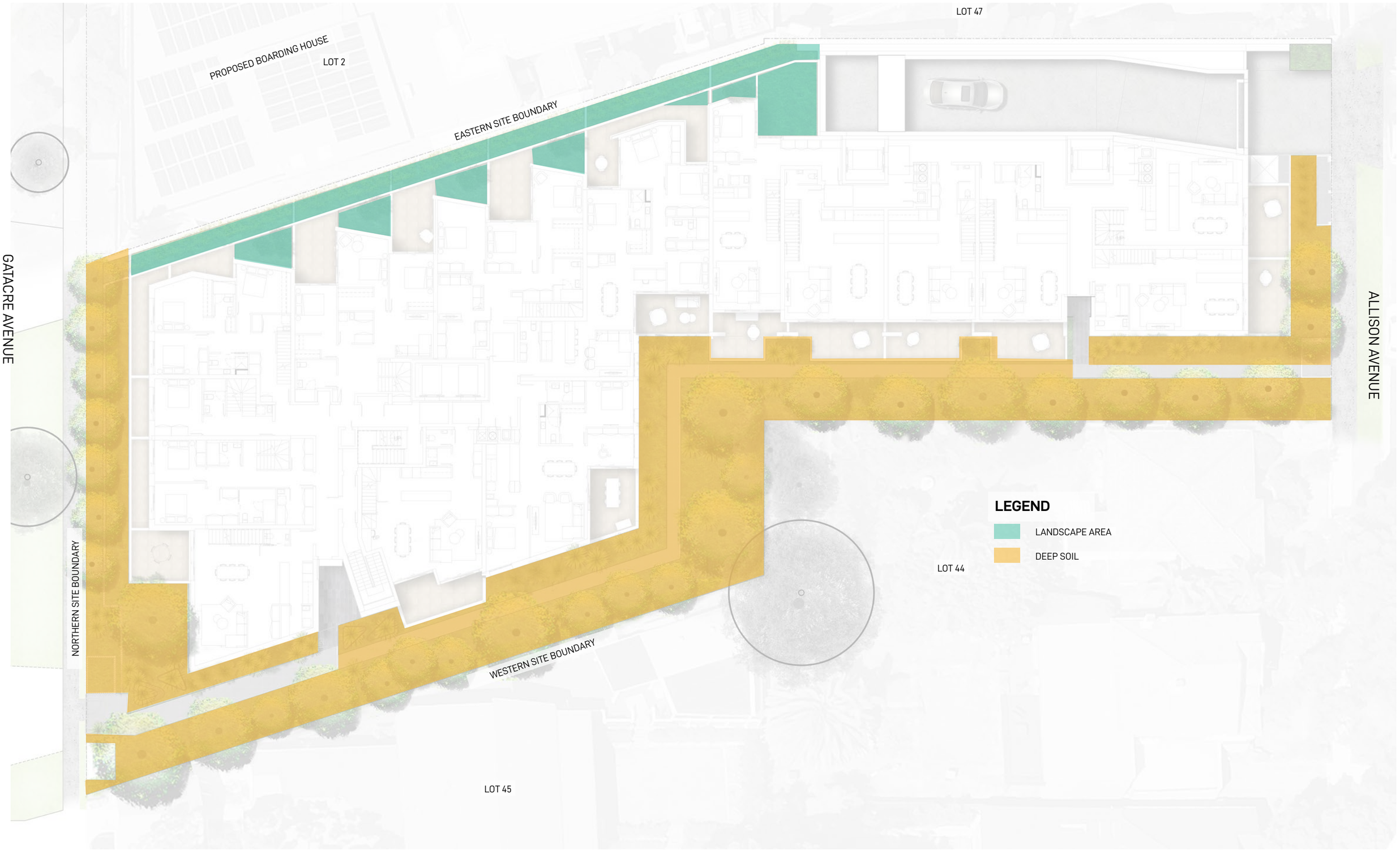
Note: Tree information from Arboricultural Impact Assessment report prepared by Blues Bros Arboriculture dated 04/08/2021.

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1:250 / A3
0 1 2 3 4 5m

EXISTING TREE PLAN

LDA-02



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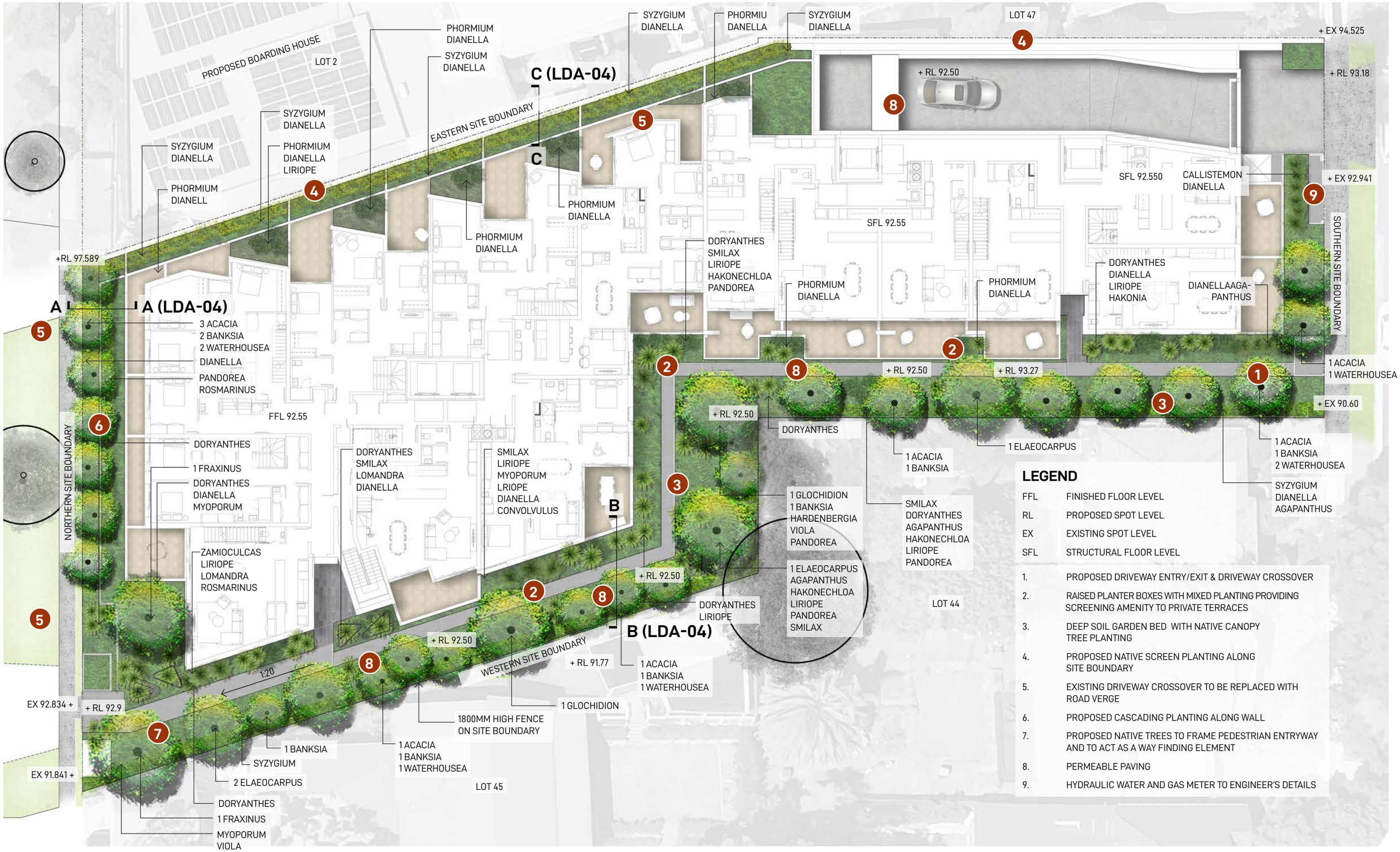
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0 1 2 3 4 5m

LANDSCAPE AREA AND DEEP SOIL

LDA-03

LANDSCAPE DA DOCUMENTATION | 1 GATACRE AVE, LANE COVE NSW

REV. F | 27-MAY-2022



LEGEND

FFL	FINISHED FLOOR LEVEL
RL	PROPOSED SPOT LEVEL
EX	EXISTING SPOT LEVEL
SFL	STRUCTURAL FLOOR LEVEL

1. PROPOSED DRIVEWAY ENTRY/EXIT & DRIVEWAY CROSSOVER
2. RAISED PLANTER BOXES WITH MIXED PLANTING PROVIDING SCREENING AMENITY TO PRIVATE TERRACES
3. DEEP SOIL GARDEN BED WITH NATIVE CANOPY TREE PLANTING
4. PROPOSED NATIVE SCREEN PLANTING ALONG SITE BOUNDARY
5. EXISTING DRIVEWAY CROSSOVER TO BE REPLACED WITH ROAD VERGE
6. PROPOSED CASCADING PLANTING ALONG WALL
7. PROPOSED NATIVE TREES TO FRAME PEDESTRIAN ENTRYWAY AND TO ACT AS A WAY FINDING ELEMENT
8. PERMEABLE PAVING
9. HYDRAULIC WATER AND GAS METER TO ENGINEER'S DETAILS

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1:250 / A3
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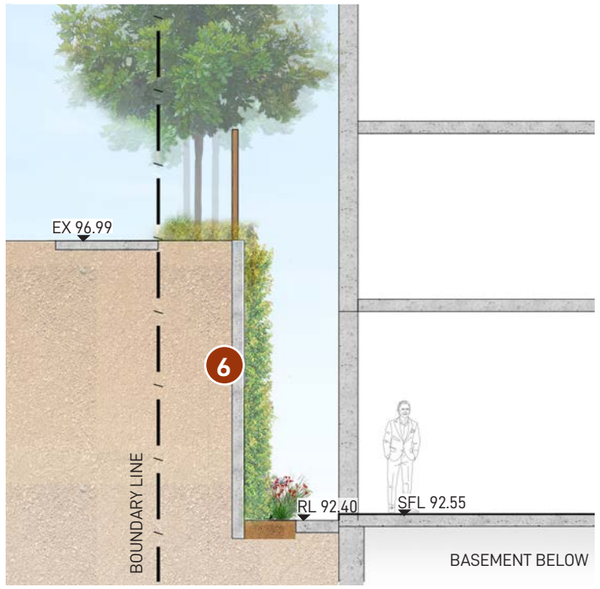
GROUND FLOOR LANDSCAPE PLAN
LDA-04

LANDSCAPE DA DOCUMENTATION | 1 GATACRE AVE, LANE COVE NSW

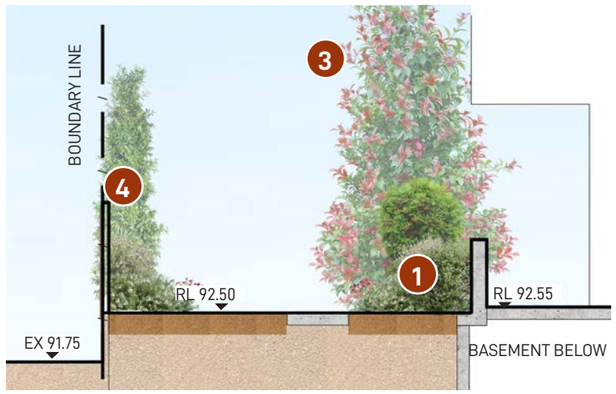
REV. F | 27-MAY-2022

LEGEND

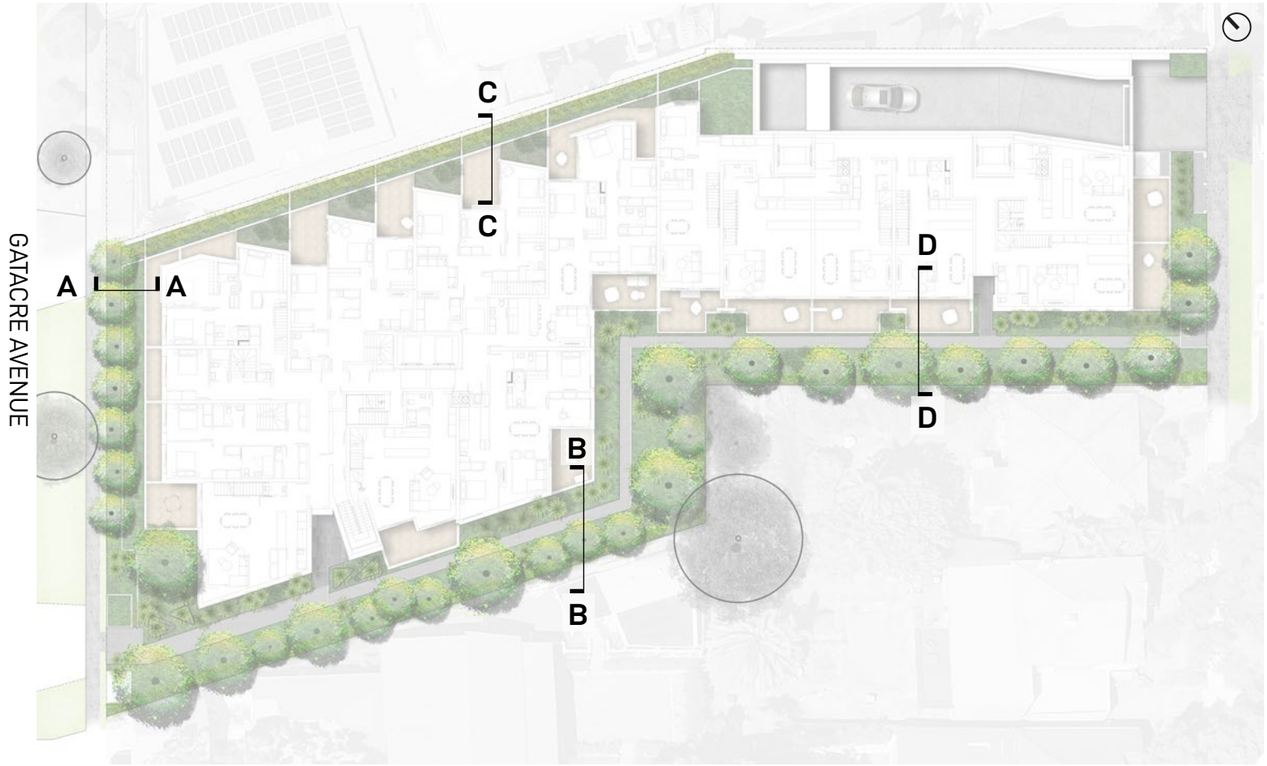
SFL	STRUCTURAL FLOOR LEVEL
RL	PROPOSED SPOT LEVEL
EX	EXISTING SPOT LEVEL
1.	MIXED PLANTING FOR SCREENING AMENITY OF BALCONY
2.	PROPOSED NATIVE SCREEN PLANTING ALONG SITE BOUNDARY
3.	PROPOSED CANOPY TREE WITH UNDERSTOREY PLANTING FOR VISUAL AMENITY
4.	PROPOSED NATIVE PLANTING TO SCREEN BOUNDARY FENCE
5.	PROPOSED SHADE TOLERANT MIXED PLANTING OF DIANELLA 'TASRED', MICROSORUM DIVERSIFOLIUM, DICHONDRA REPENS AND SCREEN PLANTING SUCH AS SYZYGIUM 'STRAIGHT AND NARROW ' TO SOFTEN RETAINING WALL
6.	PROPOSED SCREENING AND CASCADING PLANTS TO MITIGATE VIEWS OF RETAINING WALLS



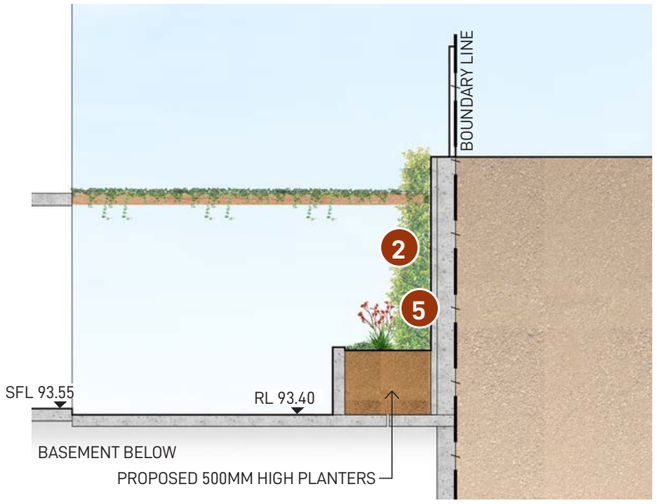
SECTION A



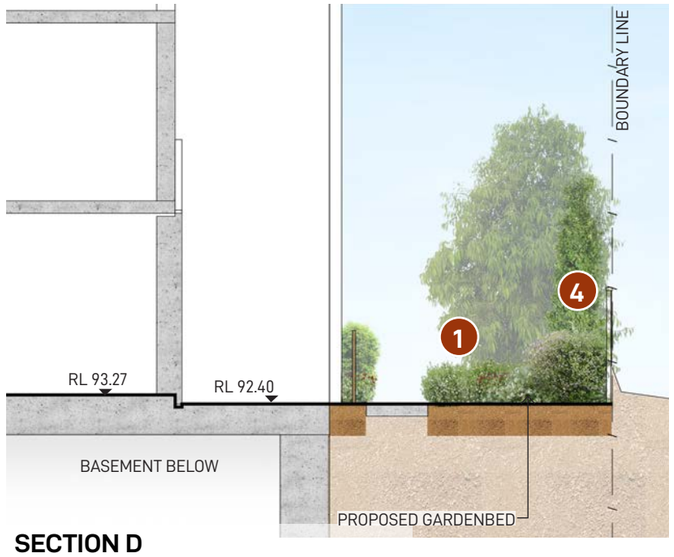
SECTION B



KEY PLAN (NOT TO SCALE)



SECTION C



SECTION D

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1:100 / A3
0 1 2m

GROUND FLOOR SECTIONS

LDA-05



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1:250 / A3
0 1 2m

LEVEL 1 LANDSCAPE PLAN

LDA-06

LANDSCAPE DA DOCUMENTATION | 1 GATACRE AVE, LANE COVE NSW

REV. F | 27-MAY-2022

GATACRE AVENUE

ALLISON AVENUE

DORYANTHES
HARDENBERGIA
PITTOSPORUM
AGAPANTHUS
PANDOREA

DORYANTHES
HARDENBERGIA
PITTOSPORUM
DIANELLA
MYOPORUM

DORYANTHES
HARDENBERGIA
PITTOSPORUM
DIANELLA
MYOPORUM

DORYANTHES
HARDENBERGIA
PITTOSPORUM
AGAPANTHUS
PANDOREA

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1:250 / A3
0 1 2m

LEVEL 2 LANDSCAPE PLAN

LDA-07

LANDSCAPE DA DOCUMENTATION | 1 GATACRE AVE, LANE COVE NSW

REV. F | 27-MAY-2022

GATACRE AVENUE

ALLISON AVENUE

DORYANTHES
PITTOSPORUM
AGAPANTHUS
PANDOREA

DORYANTHES
HARDENBERGIA
PITTOSPORUM
DIANELLA
MYOPORUM

PITTOSPORUM
AGAPANTHUS
PANDOREA

DORYANTHES
HARDENBERGIA
DIANELLA
MYOPORUM

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1:250 / A3
0 1 2m

LEVEL 4 LANDSCAPE PLAN

LDA-08

LANDSCAPE DA DOCUMENTATION | 1 GATACRE AVE, LANE COVE NSW

REV. F | 27-MAY-2022



LEGEND

SFL	STRUCTURAL FLOOR LEVEL
1.	PROPOSED LOUNGE SEATING WITH FIRE PIT
2.	PROPOSED FEATURE TREE WITH UNDERSTOREY PLANTING
3.	FEATURE TREE PLANTER BOX WITH SEATING
4.	PROPOSED MIXED NATIVE PLANTING WITH CASCADE PLANTS FOR VISUAL AMENITY
5.	PROPOSED OUTDOOR GYM AREA IN SOFT FALL MATERIAL
6.	PROPOSED BUILT IN BARBECUE WITH SINK AND BIN STORAGE
7.	POOL DECK
8.	PROPOSED SUN BED AREA IN SYNTHETIC TURF

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1:250 / A3
0 1 2 3 4 5m

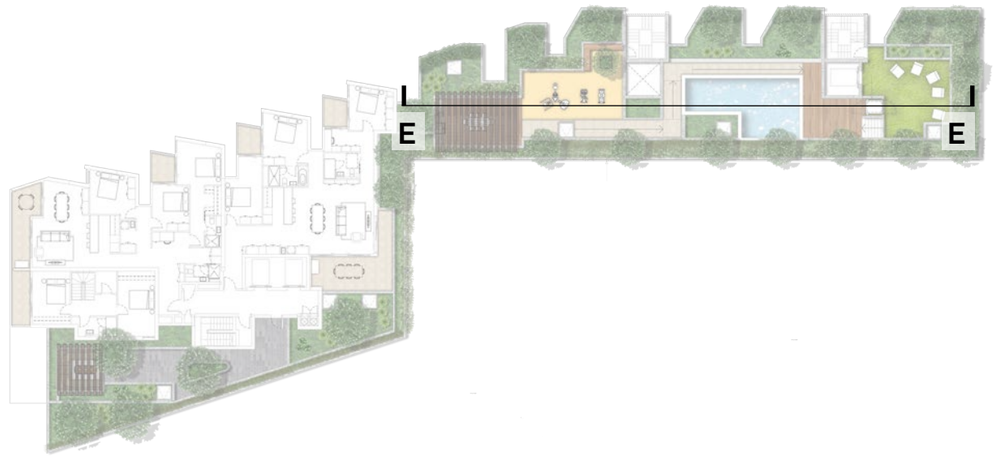
ROOF LANDSCAPE PLAN

LDA-09

LANDSCAPE DA DOCUMENTATION | 1 GATACRE AVE, LANE COVE NSW

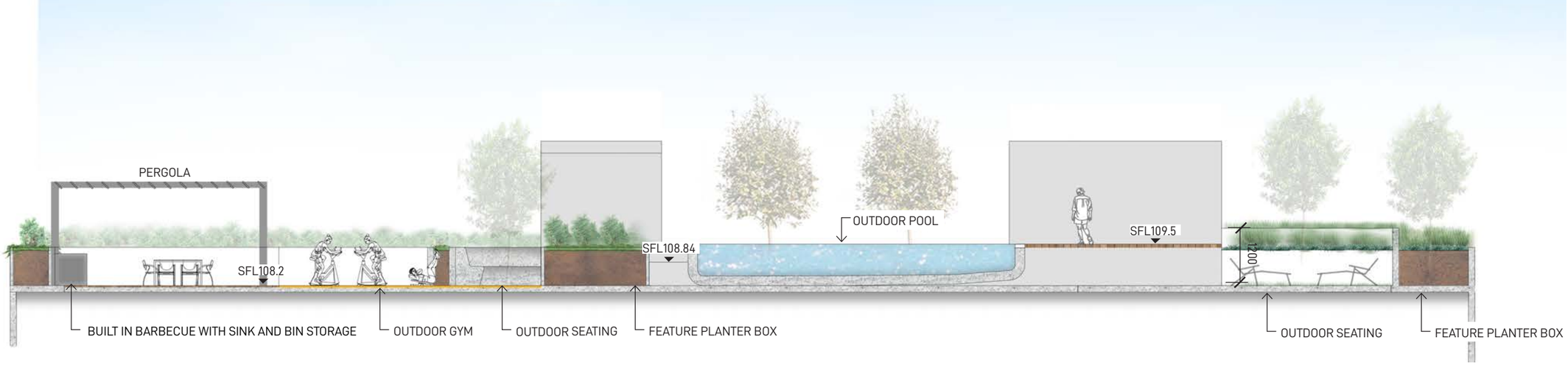
REV. F | 27-MAY-2022

GATACRE AVENUE



ALLISON AVENUE

KEY PLAN (NOT TO SCALE)



SECTION EE

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ROOF SECTIONS

LDA-10



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1:300 / A3
0 3 6m

SOUTHERN ELEVATION

LDA-11

GROUND FLOOR

TREES


Elaeocarpus reticulatus


Fraxinus oxycarpa


Glochidion ferdinandi


Waterhousea 'Sweeper'

SHRUBS


Asplenium nidus


Blechnum 'Silver Lady'


Callistemon 'Little John'


Doryanthes excelsa


Hardenbergia 'Mini Meema'


Smilax glyciphylla


Syzygium 'Straight and Narrow'


Zamioculcas zamiifolia

GRASSES & GROUNDCOVERS


Dianella 'Tasred'


Dichondra repens


Hakonechloa macra


Liriope 'Silver Lawn'


Lomandra 'Lucky Stripe'


Myoporum 'Yareena'


Phormium tenax


Pandorea pandorana


Viola hederacea

ROOFTOP

TREES


Hymenosporum flavum


Tristaniopsis 'Luscious'

SHRUBS


Crowea 'White Stars'


Banksia 'Birthday Candles'


Ozothamnus diosmifolius


Doryanthes excelsa


Hardenbergia 'Mini Meema'


Syzygium 'Straight and Narrow'


Zamioculcas zamiifolia


Pittosporum 'Miss Muffet'

GRASSES & GROUNDCOVERS


Agapanthus 'Snowball'


Convolvulus cneorum


Philodendron 'Little Phil'


Rosmarinus 'Irene'


Santolina chamaecyparissus


Thymus vulgaris


Pandorea pandorana


Viola hederacea

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INDICATIVE PLANT PALETTE

LDA-12

PLANT SCHEDULE

Botanical Name	Common Name	Mature Height	Native	Pot Size	Quantity
Trees					
Acacia floribunda	Gossamer Wattle	6-8m	✓	100L	8
Banksia integrifolia	Coast Banksia	8-10m	✓	100L	8
Elaeocarpus reticulatus	Blueberry Ash	8-10m	✓	100L	4
Fraxinus oxycarpa	Claret Ash	10-12m		200L	2
Glochidion Ferndinandi	Cheese Tree	12-15m	✓	200L	2
Hymenosporum flavum	Native Frangipani	6-8m	✓	100L	7
Tristaniopsis 'Luscious'	Water Gum	10-12m	✓	100L	16
Waterhousea 'Sweeper'	Lilly Pilly	6-8m	✓	100L	7
Shrubs					
Asplenium nidus	Birds Nest Fern	1m	✓	200mm	8
Banksia 'Birthday Candles'		0.5m	✓	200mm	35
Blechnum 'Silver Lady'		1m	✓	200mm	8
Callistemon 'Little John'		1m	✓	200mm	11
Crowea 'White Stars'		1m	✓	200mm	4
Doryanthes excelsa	Gymea Lily	2-4m	✓	200mm	30
Hardenbergia 'Mini Meema'		0.45m	✓	200mm	25
Microsorum diversifolium	Kangaroo Paw Fern	0.5m	✓	200mm	38
Pittosporum 'Miss Muffet'		1m	✓	200mm	46
Smilax glyciphylla	Sweet tea	5m	✓	200mm	45
Syzygium 'Straight and Narrow'		5m	✓	200mm	201
Zamioculcas zamiifolia	ZZ plant	0.6m		200mm	39
Grasses and Groundcovers					
Agapanthus 'Snowball'		0.4m		140mm	6/m²
Convolvulus cneorum	Silver Bush	0.5m		140mm	5/m²
Dianella 'Tasred'		0.4m	✓	140mm	6/m²
Dichondra repens		0.1m	✓	140mm	6/m²
Hakonechloa macra	Hakone Grass	0.45m		140mm	4/m²
Liriope 'Silver Lawn'		0.35m		140mm	5/m²
Lomandra 'Lucky Stripe'		0.8m	✓	140mm	4/m²
Myoporum 'Yareena'		0.1m	✓	140mm	3/m²
Ozothamnus diosmifolius	Rice Flower	2m		140mm	6/m²
Pandorea pandorana	Wonga Wonga Vine	2-20m	✓	140mm	3/m²
Philodendron 'Little Phil'		0.35m		200mm	5/m²
Phormium tenax	New Zealand Flax	1.2m		140mm	1/m²
Rosmarinus 'Irene'		0.3m		140mm	4/m²
Santolina chamaecyparissus	Cotton Lavender	0.3m		140mm	4/m²
Thymus vulgaris	Common Thyme	0.15m		140mm	6/m²
Viola hederacea	Native Violet	0.1m	✓	140mm	6/m²

OUTLINE LANDSCAPE SPECIFICATION

GENERAL
MAINTENANCE SHALL MEAN THE CARE AND MAINTENANCE OF THE LANDSCAPE WORKS BY ACCEPTED HORTICULTURAL PRACTICE AS RECTIFYING ANY DEFECTS THAT BECOME APPARENT IN THE LANDSCAPE WORKS UNDER NORMAL USE. THE LANDSCAPE CONTRACTOR SHALL ATTEND THE SITE ON A WEEKLY BASIS TO MAINTAIN THE LANDSCAPE WORKS FOR THE FULL TERM APPROVED AT CC STAGE OF THE MAINTENANCE PERIOD (COMMENCING FROM PRACTICAL COMPLETION).

RUBBISH REMOVAL
DURING THE TERM OF THE MAINTENANCE PERIOD THE LANDSCAPE CONTRACTOR SHALL UNDERTAKE RUBBISH REMOVAL FROM THE SITE ON A WEEKLY BASIS TO ENSURE THE SITE REMAINS IN TIDY CONDITION.

WEED ERADICATION
WEED GROWTH THAT MAY OCCUR IN, PLANTED OR MULCHED AREAS IS TO BE REMOVED USING ENVIRONMENTALLY ACCEPTABLE METHODS I.E. NON-RESIDUAL GLYPHOSATE HERBICIDE, (E.G. 'ROUNDUP', APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS) OR HAND WEEDING.

TREE REPLACEMENT
TREES SHALL SHOW SIGNS OF HEALTHY VIGOROUS GROWTH AND BE FREE FROM DISEASE AND NOT EXHIBIT SIGNS OF STRESS PRIOR TO HANDOVER TO THE CLIENT. ANY TREES OR PLANT THAT DIE OR FAIL TO THRIVE, OR ARE DAMAGED OR STOLEN WILL BE REPLACED. REPLACEMENT MATERIAL SHALL HAVE THE MAINTENANCE PERIOD EXTENDED IN ACCORDANCE WITH THE LANDSCAPE CONTRACT CONDITIONS. TREES AND PLANT MATERIALS SHALL BE EQUAL TO THE MINIMUM REQUIREMENTS OF SPECIES SPECIFIED AND APPROVED MATERIAL DELIVERED TO SITE. SHOULD THE CONDITION DECLINE FROM THE APPROVED SAMPLE THE SUPERINTENDENT RESERVES THE RIGHT TO REJECT THE TREE / PLANTS.
FREQUENCY: AS REQUIRED.

PRUNING
SELECTIVE PRUNING MAY BE REQUIRED DURING THE ESTABLISHMENT PERIOD TO PROMOTE A BALANCED CANOPY STRUCTURE. THESE ACTIVITIES SHALL BE CARRIED OUT TO THE BEST HORTICULTURAL AND INDUSTRY PRACTICE. ALL PRUNED MATERIAL IS TO BE REMOVED FROM SITE.

IRRIGATION
A LOW VOLUME DRIP IRRIGATION SYSTEM MAY BE INSTALLED AT THE DISCRETION OF THE DEVELOPER. POSITION OF CONTROL BOX, SOLENOIDS AND IRRIGATION CONDUITS TO BE DESIGNED BY QUALIFIED IRRIGATION ENGINEER AT CC STAGE CONTROLLERS SHALL BE MOUNTED ON A STABLE WALL, POWER RACK, OR FORMED AND CONSTRUCTED CONCRETE BASED PEDESTAL MOUNT. PERFORMANCE SPECIFICATION TO BE PROVIDED BY LANDSCAPE ARCHITECT, NOMINALLY 25MM DELIVERED TO PLANT AREAS EACH WEEK DURING ESTABLISHMENT (DEPENDING ON WEATHER CONDITIONS). AFTER ESTABLISHMENT, IRRIGATION RATES CAN BE DECREASED IN CERTAIN AREAS OF THE LANDSCAPE DEPENDING ON THE SPECIES.

WATERING
IMPLEMENT AN APPROPRIATE HAND WATERING REGIME IN AREAS NOT IRRIGATED IN ASSOCIATION WITH CURRENT WATERING PROGRAMME TO MAINTAIN PLANT HEALTH AND VIGOUR. THE PROGRAM SHALL REFLECT SEASONAL CONDITIONS AND PLANT SPECIES.
FREQUENCY: WEEKLY OR AS REQUIRED.

DRAINAGE
ALL LANDSCAPE AREAS ARE TO HAVE POSITIVE DRAINAGE TO SW SYSTEMS. IF AREAS OF POOR DRAINAGE ARE IDENTIFIED ON SITE THEN THIS SHOULD BE BROUGHT TO THE SITE SUPERINTENDENTS ATTENTION. INSTALL AGG LINES IF REQUIRED.

SOILS
HORIZON A - GARDEN BEDS ON NATURAL GROUND
A SANDY LOAM TO CLAY LOAM TOPSOIL MIX DESIGNED FOR GENERAL PURPOSE, ON-GRADE LANDSCAPE GARDEN BED PLANTING OF GRASSES, WOODY AND HERBACEOUS ANNUALS AND PERENNIALS THAT HAVE HIGH NUTRIENT REQUIREMENT FOR SUSTAINED OPTIMUM GROWTH, AND ARE NOT SUBJECT TO COMPACTION BY PEDESTRIAN AND OTHER FOOT TRAFFIC. HEAVIER TEXTURED SOILS IN THIS SPECIFICATION MAY REQUIRE ENGINEERED SOLUTIONS WHERE EXCESSIVE WETNESS IS ANTICIPATED. NOTE THAT ORGANIC SOIL VARIANT SHOULD NOT BE CHOSEN FOR LOW P PLANTINGS AND SHOULD NOT BE USED BELOW 300MM. PLANTING METHODS INCLUDE DIRECT SEEDING, TUBE AND POTTED SPECIMENS UP TO 45L

HORIZON B – LARGER POTTED PLANTING BELOW 300MM
A SANDY, WELL DRAINED MEDIUM WITH LOW ORGANIC MATTER FOR BACKFILLING BELOW 300MM FROM THE SURFACE IN LARGER POTTED SPECIMENS OVER 45L OR 400MM DEPTH OF ROOT BALL, SEMI-ADVANCED AND SUPER ADVANCED TREE PLANTING. THE SPECIFICATION MAY USE A SMALL PROPORTION OF SITE WON TOPSOIL OR SUBSOIL, PROVIDED THE ORGANIC MATTER UPPER LIMIT IS NOT EXCEEDED.

CULTIVATION
ALL GARDEN BEDS TO BE CULTIVATED TO A MIN DEPTH OF 150MM AND TREE PITS TO THE DEPTH OF THE ROOT BALL ONLY. IF ADDITIVES SUCH AS GYPSUM ARE REQUIRED CONDUCT THIS AFTER CULTIVATION INTO THE TOP 100MM OF SOIL.

PLANTING
ALL PLANTING TO BE GROWN TO NATSPEC SPECIFICATIONS. CONTRACTOR TO PREPARE SITE FOR PLANTING INCLUDING WATERING, HANDLING, SETTING OUT AND EXCAVATION. EXCAVATE A HOLE FOR EACH PLANT LARGE ENOUGH TO PROVIDE NOT LESS THAN 100MM ALL AROUND THE ROOT SYSTEM OF THE PLANT. FOR TREE PLANTING EACH HOLE SHALL BE DUG WITH A SHOVEL, BACKHOE OR SIMILAR TOOL. INDIVIDUAL HOLES SHALL BE EXCAVATED TO ALLOW ROOT SYSTEM TO SIT FLAT ON THE EXCAVATED HOLE AND 400MM TO EACH SIDE OF THE ROOT SYSTEM. BACKFILL PLANTING HOLES WITH EXISTING SITE SOIL AND TOPSOIL AS DESCRIBED IN SECTION 'SOIL', PLANT / TREE SHALL BE SET PLUMB, WITH THE ROOT BALL SET SLIGHTLY BELOW THE FINAL SOIL LEVEL.

MULCHING
THE LANDSCAPE CONTRACTOR SHALL SUPPLY AND INSTALL 10MM PINE BARK MULCH TO ALL GARDEN BEDS SHOWN ON THE LANDSCAPE PLANS, TO A MINIMUM DEPTH OF 75MM. ALL MULCH IS TO BE FREE OF DELETERIOUS MATTER SUCH AS SOIL, WEEDS AND STICKS. MULCHED SURFACES ARE TO BE KEPT CLEAN AND TIDY AND FREE OF ANY DELETERIOUS MATERIAL AND FOREIGN MATTER. REINSTATE DEPTHS TO A UNIFORM LEVEL OF 75MM WITH MULCH AS SPECIFIED, MULCH TO BE FREE OF ANY WOOD MATERIAL IMPREGNATED WITH CCA OR SIMILAR TOXIC TREATMENT. MAINTAIN WATERING RINGS AROUND TREES. TOP UP MULCH LEVELS PRIOR TO HANDOVER TO CLIENT.

TURFING
THE LANDSCAPE CONTRACTOR SHALL SUPPLY AND INSTALL SAPPHIRE BUFFALO TURF IN STRETCHER PATTERN TO ALL TURF AREAS SHOWN ON THE LANDSCAPE PLANS AND IS TO FINISH FLUSH WITH ADJACENT SURFACES. TURF TO BE A MIN THICKNESS OF 50MM WITH A 40MM MOWING HEIGHT. CONTRACTOR TO ALLOW FOR FERTILISING, LAYING, TAMPING, WATERING, TOP DRESSING, MAINTENANCE AND MOWING. THE LANDSCAPE CONTRACTOR SHALL SUPPLY AND INSTALL TURF UNDERLAY UNDER ALL TURF AREAS, CONSISTING OF 100MM THICK LAYER OF SCREENED TOP SOIL.

PEST AND DISEASE CONTROL
THE LANDSCAPE CONTRACTOR SHALL SPRAY FOR PESTS AND DISEASE INFESTATIONS WHEN THE PEST AND FUNGAL ATTACK HAS BEEN POSITIVELY IDENTIFIED AND WHEN THEIR POPULATIONS HAVE INCREASED TO A POINT THAT WILL BECOME DETRIMENTAL TO PLANT GROWTH. APPLY ALL PESTICIDES TO MANUFACTURER'S DIRECTIONS.
FREQUENCY: WEEKLY INSPECTION

FERTILISING
PELLETS SHALL BE IN THE FORM INTENDED TO UNIFORMLY RELEASE PLANT FOOD ELEMENTS FOR A PERIOD OF APPROXIMATELY NINE MONTHS EQUAL TO SHIRLEYS KOKEI PELLETS, ANALYSIS 6.3:1.8:2.9 OR SIMILAR APPROVED. KOKEI PELLETS SHALL BE PLACED AT THE TIME OF PLANTING TO THE BASE OF THE PLANT, 50MM MINIMUM FROM THE ROOT BALL AT A RATE OF TWO PELLETS PER 300MM OF TOP GROWTH TO A MAXIMUM OF 8 PELLETS PER TREE. GENERALLY CHECK FOR SIGNS OF NUTRIENT DEFICIENCIES (YELLOWING OF LEAVES, FAILURE TO THRIVE), AND ADAPT FERTILISER REGIME TO SUIT. FERTILISER SHOULD BE APPLIED AT THE BEGINNING AND THE END OF THE (SUMMER) GROWING SEASON.

GROUND iNK
LANDSCAPE ARCHITECTS

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LANDSCAPE VISUAL ASSESSMENT

Proposed Apartment Development:
1 Gatacre Avenue and 5 Allison Avenue, Lane Cove

moir
landscape architecture

Prepared for: Minter Ellison on behalf of Gateacre LC Ptd Ltd

Project No: 2102 Issue: F Date: 27th May 2022

DOCUMENT HISTORY AND STATUS

Project No: 2102

Project Name: EW 1 Gatacre Avenue Lane Cove

Issue	Submission	Date of Issue	Author	Approved by
A	Draft report for internal review	6.12.21	MED	DM
B	Visual Impact Report	8.12.21	MED	DM
C	Final Visual Impact Report	31.01.22	MED	DM
D	Final Visual Impact Report	31.01.22	MED	DM
E	Final Visual Impact Report	01.02.22	MED	DM
F	Amended Visual Impact Report	27.05.22	MED	DM

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06 Landscape Character
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08 Photomontages
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01 BACKGROUND

Moir Landscape Architecture (MLA) have been commissioned by Minter Ellison on behalf of Gateacre LC Ptd Ltd to prepare a Visual Impact Assessment (VIA) for the proposed development located at Lot A in DP 415448 and Lots 45 and 46 in DP 11416.

The purpose of this report is to provide a qualitative and quantitative assessment of the visibility and potential visual impacts of the proposal.

A photographic survey work was undertaken on 18th November 2021 using key viewpoints and locations with potential views towards the site. The report details the results of the field work, documents the assessment of the landscape character and visual setting, and assesses potential visual impacts associated with the proposal.

The report also provides an overview of the proposed landscape treatments which will assist in the mitigation of potential visual impacts. This information is provided to assist Lane Cove Council in understanding the likely impacts and how they may be managed to ensure that the positive character of the immediate area and surrounding visual landscape are not overly eroded or diminished.

02 STUDY METHOD

2.1 Overview of the Visual Impact Assessment

A Visual Impact Assessment (VIA) is used to identify and determine the value, significance and sensitivity of a landscape. The method applied to this study involved systematically evaluating the visual environment pertaining to the site and using value judgements based on community responses to scenery. The assessment was undertaken in stages as noted below:

The first stage of the process involves:

- Objective assessment of the relative aesthetic value of the landscape, defined as visual quality and expressed as high, medium or low. This assessment generally relates to variety, uniqueness, prominence and naturalness of the land form, vegetation and water forms within each character type.
- Determination of the landscape sensitivity and its ability to absorb different types of development on the basis of physical and environmental character.
- An assessment of viewer sensitivity to change. This includes how different groups of people view the landscape (for example, a resident as opposed to a tourist), and how many people are viewing and from how far.
- The undertaking of a viewpoint analysis to identify areas likely to be affected by development of the site and a photographic survey using a digital camera and a hand held GPS unit to record position and altitude.
- An assessment of visual impacts and the preparation of recommendations for impact mitigation. Suggestions are made for suitable development patterns that would maintain the areas visual quality.

The second stage of the assessment involves the preparation of photomontages depicting the proposal and recommended mitigation measures.

The purpose of the above methodology is reduce the amount of subjectivity entering into visual impact assessment and to provide sufficient data to allow for third party verification of results.

2.2 Overview of the Study Method

Survey work was undertaken on the 17th November 2021 using key viewpoints and locations with potential views towards the site. The report details the results of the field work, documents the assessment of the landscape character and visual setting, and assesses potential visual impacts associated with the proposal.

This methodology is based on the existing policies and framework and MLA's experience in landscape and visual impact assessment. The following provides an overview of the study method utilised for undertaking the Visual Impact Assessment (VIA). The VIA was undertaken in the stages as noted below in Figure 1:

PROJECT OVERVIEW Refer to Section 03 - 05	Project Description Visual aspects of the proposal
LANDSCAPE CHARACTER ASSESSMENT Refer to Section 06	Overview of the existing landscape character and identification of key landscape features of the Site and surrounds.
ASSESSMENT OF VISUAL IMPACTS Refer to Sections 07-08	Assessment of the potential visual impacts with the aid of computer modelling. Viewpoint Analysis (Section 07) Photomontage Preparation (Section 08)
MITIGATION METHODS Refer to Sections 09	Summary of Visual impacts Preparation of recommendations for impact mitigation (where practical) to maintain the area's visual quality.

Figure 1: Study Method

2.3 Existing Character Assessment

The character of a site refers to the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects how particular combinations of geology, landform, soils, vegetation, land use and human settlement create a particular sense of place for different areas within the landscape (The Landscape Institute and the institute of Environmental Management and Assessment, 2002).

The landscape character of the Study Area has been assessed at a regional, local and site scale. The Landscape Character Assessment is provided in ***Section 06.***

2.4 Visual Impact Assessment

The potential visual impact of the Project is assessed based on the relationship between the visual sensitivity ***(refer to Section 2.4.1)*** and visual magnitude ***(refer to Section 2.4.2)*** see ***Figure 2:***

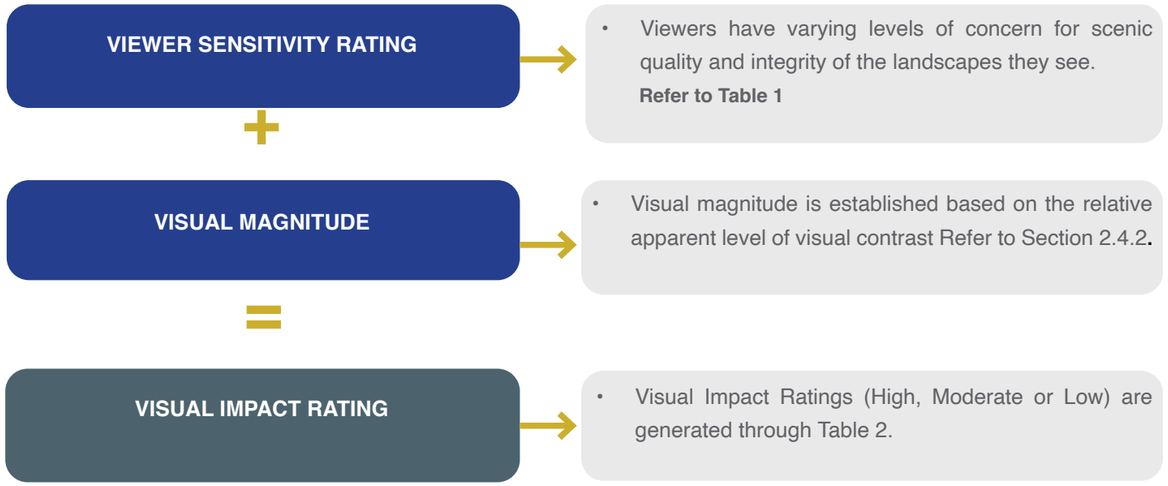


Figure 2: Visual Impact Assessment Method

2.4.1 Visual Sensitivity

Visual sensitivity is a measure of how critically a change to the existing landscape is viewed by people from different areas. The assessment is based on the number of people affected, land use, and the distance of the viewer from the proposal (EDAW, 2000).

For example, a significant change that is not frequently seen may result in a low visual sensitivity although its impact on a landscape may be high. Generally the following principles apply:

- Visual sensitivity decreases as the viewing time decreases.
- Visual sensitivity decreases as the number of potential viewers decreases.
- Visual sensitivity can also be related to viewer activity (e.g. A person viewing an affected site whilst engaged in recreational activities will be more strongly affected by change than someone passing a scene in a car travelling to a desired destination).

Sensitivity ratings are defined as high, moderate or low and are shown in the Table 1 below *(adapted from URBIS, 2009*).

VISUAL SENSITIVITY RATING

	DISTANCE FROM SITE				
LANDUSE	0-1 km	1-2 km	2 - 4.5 km	4.5 -7 km	> 7 km
Townships	HIGH	HIGH	HIGH	MODERATE	LOW
Recreational Reserve	HIGH	HIGH	HIGH	MODERATE	LOW
Homestead	HIGH	HIGH	HIGH	MODERATE	LOW
Rural Township	HIGH	HIGH	MODERATE	LOW	NIL - LOW
Main Highway	MODERATE	MODERATE	LOW	LOW	NIL - LOW
Local Roads	MODERATE	MODERATE	LOW	LOW	NIL - LOW
Farm Road	LOW	LOW	NIL - LOW	NIL - LOW	NIL
Agricultural Land	LOW	LOW	NIL - LOW	NIL - LOW	NIL

Table 1: Visual Sensitivity Rating Table *(Adapted from Urbis, 2009)*

2.4.2 Visual Magnitude

Visual magnitude refers to the extent of change that will be experienced by receptors. Factors that are considered when assessing the magnitude of change include:

- the proportion of the view / landscape affected;
- extent of the area over which the change occurs;
- the size and scale of the change;
- the rate and duration of the change;
- the level of contrast and compatibility *(Source: AILA, 2018)*

2.4.3 Visual Impact

Visual impact refers to the change in appearance of the landscape as a result of development. (EPHC, 2010). Visual impact is the combined effect of visual sensitivity and visual magnitude. Various combinations of visual sensitivity and visual magnitude will result in high, moderate and low overall visual impacts as suggested in Table 2 below *(Transport for NSW, 2020)*.

VISUAL IMPACT RATING					
		VISUAL MAGNITUDE			
		HIGH	MODERATE	LOW	NEGLIGIBLE
VISUAL SENSITIVITY	HIGH	HIGH	HIGH-MODERATE	MODERATE	NEGLIGIBLE
	MODERATE	HIGH-MODERATE	MODERATE	MODERATE-LOW	NEGLIGIBLE
	LOW	MODERATE	MODERATE-LOW	LOW	NEGLIGIBLE
	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

Table 2: Visual Impact Rating Table *(Adapted from Transport for NSW, 2020)*

03 LOCAL CONTEXT

The site is situated in the north west of Lane Cove which is located within the Lower North Shore area of Sydney and within Lane Cove Council Government Area *(Refer Fig. 03).*

The site is located close to the intersection of a number of major roads including the Pacific Highway, Longueville Rd, Gore Hill Freeway and an entry/exit of Lane Cove Tunnel.

The Pacific Highway runs generally north south direction and forms a hard barrier between the largely industrial area of Artarmon and Lane Cove to the west.

Epping Road runs in an east west direction to the north of the site and forms the boundary between Lane Cove and Lane Cove North. Longueville Road runs north south to the west of the site and continues to join Epping Road to the north of the site.

The surrounding locality is a combination of commercial, industrial and residential land uses. Generally, a combination of high density residential (R3,R4), commercial (B2,B4,B7)and industrial (IN1,IN2) uses follow the major arterial roads whilst low density residential (R2) and recreational land (RE1) are situated within the pockets to the north of Longueville/Epping Road and west of the Pacific Highway *(Refer Fig. 04).*

The character of the immediate surrounds of the highway is dominated by a combination of commercial buildings of varying quality and an emerging high density residential character. This change has been brought about by the Lane Cove Local Environmental Plan 2009 to encourage population density particularly along Pacific Highway and Longueville Roads. Generally, the character to the west and south of the subject site is that of an established low density residential area.



Figure 03 - Eastern Creek and Surrounds

04 THE SITE

The site is located at 1 Gatacre Avenue and 5 Allison Avenue, Lane Cove, and borders commercial buildings, including an existing petrol station and an approved (but not yet constructed) 5 storey boarding house at the location currently known as '99 bikes' on the land immediately to the east of the site fronting the Pacific Highway. Low density residential dwellings border the Site to the to the south and west. It is within the Lane Cove Council Government Area (LCC LGA).

The site area is legally described as Lot A in DP 415448 and Lots 45 and 46 in DP 11416. For the purposes of this visual assessment, the area subject to physical works within the aforementioned lots of the proposal will be assessed and therefore considered "the Site"*(Refer Fig.05).*

The Site is irregular in shape with a frontage of 38.25 metres to Gatacre Avenue, a frontage of 27.43 metres to Allison Avenue, a depth of approximately 92.11 metres along the northern boundary and a total area of 2,965.8m2.

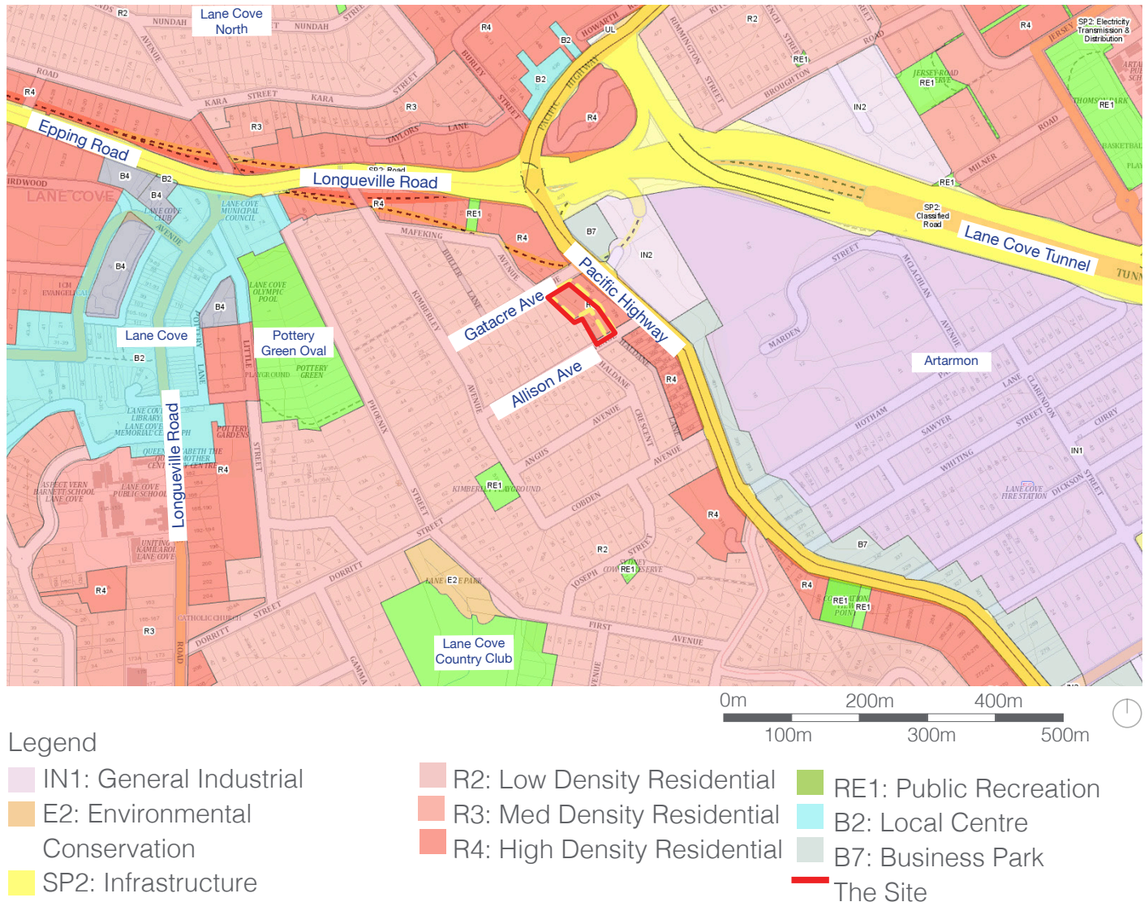


Figure 04 - Land use and character assessment *Source: NSW Planning Portal 2021*

The Site is zoned as R4 - High Density Development.

The Site currently contains a motel development (known as the 'Comfort Inn') with a frontage to, and vehicular access from, Gatacre and Allison Avenues, on the land known as 1 Gatacre Avenue, Lane Cove. The Site also contains a single detached dwelling house on the land known as 5 Allison Avenue, Lane Cove.

The existing motel is set back by approximately 2.2 metres to 7.5 metres from Gatacre Avenue (from the survey submitted and measured perpendicularly from boundary to wall of building). The southern setback of 7 metres broadly matches the residential built form setback to the balance of Gatacre Avenue. The setback to Allison Avenue varies between 3 metres for the motel in the north and approximately 6 metres to the verandah, and 7m to the wall of the existing dwelling in the southern sector (from survey submitted and measured perpendicularly from the boundary line). The latter setback matches the balance of residential setbacks for Allison Avenue.

The Site is located on a prominent ridge location. The topography of the locality includes a significant cross-fall from the high point on Pacific Highway that incorporates a cross-fall of 5.5 metres on the Gatacre Avenue frontage (North to South), 4 metres on the Allison Avenue frontage (North to South) and 6.8 metres from Gatacre Avenue to Allison Avenue (northwest to southeast). undulates across all boundaries. From Gatacre to Allison Avenue, the site falls by approximately 2m to 3m along the length of the site.



Figure 05 - The Site *Source: Sixmaps 2021*

05 THE PROPOSAL

The original development application (DA65/2021) was lodged to Lane Cove Council on 3 June 2021. As lodged, the DA proposed:

- Demolition of existing structures, comprising a multi-storey motel building and dwelling house;
- Lot consolidation of the land in folio identifiers 45/11416 (5 Allison Avenue), 46/11416 and A/415448 (1 Gatacre Avenue);
- Construction of a part 4/part 6 storey residential flat building with 61 apartments 13 x 1 bedroom, 20 x 2 bedroom, 18 x 3 bedroom, 9 x 4 bedroom, 1 x 5 bedroom), and two levels of basement parking with 121 parking spaces and with a two-way driveway from Allison Avenue; and
- Removal of all 13 site trees and shrub planting to the northern boundary.

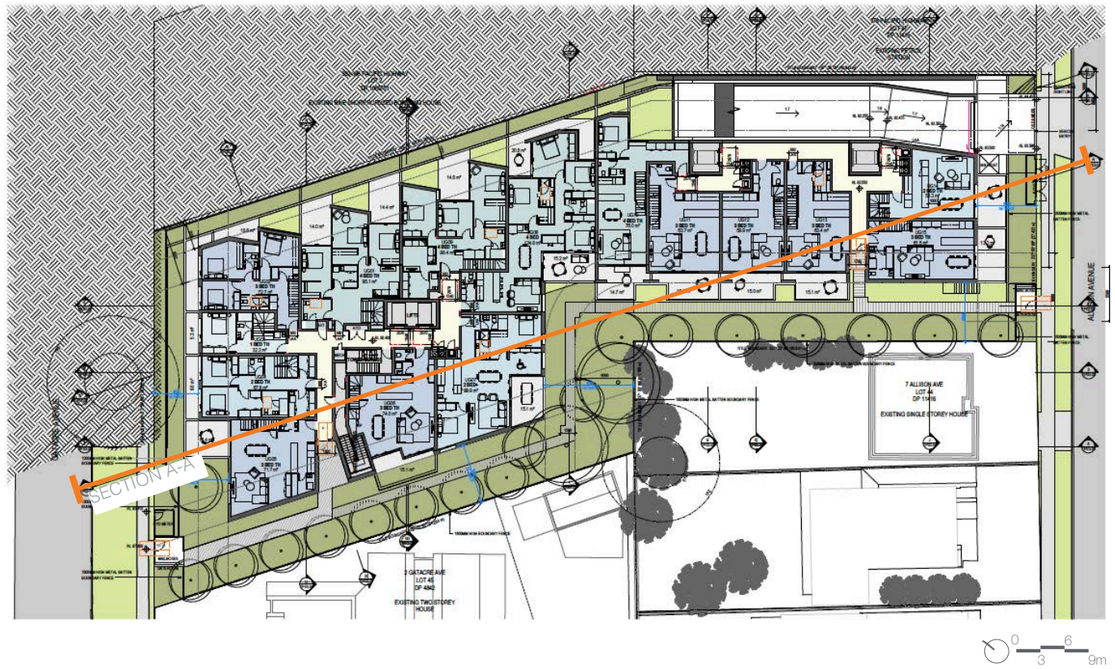


Figure 06 - Proposed Ground Floor of Proposed Development
Source: Rothelowman, Revision H 27.05.22

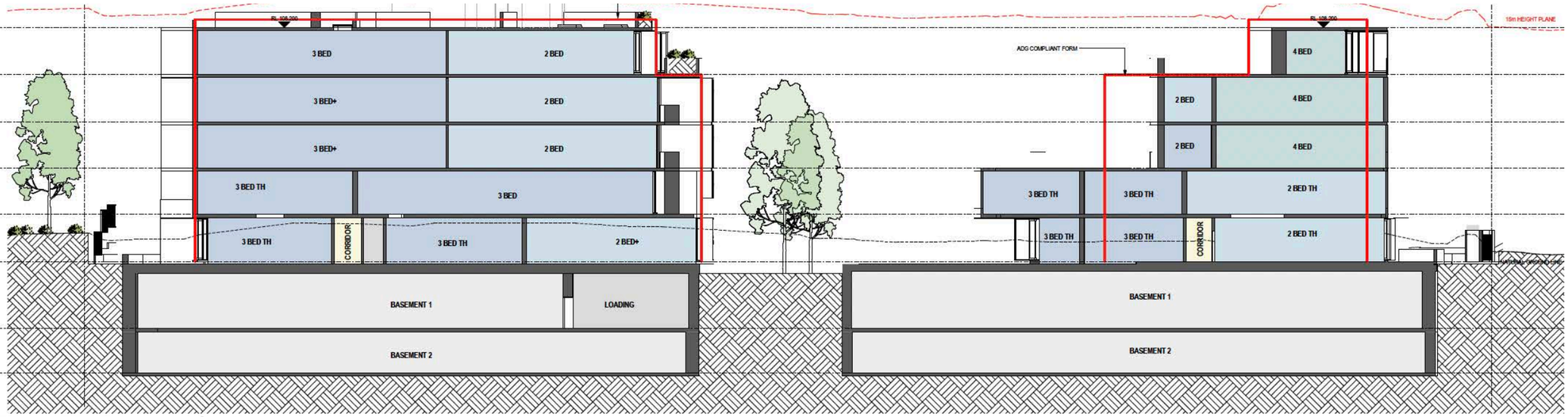


Figure 07 - Proposed Section A-A of Development
Source: Rothelowman, Revision H, 27.05.22

05 THE PROPOSAL

An amended development application, supported by additional information, was provided by the applicant, submitted on the planning portal and accepted by Council on 13 August 2021, that included:

- Demolition of existing buildings and structures and amalgamation of lots;
- Construction of a part five, part six storey residential flat building fronting both Gatacre and Allison Avenue with a total of 60 apartments, comprising 12 x one (1) bedroom, 22 x two (2) bedroom, 22 x three (3) bedroom and four (4) x 4 bedroom apartments. The maximum building height was reduced from 18.85 m to 17.4 m; and the FSR was reduced from 2.24:1 (6633m2) to 2.21:1 (6546.6m2);
- Vehicular access is provided via a ramp off Allison Avenue and will provide access to two levels of basement parkings; and
- Removal of total 13 existing trees and Landscape and planting areas

Further to this, an amended proposal was prepared by Rothe Lowman (Dated 25th January 2022) This included :

- Demolition of existing buildings and structures and amalgamation of lots;
- Construction of a part five, part six storey residential flat building fronting both Gatacre and Allison Avenue
- Vehicular access via a ramp off Allison Avenue
- Removal of total 13 existing trees and Landscape and planting areas as per Ground Ink Landscape Plans.

Following proceedings regarding the above proposal, further amendments have been prepared by Rothe Lowman (Dated 27th May 2022) as shown in *Figure. 06, 07 and 08* which has been used to complete this visual impact assessment. This included:

- Demolition of existing buildings and structures and amalgamation of lots;
- Construction of a part five, part six storey residential flat building fronting both Gatacre and Allison Avenue
- Vehicular access via a ramp off Allison Avenue
- Removal of total 13 existing trees and Landscape and planting areas as per Ground Ink Landscape Plans.

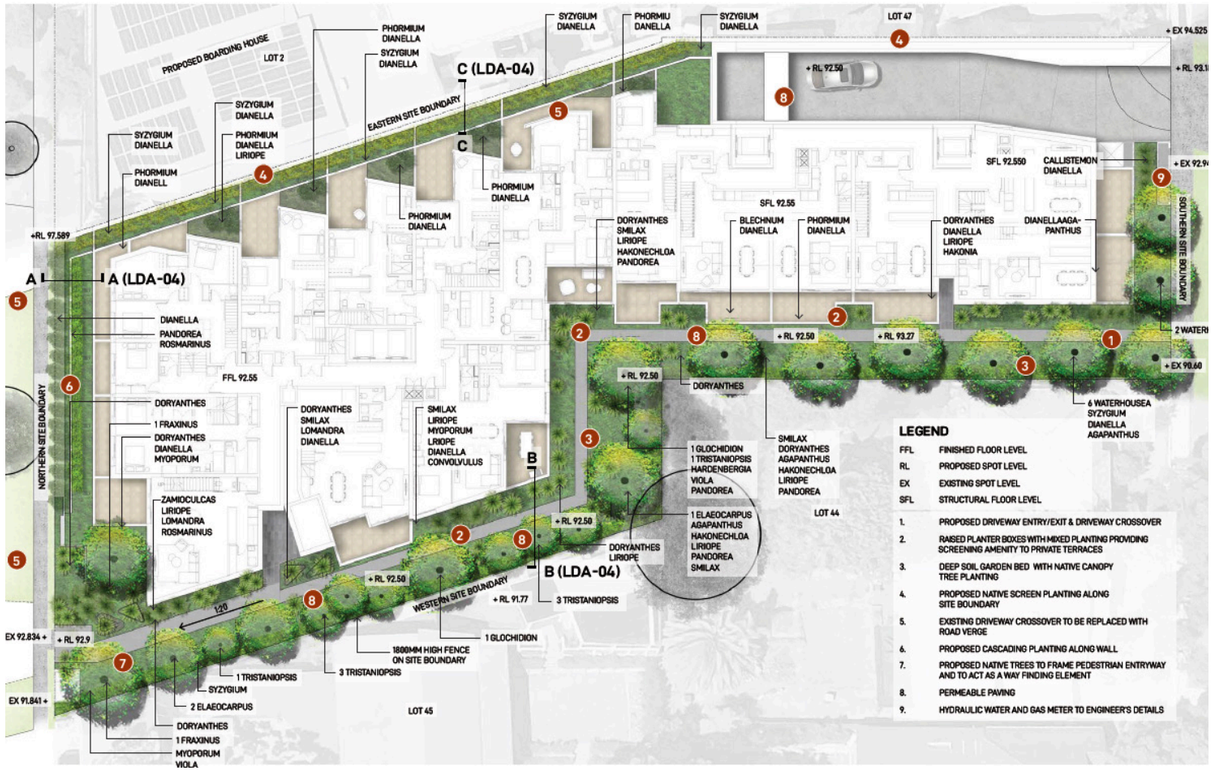


Figure 08 - Proposed Landscaping DA Documentation
Source: Ground Ink, Revision F, 25.05.22

06 EXISTING LANDSCAPE CHARACTER

Urban development within the area is high and consists of a mix of high density residential (R3,R4), commercial (B2,B4,B7)and industrial (IN1,IN2) uses that follow the major arterial roads. Low density residential (R2) and recreational land (RE1) is situated within the pockets to the north of Longueville/Epping Road and west of the Pacific Highway.

LAND USE
A combination of Business Park type commercial developments and more recently, residential apartment buildings are present along the Pacific Highway and Longueville Roads and are the dominant character element when traveling through the area. These developments provide a defined transition between the highway edge and the established low density residential area.

The site is located at the interface between R2 and R4 zoning and as such a mixture of high and low density residential define the existing character of the area. The low density residential areas to the west of the site are typically well established, with lots generally orientated north-west, south-east following the orientation of the street grid. The combination of the street grid and the steep to undulating terrain has resulted in the majority of lots 'stepping' down to respond to the gradient of the road. Views are generally orientated to the street and out toward the south west.

Due to the existing development along the highway, the low density residential is not easily visible from the Pacific Highway.

VEGETATION
As an existing and well established area, the general character of the low density residential areas is that of a 'leafy' suburb. There is extensive mature vegetation both within lots that provides an effective screen between the rear and side of adjoining lots and visual fragmentation from the street into the front of residences.

Extensive streetscape tree planting provides both shade and visual screening along residential streets.

Vegetation along the Pacific Highway is minimal.

TOPOGRAPHY
The natural topography of the area is sloping to undulating. The Pacific Highway extends generally North-South along the ridgeline with land sloping away to the East and West.

Views toward the commercial and high density development along the highway from public domain areas located to the south east, particularly from the south east of Gatacre and Allison Street are contained by a combination of existing vegetation and topography.



Figure 09 - Commercial developments as the dominant element along the Pacific Highway



Figure 10 - Interface between high and low density residential



Figure 11 - Typical existing Streetscape Planting along residential streets

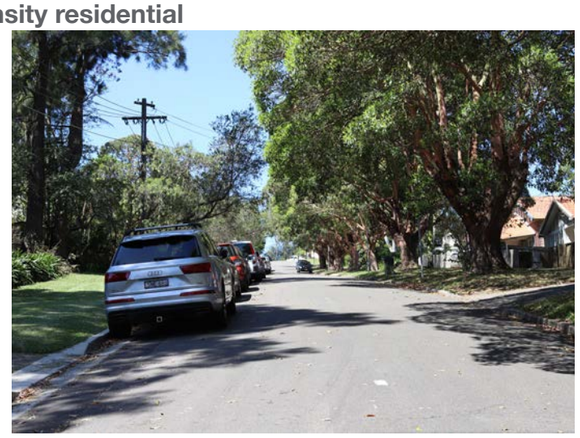


Figure 12 - Views north west along south eastern section of Gatacre Ave.

07 VISUAL ANALYSIS

This part of the visual assessment considers the likely impact that development would have on the existing landscape character and visual amenity by selecting prominent public locations, otherwise referred to as viewpoints.

5.1.1 Viewpoint Selection Process

Viewpoints are selected to illustrate a combination of the following:

- Present landscape character types.
- Areas of high landscape or scenic value.
- Visual composition (e.g. focused or panoramic views, simple or complex landscape pattern).
- Range of distances.
- Varying aspects.
- Various elevations.
- Various extent of development visibility (full and partial visibility).
- Sequential along specific routes.

Viewpoints have been carefully selected to be representative of the range of views within the study area. The selection of viewpoints is informed by topographical maps, field work observations and other relevant influences such as access, landscape character and the popularity of vantage points.

A total of 21 viewpoints were taken as part of the field work process. The majority of these viewpoints were taken from publicly accessible roads surrounding the site. Of the 21 a total of 7 viewpoints have been included to represent the areas from where the development would appear most prominent, either based on the degree of exposure or the number of people likely to be affected.

It is important to note that viewpoints for this study have been taken only from accessible public land *(refer to Figure 13 for locations)*.

5.1.2 Process of Viewpoint Analysis

Once the viewpoint had been selected, panoramic photographs were taken at eye level from the viewpoints towards The Site. Photographs were taken with a Canon EOS 5D Mark III digital SLR through a 50mm lens to best represent the human eye.

The visual impact of the viewpoint was then assessed both on site and with the topographic and aerial information to ensure accuracy. Viewpoint photographs and analysis is included the following pages. The findings of the viewpoint analysis have been quantified and are summarised in *Table 3.*



Figure 13 - Viewpoint Locations

5.2 Overview of Viewpoint Analysis

As discussed in the rationale for the viewpoint selection process, where possible, these viewpoints have been selected to represent the worst case scenario. For each viewpoint, the potential visual impact was analysed through the use of a combination of topographic maps and on site analysis.

The visual sensitivity and visual magnitude of each viewpoint have been assessed which, when combined, result in an overall visual impact for the viewpoint *(Refer to Table 3)*.

Of the 7 viewpoints assessed as part of this VIA, the proposal would be visible to varying levels from a total of 7 viewpoints. Of the 7 viewpoints from which the proposal would be visible, two (2) of these have been assessed as having a low visual impact, two (2) have been rated as moderate to low, one (1) as moderate and two (2) has been rated as having a high to moderate visual impact.

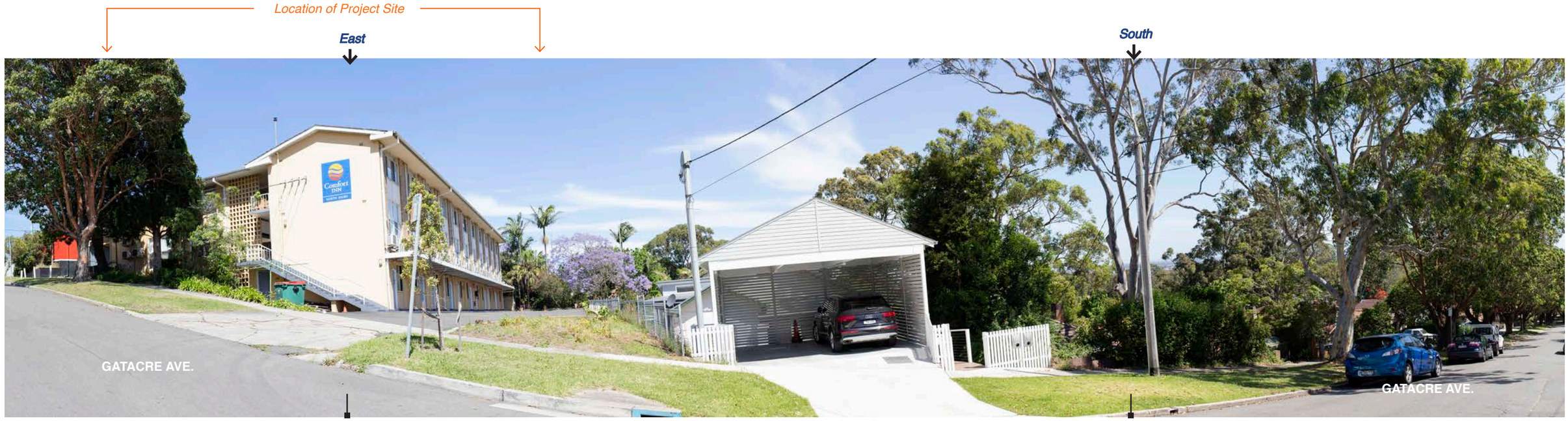
Generally, the viewpoints are rated as having a high and moderate visual impact were taken within close proximity the proposal and with limited visual screening toward the site (resulting in a high visual sensitivity). The visual magnitude (the level of visual contrast) is likely to be low or moderate for the majority of locations, however two (2) viewpoints have a high visual magnitude.

VIEWPOINT	VISUAL SENSITIVITY	VISUAL MAGNITUDE	POTENTIAL VISUAL IMPACT
VP01	MODERATE	HIGH	HIGH-MODERATE
VP02	MODERATE	LOW	MODERATE-LOW
VP03	MODERATE	MODERATE-LOW	MODERATE
VP04	MODERATE	LOW	LOW
VP05	MODERATE	LOW	LOW
VP06	MODERATE	HIGH	HIGH-MODERATE
VP07	MODERATE	LOW	MODERATE-LOW

Table 3: Viewpoint Visual Impact Summary

**Please note the Viewpoint Visibility Assessment Summary is based on the visibility assessment criteria outlined in Section 2.1 of this report.*

VP01 - GATACRE AVE, LANE COVE





VP01 Location

VIEWPOINT VP01			
SUMMARY OF VIEWPOINT		VIEWPOINT DESCRIPTION	POTENTIAL VISUAL IMPACT
LOCATION	Gatacre Avenue, Lane Cove	View from Gatacre Avenue looking generally south east direction towards the Site and adjoining dwelling. The character of the view is defined by the existing low density dwellings and contrasted by the adjoining commercial/high density land uses. It is noted that an approved 5 Story Boarding House is planned for the 99 Bikes site, adjoining the Site to the east of the view. The proposed development is situated in the foreground of the view to the east of the view. The proposed development is likely to be visible in the foreground of the view from this location due to the close proximity and lack of vegetation. The planned boarding house is likely to be visible, though partially screened by vegetation to the east of the site, in the background of the view. The visual sensitivity of this viewpoint has been rated as **Moderate** due to the land use and close proximity to the Site.	From this location the proposed development has the potential to be a dominant visual element in the landscape due to its location at the interface between two land uses, the close proximity and lack of foreground vegetation. However, within the context of the existing and planned higher density character surrounding the highway, the proposed development is in keeping with the scale of the surrounding developments. The proposed development will be a dominant element from this location however, the surrounding high density and commercial developments assist in integrating the proposed development into the surrounding landscape character, reducing the impact on the broader landscape character. The visual magnitude is likely to be **High** resulting in an overall visual impact as **High-Moderate**. **Refer Photomontage 01**
COORDINATES	33°48’49.46”S 151°10’32.45”E		
ELEVATION	95m		
VIEWING DIRECTION	Generally South East		
DISTANCE TO SITE	Approx. 20m		
LAND USE	Local Residential Road		
VISUAL SENSITIVITY	Moderate		
VISUAL MAGNITUDE	Moderate		
VISUAL IMPACT	Moderate		

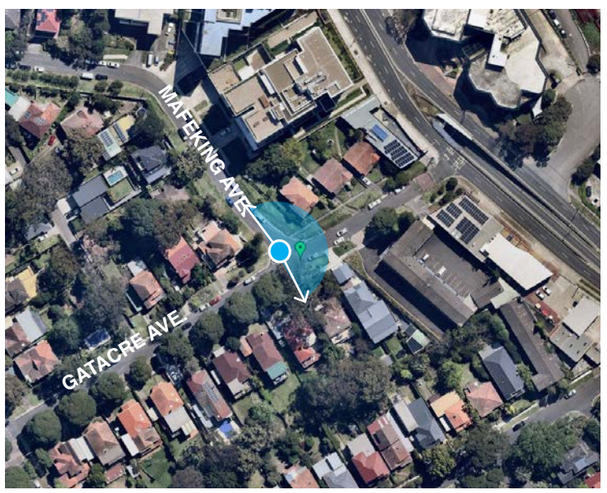
VP02 - GATACRE AVE, LANE COVE

Location of Project Site

North

East





VP02 Location

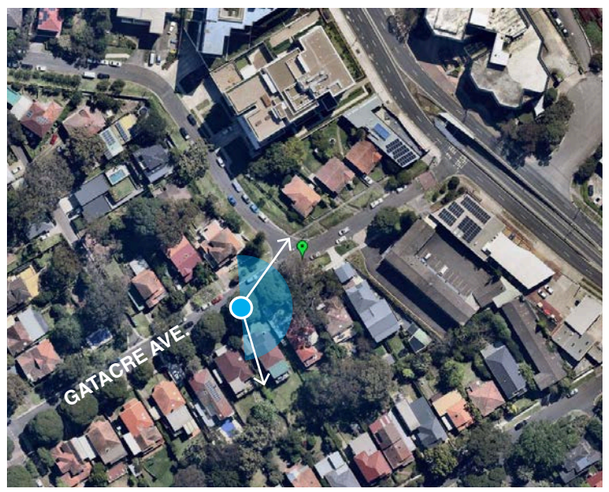
VIEWPOINT VP02			
SUMMARY OF VIEWPOINT		VIEWPOINT DESCRIPTION	POTENTIAL VISUAL IMPACT
LOCATION	Gatacre Avenue, Lane Cove	View from looking generally north east direction along Gatacre Avenue. The Site is visible in the middleground of the view to the east. The character of the view is defined by the existing low density dwellings and associated vegetation in the foreground of the view and contrasted by the existing high density building and commercial land uses in the background of the view. It is noted that an approved 5 Story Boarding House is planned for the 99 Bikes site, adjoining the Site to the north east of the view. The proposed development is situated in the middleground of the view to the east. The proposed development is likely to be visible in the middleground of the view from this location due to the close proximity and lack of vegetation in the foreground of the view. The planned boarding house is likely to be visible, though partially screened by vegetation, in the background of the view. The visual sensitivity of this viewpoint has been rated as **Moderate** due to the land use and close proximity to the Site.	From this location the proposed development is likely to be a major visual element due to the close proximity and lack of foreground vegetation . However, within the context of the surrounding higher density character the proposed development is in keeping with the scale of the surrounding developments. The proposed development will be a major element from this location however, the surrounding high density and commercial developments assist in integrating the proposed development into the surrounding landscape character, reducing the dominance of the element within the landscape. The visual magnitude is likely to be **Moderate** resulting in an overall visual impact as **Moderate**. **Refer Photomontage 02**
COORDINATES	33°48'49.55"S 151°10'31.94"E		
ELEVATION	92m		
VIEWING DIRECTION	Generally North East		
DISTANCE TO SITE	Approx. 25m		
LAND USE	Local Residential Road		
VISUAL SENSITIVITY	Moderate		
VISUAL MAGNITUDE	Low		
VISUAL IMPACT	Moderate		

VP03 - GATACRE AVE, LANE COVE

Location of Project Site

East

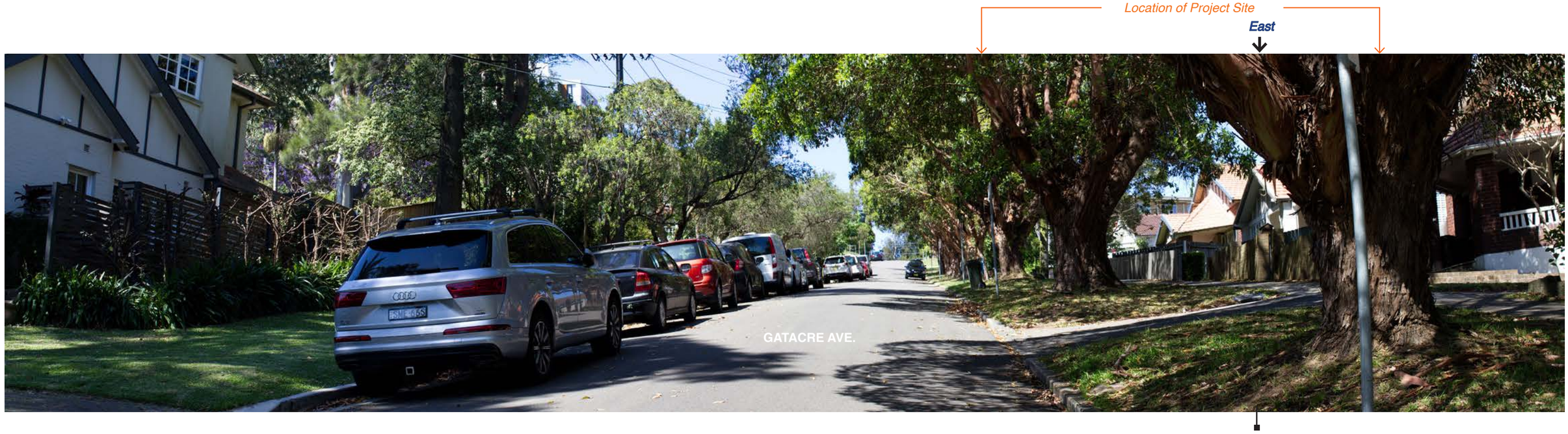


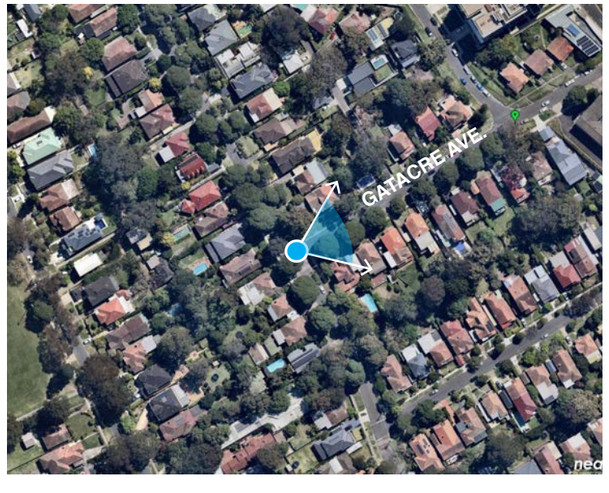


VP03 Location

VIEWPOINT VP03			
SUMMARY OF VIEWPOINT		VIEWPOINT DESCRIPTION	POTENTIAL VISUAL IMPACT
LOCATION	Gatacre Avenue, Lane Cove	View from Gatacre Avenue looking east towards the Site and adjoining dwellings. The key character of the view is defined by the existing low density dwellings and the adjoining commercial/ land uses set amongst generally sloping terrain. Residences follow the existing topography of the street, with each lot 'stepping down'. Those located on the north eastern side of Gateacre Avenue are generally set down lower than the street level. Existing established vegetation associated with lots and streetscape planting is visible in the foreground and middleground of the view. The site is visible along a ridgeline in the background of the view. It is noted that an approved 5 Story Boarding House is planned for the 99 Bikes site, directly adjoining the Site to the east of the view. Views toward the site and proposed development are likely to be visible from this location. The existing vegetation is likely to fragment views toward portions of the proposed development. The planned boarding house is likely to be visible behind the existing commercial building, though partially screened by vegetation, in the background of the view. The visual sensitivity of this viewpoint has been rated as Moderate due to the land use and proximity to the Site.	From this location the proposed development has the potential to be a visible element in the landscape due to its location at the interface between two land uses, it location along a ridgeline and close proximity to the site. However, within the context of the existing and planned higher density character surrounding the highway, the proposed development is in keeping with the character of the surrounding area. The existing vegetation in the middleground of the view and surrounding high density developments, and low density dwellings are likely to fragment views toward the proposed development and assist in integrating the proposed development into the surrounding landscape character. It is also noted that given the set down and orientation of the closest residential dwellings along Gateacre Avenue views are generally orientated towards the street and potential views to the proposed development are blocked by the adjoining residence to the east. The visual magnitude is likely to be **Low-Moderate** resulting in an overall visual impact as **Moderate**. **Refer Photomontage 03**
COORDINATES	33°48'50.31"S 151°10'31.03"E		
ELEVATION	88m		
VIEWING DIRECTION	Generally South East		
DISTANCE TO SITE	Approx. 50m		
LAND USE	Local Residential Road		
VISUAL SENSITIVITY	Moderate		
VISUAL MAGNITUDE	Low-Moderate		
VISUAL IMPACT	Moderate		

VP04 - GATACRE AVE, LANE COVE





VP04 Location

VIEWPOINT VP04			
SUMMARY OF VIEWPOINT		VIEWPOINT DESCRIPTION	POTENTIAL VISUAL IMPACT
LOCATION	Gatacre Avenue, Lane Cove	View looking generally north east direction up Gatacre Avenue. The existing low density dwellings and surrounding mature tree lined streetscape are the dominant landscape character from this location. The topography in the area is generally sloping and rises to the north east to eventually terminate at the Pacific Highway in the background of the view. The proposed development is located along the ridge close by the termination of Gatacre Avenue. Views toward the site and proposed development are likely to be largely screened by to the existing streetscape vegetation and buildings. Fragmented views toward a small portion of the proposed development may be visible through vegetation to the east of the view. This is likely to make up a small portion of the view and is not likely to dominate or modify the character of the viewfrom this location. The visual sensitivity of this viewpoint has been rated as **Moderate** due to the land use and close proximity to the Site.	From this location views of the proposed development to the north east will be restricted to a small portion of the overall view as a result of existing residential development and vegetation in the foreground of the view. The introduction of the proposed works is likely to integrate into the existing landscape. The proposed works are unlikely to diminish or modify the vegetated and sloping character of the view. It is my opinion that the visual impact from this location due to the existing streetscapre vegetation is **Low** resulting in an overall visual impact as **Low**.
COORDINATES	33°48'51.86"S 151°10'27.59"E		
ELEVATION	75m		
VIEWING DIRECTION	Generally North East		
DISTANCE TO SITE	Approx. 155m		
LAND USE	Local Residential Road		
VISUAL SENSITIVITY	Moderate		
VISUAL MAGNITUDE	Low		
VISUAL IMPACT	Low		

VP05 - CNR PACIFIC HIGHWAY & ALLISON ST, LANE COVE

Location of Project Site

West





VP05 Location

VIEWPOINT VP05			
SUMMARY OF VIEWPOINT		VIEWPOINT DESCRIPTION	POTENTIAL VISUAL IMPACT
LOCATION	Cnr Pacific Highway & Allison Ave, Lane Cove	View from the corner of the Pacific Highway and Allison Street, nearby a Petrol Station, with the Project area to the west of the view. The character of the view is defined by the commercial and high density development that borders the Pacific Highway. The proposed development is situated behind the Petrol Station and Bike store to the west of the view. The proposed development is likely to be visible however, it will partially screened by the existing buildings in the foreground of the view. It is noted that an approved 5 Story Boarding House is planned for the 99 Bikes site and is likely to provide additional visual screening and further integrate the proposed development into the surrounding Landscape. The Pacific Highway is a busy road with a speed limit of 60km/h. The existing commercial and high density development is the distinguishable feature when travelling along this road. The proposed development will not be out of character in the context of this view.	From this location the introduction of the proposed works is likely to integrate into the existing landscape. The proposed works are unlikely to diminish or modify the existing character of the view. It is my opinion that the visual impact from this location due to the construction of the proposed works is **Low** resulting in an overall visual impact as **Low**. **Refer Photomontage 04**
COORDINATES	33°48'50.80"S 151°10'37.40"E		
ELEVATION	103m		
VIEWING DIRECTION	Generally North West		
DISTANCE TO SITE	Approx. 40m		
LAND USE	Main Highway		
VISUAL SENSITIVITY	Moderate		
VISUAL MAGNITUDE	Low		
VISUAL IMPACT	Low		

VP06 - ALLISON AVE, LANE COVE

Location of Project Site

North





VP06 Location

VIEWPOINT VP06			
SUMMARY OF VIEWPOINT		VIEWPOINT DESCRIPTION	POTENTIAL VISUAL IMPACT
LOCATION	Allison Avenue, Lane Cove	View from Allison Avenue looking generally north towards the Site. The proposed development is located along a ridge to the north of the viewpoint. The key character of the view is defined by the existing low density dwellings and the adjoining commercial land uses. The topography in the area is generally sloping to the south west. Views toward the site and proposed development are likely to be highly visible from this location due to the close proximity and lack of vegetation in the foreground of the view. It is noted that the vegetation within the site boundary currently providing fragmented views toward the existing dwelling and hotel is proposed to be removed as part of the project. The visual sensitivity of this viewpoint has been rated as **Moderate** due to the land use and close proximity to the Site.	From this location the proposed development has the potential to be a dominant visual element in the landscape due to its location at the interface between two land uses, the close proximity, the general low density character of the immediate surrounds and lack of foreground vegetation. The visual magnitude is likely to be **High** resulting in an overall visual impact as **High-Moderate**. **Refer Photomontage 05**
COORDINATES	33°48'50.31"S 151°10'31.03"E		
ELEVATION	92m		
VIEWING DIRECTION	Generally South East		
DISTANCE TO SITE	Approx. 15m		
LAND USE	Local Residential Road		
VISUAL SENSITIVITY	Moderate		
VISUAL MAGNITUDE	High		
VISUAL IMPACT	High-Moderate		

VP07 - ALLISON AVE, LANE COVE

Location of Project Site

North

East



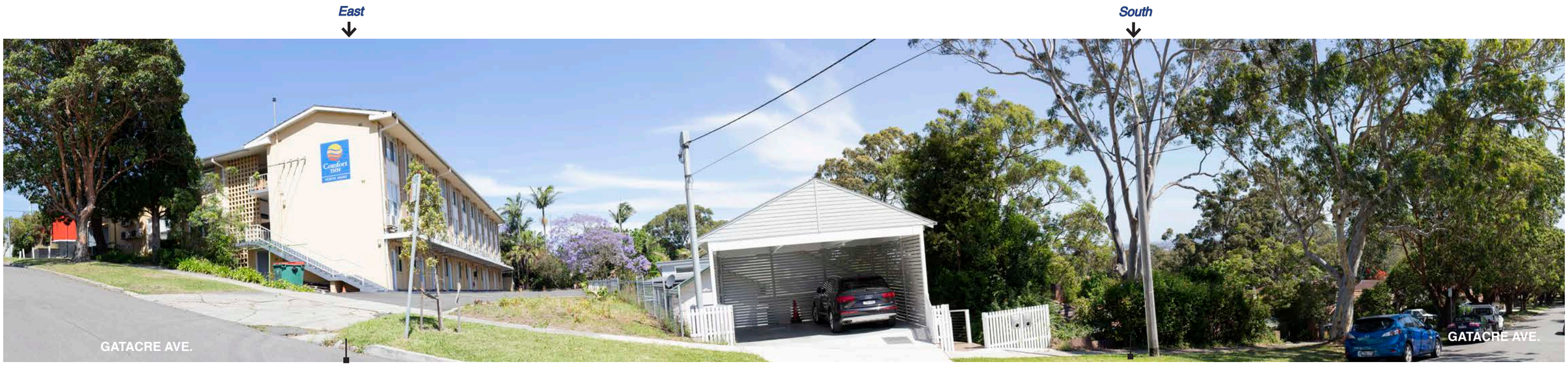


VP07 Location

VIEWPOINT VP07			
SUMMARY OF VIEWPOINT		VIEWPOINT DESCRIPTION	POTENTIAL VISUAL IMPACT
LOCATION	Allison Avenue, Lane Cove	View from Allison Avenue looking generally north east direction towards the Site. The commercial buildings and infrastructure, including that of the existing motel on the Site, associated with the Pacific Highway are visible in the background of the view. The character of the view is defined by the existing low density dwellings and dense streetscape tree plantings in the foreground of the view and the and the commercial establishments in the background of the view. The site is situated along the ridge in the background of the view. The proposed development is likely to be visible above the roof line of the dwellings along the northern side of Allison Avenue, however the existing buildings and vegetation are likely to fragment the view toward the proposed development. The visual sensitivity of this viewpoint has been rated as **Moderate** due to the land use and close proximity to the Site.	The proposed development is likely to be a visible element when travelling in a south western direction from this location however, the existing mature vegetation and buildings are likely to fragment views towards a large proportion of the development. The development will be a noticeable element in the landscape yet not cause significant modification to the character of the viewpoint due to the existing screening factors. From this location the introduction of the proposed works is likely to integrate into the existing landscape. The proposed development is unlikely to diminish or modify the existing character. It is my opinion that the visual magnitude is likely to be **Low** resulting in an overall visual impact as **Moderate-Low**.
COORDINATES	33°48'52.60"S 151°10'34.58"E		
ELEVATION	89m		
VIEWING DIRECTION	Generally North East		
DISTANCE TO SITE	Approx. 45m		
LAND USE	Local Residential Road		
VISUAL SENSITIVITY	Moderate		
VISUAL MAGNITUDE	Low		
VISUAL IMPACT	Moderate-Low		

08 PHOTOMONTAGES

PHOTOMONTAGE 01 (PM01) : VP01 - GATACRE AVE, LANE COVE



Existing

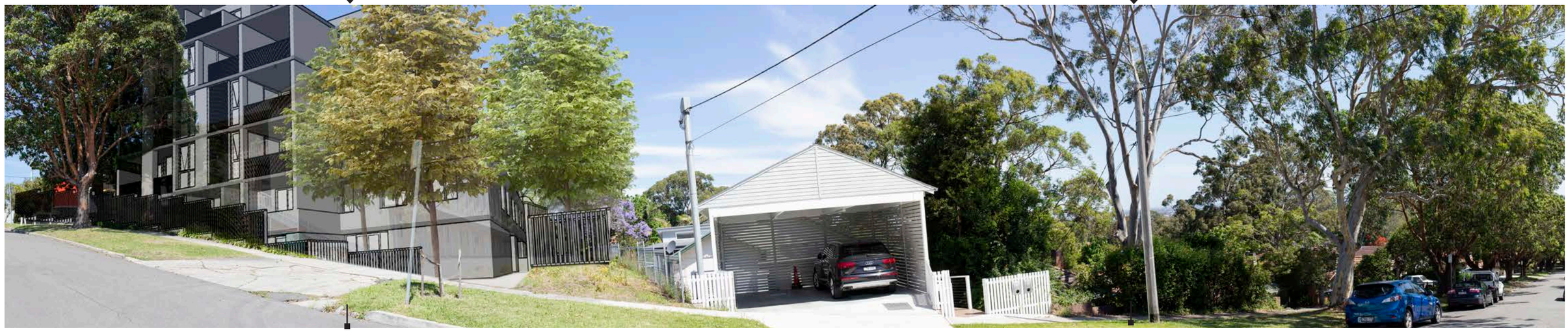


Proposed (without proposed vegetation)

PHOTOMONTAGE 01 (PM01) : VP01 - GATACRE AVE, LANE COVE

East

South



Proposed (shown with proposed established vegetation at 5-10 year growth)



Compliant Built Form ** Note: The existing building has been kept to demonstrate context.*

PHOTOMONTAGE 02 (PM02) : VP02 - GATACRE AVE, LANE COVE

North ↓ *East* ↓



Existing



Proposed (without proposed vegetation)

PHOTOMONTAGE 02 (PM02) : VP02 - GATACRE AVE, LANE COVE

North

East



Proposed (shown with proposed established vegetation at 5-10 year growth)



Compliant Built Form ** Note: The existing building has been kept to demonstrate context.*

PHOTOMONTAGE 03 (PM03) : VP03 - GATACRE AVE, LANE COVE

East



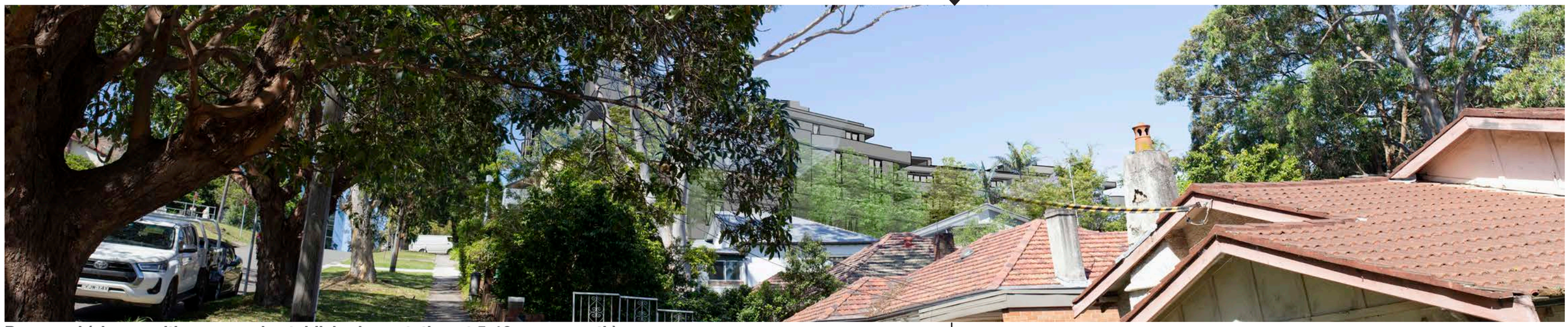
Existing



Proposed (without proposed vegetation)

PHOTOMONTAGE 03 (PM03) : VP03 - GATACRE AVE, LANE COVE

East



Proposed (shown with proposed established vegetation at 5-10 year growth)



Compliant Built Form

PHOTOMONTAGE 04 (PM04) : VP05 - CNR ALLISON AVENUE AND PACIFIC HIGHWAY, LANE COVE

West



Existing



Proposed



Compliant Built Form

PHOTOMONTAGE 05 (PM05) : VP06 - ALLISON AVENUE, LANE COVE

North



Existing



Proposed (without proposed vegetation)

PHOTOMONTAGE 05 (PM05) : VP06 - ALLISON AVENUE, LANE COVE

North



Proposed (shown with proposed established vegetation at 5-10 year growth)



Compliant Built Form ** Note: The existing building has been kept to demonstrate context.*

09 SUMMARY OF VISUAL IMPACTS

On review of all the viewpoints it is my opinion that the impact of the proposal in its current form is moderate. The key reasons for this conclusion are based on the three key aspects of visual assessment, which are; the scenic quality of the view, the existing character of the view and the ability of any impacts to be mitigated.

The visual quality of the views to the site from the identified viewpoints do not consist of the key elements that contribute to how we generally perceive landscapes in a positive way (naturalness, variation, rarity). For the most part the views are dominated by the existing built form of an established low density residential area contrasted by the surrounding high density and commercial developments concentrated along the Pacific Highway Corridor and the mature streetscape vegetation that provides an effective screen to the site from the southern sections of both Gatacre and Allison Avenue. The immediate area does not possess any visually sensitive features (heritage items, unique natural characteristics) that are evident to an extent that they are likely to be impacted by the proposal.

The second consideration is impact on character. It is without question that the area is undergoing a transitional period brought about by the *Lane Cove Local Environmental Plan 2009* which encourages increased height and density along the Pacific Highway and Longueville Roads. High density and commercial development are already the defining character element when travelling along the Pacific Highway and a combination of these elements contrasted by low density residential areas are the dominant character elements within the residential streets close to the Pacific Highway corridor.

The modifications to the site in the amended proposal are generally consistent with the existing bulk, scale and design vernacular of the site and the broader area to the north and west of the site. It is my opinion that, in most locations, apart from those viewpoints taken at close range to the project site, the surrounding and/or proposed higher density developments are already a defining character element of the view and this character is unlikely to be modified or diminished by the proposal. Within the southern sections of Gatacre and Allison Avenue, dense established street trees are a key characteristic. This is likely to remain unchanged or diminished as a result of the proposed development.

The final meter of visual impact assessment that a proposal should be measured against is the ability of any impacts to be mitigated through screening or modifications to the proposal. I consider that the visual impacts of the proposal are Moderate and that, in the context of the character of the area, additional screen planting is unlikely to modify the character or appearance of the proposal to a significant extent. However, the streetscape plantings along Gatacre and Allison roads are a defining character element and it is recommended that any development on the site looks to reinstate street tree planting that is consistent with this character and provides shade to the pedestrian environment.

It is noted that the amended proposal *(REV F - 25/05/22)* by Ground Ink Landscape Architects has included an increased deep soil area to the southern and western boundaries. In our opinion, this will ensure the long-term viability of the proposed trees along the boundaries and will be sufficient to support the growth of large canopy trees along the southern and western boundaries of the development. This will ensure adequate canopy to positively contribute to privacy both within the site and the adjoining residences.

It is my opinion that the visual impacts of the proposal on the broader context of the area are likely to be minimal. From publicly accessible areas within the broader context of the proposal a combination of streetscape vegetation and topography are likely to screen or significantly fragment the views toward the proposal. This is particularly true of areas where the topography slopes away from the proposal and established trees line the streetscape. In addition, it is noted that the visual impacts reduce as you move away from the proposal as it is viewed in the context of other similar developments that characterise the highway.

As part of the process of the review, five (5) selected photomontages were prepared demonstrating the existing viewpoint, the proposed development and a compliant built form massing model provided by Rothe Lowman Architects. The purpose of this exercise is to cross-compare any significant changes to the visual impact of the proposed development and that of a compliant built form.

It is my opinion that generally there is no significant changes between the proposal and the compliant built form. It is noted that the most visible change between the two photomontages is that of the northern edge of the building running parallel to the highway whereby the proposed development is set back and higher in height than the compliant built form.

The view from along the highway and that of the far northern end of Allison Avenue and Gateacre Avenue is characterised by the existing residential and commercial developments and highway infrastructure. It is not a sensitive viewing location and it would not be out of character to view similar developments to that of the proposed scale and vernacular in the context of the view.

It is my opinion that if constructed, the visual impact upon views from residences and the public domain for both the original proposal or amended scheme would be Moderate and would be acceptable within the existing surrounding landscape character.

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Job No: IAC-1571

Friday, 27 May 2022

WINIM DEVELOPMENTS PTY LTD
SUITE 214
40 YEO STREET
NEUTRAL BAY, NSW 2089

Reference: Lane Cove – 1 Gatacre Ave and 5 Allison Ave LEC Submission

Attention: Ms Wilma Leahy
Email: wleahy@winim.com.au
Phone No: 0421 520 350

Dear Ms Leahy,

Thank you for inviting iAccess Residential to undertake this access assessment of the proposed development on this site. This access report is to accompany the documentation to be submitted to the Land and Environment Court.

This access report has been structured in accordance with the provisions of the Disability (Access to Premises) Standard 2010 as well as the provisions of the relevant Australian Standards.

Detailed documentation addressing the specific details and requirements of the access legislation, codes and standards will need to be documented in the Construction Certificate documentation to be prepared for this project.

Several issues have been identified which will need to be addressed by the project team in the finalisation of the documents for this project. A summary of the recommendations nominated is provided at pages 8-10 of this report.

Please do not hesitate to contact us should you wish to discuss any aspect of this Access Report.

Yours sincerely,

RICHARD SEIDMAN

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Diploma in Access Consulting, ACAA (Accredited Access Consultant No 330),
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ACCESS REPORT – LEC SUBMISSION

RESIDENTIAL DEVELOPMENT
1 GATACRE AVE AND 5 ALLISON AVE
LANE COVE NSW 2066



Prepared by

iAccess Consultants

A division of iAccess Group Pty Ltd

ABN 37 002 648 615

Revision **[B]**

27 May 2022

Document Control

Project: 1 Gatacre Ave and 5 Allison Ave
Lane Cove NSW 2066

Document Type: Access Report – LEC Submission

Report Number: IAC-1571

The following report register documents the development and issue of this and each subsequent report(s) undertaken by iAccess Residential.

The technical and intellectual content contained herein remain the property of iAccess Residential and have been prepared and may only be used for the development / buildings being the subject of this report.

Revision History:

Rev	Remarks	Issue Date
-	Draft Access report prepared and issued to client	21 May 2022
A	Access report revised and issued to client	21 May 2022
B	Access report revised and issued to client	27 May 2022

Authorisation and Sign-off by:



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Summary of Actions to be undertaken

The following table summarises the actions yet to be undertaken as part of the detailed construction documentation to be prepared for this project. The schedule indicates the report number and report page number.

3.02.4. Height of Continual Accessible Paths of Travel - *The detailed construction documentation to be prepared for this project will need document a minimum clear height of 2m. The room height requirements of NCC Part F3 nominate the minimum celling levels for various parts of the building.*.....20

3.02.5. Width of Continual Accessible Paths of Travel - *The detailed construction documentation to be prepared for this project will need document the paths of travel with a minimum 1m clear width.*.....20

3.02.6. Wheelchair Circulation Zones - *The detailed construction documentation to be prepared for this project will need document any turn and circulation zones as required by Clause 6.5 of AS1428.1:2009.* 22

3.03. Visual Indicators on Glazing – The detailed documentation to be prepared for this project will need to detail the application of visual indicators on full height glazing. The visual indicators will need to be solid and opaque, and the bottom of the visual indicators will need to be located between 900-1000mm AFFL. In some locations differing colours of the indicators mat need to be applied. The visual indicators will need to achieve a 30% luminance contrast.....25

3.04.1. OC Slip Resistance - floor and ground surfaces – *On completion of the works certification is to be provided by the contractors indicating the slip resistance of the flooring materials installed This information is required for the issue of the access installation certificate required for the issue of the Occupation Certificate.*.....27

3.04.1. Slip Resistance - floor and ground surfaces – *The detailed construction documentation to be prepared for this project will need to detail the various floor finishes and the respective slip-resistance ratings. A schedule of the materials and the associated slip resistance rating will need to be prepared.*.....27

3.04.2. Carpet – *On completion of the works certification is to be provided by the carpet contractor that the specified carpet has been installed and that the provisions of NCC Clauses D3.3 (g) & (h) have been satisfied.*.....28

3.04.3. Floor transitions – *The construction documentation to be prepared for this project will need to detail the various floor finishes and their respective junctions and transitions.* 28

3.04.4. Recessed Matting - *The construction documentation to be prepared for this project will need to detail any recessed floor mats to be installed as part of this project.* 29

3.04.5. Grated drains – *The future construction documentation to be prepared for this project will need to specify the heel guard grates to be installed.* 30

3.05.4. Statutory Braille Tactile Exit Signage*– The detailed construction documentation will need to document the braille tactile exit signage to be installed.* 32

3.05.5 Lift Signage - *Details of the braille tactile signage to be installed will need to be provided for review as part of the detailed construction documentation to be prepared for this project.* 32

3.05.7 Luminance & Colour Contrast - *Details of the braille tactile WC signage is to be provided for review as part of the detailed Constriction documentation to be prepared for this project. Please note that aluminium signs on a white wall will not achieve compliance.*.....34

3.05.8 Braille Tactile Press to Exit Signage - *Details of the braille tactile 'Press to Exit' signage to be installed will need to be provided for review as part of the detailed construction documentation to be prepared for this project. Specific attention is directed to the font type, size of lettering and the selection of a field colour of the sign which will achieve a 30% luminance contrast with the wall or door the sign is installed on.*.....34

3.06.2. TGSIs – Luminance Contrast – *The selection of the type of TGSI will nominate the luminance contrast level to be achieved. Once the TGSI has been selected it may be necessary to have testing undertaken to determine compliance. Certification of compliance will need to be provided for the issue of the Occupation Certificate for this project.* 37

3.06.3. Warning indicators – *The setout for the placement of TGSIs will need to be provide as part of the detailed construction Documentation to be prepared for this project. Please note that TGSIs are not required to be provided at mid landings on stairways or mid landing on a ramp system where no additional persons are added to the ramp system.* 38

3.06.4. Setout of TGSIs associated with Stairs – *Detailed TGSI setout plans will need to be prepared as part of the detailed construction documentation to be prepared for this project. The details will need to indicate the setout of the TGSIs from the face of risers and the nominated depth of TGSIs depending on the landing length.* 38

3.07.1. Walkways – *The construction drawings to be prepared for this project will need to indicate the detailing of the walkways provided as part of this development. The details will nee3d to satisfy the provisions of Clause 10.2 of AS1428.1:2009.* 39

3.07.2 1:14 Ramps – *The construction drawings to be prepared for this project will need to indicate the detailing of the 1:14 Ramps. Specific attention is directed to the detailing of the handrails associated with the ramps including the detailing of handrail terminations and provision of kerb rails. The slip resistance of the surface of the ramps is to satisfy NCC Table D2.14. Details of landings and any change in directions are to be provided as part of the detailed construction documentation to be prepared for this project. The gradient of any mid landing is to be 1:40 max in any direction. A 1200mm (min) landing is to be provided at the top and bottom of the ramp system. The max gradient of the landings at the top and bottom of the ramp system is to be 1:40 in any direction.* 39

3.08.2. Fire Stairs *– The detailed construction drawings to be prepared for this project will need to detail the fire stairs. The details are to be developed in conjunction with the access consultant.* 42

3.08.3. Circulation Stairs *– Details of the circulation stairs will need to be provided as part of the detailed construction documentation to be prepared for this project.* 43

3.09. Shop drawings to be provided – Ramp Handrails *– Shop drawing of the ramp (if provided) will need to be provided to the access consultant for review.* 44

3.10.1. Clear Door Width - *The detailed documentation to be prepared for this project will need to demonstrate compliance with these provisions.* 45

3.10.3 Luminance Contrast - *A table indicating wall colour and door colour with the associated luminance contrast level achieved will need to be prepared and provided to demonstrate compliance with the requirements of Clause 13.1 of AS1428.1:2009.* 46

3.10.4. Door Controls – *The door hardware schedule will need to specify compliant door hardware* 47

3.10.5. Circulation at Doorways – The detailed construction documentation to be prepared for this project will need to indicate compliance with the circulation at doorway provisions of Clause 13.3 of AS1428.1:2009. 51

3.10.6. Gradient of landings on either side of doorways or gates– *The detailed construction documentation to be prepared for this project will need to document the maximum gradient of landings associated with doorway and gates at 1:40 in any direction.* 51

3.10.7. Door Closers – *Confirmation that the proposed door closer(s) can satisfy this requirement will need to be provided as part of the detailed construction documentation to be prepared for this project. Certification of compliance will be required for the issue of the Occupation Certificate.* 51

3.10.8. Doorway Thresholds *Level and smooth transitions are required between internal and external doorways. The detailed construction documentation will need to detail this junction.* 52

3.11. Switches – Details of the setout of switches will need to be provided as part of the detailed construction documentation to be prepared for this project. 55

3.12.1 Vertical transport - Detailed lift drawings will need to be prepared and provided for review. 58

3.12.2 Vertical transport - A design certificate will need to be provided from the lift supplier indicating compliance with AS1735.12:2020. 58

3.12.3 Vertical transport - *A lift installation certificate referencing the NCC performance requirement of EP4, NCC Clause E3.6 and AS1735.12:2020 will need to be provided for the issue of the OC Access Installation Certificate.* 58

3.12.3 Vertical transport Low rise Platform Lift – Less than 2m rise - *Detailed lift drawings will need to be prepared and provided for review.* 59

3.13.3 Carparking – Clearance Aisleway - *The detailed construction documentation will need to demonstrate the aisleways have a clear 2200mm clearance .* 60

3.13.4 Carparking – Clearance parking bays - *The detailed construction documentation will need to demonstrate compliance with the 2500mm clearance above the parking bay and adjacent shared zone.* 61

3.16. Lighting *- Information to be provided as part of the documentation to be issued for the OC.* 66

3.17 Adaptable Housing *- The completion of the* ***AS4299 Schedule of features for adaptable housing*** *will need to be completed as part of the detailed construction documentation to be prepared for this project.* 71

OC - 3.10.7. Door Closers – *Certification of compliance that the doors installed with a door closer (other than fore rated doors) satisfy the provisions of Clause 13.5(e) of AS1428.1:2009 (20N Force) will be required for the issue of the Occupation Certificate.* 51

OC - 3.2.3. Lighting Levels – *On completion of the works certification of lighting levels achieved indicating compliance with these requirements will need to be provided for the issue of the Access Installation certificate at OC.* 19

Abbreviations

The following abbreviations are employed in this Checklist:

ACAA	Association of Consultants in Access Australia
AS	Australian Standard
BCA	Building Code of Australia
NCC	National Construction Code
Dts	Deemed to satisfy
CAPT	Continuous Accessible Path of Travel
GPO	General Power Outlet
USAT	Unisex Accessible Sanitary Toilet
AFFL	Above Finished Floor Level
TGSI	Tactile Ground Surface Indicator
PPE	Principal Pedestrian Entrance
DAPB	Designated Accessible Parking Bay
SOU	Sole Occupancy Unit

Legend

The following list of differing colour toning are indicators of access compliance throughout this report:

Compliant

Not Compliant

Information to be provided

Examples of these compliance summaries include:

Compliance:	An accessible path of travel is provided from the set-down point to the Principal Pedestrian Entry to the event.

Compliance:	Door circulation zones are not compliant. Ensure door latch-side clearance achieves a minimum of 530mm.

Compliance:	The doorways luminance contrast levels is not able to be assessed. Information is to be provided.

Lines that are written in red and highlighted in yellow (like this line of text) indicate an item that may require action by the project team, impacting on the overall design.

1. Executive Summary

This access report has been prepared to provide commentary on the LEC documentation prepared for the residential development located at 1 Gatacre Ave and 5 Allison Ave Lane Cove.

The purpose of this access report is to highlight and review key accessible topics as they relate to design elements of the proposed redevelopment. The key accessible areas are mainly in relation to the requirements of the NCC Section D, Access and Egress and AS1428.1:2009 Design for access and mobility.

There is generally a high level of compliance throughout the project, however there are many access requirements that require more information to be provided. This additional information is to be provided as part of the detailed construction documentation to be prepared for this project.

1.1. Design proposal

This development proposes a mixed-use development comprising:

- 53 apartments
- Basement parking
- Terrace Swimming Pool
- Outdoor Gym

The development is divided into 3 lift cores servicing all levels of this development.

1.2. Adaptable Dwellings and LHA Silver dwellings

Clause 3.5 of Part F of Lane Cove Council's DCP nominates that 20% of dwellings are to be designed to meet the requirements of AS4299:1995 Adaptable Housing Class C. In this development, 11 dwellings are required to be designed with the capacity to be adapted.

The provisions of Apartment Design Guide will apply to the residential component of this development where 20% of dwellings will need to satisfy the provisions of the Silver LHA Design Guidelines. A total of 11 dwellings are required to be provided to meet this requirement.

Compliance:	***Adaptable Dwellings –*** *The design nominates 11 dwellings as being capable of being adapted to meet the requirements of AS4299:1995 Class C. Post adaptable unit designs provided are capable of achieving compliance with AS4299.*

Compliance:	ADG - Silver LHA – The design nominates 43 dwellings as being capable of achieving compliance for the design requirements of silver LHA requirements.

1.3. Visitable Dwellings

Clause 3.5 of Part F of Lane Cove Council's DCP nominates that 80% of dwellings are to be designed to be visitable. The DCP nominates the following concerning Visitable dwellings:

Visitable housing is to provide a continuous path of accessible travel from the property frontage or carparking area to the living area and to a toilet that is either accessible or visitable and common areas within the building.

A total of 43 dwellings will need to be designed as being visitable. The visitable dwellings will need to be provided as part of the original works for this project.

The requirements for visitable dwellings are nominated in AS4299:1995 Adaptable Housing.

The visitable features of each visitable dwelling are:

- Visitable housing is to provide a continuous path of accessible travel from the property frontage or carparking area to the living area and to a toilet that is either accessible or visitable and common areas within the building.
- A visitable toilet is a toilet which has as space of a minimum of 1250mm in front of the toilet by 900mm wide clear of the door swing.
- The width of any corridors within the dwelling is to be 1m clear of any skirtings.
- A level access to any balcony, courtyard or terrace is to be provided.

Compliance:	The plan nominates 43 LHA dwellings. These dwellings are to be also nominated as the visitable dwellings to satisfy the requirments of the DCP

1.4. Accessible Access

Accessible access to and within this development is assessed considering the following:

DP1 Access for people with a disability

Access must be provided, to the degree necessary, to enable—

(a) people to—

(i) approach the building from the road boundary and from any accessible carparking spaces associated with the building; and

(ii) approach the building from any accessible associated building; and

(iii) access work and public spaces, accommodation and facilities for personal hygiene

The provisions of NCC Table D3.1 will need to be satisfied. NCC Table D3.1 for NCC Class 2 developments states:

From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level

To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area, or the like.

Where a ramp complying with AS 1428.1 or a passenger lift is installed—

(a) to the entrance doorway of each sole-occupancy unit; and

(b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp.

The provisions of NCC Clause D3.2(a) will need to be satisfied. NCC Clause D3.2(a) states:

An accessway must be provided to a building required to be accessible—

(i) from the main points of a pedestrian entry at the allotment boundary; and
(ii) from another accessible building connected by a pedestrian link; and
(iii) from any required accessible carparking space on the allotment.

Compliance:	The design as proposed is capable to satisfy the requirements of NCC Performance Requirement DP1(a), NCC Table D3.1 and NCC Clause D3.2(a).

1.5. Access Declaration

This report confirms that the provisions for compliance with the accessible requirements nominated in the Disability (Access to Premises – Building) Standard 2010 where possible have been incorporated into the design proposed by the Development Application documentation.

1.6. Building Classification

The NCC classification for this Development is:

- *Class 2 - Residential Apartment*
- *Class 7a - Carpark*

1.7. Report Exclusions

The assessment discussed in this report is limited to the Scope of Works nominated in the Executive Summary.

1.8. Performance Based Design Solutions to be prepared

The proposed design may rely on the following performance solution to be prepared by iAccess Consultants, being:

i. Location of lift lobby call button if installed on lift door jamb.
ii. Automation of doorways

1.9. Equitable Egress Strategy - NCC Clauses DP4 & DP6

An NCC Deemed to Satisfy solution addressing egress from a building satisfies the provisions of DP4 and DP6.

Compliance:	The provision of the fire isolated stairways satisfies this requirement

1.10. Architectural Documentation

This Access Report references the following architectural documentation prepared by Rothelowman Architects.

Dwg No	Title	Revision
TP00.00	Cover	C
TP00.01	Development Summary	J

TP01.01	Basement 2	L
TP01.02	Basement 1	L
TP01.03	Ground	N
TP01.04	Level 1	M
TP01.05	Level 2	M
TP01.06	Level 3	E
TP01.07	Level 4	M
TP01.08	Level 5	M
TP04.20	Adaptable Plans	B
TP04.21	Adaptable Plans	C
TP04.22	Adaptable Plans	A

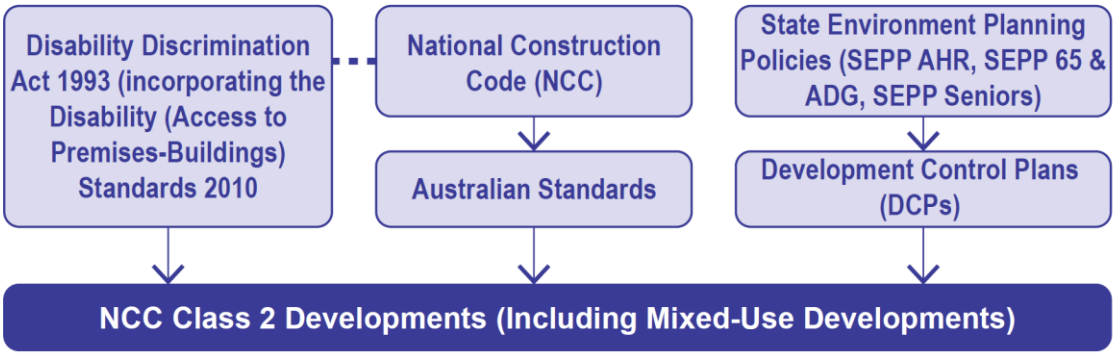
1.11. Occupation Certificate Checklist – Access NCC Parts D3, E3.6 and F2.4

The following requirements are to be provided for the issue of the Occupation Certificate Access Installation Certificate.

- Lift installation certificate for each lift nominating compliance with NCC Clause E3.6 and AS1735.12
- Lift installation certificate for low rise platform lift
- Slip resistance rating for external pavements
- Slip resistance rating for internal floor finishes to corridors and wet areas of rooms required to be accessible
- Slip resistance rating of stair nosing
- Slip resistance rating of stair going
- Slip resistance rating of TGSIs
- Luminous contrast of TGSIs to background floor finish
- Luminous contrast of stair nosing to going.
- Luminous contrast of Visual Indicators installed to full height glazing.
- Luminous contrast at doorways
- Installation of wall strengthening to locations where grabrails are installed.
- Setout of Accessible WCs to the requirements of Clause 15 of AS1428.1:2009
- Setout of Ambulant WCs to the requirements of Clause 16 of AS1428.1:2009
- Certification of hearing augmentation systems installed to the provisions of NCC Clause D3.7 and AS1428.5:2010
- Certification that the Statutory Braille Tactile signage is designed and installed to NCC Clause D3.6, NCC Specification D3.6 and Section 5 of AS1428.5:2010 where hearing augmentation is installed.
- Detailing of handrails to ramps and stairs to the provisions of Clause 10, 11 & 12 of AS1428.1:2009
- Line marking of any accessible parking spaces to be to Section 3 of AS2890.6:2009.
- Gradients of kerb ramps to be not more than 1:8
- Gradients of kerb ramps to be between 1:14 and 1:20
- Gradients of walkways to be shallower than 1:20
- Certification of force to operate doors other than fire or smoke doors fitted with door closers to be not more than 20N force
- Setout of door release buttons
- Location of switches to be not closer than 500mm to an internal corner
- Locations where the ceiling height is less than 2m to be designated with TGSIs or a barrier

2. Statutory Framework

The legislation addressing accessibility is documented in the following Act, Code and Standards:



2.1. Disability Discrimination Act 1992

Section 23 of the Disability Discrimination Act 1992 states:

> *It is unlawful for a person to discriminate against another person on the ground of the other person's disability:*
>
> *a) by refusing to allow the other person access to, or the use of, any premises that the public or a section of the public is entitled or allowed to enter or use (whether for payment or not); or*
>
> *b) in the terms or conditions on which the first-mentioned person is prepared to allow the other person access to, or the use of, any such premises; or*
>
> *c) in relation to the provision of means of access to such premises; or*
>
> *d) by refusing to allow the other person the use of any facilities in such premises that the public or a section of the public is entitled or allowed to use (whether for payment or not); or*
>
> *e) in the terms or conditions on which the first-mentioned person is prepared to allow the other person the use of any such facilities; or*
>
> *f) by requiring the other person to leave such premises or cease to use such facilities.*

The Disability Discrimination Act 1992 is complaints-based legislation and the Commissioner once having heard and assessed the level of discrimination may issue orders to rectify.

2.2. Legislative Framework

- Disability Discrimination Act 1992
- Disability (Access to Premises - Buildings) Standards 2010 (DDA 1992)
- National Construction Code (NCC 2019, Volume 1 Amendment 1)
- AS1428.1:2009 Design for access and mobility - General requirements for access - New building work

- AS1428.2:1992 Design for access and mobility - Enhanced and additional requirements - Buildings and facilities
- AS1428.4.1:2009 Design for access and mobility - Means to assist the orientation of people with vision impairment - Tactile ground surface indicators
- AS1680.2.1:2008 Interior and workplace lighting - Specific applications - Circulation spaces and other general areas
- AS1735.12:1999 Lifts, escalators and moving walks - Facilities for persons with disabilities
- HB198:2014 Guide to the specification and testing of slip resistance of pedestrian surfaces

3. ACCESS REPORT

3.1. Access Report Preamble

The Access Report following has adopted the headings of the Disability (Access to Premises) Standard 2010. The Standard provides a framework for analysis and when coupled with the technical provisions of the National Construction Code (NCC) and the provisions of Australian Standards AS1428, AS2890.6 and AS1735.

Australian Standards provide certainty and direction to address accessibility compliance.

3.2. Continuous Accessible Paths of Travel

NCC Reference:	DP1 Access for people with a disability
	D3.2 Access to buildings
	D3.3 Parts of buildings to be accessible
Australian Standard Reference:	Clause 6 (Continuous Accessible Paths of Travel) of AS1428.1 2009
	AS 1428.4.1 2009 Design for access and mobility - Means to assist the orientation of people with vision impairment

3.2.1. Preamble

This section discusses Continuous Accessible Paths of Travel (CAPT) throughout the external and internal areas of the development.

Accessible access is provided from the boundary to the to the residential lobbies.

Accessible access from the residential accessible parking is provided.

Accessible access is provided to at least 1 of each common area facility provided. (NCC Table D3.1).

3.2.2. CAPT Requirements to be satisfied

The requirements for Continuous Accessible Paths of Travel are noted in the National Construction Code at Clauses DP1 and D3.2:

A continuous accessible path of travel to accessible facilities will need to be provided to enable people to *'approach the building from the road boundary'* so that they can *'access work and public spaces, accommodation and facilities for personal* hygiene' in accordance with the requirements of ***DP1*** of the National Construction Code 2016.

The NCC Clause **D3.2(a)** identifies that

An accessway must be provided to a building required to be accessible—

i. from the main points of a pedestrian entry at the allotment boundary; and

ii. from another accessible building connected by a pedestrian link; and

iii. from any required accessible carparking space on the allotment.

Compliance:	The design as proposed satisfies the requirements of NCC Performance Requirement DP1(a), NCC Table D3.1 and NCC Clause D3.2(a).

3.2.3. Lighting Levels

The lighting level along path of travels will need to achieve a minimum level of 150lx as noted at Clause 19 of AS1428.2:1992 or the minimum lighting levels noted at AS1680.

OC - 3.2.3.	***Lighting Levels –*** *On completion of the works certification of lighting levels achieved indicating compliance with these requirements will need to be provided for the issue of the Access Installation certificate at OC.*

3.2.4. Height and Width of Continual Accessible Paths of Travel

The minimum unobstructed height of a continuous accessible path of travel shall be 2000mm or 1980mm at doorways.

Unless otherwise specified (such as at doors, curved ramps and similar), the minimum unobstructed width of a continuous accessible path of travel shall be 1000 mm and the following shall not intrude into the minimum unobstructed width of a continuous accessible path of travel:

(a) Fixtures and fittings such as lights, awnings, windows that, when open, intrude into the circulation space, telephones, skirtings and similar objects.

(b) Essential fixtures and fittings such as fire hose reels, fire extinguishers and switchboards.

(c) Door handles less than 900 mm above the finished floor level.

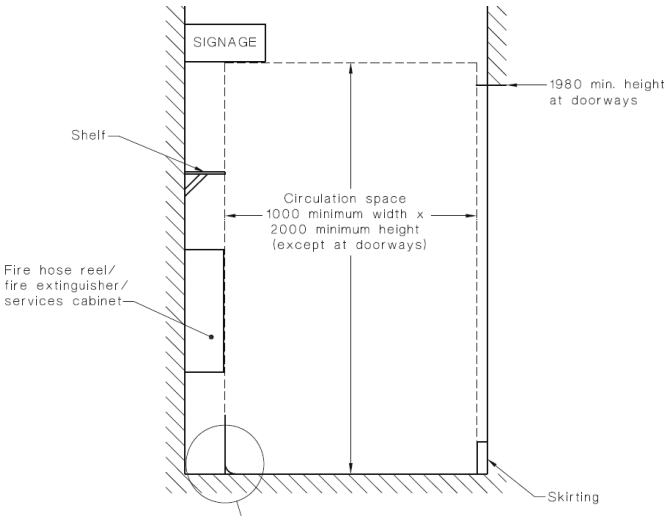


Figure 1 – Fig. 2 of Section 6, AS1428.1:2009

3.2.4. Height of Continual Accessible Paths of Travel - *The detailed construction documentation to be prepared for this project will need document a minimum clear height of 2m. The room height requirements of NCC Part F3 nominate the minimum celling levels for various parts of the building.*

3.2.5. Circulation Zones – Width of path of travel

A minimum pathway of 1m width is required throughout all accessible areas.

3.2.5. Width of Continual Accessible Paths of Travel - *The detailed construction documentation to be prepared for this project will need document the paths of travel with a minimum 1m clear width.*

3.2.6. Circulation Zones – Turn areas

The design also requires locations where a wheelchair user can make a 180deg turn (1540 x 2070mm) at corridor/pathway ends in accordance with the provisions of Fig. 5, Clause 6 of AS1428.1 2009 as well as 1500x1500 circulation zones where the path of travel changes direction.

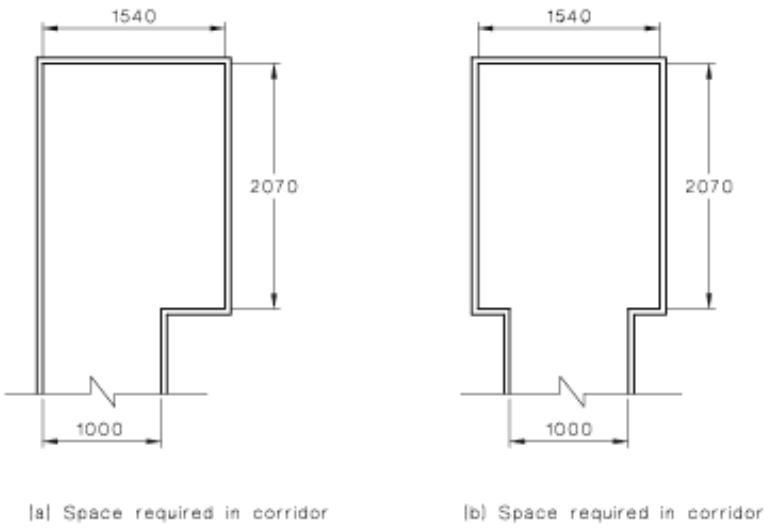
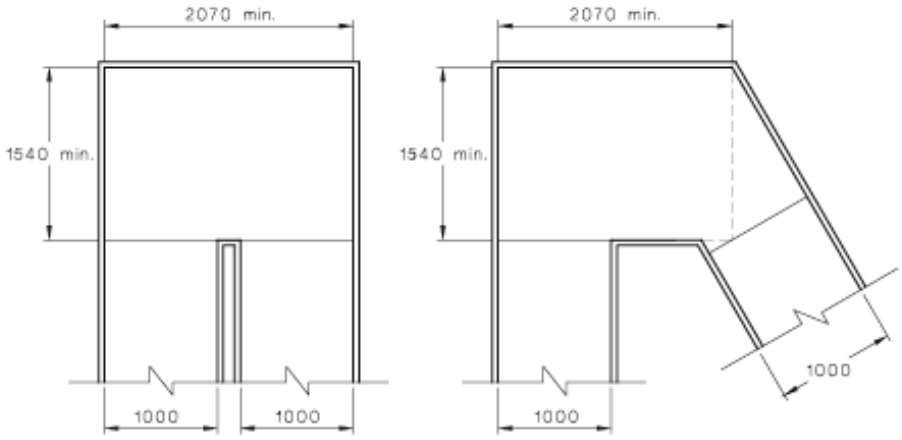


Figure 2 – Fig.3 Section 6 AS1428.1 2009



DIMENSIONS IN MILLIMETRES

FIGURE 5 SPACE REQUIRED FOR A >90° TO 180° TURN

Figure 3 – Fig.5 Section 6 AS1428.1 2009

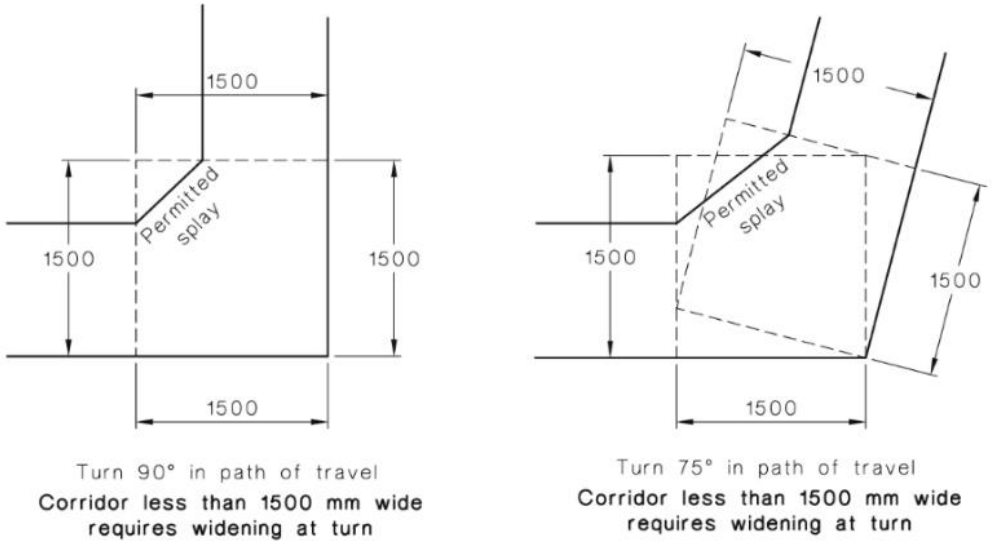


Figure 4 – Fig.4 Section 6 AS1428.1 2009

3.2.6. ***Wheelchair Circulation Zones -*** *The detailed construction documentation to be prepared for this project will need document any turn and circulation zones as required by Clause 6.5 of AS1428.1:2009.*

3.3. Visual Indicators on Glazing

NCC Reference:	DP1(a)(iii) Access for people with a disability
	D3.12 Glazing on an accessway
Australian Standard Reference:	Clause 6.6 (Visual Indicators on Glazing) of AS1428.1 2009

3.3.1. Visual Indicators on glazing

The design may propose full height glazing as part of the glazing associated with the commercial tenancies and with the residential lobbies. Where full height glazing is provided then visual indicators will need to be specified to be applied to the glazing.

3.3.2. Visual Indicators – Requirements to be satisfied

Where full height glazing is proposed, visual indicators will need to be fixed to the glazing in accordance with Clause 6.6 of AS1428.1:2009:

> *Where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights, including any glazing capable of being mistaken for a doorway or opening, shall be clearly marked for their full width with a solid and non-transparent contrasting line. The contrasting line shall be not less than 75 mm wide and shall extend across the full width of the glazing panel. The lower edge of the contrasting line shall be located between 900 mm and 1000 mm above the plane of the finished floor level.*
>
> *Any contrasting line on the glazing shall provide a minimum of 30% luminance contrast when viewed against the floor surface or surfaces within 2 m of the glazing on the opposite side.*

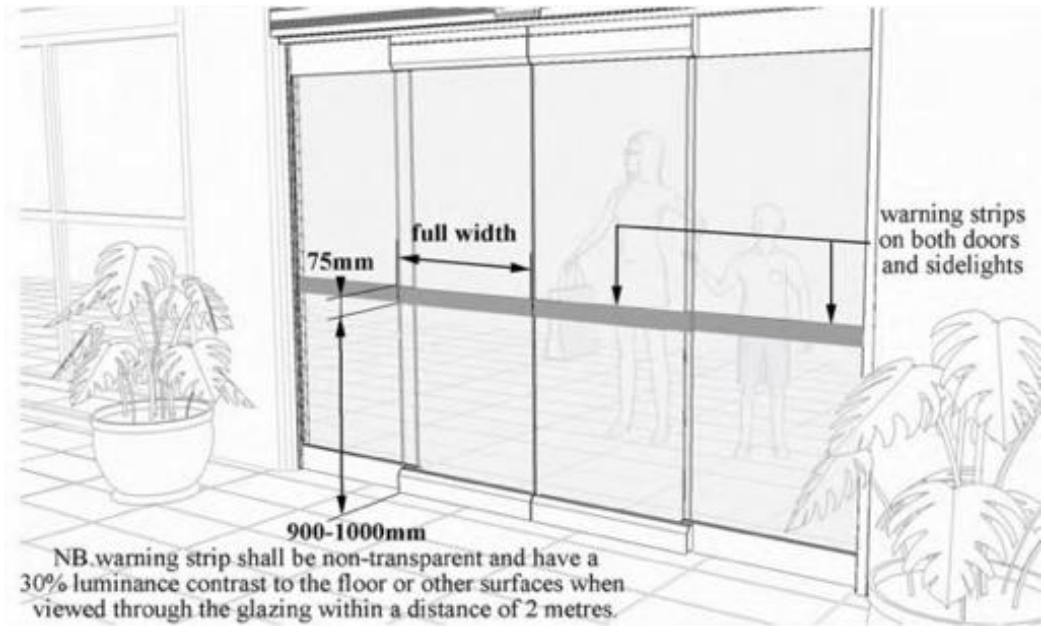


Figure 5 – Diag.4 DE-IG02 2013

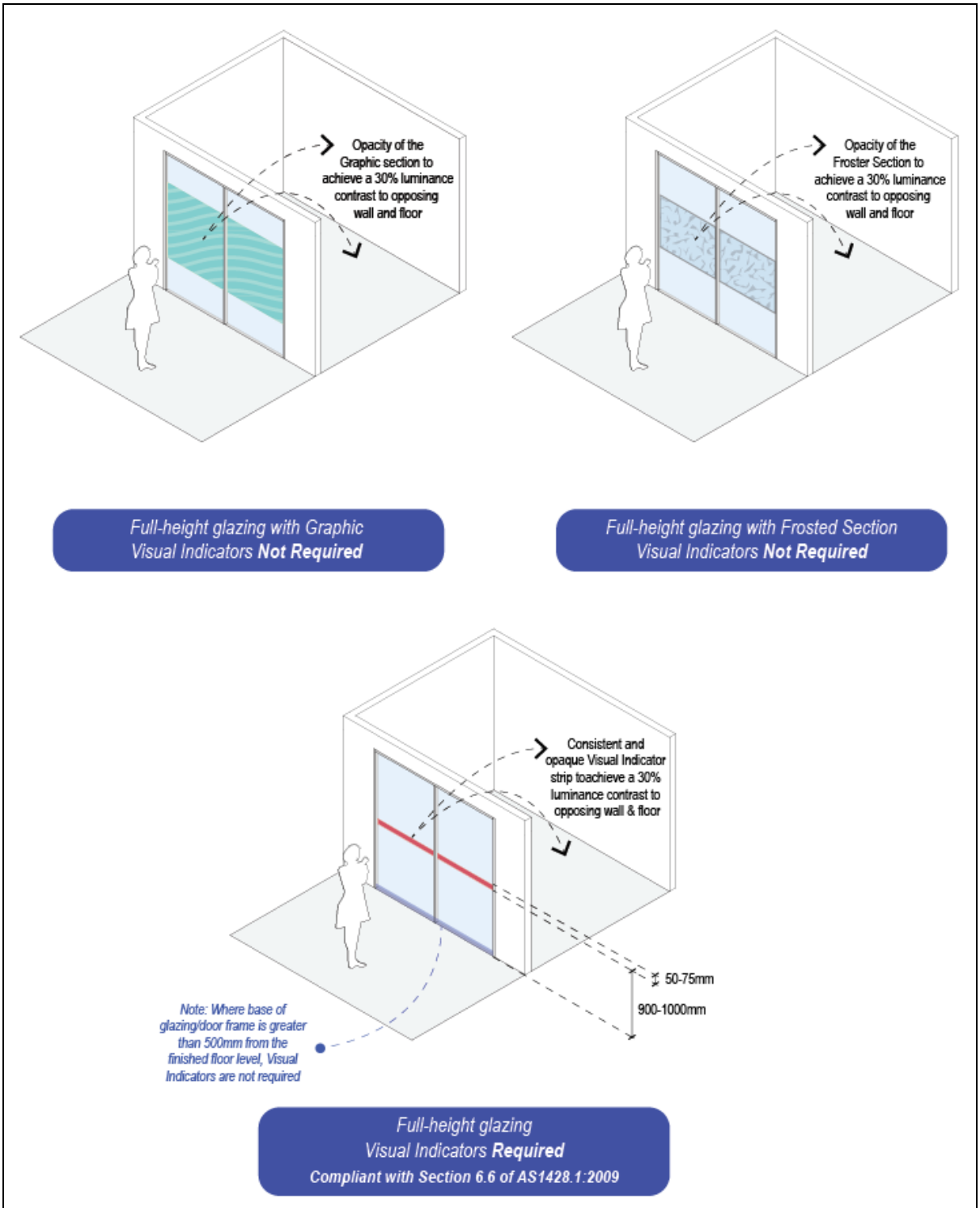
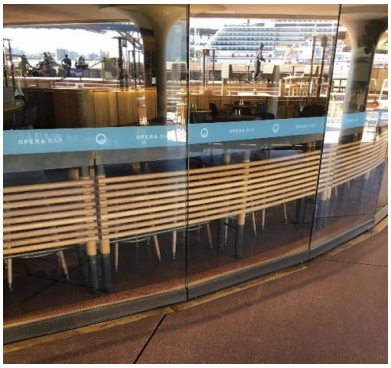


Figure 6 – Visual Indicators Summary Sketch - iAccess Residential

The following are some compliant examples of the application of Visual Indicators on glazing.





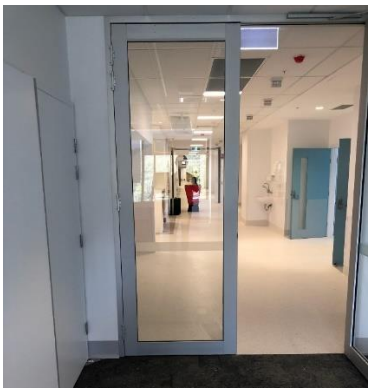


In considering the statutory requirements for Visual Indicators on glazing, it is important to note other contextual factors, such as glare, lighting, floor finishes, furniture placement and casted shadows from building lines.

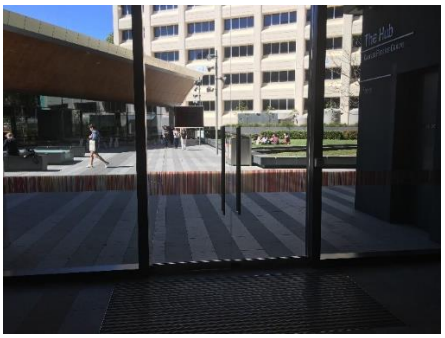
The following are some non-compliant examples of the application of Visual Indicators on glazing as a result of these contextual factors.



Luminance contrast is not achieved due to glare and shadow cast.



Luminance contrast is not achieved due to floor finish colour.



Luminance contrast is not achieved due to shadow cast.

3.3. Visual Indicators on Glazing – The detailed documentation to be prepared for this project will need to detail the application of visual indicators on full height glazing. The visual indicators will need to be solid and opaque, and the bottom of the visual indicators will need to be located between 900-1000mm AFFL. In some locations differing colours of the indicators mat need to be applied. The visual indicators will need to achieve a 30% luminance contrast.

3.4. Floor or Ground Surfaces

NCC Reference:	DP1(a)(iii) Access for people with a disability
	DP2 Safe movement to and within a building
	NCC Table D2.14
Australian Standard Reference:	Clause 7 of AS1428.1:2009
	HB198:2014 (slip resistance)

3.4.1. Slip Resistance

The slip resistance of the floor finishes will need to satisfy the minimum requirements of NCC Table 2.14 and the slip resistance ratings noted within HB198.

Certification indicating compliance with the slip resistance provisions will need to be provided from the respective flooring suppliers.

The table following summarises the minimum slip resistance levels of flooring materials to be achieved within this development.

Location	NCC Table D2.14	HB198	Criterion Satisfied
Ramp steeper than 1:14	Dry P4/R11 – Wet P5/R12	P5/R12	Not Applicable
Ramp steeper than 1:20 but not steeper than 1:14	Dry P3/R10 – Wet P4/R11		Additional Information to be provided
Tread or landing surface	Dry P3/R10 – Wet P4/R11	Dry P3/R10 – Wet P4/R11	Additional Information to be provided
Nosing	Dry P3 – Wet P4	Dry P3 – Wet P4	Additional Information to be provided
Transition Areas		P2/R9	Additional Information to be provided
External ramps including sloping driveways, footpaths, etc., under 1:14, external sales areas (e.g. markets), external carpark areas, external colonnades, walkways, pedestrian crossings, balconies, verandas, carports, driveways, courtyards and roof decks		P4/R11	Additional Information to be provided
External Ramps (including sloping driveways, footpaths etc.) steeper than 1 in 14		P5/R12	Not Applicable
Wet area / sanitary facilities		P3/R10	Additional Information to be provided

3.4.1. Slip Resistance - floor and ground surfaces – *The detailed construction documentation to be prepared for this project will need to detail the various floor finishes and the respective slip-*

resistance ratings. A schedule of the materials and the associated slip resistance rating will need to be prepared.

3.4.1. OC Slip Resistance - floor and ground surfaces – *On completion of the works certification is to be provided by the contractors indicating the slip resistance of the flooring materials installed This information is required for the issue of the access installation certificate required for the issue of the Occupation Certificate.*

3.4.2. Carpet

The finishes schedule may propose carpet finishes within this development.

It will be necessary that the specification and application of the carpet satisfy the provisions of:

- NCC Clause D3.3 (g) & (h) and
- AS1428.1:2009 Clause 7.4

Clause 7.4.1 of AS1428.1:2009 states:

> *Where carpets or any soft flexible materials are used on the ground or floor surface—*
>
> *(a) the pile height or pile thickness shall not exceed 6 mm and the carpet backing thickness shall not exceed 4mm*
>
> *(b) exposed edges of floor covering shall be fastened to the floor surface and shall have a trim along the entire length of any exposed edge; and*
>
> *(c) at the leading edges, carpet trims and any soft flexible materials shall have a vertical face no higher than 3 mm or a rounded bevelled edge no higher than 5 mm or above that height a gradient of 1 in 8 up to a total maximum height of 10 mm*

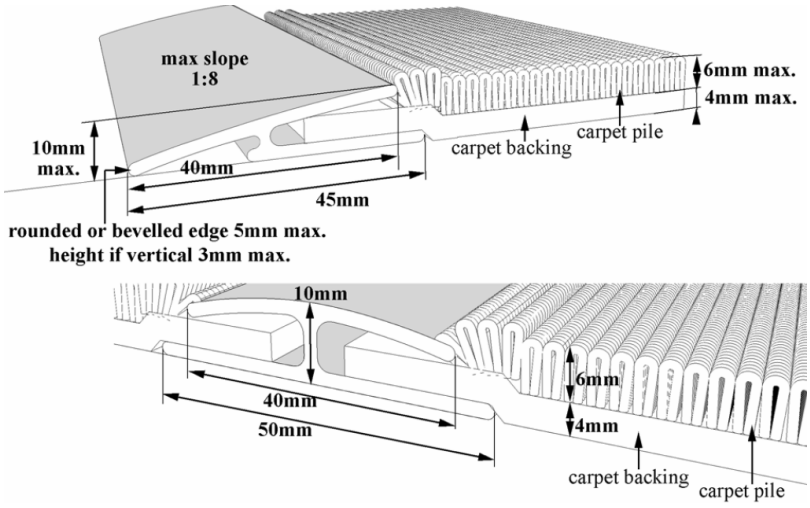


Figure 7 – Examples of carpet joints on an accessible path of travel

3.4.2. ***Carpet –*** *On completion of the works certification is to be provided by the carpet contractor that the specified carpet has been installed and that the provisions of NCC Clauses D3.3 (g) & (h) have been satisfied.*

3.4.3. Floor transitions

Transitions between floor finishes will need to comply with Clause 7.2 of AS1428.1:2009.

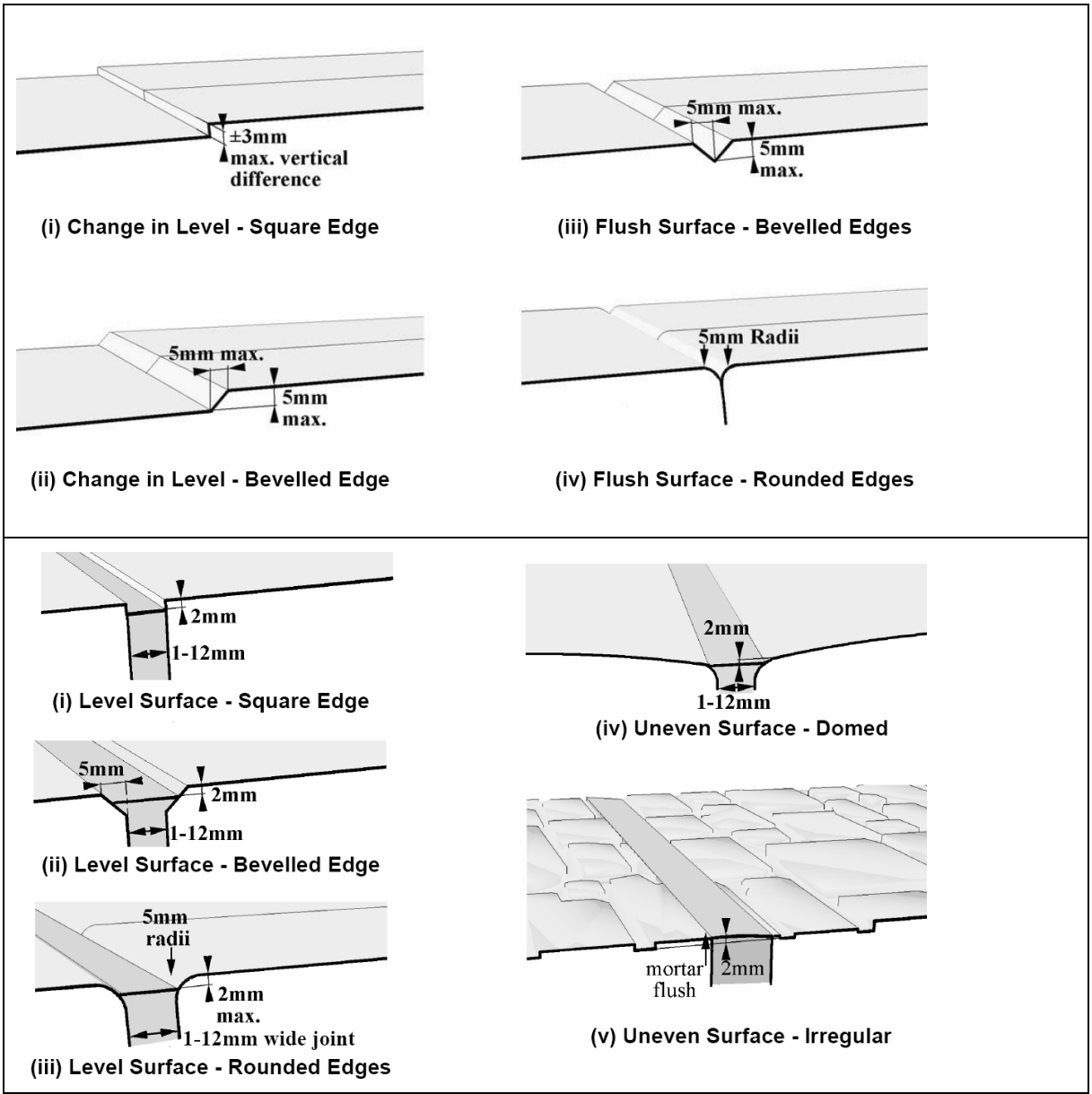


Figure 8 – diagrams indicating the acceptable tolerances between pavement finishes

3.4.3. ***Floor transitions –*** *The construction documentation to be prepared for this project will need to detail the various floor finishes and their respective junctions and transitions.*

3.4.4. Recessed Matting

The design may propose the installation of recessed matting.

The installation will need to satisfy the following requirements from Clause 7.4.2 of AS1428.1:2009

Matting recessed within a continuous accessible path of travel—

(a) where of metal and bristle type construction or similar, its surface shall be no more 3 mm if vertical or 5 mm if rounded or bevelled, above or below the surrounding surface; and

(b) where of a mat or carpet type material, shall have the fully compressed surface level with or above the surrounding surface with a level difference no greater than 3 mm if vertical or 5 mm if rounded or bevelled.

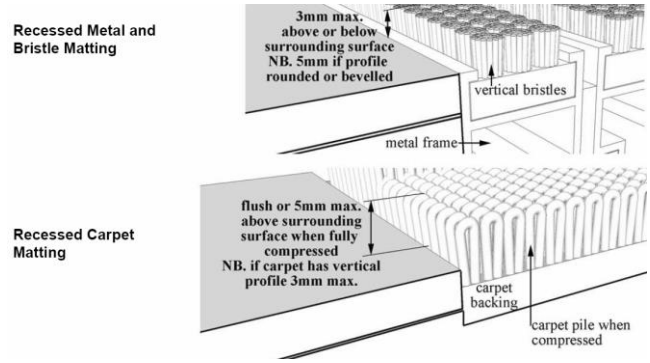


Figure 9 – Recessed matting height tolerances

3.4.4. Recessed Matting - *The construction documentation to be prepared for this project will need to detail any recessed floor mats to be installed as part of this project.*

3.4.5. Grated Drains

Any grated drains located on any paths of travel will need to be fitted with compliant heel guard grates (Clause 7.5).

7.5 Grates

Grates shall comply with the following:

(a) Circular openings shall be not greater than 13 mm in diameter.

(b) Slotted openings shall be not greater than 13 mm wide and be oriented so that the long dimension is transverse to the dominant direction of travel.

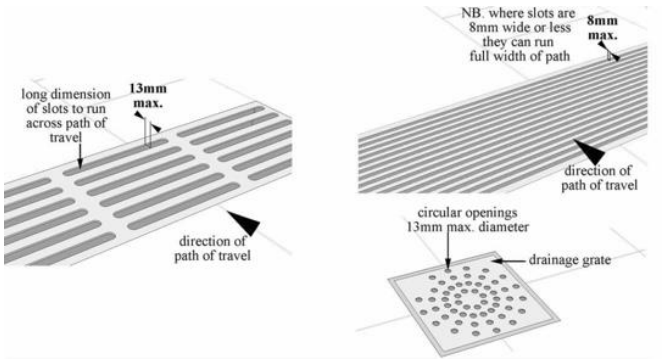


Figure 10 –Diag.7 DE-IG02 2013 – example of heel guard grates

3.4.5. Grated drains – *The future construction documentation to be prepared for this project will need to specify the heel guard grates to be installed.*

3.5. Statutory Braille Tactile Signage

The requirements for the statutory Braille Tactile signage are referenced in the following legislation:

NCC Reference:	DP1(a)(iii) Access for people with a disability
	D3.6 Signage
	Specification D3.6
Australian Standard Reference:	Clause 8 – Signage, AS1428.4.1 2009 Design for access and mobility - Means to assist the orientation of people with vision impairment
	Clause 16 – Symbols, AS1428.4.2 1992 Design for access and mobility - Enhanced and additional requirements - Buildings and facilities
	Clause 17 – Signs, AS1428.2 1992 Design for access and mobility - Enhanced and additional requirements - Buildings and facilities
	AS1428.4.2:2018 Design for access and mobility – Wayfinding

3.5.1. Preamble

The NCC nominates the statutory requirements for Braille Tactile signage. Braille Tactile signs are to be provided in the following locations:

- Exits
- Locations where hearing augmentation is provided
- Directional information to accessible entrances.
- Push to exit locations

3.5.2. Statutory Signage Requirements (Informational)

NCC Section **D3.6 Signage** states:

> *In a building required to be accessible—*
>
> *(a) braille and tactile signage complying with **Specification D3.6** must—*
>
> *(ii) identify each door required by E4.5 to be provided with an exit sign and state—*
>
> *(A) **"Exit"**; and*
>
> *(B) **"Level"**; and either*
>
> *(aa) the floor level number; or*
>
> *(bb) a floor level descriptor; or*

3.5.3. Wayfinding (Not referenced by the NCC)

AS 1428.4.2-2018 The Australian Standard for design for access and mobility – Wayfinding, specifies the minimum wayfinding sign requirements to enable pedestrians, particularly

those who are blind, deafblind or have low vision, to enter and to navigate within buildings and/or sites, including a return route, in a safe and independent manner.

This Standard will also be of use to people with other disabilities who require enhanced information to communicate wayfinding information within buildings.

3.5.4. Braille Tactile Exit Signage

Braille tactile Exit signage will need to be provided at each level of the building associated with the fire egress door and at horizontal exits between fire compartments.

Examples of Braille Tactile Signage include:



(***Figure 11 – Examples of Braille Tactile Signage from www.brailletactilesigns.com.au)***

3.5.4. ***Statutory Braille Tactile Exit Signage*** *– The detailed construction documentation will need to document the braille tactile exit signage to be installed.*

3.5.5. Lift Signage (Not referenced by the NCC)

Clause ZA5.2 of AS1735.12:2020 requires the provision of Braille, tactile level identification signs to be installed on the lift door jambs.



3.5.5 ***Lift Signage -*** *Details of the braille tactile signage to be installed will need to be provided for review as part of the detailed construction documentation to be prepared for this project.*

3.5.6. Mounting Heights – General signs

The mounting heights of signage will need to incorporate the viewing zones as identified in AS1428.2:1992.

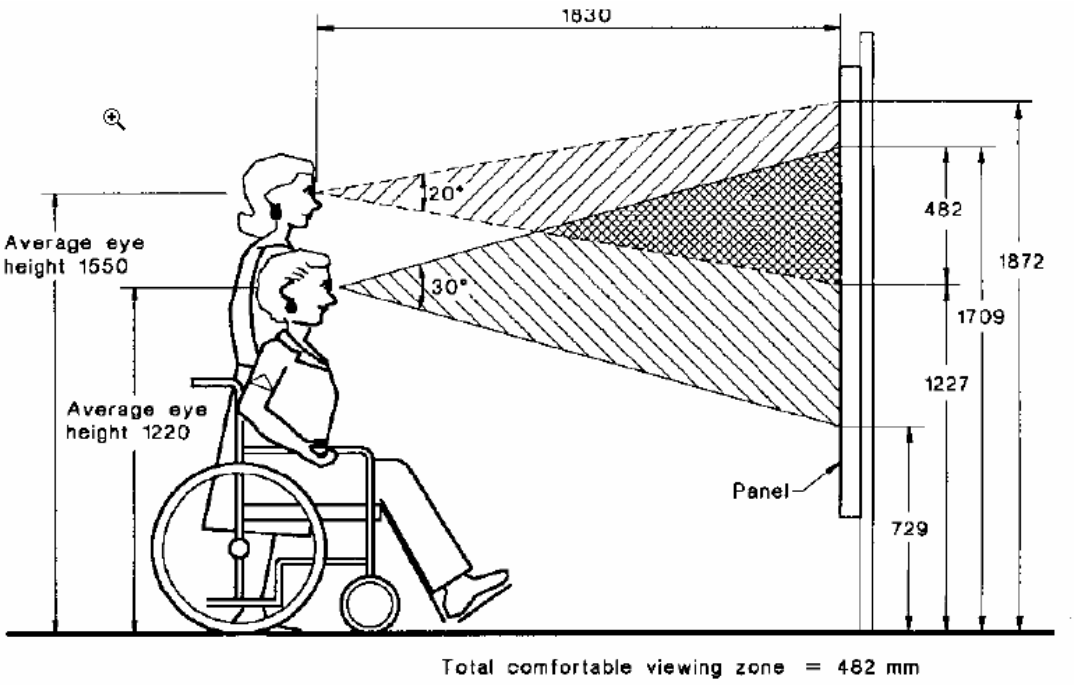


Figure 12 – Extract from Australian Standard indicating acceptable view range for signage

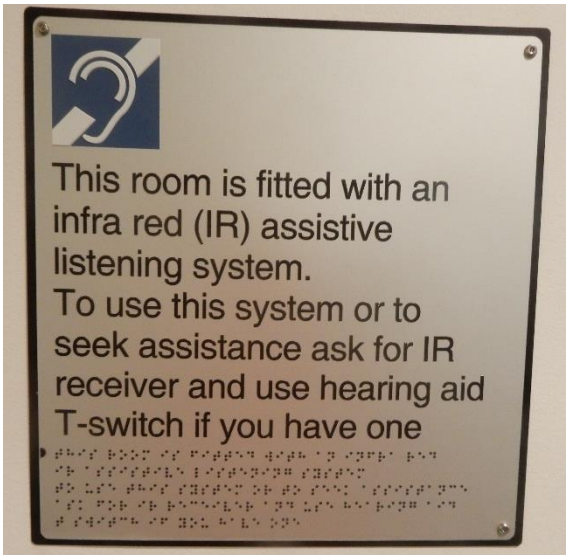
3.5.7. Luminance & Colour Contrast

Signs should be matt in colour, instead of a gloss finish to avoid any glare.

The minimum recommended luminance contrast for lettering on signage to the sign background is 30%.

The minimum recommended luminance contrast of a sign to its context is 30%.

This can be achieved by the sign field colour achieving a 30% luminous contrast with the wall surface the sign is mounted on or by providing a 5mm black border to the sign as per the following examples.





3.5.7	***Luminance & Colour Contrast -*** *Details of the braille tactile WC signage is to be provided for review as part of the detailed Constriction documentation to be prepared for this project. Please note that aluminium signs on a white wall will not achieve compliance.*

3.5.8. Push to release door locations

The design may include door release by way of push buttons.

NCC Clause D2.21(a)(iii)(B) states:

> *A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by where the latch operation device referred to in NCC Clause D2.21(a)(ii) is not located on the door leaf itself braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device.*

The following are examples of sign types for this instance.

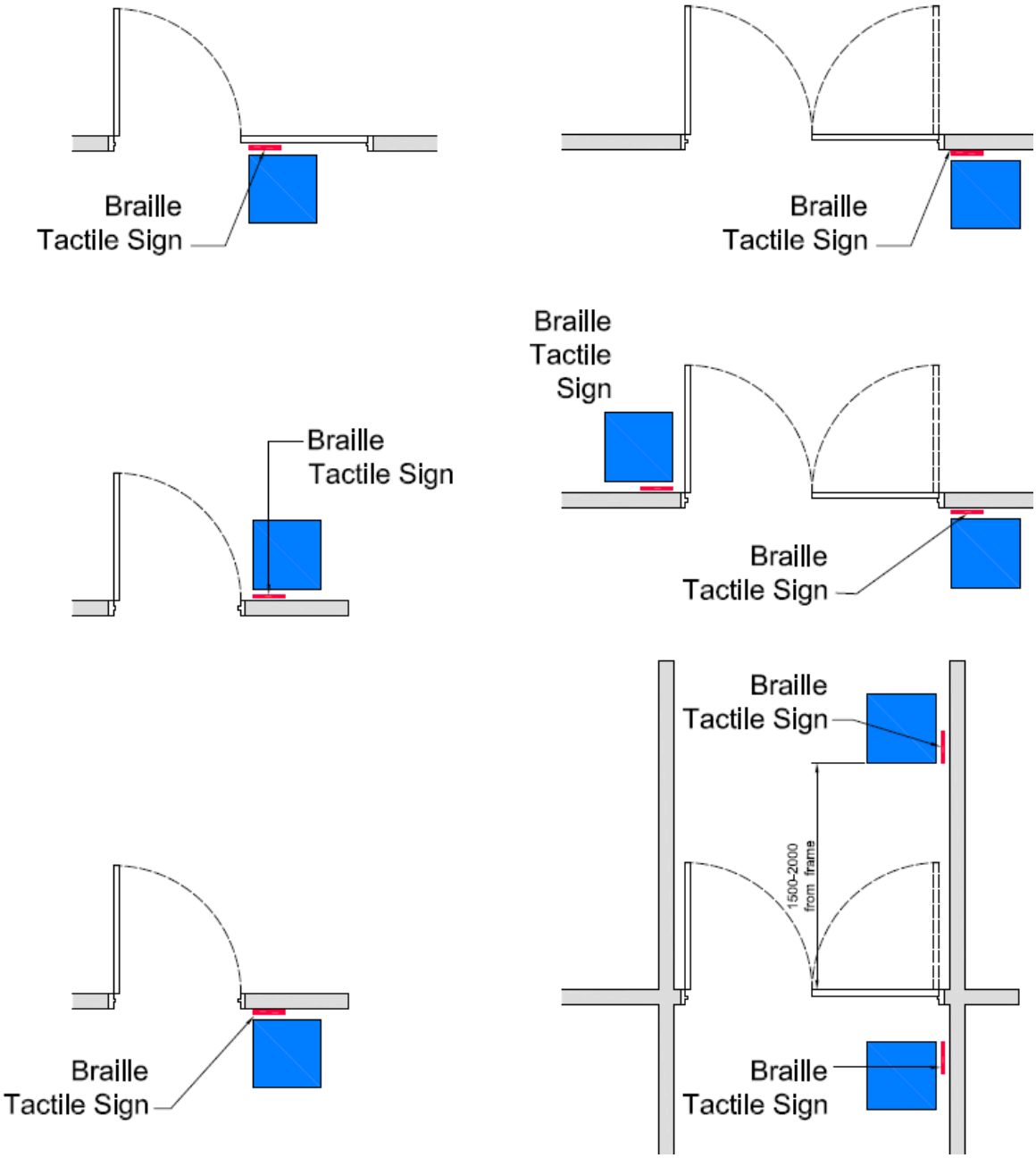


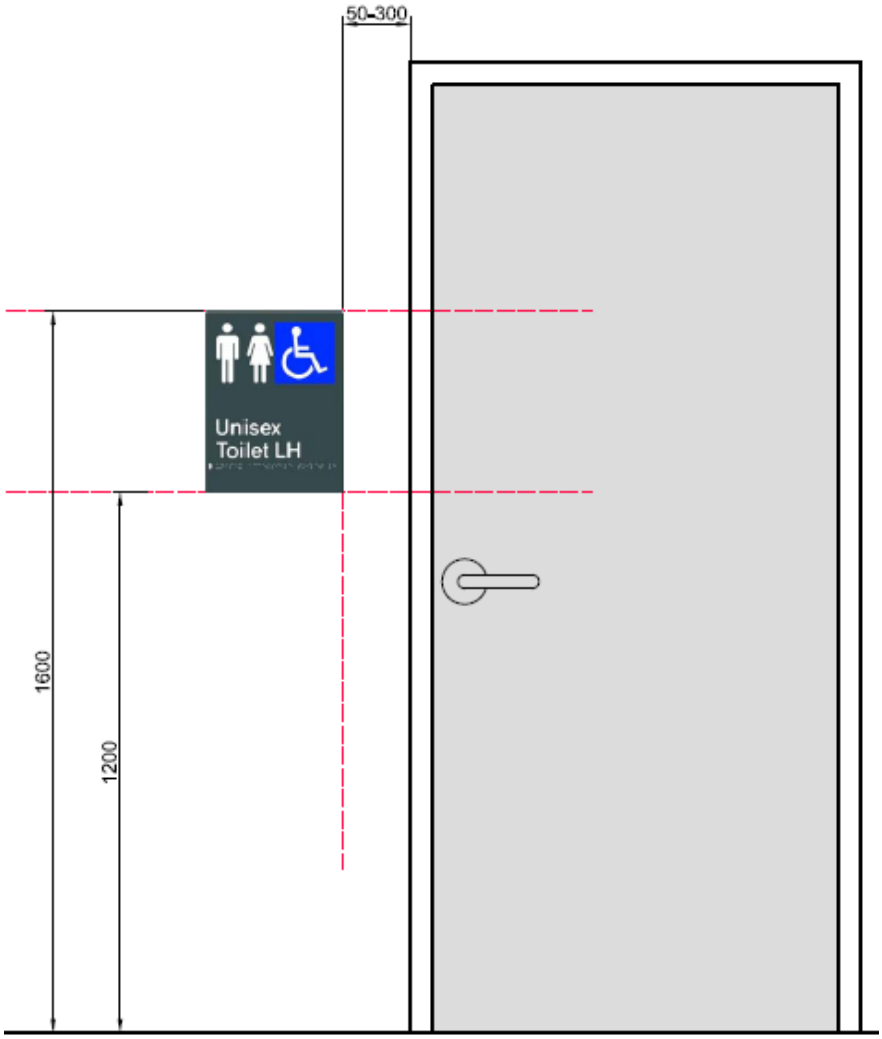


3.5.8	***Braille Tactile Press to Exit Signage -*** *Details of the braille tactile 'Press to Exit' signage to be installed will need to be provided for review as part of the detailed construction documentation to be prepared for this project. Specific attention is directed to the font type, size of lettering and the selection of a field colour of the sign which will achieve a 30% luminance contrast with the wall or door the sign is installed on.*

3.5.9. Locations of Braille Tactile door signs

The following sketches have been prepared to indicate the preferred installation locations for the placement of Braille Tactile signs.




50-300
Unisex
Toilet LH
1600
1200

3.6. Tactile Indicators (TGSIs)

NCC Reference:	DP1(a)(iii) Access for people with a disability
	D3.7 Tactile Indicators
Australian Standard Reference:	Clause 9 (Tactile Ground Surface Indicators (TGSIs) of AS1428.1 2009
	AS 1428.4.1 2009 Design for access and mobility - Means to assist the orientation of people with vision impairment

3.6.1. TGSIs – Overview

The design proposes a stair to an upper terrace located on the roof. TGSIs will need to be provided to this stairway in accordance with the requirements of AS1428.4.1:2009.

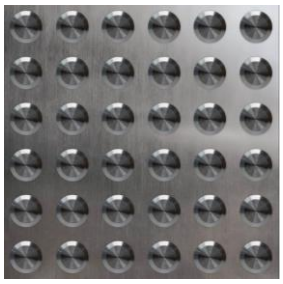
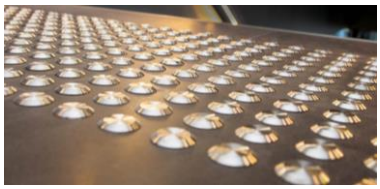
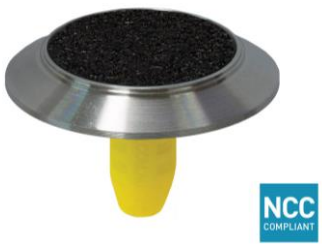
3.6.2. TGSIs – Luminance Contrast

Clause 2.2 of AS1428.4.1:2009 requires that luminance contrast be provided between the TGSI and the adjacent base as follows:

(i) Where the integrated TGSIs are of the same colour as the underlying surface—not less than 30% across its entire area.

(ii) Where discrete TGSIs—not less than 45%.

(iii) Where discrete TGSIs are constructed using two colours or materials, the raised surface shall have a section that has 60% luminance contrast for a diameter of 25 ±1 mm.

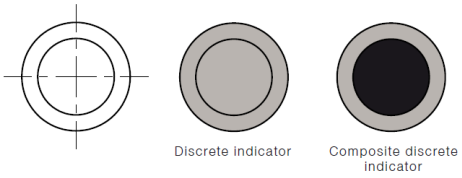
		
The above integrated TGSI format requires 30% luminous contrast to adjacent floor finish	The above discrete TGSI format requires 45% luminous contrast to adjacent floor finish	The above two colour/material discrete TGSI format requires 60% luminous contrast to adjacent floor finish

3.6.2. TGSIs – Luminance Contrast – *The selection of the type of TGSI will nominate the luminance contrast level to be achieved. Once the TGSIs have been selected it may be necessary to have testing undertaken to determine compliance. Certification of compliance will need to be provided for the issue of the Occupation Certificate for this project.*

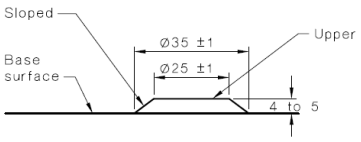
3.6.3. TGSIs – Requirements to be satisfied

TGSIs to warn people of hazards shall comply with AS/NZS 1428.4.1.

The design and arrangement of warning tactile ground surface indicators (TGSIs) shall comply with Figure 2.1 of AS1428.4.1:2009.



(a) Plans of individual truncated cones



(b) Elevation of individual truncated cone

DIMENSIONS IN MILLIMETRES

FIGURE 2.1 DESIGN AND ARRANGEMENT OF WARNING TGSIs

Figure 13 – Fig. 2.1 of AS1428.4.1:2009.

3.6.3. ***Warning indicators –*** *The setout for the placement of TGSIs will need to be provide as part of the detailed construction Documentation to be prepared for this project. Please note that TGSIs are not required to be provided at mid landings on stairways or mid landing on a ramp system where no additional persons are added to the ramp system.*

3.6.4. Setout of TGSIs associated with Stairs

TGSIs to warn people of hazards shall comply with AS/NZS 1428.4.1. TGSIs are to be provided to stairways which are not fire isolated stairways. These stairways are general access stairs and are available for use by all. TGSIs are not requires to be installed within fire isolated stairs unless the fire isolated stair also functions as a general circulation stair

TGSIs are setout from the face of the riser at the top and bottom of the stair. The first row of TGSIs is located 300mm from the face of the riser. The depth of the TGSIs is generally 600-800mm where length of the landing is greater than 3m. Where the length of the landing is less than 3m the depth of the TGSIs is reduced to 300mm.

TGSIs are not located at mid landings where no additional population is address to the stair system.

3.6.4. ***Setout of TGSIs associated with Stairs –*** *Detailed TGSI setout plans will need to be prepared as part of the detailed construction documentation to be prepared for this project. The details will need to indicate the setout of the TGSIs from the face of risers and the nominated depth of TGSIs depending on the landing length.*

3.7. Walkways Ramps and Landings

NCC Reference:	DP1(a)(iii) Access for people with a disability
	DP2 Safe movement to and within a building
	NCC Clause D3.3(a)(i)
Australian Standard Reference:	Clause 10.3 of AS 1428.1:2009
	Clause 10.6 of AS 1428.1:2009

3.7.1. Walkways Preamble

The design proposes walkways within the public areas of this development.

The design of the walkways will need to satisfy the provisions of Clause 10.2 of AS1428.1:2009.

Specific attention is directed to the detailing of the edge of the walkways.

3.7.1.	***Walkways –*** *The construction drawings to be prepared for this project will need to indicate the detailing of the walkways provided as part of this development. The details will nee3d to satisfy the provisions of Clause 10.2 of AS1428.1:2009.*

3.7.2. 1:14 Ramps

The NCC Clause D3.3(a)(i) identifies that:

In a building required to be accessible—

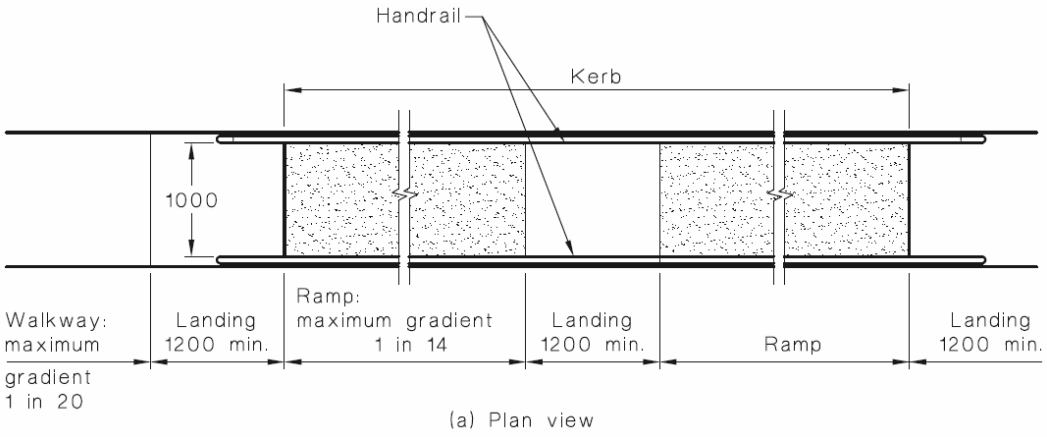
(a) every ramp and stairway, except for ramps and stairways in areas exempted by D3.4, must comply with—

(i) for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1

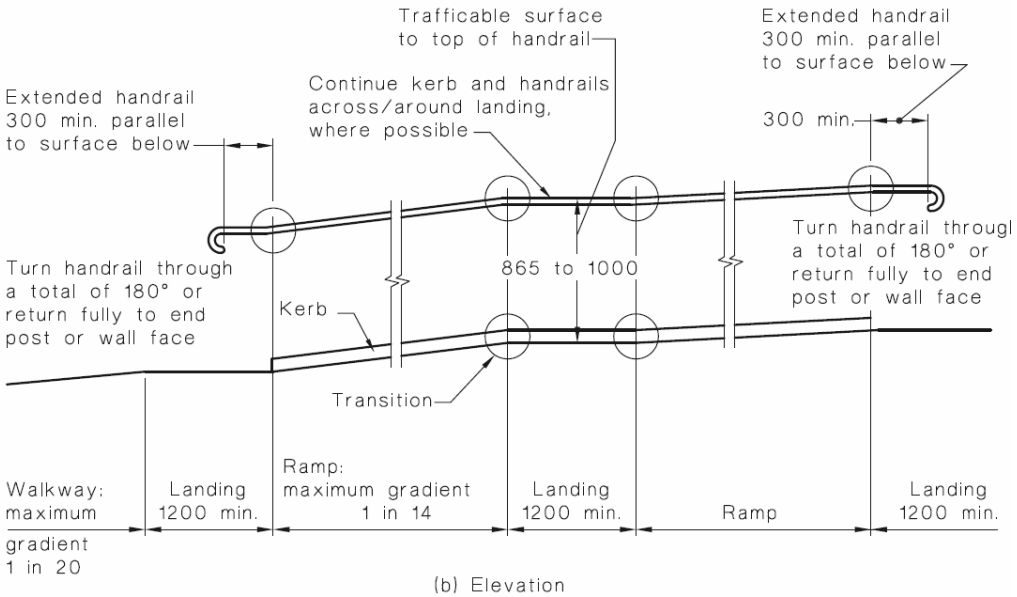
The works propose 1:14 ramps as part of the roof terrace works.

3.7.2	***1:14 Ramps –*** *The construction drawings to be prepared for this project will need to indicate the detailing of the 1:14 Ramps. Specific attention is directed to the detailing of the handrails associated with the ramps including the detailing of handrail terminations and provision of kerb rails. The slip resistance of the surface of the ramps is to satisfy NCC Table D2.14. Details of landings and any change in directions are to be provided as part of the detailed construction documentation to be prepared for this project. The gradient of any mid landing is to be 1:40 max in any direction. A 1200mm (min) landing is to be provided at the top and bottom of the ramp system. The max gradient of the landings at the top and bottom of the ramp system is to be 1:40 in any direction.*

Ramp setout specifications for ramps of gradient 1:14 are provided at Figure 14 of AS1428.1:2009.



(a) Plan view



(b) Elevation

DIMENSIONS IN MILLIMETRES

FIGURE 14 RAMP HANDRAILS

Figure 14 – Figure 14 of AS1428.1:2009

3.8. Stairways

NCC Reference:	DP1(a)(iii) Access for people with a disability
	DP2 Safe movement to and within a building
	Table D2.14 Slip Resistance Classification
	D3.3(a)(ii) Parts of buildings to be accessible for a stairway
Australian Standard Reference:	Clause 11 Stairways AS1428.1:2009

3.8.1. Overview

The design proposes fire rated stairs and a circulation stair to the upper roof terrace.

3.8.2. Fire Stairs

The detailing of fire stairs will need to satisfy the requirements of Clauses 11.1 (f) & (g) of AS1428.1:2009.

Specific attention is directed to the following:

f) *At the nosing, each tread shall have a strip not less than 50 mm and not more than 75 mm deep across the full width of the path of travel. The strip may be set back a maximum of 15 mm from the front of the nosing. The strip shall have a minimum luminance contrast of 30% to the background. Where the luminous contrasting strip is affixed to the surface of the tread, any change in level shall comply with Clause 7.2 and Clause 7.3.*

g) *Where the luminance contrasting strip is not set back from the front of the nosing then any area of luminance contrast shall not extend down the riser more than 10 mm*

The detailing of the handrail provided within the fire stairs will need to satisfy the provisions of Clause 11.2(c) which requires that there be no vertical sections in the handrail design and that the handrail follow the angle of the stairway nosing.

The details of the handrail design will need to be provided as part of the Construction Certificate documentation.

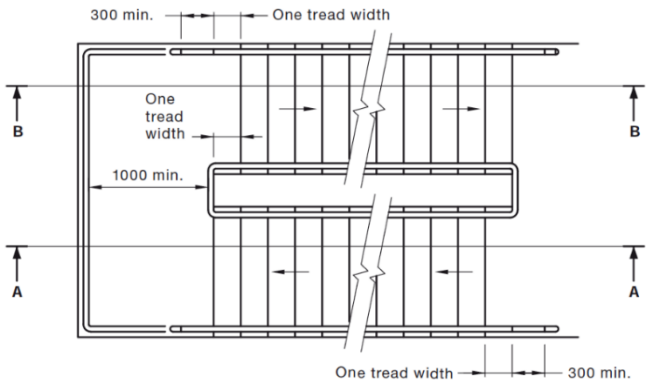


Figure 15 – Fig. 28 of AS1428.1:2009

Appropriate exit Braille Tactile Signage is required. Refer to the ‘Signage’ section of this report.

3.8.2.	***Fire Stairs*** *– The detailed construction drawings to be prepared for this project will need to detail the fire stairs. The details are to be developed in conjunction with the access consultant.*

3.8.3. Circulation Stairs

The circulation stairs will need to comply with the provisions noted at Clause 11 and 12 of AS1428.1:2009.

Specific attention is directed to the following:

a) Compliant handrail designs

b) Compliant handrail extensions to the top and bottom of each flight

c) Non-slip finish to going (Refer to NCC Table D2.14)

d) Non-slip 50-75 nosing fixed to each going

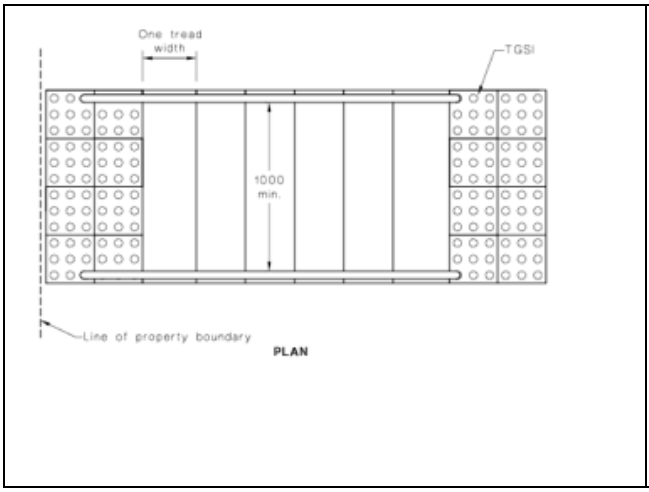
e) Opaque risers

f) Compliant TGSIs located at the top and bottom of each flight. TGSIs are not required at mid-landings where no additional pedestrians are added to the stair system

Note: TGSIs shall be 600mm in width (or 300mm wide where the stair is closer than 3m to an adjacent wall.)

g) Minimum lighting level of 150 lx to be achieved

The following extract Figures below highlight the main features of a compliant stair design.



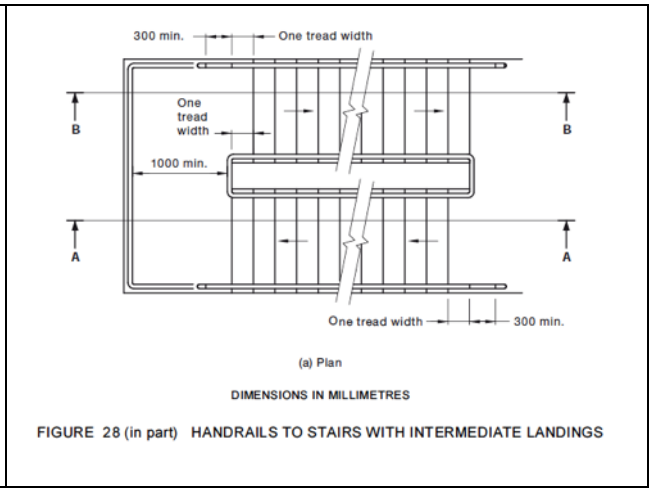


FIGURE 28 (in part) HANDRAILS TO STAIRS WITH INTERMEDIATE LANDINGS

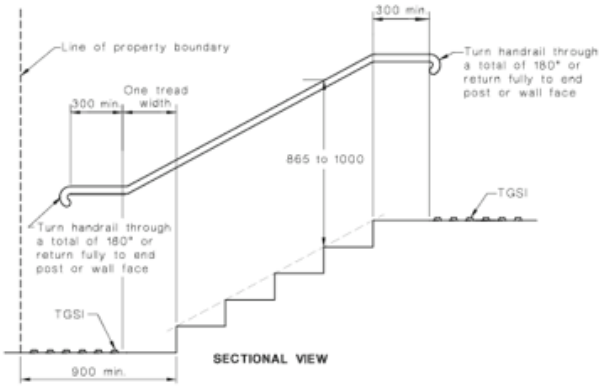


FIGURE 26(A) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT BOUNDARY

Figure 16 – Fig.26A Section 11 AS1428.1 2009

Figure 17 – Fig.28 Section 11 AS1428.1 2009

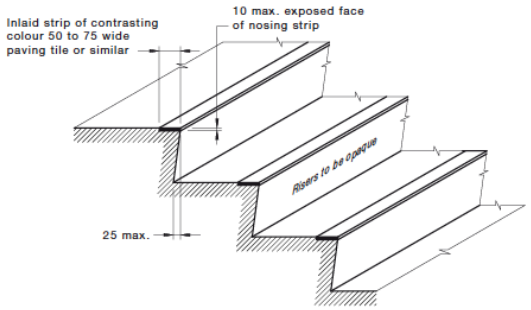


FIGURE 27(B) A TYPICAL STAIR NOSING PROFILE WITH EXPOSED NOSING STRIP

Figure 18 – Fig.27B Section 11 AS1428.1 2009

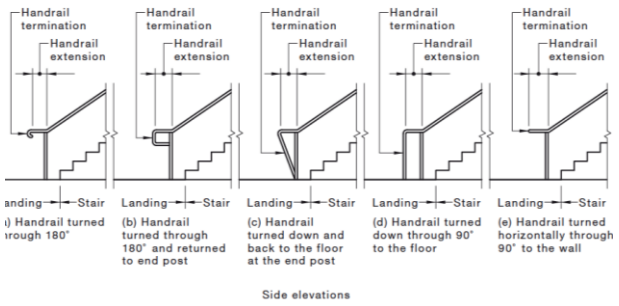


Figure 19 – Fig.26C Section 11 AS1428.1 2009

3.8.3. ***Circulation Stairs*** *– Details of the circulation stairs will need to be provided as part of the detailed construction documentation to be prepared for this project.*

3.9. Handrails

NCC Reference:	DP1(a)(iii) Access for people with a disability
	DP2(c)(ii) Safe movement to and within a building
	D3.3(a) Parts of buildings to be accessible
Australian Standard Reference:	Clause 12 Handrails AS1428.1:2009

The design and construction of handrails shall comply with the following:

(a) Handrails and balustrades shall not encroach into required circulation spaces.

(b) The cross-section of handrails shall be circular or elliptical, not less than 30 mm or greater than 50 mm in height or width for not less than 270° around the uppermost surface as shown in Figures 29(a) and 29(b). Elliptical handrails shall have the greater dimension in the horizontal axis as shown in Figure 29(b).

(c) Exposed edges at ends and corners of handrails shall have a radius of not less than 5 mm.

(d) The top of handrails shall be not less than 865 mm nor more than 1000 mm above the nosing of stairway tread or the plane of the finished floor of the walkway, ramp or landing.

(e) The height of the top of the handrail, measured in accordance with Item (d), shall be consistent through the ramp (or stairs) and any landings.

(f) If a balustrade is required at a height greater than the handrail, both shall be provided.

(g) Handrails shall be securely fixed and rigid, and their ends shall be turned through a total of 180°, or to the ground, or returned fully to end post or wall face, as shown in Figures 26(C) and 26(D).

(h) The clearance between a handrail and an adjacent wall surface or other obstruction shall be not less than 50 mm. This clearance shall extend above the top of the handrail by not less than 600 mm.

(i) Handrails shall have no obstruction to the passage of a hand along the rail, as shown in Figures 29(a) and 29(b).

(j) The inside handrail at landings shall always be continuous, as shown in Figure 28(a).

3.9. ***Shop drawings to be provided – Ramp Handrails*** *– Shop drawing of the stairs will need to be provided to the access consultant for review.*

3.10. Doorways

NCC Reference:	DP1(a)(iii) Access for people with a disability
	D3.2 Access to buildings
	D3.3 Parts of buildings to be accessible
Australian Standard Reference:	Clause 13 (Doorways, Doors and Circulation Spaces at Doorways) of AS1428.1 2009

3.10.1. Doorways - overview

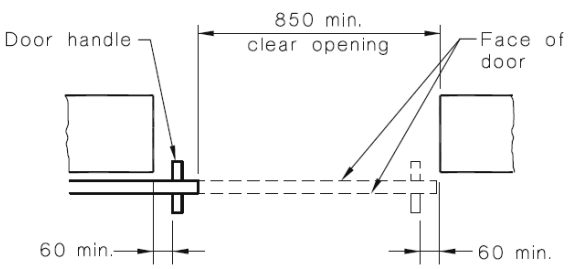
The design as proposed provides accessible acecss to the front door of each dwelling provided within this development.

3.10.2. Clear Door Width

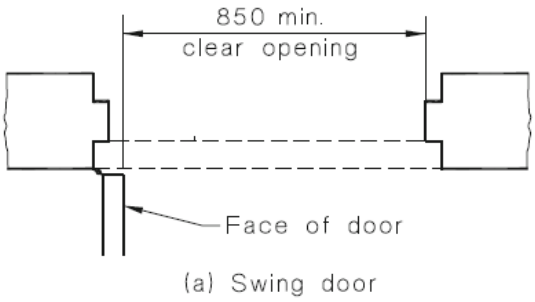
The minimum clear width of all doorways (including swing and sliding doorways) to rooms required to be accessible is to be not less than 850mm clear.

Where double doors are proposed, the active leaf is to have a minimum clear width of 850mm.

Provide confirmation of clear open widths of all doorways.



(c) Surface-mounted sliding door



(a) Swing door

3.10.1. Clear Door Width - *The detailed documentation to be prepared for this project will need to demonstrate compliance with these provisions.*

3.10.3. Luminance Contrast

The design of the doorways to each dwelling entrance and each common room required to be accessible, including fire exit doors and garbage room locations located on each level are to achieve 30% luminance contrast (Minimum)

Rooms that are not required to be accessible do not need to satisfy the requirements for doorway luminance contrast.

All other rooms required to be accessible require compliance with doorway luminance contrast requirements noted at Clause 13.1 of AS1428.1:2009:

All doorways shall have a minimum luminance contrast of 30% provided between—

(a) door leaf and door jamb;

(b) door leaf and adjacent wall;

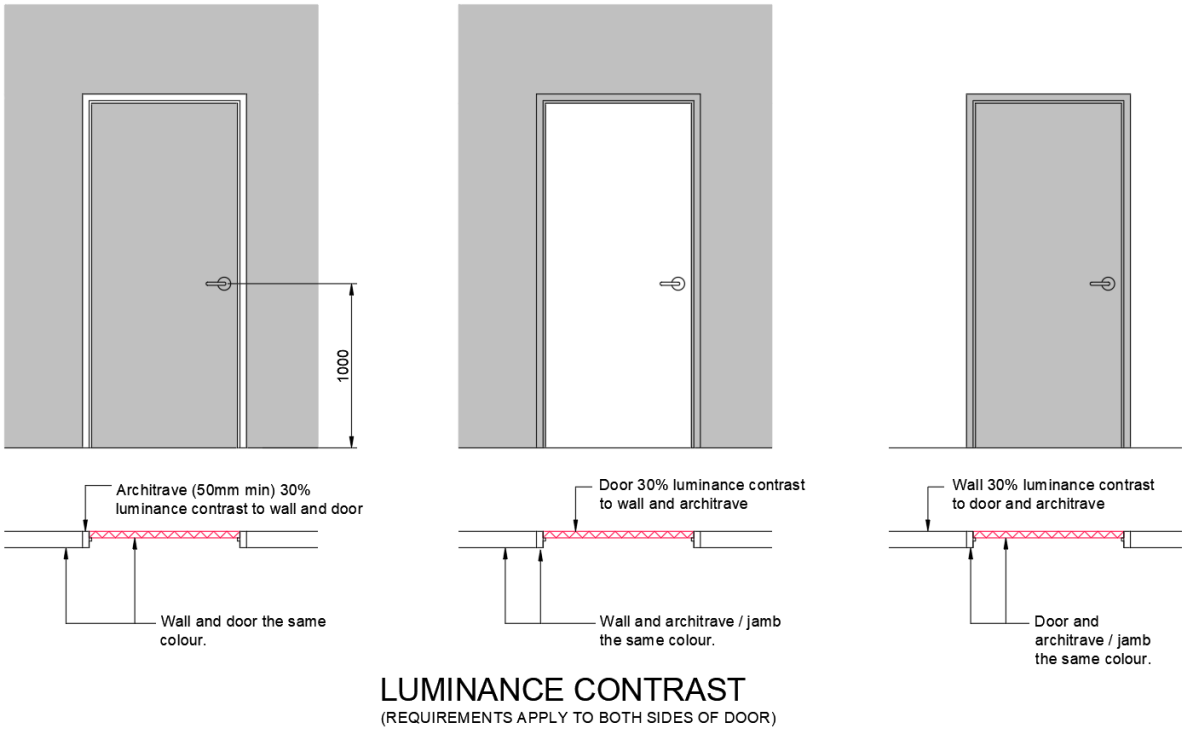
(c) architrave and wall;

(d) door leaf and architrave; or

(e) door jamb and adjacent wall.

The minimum width of the area of luminance contrast shall be 50 mm

The prevailing view is that option (b) – indicating luminance contrast between the *door leaf and adjacent wall* is the preferred option.



LUMINANCE CONTRAST
(REQUIREMENTS APPLY TO BOTH SIDES OF DOOR)

3.10.3 ***Luminance Contrast -*** *A table indicating wall colour and door colour with the associated luminance contrast level achieved will need to be prepared and provided to demonstrate compliance with the requirements of Clause 13.1 of AS1428.1:2009.*

3.10.4. Door Controls

The Australian Standard requires that door hardware be located within 900-1100mm AFFL.

If lever hardware is proposed to be utilised it will be necessary for the design of the lever to comply with the provisions of Clause 13.5 of AS1428.1:2009.

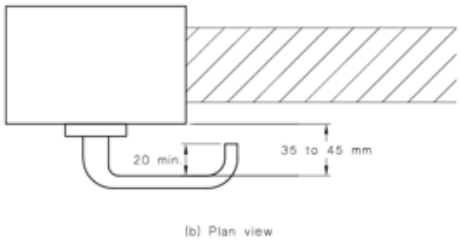


FIGURE 35(A) EXAMPLE OF ACCEPTABLE DOOR HARDWARE FOR HINGED DOORS



Figure 20 – Fig. 35 Section 13 AS1428.1:2009



Lockwood Lever 80



Lockwood Lever 70



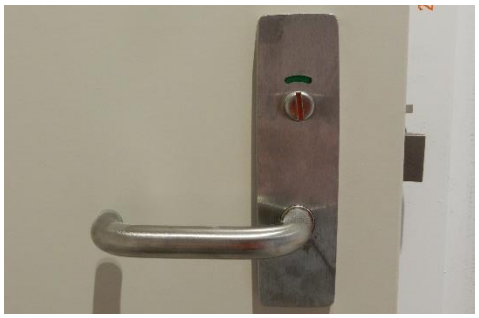
Lockwood Lever 96



Lockwood Lever 77



The above image indicates a privacy latch set provided to accessible WC facilities as viewed from within the facility



The above image indicates a privacy latch set provided to accessible WC facilities as viewed from the outside

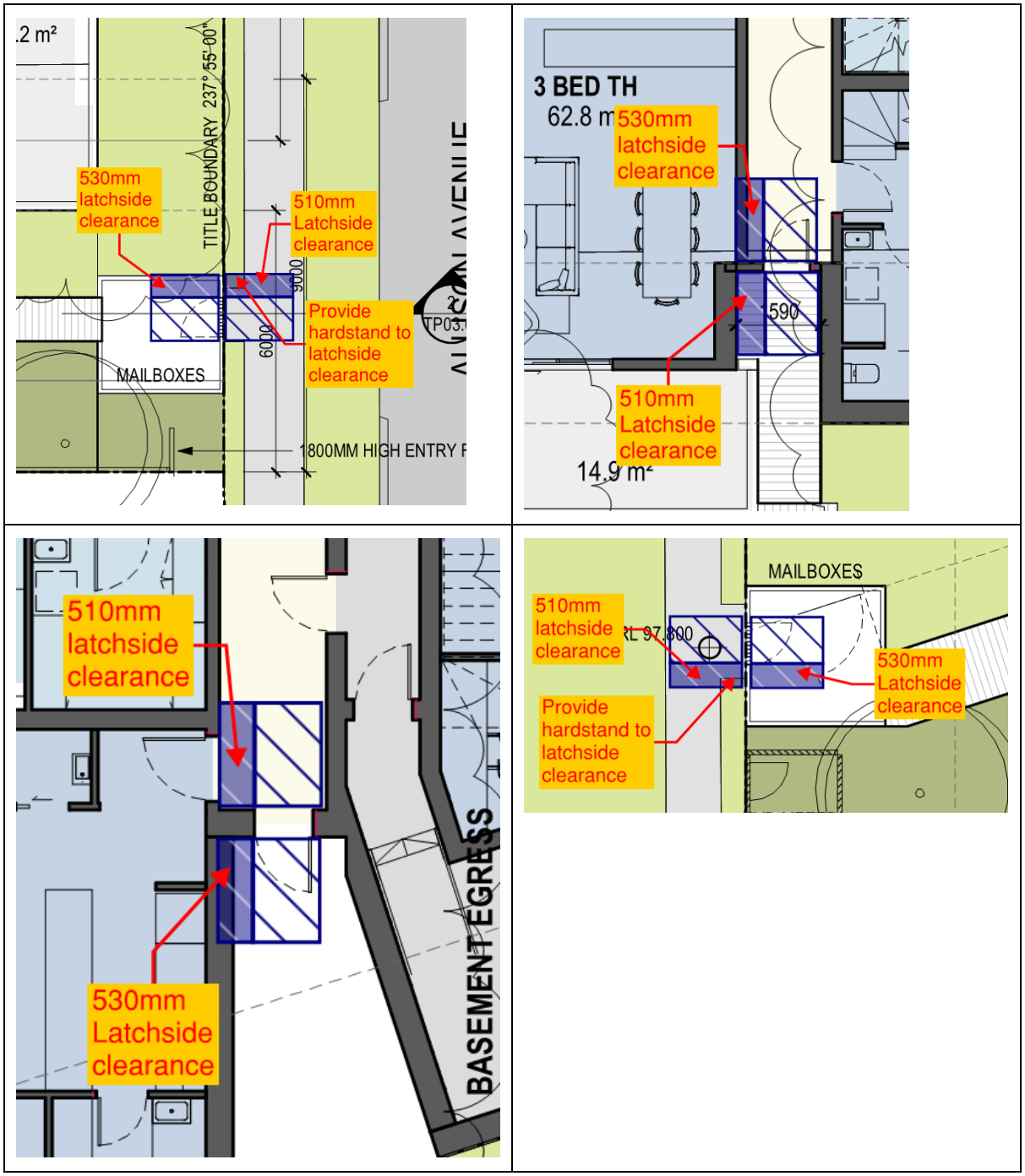
Figure 21 – The above images are examples of compliant hardware

3.10.4. Door Controls – *The door hardware schedule will need to specify compliant door hardware*

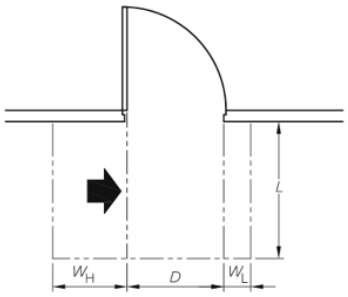
3.10.5. Circulation at Doorways

Clause 13.3 of AS1428.1:2009 provides direction as to the required circulation space to approach and enter rooms required to be accessible. Doorways to rooms that are not required to be accessible do not need to comply with the requirements for circulation at doorways.

The circulation at the following doorways requires review.

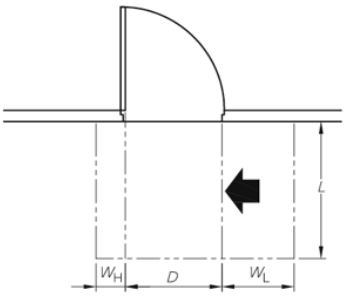


The following extracts from the Standard is provided by way of information.



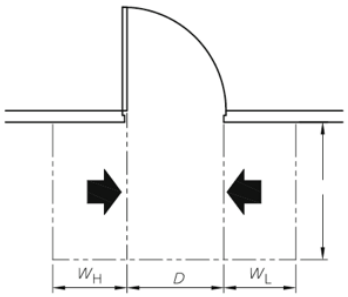
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1220	560	340
900	1185	510	340
950	1160	460	340
1000	1140	410	340

(a) Hinge-side approach, door opens away from user



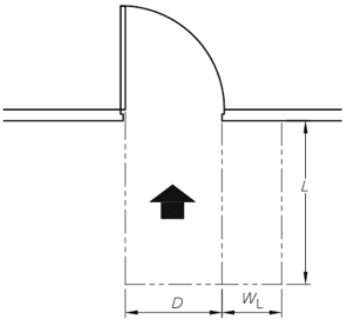
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1240	240	660
900	1210	190	660
950	1175	140	660
1000	1155	90	660

(b) Latch-side approach, door opens away from user



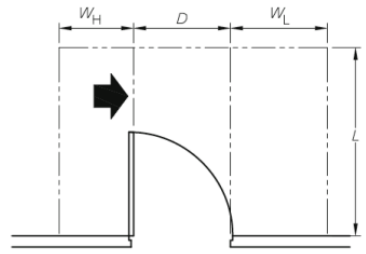
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1240	560	660
900	1210	510	660
950	1175	460	660
1000	1155	410	660

(c) Either side approach, door opens away from user



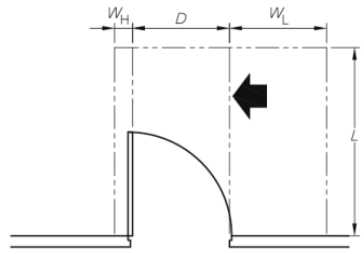
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1450	0	510
900	1450	0	510
950	1450	0	510
1000	1450	0	510

(d) Front approach, door opens away from user



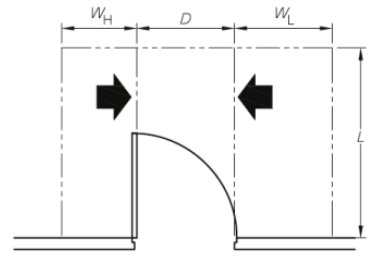
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	660	900
900	1670	610	900
950	1670	560	900
1000	1670	510	900

(e) Hinge-side approach, door opens towards user



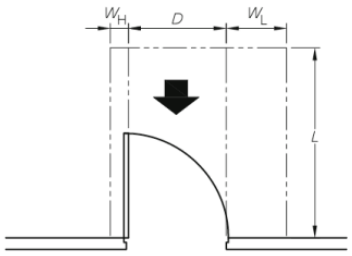
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	110	900
900	1670	110	900
950	1670	110	900
1000	1670	110	900

(f) Latch-side approach, door opens towards user



Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	660	900
900	1670	610	900
950	1670	560	900
1000	1670	510	900

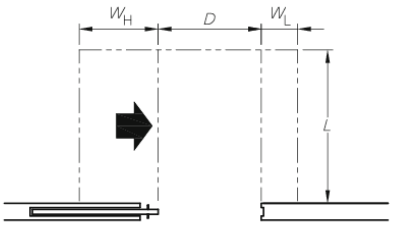
(g) Either side approach, door opens towards user



Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1450	110	530
900	1450	110	530
950	1450	110	530
1000	1450	110	530

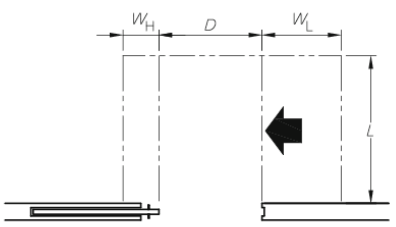
(h) Front approach, door opens towards user

Figure 22 – Figure 31 of AS1428.1:2009



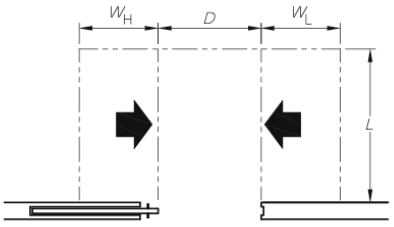
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1280	660	395
900	1280	610	395
950	1280	560	395
1000	1280	510	395

(a) Slide-side approach



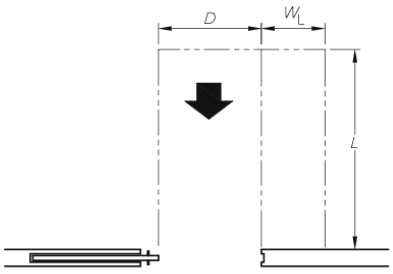
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1230	185	660
900	1230	180	660
950	1230	180	660
1000	1230	180	660

(b) Latch-side approach



Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1280	660	660
900	1280	610	660
950	1280	560	660
1000	1280	510	660

(c) Either side approach



Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1450	0	530
900	1450	0	530
950	1450	0	530
1000	1450	0	530

(d) Front approach

Figure 23 – Figure 32 of AS1428.1:2009

3.10.5.	***Circulation at Doorways –*** The detailed construction documentation to be prepared for this project will need to indicate compliance with the circulation at doorway provisions of Clause 13.3 of AS1428.1:2009.

3.10.6. Gradient of landings on either side of doorways or gates

Compliance requires that compliant circulation be provided to either side of doorways. The maximum gradient of the landings to either side of doorways is to be 1:40 in any direction.

3.10.6.	***Gradient of landings on either side of doorways or gates–*** *The detailed construction documentation to be prepared for this project will need to document the maximum gradient of landings associated with doorway and gates at 1:40 in any direction.*

3.10.7. Door Closers (20N Force)

Where door closers are fitted to doors, other than fire doors associated with the fire stairs, the maximum force required to be applied to the door to open the door is not to be greater than 20N force. (Clause 13.5.2(e) AS1428.1:2009).

3.10.7.	***Door Closers –*** *Confirmation that the proposed door closer(s) can satisfy this requirement will need to be provided as part of the detailed construction documentation to be prepared for this project. Certification of compliance will be required for the issue of the Occupation Certificate.*

3.10.7.	***OC Door Closers –*** *Certification of compliance that the doors installed with a door closer (other than fore rated doors) satisfy the provisions of Clause 13.5(e) of AS1428.1:2009 (20N Force) will be required for the issue of the Occupation Certificate.*

3.10.8. Doorway Thresholds

Doors to all accessible rooms require a level threshold whereby the maximum lip shall be 3mm high for a straight edge or 5mm high for a bevelled edge. Specific attention is drawn to the doorways leading to outdoor areas. The following photograph is an example of a level threshold transition.



Figure 24 – Photograph of door threshold

3.10.8. ***Doorway Thresholds*** *Level and smooth transitions are required between internal and external doorways. The detailed construction documentation will need to detail this junction.*

3.11. Switches

NCC Reference	DP1(a)(iii) Access for people with a disability
Australian Standard Reference:	Clause 14 (Switches and General Purpose Outlets) of AS1428.1 2009
Requirement to be Satisfied:	All switches and controls on an accessible path of travel, other than general purpose outlets, shall be located not less than 900 mm nor more than 1100 mm above the plane of the finished floor and not less than 500 mm from internal corners.

3.11.1. General

The operation of some of the doors within this development may be connected to the building access control system.

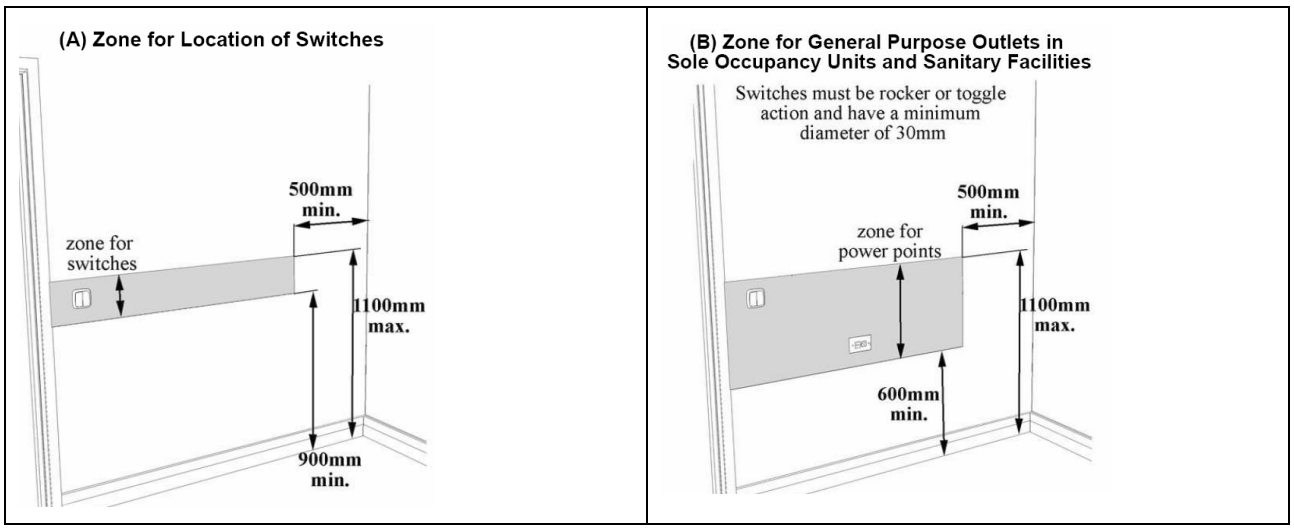
3.11.2. Video Intercoms

Any video intercom units will need to be installed in accordance with the manufacturer's instructions. The video intercom unit will need to be installed not closer than 500mm to an internal corner.

3.11.3. Access Control

Access control swipe or fob readers will need to be installed between 900-1100mm AFFL and not closer than 500mm to an internal corner.

Door release buttons will need to be located between 900-1100mm AFFL and not closer than 500mm to an internal corner. The door release button will need to be the large format switches (35 x 35mm rocker switch) or the "mushroom" push button type.

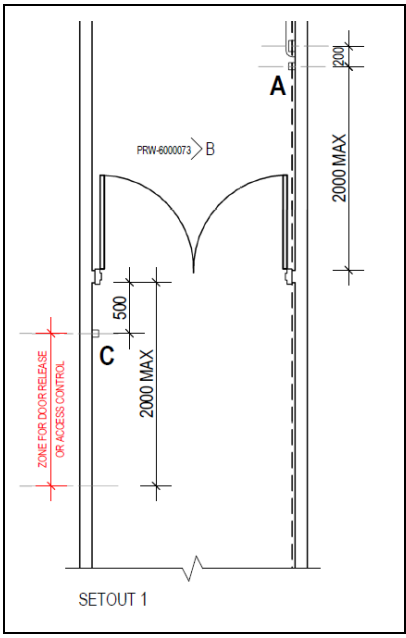




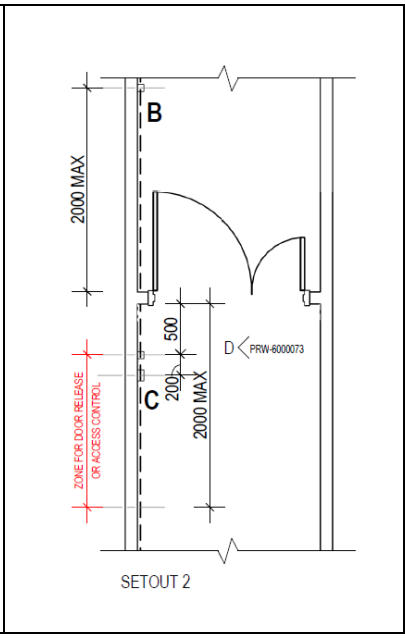




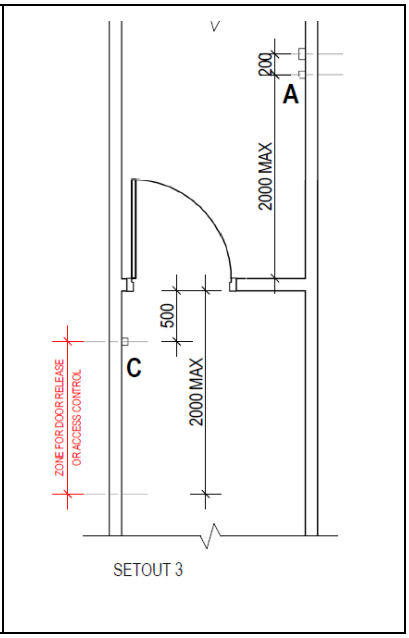
The following diagrams have been prepared to indicate the location of Light switches card readers, push to exit buttons and the like in relation to doorways.



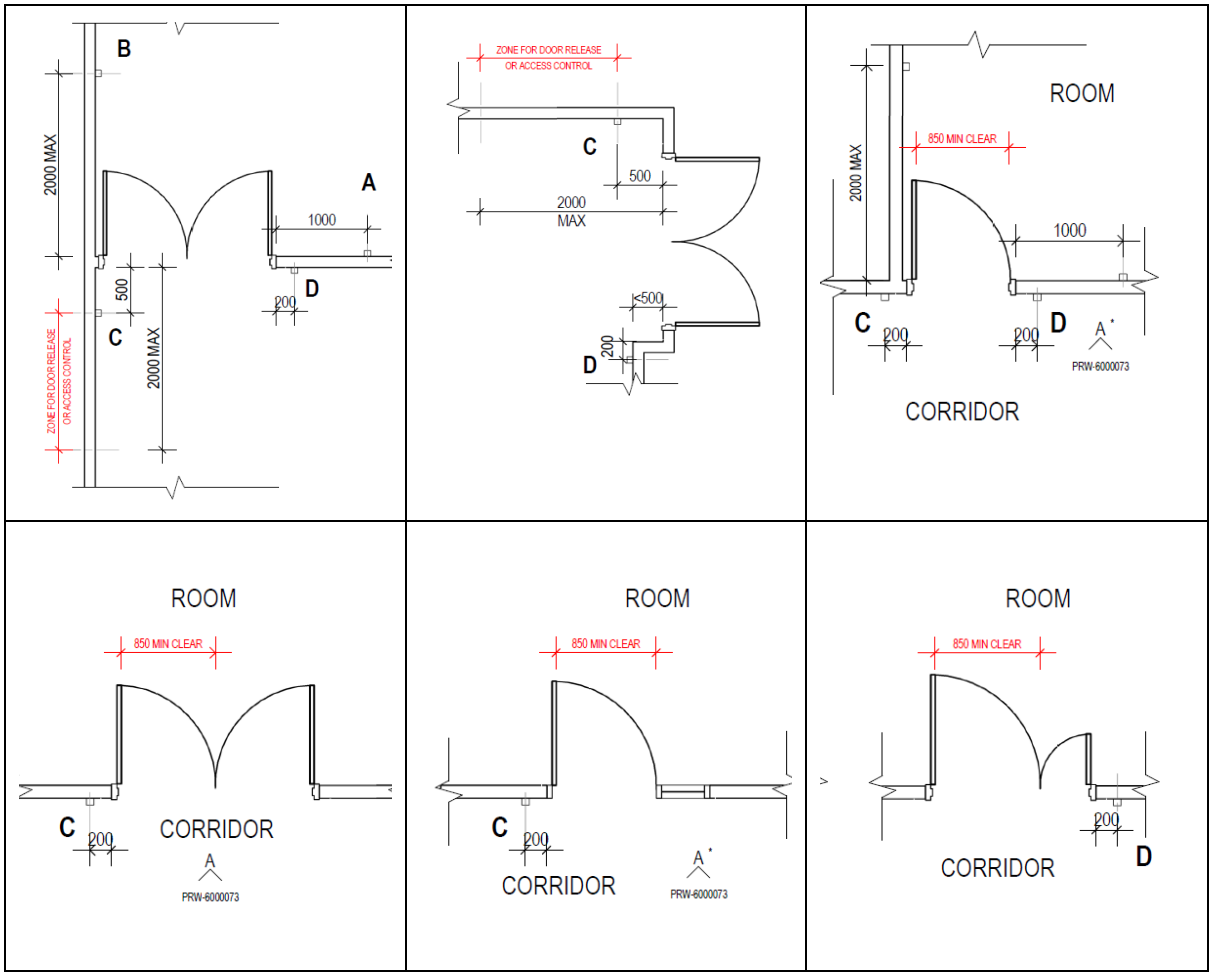
SETOUT 1



SETOUT 2



SETOUT 3



3.11 ***Switches –*** Details of the setout of switches will need to be provided as part of the detailed construction documentation to be prepared for this project.

3.12. Vertical transport

NCC Reference:	DP1(a)(iii) Access for people with a disability
	EP3.4 Lift access for people with a disability
	D3.3 Parts of buildings to be accessible
	E3.6 Passenger Lifts
Australian Standard Reference:	AS1735.12:1999 Lifts, Escalators and Moving Walks
	AS1735.12:2020 Lifts, Escalators and Moving Walks

3.12.1. Lifts - Overview

Passenger lifts will be provided as part of this development.

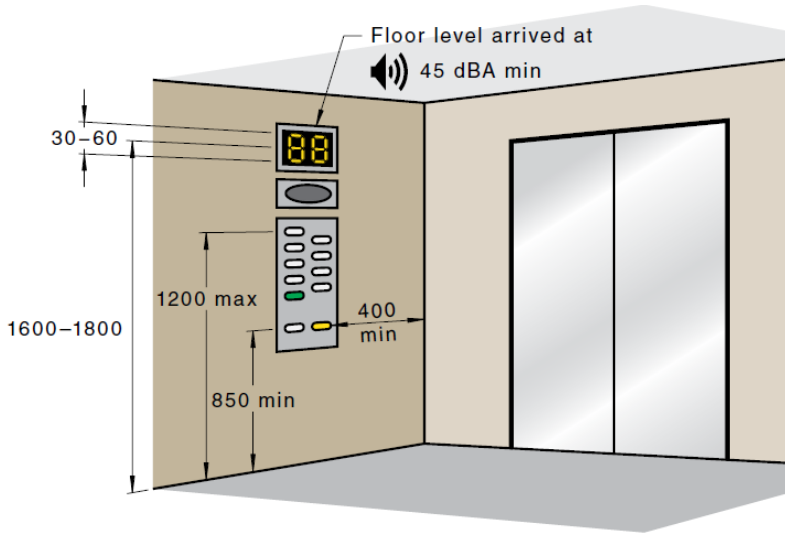
The detailing of the lift cars will need to satisfy the requirements of NCC Clause E3.6, the provisions of AS1735.12.

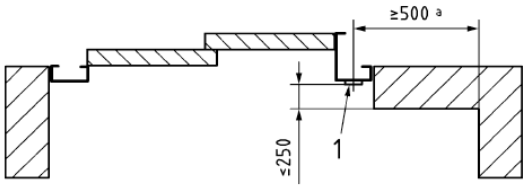
The provision of a lift service designed to the provisions of AS1735.12:2020 will address the Categories of Disability considered at Annex A of AS1735.12.

3.12.2. AS1735.12:2020 Assessment

The lift design will need to satisfy the provisions of AS1735.12:2020. The following table identifies the accessible features to be provided.

<table>
<tr><th>Cl</th><th>Requirement</th><th>Status</th></tr>
<tr><td>5.1.2</td><td>Luminance Contrast (comply with Table 2)
Table 2 — Minimum difference of light reflectance value (LRV)
<table>
<tr><th rowspan="2">Clause</th><th rowspan="2">Item</th><th colspan="2">At landings</th><th colspan="2">In the car</th></tr>
<tr><th>Minimum LRV point difference</th><th>Viewing angle</th><th>Minimum LRV point difference</th><th>Viewing angle</th></tr>
<tr><td>Table 4, item c)</td><td>Active part of push buttons to their surrounding</td><td>30</td><td>45° above horizontal</td><td>30</td><td>45° above horizontal</td></tr>
<tr><td>Table 4, item d)</td><td>Face plate to its surrounding</td><td>30</td><td>Perpendicular</td><td>30</td><td>Perpendicular</td></tr>
<tr><td>Table 4, item j)</td><td>Symbols on push buttons to active areas</td><td>30 (60 recommended)</td><td>45° above horizontal</td><td>30 (60 recommended)</td><td>45° above horizontal</td></tr>
<tr><td>5.4.3.3 c)</td><td>Lift identification to background</td><td>30 (60 recommended)</td><td>Perpendicular</td><td>-</td><td>-</td></tr>
</table></td><td>Additional Information to be provided</td></tr>
<tr><td>5.1.3</td><td>When an audible signal or voice announcement is required, the sound shall be adjustable between 35dB(A) and at least 65dB(A) to suit the site conditions.</td><td>Additional Information to be provided</td></tr>
<tr><td>5.2.1</td><td>The clear opening door width shall be at least 900mm for Type 2 cars</td><td>Additional Information to be provided</td></tr>
<tr><td>5.2.2</td><td>Minimum door dwell time – 6s</td><td>Additional Information to be provided</td></tr>
</table>

Cl	Requirement	Status
5.3.1	Table 3 Minimum car dimensions - Type 2 lift car - 1100 x 1400mm (630kg) Car decorations that reduce the minimum car dimensions shall not exceed 15mm in thickness. Any protruding decorations shall not extend below 800mm AFFL.	Additional Information to be provided
5.3.2.1	A handrail shall be installed on the side wall where the car operating panel is located.	Additional Information to be provided
	(a) The handrail shall be interrupted where the car operating panel is located	Additional Information to be provided
	(b) Handrail length to be a minimum of 400mm	Additional Information to be provided
	(c) The cross section of the handrail is to be between 30-45mm with a minimum radius of 10mm	Additional Information to be provided
	(d) The distance between the wall and the gripping part of the handrail shall be at least 35mm	Additional Information to be provided
	(e) The top of the rail shall be 900+/-25mm AFFL	Additional Information to be provided
	(f) The ends of the rail shall be closed.	Additional Information to be provided
5.3.2.3	For Type 2 cars a device shall be installed to enable passengers to observe obstacles behind them when moving backwards out of the car	Additional Information to be provided
5.3.2.4	The car floor shall be slip resistant (P3/R10)	Additional Information to be provided
5.4.2	Control devices and signals for collective control systems (Refer to Table 4 of AS1735.12:2020)  **Figure ZA.1 — In car control station**	Additional Information to be provided

Cl	Requirement	Status
5.4.2.2	Landing control devices The minimum setout of landing control devices is to be as follows:  **Key** 1 landing button a preferably 700 **Figure 3 — Arrangement of landing buttons**	Additional Information to be provided
ZA.5.2	Raised tactile and braille signs identifying both the lift car and building level shall be provided on both sides of every lift landing door frame. Signs shall be visible from inside the lift car. 	Additional Information to be provided
ZA.6	Lift identification sign content shall be in accordance with AS1428.4.2.	Additional Information to be provided

3.12.2 Vertical transport - Detailed lift drawings will need to be prepared and provided for review.

3.12.2 Vertical transport - A design certificate will need to be provided from the lift supplier indicating compliance with AS1735.12:2020.

3.12.2 Vertical transport - *A lift installation certificate referencing the NCC performance requirement of EP4, NCC Clause E3.6 and AS1735.12:2020 will need to be provided for the issue of the OC Access Installation Certificate.*

3.12.3. Low rise platform lifts (external areas) Rise not more than 2m

The design will need to provide a platform lift to provide accessible access to the upper roof terrace which has been nominated as a Yoga area. Where the rise is not more than 2m the low-rise platform lift will need to meet the requirements of NCC Tables E3.6(a) and E3.6(b).

The size of the platform is to be 1100 x 1400mm and not as noted in Australian Standard AS1735.15.

3.12.3	***Vertical transport Low rise Platform Lift – Less than 2m rise -*** *Detailed lift drawings will need to be prepared and provided for review.*

3.13. Carparking

NCC Reference:	DP1(a)(iii) Access for people with a disability
	DP8(a) and (b)
	D3.5 Accessible Parking
Australian Standard Reference:	AS 2890.6:2009 Carparking
	AS 1680.2.1:2008 Carparking (undercover)

3.13.1. Carparking - overview

The plan proposes parking within the basements of this development. A total of 105 parking spaces are proposed. A minimum of 11 accessible parking spaces are required to be provided for this project.

The design proposes 11 accessible parking spaces. These parking spaces are to be allocated to the title of the adaptable dwellings provided within this development. This requirement has been satisfied. Although NCC Table D3.5 does not require any accessible parking spaces for Class 2 residential development.

Compliance:	The provision of 11 accessible parking spaces for this development satisfies the provisions of AS4299:1995.

3.13.2. Accessible Carparking – Residential

Accessible parking spaces in accordance with the provisions of Clause 3.7.2 of AS4299:1995. The spatial requirements nominated in AS2890.6:2009 may also be implemented for the adaptable dwellings provided in this development.

1 accessible parking space is required as per each adaptable dwelling provided. The accessible parking space is to be provided on the title of each adaptable dwelling. The international symbol of access is not to be painted on the floor or theses accessible parking spaces.

3.13.3. Carparking – Clearance Aisleway

A 2200mm high clear path of travel is to be provided within the traffic aisle ways of the carpark.

3.13.3	***Carparking – Clearance Aisleway -*** *The detailed construction documentation will need to demonstrate the aisleways have a clear 2200mm clearance.*

3.13.4. Carparking – Clearance parking bays

A clear zone of 2500mm will need to be provided above the accessible parking space, the adjacent shared zone and the shared zone located within the traffic aisle associated with the accessible parking space.

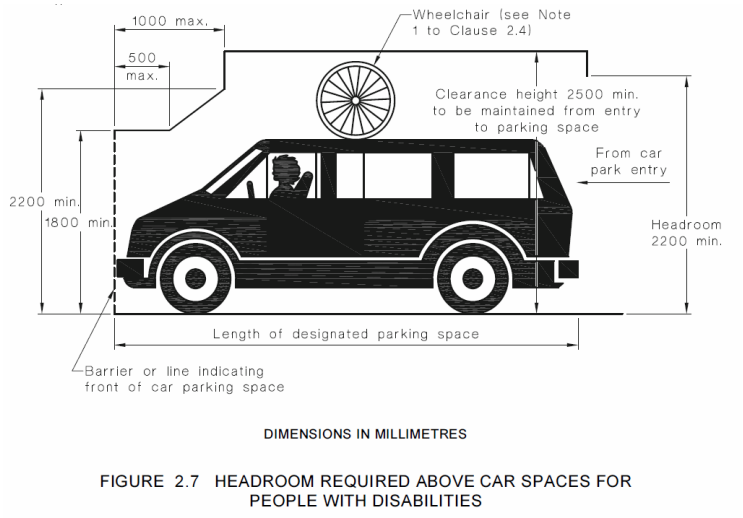


Figure 25 – Fig. 2.7 of Section 2 AS2890.6 2009

3.13.4 ***Carparking – Clearance parking bays -*** *The detailed construction documentation will need to demonstrate compliance with the 2500mm clearance above the parking bay and adjacent shared zone.*

3.14. Swimming Pool

NCC Reference:	DP1(a)(iii) Access for people with a disability
	Table D3.1 Requirements for access for people with a disability
	D3.10 Swimming Pools
	Specification D3.10 Accessible water entry/exit for swimming pools

3.14.1. Swimming pool

The design proposes a rooftop swimming pool

The design perimeter of the swimming pool is approximately 28lm.

NCC table requires that accessible access be provided into swimming pools where the perimeter of the pool is more than 40lm.

There is no statutory requirement to provide accessible access into this swimming pool.

3.15. Unit designs

3.15.1. ADG requirements

The development comprises 53 dwellings. Section 4Q of the Apartment design Guidelines requires that 26% of all dwellings provided satisfy the requirements of the LHA Design Guidelines.

3.15.2. Silver LHA dwellings

43 dwellings within this development will need to satisfy the LHA Silver design requirements as proposed on plans.

The table following identify the silver LHA design guideline requirements to be achieved in this development.

1. DWELLING ACCESS	
SILVER CRITERIA	**ASSESSMENT**
a. Provide a safe and continuous pathway from:	
i. the front boundary of the allotment; or	Satisfied
ii. a car parking space, where provided, which may include the driveway on the allotment, to an entrance that is level (step- free) as specified in Element 2.	N/A
b. The path of travel as referred to in (a) should have a minimum clear width of 1000mm and –	Information to be provided with CC
i. an even, firm, slip resistant surface;	Information to be provided with CC
ii. a crossfall of not more than 1:40;	Information to be provided with CC
iii. a maximum pathway slope of 1:14, with landings provided at no greater than 9m for a 1:14 ramp and no greater than 15m for ramps steeper than 1:20. Landings should be no less than 1200mm in length; and	N/A
iv. be step-free	Information to be provided with CC
c. A step ramp may be incorporated at an entrance doorway where there is a change in height of 190mm or less. The step ramp should provide:	N/A
i. a maximum gradient of 1:10	N/A
ii. a minimum clear width of 1000mm (please note: width should reflect the pathway width)	N/A
iii. a maximum length of 1900mm	N/A
Level landings no less than 1200mm in length, exclusive of the swing of the door or gate than opens onto them, must be provided at the head and foot of the ramp	N/A

2. DWELLING ENTRANCE	
SILVER CRITERIA	**ASSESSMENT**
a. The dwelling should provide an entrance door with -	
i. a minimum clear opening width of 820mm;	Satisfied

2. DWELLING ENTRANCE	
SILVER CRITERIA	**ASSESSMENT**
ii. a level (step-free) transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled); and	Information to be provided with CC
iii. reasonable shelter from the weather.	Satisfied
b. A level landing area of at least 1200mm x 1200mm should be provided at the level (step free) entrance door	Information to be provided with CC
c. Where the threshold at the entrance exceeds 5mm and is less than 56mm, a ramped threshold may be provided (see Figure 1(b))	Information to be provided with CC
d. The level (step-free) entrance should be connected to the safe and continuous pathway as specified in Element 1	Information to be provided with CC
The entrance must incorporate waterproofing and termite management requirements as specified in the NCC.	Information to be provided with CC

3. INTERNAL DOORS & CORRIDORS	
SILVER CRITERIA	**ASSESSMENT**
a. Doorways to rooms on the entry level used for living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment purposes should provide	
i. a minimum clear opening width of 820mm and	Satisfied
ii. a level transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled).	Information to be provided
b. Internal corridors/passageways to the doorways referred to in (a) should provide a minimum clear width of 1000mm	Information to be provided with CC

4. TOILET	
SILVER CRITERIA	**ASSESSEMNT**
a. Dwellings should have a toilet on the ground (or entry) level that provides:	
i. a minimum clear width of 900mm between the walls of the bathroom if located in a separate room; and	Information to be provided with CC
ii. a minimum 1200mm clear circulation space forward of the toilet pan exclusive of the swing of the door in accordance with Figure 3(a).	Information to be provided with CC
b. If the toilet is located within the ground (or entry) level bathroom, the toilet pan should be located in the corner of the room to enable the installation of grabrails	Satisfied

5. SHOWER	
SILVER CRITERIA	**ASSESSMENT**
a. One bathroom should feature a slip resistant, hobless (step- free) shower recess. Shower screens are permitted provided they can be easily removed at a later date	Information to be provided
b. The shower recess should be located in the corner of the room to enable the installation of grabrails at a future date	Satisfied

6. REINFORCEMENT OF BATHROOM & TOILET WALLS	
SILVER CRITERIA	**ASSESSMENT**
a. Except for walls constructed of solid masonry or concrete, the walls around the shower, bath (if provided) and toilet should be reinforced to provide a fixing surface for the safe installation of grabrails.	Information to be provided with CC
b. The walls around the toilet are to be reinforced by installing: i. noggings with a thickness of at least 25mm in accordance with Figure 6(a); or ii. sheeting with a thickness of at least 12mm in accordance with Figure 6(b).	
c. The walls around the bath are to be reinforced by installing: i. noggings with a thickness of at least 25mm in accordance with Figure 7(a); or ii. sheeting with a thickness of at least 12mm in accordance with Figure 7(b).	
d. The walls around the hobless shower recess are to be reinforced by installing: i. noggings with a thickness of at least 25mm in accordance with Figure 8(a); or ii. sheeting with a thickness of at least 12mm in accordance with Figure 8(b).	

7. INTERNAL STAIRWAYS	
SILVER CRITERIA	**ASSESSMENT**
a. Stairways in dwellings must feature: i. a continuous handrail on one side of the stairway where there is a rise of more than 1m.	Information to be provided

3.16. Lighting

Australian Standard Reference: Clause 19 of AS1428.2:1992
Appendix D of AS1680.2.1:2008

The plans presently do not indicate the minimum lighting levels to be achieved. It will be necessary that the Construction Certificate documentation confirm that the minimum lighting levels nominated by the Australian Standards are achieved.

In additional to the minimum lighting levels identified at Clause 19 of AS1428.2:1992 the provisions of Table D1 of AS168.2.1:2008 which nominates interior light levels to be achieved must be considered.

The following table schedules the lighting levels nominated within the Australian Standards for accessibility:

LOCATION	CLAUSE 19 AS1428.2:1992	APPENDIX D AS1680.2.1:2008
Entrances, passages & walkways	150lx	160lx
Corridors Passageways	-	40lx
Accessible parking spaces	-	40lx

***3.16. Lighting** - Information to be provided as part of the documentation to be issued for the OC.*

3.17. Adaptable Housing

Australian Standard Reference: AS4299:1995 Adaptable Housing

Appendix A of AS4299:1995 Class C

20% of all dwellings within this development will need to be adaptable to satisfy Councils DCP requirements. A total of 11 dwellings are to be designed to AS4299:1995 Class C.

The plans list the following dwellings as the adaptable dwellings to be provided as part of this development.

• Ground	3 BED	TH UG06
• Level 1	3 BED	U101
• Level 1	3 BED	TH UG06
• Level 2	1 BED	U202
• Level 2	3 BED+	U205
• Level 2	2 BED	U206
• Level 3	1 BED	U302
• Level 3	3 BED+	U305
• Level 3	2 BED	U306
• Level 4	1 BED	U402
• Level 4	3 BED	U405
• Level 4	2 BED	U406

Compliance: ***Adaptable Dwellings –*** *Drawings TP04.20 - TP04.22 provide pre and post adaptation drawings of the adaptable dwellings to be provided.*

The following Table summarises the requirements to be satisfied for adaptable Housing (AS4299 Class C).

Modified Extract

APPENDIX A - AS4299-1995

SCHEDULE OF FEATURES FOR ADAPTABLE HOUSING

CLASS C

Review undertaken by iAccess Consultants

(a division of iAccess Group Pty Ltd ACN 37 002 648 615)

The table shown below indicates essential features to be incorporated into a housing unit for it to be termed an 'Adaptable House'. All essential items are pre-checked in the 'essential' features column.

Prior to commencing construction, the Architect is to sign the checklist to certify that the essential features have been incorporated into the design.

The Head Contractor must initial the second column to certify that each essential feature has been incorporated into the building (prior to Handover).

The Head Contractor shall sign the checklist signifying achievement of Class C adaptability.

Although this table is generally completed for OC, it is provided as part of this CC Access Report for reference.

Item No.	Room/Item	Clause No.	Essential	
			Required feature	Certified by
	DRAWINGS			
1	Provision of drawings showing the housing unit in its pre-adaptation and post-adaptation stages	2.3	√	R Seidman
	SITING			
3	A continuous accessible path of travel from street frontage and vehicle parking to entry complying with AS 1428.1	3.3.2	√	*Requirement is capable of being satisfied*
	LETTERBOXES IN ESTATE DEVELOPMENTS			
11	Letterboxes to be on hard standing area connected to accessible pathway	3.8	√	R Seidman
	PRIVATE CAR ACCOMMODATION			
14	Carparking space or garage min. area 5.4m ×3.8 m	3.7.2	√	R Seidman
16	Internal clearance of garage or carport 2.5 m min.	3.7.2	√	R Seidman
	ACCESSIBLE ENTRY			
20	Accessible entry	4.3.1	√	*Requirement is capable of being satisfied*
22	Accessible entry to be level (i .e. max. 1:40 slope)	4.3.2	√	*Requirement is capable of being satisfied*
23	Threshold to be low-level	4.3.2	√	*Requirement is capable of being satisfied*
24	Landing to enable wheelchair manoeuvrability	4.3.2	√	*Requirement is capable of being satisfied*
25	Accessible entry door to have 850 mm min. clearance	4.3.1	√	R Seidman
27	Door lever handles and hardware to AS 1428.1	4.3.4	√	*Requirement is capable of being satisfied*
	INTERIOR: GENERAL			
32	Internal doors to have 820 mm min. clearance	4.3.3	√	R Seidman
33	Internal corridors min. width of 1000 mm	4.3.7	√	*Requirement is capable of being satisfied*
34	Provision for compliance with AS 1428.1 for door approaches	4.3.7	√	*Requirement is capable of being satisfied*
	LIVING ROOM & DINING ROOM			

Item No.	Room/Item	Clause No.	Essential	
			Required feature	Certified by
36	Provision for circulation space of min. 2250 mm diameter	4.7.1	√	Satisfied
38	Telephone adjacent to GPO	4.7.4	√	*Requirement is capable of being satisfied*
41	Potential illumination level min. 300 lux	4.10	√	*Requirement is capable of being satisfied*
	KITCHEN			
42	Minimum width 2.7 m (1550 mm clear between benches)	4.5.2	√	Satisfied
43	Provision for circulation at doors to comply with AS 1428.1	4.5.1	√	Not applicable
44	Provision for benches planned to include at least one work surface of 800 mm length, adjustable in height from 750 mm to 850 mm or replaceable. Refer to Figure 4.8	4.5.5	√	*Requirement is capable of being satisfied*
45	Refrigerator adjacent to work surface	4.5.5	√	*Requirement is capable of being satisfied*
46	Kitchen sink adjustable to heights from 750 mm to 850 mm or replaceable	4.5.6	√	*Requirement is capable of being satisfied*
47	Kitchen sink bowl max. 150 mm deep	4.5.6	√	*Requirement is capable of being satisfied*
48	Tap set capstan or lever handles or lever mixer	4.5.6(e)	√	*Requirement is capable of being satisfied*
49	Tap set located within 300 mm of front of sink	4.5.6(e)	√	*Requirement is capable of being satisfied*
51	Cooktops to include either front or side controls with raised cross bars	4.5.7	√	*Requirement is capable of being satisfied*
52	Cooktops to include isolating switch	4.5.7	√	*Requirement is capable of being satisfied*
53	Work surface min. 800 mm length adjacent to cooktop at same height	4.5.7	√	*Requirement is capable of being satisfied*
54	Oven located adjacent to an adjustable height or replaceable work surface	4.5.8	√	*Requirement is capable of being satisfied*
59	GPOs to comply with AS 1428.1. At least one double GPO within 300 mm of front of work surface	4.5.11	√	*Requirement is capable of being satisfied*
60	GPO for refrigerator to be easily reachable when the refrigerator is in its operating position	4.5.11	√	*Requirement is capable of being satisfied*

Item No.	Room/Item	Clause No.	Essential	
			Required feature	Certified by
61	Slip-resistant floor surface	4.5.4	√	*Requirement is capable of being satisfied*
	MAIN BEDROOM			
62	At least one bedroom of area sufficient to accommodate queen size bed and wardrobe and circulation space requirements of AS 1428.2	4.6.1	√	*Requirement is capable of being satisfied*
	BATHROOM			
75	Provision for bathroom area to comply with AS 1428.1	4.4.1	√	Satisfied
76	Slip-resistant floor surface	4.4.2	√	*Requirement is capable of being satisfied*
77	Shower recess - no hob. Minimum size 1160 × 1100 to comply with AS 1428.1. (Refer Figures 4.6 and 4.7)	4.4.4(f)	√	*Requirement is capable of being satisfied*
78	Shower area waterproofed to AS 3740 with floor to fall to waste	4.4.4(f)	√	*Requirement is capable of being satisfied*
79	Recessed soap holder	4.4.4(f)	√	*Requirement is capable of being satisfied*
80	Shower taps positioned for easy reach to access side of shower sliding track	4.4.4(f)	√	*Requirement is capable of being satisfied*
82	Provision for adjustable, detachable hand held shower rose mounted on a slider grabrail or fixed hook (plumbing and wall – strengthening provision)	4.4.4(h)	√	*Requirement is capable of being satisfied*
83	Provision for grabrail in shower (Refer to Figure 4.7) to comply with AS 1428.1	4.4.4(h)	√	*Requirement is capable of being satisfied*
86	Tap sets to be capstan or lever handles with single outlet	4.4.4(c)	√	*Requirement is capable of being satisfied*
88	Provision for washbasin with clearances to comply with AS1428.1	4.4.4(g)	√	*Requirement is capable of being satisfied*
90	Double GPO beside mirror	4.4.4(d)	√	*Requirement is capable of being satisfied*
	TOILET			
92	Provision of either 'visitable toilet' or accessible toilet	4.4.3	√	Information to be provided
93	Provision to comply with AS 1428.1	4.4.1	√	*Requirement is capable of being satisfied*
94	Location of WC pan at correct distance from fixed walls	4.4.3	√	*Requirement is capable of being satisfied*

Item No.	Room/Item	Clause No.	Essential	
			Required feature	Certified by
95	Provision for grab rail zone. (Refer Figure 4.6)	4.4.4(h)	√	*Requirement is capable of being satisfied*
96	Slip resistant floor surf ace. (Vitreous tiles or similar)	4.4.2	√	*Requirement is capable of being satisfied*
	LAUNDRY			
98	Circulation at doors to comply with AS 1428.1	4.8	√	Satisfied
99	Provision for adequate circulation space in front of or beside appliances (min. 1550 mm depth)	4.8	√	*Requirement is capable of being satisfied*
100	Provision for automatic washing machine	4.8(e)	√	*Requirement is capable of being satisfied*
102	Where clothes line is provided, an accessible path of travel to this	4.8(a)	√	*Requirement is capable of being satisfied*
105	Double GPO	4.8(g)	√	*Requirement is capable of being satisfied*
108	Slip-resistant floor surface	4.9.1	√	*Requirement is capable of being satisfied*
	DOOR LOCKS			
110	Door hardware operable with one hand, located 900–1100 mm above floor	4.3.4	√	*Requirement is capable of being satisfied*

3.17 ***Adaptable Housing*** *- The completion of the* ***AS4299 Schedule of features for adaptable housing*** *will need to be completed as part of the detailed construction documentation to be prepared for this project.*

4. Disability (Access to Premises - Buildings) Standard 2010 – Compliance Summary

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE	ACTION / COMMENT
A4.1	**Classifications** **Class 2** – Residential **Class 7a - Parking**	Note	
DP1	**Performance requirement** Access must be provided, to the degree necessary, to enable: a) people to: i. approach the building from the road boundary and from any *accessible* carparking spaces associated with the building; and	Satisfied	
	ii. approach the building from any accessible associated building; and	Satisfied	
	iii. access work and public spaces, accommodation and facilities for personal hygiene; and	Satisfied	
	b) Identification of accessways at appropriate locations which are easy to find.	Satisfied	
DP4	**Performance requirement** *Exits* must be provided from a building to allow occupants to evacuate safely, with their number, location and dimensions being appropriate to: a) the travel distance; and b) the number, mobility and other characteristics of occupants; and c) the function or use of the building; and d) the height of the building; and e) Whether the *exit* is from above or below ground level.	Satisfied	

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE	ACTION / COMMENT
DP6	**Performance requirement** So that occupants can safely evacuate the building, *accessways* to *exits* must have dimensions appropriate to: a) the number, mobility and other characteristics of occupants; and b) the function or use of the building.	Satisfied	
DP8	**Performance requirement** Carparking spaces for use by people with a disability must be: 1. provided, to the degree necessary, to give equitable access for carparking; and 2. designated and easy to find.	Satisfied	
DP9	**Performance requirement** An inbuilt communication system for entry, information, entertainment, or for the provision of a service, must be suitable for occupants who are deaf or hearing impaired.	Not Applicable	
D3.1	**General Building Access Requirements Class 2 — a building containing 2 or more sole-occupancy units each being a separate dwelling.,**		
Table D3.1	From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level. To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed— (a) to the entrance doorway of each sole-occupancy unit; and (b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp.	Satisfied	
D3.1	**General Building Access Requirements Class 7a -Parking**		

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE	ACTION / COMMENT
Table D3.1	To and within all areas normally used by the occupants	Additional Information to be provided	
D3.2	**Access to Buildings**		
	(1) An *accessway* must be provided: (a) to a building *required* to be *accessible*;	Satisfied	
	(b) from the main points of a pedestrian entry at the allotment boundary; and	Satisfied	
	I. from another *accessible* building connected by a pedestrian link; and	Not Applicable	
	II. from any required accessible carparking space on the allotment.	Satisfied	
	(2) In a building *required* to be *accessible,* an *accessway* must be provided through the principal pedestrian entrance, and: a. through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and b. in a building with a total *floor area* more than 500sqm, a pedestrian entrance which is not *accessible* must not be located more than 50 m from an *accessible* pedestrian entrance. Except for pedestrian entrances serving only areas exempted by clause D3.4.	Additional Information to be provided	
D3.3	**Parts of buildings to be accessible**		
	In a building *required* to be *accessible*: a) every ramp and stairway, except for ramps and stairways in areas exempted by clause D3.4, must comply with:		
	i. for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and	Additional Information to be provided	
	ii. for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1;	Additional Information to be provided	
	iii. for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1;	Additional Information to be provided	

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE	ACTION / COMMENT
	b) every passenger lift must comply with clause E3.6;	Additional Information to be provided	
	c) *accessways* must have: i. passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an accessway where a direct line of sight is not available: and ii. turning spaces complying with AS 1428.1: A. within 2m of the end of *accessways where* it is not possible to continue travelling along the *accessway*; and B. at maximum 20 m intervals along the *accessway*;	Satisfied	
	d) an intersection of *accessways* satisfies the spatial requirements for a passing and turning space;	Satisfied	
	e) a passing space may serve as a turning space;	Satisfied	
	f) a ramp complying with AS 1428.1 or a passenger lift need not be provided to serve a *storey* or level other than the entrance *storey* in a Class 5, 6, 7b or 8 building- (i) containing not more than 3 *storeys*; and (ii) with a *floor area* for each *storey*, excluding the entrance *storey*, of not more than 200sqm.	Not Applicable	
D3.5	**Carparking**	Satisfied	
D3.6	**Signage**	Additional Information to be provided	
D3.7	**Hearing Augmentation**	Not Applicable	
D3.8	**Tactile Indicators**	Additional Information to be provided	
D3.9	**Wheelchair seating**	Not Applicable	

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE	ACTION / COMMENT
D3.10	**Swimming pool**	Not Applicable	The perimeter of the swimming pool is less than 40lm. Accessible access into the pool is not required to be provided.
D3.11	**Ramps (Connecting Ramps)**	Not Applicable	
D3.12	**Glazing on an accessway** On an *accessway*, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with Clause 6.6 of AS 1428.1.	Additional Information to be provided	
Part D4	**Braille & Tactile Signs**	Additional Information to be provided	The signage detailing will need to comply with the provisions of Clause D3.6 and Specification D3.6 of the BCA as well as Clauses 16.3 and 17 of AS1428.2 which addresses the size of the pictogram as well as the height of lettering.
Part E3	**Lift Installation**	Additional Information to be provided	
Part F2	**Sanitary and other facilities**	Not Applicable	

STATEMENT OF EXPERTISE



Name	**Richard Seidman**
Qualifications	• 2019 Diploma in Access (Access Institute) • 2018 Accredited Access Consultant • 2014 Accredited assessor Livable Housing Australia • 2011 Certificate IV Access Consulting (IATA) • 2008 Accredited Green Star Professional (GBCA) • 2007 Graduate Diploma in Building Surveying (Fire Engineering) University of Western Sydney • 2005 Masters in Property Development University of Technology (Graduating 1st in year) • 1999 Graduate Diploma in Architectural Design Science (Facilities Management) University of Sydney • 1983 Bachelor of Architecture (Hons) University of NSW
Memberships	• Royal Australian Institute of Architects (No. 4700) • NSW Architects Registration Board (No. 4829) • Association of Consultants in Access Australia (Accredited Access Consultant No 330) • Livable Housing Australia (10041)
Experience	Richard Seidman has practised for more than 35 years in the built environment and has developed extensive skills and expertise in the residential, commercial, industrial, health, retail, education and transport industries. Richard has extensive expertise in all aspects of AS1428, AS4299 and AS2890.6 which has been honed as part of the plan check role undertaken as part of the NBESP Social Housing Initiative undertaken for the Department of Human Services – Housing NSW and 10 years' experience with Westfield Design and Construction in the capacity of Project Design Manager. In 2010 Richard established iAccess Consultants a division of iAccess Group Pty Ltd. Since 2010 Richard has undertaken a wide range of consultancies

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DISABLED ACCESS & EGRESS – DESIGN STATEMENT – LEC Submission [A]

DATE	**27 May 2022**
Job No:	**IAC-1571**
Project Name	**Residential Development**
Address	**1 Gatacre Ave and 5 Allison Ave Lane Cove NSW 2066**
Part of Building to be certified	**Whole of building**

Pursuant to NCC 2019 (Amendment 1) Clause A5.2(1)(e)(i) Evidence of Suitability I hereby certify that:

a) A review of the Development Application Documentation was undertaken on 24 May 2022.

b) The Development Application documentation prepared for this project reflects compliance with the nominated Standards of Performance for accessibility in accordance with the applicable Act, Code and Australian Standards.

c) The documentation prepared indicates that the design is capable of satisfying Part D3 of the National Construction Code 2019 Vol 1 Amendment 1 and the Disability (Access to Premises – Buildings) Standard provisions of the Disability Discrimination Act 1992.

d) Compliance with the applicable performance requirements of the National Construction Code 2019

The design as proposed complies with the following NCC access Performance Requirements. Compliance has been achieved by a combination of Deemed to Satisfy and Performance Solution approaches.

- DP1 Access for people with a disability
- DP2 Safe movement to and within a building
- DP4 Provision of Exits
- DP6 Paths of travel to Exits
- DP8 Carparking
- EP3.4 Passenger lifts
- FP2.1 Personal hygiene facilities

e) The table following confirms compliance with the requirements of the National Construction Code 2019 Vol 1 Amendment 1.

MEASURE AND/OR SYSTEM	STANDARDS OF PRACTICE	N/A	SATISFIED DETAIL TO BE PROVIDED AS PART OF THE CONSTRUCTION CERTIFICATE DOCUMENTATION
D3.1	**Access into and within the building** BCA 2019 Vol 1 Amendment 1 Part D3 and AS1428.1-2009 & AS1428.2:1992	☐	✓
D3.2	**Access to Buildings** – AS1428.1:2009	☐	✓
D3.3	**Parts of Buildings to be accessible** – AS1428.1:2009	☐	✓
D3.4	**Exemptions**	☐	✓
D3.5	**Accessible parking** –AS2890.6:2009	☐	✓
D3.6	**Braille & Tactile signage** NCC 2019 Vol 1 Amendment 1 Clause D3.6, Specification D3.6 and AS1428.1-2009	☐	✓

DISABLED ACCESS & EGRESS – DESIGN STATEMENT – LEC Submission [A]

DATE	**27 May 2022**
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Part of Building to be certified	**Whole of building**

MEASURE AND/OR SYSTEM	STANDARDS OF PRACTICE	N/A	SATISFIED DETAIL TO BE PROVIDED AS PART OF THE CONSTRUCTION CERTIFICATE DOCUMENTATION
D3.7	**Hearing Augmentation**	✓	☐
D3.8	**Tactile Ground Surface Indicators** NCC 2019 Vol 1 Amendment 1 Clause D3.8 and AS1428.4.1-2009	☐	✓
D3.9	**Wheelchair seating spaces in Class 9b assembly Buildings**	✓	☐
D3.10	**Swimming Pool**	✓	☐
D3.11	**Ramps**	✓	☐
D3.12	**Glazing on an accessway** – AS1428.1:2009	☐	✓
Specification D3.6	**Braille & Tactile Signs**	☐	✓
Part E3	**Lift Installations** NCC 2019 Vol 1 Amendment 1 Clause E3.6 and AS1735.12	☐	✓
Part F2	**Sanitary Facilities** NCC 2019 Vol 1 Amendment 1 Clause F2.4 and AS1428.1-2009	☐	✓

f) Performance Based Design Solutions relied upon:

This Access Design Statements relies on the following Performance Based Design Solutions:

i. Location of lift lobby call button if installed on lift door jamb.
ii. Automation of doorways

g) Compliance with AS1428

The LEC documentation was reviewed on 24 May 2022. This design statement confirms that the works as proposed is capable of satisfying the requirements of AS1428:2009.

h) NCC Clause D3.4 Exemptions

Applying the **NCC D3.4 *Exemptions*** concession the following rooms within this development has been designated as not requiring to be accessible:

- Stores
- Plant areas

i) Documents relied upon

In providing this Statement for the DA we have relied upon the following documents:

- Slip resistance certification issued by the respective floor finishes manufacturers
- Confirmation of compliant lighting levels

DISABLED ACCESS & EGRESS – DESIGN STATEMENT – LEC Submission [A]

DATE	**27 May 2022**
Job No:	**IAC-1571**
Project Name	**Residential Development**
Address	**1 Gatacre Ave and 5 Allison Ave Lane Cove NSW 2066**
Part of Building to be certified	**Whole of building**

j) Architectural Documentation

The following documents form the basis of this access report:

Dwg No	Title	Revision
TP00.00	Cover	C
TP00.01	Development Summary	J
TP01.01	Basement 2	L
TP01.02	Basement 1	L
TP01.03	Ground	N
TP01.04	Level 1	M
TP01.05	Level 2	M
TP01.06	Level 3	E
TP01.07	Level 4	M
TP01.08	Level 5	M
TP04.20	Adaptable Plans	B
TP04.21	Adaptable Plans	C
TP04.22	Adaptable Plans	A

k) Qualifications

I am a properly qualified person and have good working knowledge of the relevant codes and standards referenced above.

My qualifications are:

- M.PropDev (UTS),
- BArch (Hons) (UNSW), ARB Reg No 4829,
- Diploma in ACCESS, ACAA Accredited Access Consultant (No 330)

The information contained in this statement is true and accurate to the best of my knowledge.



Richard Seidman
M.PropDev,
BArch (Hons), ARB Reg No 4829,
Diploma in Access, ACAA (Accredited Access Consultant No 330)
Livable Housing Registered Assessor 10041

DISABLED ACCESS & EGRESS – DESIGN STATEMENT – LEC Submission [A]

DATE	**27 May 2022**
Job No:	**IAC-1571**
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STATEMENT OF EXPERTISE



Name	**Richard Seidman**
Qualifications	• 2019 Diploma in Access (Access Institute) • 2018 Accredited Access Consultant • 2014 Accredited assessor Livable Housing Australia • 2011 Certificate IV Access Consulting (IATA) • 2008 Accredited Green Star Professional (GBCA) • 2007 Graduate Diploma in Building Surveying (Fire Engineering) University of Western Sydney • 2005 Masters in Property Development University of Technology (Graduating 1st in year) • 1999 Graduate Diploma in Architectural Design Science (Facilities Management) University of Sydney • 1983 Bachelor of Architecture (Hons) University of NSW
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martens
consulting engineers since 1989

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Emailed	X	
Courier		
By Hand		
Contact:		Ben McGiffin
Our Ref:		P2008014JC03V01
Pages:		1
cc.		

27 May 2022

WINIM Developments Pty Ltd
C/ Minter Ellison
Attn: Alexander Beal
By email

Dear Alex,

RE: ADDENDUM TO DETAILED SITE INVESTIGATION: 1 GATACRE AVENUE AND 5 ALLISON AVENUE, LANE COVE NSW

This letter has been prepared as an addendum to a detailed site investigation (DSI) report prepared by Martens and Associates (MA) for WINIM Developments Pty Ltd as part of a development application for a multi-story residential development at 1 Gatacre Avenue and 5 Allison Avenue, Lane Cove, NSW (the site).

The DSI comprised a soil and groundwater investigation program which included a total of eight sampling locations completed via the excavation of boreholes. Five of the eight boreholes were converted to groundwater monitoring wells following soil sampling works.

Prior to undertaking the site investigation program, MA were provided with a site survey, completed by Metwest Survey Pty Ltd in 2020, which confirmed the site area as being 2,965.8 m^2.

Table A: Minimum Sampling Points Required for Site Characterisation Based on Detecting Circular Hot Sports by Using a Systematic Sampling Pattern provided in the NSW EPA (1995) *Sampling Design Guidelines* provides the following recommended number of sampling points for site characterisation works:

- For a 2,000 m^2 site - 7 samples.
- For a 3,000 m^2 site - 9 samples.

Based on the surveyed area of 2,965.8 m^2, we confirm that the eight sampling locations completed as part of the DSI meets the requirements of *Table A: Minimum Sampling Points Required for Site Characterisation Based on Detecting Circular Hot Sports by Using a Systematic Sampling Pattern* provided in the NSW EPA (1995) *Sampling Design Guidelines*.

Please call our offices if you have any further queries regarding this matter.

For and on behalf of

MARTENS & ASSOCIATES PTY LTD

Ben McGiffin

BEN MCGIFFIN
BEng Civil & Environmental
Environmental Manager / Senior Environmental Consultant



MBC GROUP

Building Code of Australia 2019 Amendment 1

BCA ASSESSMENT REPORT

Proposed multi-storey residential development
1 Gatacre Avenue
Lane Cove

Prepared for: WINIM | Issue date: 27 May 2022

www.mbc-group.com.au | Suite 3 / 18 Sydney Road, Manly NSW 2095 | 9939 1530

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Authorisation

Revision	Comment / Reason for Issue	Issue Date	Prepared by	Reviewed by
4	Revised architectural plans	27 May 2022		
			Joel Lewis	Seb Howe
			BDC #2335	BDC #2402

Revision History

Revision	Comment / Reason for Issue	Issue Date	Prepared By
1	DA Lodgement	6 May 2021	Joel Lewis
2	Updated as per stakeholder comments	20 July 2021	Joel Lewis
3	Revised DA Lodgement	12 August 2021	Joel Lewis
4	Revised architectural plans	27 May 2022	Joel Lewis

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1 Executive Summary

MBC Group as the appointed Certifier for the proposed development, have reviewed architectural design documents prepared by rothelowman (refer appendix A) for compliance with the National Construction Code - Building Code of Australia Volume One 2019 Amendment 1.

1.1 Performance Solutions - Fire & Life Safety

The assessment of the design documentation has revealed that the following areas are required to be assessed against the relevant Performance Requirements of the BCA in accordance with Clause 25 of the Building and Development Certifiers Regulation 2020. The submission for a Construction Certificate will need to include verification from a Certifier – Fire Safety, where determined permissible under A2.1 of the BCA, for the following aspects: -

DTS Clause	Description of Non-Compliance	Performance Requirement
D1.4	**Exit travel distances** The distance to a point of choice exceeds 20m to the following areas: ▪ Basement – 45m to an exit in lieu of 20m ▪ Ground – 32m to an exit in lieu of 20m ▪ Level 1 – 9m to an exit in lieu of 6m ▪ Level 2-3 – 10m to an exit in leu of 6m ▪ Level 4 – 9m to an exit in leu of 6m ▪ Level 5 – 22m to an exit in lieu of 20m The distance to an exit is required to be less than 40m or addressed against the performance requirements of the BCA and in consultation with Fire and Rescue NSW.	DP4 & EP2.2
D1.5	**Distance between alternative exits** The distance between alternative exits when measured through the point of choice exceed to the following areas: ▪ Basement 2 – 90m in lieu of 60m ▪ Basement 1 – 90 in lieu of 60m The distance between alternative exits is required to be no greater than 60m or addressed	DP4 & EP2.2

DTS Clause	Description of Non-Compliance	Performance Requirement
	against the performance requirements of the BCA and in consultation with Fire and Rescue NSW.	
D1.7	**Travel via fire-isolated exits** ▪ Western stairway discharges within the confines of the building which is not open for 2/3 of its perimeter. ▪ Discharge from the Eastern fire stairs requires passing within 6m of an external wall containing openings. The non-compliances will be required to be re-designed to be in accordance with the deemed-to-satisfy provisions of the BCA or addressed against the performance requirements of the BCA and in consultation with Fire and Rescue NSW.	DP4 & EP2.2
E1.3	**Fire Hydrants** The fire hydrant booster assembly is located that is not within sight of each main entry to each building. The fire hydrant booster assembly is required to be located in accordance with the provisions of AS2419.1-2005 or addressed against the performance requirements of the BCA and in consultation with Fire and Rescue NSW.	EP13

Any Performance Solution relating to category 2 items (CP9, EP1.3, EP1.4, EP1.6, EP2.2, EP3.2) will be subject to consultation and approval by Fire and Rescue NSW as part of the Construction Certificate process.

1.2 Performance Solutions - Accessibility

The assessment of the design documentation has revealed that the following areas are required to be assessed against the relevant Performance Requirements of the BCA in accordance with Clause 25 of the Building and Development Certifiers Regulation 2020. The submission for a Construction Certificate will need to include verification from a Accredited Access Consultant, where determined permissible under A2.1 of the BCA, for the following aspects:

DTS Clause	Description of Non-Compliance	Performance Requirement
	Refer to report prepared by a suitably qualified access consultant	

1.3 Design Details Required

The assessment of the design documentation has revealed that the following areas require further details to demonstrate compliance with the prescriptive provisions of the BCA

DTS Clause	Description
E1.3	Fire hydrant booster is located within 10m from the external wall of the building. A heat shield is required to be provided in accordance with AS2419.1-2005 or addressed against the performance requirements of the BCA.

The documentation will need further detailing such as door hardware, construction specifications, services design and manufacturer's details.

The application for Construction Certificate shall be assessed under the relevant provisions of the Environmental Planning & Assessment Act 1979 (As Amended) and the Environmental Planning & Assessment Regulation 2000.

2 Introduction

MBC Group have been engaged as the BCA Consultant for the development subject of this report by WINIM. This report is based upon a desktop review of architectural details (as listed in Appendix A), presently concept design form against the applicable provisions of the National Construction Code - Building Code of Australia Volume One 2019 Amendment 1.

2.1 Purpose

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy (DtS) provisions of the BCA.

2.2 Methodology

The methodology applied in undertaking this assessment has included: -

- A desktop review of architectural plans, as listed in Appendix A
- Detailed assessment of Sections C, D, E, F, G, H and J (as applicable / relevant) of the BCA
- Discussions with the design development team to gain an understanding of the development proposed.

2.3 Limitations

This report does not include or imply any detailed assessment for design, compliance or upgrading for:

- the structural adequacy or design of the building;
- the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and
- the design basis and/or operating capabilities of any proposed
    - electrical
    - mechanical
    - hydraulic
    - fire protection services.

This report does not include, or imply compliance with:

- the National Construction Code – Plumbing Code of Australia Volume 3
- the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to)
- The deemed to satisfy provisions of Part D3 and F2.4 of BCA 2019 Amendment 1
- The deemed to satisfy provisions of Section J of BCA 2019 Amendment 1
- Demolition Standards not referred to by the BCA;
- Work Healthy and Safety Act 2011;
- An out of cycle change to the Building Code of Australia.
- Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply

Authority, Work Cover, Roads and Maritime Services (RMS), Roads and Transport Authority, Local Council, ARTC, Department of Planning and the like; and
- Conditions of Development Consent issued by the Local Consent Authority.

This report has been prepared by MBC in the capacity as the appointed Certifier for the proposed development. This report is an assessment of the proposed development against the DtS provisions of the applicable BCA.

2.4 Current Legislation

The applicable legislation governing the design of buildings in NSW is the Environmental Planning and Assessment Act 1979.

Applicable Building Code of Australia (BCA)

The proposed development will be subject to compliance with the relevant requirements of the BCA as in force at the time that the application for the Construction Certificate is made.

In this regard it is assumed that the Construction Certificate application will be made prior to the 1st May 2022, as such this report is based upon the Deemed-to-Satisfy provisions of BCA 2019 amendment 1.

Should the application for Construction Certificate be made after 1st May 2022, this report will be required to be updated to reflect any changes made and now required by the BCA.

Should an *out of cycle* change occur to the Building Code of Australia, then this report is required to be updated to reflect any applicable changes made and now required by the BCA.

3 Development Description & Assessment Information

3.1 Proposed Development

The proposed development comprises a multi storey residential development containing two (2) storeys of basement and six (6) levels of residential.

3.2 Location and Description

The site is located at 1 Gatacre Avenue and 1-5 Alison Avenue, Lane Cove.

The site is legally known at Lot 46 DP11416.



Figure 1: 1 Site location at 1 Gatacre Road, Lane Cove

3.3 BCA Classification (Clause A3.2)

The proposed development shall contain the following classifications: -

- Class 2: being an apartment building
- Class 7a: being a carpark building or part

3.4 Rise in Storeys (Clause C1.2)

The proposed development has been assessed to have a *rise in storeys* of six (6) (Ground – Level 5).

3.5 Effective Height (Clause A1.1)

The proposed development has been assessed to have an *effective height* of 16.85m, this is measured from Ground floor RL92.550 to Level 5 RL109.400).

Please note the definition of effective height of a building was changed 1 May 2016. The BCA now defines effective height as: -

"Effective height means the vertical distance between the floor of the lowest storey included in a determination of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units)."

3.6 Type of Construction Required (Clause C1.1 / Table C1.1)

The proposed development is required to be Type A Construction. Specification C1.1 outlines the fire resistance required by certain building elements. This has also been provided in Appendix B.

3.7 Floor Area and Volume Limitations (Clause C2.2 / Table C2.2)

The development is limited to the following floor area and volume compartment limitations: -

Class		Type A	Type B	Type C
5, 9b or 9c	Max floor area -	8,000m^2	5,500m^2	3,000m^2
	Max volume -	48,000m^3	33,000m^3	18,000m^3
6, 7, 8 or 9a	Max floor area -	5,000m^2	3,500m^2	2,000m^2
	Max volume -	30,000m^3	21,000m^3	12,000m^3

3.8 Building Data Summary

Part of Development	Use	Class	Floor Area (approx.) m^2	Population (using D1.13)
Basement 2	Carparking, storage	7a	2,065	N/A
Basement 1	Carparking, utility rooms, waste room0 storage	5, 7a, 7b	2,043	N/A
Ground	Residential	2	1,295	N/A
Level 1	Residential	2	1,309	N/A
Level 2	Residential	2	1,176	N/A

Part of Development	Use	Class	Floor Area (approx.) m^2	Population (using D1.13)
Level 3	Residential	2	1,133	N/A
Level 4	Residential	2	936	N/A
Level 5	Residential, gym, communal areas	2	336	N/A

Notes:

- The above areas have been provided by the architect on the architectural plans
- The above populations have been based on the floor areas and calculations in accordance with Table D1.13 of the BCA.
- The Carpark areas have been considered ancillary to the use for the purposes of population numbers

Summary of Construction and Building	
Use(s)	Residential, storage, carparking
Classification(s)	2, 7a
Number of Storeys contained	8 (basement 2 – Level 5)
Rise in Storeys	6 (Ground – Level 5)
Type of Construction	A
Effective Height	15.65m (RL92.550 - RL108.200)

4 Proposed Fire Safety Schedule

The following is a draft Fire Safety Schedule for the proposed building, listing the likely measures and standards of performance required, this schedule shall be subject of further development and review as part of the Performance Solutions assessment: -

Fire Safety Schedule

Clause 168 of the Environmental Planning and Assessment Regulation 2000

Premises: Multi storey residential building
Address: 1 Gatacre Avenue, lane Cove

The following essential fire safety measures shall be implemented in the whole of the building premises and each of the fire safety measures must satisfy the standard of performance listed in the schedule which, for the purposes of Clause 168 of the Environmental Planning and Assessment Regulation 2000, is deemed to be the current fire safety schedule for the building.

SCHEDULE – Base Building BCA Year 2019-Amendment 1
Type of Construction A
Effective height = 15.65m

	Measure	Status	Existing Performance Standard
1.	Access panels, doors and hoppers to fire-resisting shafts	N	BCA 2019 Amd. 1 Clause C3.13, AS 1905.1-2015, AS1905.2-2005 & Manufacturer's specifications
2.	Self-closing, automatic closing and latching mechanisms	N	BCA 2019 Amd. 1 Clause C3.4, C3.5, C3.6, C3.7, C3.8, C3.11, Spec C3.4
3.	Automatic fail safe devices	N	BCA 2019 Amd. 1 Clause D2.19, D2.21, D2.22, Clause C3.6, Spec C3.4, AS 2118.1-2017, AS 1670.1-2018
4.	Automatic fire detection and alarm system	N	BCA 2019 Amd. 1 Clause E2.2a, Spec. E2.2a Clause 4, 5, 6, Spec. G3.8, AS 3786-2014, AS 1670.1-2018, AS 1603 suite

	Measure	Status	Existing Performance Standard
5.	Automatic fire suppression system	N	BCA 2019 Amd. 1 Clause E1.5, Spec. E1.5, Spec E1.5a FPAA101D, FPAA101H AS 2118.1-2017, AS 2118.4-2012, AS 2118.6-2012 (Combined System)
6.	Emergency lighting	N	BCA 2019 Amd. 1 Clause E4.2, E4.3 E4.4, AS 2293.1-2018
7.	Exit and directional signage	N	BCA 2019 Amd. 1 Clause E4.5, NSW E4.6 & E4.8, Spec E4.8 AS 2293.1-2018
8.	Fire & Smoke dampers	N	BCA 2019 Amd. 1 Clause E2.2, C2.5, C3.12, C3.15, Spec E1.8, Spec E2.2, Spec C2.5, Spec G3.8 AS/NZS 1668.1-2015, AS 1682.1-2015, AS 1682.2-2015, Manufacturer's specifications
9.	Fire doors	N	BCA 2019 Amd. 1 Clause C2.12, C2.13, C3.4, C3.6, C3.8, C3.11, Spec C3.4, AS 1905.1-2015
10.	Fire hose reel systems	N	BCA 2019 Amd. 1 Clause E1.4, AS 2441-2005
11.	Fire hydrant systems	N	BCA 2019 Amd. 1 Clause E1.3, AS 2419.1-2005, AS 2118.6-2012 (Combined System)
12.	Fire seals (protecting openings and service penetrations in fire resisting components of the building)	N	BCA 2019 Amd. 1 Clause C3.15, Spec C3.15, AS 4072.1-2005, AS 1530.4-2014, Manufacturer's specifications

	Measure	Status	Existing Performance Standard
13.	Lightweight construction	N	BCA 2019 Amd. 1 Clause C1.8, Spec C1.8, Manufacturer's specifications
14.	Openings in fire-isolated lift shafts	N	BCA 2019 Amd. 1 Clause C3.10, AS 1735.11-1986
15.	Occupant warning system	N	BCA 2019 Amd. 1 Clause E2.2, Spec. E2.2a Clause 7, AS 1670.1-2018
16.	Path of travel for stairways, passageway and ramps	N	Clauses 183-186 of the Environmental Planning and Assessment Regulation 2000
17.	Portable fire extinguishers	N	BCA 2019 Amd. 1 Clause E1.6, AS 2444-2001
18.	Wall wetting sprinkler and drencher systems	N	BCA 2019 Amd. 1 Clause C3.4, Spec G3.8, AS 2118.2-2010
19.	Warning and operational signs	N	BCA 2019 Amd. 1 Clause C3.6, D2.23, E3.3, Spec E1.8, Clause 183 of the Environmental Planning and Assessment Regulation 2000
20.	Performance Solution Report XXXXX, prepared by XXXX dated XXXX	N	

Notes
* Indicate whether the measure is new (N), existing (E) or Modified (M)

5 BCA Assessment – Clause by Clause

BCA Clause	Compliance Provisions	Status	Assessment commentary
Part B - Structural			
B1 – Structural Provisions			
B1.0	Deemed-to-Satisfy Provisions		Part B1 is applicable
B1.1	Resistance to Action	Further Details Required	The resistance of a building or structure shall be greater than the most critical action effect determined by B1.2 of the BCA, AS/NZS 1170.0-2002 and B1.4 of the BCA.
B1.2	Determination of individual Actions	Further Details Required	The structural design of the building is required to be determined in accordance with the varying "actions" considerations contained within this clause (i.e. permanent actions, imposed actions, wind / snow / earthquake actions).
B1.4	Determination of Structural resistance of materials and form of construction	Further Details Required	The structural resistance of materials and forms of construction shall be determined in accordance with the following: (i) Masonry - AS3700-2018 (ii) Concrete construction - AS3600-2018 (iii) Footings and slabs – AS2870-2011 (iv) Steel construction - AS4100-1998 or AS/NZS 4600-2005 (v) Termite Risk Management - AS3660.1-2014 (vi) Piling - AS2159-2009 (vii) Glazed assemblies - AS2047-2014-amendments 1 & 2 (external), and/or AS1288-2006 (internal)
Part C – Fire Resistance			
C1 - Fire Resistance			
C1.0	Deemed-to-Satisfy Provisions		
C1.1	Type of Construction Required	Further Details Required	Type A Construction. Type of Construction shall comply with Spec C1.1 Table 3 & 3.9
C1.4	Mixed types of construction	Further Details Required	FRL of 120mins is required to be provided separating the carpark and residential levels
C1.8	Lightweight Construction	Further Details Required	Any light weight construction must comply to Specification C1.8 provisions within the BCA. Please provide details to confirm compliance to this clause.

BCA Clause	Compliance Provisions	Status	Assessment commentary
C1.9	Non-combustible building elements	Further Details Required	The following building elements and their components must be non-combustible: (i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. (ii) The flooring and floor framing of lift pits. (iii) Non-loadbearing internal walls where they are required to be fire-resisting.
C1.10 & *NSW Variation*	Fire Hazard Properties	Further Details Required	All floor, wall and ceiling lining materials shall comply with C1.10 and Specification C1.10. Design Compliance Statement to be provided by relevant architect prior to issue of CC.
C1.14	Ancillary elements	Further Details Required	An ancillary element must not be fixed, installed, or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is provided a concession by this clause.
C2 - Compartmentation and Separation			
C2.2	General Floor area and volume limitations	Further Details Required	Carpark is determined as one fire compartment. Each level of the residential levels are determined as a fire compartment. Fire compartments drawings and sections are required to be detailed prior to issuance of a CC.
C2.8	Separation of classifications in the same storey	Compliance Appears Achieved	Different building classifications situated adjacent to each other in the same storey are required to adopt the highest FRL prescribed in Specification C1.1 or have the parts of the building separated by a fire wall
C2.9	Separation of classifications in different storeys	Further Details Required	FRL of 120mins is required to be provided separating the carpark and residential levels
C2.10	Separation of Lift Shafts	Further Details Required	The walls of the lift shaft are required to — (A) if loadbearing, have the relevant FRL prescribed by Table 4 of Specification C1.1 (240/120/120) ; or (B) if non-loadbearing, be of *non-combustible construction*. --/120/120 ceiling to the lift shaft to be detailed.

BCA Clause	Compliance Provisions	Status	Assessment commentary
C2.12	Separation of equipment	Further Details Required	The following equipment must be separated from the remainder of the building - (i) lift motors and lift control panels; or (ii) emergency generators used to sustain emergency equipment operating in the emergency mode; or (iii) central smoke control plant; or (iv) boilers; or (v) a battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours. Separating construction must have— (i) except as provided by (ii)— (A) an FRL as required by Specification C1.1, but not less than 120/120/120; and (B) any doorway protected with a self-closing fire door having an FRL of not less than –/120/30; or (ii) when separating a lift shaft and lift motor room, an FRL not less than 120/–/–.
C2.13	Electricity supply system	Further Details Required	Electrical substations, main switchboards etc., must be separated from the remainder of the building by construction achieving and FRL of 120/120/120.
C2.14	Public Corridors in Class 2 and 3 Buildings	Compliance Appears Achieved	Corridors are less than 40m
C3 – Protection of Openings			
C3.2	Protection of openings in external walls	Compliance Appears Achieved	Openings are not believed to be exposed to fire source features by less than the dimensions prescribed in BCA.
C3.3	Separation of openings in external walls and associated openings in different fire compartments	Compliance Appears Achieved	The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must be not less than that set out in Table C3.3

BCA Clause	Compliance Provisions	Status	Assessment commentary
C3.4	Acceptable methods of protection	Further Details Required	Openings require protection due to D1.7. Acceptable methods of protection include; Wall Wetting Sprinklers --/60/30 Fire doors or windows which are *automatic* closing or *self closing*. Windows - --/60/-- *automatic* closing fire shutters. Fire doors, Fire Windows and Fire Shutters must comply with Spec. C3.4
C3.8	Openings in fire-isolated exits	Further Details Required	Doorways in fire-isolated exits must be protected by --/60/30 fire doors which are self-closing or automatic closing (detection activation).
C3.9	Service penetrations in fire-isolated exits	Further Details Required	Fire-isolated exits must not be penetrated by any services other than— (a) electrical wiring permitted by D2.7(e) to be installed within the exit; or (b) ducting associated with a pressurisation system if it— (i) is constructed of material having an FRL of not less than –/120/60 where it passes through any other part of the building; and (ii) does not open into any other part of the building; or (c) water supply pipes for fire services.
C3.10	Openings in fire-isolated lift shafts	Further Details Required	Doors to lifts must be protected by --/60/-- fire doors which comply with AS 1735.11 and are set to remain closed except when discharging/receiving passengers. Life indicator panels must be backed by construction having an FRL of not less than --/60/-- if it exceeds 35,000mm2, i.e. 175mm x 200mm.

BCA Clause	Compliance Provisions	Status	Assessment commentary
C3.11 & *NSW Variation*	Bounding construction: Class 2 and 3 buildings and Class 4 parts	Performance Solution Proposed	Protection is required to the bounding walls of sole-occupancy units or public corridors in Class 2 & 3 buildings and Class 4 portions of buildings of Types A, B & C Construction. Namely: - Ø Doorways must be protected if providing access from an SOU to a: Ø Public corridor. Ø A room not within an SOU; or Ø The landing of an internal non-fire isolated stairway that serves a required exit; or Ø Another SOU Ø A doorway must be protected by a self-closing -/60/30 fire door if provides access from a room not within an SOU to a public corridor or the like; or to the landing on a non-fire isolated stairway that serves as a required exit. **The following non-compliance was identified:** **The lift shaft doors opening into SOU's do not achieve an FRL of at least -/60/30 being a -/60/- lift door**
C3.12	Openings in floors and ceilings for services	Further Details Required	Are any service riser shafts proposed through the building? If so the shaft must be constructed in accordance with Spec. C1.1.
C3.13	Openings in shafts	Further Details Required	Openings in shafts are required to be protected by a self-closing --/60/30 fire door or hooper or an access panel having an FRL of --/60/30.
C3.15	Openings for service installations	Further Details Required	Any new proposed penetrations must comply with provisions of C3.15 and Spec. C3.15. At OC stage a detailed schedule of every penetration is required to be produced. Advise engaging specialist fire stopping company.
C3.16	Construction joints	Further Details Required	Any proposed joint construction is to comply with the provisions of C3.16 and in accordance to AS 1530.4
C3.17	Columns protected with lightweight construction to achieve an FRL	Further Details Required	Any lightweight construction must be with a method and materials identical with a tested prototype which has achieved the required FRL. Details to be submitting demonstrating compliance prior to CC.

BCA Clause	Compliance Provisions	Status	Assessment commentary
Specifications			
Spec C1.1	Fire-Resisting Construction	Further Details Required	Refer to specification. FRL of 120mins to Carpark and slab separating the carpark and residential level FRL of 90mins to residential levels
Spec C1.8	Structural Tests for Lightweight Construction	Compliance Appears Achieved	Refer to specification
Spec C1.10 & *NSW Variation*	Fire Hazard Properties	Further Details Required	Refer to specification
Spec C3.4	Fire Doors, Smoke Doors, Fire Windows and Shutters	Further Details Required	Refer to specification
Spec C3.15	Penetration of Walls, Floors and Ceilings by Services	Further Details Required	Refer to specification

BCA Clause	Compliance Provisions	Status	Assessment commentary
Part D - Access and Egress			
D1 - Provision for Escape			
D1.2 & *NSW Variation*	Number of exits required	Compliance Appears Achieved	Each building shall have at least one exit from each storey. Not less than 2 exits shall be provided from each storey if the building has an affective height of more than 25m. Basements that have a vertical rise of more than 1.5m shall be provided with 2 exits unless; (i) the floor area of the storey is not more than 50 m2; and (ii) the distance of travel from any point on the floor to a single exit is not more than 20 m Class 9 buildings with a RIS of more than 6 shall also be provided with not less than 2 exits, Where the class 9 building is a childcare 2 exits must be provided fr4om each storey (regardless of its RIS) and where the class 9b is a primary or secondary school with a RIS of more than two, 2 exits are also required. The proposed building is provided by the following exits: - Basement 2 & 1 - 2 x exits - Ground - Level 5 - 3 x exits
D1.3	When fire-isolated stairways and ramps are required	Further Details Required	Class 2 or 3 All stairways serving as a required exit must be fire-isolated unless it passes through or by not more than (i) 3 consecutive storeys in a Class 2 building; , and one extra storey of any classification may be included if: the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout. The proposed building appears to be provide with fire isolated stairways.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D1.4	Exit travel distances	Performance Solution Proposed	Travel distance shall be as follows: **Class 5, 6, 7, 8 or 9 portions:** - 20m to a point of choice - 40m total distance to an exit -30m to a single exit serving a storey at the level of egress to the road or open space for class 5 and 6 portions **Class 2 or 3 portions:** The doorway of an SOU (including class 4) must be 6m from a point of choice of 2 available exits. It is noted that the distance may be increased to 12m as per Spec E1.5A due to a fire sprinkler system installed within the building. 20m a single exit serving the level of egress to a road or open space. No point on the floor of a room not within an SOU must be more than 20m from an exit or a point in which two exits are available in different directions. **The following areas exceed the maximum allowable travel distance to a point of choice:** ▪ Basement – 45m to an exit in lieu of 20m ▪ Ground – 32m to an exit in lieu of 20m ▪ Level 1 – 9m to an exit in lieu of 6m ▪ Level 2-3 – 10m to an exit in leu of 6m ▪ Level 4 – 9m to an exit in leu of 6m ▪ Level 5 – 22m to an exit in lieu of 20m The distance to an exit is required to be less than 40m or addressed against the performance requirements of the BCA and in consultation with Fire and Rescue NSW.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D1.5	Distance between alternative exits	Performance Solution Proposed	Exits must not be less than 9m apart; and note more than: Class 2 or 3 - 45m apart Class 5, 6, 7, 8 or 9 - 60m apart; and Located so that alternative paths of travel do not converge such that they become less than 6 m apart. **The following areas exceed the maximum allowable travel distance when measured through the point of choice:** - Basement 2 - 90m between alternative exits in lieu of 60m - Basement 1 - 90m between alternative exits in lieu of 60m The distance to appoint of choice extended distances will be required to be no greater than 60m or addressed against the performance requirements of the BCA and in consultation with Fire and Rescue NSW.
D1.6 & *NSW Variation*	Dimensions of exits and paths of travel to exits	Compliance Appears Achieved	Dimensions of exits and paths of travel appear compliant with provisions in D1.6 of the BCA. 1m in width of an exit or path of travel to an exit is required. The unobstructed height of throughout must also not be less than 2m (1980mm at doorways). Aggregate exit width caters for the proposed number of occupants on each level as determined by D1.13 of the BCA.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D1.7	Travel via fire-isolated exits	Performance Solution Proposed	A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from— (i) a public corridor, public lobby or the like; or (ii) a sole-occupancy unit occupying all of a storey; or (iii) a sanitary compartment, airlock or the like. Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly or by way of its own fire-isolated passageway: i) to a road or open space; or ii) to a point— (A) in a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter; and (B) from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or iii) into a covered area that— (A) adjoins a road or open space; and (B) is open for at least 1/3 of its perimeter; and

BCA Clause	Compliance Provisions	Status	Assessment commentary
			(C) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and (D) provides an unimpeded path of travel from the point of discharge to the road or open space of not more Where a path of travel from a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured, that part of the wall must have— (i) an FRL of not less than 60/60/60; and (ii) any openings protected internally in accordance with C3.4, for a distance of 3 m above, the level of the path of travel. **The following non-compliances were identified:** ▪ Western stairway discharges into a covered area that is not open for 1/3 of its perimeter. ▪ Discharge from the Eastern fire stairs requires passes within 6m of an external wall containing openings. The non-compliances will be required to be re designed to be in accordance with the deemed-to-satisfy provisions of the BCA or addressed against the performance requirements of the BCA and in consultation with Fire and Rescue NSW.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D1.9	Travel by non-fire-isolated stairways or ramps	Compliance Appears Achieved	A non-fire-isolated stairway or non-fire-isolated ramp serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided. In a class 2,3 or 4 building the distance from an SOU doorway utilising the non-fire-isolated stairway must not exceed: - 30m in a type C building; or - 60m in all other cases. In a class 5, 6, 7, 8 or 9 building the distance from any point on a floor to a road or open space utilising the require non-fire-isolated stairway must not exceed 80m.
D1.10 & *NSW Variation*	Discharge from exits	Compliance Appears Achieved	Exits must not obstructed by potential vehicle blockage. Suitable barriers must be provided to prevent vehicles blocking the exit or access to it.
D1.15	Method of measurement	Noted	Noted
D1.16	Plant rooms, lift machine rooms and electricity network substations: Concession	Not Applicable	Ladders may be provided to plants rooms and the like if not more than 100m2. Plant room stairways to achieve compliance with AS 1657.
D1.17	Access to lift pits	Compliance Readily Achievable	Where the pit depth is not more than 3 m, be through the lowest landing doors; or where greater than 3m be through specific access complying with D1.17.
D2 – Construction of Exits			
D2.2	Fire-isolated stairways and ramps	Further Details Required	Fire-isolated stairs must be: (a) of *non-combustible* materials; and (b) so that if there is local failure it will not cause structural damage to, or impair the fire-resistance of, the shaft.
D2.4	Separation of rising and descending stair flights	Performance Solution Proposed	Rising and descending stairs shall be separated by non-combustible smoke proof construction in accordance with Clause 2 of Spec C2.5. Separation between stair flights has not been provide to the Western Stair.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D2.7	Installations in exits and paths of travel	Further Details Required	Services or equipment comprising— (i) electricity meters, distribution boards or ducts; or (ii) central telecommunications distribution boards or equipment; or (iii) electrical motors or other motors serving equipment in the building, may be installed in— (iv) a required exit, except for fire-isolated exits specified in (a); or (v) in any corridor, hallway, lobby or the like leading to a required exit, if the services or equipment are enclosed by non-combustible construction or a fire protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure.
D2.8	Enclosure of space under stairs and ramps	Further Details Required	If the space below a required fire-isolated stairway or fire-isolated ramp is within the fire-isolated shaft, it must not be enclosed to form a cupboard or similar enclosed space. The space below a required non fire-isolated stairway (including an external stairway) or non fire-isolated ramp must not be enclosed to form a cupboard or other enclosed space unless— i) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and ii) any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door.
D2.13 & NSW Variation	Goings and risers	Further Details Required	Risers and goings must comply with D2.13 and have slip resistance as per table D2.14. Architect to cover in Design Compliance Statement.
D2.14	Landings	Further Details Required	750mm landings to be provided at bottom and top of stairs as per D2.14 and landings and stairs nosing's throughout to have a slip resistance as per table D2.14. Architect to cover in Design Compliance Statement.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D2.15 & *NSW Variation*	Thresholds	Further Details Required	No steps are to be located closer to the doors threshold then the width of the door unless to the door leads to open space; a step ramp compliant with AS1428.1-2009 can be incorporated.
D2.16 & *NSW Variation*	Barriers to prevent falls	Further Details Required	Compliant balustrades not less than 1m high with no climbable features between 150mm and 760mm are to be provided wherever it is possible to fall 1m or more. Architect to cover in Design Compliance Statement.
D2.17	Handrails	Further Details Required	Handrails are to be provided to either side of stairs (one side in fire isolated stairs) in accordance with AS1428.1-2009. Handrail extensions to be provided. Architect to cover in Design Compliance Statement.
D2.19 & *NSW Variation*	Doorways and doors	Compliance Appears Achieved	Doors serving as required exits or forming part of required exits must be swinging or power operated. If fitted with a door which is power-operated— (A) it must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and (B) if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.
D2.20.	Swinging doors	Compliance Appears Achieved	Doors forming part of a required exit must not encroach at any part of its swing more than 500mm on the required width of the exit, i.e. F.I.S landings. Doors must swing in the direction of egress unless serving a ground floor tenancy that is less than 200m2 and incorporates a hold-open device.
D2.21 & *NSW Variation*	Operation of latch	Further Details Required	Doors shall be readily openable without a key from the side that a person may seek egress by a single handed downward action on a single device located between 900mm and 1100mm. Alternatively door must be readily openable on activation of a fail-safe device.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D2.23	Signs on doors	Further Details Required	Signage to be provided on exit and fire door; for a self-closing door— “FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN”; or for a door discharging from F.I.S "FIRE SAFETY DOOR—DO NOT OBSTRUCT"
D2.24	Protection of openable windows	Further Details Required	Where openable windows are proposed compliance with this clause must be achieved. A window opening must be provided with protection, if the floor below the window is 2 m or more above the surface beneath in— (i) a bedroom in a Class 2 or 3 building or Class 4 part of a building; or (ii) a Class 9b early childhood centre. A barrier with a height not less than 865 mm above the floor is required to an openable window— (i) in addition to window protection, when a child resistant release mechanism is required by (b)(ii)(C); and (ii) where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (a). This is applicable to all class buildings.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D3 – Access for People with a Disability			
D3.1	General building access requirements	Further Details Required	Access is required to all areas of the class 5, 6, 7, 8, 9a and 9b portions of the building. Access is required to the doorway of each Class 2 & 3 SOU of the building, to and within each accessible unit and to and 1 type of space or room used in common by residents. Access consultant shall provide a design compliance statement prior to the issuance of a CC.
D3.2	Access to buildings	Does not comply	(a) An accessway must be provided to a building required to be accessible— (i) from the main points of a pedestrian entry at the allotment boundary & (ii) from another accessible building connected by a pedestrian link; and (iii) from any required accessible carparking space on the allotment. Access consultant to update report based upon detailed review of CC plans.
D3.3	Parts of buildings to be accessible	Further Details Required	Access is to be provided to and within all areas normally used by occupants in accordance with AS 1428.1-2009. Access consultant to update report based upon detailed review of CC plans.
D3.6	Signage	Further Details Required	To be provided throughout in accordance with details in D3.6. i.e. tactile and braille indicating levels, sanitary facilities etc.
D3.8	Tactile indicators	Further Details Required	To be provided in accordance with AS 1428 throughout: (i) a stairway, other than a fire-isolated stairway (iv) a ramps, step ramp, kerb ramp TGSI are also required in the absence of suitable barrier to protect from over head obstructions or an accessway meeting a vehicular way adjacent to an pedestrian entrance to a building.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D3.11	Ramps	Further Details Required	On an accessway— (a) a series of connected ramps must not have a combined vertical rise of more than 3.6 m; and (b) a landing for a step ramp must not overlap a landing for another step ramp or ramp.
D3.12	Glazing on an access way	Further Details Required	Glazing to be provided visual indicators in accordance with AS1428.1-2009 when able to be confused for a doorway
Specifications			
Spec D1.12	Non-Required Stairways, Ramps and Escalators	Further Details Required	This Specification contains the requirements to allow non-required stairways, ramps or escalators to connect any number of storeys in a Class 5 or 6 building. This specification shall be understood in detail should it be utilised in the design of a non-required stairway, ramp or escalator. A compliance statement shall be provided by the architect prior to the issuance of the CC.
Spec D3.6	Braille and Tactile Signs	Further Details Required	This Specification sets out the requirements for the design and installation of braille and tactile signage as required by D2.21, D3.6 and Specification F2.9. A compliance statement shall be provided by the architect prior to the issuance of the CC.
Part E – Services and Equipment			
E1 – Fire Fighting Equipment			
E1.3	Fire hydrants	Performance Solution Proposed	A fire hydrant system shall be provided in accordance with Clause E1.3, and AS2419.1-2005. Engineering Details of the proposed fire hydrant system shall be provided. This detail shall be certified by a suitably qualified Accredited Practitioner Fire Safety. **The following non-compliances were identified:**

BCA Clause	Compliance Provisions	Status	Assessment commentary
			The location of the fire hydrant booster is not located within sight of the main entry to each building. The fire hydrant booster assembly is required to be located in accordance with the provisions of AS2419.1-2005 or addressed against the performance requirements of the BCA and in consultation with Fire and Rescue NSW.
E1.4	Fire hose reels	Further Details Required	A fire hose reel (FHR) system shall be provided in accordance with Clause E1.4, and AS2441-2005. Engineering Details of the proposed FHR system shall be provided. This detail shall be certified by a suitably qualified Accredited Practitioner - Fire Safety. Fire Hose Reels are required to the basement levels only.
E1.5 & *NSW Variation*	Sprinklers	Further Details Required	A sprinkler system shall be provided in accordance with Clause E1.5, Spec E1.5, and AS 2118.1-2017. Engineering Details of the proposed sprinkler system shall be provided. This detail shall be certified by a suitably qualified Accredited Practitioner - Fire Safety
E1.6	Portable fire extinguishers	Further Details Required	Portable fire extinguishers shall be provided in accordance with Clause E1.6, and AS 2444-2001. Details of the type of portable fire extinguishers proposed and their location shall be provided. This detail shall be certified by a suitably qualified person
E1.9	Fire precautions during construction	Compliance Readily Achievable	Suitable fire extinguishers shall be located adjacent to exits on each storey while the building is under construction. Once the building reaches an effective above 12m fire hydrants, FHRs and the hydrant booster connection shall be commissioned and operational.

BCA Clause	Compliance Provisions	Status	Assessment commentary
Specifications			
E1.5	Fire Sprinkler Systems	Further Details Required	
E1.5a	Class 2 and 3 buildings not more than 25m in effective height	Further Details Required	
E2 – Smoke Hazard Management			
E2.2 & *NSW Variation*	General requirements		An automatic smoke detection and alarm system complying with specification E2.2a is required to be provide throughout the building. Engineering Details of the proposed automatic smoke detection and alarm system shall be provided. This detail shall be certified by a suitably qualified Accredited Practitioner - Fire Safety.
Specifications			
Spec E2.2a & *NSW Variation*	Smoke Detection and Alarm Systems	Further Details Required	The building must be provided with an automatic smoke detection and alarm system complying with AS3786-2014 and AS1670.1-2018 including a building occupant warning system. Engineering Details of the proposed automatic smoke detection and alarm system shall be provided. This detail shall be certified by a suitably qualified Accredited Practitioner - Fire Safety.
E3 – Lift Installations			
E3.1	Lift installations	Further Details Required	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1. Please provide details of the lifts proposed to be installed including design certification from a suitably qualified engineer.
E3.2	Stretcher facility in lifts	Further Details Required	Buildings with an effective height greater than 12m or where emergency lifts are provided shall accommodate stretcher facilities via a space that is not less than 600mm wide x 2000mm long x 1400mm high above the floor level. Details demonstrating compliance shall be provided

BCA Clause	Compliance Provisions	Status	Assessment commentary
E3.3	Warning against use of lifts in fire	Further Details Required	Warning signs must be displayed; "DO NOT USE LIFTS IF THERE IS A FIRE". No less than 10mm high that are incised, inlaid or embossed on a metal, wood, plastic or similar plate securely & permanently attached to the wall or provided directly into the surface material of the wall. These shall be near every call button for a passenger lift or group throughout the building. Details demonstrating compliance shall be provided
E3.5	Landings	Further Details Required	Access and egress to and from lift landings shall comply with Section D of the BCA. Details demonstrating compliance shall be provided
E3.6	Passenger lifts	Further Details Required	In an accessible building, every passenger lift shall comply with the limitations of Table E3.6a of the BCA, be provided accessible features as required by Table E3.6b of the BCA and not rely upon a constant pressure device for its operation if the lift car is fully enclosed. Details demonstrating compliance shall be provided
E3.7	Fire service controls	Further Details Required	Any lift or group of lifts that serve a storey above 12m effective height, shall be provided a fire service recall control switch complying with Clause E3.9 and a lift car fire service drive control switch complying with Clause E3.10 of the BCA. Details demonstrating compliance shall be provided
E3.9	Fire service recall control switch	Further Details Required	Each group of lifts must be provided with one fire service recall control switch that activates the fire service recall operation in accordance with Clause E3.9 of the BCA. Details demonstrating compliance shall be provided
E3.10	Lift car fire service drive control switch	Further Details Required	The lift car fire service drive control switch must be activated from within the lift car and comply with the requirements of Clause E3.10 of the BCA. Details demonstrating compliance shall be provided
Specifications			
Spec E3.1	Lift Installations	Further Details Required	

BCA Clause	Compliance Provisions	Status	Assessment commentary
E4 – Emergency Lighting, Exit Signs and Warning Systems			
E4.2	Emergency lighting requirements	Further Details Required	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.3	Measurement of distance	Noted	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.4	Design and operation of emergency lighting	Further Details Required	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.5	Exit signs	Further Details Required	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.6 & *NSW Variation*	Direction signs	Further Details Required	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.7	Class 2 and 3 buildings and Class 4 parts: Exemptions	Further Details Required	Exit signage not applicable to sole-occupancy unit doorways.
E4.8	Design and operation of exit signs	Further Details Required	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
Part F – Health and Safety			
F1 – Damp and Weatherproofing			
F1.0	Deemed-to-Satisfy Provisions	Performance Solution Proposed	There are not Deemed-to-Satisfy Provisions for Performance Requirement FP1.4 (The prevention of the penetration of water through external walls) This must be addressed by way of Performance Solution
F1.1	Stormwater drainage	Further Details Required	Stormwater drainage shall comply with AS 3500.3-2018. Details of the proposed Stormwater Management System shall be provided. This detail shall be certified by a suitably qualified and Chartered Engineer

BCA Clause	Compliance Provisions	Status	Assessment commentary
F1.4	External above ground membranes	Further Details Required	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 and AS 4654.2-2012. Details demonstrating compliance shall be provided
F1.5	Roof coverings	Further Details Required	The roof must be covered with one of the following materials, concrete roof tiles, terracotta roof tiles, cellulose cement corrugated sheeting, metal sheet roofing, plastic sheet roofing or shingles made of terracotta, fibre cement, timber or slate. Compliance with fire resisting construction and non-combustible construction of Part C must also be achieved as applicable. Where none of the above materials is proposed, a Performance Solution addressing Performance Requirements FP1.4 will be required
F1.6	Sarking	Further Details Required	Sarking-type material used for weatherproofing of rood and walls must comply with AS 4200.1- 2017 and AS 4200.2-2017. Compliance with fire resisting construction and non-combustible construction of Part C must also be achieved as applicable
F1.7	Waterproofing of wet areas in buildings	Further Details Required	Waterproofing of wet areas shall comply with the requirements of Table F1.7 and AS 3740-2010. Details demonstrating compliance shall be provided
F1.9	Damp-proofing	Further Details Required	Moisture from the ground must be prevented from reaching the structure of the building. Where a damp-proof course is provided it must comply with AS 2904-1995 or impervious sheet material in accordance with AS3660.1-2014. Details demonstrating compliance shall be provided
F1.10	Damp-proofing of floors on the ground	Further Details Required	Floors laid on ground shall be provided a vapour barrier in accordance with AS 2870-2011. Details demonstrating compliance shall be provided

BCA Clause	Compliance Provisions	Status	Assessment commentary
F1.11	Provision of floor wastes	Further Details Required	In a Class 2 or 3 building or Class 4 part of a building, a bathroom or laundry located at any level above another SOU or public space must be provided a floor waste and the floor be graded to the floor waste to permit drainage of water. Details demonstrating compliance shall be provided
F1.13	Glazed assemblies	Further Details Required	Glazed assemblies in an external wall shall comply with AS 2047-2014. The following glazed assemblies need not comply revolving doors, fixed louvres, skylights / roof lights, sliding and swinging doors without a frame, heritage windows or second hand windows, windows constructed onsite which are not design tested. Details demonstrating compliance shall be provided
F2 – Sanitary and Other Facilities			
F2.1	Facilities in residential buildings	Further Details Required	Facilities for cooking, washing, cleaning and laundering shall be provided as required for the classification concerned by Clause F2.2 of the BCA. Details demonstrating compliance shall be provided
Specifications			
Spec F2.9	Accessible adult change facilities	Not Applicable	See Specification
F3 – Room Heights			
F3.1	Height of rooms and other spaces	Further Details Required	Floor to ceiling heights compliant with Clause F3.1 of the BCA shall be achieved throughout the development. Details demonstrating compliance shall be provided.
F4 – Light and Ventilation			
F4.1	Provision of natural light	Further Details Required	Natural light requirements of the BCA are applicable to all habitable room of Class 2, and 4 buildings. To all bedrooms and dormitories of Class 3 buildings and to all rooms used for sleeping purposes in Class 9a and 9c building. In Class 9b buildings it is limited to general purpose classrooms of primary and secondary schools and the playrooms or the like of for the use of children in early childhood centres. Details demonstrating compliance shall be provided

BCA Clause	Compliance Provisions	Status	Assessment commentary
F4.2	Methods and extent of natural lighting	Further Details Required	Windows that provide the required natural light shall be not less than 10% of the floor area of the room, roof lights shall be not less than 3% of the floor area. A required window for the purposes of natural light shall be not less than the greater of:- 1m, or 50% of the square root of the exterior height of the wall in which the window is located measured in metres from its sill Details demonstrating compliance shall be provided.
F4.3	Natural light borrowed from adjoining room	Further Details Required	Borrowed light from an adjoining room is permitted in Class 2, 3 and 4 buildings subject to the window or roof light being sufficient in size to accommodate the floor area of both rooms. If proposed to borrow light form adjoining rooms, please provide details demonstrating compliance shall be provided
F4.4	Artificial lighting	Further Details Required	Artificial lighting shall be provided to required stairways, passageways and ramps. Artificial lighting shall comply
F4.5 & *NSW Variation*	Ventilation of rooms	Further Details Required	Natural ventilation or mechanical ventilation to be provided. Mechanical Engineer to confirm compliance with F4.5 and AS 3666.1. If compliance with DtS not achievable a Performance Solution demonstrating compliance with FP4.3 and FP4.4 may be more appropriate.
F4.6	Natural ventilation	Further Details Required	
F4.7	Ventilation borrowed from adjoining room	Further Details Required	
F4.11	Carparks	Further Details Required	Natural ventilation or mechanical ventilation to be provided. Mechanical Engineer to confirm compliance with AS 1668.2-2012 or Section 4 of AS1668.4-2012.
F5 – Sound Transmission and Insulation			
F5.0	Deemed-to-Satisfy Provisions	Further Details Required	Acoustic engineer to confirm compliance
F5.1	Application of Part	Further Details Required	Acoustic engineer to confirm compliance

BCA Clause	Compliance Provisions	Status	Assessment commentary
F5.2	Determination of airborne sound insulation ratings	Further Details Required	Acoustic engineer to confirm compliance
F5.3	Determination of impact sound insulation ratings	Further Details Required	Acoustic engineer to confirm compliance
F5.4	Sound insulation rating of floors	Further Details Required	Acoustic engineer to confirm compliance
F5.5	Sound insulation rating of walls	Further Details Required	Acoustic engineer to confirm compliance
F5.6	Sound insulation rating of internal services	Further Details Required	Acoustic engineer to confirm compliance
F5.7	Sound isolation of pumps	Further Details Required	Acoustic engineer to confirm compliance
Specifications			
Spec F5.2	Sound Insulation for Building Elements	Further Details Required	Acoustic engineer to confirm compliance
Spec F5.5	Impact Sound -Test of Equivalence	Further Details Required	Acoustic engineer to confirm compliance
F6 - Condensation Management			
F6.0	Deemed-to-Satisfy Provisions	Further Details Required	(a) Compliance with Performance Requirement FP6.1 is satisfied by complying with Deemed-to-Satisfy Provisions F6.1 to F6.4 (b) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2.2(3) and A2.24(3) as applicable
F6.1	Application of Part	Further Details Required	The Deemed-to-Satisfy Provisions of this Part only apply to a sole-occupancy unit of a Class 2 building and a class 4 part of a building.

BCA Clause	Compliance Provisions	Status	Assessment commentary
F6.2	Pliable building membrane	Further Details Required	(a) Where a pliable membrane is installed in an external wall, it must - (i) comply with AS/NZS 4200.1; and (ii) be installed in accordance with AS 4200.2; and (iii) be a vapour permeable membrane for climate zones 6, 7 and 8; and (iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. (b) Except for single skin masonry and single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity.
F6.3	Flow rate and discharge of exhaust systems	Further Details Required	(a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of- (i) 25 L/s for a bathroom or sanitary compartment; and (ii) 40 L/s for a kitchen or laundry (b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air. (c) Exhaust from a bathroom, sanitary compartment, or laundry must be discharged- (i) directly or via a shaft or duct to outdoor air; or (ii) to a roof space that is ventilated in accordance with F6.4
F6.4	Ventilation of roof spaces	Further Details Required	(a) Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof must be ventilated to outdoor air through evenly distributed openings. (b) Openings required by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is greater than 22°, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22° (c) 30% of the total unobstructed area required by (b) must be located not more than 900mm below the ridge or highest point of the roof space, measured vertically, with the remaining required area provided by eave vents.

BCA Clause	Compliance Provisions	Status	Assessment commentary
Part G – Ancillary Provisions			
G1 – Minor Structures and Components			
NSW Variation G1.101	Provision for window cleaning	Further Details Required	(a) A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. (b) A building satisfies (a) where— (i) the windows can be cleaned wholly from within the building; or (ii) provision is made for the cleaning of the windows by a method complying with the Work Health and Safety Act 2011 and regulations made under that Act. Please provide certification from a suitably qualified person confirming the building achieves compliance with this clause.
G6 – Occupiable outdoor areas			
G6.1	Application of Part	Not Applicable	(a) The Deemed-to-Satisfy Provisions of this Part apply to buildings containing an occupiable outdoor area in addition to the other Deemed-to-Satisfy Provisions of the BCA. (b) The Deemed-to-Satisfy Provisions of this Part take precedence where there is a difference to The Deemed-to-Satisfy Provisions of Sections C, D, E, F and G. (c) Except for G6.2, The Deemed-to-Satisfy Provisions of this Part do not apply to- (i) an occupiable outdoor area of a sole-occupancy unit in a Class 2 or 3 building, class 9c building or Class 4 part of a building; or (ii) an occupiable outdoor area with an area less than 10m^2.
G6.2	Fire hazard properties	Not Applicable	(a) subject to (b), a lining, material or assembly in an occupiable outdoor area must comply with C1.10 as fir an internal element. (b) The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C1.10: (i) Average specific extinction area. (ii) Smoke-Developed Index (iii) Smoke development rate (iv) Smoke growth rate index (SMOGRArc)

BCA Clause	Compliance Provisions	Status	Assessment commentary
G6.3	Fire Separation	Not Applicable	For the purpose of the Deemed-to-Satisfy Provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area, however a fire wall cannot be used to separate an occupiable outdoor area into different fire compartments.
G6.4	Provision of escape	Not Applicable	For the purpose of the Deemed-to-Satisfy Provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area.
G6.5	Construction of exits	Noted	For the purpose of the Deemed-to-Satisfy of Part D2, a reference to a storey or room includes an occupiable outdoor area
G6.6	Fire fighting equipment	Not Applicable	Except for Clause 7(b)(i) of Specification E1.5 for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes and occupiable outdoor area.
G6.7	Lift installations	Not Applicable	For the purpose of Deemed-to-Satisfy Provisions of Part E3, a reference to a storey includes an occupiable outdoor area.
G6.8	Visibility in an emergency, exit signs and warning systems	Not Applicable	For the purpose of the Deemed-to-Satisfy Provisions of Part E4, a reference to a storey includes an occupiable outdoor area
G6.9	Light and ventilation	Not Applicable	For the purpose of the Deemed-to-Satisfy Provisions of F4.4, F4.8 and F4.9, a reference to a room includes an occupiable outdoor area.
G6.10	Fire orders	Not Applicable	For the purpose of the Deemed-to-Satisfy Provisions of G4.9, a reference to a storey includes an occupiable outdoor area.
Part J – Energy Efficiency			
J0.0	Deemed-to-Satisfy Provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J0.1	Application of Section J	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J0.2	Heating and cooling loads of sole-occupancy units of a Class 2 building or a Class 4 Part	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J0.3	Ceiling fans	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to

BCA Clause	Compliance Provisions	Status	Assessment commentary
			certify CC Plans achieve compliance with Part J.
J0.4	Roof thermal breaks	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J0.5	Wall thermal breaks	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J1 – Building Fabric			
J1.0	Deemed-to-Satisfy Provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J1.5	Application of Part	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J1.2	Thermal construction-general	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J1.3	Roof and ceiling construction	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J1.4	Roof Lights	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J1.5	Walls and glazing	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J1.6	Floors	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J3 – Building Sealing			
J3.0	Deemed-to-Satisfy Provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.

BCA Clause	Compliance Provisions	Status	Assessment commentary
J3.1	Application of Part	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J3.2	Chimneys and flues	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J3.3	Roof lights	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J3.4	Windows and doors	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J3.5	Exhaust fans	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J3.6	Construction of roofs, walls and floors	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J3.7	Evaporative coolers	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5 – Air Conditioning and Ventilation Systems			
J5.0	Deemed-to-Satisfy Provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5.2	Air-conditioning and ventilation systems	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5.3	Mechanical ventilation system control	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5.4	Fan system	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.

BCA Clause	Compliance Provisions	Status	Assessment commentary
J5.5	Ductwork Insulation	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5.6	Ductwork sealing	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5.7	Pump systems	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5.8	Pipework insulation	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5.9	Space heating	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5.10	Refrigerant chillers	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5.11	Unitary air-conditioning equipment	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J5.12	Heat rejection equipment	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J6 – Artificial Lighting and Power			
J6.0	Deemed-to-Satisfy Provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J6.1	Application of Part	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J6.2	Artificial lighting	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.

BCA Clause	Compliance Provisions	Status	Assessment commentary
J6.3	Interior artificial lighting and power control	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J6.4	Interior decorative and display lighting	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J6.5	Exterior artificial lighting	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J6.6	Boiling water and chilled water storage units	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J6.7	Lifts	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J6.8	Escalators and moving walkways	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J7 – Heated water supply and swimming pool and spa pool plant			
J7.0	Deemed-to-Satisfy Provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J7.2	Heated water supply	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J7.3	Swimming pool heating and pumping	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J7.4	Spa pool heating and pumping	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J8 – Facilities for energy monitoring			
J8.0	Deemed-to-Satisfy Provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to

BCA Clause	Compliance Provisions	Status	Assessment commentary
			certify CC Plans achieve compliance with Part J.
J8.1	Application of Part	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J8.3	Facilities for energy monitoring	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
Specifications			
Spec J1.2	Material Properties	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
Spec J1.5a	Calculation of U-Value and solar admittance	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
Spec J1.5b	Spandrel panel thermal performance	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
Spec J1.6	Sub-floor thermal performance	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
Spec J6	Lighting and Power Control Devices	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
NSW Subsection J(A) Energy Efficiency – Class 2 Buildings and Class 4 Parts			
NSW J(A)1 Building Fabric			
J(A)1.0	Deemed-to-satisfy provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J(A)1.1	Application of part	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J(A)1.2	Compliance with BCA provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.

BCA Clause	Compliance Provisions	Status	Assessment commentary
NSW J(A)2 Building Sealing			
J(A)2.0	Deemed-to-satisfy provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J(A)2.1	Application of part	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J(A)2.2	Compliance with BCA provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
NSW J(A)3 Air-Conditioning and Ventilation Systems			
J(A)3.0	Deemed-to-satisfy provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J(A)3.1	Application of part	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J(A)3.2	Compliance with BCA provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
NSW J(A)4 Heated Water Supply			
J(A)4.0	Deemed-to-satisfy provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J(A)4.1	Application of part	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J(A)4.2	Compliance with BCA provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
NSW J(A)5 Facilities for energy monitoring			
J(A)5.0	Deemed-to-satisfy provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.

BCA Clause	Compliance Provisions	Status	Assessment commentary
J(A)5.1	Application of part	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.
J(A)5.3	Compliance with BCA provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.

6 Appendix A – Architectural Plans Reviewed

The following documentation, prepared by Rothe Lowman was used in the assessment and preparation of this report: -

Drawing No.	Title	Date	Drawn By	Revision
TP01.01	Basement 2	27.05.22	Rothelowman	L
TP01.02	Basement 1	27.05.22	Rothelowman	L
TP01.03	Ground	27.05.22	Rothelowman	N
TP01.04	Level 1	27.05.22	Rothelowman	M
TP01.05	Level 2	27.05.22	Rothelowman	M
TP01.06	Level 3	27.05.22	Rothelowman	E
TP01.07	Level 4	27.05.22	Rothelowman	M
TP01.08	Level 5	27.05.22	Rothelowman	M
TP01.09	Roof	27.05.22	Rothelowman	G
TP02.01	East and West Elevations	27.05.22	Rothelowman	C
TP02.01	North and South Elevations	27.05.22	Rothelowman	C
TP03.01	Sections	27.05.22	Rothelowman	H
TP03.02	Sections 2	27.05.22	Rothelowman	F
TP03.03	Sections 3	27.05.22	Rothelowman	E
TP03.04	Sections 4	27.05.22	Rothelowman	D
TP03.05	Sections 5	27.05.22	Rothelowman	C

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7 Appendix B – Table 3 of Specification C1.1

Below is an abridged version of Table 3 of Specification C1.1. These are the Deemed to Satisfy requirements and do not take into consideration any reduction in FRL's sought via a performance-based solution or any concessions afforded by Part 3 of Specification C1.1

Building element	Class of building — FRL: (in minutes) Structural adequacy/Integrity/Insulation			
	2, 3 or 4 part	5 / 7a / 9b	6	7b
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is—				
For loadbearing parts—				
less than 1.5 m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/60	120/90/90	180/180/120	240/240/180
3 m or more	90/60/30	120/60/30	180/120/90	240/180/90
For non-loadbearing parts—				
less than 1.5 m	–/90-90	–/120/120	–/180/180	–/240/240
1.5 to less than 3 m	–/60/60	–/ 90/ 90	–/180/120	–/240/180
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN not incorporated in an external wall—				
For loadbearing columns	90/–/–	120/–/–	180/-/-	240/–/–
For non-loadbearing columns	–/–/–	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS—				
All	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS—				
Fire-resisting lift and stair shafts—				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-loadbearing	–/90/90	–/120/120	–/120/120	–/120/120
Bounding public corridors, public lobbies and the like—				
Loadbearing	90/90/90	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/60/60	–/–/–	–/–/–	–/–/–
Between or bounding sole-occupancy units—				
Loadbearing	90/90/90	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/60/60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion—				
Loadbearing	90/90/90	120/ 90/ 90	180/120/120	240/120/120

Building element	Class of building — FRL: (in minutes) Structural adequacy/Integrity/Insulation			
	2, 3 or 4 part	5 / 7a / 9b	6	7b
Non-loadbearing	–/90/90	–/ 90/ 90	–/120/120	–/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS—				
All	90/–/–	120/–/–	180/–/–	240/–/–
FLOORS				
Any	90/90/90	120/120/120	180/180/180	240/240/240
ROOFS				
Any	90/90/30	120/60/30	180/60/30	240/90/60



MBC GROUP

Building Code of Australia 2019 Amendment 1

BCA DESIGN COMPLIANCE REPORT

ABN 48 612 666 172

Sydney | Brisbane | Melbourne

Level 23, 101 Miller St
North Sydney NSW 2060

PO Box 3
North Sydney NSW 2059
Ph (02) 94371000

27 May 2022

WINIM Developments

Suite 214, 40 Yeo Street

Neutral Bay, NSW 2089

Acoustic Addendum to DA Report

JOB NUMBER: 210171

REVISION NO.: [B]

SUBJECT PREMISES : 1 Gatacre Avenue, Lane Cove

This acoustic statement has been prepared as an addendum to the Acoustic Report for Development Application (210171-AC-RPT-DA [B], dated 06/05/2021 by JHA Engineers). The addendum has been prepared in response to updated architectural documentation provided by Rothelowman. The drawing numbers and revisions this addendum has been based on are as follows:

TP01.01 L	TP03.02 F
TP01.02 L	TP03.03 E
TP01.03 N	TP03.04 D
TP01.04 M	TP03.05 C
TP01.05 M	TP03.10 C
TP01.06 E	
TP01.07 M	
TP01.08 M	
TP01.09 G	
TP02.01 C	
TP02.02 C	
TP03.01 H	

Based on a review of the architectural documentation and the applicable modifications, this addendum has been prepared to address revisions to the acoustic glazing requirements and the mechanical ventilation scheme.

The acoustic glazing requirements have been updated based on the revised documentation in order to achieve the requirements of *'Developments Near Rail Corridors or Busy Roads– Interim Guideline'* by the Department of Planning (DoP). Refer to Appendix A of this addendum for the updated glazing mark-ups.

The glazing mark-ups indicate that where windows are located along the coloured lines, the acoustic requirements are to apply.

DoP Interim Guideline provides a requirement that if the internal noise level cannot be achieved with windows open for natural ventilation, then an alternative means of ventilation must be provided such windows can be closed and the ventilation requirements of the BCA are met. Refer to Appendix B of this addendum for an updated mark-up which identifies the bedrooms and habitable spaces that require mechanical ventilation, as they cannot use open windows to achieve natural ventilation and comply with the requirements of the DoP Guideline. The mechanical ventilation will be provided such that the noise affected apartments can close the windows and achieve ventilation to the requirements of the BCA. This will be addressed further during detailed design.

There are no changes to the mechanical plant which requires an amendment of the acoustic assessment from the original DA acoustic report. The details of the mechanical plant for the development is not known at this stage and will be addressed during detailed design. The mechanical plant associated with the development including the rooftop pool plant, will be acoustically treated such that the external noise emission criteria is be achieved.

Based on the aforementioned Acoustic Report for DA and this addendum letter, with the implementation of the acoustic measures the development will comply with all applicable acoustic requirements.

Yours sincerely,

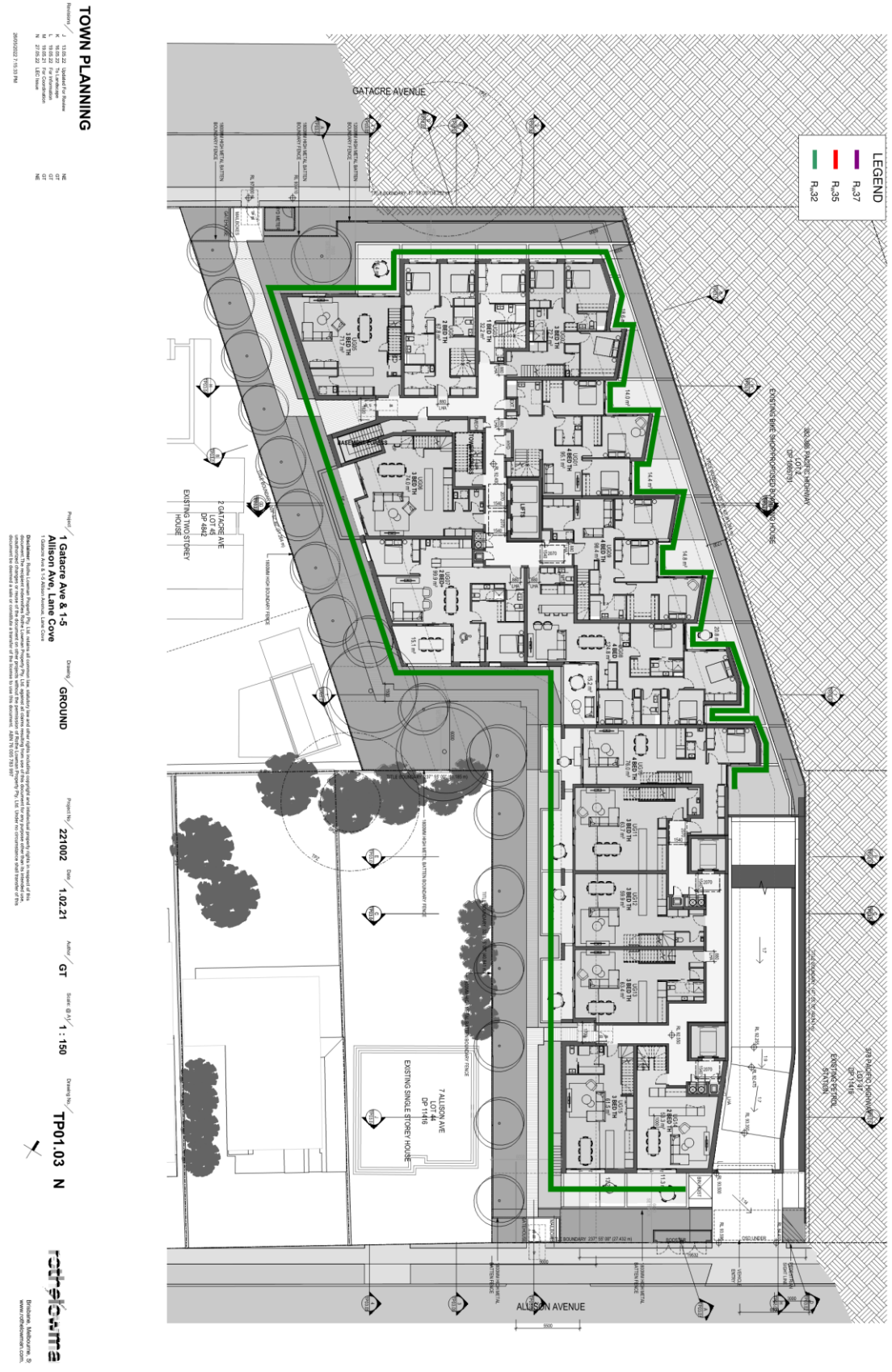


Sean Matthews

Senior Acoustics Engineer

Appendix A

Ground Level



Level 1



TOWN PLANNING

Revisions			
H	13.05.22	Updated For Review	NE
J	16.05.22	To Landscape	GT
K	19.05.22	For Information	GT
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Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **LEVEL 1**

Project No.: **221002**

Date: **01.02.21**

Author: **GT**

Scale: @ A1: **1 : 150**

Drawing No.: **TP01.04 M**

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Level 2



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1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

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Project No: **221002** Date: **05/05/21** Author: **NE** Scale: @ A1 **1 : 150** Drawing No: **TP01.05 M**

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Level 3



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1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **LEVEL 3**

Project No: **221002**

Date: **02/21/22**

Author: **GT**

Scale: @ A1 **1 : 150**

Drawing No: **TP01.06 E**

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Level 4



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1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

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Project No: **221002** Date: **01.02.21** Author: **GT** Scale: @ A3 **1 : 150** Drawing No: **TP01.07 M**

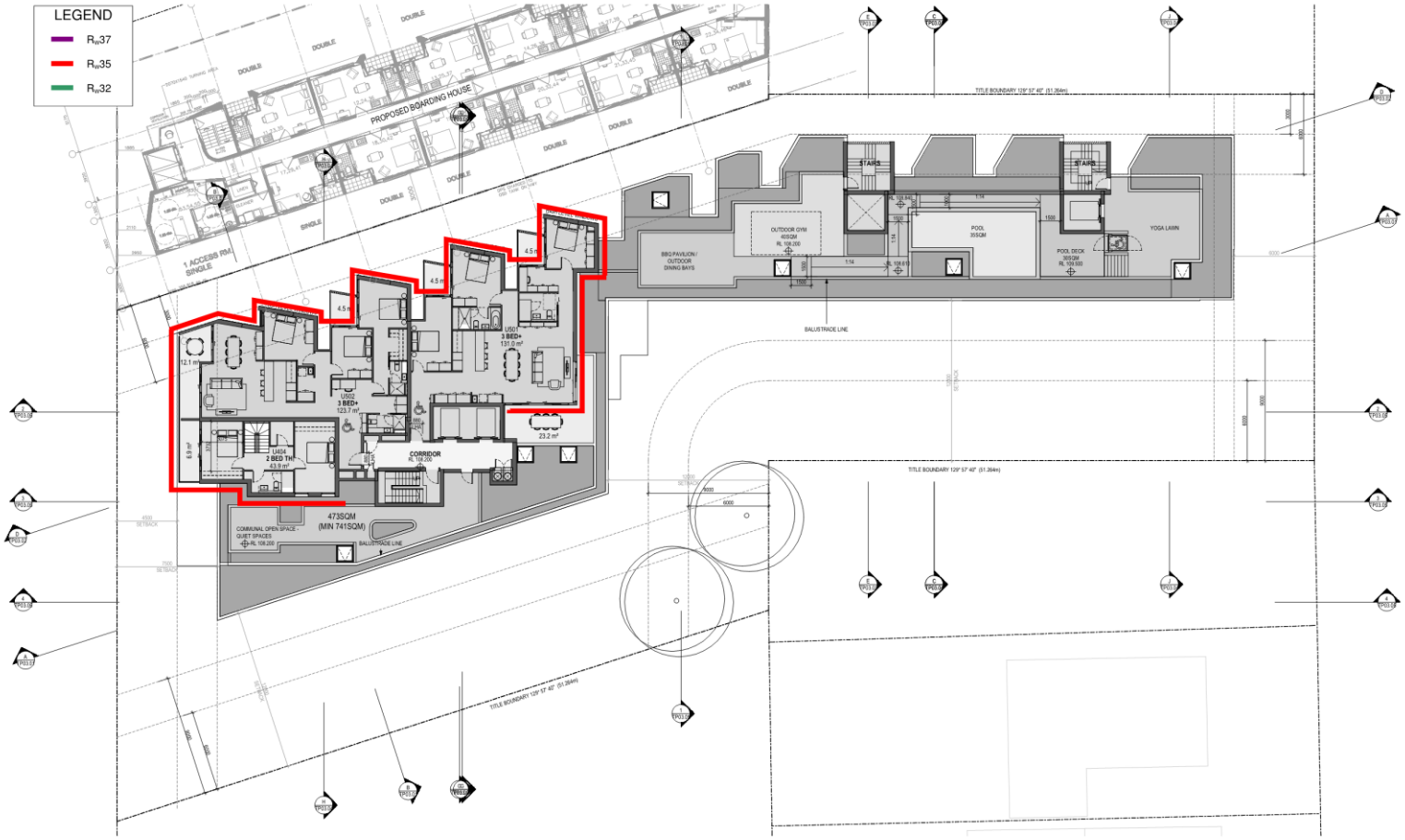
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Project: **1 Gatacre Ave & 1-5 Allison Ave, Lane Cove**
1 Gatacre Ave & 1-5 Allison Avenue, Lane Cove

Drawing: **LEVEL 5**

Project No: **221002**

Date: **04.02.21**

Author: **GT**

Scale: @ A1: **1 : 150**

Drawing No: **TP01.08 M**

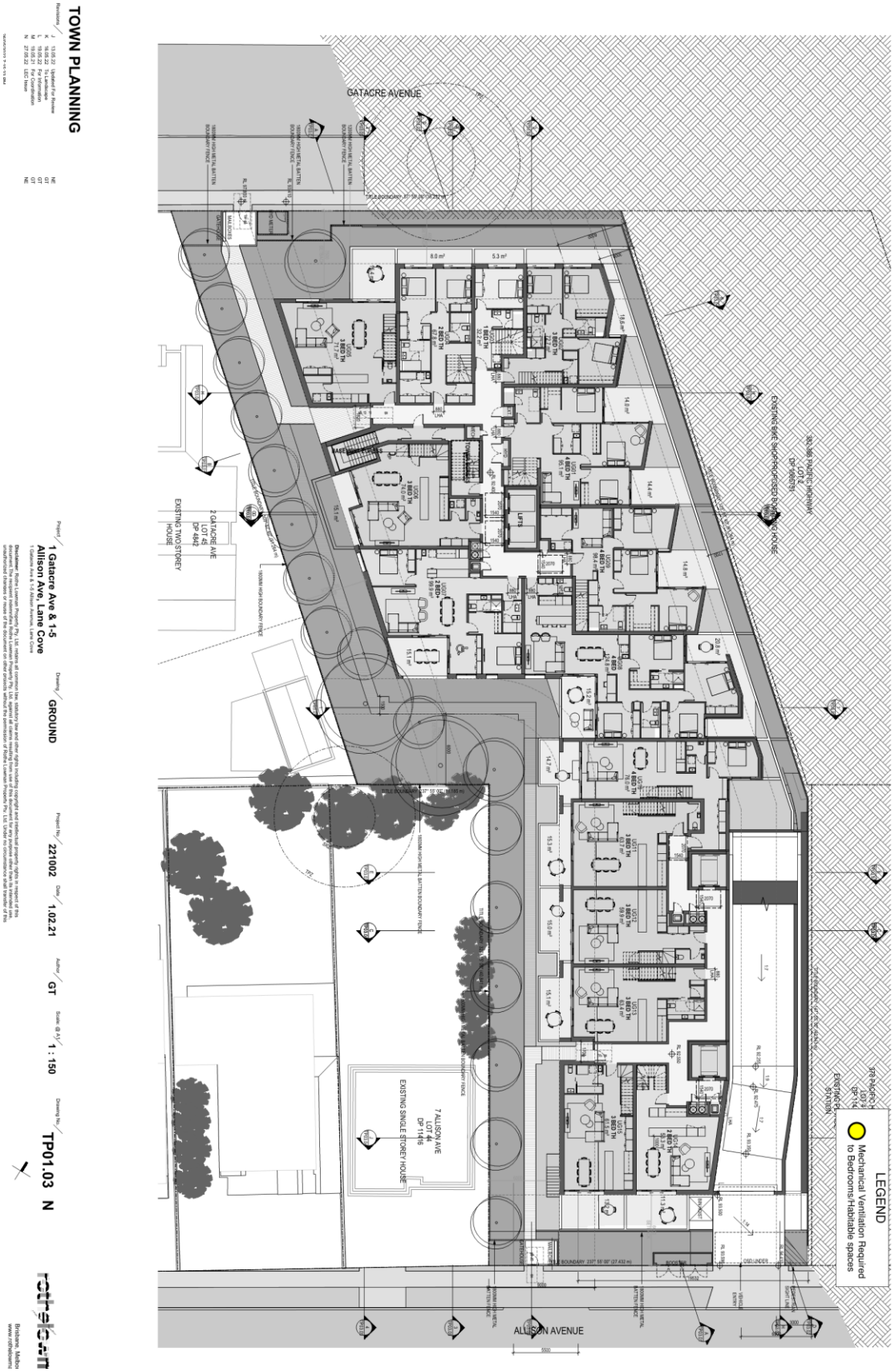
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Appendix B

Ground Level



Level 1



TOWN PLANNING

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Level 2



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Drawing: **LEVEL 2**

Project No: **221002** Date: **05/05/21** Author: **NE** Scale: @ A1 **1 : 150** Drawing No: **TP01.05 M**

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Level 4



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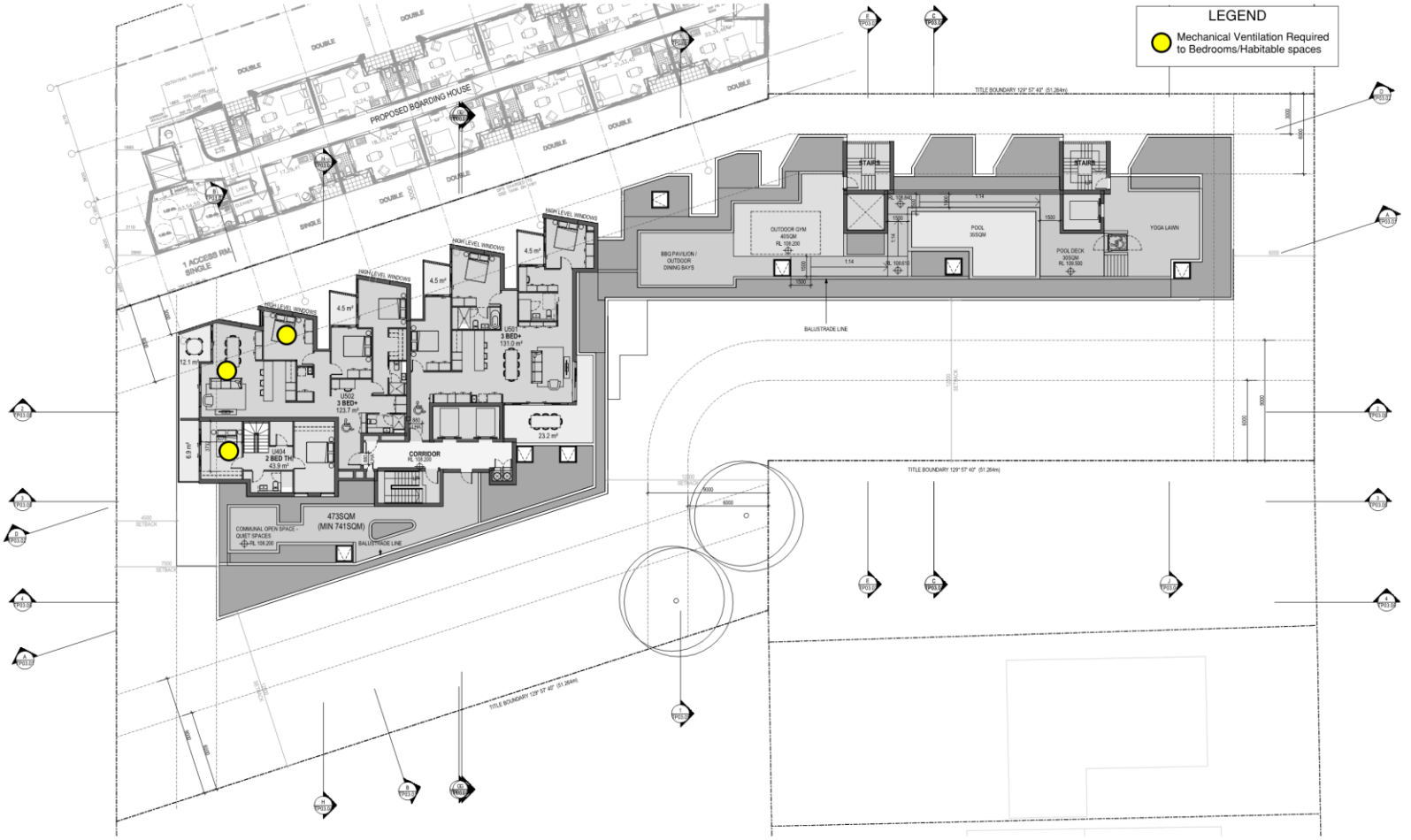
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TRAFFIC IMPACT AND PARKING ASSESSMENT

RESIDENTIAL DEVELOPMENT
1 GATACRE AVE,
LANE COVE NSW 2066

PREPARED FOR
A4 AU ZETA PTY LTD & WFM NO.10 PTY LTD

IN-COORDINATION WITH
WINIM DEVELOPMENTS

DATE: 27TH MAY 2022

OUR REFERENCE: 201223

BY: LIAM SHEARSBY

Author	**Liam Shearsby**	
Approved by	**Alistair McKerron**	
REVISION	**DATE**	**DESCRIPTION**
A	4th May 2021	DRAFT For comment
B	7th May 2021	For Approval
C	19th May 2021	For Approval
D	13th August 2021	For Approval
E	27th May 2022	For Approval

This report has been prepared in accordance with the terms and conditions of appointment. Greenview Consulting Pty Ltd (ABN 32600067338) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

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1 INTRODUCTION

1.1 GENERAL

Greenview Consulting has been engaged by the client to undertake a review of traffic and parking at the subject site. This report must be read in conjunction with the other Development Application documents and other relevant information, including:

- Lane Cove Municipal Council DCP 2010 requirements
- Rothelowman design drawings (May 2022)
- RTA (RMS) Guide to Traffic Generating Developments (October 2002)

This purpose of this report is to:

- Describe the site and the proposed development scheme;
- Describe the road network serving the site and the prevailing traffic conditions;
- Assess the adequacy of the proposed parking provision;
- Assess the potential traffic implications;
- Assess the suitability of the proposed vehicles access, internal circulation and servicing arrangements.

2 EXISTING CONDITIONS

2.1 SITE DESCRIPTION

The subject site is located on the southern side of Gatacre Ave and the northern side of Allison Ave, refer **Figure 2.1**. The site is currently occupied by three Lots: Lot A DP 415448, and Lots 45 & 46 DP 11416. Each Lot utilized for a differing purpose ranging from single and two-storey residential building to carparking areas and a multi-storey inn.

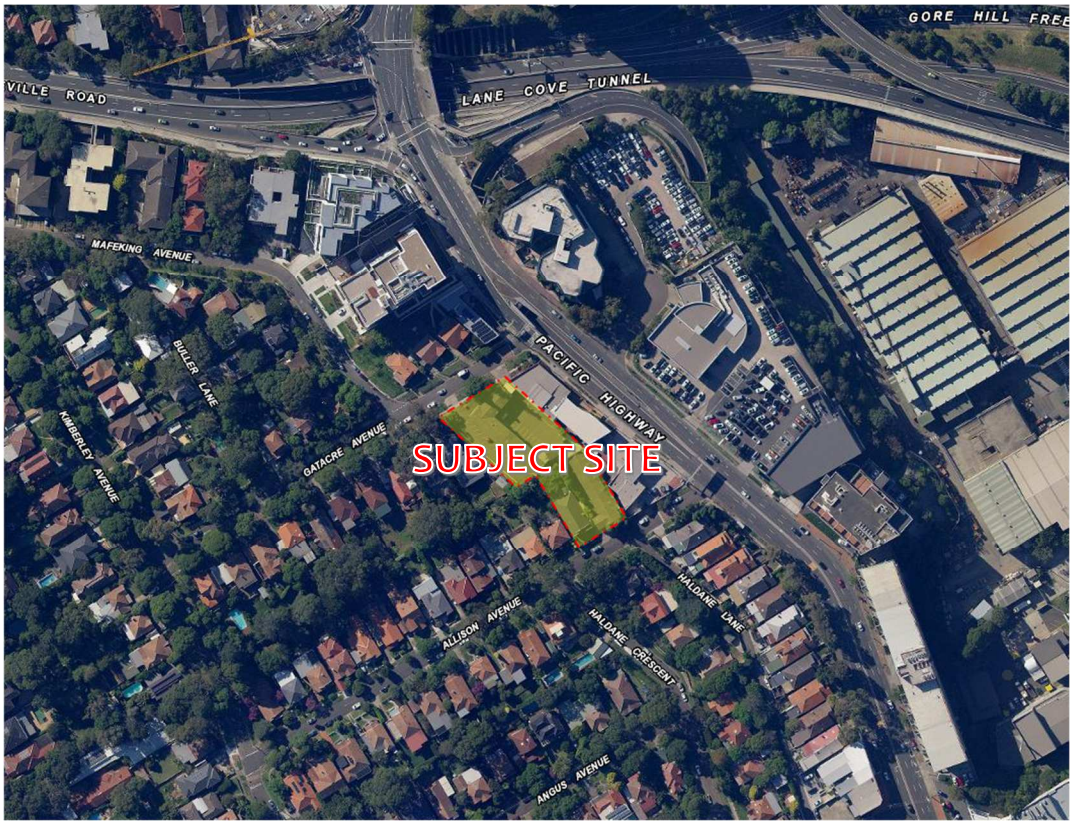


Figure 2-1 Site Location

The total area occupied by the subject site is approximately 2965m^2. The development as currently proposed consists of 60 total apartments, ranging from single to 4-bedroom plus.



Figure 2-2 Site Frontage from Gatacre Ave, looking west (site on left)
Image courtesy of Google Maps (Street View, capture date February 2020)



Figure 2-3 Site Frontage from Gatacre Ave, looking east (site on right)
Image courtesy of Google Maps (Street View, capture date February 2020)



Figure 2-4 Site Frontage from Allison Ave, looking east (site on left)
Image courtesy of Google Maps (Street View, capture date February 2020)



Figure 2-5 Site Frontage from Allison Ave, looking west (site on right)
Image courtesy of Google Maps (Street View, capture date February 2020)

2.2 EXISTING ROAD CONDITIONS

The Roads & Maritime Services (RMS, formally RTA) broadly classifies all roads into three administrative classes: state, regional and local. A detailed description of each administrative class is provided in "NSW Road Management Arrangements" (December 2008), however in general:

> **State Roads** are the major arterial links throughout NSW and within major urban areas. They are the principal traffic carrying and linking routes for the movement of people and goods within the Sydney, Newcastle, Wollongong and Central Coast urban areas and which connect between these urban centres, the major regional towns, the major regions of the State and the major connections interstate.
>
> **Regional Roads** are routes of secondary importance between State Roads and Local Roads which together with the State Roads, provide the main connections to and between smaller towns and districts and perform a sub arterial function in major urban areas.
>
> **Local Roads** comprise the remaining Council controlled roads which provide for local circulation and access.

Gatacre Ave is a local road; in the site vicinity it has 1 lane of traffic flow with parallel parking permitted on either side of the majority of Gatacre Ave (i.e. 1 effective lane of traffic flow for both directions). No line divider is present, and the posted speed limit is 40km/hr.

Allison Ave is a local road; in the site vicinity it has 1 lane of traffic flow with parallel parking permitted on either side of the majority of Allison Ave (i.e. 1 effective lane of traffic flow for both directions). No line divider is present, and the default speed limit is 50km/hr.

Pacific Hwy is a state road; in the site vicinity it has 6 lanes of traffic flow (i.e. 3 effective lanes of traffic flow for either direction. A raised median strip is present to separate the north and south bound traffic. Parking is permitted along sections of the eastern side of the Pacific Hwy and the posted speed limit is 60km/hr.

Haldane Cres is a local road; in the site it has 1 lane of traffic flow with parallel parking permitted on either side of the road (i.e. 1 effective lane of traffic flow for both directions of traffic flow). No line divider is present, and the default speed limit is 50km/hr.

Haldane Ln is a local road; in the site vicinity it has 1 lane of traffic flow (i.e. 1 effective lane of traffic flow for both directions) with parallel parking permitted on the eastern side of the laneway. No line divider is present, and the default speed limit is 50km/hr.

2.3 EXISTING ROAD FEATURES

The existing road features which apply to the road network in the vicinity of the site are illustrated in **Figure 2.5**. These include:

- Bus zones along the Pacific Hwy.
- Parking is generally allowed in the site vicinity in the local roads but prohibited along certain sections.
- The default local speed limit is 50 km/hr.



Figure 2-6 Existing Road Features

2.4 TRAFFIC DATA

As far as we are aware, there a no readily available traffic counts in the local vicinity.

2.5 PUBLIC TRANSPORT

The closest train station to the subject site is Artarmon Station, located approximately 1km to the north-east. Artarmon Station is located on the T9 Northern Line and the CCN Central Coast & Newcastle Line. This station provides commuters with direct access into Sydney CBD, along with suburbs such as Strathfield, Hornsby and Berowra, along with suburbs up along the Central Coast. For access to southern suburbs, commuters can switch lines at Townhall Station.

The closest bus stops to the subject site are located along the Pacific Hwy, approximately 180m to the east of the subject site (approximately 3-minutes' walk). Other bus stations servicing additional routes can be located further along the Pacific Hwy (approximately 250m to the southern east of the subject site), along Phoenix St (approximately 365m to the east of the subject site) and along Longueville Rd (approximately 650m to the east of the subject site). Routes that the beforementioned bus stations service are as follows:

- Route 144 - Manly to Chatswood via St Leonards
- Route 252 - Gladesville to City King Street Wharf via North Sydney
- Route 253 - Riverview to City Wynyard via Freeway
- Route 254 - Riverview to McMahons Point
- Route 261 - Lane Cove to City King Street Wharf via Longueville
- Route 265 - Lane Cove to North Sydney via Greenwich
- Route 286 - Denistone East to Milsons Point via St Leonards & North Sydney
- Route 287 - Ryde to Milsons Point via St Leonards & North Sydney
- Route 290 - Epping to City Erskine St via Macquarie University & North Sydney
- Route 291 - Epping to McMahons Point
- Route 602X - Bella Vista Station to North Sydney (Express Service)
- Route 612X - Castle Hill to North Sydney (Express Service)
- Route 622 - Dural to Milsons Point via Cherrybrook

We therefore conclude that the subject site has good access to public transport.

2.6 SOCIAL & DEMOGRAPHIC INFORMATION

2016 Census Data (refer www.censusdata.abs.gov.au) was used to construct a community profile of the suburb of Lane Cove. The most relevant census data categories are reproduced in **Table 2.2**; we have also provided values for NSW to allow general comparisons to be made.

Unsurprisingly for a suburb with good access to public transport, Lane Cove exhibits a very high degree (over 29%) of people who travel to work by public transport and a lower degree of people who travel to work by car than NSW as a whole. We expect these high levels of public transport usage will carry across to the residents of the proposed development.

Table 2.1 Demographic Information

Category	Lane Cove%	NSW%
Employment		
Worked Full-time	66.6	59.2
Worked Part-time	25.1	29.7
Unemployed	4.4	6.3
Travel to Work		
By car (as driver or passenger)	51.2	64.6
By public transport	29.8	16.0
Walked only	3.9	3.9
Number of registered motor vehicles per dwelling		
0	9.9	9.2
1	49.6	36.3
2	30.5	34.1
3+	7.7	16.7

3 PROPOSED DEVELOPMENT

3.1 PROPOSED DEVELOPMENT DESCRIPTION

The development as currently proposed consists of a two stores of basement parking, with a loading bay for a waste/service truck on basement 1, along with ground floor and 5 stores of residential dwellings consisting of the following break-down:

- 1-bedroom dwellings: 12
- 2-bedroom dwellings: 14
- 3-bedroom dwellings: 16
- 4-bedroom dwellings: 11

53

With respect to deliveries to site, it is proposed that a service truck will enter the loading bay on basement 1 to make required deliveries.

3.2 SITE ACCESS & SERVICING

It is currently proposed that the basement areas will be access from the site frontage along Allison Ave, refer **Figure 3.1**.

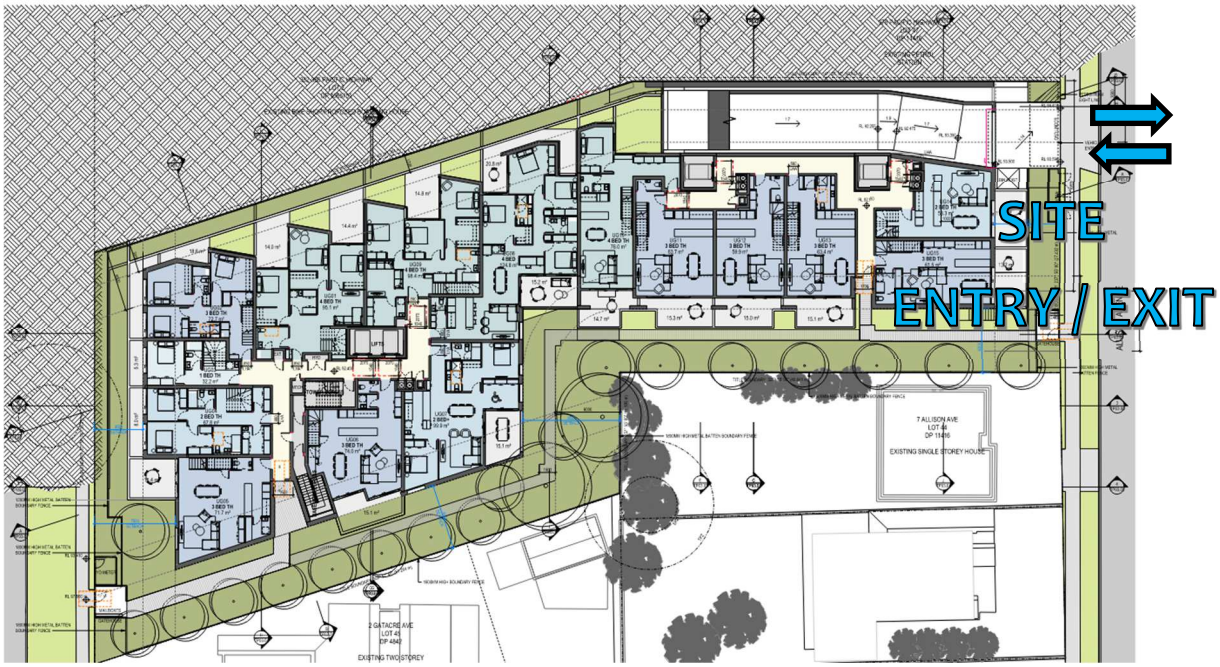


Figure 3-1 Proposed Entry / Exit Point

Swept Paths Analysis

We have undertaken swept-path analysis using Autotrack (refer attached turning plans), this analysis indicates that:

- A B85 can enter the site in a forward direct, access the parking area, and exit the site in a forward direction.
- A waste/service truck can enter basement 1 from the ground floor and manoeuvre to the loading bay, exiting in a forward's direction.
- A B85 vehicle can enter the driveway and a SRV vehicles can exit the driveway at the same time and not conflict with each other; and vice versa. They enter and exit from the correct side of Alison Ave and do not conflict with opposing traffic.

Garbage Collection

Garbage collection will occur by a council waste truck, within the loading bay area on basement 1.
A garbage plan has been provided in the Waste Management Report which forms part of the DA submission.

3.3 ONSITE PARKING PROVISIONS

Parking will be provided in accord with Lane Cove Municipal Council DCP 2010, Part R Table 1. Any number equal to or greater than the minimum will be compliant with Council controls, as demonstrated following.

- Residential flat buildings:
  0.5 spaces per studio.
  1 space per 1-bedroom unit.
  1.5 spaces per 2-bedroom unit.
  2 spaces per 3+ bedroom unit.
  1 visitor space per 4 units.
  1 disabled space per 50 visitor spaces (min 1).

The calculations are summarised in **Table 3.1** below.

Table 3.1 Car Parking Requirements (Minimum)

Type	Number of Units	Rate	Spaces Required
METHOD A: DCP 2010			
Studio	0	0.5 spaces per unit	0
1-bedroom dwelling	12	1 space per unit	12
2-bedroom dwelling	14	1.5 space per unit	21
3+ bedroom dwelling	27	2 space per unit	54
			∑ = 87
Visitor parking	53	1 space per 4 units	14
Disabled parking	14 visitor spaces	1 space per 50 spaces	1
		MINIMUM REQUIRED	**101**

The proposed development incorporates **eighty-one (81) spaces** for resident use, **fourteen (14) visitor spaces** and **eleven (11) disabled spaces** (for a total of **106 spaces**) across both floors of basement parking. We note the surplus of disabled spaces, and therefore 6 disabled spaces should be repurposed for resident parking to achieve the minimum required number of 87 resident spaces in Councils DCP 2010. The minimum requirements of disabled parking spaces will continue to be compliant in this scenario.

Bicycle Parking

Bicycle parking will be required as specified in DCP 2010 Part R, Table 3 for Residential flat buildings, as follows:

- 1 residential space per 4 dwellings (14 required)
- 1 visitor rack + 1 additional rack per 10 dwellings (6 required)

A total of 14 spaces plus 6 racks are thus required, and these will be provided on basements 1 & 2. A residential bike storeroom is available for residents and bike racks are available for visitors.

Service Vehicles

Service vehicle parking will be required as specified in DCP 2010 Part R Clause 2.10 and will be provide on Basement 1.

Motorcycle Parking

DCP 2010 Part R Section 2.7 stipulates that "*Developers shall provide 1 motorcycle parking space per 15 car spaces for all types of development. Motorcycle parking spaces are to have an area of 1.2m x 3m.*"

Given that the proposed development incorporates 106 car spaces, 7 motorcycle parking spaces are required which will be provided on both basements 1 & 2.

Accessible Parking

Accessibility requirements for the proposed development are discussed in the access consultant's report, which forms part of the DA submission.

3.4 PEDESTRIAN ISSUES

There is a formal pedestrian footpath along both the Gatacre Ave and Allison Ave site frontage, and this will be maintained under proposed conditions. We note there is an existing *vehicular access* (i.e. driveway) from Gatacre and Allison Ave. The vehicular access along Gatacre Ave is to be removed under proposed conditions whilst the vehicular access along Allison Ave is remain and be widened under proposed conditions. When any work is be performed in either site frontage area, pedestrian access along the frontage is to be maintained. Any road frontage works may need to be completed in two stages to ensure a safe path of travel for pedestrians.

4 TRAFFIC GENERATION

4.1 TRAFFIC GENERATION

The RTA *Guide to Traffic Generating Developments,* October 2002, Section 3 - Land Use Generation (Section 3.3.2 & 3.4.1) provides estimated traffic generation rates for various development types, as noted below. The existing site consisting of an inn that houses 44 units.

A. Motels: 3 daily trips per unit
0.4 peak hour trips per unit

B. Residential Flat Building
   a. Small Units (up to 2-bedrooms) 5 daily trips per dwelling
   0.5 peak hour trips per dwelling
   b. Larger Units (3+ bedrooms) 6.5 daily trips per dwelling
   0.65 peal hour trips per dwelling

We note that the site is currently occupied by 44 units as a part of the Inn, and we have calculated the net impact accordingly.

Table 4.1 Traffic Generated Under Proposed Conditions

	Weekday Daily vehicle trips	**Weekday Peak hour vehicle trips**
Existing	*44 Units* 44*3 = +132 vt	*44 Units* 44*0.4 = 17.6 = +18 vt
Proposed	*26 Small and 27 Large Dwellings* 26*5 + 27*6.5 = 305.5 = + 306 vt	*33 Small and 27 Large Dwellings* 26*0.5 + 27*0.65 = 30.55 = + 31 vt
Net change	**306-132 = +174 vt**	**31-18 = +13 vt**

vt = vehicle trips

The above calculations indicate a little increase on the existing traffic network, and as such, we believe the development as proposed will not have detrimental traffic impacts in the locale in terms of the traffic efficiency, amenity, safety, and/or road pavement life.

5 CONCLUSIONS

We conclude that:

- We believe that the proposed development will not have a significant impact on the traffic in the local network.
- We believe the development will not have a significant impact on the locale in terms of the traffic efficiency, amenity, safety, and/or road pavement life.
- The proposed development does meet the minimum required number of parking spaces as per the parking requirements outlined in Table 3.1.

Yours faithfully,
For & on behalf of Greenview,

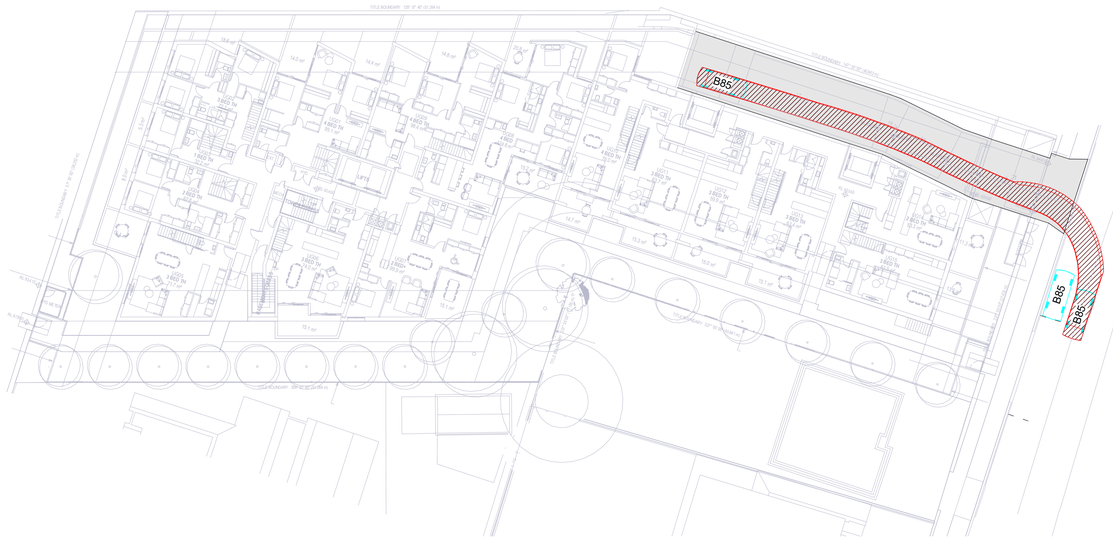




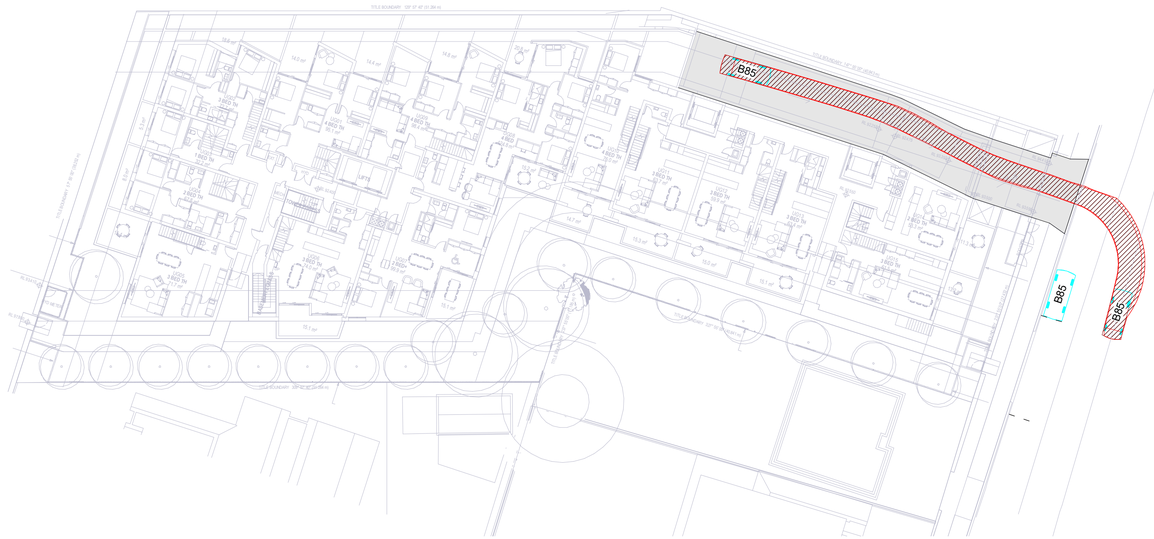
Liam Shearsby
Traffic Designer

Alistair McKerron B.E., M.I.E.(Aust), CP Eng,
NPER No. 2220277
Senior Project Engineer

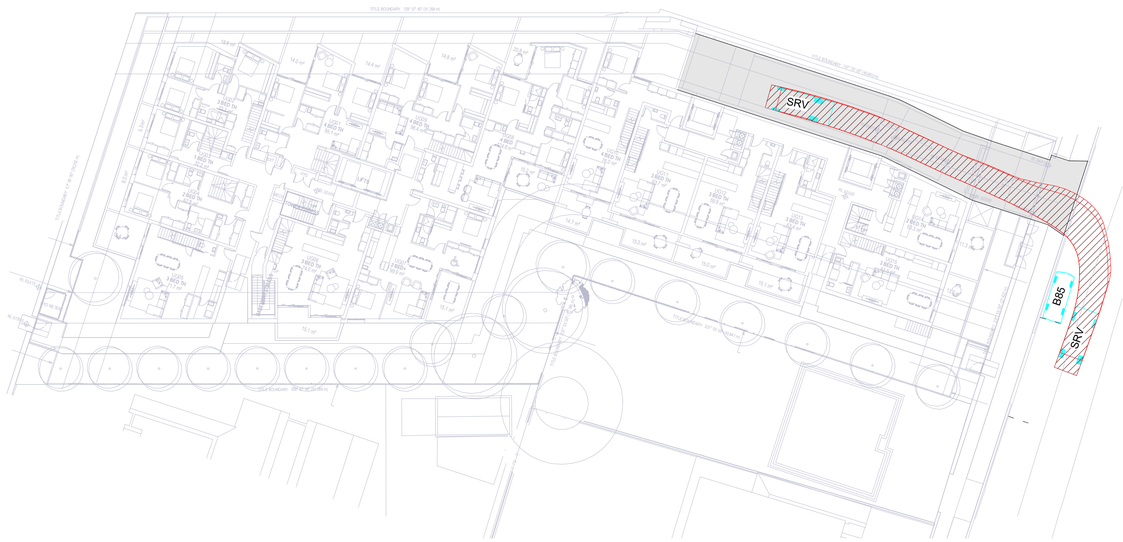
APPENDICES
SWEPT PATH ANALYSIS – GREENVIEW CONSULTING



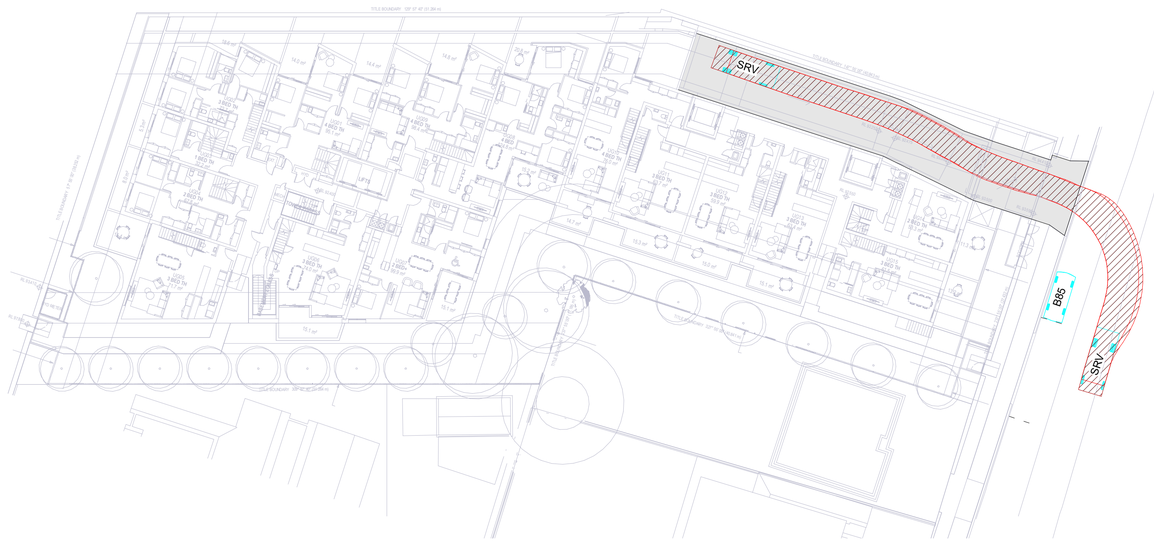
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GROUND FLOOR - B85 EXIT 1
Scale: 1 : 300



GROUND FLOOR - SRV ENTRY 1
Scale: 1 : 300



GROUND FLOOR - SRV EXIT 1
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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

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CIVIL DESIGN

GROUND FLOOR TURNING PATHS SHEET 1

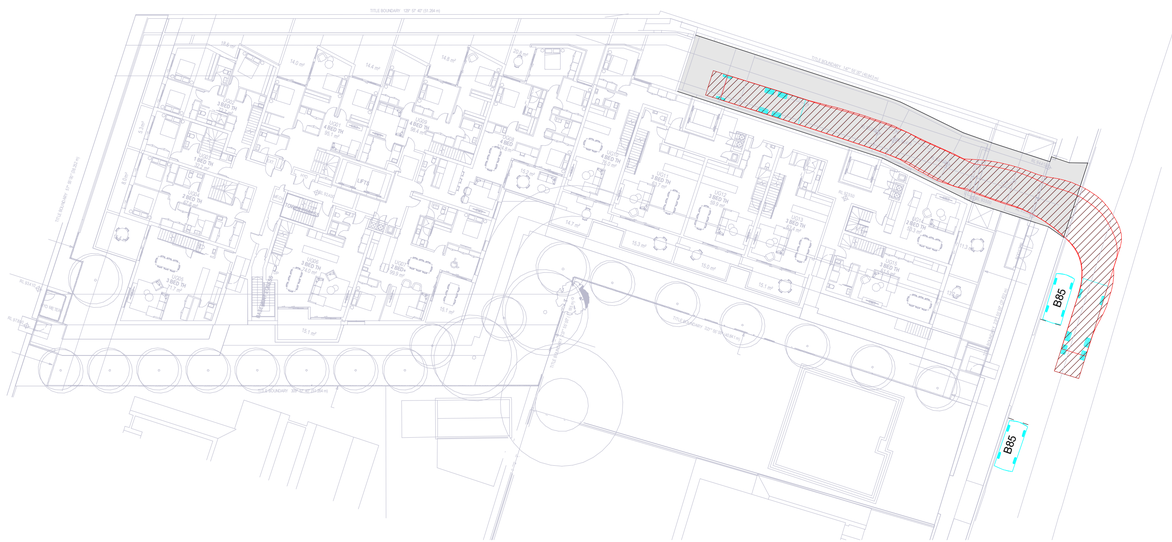
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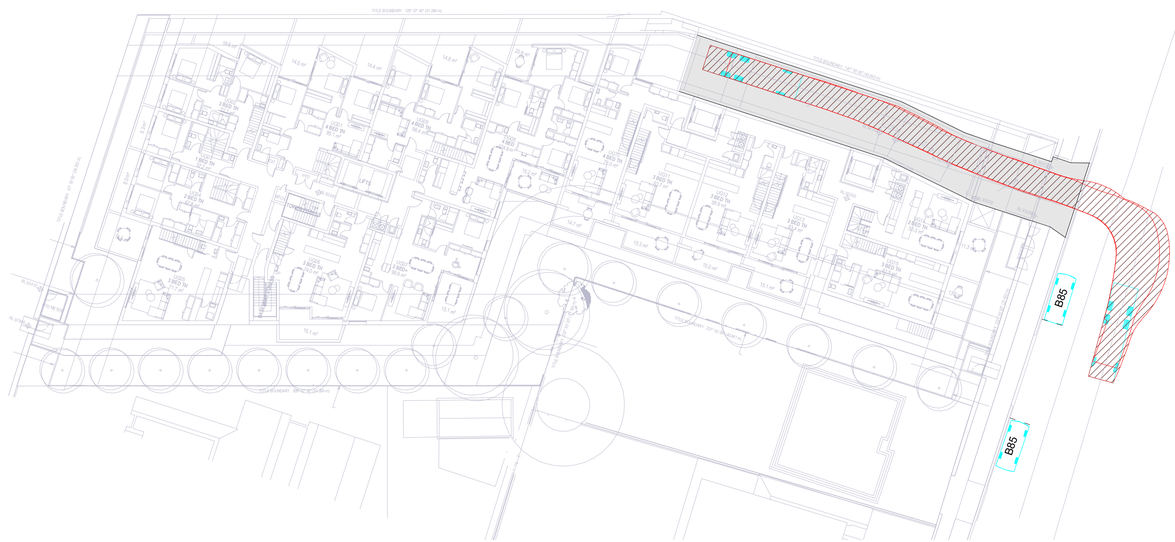
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GROUND FLOOR - B85 & SRV PASSING 2
Scale: 1 : 300



GROUND FLOOR - WASTE SERVICES TRUCK ENTRY 1
Scale: 1 : 300



GROUND FLOOR - WASTE SERVICES TRUCK EXIT 1
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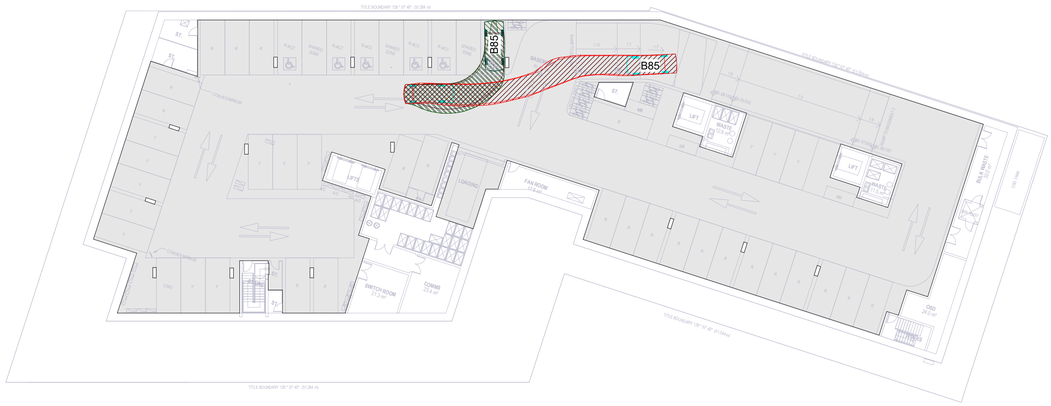
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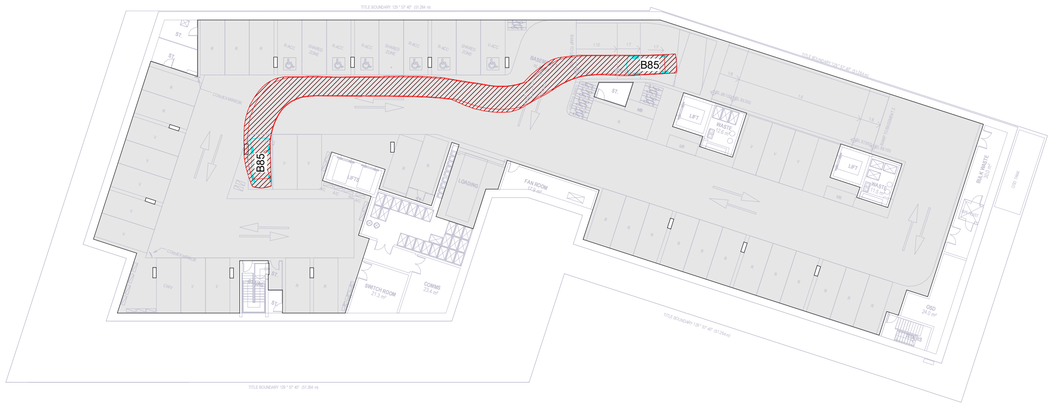
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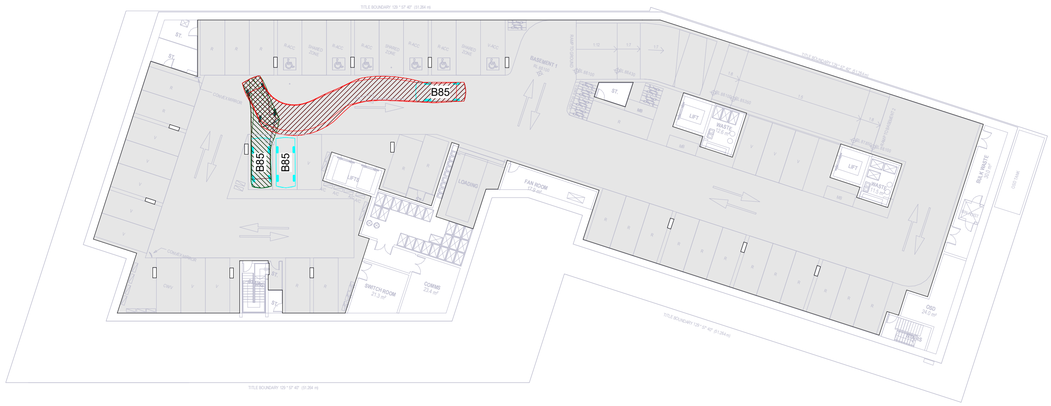
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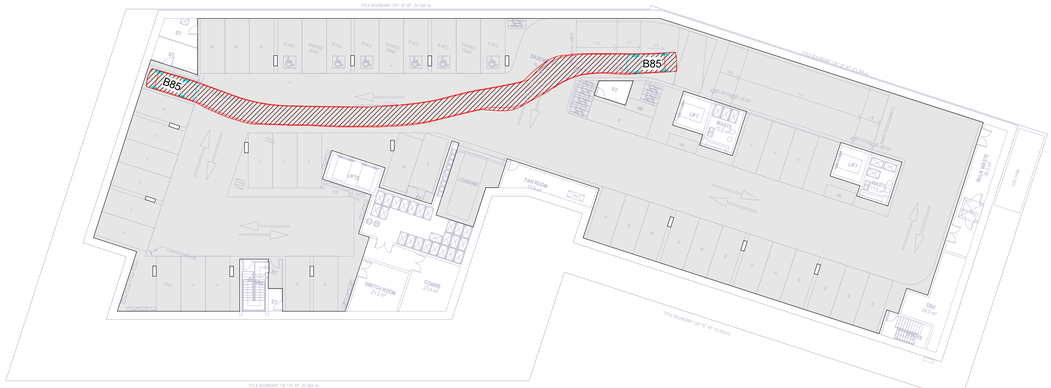

B85
B85
TITLE BOUNDARY 135° 12' 40" 23.384 m
TITLE BOUNDARY 135° 12' 40" 23.384 m
TITLE BOUNDARY 135° 12' 40" 23.384 m
LIFT
LIFT
LIFT
LIFT
LOADING
FAN ROOM
SWITCH ROOM
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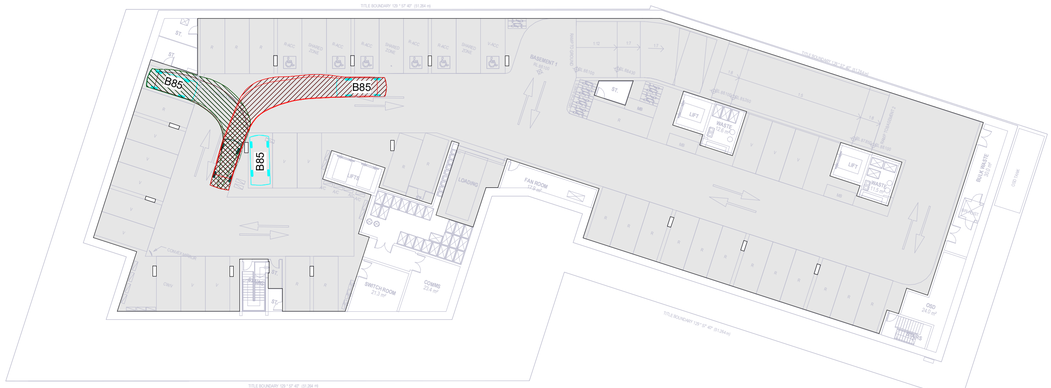
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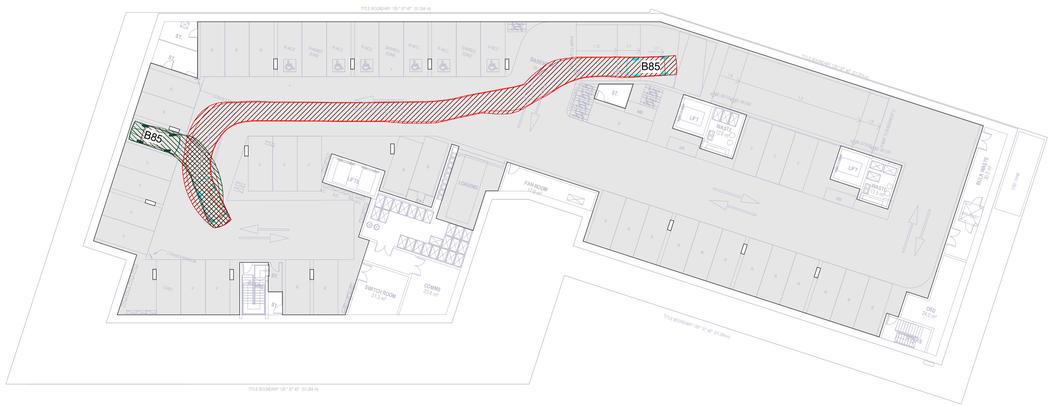
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BASEMENT 1 - B85 EXIT 5
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BASEMENT 1 - B85 ENTRY 6
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BASEMENT 1 - B85 EXIT 6
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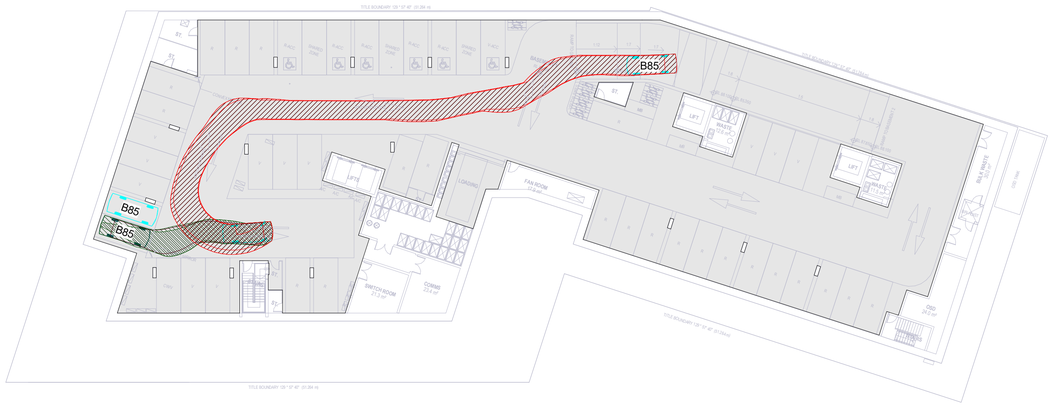
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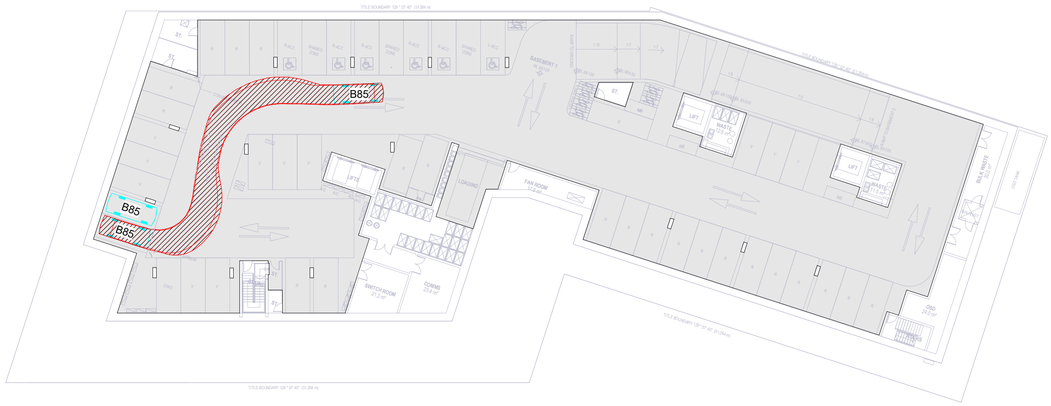
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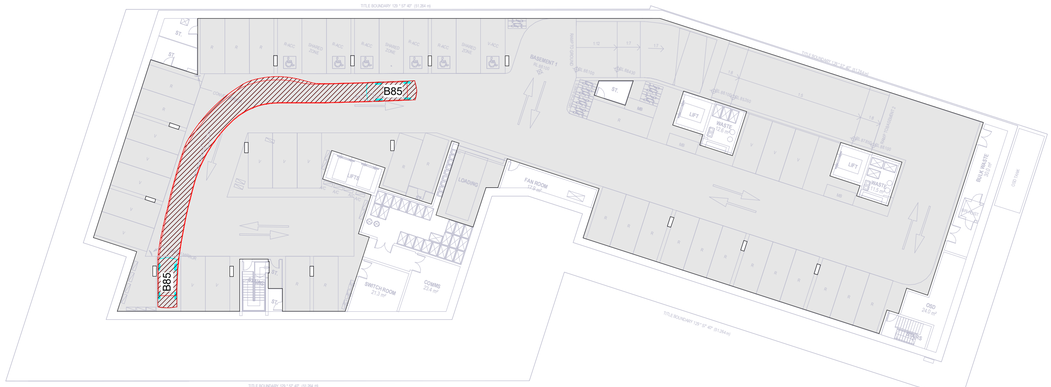
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BASEMENT 1 - B85 ENTRY 8
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BASEMENT 1 - B85 EXIT 8
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BASEMENT 1 - B85 ENTRY 9
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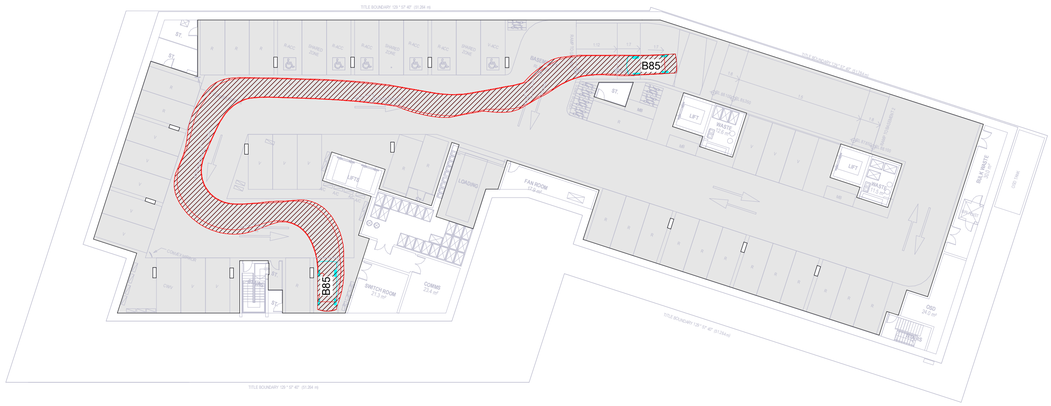
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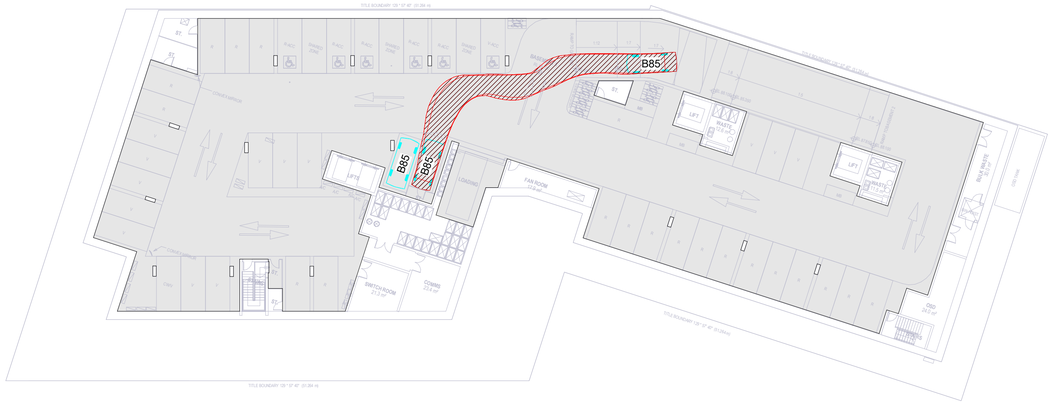
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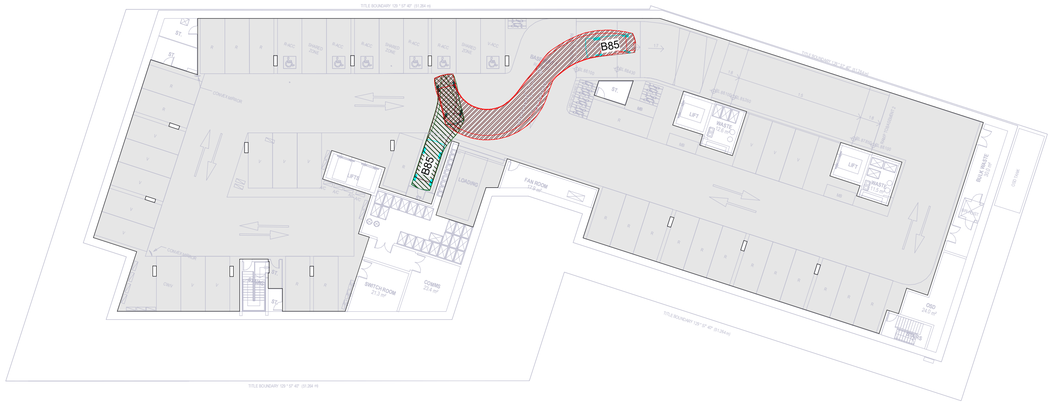
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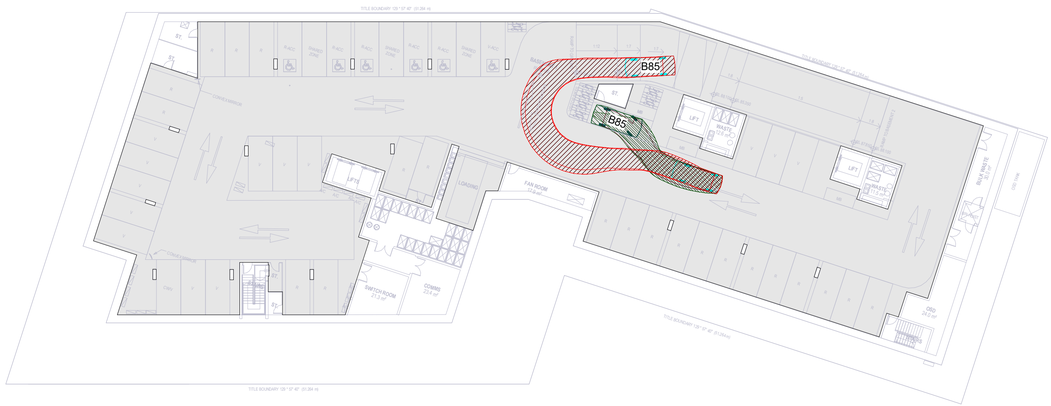
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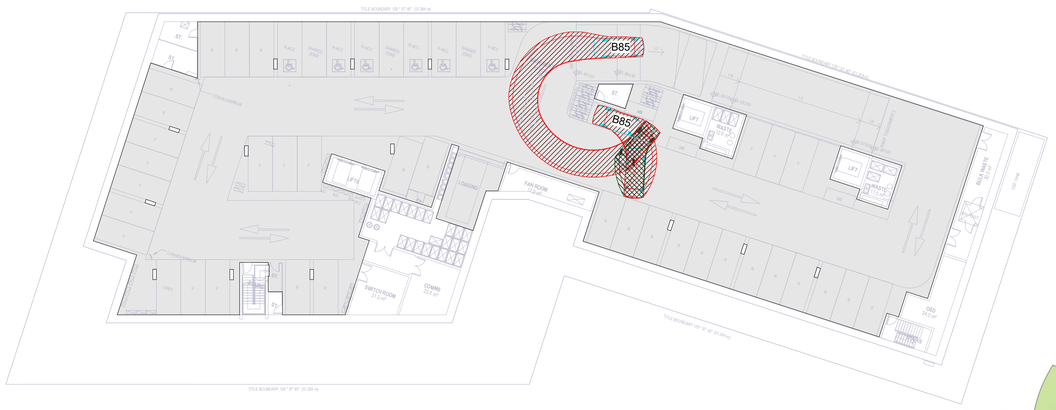
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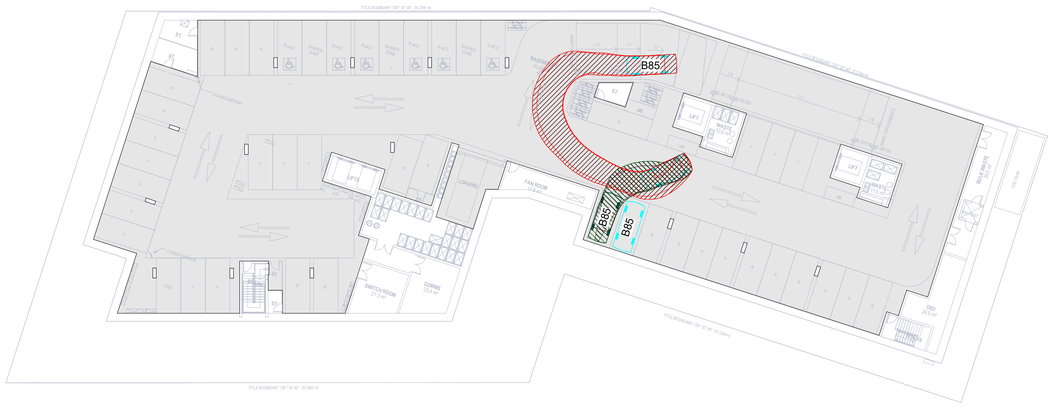
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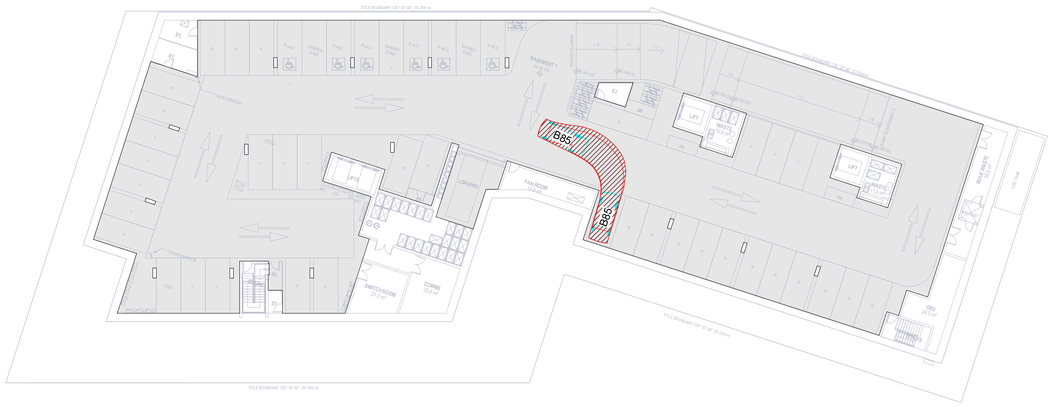
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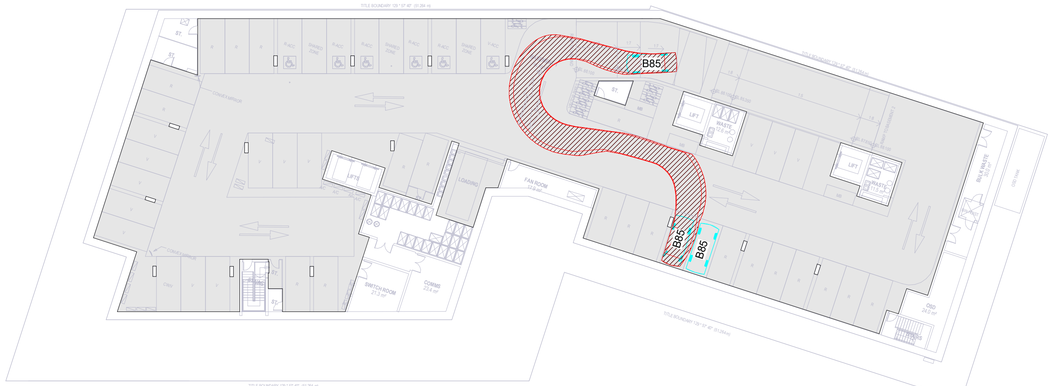
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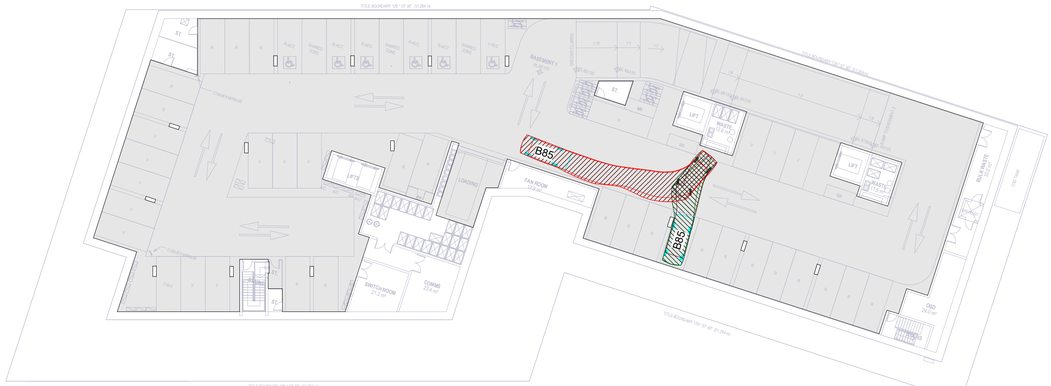
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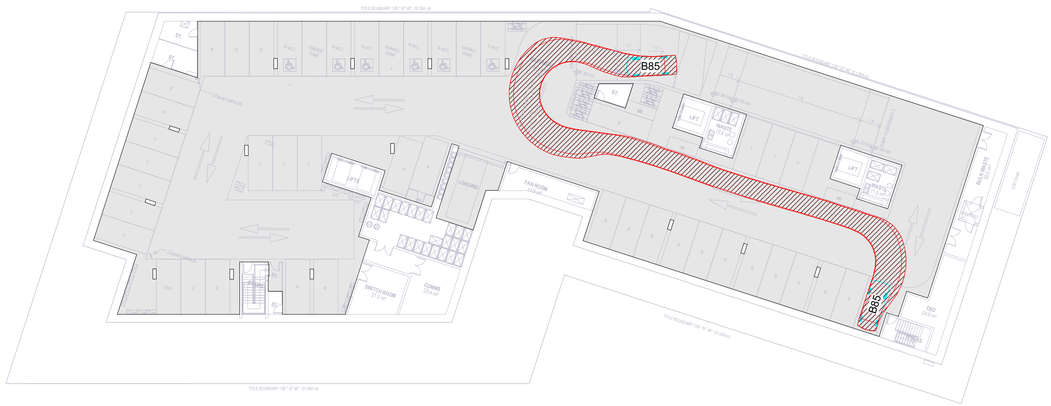
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BASEMENT 1 - B85 ENTRY 14
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BASEMENT 1 - B85 EXIT 14
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BASEMENT 1 - B85 ENTRY 15
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BASEMENT 1 - B85 EXIT 15
Scale: 1 : 300

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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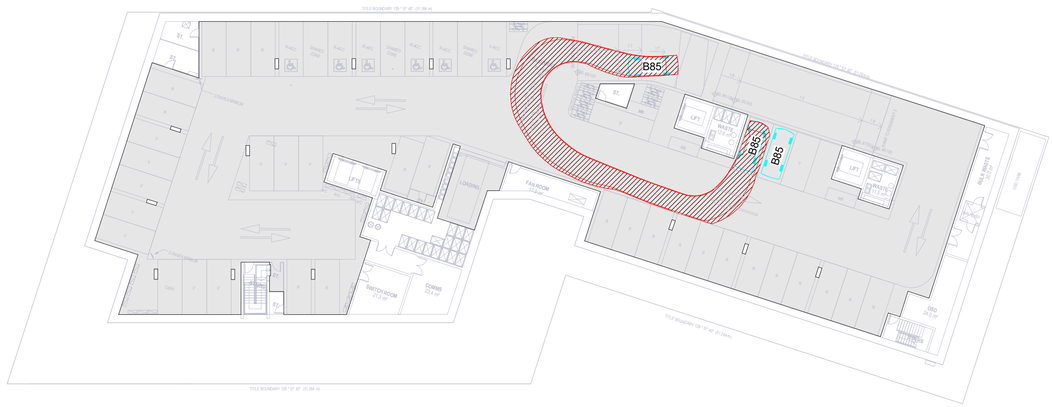
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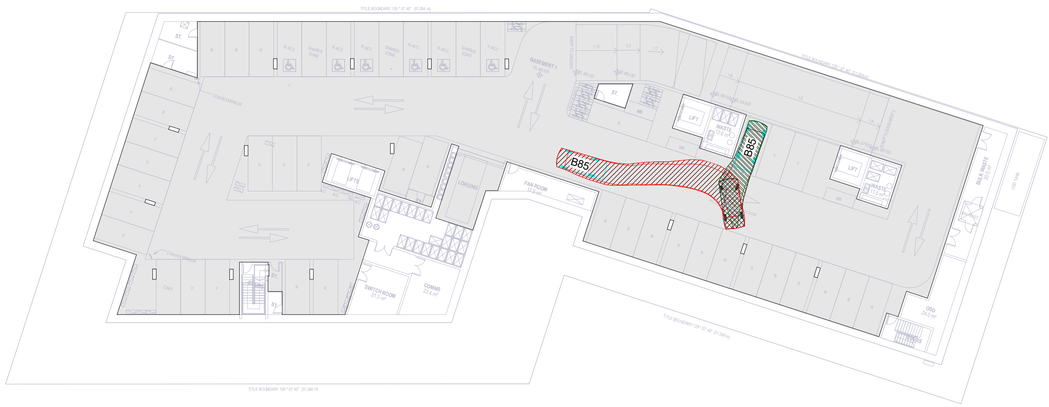
CIVIL DESIGN

BASEMENT 1 TURNING PATHS SHEET 5

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BASEMENT 1 - B85 ENTRY 16
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BASEMENT 1 - B85 EXIT 16
Scale: 1 : 300



BASEMENT 1 - WASTE/SERVICE TRUCK ENTRY 1a
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BASEMENT 1 - WASTE/SERVICE TRUCK EXIT 1
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BASEMENT 1 - WASTE/SERVICE TRUCK ENTRY 1b
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1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

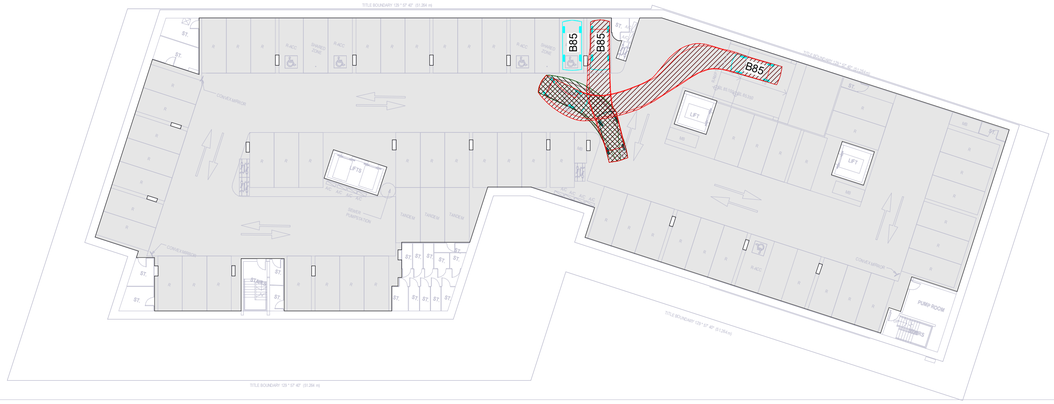
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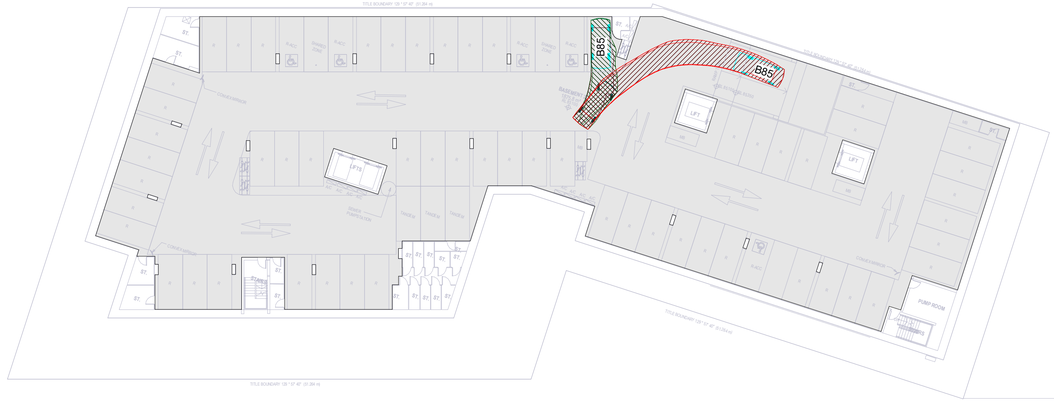
CIVIL DESIGN

BASEMENT 1 TURNING PATHS SHEET 6

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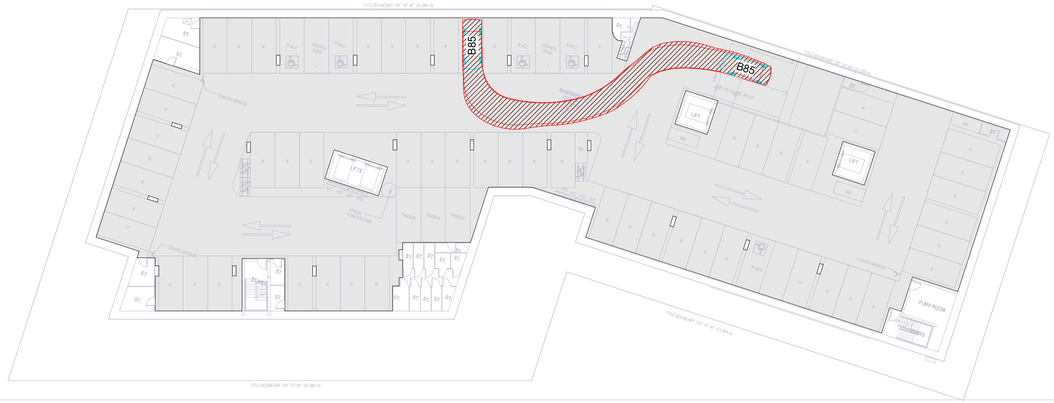
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BASEMENT 2 - B85 EXIT 1
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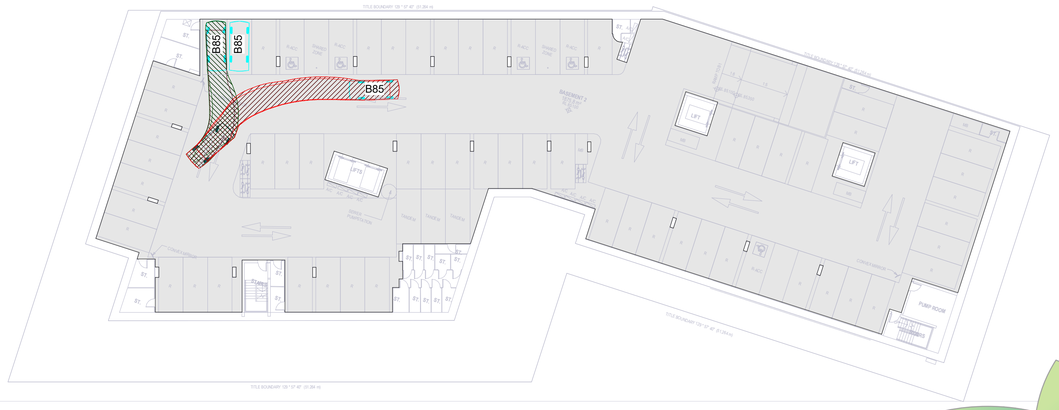
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BASEMENT 2 - B85 EXIT 2
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 3
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BASEMENT 2 - B85 EXIT 3
Scale: 1 : 300

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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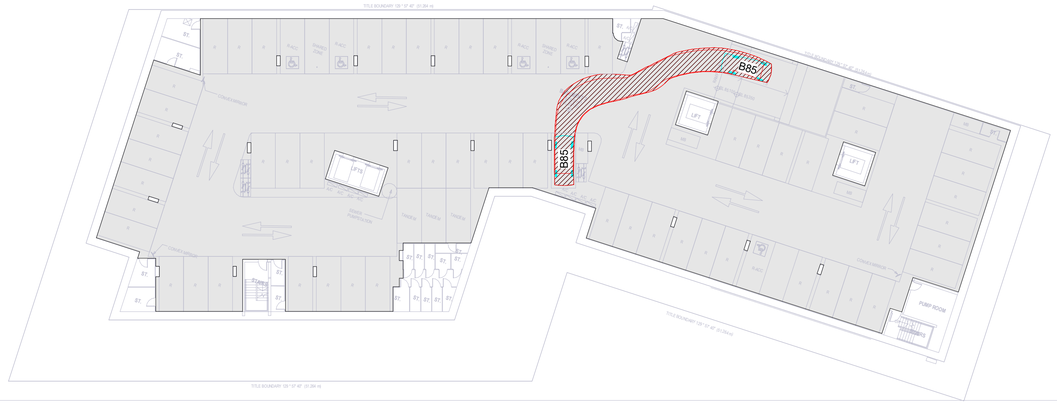
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BASEMENT 2 TURNING PATHS SHEET 1

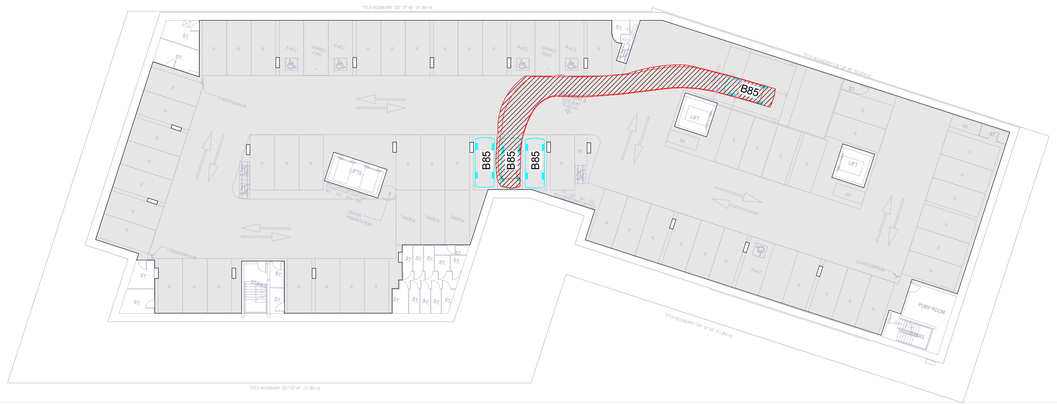
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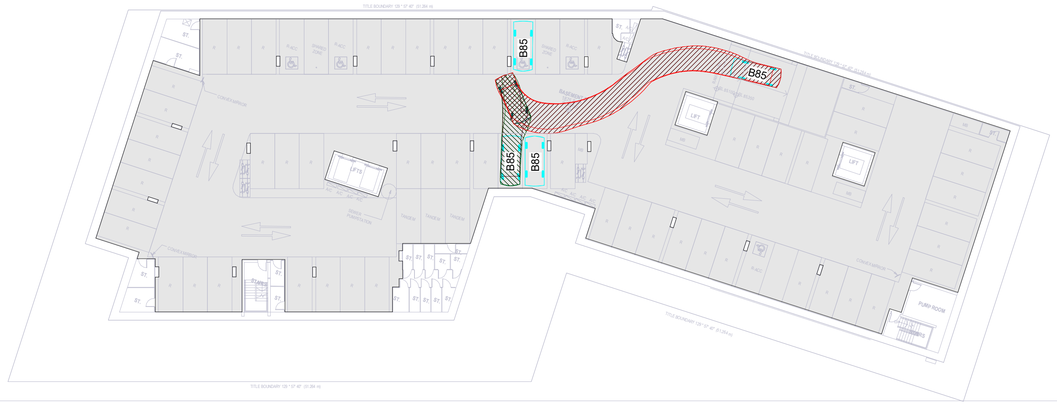
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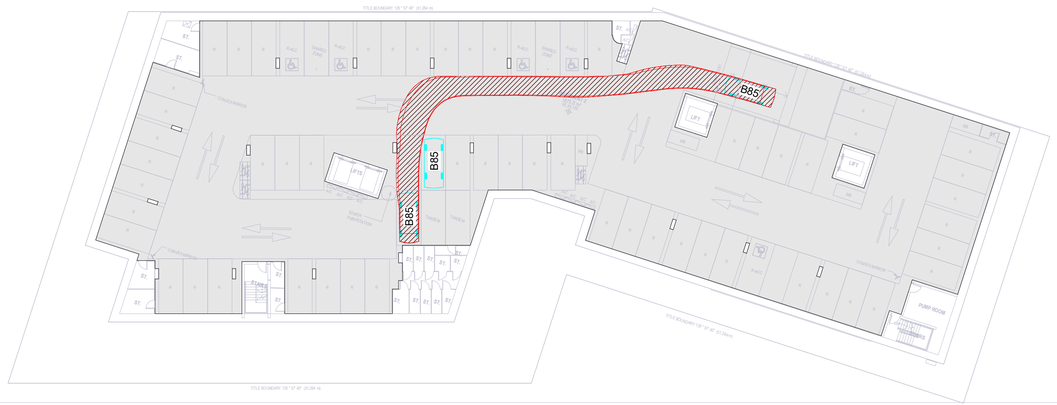
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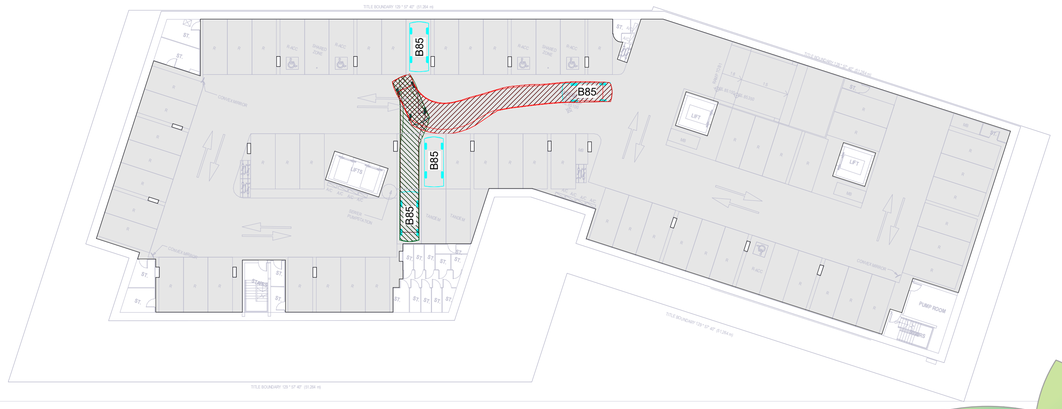
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BASEMENT 2 - B85 EXIT 5
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 6
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BASEMENT 2 - B85 EXIT 6
Scale: 1 : 300

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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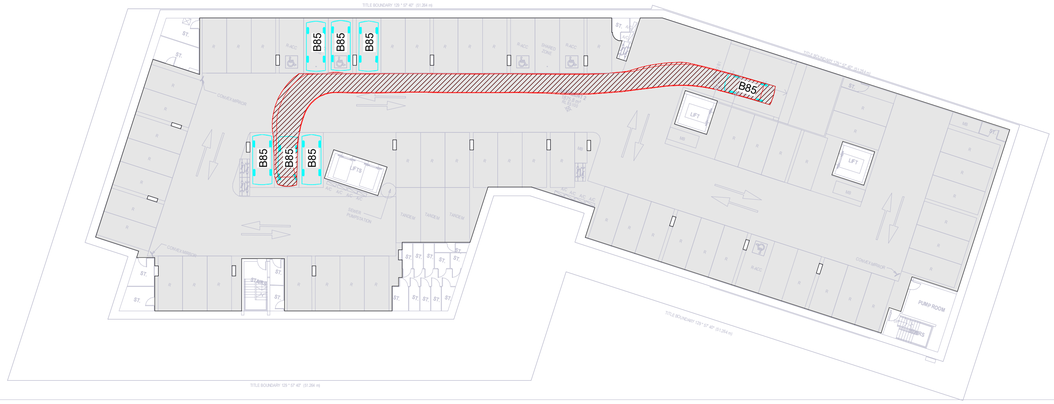
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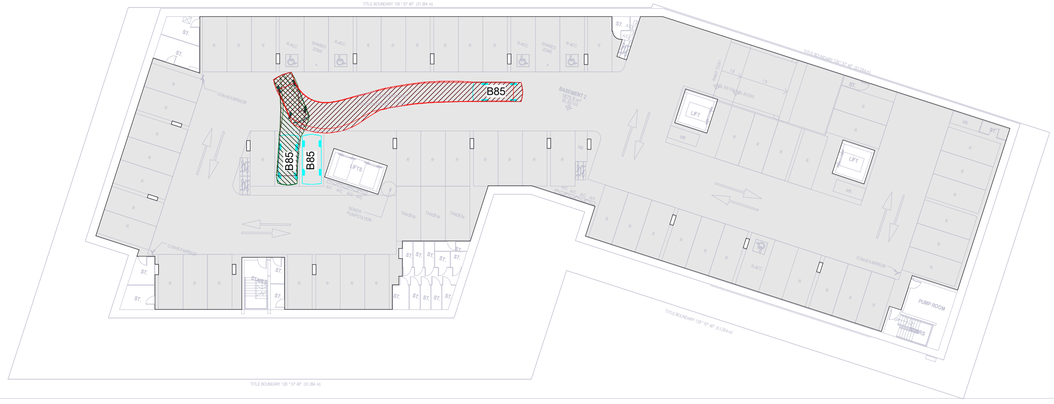
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BASEMENT 2 TURNING PATHS SHEET 2

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BASEMENT 2 - B85 ENTRY 7
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BASEMENT 2 - B85 EXIT 7
Scale: 1 : 300



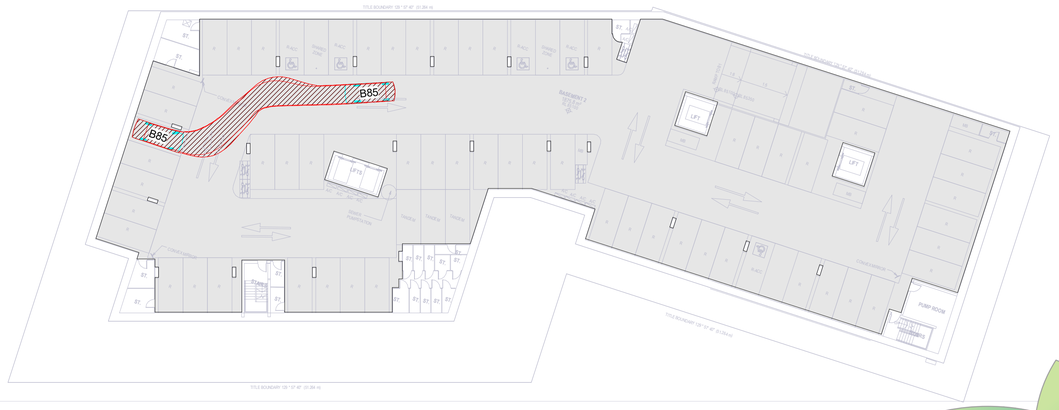
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BASEMENT 2 - B85 EXIT 8
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 9
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 9
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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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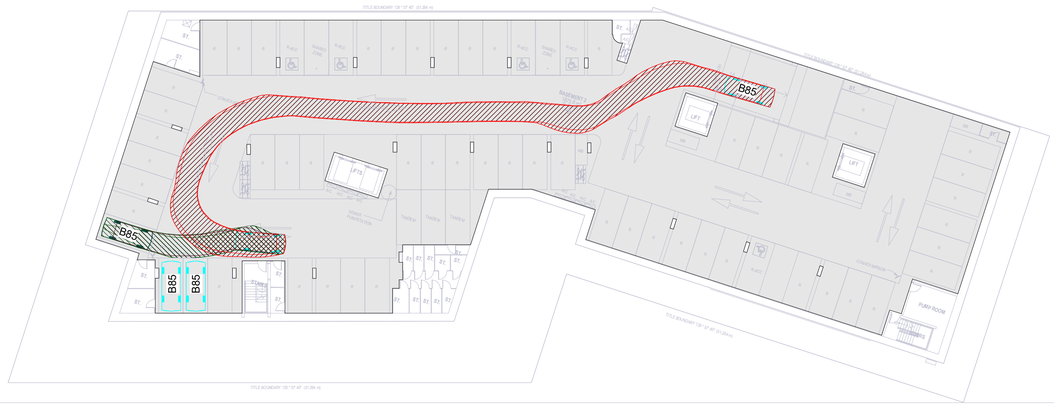
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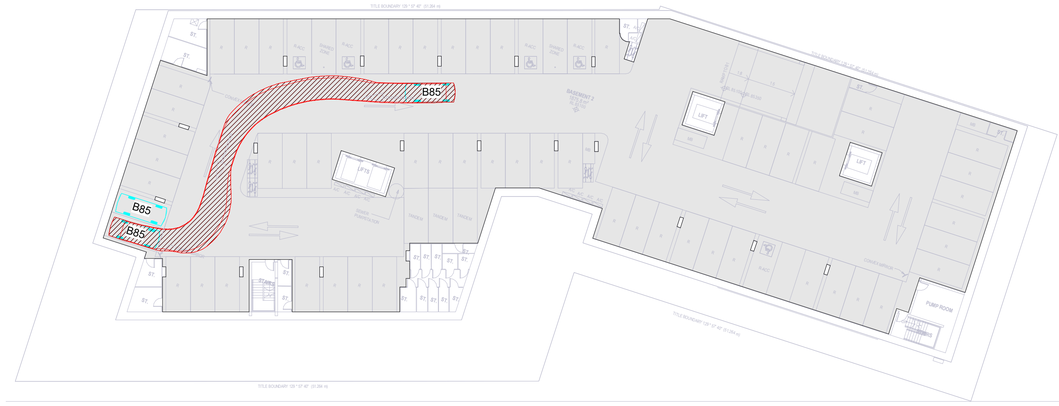
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BASEMENT 2 TURNING PATHS SHEET 3

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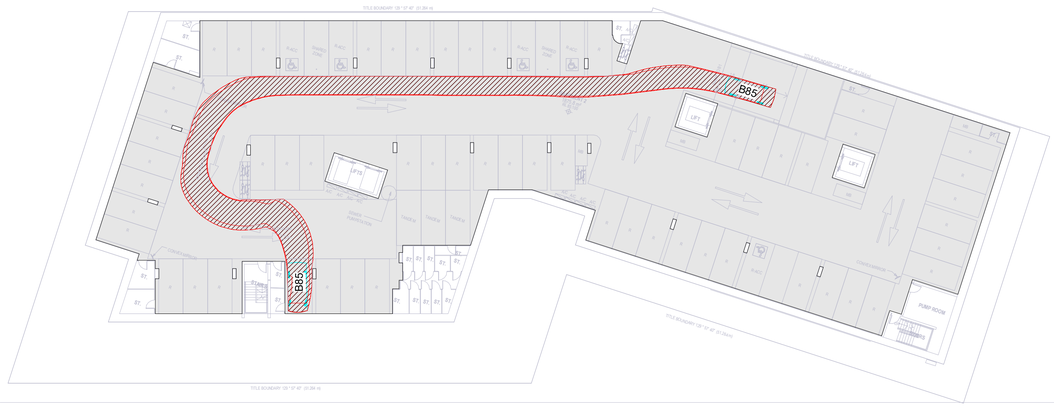
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BASEMENT 2 - B85 ENTRY 11
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BASEMENT 2 - B85 EXIT 11
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 12
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BASEMENT 2 - B85 EXIT 12
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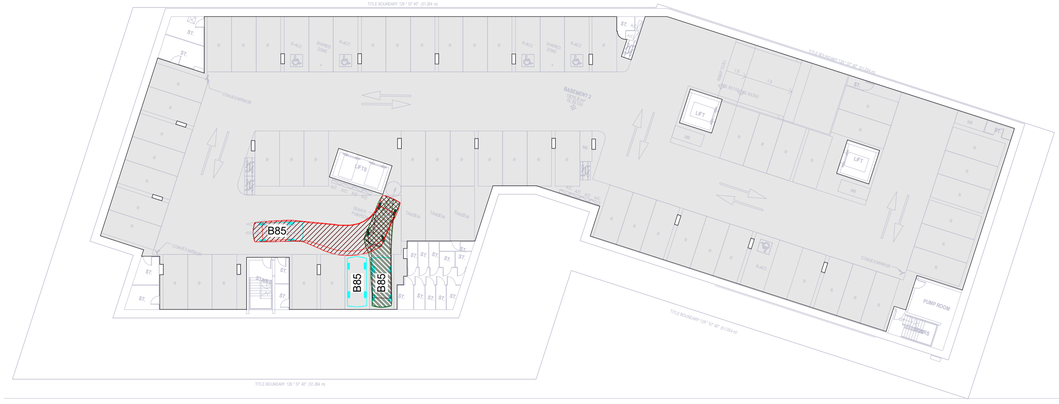
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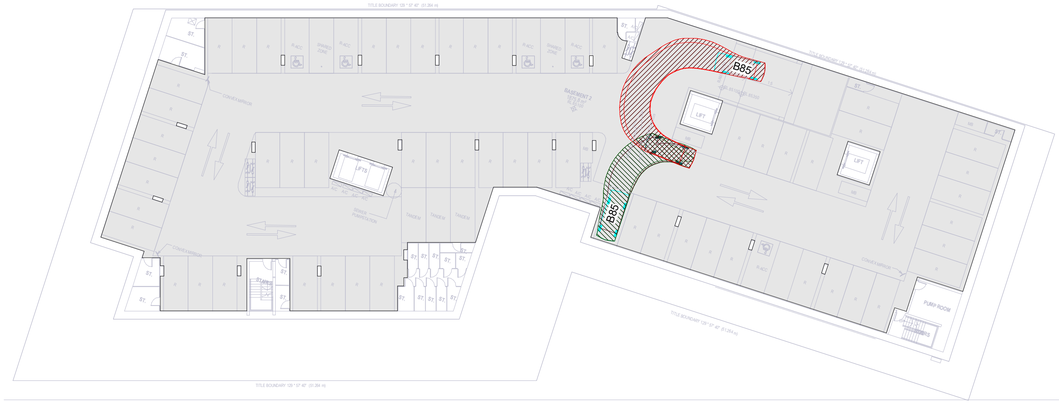
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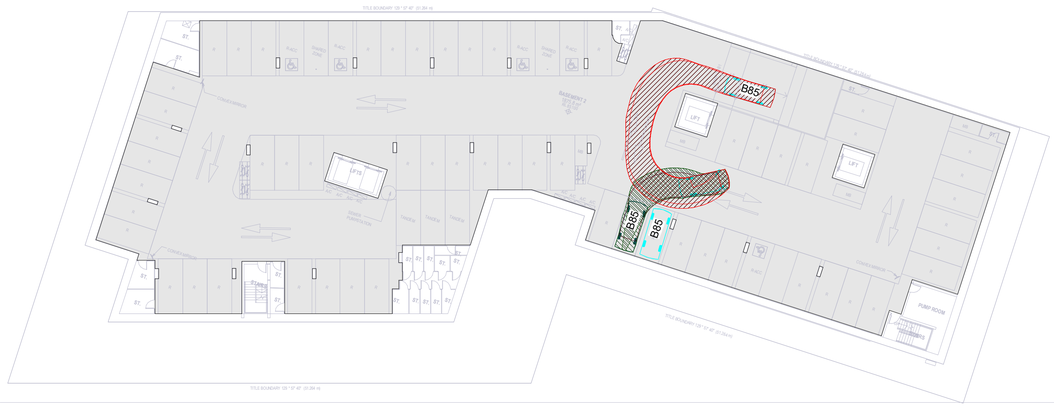
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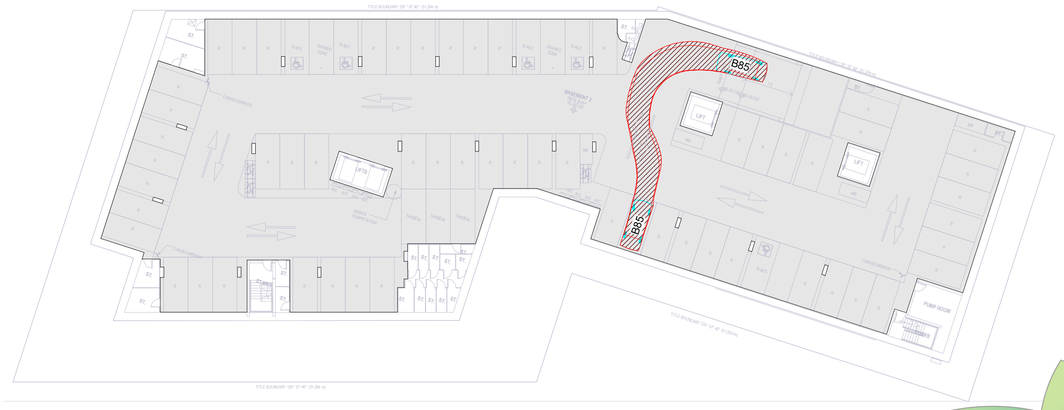
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BASEMENT 2 - B85 EXIT 14
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BASEMENT 2 - B85 ENTRY 15
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BASEMENT 2 - B85 EXIT 15
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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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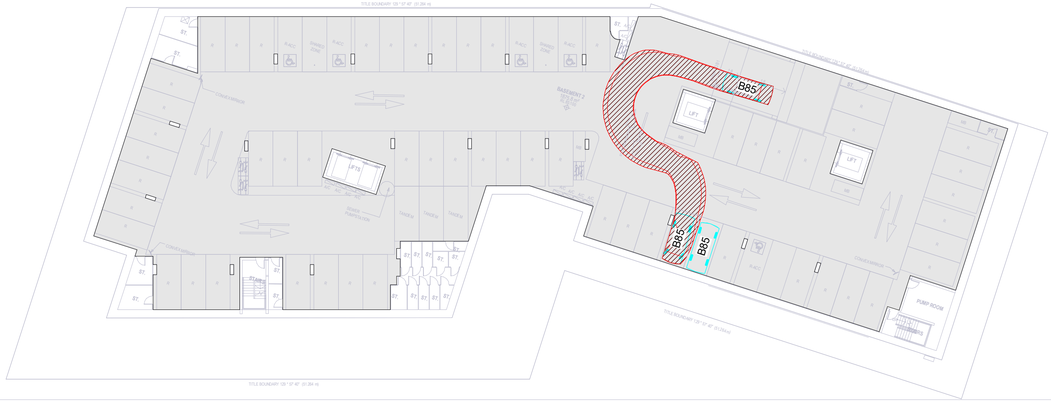
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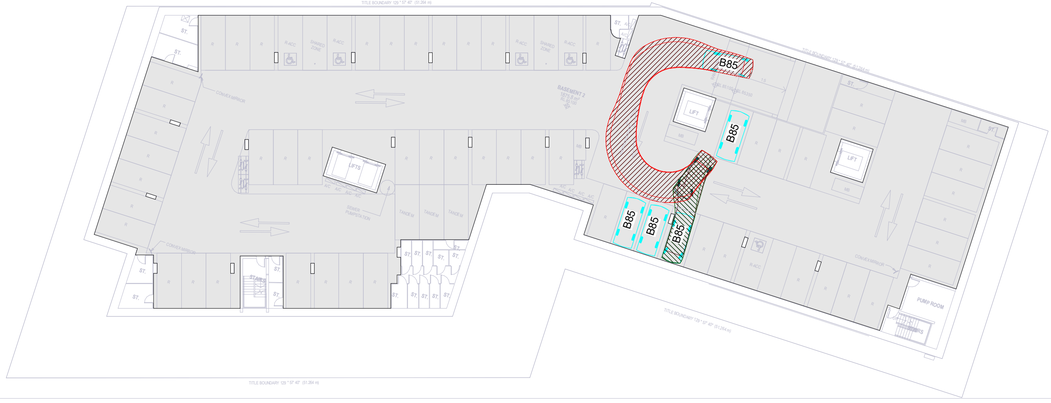
CIVIL DESIGN

BASEMENT 2 TURNING PATHS SHEET 5

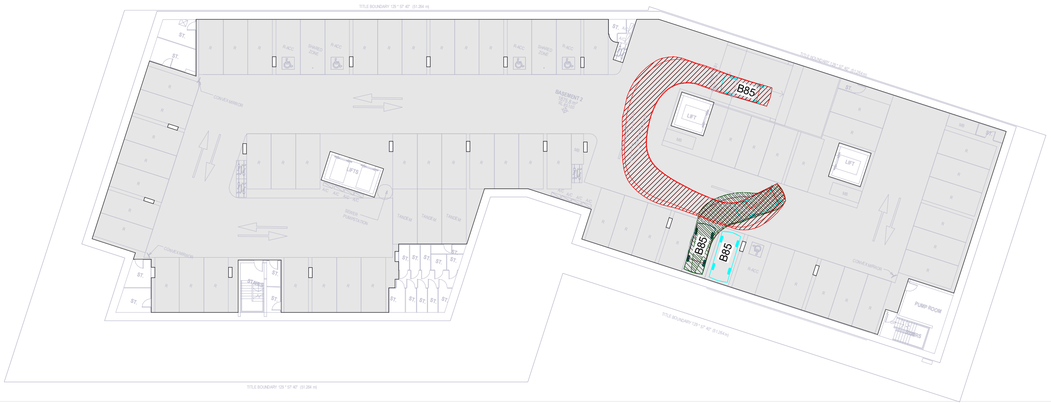
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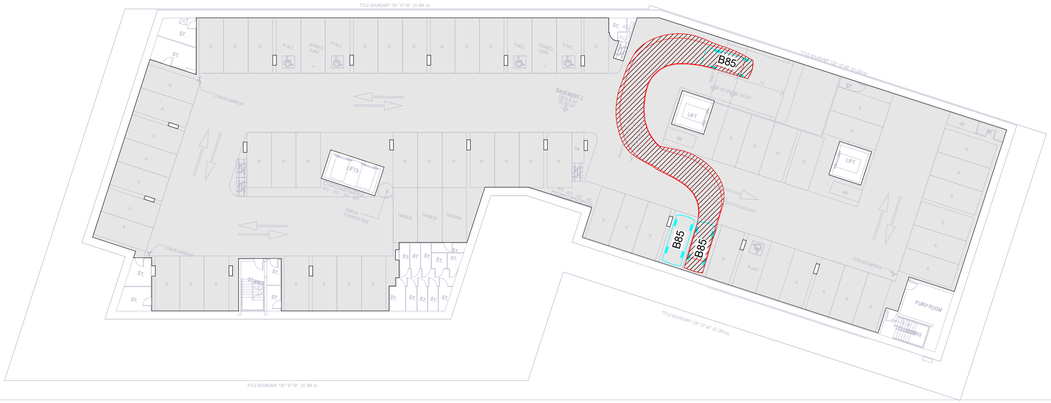
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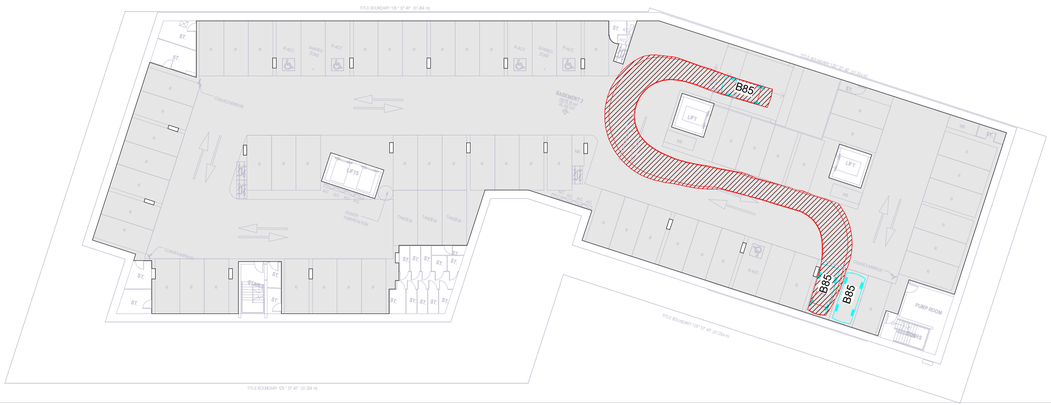
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BASEMENT 2 - B85 ENTRY 17
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 17
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BASEMENT 2 - B85 ENTRY 18
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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

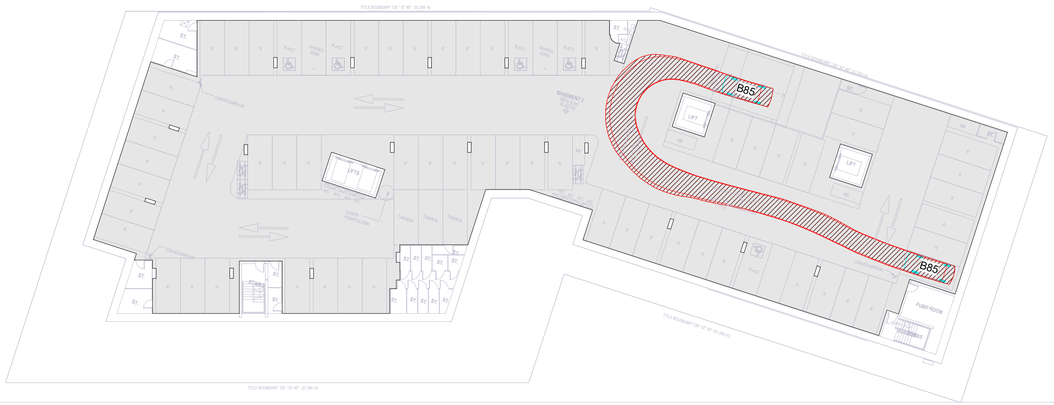
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CIVIL DESIGN

BASEMENT 2 TURNING PATHS SHEET 6

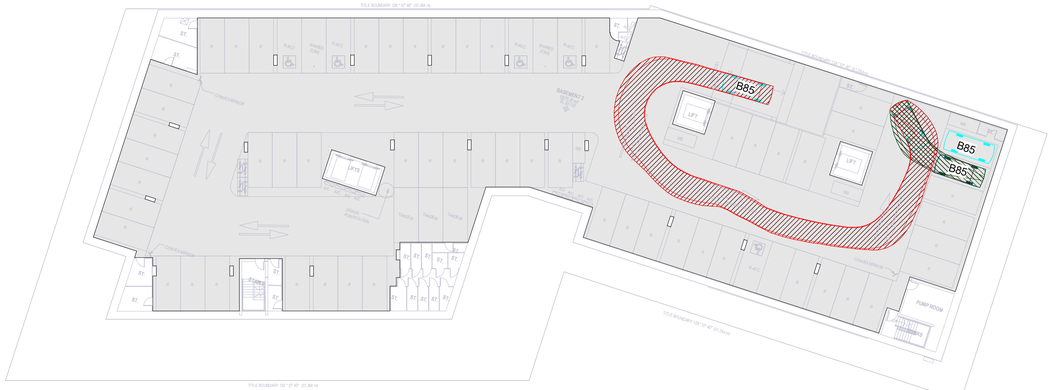
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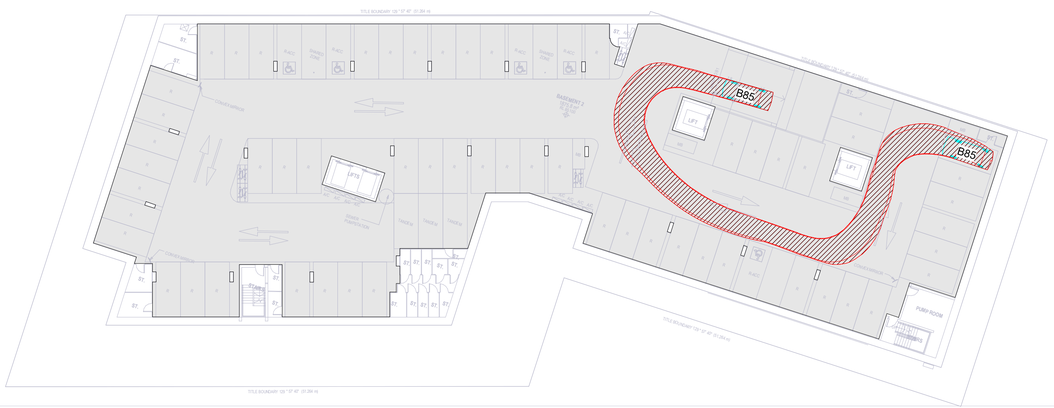
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BASEMENT 2 - B85 ENTRY 20
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BASEMENT 2 - B85 EXIT 20
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BASEMENT 2 - B85 ENTRY 21
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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

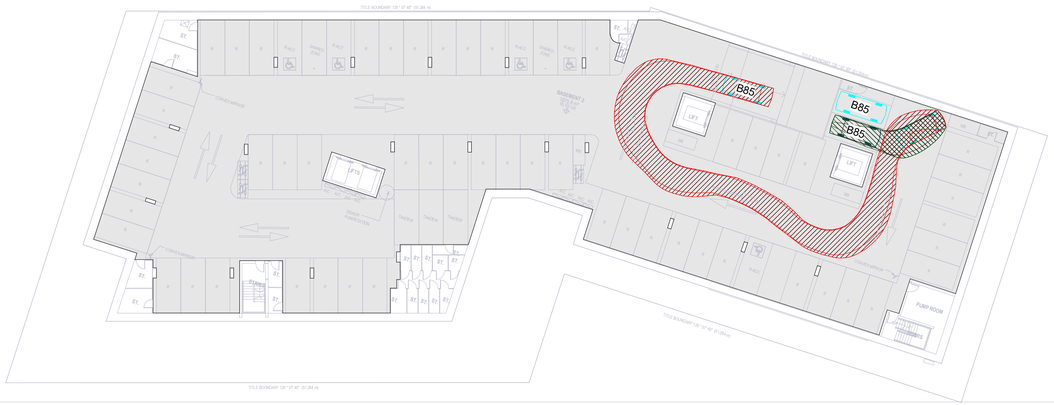
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CIVIL DESIGN

BASEMENT 2 TURNING PATHS SHEET 7

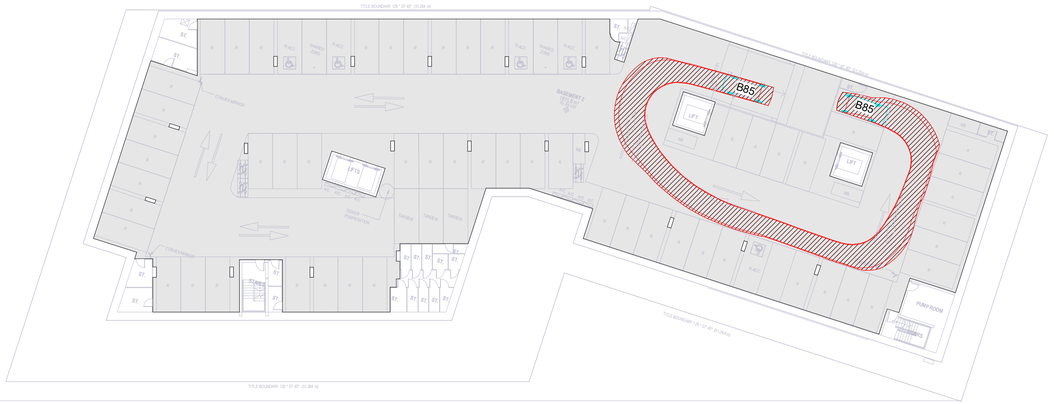
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BASEMENT 2 - B85 ENTRY 22
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BASEMENT 2 - B85 EXIT 22
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BASEMENT 2 - B85 ENTRY 23
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PROPOSED DEVELOPMENT

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CIVIL DESIGN

BASEMENT 2 TURNING PATHS SHEET 8

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CIVIL DESIGN

FOR PROPOSED DEVELOPMENT AT

1 Gatacre Av, Lane Cove, NSW

GENERAL NOTES

1. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE NOMINATED OR APPLICABLE COUNCIL SPECIFICATION.
2. THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN.
3. IT IS THE RESPONSIBILITY OF THE TENDERER TO SEEK CLARIFICATION WHERE DOCUMENTATION IS CONFLICTING OR UNCLEAR. WHERE NO CLARITY IS OBTAINED, THE TENDERER IS TO ALLOW FOR BOTH INTERPRETATIONS IN THEIR PRICING.
4. CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE OWNER.
5. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE.
6. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
7. ALL DRAINAGE LINES THOUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS.
8. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN PREPARED BY AN ACCREDITED PERSON IN ACCORDANCE WITH RMS REQUIREMENTS, FOR ANY WORK ON OR ADJACENT TO PUBLIC ROADS, PLAN TO BE SUBMITTED TO COUNCIL & RMS AS REQUIRED.
9. THESE PLANS SHALL BE A READ IN CONJUNCTION WITH OTHER RELEVANT CONSULTANTS' PLANS, SPECIFICATIONS, CONDITIONS OF DEVELOPMENT CONSENT AND CONSTRUCTION CERTIFICATE REQUIREMENTS.
10. THE BUILDER/CONTRACTOR SHALL LOCATE ALL EXISTING PUBLIC UTILITY SERVICES WITHIN THE SITE, FOOTPATH AREA AND ROAD RESERVE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ALL LOCATIONS AND LEVELS OF SERVICES SHALL BE REPORTED TO THE STORMWATER ENGINEER PRIOR TO THE COMMENCEMENT OF ANY WORKS TO ENSURE THERE ARE NO OBSTRUCTIONS IN THE LINE OF THE DRAINAGE DISCHARGE PIPES.
11. THE BUILDER IS TO VERIFY ALL LEVELS ON SITE PRIOR TO COMMENCING CONSTRUCTION.
12. ALL THE CLEANING EYES (OR INSPECTION EYES) FOR THE UNDERGROUND PIPES HAVE TO BE TAKEN UP TO THE FINISHED GROUND LEVEL FOR EASY IDENTIFICATION AND MAINTENANCE PURPOSES
13. ALL TERRACE FLOOR AND PLANTER GRATES TO HAVE FIRE COLLARS FITTED.
14. ALL PITS HAVING AN INTERNAL DEPTH THAT EXCEEDS 1.0m SHALL BE PROVIDED WITH GALVANIZED STEP IRON'S AT 300 mm CENTRES PLACED IN A STAGGERED PATTERN AND SHALL BE IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS AS4198-1994.
15. ALL MULCHING TO BE USED WITHIN THE AREA DESIGNATED AS ON SITE DETENTION STORAGE SHALL BE OF A NON-FLOATABLE MATERIAL SUCH AS DECORATIVE RIVER GRAVEL. BARK MULCHING SHALL NOT BE USED WITHIN THE DETENTION STORAGE AREA.
16. PRIOR TO COMMENCING ANY WORKS ON THE SITE, THE BUILDER SHALL ENSURE THAT THE INVERT LEVELS OF WHERE THE SITE STORMWATER SYSTEM CONNECTION INTO COUNCIL'S KERB/DRAINAGE SYSTEM MATCH THE DESIGN LEVELS. ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY.
17. GREENVIEW IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY SURVEY INFORMATION PROVIDED ON THIS DRAWING.
18. ALL LEVELS SHOWN ARE EXPECTED TO BE TO A.H.D.
19. ALL CHAINAGES AND LEVELS ARE IN METERS, AND DIMENSIONS IN MILLIMETRES, UNLESS NOTED OTHERWISE.
20. THE SURVEY INFORMATION ON THIS DRAWING HAS BEEN PROVIDED BY THE ARCHITECT.
21. CONTRACTORS SHALL ARRANGE FOR THE WORKS TO BE SET OUT BY A REGISTERED SURVEYOR.
22. W.A.E DRAWINGS BY A REGISTERED SURVEYOR ARE REQUIRED PRIOR TO CERTIFICATION OF DRAINAGE.
23. WHERE THESE PLANS ARE NOTED FOR DEVELOPMENT APPLICATION PURPOSES ONLY, THEY SHALL NOT BE USED FOR OBTAINING A CONSTRUCTION CERTIFICATE NOR USED FOR CONSTRUCTION PURPOSES WITHOUT WRITTEN APPROVAL.
24. WATER TREATMENT DEVICES TO STRICTLY COMPLY WITH MANUFACTURING SPECIFICATIONS.

RAINWATER REUSE SYSTEM NOTES

1. RAINWATER SUPPLY PLUMBING TO BE CONNECTED TO OUTLETS WHERE REQUIRED BY BASIX CERTIFICATE (BY OTHERS).
2. NO DIRECT CONNECTION BETWEEN TOWN WATER SUPPLY AND THE RAINWATER SUPPLY
3. PROVIDE AN APPROVED STOP VALVE AND/OR PRESSURE LIMITING VALVE AT THE RAINWATER TANK
4. PROVIDE AT LEAST ONE EXTERNAL HOSE COCK ON THE TOWN WATER SUPPLY FOR FIRE FIGHTING.
5. PROVIDE APPROPRIATE FLOAT VALVE AND/OR SOLENOID VALVES TO CONTROL TOWN WATER SUPPLY INLET TO TANK IN ORDER TO ACHIEVE THE TOP-UP INDICATED ON THE TYPICAL DETAIL.
6. ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS/NZS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE.
7. PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY A LICENSED ELECTRICIAN.
8. ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK SURFACE WATER INLETS ARE NOT TO BE CONNECTED.
9. PIPE MATERIALS FOR RAINWATER SUPPLY PLUMPING ARE TO BE APPROVED MATERIALS TO AS/NZS3500 PART 1 SECTION 2 AND TO BE CLEARLY AND PERMANENTLY IDENTIFIED AS 'RAINWATER'. THIS MAY BE ACHIEVED FOR BELOW GROUND PIPES USING IDENTIFICATION TAPE (MADE IN ACCORDANCE WITH AS2648) OR FOR ABOVE GROUND PIPES BY USING ADHESIVE PIPE MARKERS (MADE IN ACCORDANCE WITH AS1345)
10. EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER TANK ARE TO BE LABELLED 'RAINWATER' ON A METALLIC SIGN IN ACCORDANCE WITH AS1319
11. ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE MEASURES PROVIDED TO PREVENT MOSQUITO AND VERMIN ENTRY.
12. ALL DOWNPIPES CHARGED TO THE RAINWATER TANK ARE TO BE SEALED UP TO GUTTER LEVEL AND BE PRESSURE TESTED AND CERTIFIED
13. TOWN WATER CONNECTION TO RAINWATER TANK TO BE TO THE SATISFACTION OF THE REGULATORY AUTHORITY. THIS MAY REQUIRE PROVISION OF

    13.1. PERMANENT AIR GAP
    13.2. BACKFLOW PREVENTION DEVICE

SAFETY IN DESIGN NOTES

THERE ARE INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING. WE NOTE THIS DESIGN IS TYPICAL OF SIMILAR DESIGNS. AS FAR AS IS REASONABLY PRACTICABLE RISKS HAVE BEEN ELIMINATED OR MINIMISED THROUGH THE DESIGN PROCESS. HAZARD CONTROLS MUST STILL BE IMPLEMENTED BY THE CONTRACTOR, OWNER OR OPERATOR TO ENSURE THE SAFETY OF WORKERS. GREENVIEW ASSESSMENT DID NOT IDENTIFY ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN.

EARTHWORK NOTES

1. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS
2. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES AND DEBRIS ETC. TO THE EXTENT OF THE PROPOSED DEVELOPED AREA.
3. PROVIDE PROTECTION BARRIERS TO PROTECTED/SENSITIVE AREAS PRIOR TO ANY BULK EXCAVATION.
4. OVER FULL AREA OF EARTHWORKS, CLEAR VEGETATION, RUBBISH, SLABS ETC. AND STRIP TOP SOIL, AVERAGE 200mm THICK. REMOVE FROM SITE, EXCEPT TOP SOIL FOR RE-USE.
5. CUT AND FILL OVER THE SITE TO LEVELS REQUIRED.
6. PRIOR TO ANY FILLING IN AREAS OF CUT OR IN EXISTING GROUND, PROOF ROLL THE EXPOSED SURFACE WITH A ROLLER OF MINIMUM WEIGHT OF 5 TONNES WITH A MINIMUM OF 10 PASSES.
7. EXCAVATE AND REMOVE ANY SOFT SPOTS ENCOUNTERED DURING PROOF ROLLING AND REPLACE WITH APPROVED FILL COMPACTED IN LAYERS. THE WHOLE OF THE EXPOSED SUBGRADE AND FILL SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2%.
8. FOR ON SITE FILLING AREAS, THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
9. WHERE HARD ROCK IS EXPOSED IN THE EXCAVATED SUB-GRADE, THIS WILL BE INSPECTED AND A DECISION MADE ON THE LEVEL TO WHICH EXCAVATION IS TAKEN.
10. FILL IN 200mm MAXIMUM (LOOSE THICKNESS) LAYERS TO UNDERSIDE OF BASECOURSE USING THE EXCAVATED MATERIAL AND COMPACTED TO 98% STANDARD (AS 1289 5.1.1). MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2% SHOULD THERE BE INSUFFICIENT MATERIAL FROM SITE EXCAVATIONS, IMPORT AS NECESSARY CLEAN GRANULAR FILL TO APPROVAL.
11. COMPACTION TESTING SHALL BE CARRIED OUT AT THE RATE OF 2 TESTS PER 100LINEAR METRES PER LAYER BY A REGISTERED NATA LABORATORY. THE COSTS OF TESTING AND RE-TESTING ARE TO BE ALLOWED FOR BY THE BUILDER.
12. BATTERS TO BE AS SHOWN. OR MAXIMUM 1 VERT : 4 HORIZ.
13. ALL CONDUITS AND MAINS SHALL BE LAID PRIOR TO LAYING FINAL PAVEMENT.
14. ALL BATTERS AND FOOTPATHS ADJACENT TO ROADS SHALL BE TOP SOILED WITH 150mm APPROVED LOAM AND SEEDED UNLESS OTHERWISE SPECIFIED.

DRAINAGE INSTALLATION

RCP CONVENTIONAL INSTALLATIONS & ROAD CROSSINGS

1. SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN ACCORDANCE WITH THESE DRAWINGS, THE COUNCIL SPECIFICATION AND THE CURRENT APPLICABLE AUSTRALIAN STANDARDS.
2. BACKFILL SHALL BE PLACED & COMPACTED IN ACCORDANCE WITH THE SPECIFICATION. A GRANULAR GRAVEL AGGREGATE MATERIAL (<10mm) BACKFILL IS RECOMMENDED FOR THE BEDDING, HAUNCH SUPPORT AND SIDE ZONE DUE TO IT'S SELF COMPACTING ABILITY.
3. A MINIMUM OF 150mm CLEARANCE IS TO BE PROVIDED BETWEEN THE OUTSIDE OF THE PIPE BARREL AND THE TRENCH WALL FOR PIPES < 600 DIA. 200mm CLEARANCE FOR PIPES 600 TO 1200 DIA AND D/6 CLEARANCE FOR PIPES > 1200 DIA.
4. BEDDING OF THE PIPELINES IS TO BE TYPE 'HS2' IN ACCORDANCE WITH THE STANDARDS AND AS FOLLOWS:

   a.COMPACTED GRANULAR MATERIAL IS TO COMPLY WITH THE FOLLOWING GRADINGS:

M	19	2.3600	0.6000	0.3000	0.1500	0.0750
% MASS PASSING	100	50-100	20-90	10-60	0-25	0-10

   -AND THE MATERIAL PASSING THE 0.075 SIEVE HAVING LOW PLASTICITY AS DESCRIBED IN APPENDIX D OF AS1726.

   b.BEDDING DEPTH UNDER THE PIPE TO BE 100mm.

   c.BEDDING MATERIAL TO BE EXTENDED FROM THE TOP OF THE BEDDING ZONE UP TO 0.3 TIMES PIPE OUTSIDE DIAMETER. THIS REPRESENTS THE 'HAUNCH ZONE.'

   d.THE BEDDING & HAUNCH ZONE MATERIAL IS TO BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% WITHIN ROAD RESERVES AND TRAFFICABLE AREAS AND 95% ELSEWHERE FOR COHESIVE MATERIAL OR A MINIMUM DENSITY INDEX OF 70% IN ACCORDANCE WITH THE STANDARDS FOR COHESIONLESS MATERIAL.

   e.COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED ORGANISATION WITH A NATA CERTIFIED LABORATORY FOR ALL DRAINAGE LINES LAID WHOLLY OR IN PART UNDER THE KERB & GUTTER OR PAVEMENT

ROOF DRAINAGE

1. ALL ROOF DRAINAGE IS TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE CURRENT APPLICABLE AUSTRALIAN STANDARDS INCLUDING AS3500.3, NCC AND COUNCIL'S SPECIFICATIONS.
2. DOWNPIPES SHOWN ARE INDICATIVE ONLY. REFER ARCHITECTURALS FOR FINAL LOCATIONS.
3. ALL DOWNPIPES TO BE CONSTRUCTED OF ONE MATERIAL FOR AESTHETICS REASONS AND PAINTED TO PROTECT THEM AGAINST ULTRA-VIOLET LIGHT DAMAGE. UNLESS APPROVED OTHERWISE BY THE PROJECT ARCHITECT.
4. ALL DOWNPIPES TO HAVE LEAF GUARDS.
5. ALL EAVES GUTTERS ARE TO BE DESIGNED TO THE 5% AEP (20YR) STORM EVENTS UNO
6. ALL EAVES GUTTER OVERFLOWS ARE TO BE IN ACCORDANCE WITH AS3500.3 G3
7. ALL BOX GUTTERS ARE TO BE DESIGNED TO CATER TO THE 1% AEP (100YR) STORM EVENTS UNO
8. IN ACCORDANCE WITH AS3500.3 CLAUSE 3.7.6.G, BOX GUTTERS SHALL:
   a. BE STRAIGHT (WITHOUT CHANGE IN DIRECTION)
   b. HAVE A HORIZONTAL CONSTANT WIDTH BASE (SOLE) WITH VERTICAL SIDES IN A CROSS-SECTION.
   c. HAVE A CONSTANT LONGITUDINAL SLOPE BETWEEN 1:200 AND 1:40.
   d. DISCHARGE AT THE DOWNSTREAM END WITHOUT CHANGE OF DIRECTION (I.E. NOT TO THE SIDE); AND
   e. BE SEALED TO THE RAINHEADS AND SUMPS
9. GREENVIEW RECOMMENDS THAT THE BUILDER VERIFIES THAT ANY AND ALL BOX GUTTERS HAVE BEEN DESIGNED BY A QUALIFIED CIVIL ENGINEER PRIOR TO THE COMMENCEMENT OF WORKS.
10. GREENVIEW RECOMMENDS A SPECIFIC INSPECTION AND CERTIFICATION BY A QUALIFIED CIVIL ENGINEER OF ANY AND ALL BOX GUTTERS INSTALLED ON THE PROJECT PRIOR TO OCCUPATION CERTIFICATE
11. ALL DOWNPIPES ARE TO BE PIPE CONNECTED INTO THE FORMAL RAINWATER OR STORMWATER LINE UNLESS SPECIFICALLY NOTED ON THE DRAWINGS OTHERWISE.

STORMWATER DRAINAGE NOTES

1. STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS INCLUDING AS3500.3 , NCC AND COUNCIL'S SPECIFICATION.
2. MINIMUM PIT DIMENSIONS ARE TO BE IN ACCORDANCE WITH AS3500.3 TABLE 7.5.2.1 WHICH PROVIDES GUIDANCE ACCORDING TO PIT DEPTH U.N.O.

TABLE 7.5.2.1

MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS

Depth to invert of outlet	Minimum internal dimensions mm		
	Rectangular		Circular
	Width	Length	Diameter
≤450	350	350	—
≤600	450	450	600
>600 ≤900	600	600	900
>900 ≤1200	600	900	1000
>1200	900	900	1000

3. PIPES OF 225mm DIA. AND UNDER SHALL BE UPVC
4. PIPES OF 300mm DIA. AND LARGER SHALL BE FRC OR CONCRETE CLASS 2 RUBBER RING JOINTED UNO.
5. ALL FRC OR RCP STORMWATER PIPES WITHIN ROAD RESERVE AREAS TO BE CLASS 3 U.N.O. BY COUNCILS SPECIFICATION.
6. PIPES SHALL GENERALLY BE LAID AT THE GRADES INDICATED ON THE DRAWINGS.
7. MINIMUM COVER TO PIPES 300mm DIA. AND OVER GENERALLY SHALL BE 600mm IN CARPARK & ROADWAY AREAS UNO.
8. ALL PIPES LOCATED IN LANDSCAPE AREAS TO HAVE 300mm COVER. WHERE NOT POSSIBLE AND COVER IS BETWEEN 150mm AND 300mm USE SEWER GRADE PIPE.
9. PIPES 225mm DIA AND OVER SHALL BE LAID AT 0.5% MIN. GRADE U.N.O.
10. PIPES UP TO 150mm DIA SHALL BE LAID AT 1.0% MIN. GRADE U.N.O
11. BACKFILL TRENCHES WITH APPROVED FILL COMPACTED IN 200mm LAYERS TO 98% OF STANDARD DENSITY.
12. ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT ALL JOINTS
13. THE MINIMUM SIZES OF THE STORMWATER DRAINAGE PIPES SHALL NOT BE LESS THAN 90mm DIA FOR CLASS 1 BUILDINGS AND 100mm DIA FOR OTHER CLASSES OF BUILDING OR AS REQUIRED BY THE REGULATORY AUTHORITY.
14. BUILD INTO UPSTREAM FACE OF ALL PITS A 3.0m SUBSOIL LINE FALLING TO PITS TO MATCH PIT INVERTS.
15. ALL LANDSCAPED PITS TO BE MIN 450 SQUARE U.N.O OR LARGER AS REQUIRED BY AS3500.3 TABLE 7.5.2.1
16. GREENVIEW RECOMMENDS ALL COURTYARDS TO HAVE 450 SQUARE PLASTIC PIT INSTALLED WITH A 150mm DIA. CONNECTION TO FORMAL DRAINAGE SYSTEM.
17. ALL DRIVEWAY PITS TO BE MIN 600 SQUARE U.N.O OR LARGER AS REQUIRED BY AS3500.3 TABLE 7.5.2.1
18. ALL PLANTER BOXES AND BALCONIES TO BE CONNECTED TO THE PROPOSED STORMWATER DRAINAGE LINE.
19. ALL STORMWATER DRAINAGE WORK TO AVOID TREE ROOTS. WHERE NOT POSSIBLE, ALL EXCAVATIONS IN VICINITY OF TREE ROOTS ARE TO BE HAND DUG.
20. GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION WHERE APPLICABLE.
21. ALL BASES OF PITS TO BE BENCHED (TO HALF PIPE DEPTH) TO THE INVERT OF THE OUTLET PIPE AND PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE.
22. ANY VARIATION TO THAT WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY THE ENGINEER PRIOR TO THE COMMENCEMENT.
23. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
24. ALL GRATES TO HAVE CHILDPROOF LOCKS
25. ALL WORK WITHIN COUNCIL RESERVE AREAS TO BE INSPECTED BY COUNCIL PRIOR TO BACKFILLING.
26. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
27. WATER PROOF ALL CONCRETE BALCONIES & ROOFS TO ARCHITECTS DETAILS
28. ALL BALCONIES TO HAVE FLOOR WASTE AND 1% FALL WITH SAFETY OVERFLOW.
29. ALL SUBSOIL DRAINAGE SHALL BE A MINIMUM OF Ø65mm AND SHALL BE PROVIDED WITH A FILTER SOCK. THE SUBSOIL DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH DETAILS TO BE PROVIDED BY THE LANDSCAPE CONSULTANT.
30. SUBSOIL DRAINAGE PIPES AND FITTINGS SHALL BE PERFORATED PLASTIC TO CURRENT AUSTRALIAN STANDARDS. LAY PIPES ON FLOOR OF TRENCH GRADED AT 1% MIN. AND OVERLAY WITH FILTER MATERIAL EXTENDING TO WITHIN 200mm OF SURFACE. PROVIDE FILTER FABRIC OF PERMEABLE POLYPROPYLENE BETWEEN FILTER MATERIAL AND TOPSOIL. PROVIDE FLUSHING EYE'S AT HIGH POINTS OR TO COUNCILS REQUIREMENTS.
31. ALL GRATES IN AREAS OF FREQUENT PEDESTRIAN TRAFFIC (IE FOOTPATHS, WALKWAYS, ETC.) TO BE HEELPROOF GRATE.
32. REFER ARCHITECTS DETAIL FOR GRATE FINISH (IE STAINLESS STEEL OR GALVANISED).
33. GRATES TO BE IN ACCORDANCE WITH TABLE BELOW:

PIT GRATE INLINE TYPE

GRATE TYPE	TRAFFIC CONDITIONS
A - EXTRA LIGHT DUTY	FOOTWAYS AND AREAS ACCESSIBLE ONLY TO PEDESTRIANS AND PEDAL CYCLISTS.
B - LIGHT DUTY	FOOTWAYS THAT CAN BE MOUNTED BY VEHICLES.
C - MEDIUM DUTY	MALLS AND PEDESTRIAN AREAS OPEN TO SLOW MOVING COMMERCIAL VEHICLES.
D - HEAVY DUTY	CARRIGEWAYS OF ROADS AND AREAS OPEN TO COMMERCIAL VEHICHLES.
TABLE AS PER AS3996 - 2006. ENGINEER TO BE NOTIFIED IF LOAD CONDITIONS LISTED ABOVE ARE EXCEEDED.	

32. COVER TO PIPE TO BE AS PER TABLE BELOW:

COVER TABLE

LOCATION	PIPE TYPE	COVER
LANDSCAPE	PVC	300
LANDSCAPE (SINGLE DWELLING)	PVC	100
UNDER TRAFFICABLE AREA	PVC	100 BELOW UNDERSIDE OF PAVEMENT
CONCRETE	STEEL	NIL BELOW UNDERSIDE OF PAVEMENT
ROADS	RCP	500 BELOW UNDERSIDE OF PAVEMENT

STORMWATER DRAINAGE NOTES CONTINUED

33. GREENVIEW'S STORMWATER SYSTEM HAS BEEN DESIGNED TO CAPTURE SURFACE RUNOFF FROM THE SITE ITSELF BUT DOES NOT INCORPORATE SPECIFIC GROUNDWATER CAPTURE MECHANISMS. IN SOME CASES, GROUNDWATER INUNDATION MAY BE A SIGNIFICANT SOURCE OF WATER DURING A STORM EVENT. GREENVIEW RECOMMENDS THAT ALL RETAINING WALLS CLOSE TO HABITABLE AREAS BE FITTED WITH AN IMPERMEABLE MEMBRANE AND SUBSOIL DRAINAGE TO PREVENT GROUNDWATER INGRESS.
34. GREENVIEW RECOMMENDS ALL IN-GROUND STORMWATER PIPE RUNS ARE SET OUT BY THE BUILDER PRIOR TO COMMENCEMENT OF WORKS. WHERE 300MM COVER IS NOT ACHIEVED, NOTIFY ENGINEER.
35. WHERE STORMWATER DRAINAGE WORKS ARE TO BE UNDERTAKEN PRIOR TO THE CONSTRUCTION OF THE BUILDING, THE BUILDER IS TO SET OUT THE FLOOR LEVELS AND ENSURE PROPOSED STORMWATER DRAINAGE LEVELS AND BUILDING LEVELS ARE COMPATIBLE. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES.

ON-SITE DETENTION

1. ON-SITE DETENTION (OSD) TANKS ARE TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE CURRENT APPLICABLE AUSTRALIAN STANDARDS INCLUDING AS3500.3, NCC AND COUNCILS' SPECIFICATIONS.
2. IT IS CRITICAL THAT THE MINIMUM OSD VOLUME AS CALCULATED BY THE DESIGN AND NOTED ON THESE PLANS IS ACHIEVED ON SITE. VOLUMES TO BE VERIFIED BE REGISTERED SURVEYOR AND NOTED IN THE WAE SURVEY PRIOR TO CERTIFICATION.
3. OSD VOLUME MAY BE ACHIEVED IN BELOW GROUND TANK, OR ABOVE GROUND PONDING, OR RAINWATER TANK OFFSET, OR INFILTRATION/ABSORPTION SYSTEM. EACH COUNCIL HAS SPECIFIC GUIDELINES FOR HOW STORMWATER FLOWS ARE TO BE CONTROLLED AND DISCHARGED.
4. PONDING AND OVERFLOW LEVELS FROM THE OSD SHALL BE NOT LESS THAN 300mm BELOW ADJACENT HABITABLE FLOOR LEVELS OF BUILDINGS AND NOT LESS THAN 150mm BELOW NON-HABITABLE FLOOR LEVELS (AS3500.1 CLAUSE 7.10.1)

BELOW GROUND OSD TANKS

1. THE HYDRAULIC CONTROL FOR THE STORAGE (USUALLY ORIFICE PLATE) SHALL BE FIRMLY FIXED IN PLACE TO PREVENT REMOVAL OR TAMPERING. A PLATE OF 3mm TO 5mm THICK STAINLESS STEEL WITH A CIRCULAR HOLE SHALL BE USED, PROVIDED:
   a. IT IS MACHINED TO 0.5mm ACCURACY
   b. IT RETAINS A SHARP EDGE; AND
   c. THE ORIFICE DIAMETER IS NOT LESS THAN 25mm (AS 3500.3 CLAUSE 7.10.2
2. INSPECTION / ACCESS OPENINGS SHALL BE PROVIDED ABOVE THE LOCATION OF THE OUTLET WITH DIMENSIONS AT LEAST 600mm x 600mm OR 600mm DIAMETER FOR STORAGES UP TO 800mm DEEP AND 600mm x 900mm FOR DEEPER STORAGES. THERE SHALL BE NO IMPEDIMENTS TO THE REMOVAL OF DEBRIS THROUGH THIS OPENING. INSPECTION SHALL BE POSSIBLE WITHOUT RESIDENTS OR OWNERS HAVING TO REMOVE HEAVY ACCESS COVERS (AS3500.3 CLAUSE 7.10.2.b.ii)
3. WHERE STORAGES ARE NOT DEEP ENOUGH TO WORK IN (<1.5m DEEP), ACCESS SHALL BE PROVIDED AT INTERVALS OF APPROXIMATELY 10m TO ALLOW THE SYSTEM TO BE FLUSHED TO THE STORAGE OUTLET> ACCESS SHALL BE PROVIDED AT THE OUTLET (AS3500.3 CLAUSE 7.10.2.b.iii)
4. A SUMP SHALL BE PROVIDED AT THE OUTLET POINT, SET BELOW THE LEVEL OF THE MAIN STORAGE TO COLLECT DEBRIS. WHERE A DISCHARGE CONTROL PIT IS INCLUDED IN THE STORAGE< THIS SHALL CONTAIN A SUMP SET A MINIMUM OF 1.5 TIMES THE DIAMETER OF THE ORIFICE OF THE OUTLET BELOW THE CENTRE OF THE ORIFICE. SUMPS SHALL BE PROVIDED WITH WEEP HOLES TO DRAIN OUT TO THE SURROUNDING SOIL, AND SHALL BE FOUNDED ON A COMPACTED GRANULAR BASE.
5. WHERE THE DEPTH OF THE TANK EXCEEDS 1.2m, A LADDER IN ACCORDANCE WITH AS3500.3 CLAUSE 7.5.5.4 SHALL BE INSTALLED.
6. BELOW GROUND OSD SYSTEMS SHALL CONFORM WITH AS2865.
7. IN ACCORDANCE WITH AS3500.3 CLAUSE 7.10.2.D SCREENS (TRASH RACKS) WITH THE FOLLOWING CHARACTERISTICS SHOULD BE PROVIDED TO COVER EACH ORIFICE OUTLET:
   a. FOR ORIFICES UP TO 150mm DIA., A FINE APERTURE-EXPANDED METAL MESH SCREEN WITH A MINIMUM AREA OF 50 TIMES THE AREA OF THE ORIFICE. FOR LARGER DIA. ORIFICES, A COARSER GRID MESH WITH A MINIMUM AREA OF 20 TIMES THE ORIFICE AREA MAY BE USED AS AN ALTERNATIVE.
   b. STEEL SCREENS SHOULD BE STAINLESS STEEL OR HOT-DIP GALVANIZED
   c. WHERE APERTURE-EXPANDED MESH SCREENS ARE EMPLOYED, THEY SHOULD BE POSITIONED SO THAT THE OVAL-SHAPED HOLES ARE HORIZONTAL, WITH THE PROTRUDING LIP ANGLED UPWARDS AND FACING DOWNSTREAM. A HANDLE MAY BE FITTED TO ENSURE CORRECT ORIENTATION AND EASY REMOVAL FOR MAINTENANCE.
   d. SCREENS SHOULD BE PLACED NO FLATTER THAN 45 DEGREES TO THE HORIZONTAL IN SHALLOW STORAGES UP TO 600mm DEEP. IN DEEPER OR MORE REMOTE LOCATIONS, THE MINIMUM ANGLE SHOULD BE 60 DEGREES TO THE HORIZONTAL.
8. IF THE BELOW GROUND OSD STORAGE IS SEALED, A VENT SHOULD BE PROVIDED TO EXPEL ANY NOXIOUS GASES (AS3500.3 CLAUSE 7.10.2.D.B).
9. THE STORAGE SHOULD BE DESIGNED TO FILL WITHOUT CAUSING OVERFLOWS IN UPSTREAM CONDUITS DUE TO BACKWATER EFFECTS (AS3500.3 CLAUSE 7.10.2.D.C).
10. BELOW GROUND STORAGES SHALL BE CONSTRUCTED OF CONCRETE, MASONRY, ALUMINIUM/ZINC AND ALUMINIUM/ZINC/MAGNESIUM ALLOY-COATED STEEL, ZINC-COATED STEEL, GALVANISED IRON OR PLASTICS (AS3500.3 7.10.3).

ABOVE GROUND OSD TANKS

1. WHERE ABOVE-GROUND OSD SYSTEMS ARE PROPOSED TO BE LOCATED IN LANDSCAPED AREAS THE FOLLOWING CRITERIA IS RECOMMENDED IN ACCORDANCE WITH AS3500.3 N12.A:
   a. A DESIRABLE MINIMUM SLOPE FOR SURFACES DRAINING TO AN OUTLET TO BE 1:60, AND AN ABSOLUTE MINIMUM SLOPE TO BE 1:100.
   b. THE DESIRABLE MAXIMUM DEPTH OF PONDING UNDER DESIGN CONDITIONS TO BE 300mm.
   c. STORAGE VOLUMES IN LANDSCAPING AREAS TO BE INCREASED BY 20% TO ALLOW FOR VEGETATION GROWTH, CONSTRUCTION INACCURACIES AND POSSIBLE FILLING.
   d. SUBSOIL DRAINS TO BE PROVIDED AROUND OUTLETS TO PREVENT THE GROUND BECOMING SATURATED DURING PROLONGED WET WEATHER; AND
   e. WHERE THE STORAGE IS LOCATED IN AREAS WHERE FREQUENT PONDING WOULD CAUSE MAINTENANCE PROBLEMS OR INCONVENIENCE, THE FIRST 10% TO 20% OF THE STORAGE SHOULD BE IN AN AREA THAT CAN TOLERATE FREQUENT INUNDATION, SUCH AS A PAVED OUTDOOR ENTERTAINMENT AREA, A SMALL UNDERGROUND TANK, A PERMANENT WATER FEATURE OR A ROCKERY.
2. WHERE ABOVE-GROUND OSD SYSTEMS ARE PROPOSED TO BE LOCATED IN DRIVEWAY AND CAR PARK STORAGES, THE FOLLOWING CRITERIA IS RECOMMENDED IN ACCORDANCE WITH AS3500.3 N12.B:
   a. DEPTHS OF PONDING TO NOT EXCEED 200mm UNDER DESIGN CONDITIONS
   b. TRANSVERSE PAVING SLOPES WITHIN STORAGES TO BE NOT LESS THAN 1:140; AND
   c. WHERE THE STORAGE IS LOCATED IN COMMONLY USED AREAS WHERE PONDING WOULD CAUSE INCONVENIENCE, PART OF THE STORAGE SHOULD BE PROVIDED IN AN AREA OR FORM THAT WILL NOT CAUSE A NUISANCE.

MAINTENANCE SCHEDULE: ON SITE DETENTION (OSD)

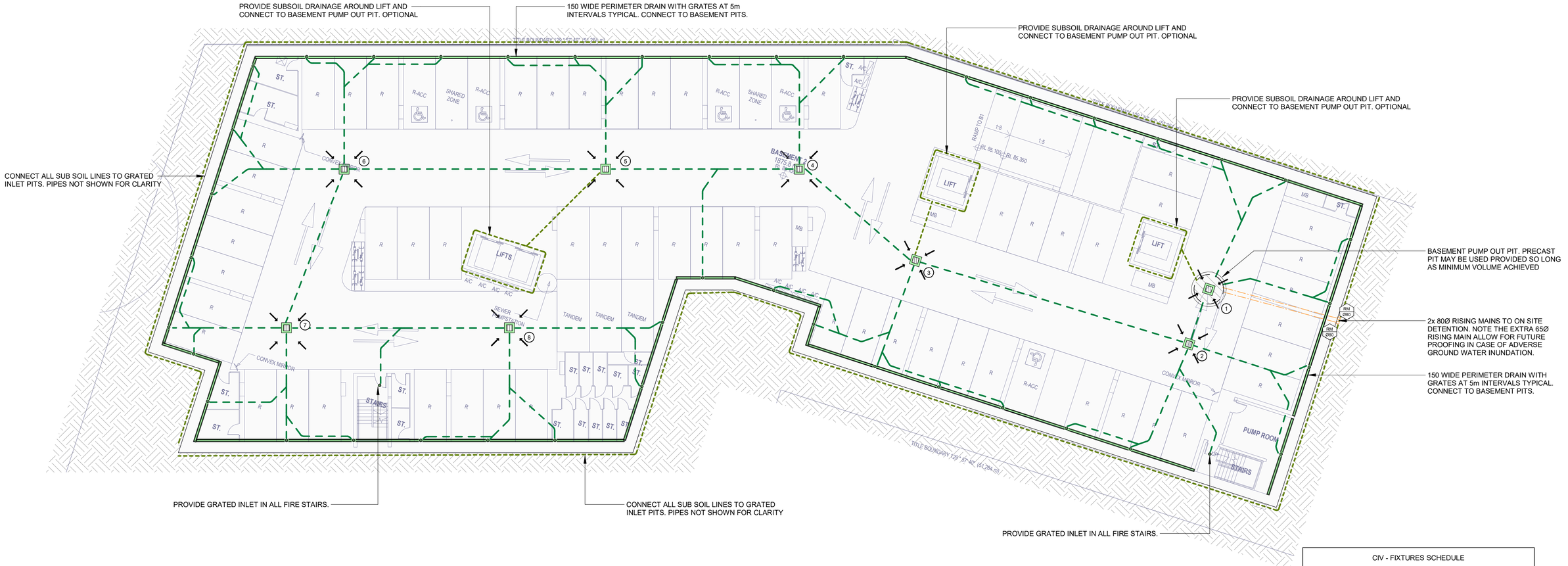
ALL OSD MAINTENANCE TASKS SHOULD BE UNDERTAKEN AFTER A SIGNIFICANT STORM EVENT

6 MONTHLY

ELEMENT	TASK	DESCRIPTION / ACTION
ORIFICE PLATE	INSPECT FOR BLOCKAGE	CHECK PLATE FOR BLOCKAGE AND CLEAN
TRASH SCREEN	CHECK / CLEAN	CHECK AND CLEAN TRASH SCREEN
PIT SUMP	CHECK FOR SEDIMENT	CHECK FOR SEDIMENT / LITTER / SLUDGE AND CLEAN-OUT
GRATED LIDS	CHECK FOR DAMAGE	CHECK FOR CORROSION OR OTHER DAMAGE AND REPAIR / REPLACE AS NEEDED
	CLEAR BLOCKAGES	CHECK AND CLEAR BLOCKAGES
STORAGE LIDS	CHECK	REMOVE DEBRIS / MULCH / LITTER / SEDIMENT
OUTLET PIPES	CHECK FOR BLOCKAGES	CHECK / CLEAN / FLUSH OUTLET PIPES, REMOVE ANY BLOCKAGES
STEP IRONS	CHECK FIXING	ENSURE STEP-IRON FIXINGS ARE SECURE AND REPAIR AS NEEDED

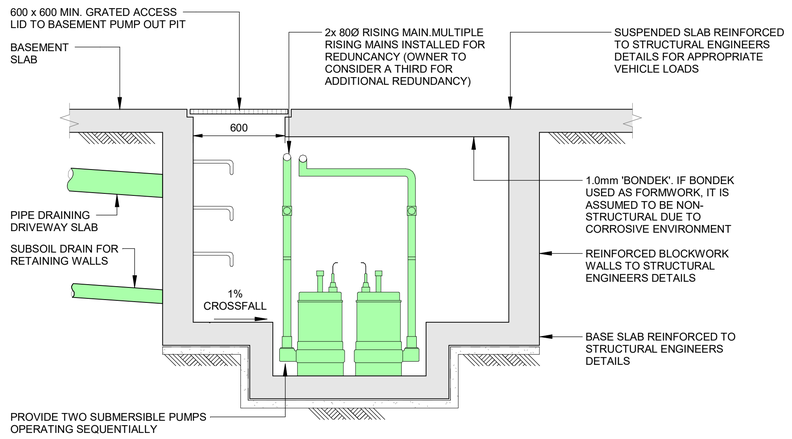
ANNUALLY

ELEMENT	TASK	DESCRIPTION / ACTION
ORIFICE PLATE	CHECK ATTACHMENT	ENSURE PLATE IS MOUN



BASEMENT 2 DRAINAGE PLAN
Scale: 1 : 150

1. ALL PIPES TO BE 100mmØ @ 1% MINIMUM UNLESS KNOWN OTHERWISE.
2. ALL BASES OF PITS TO BE BENCHED (TO HALF PIPE DEPTH) TO THE INVERT OF THE OUTLET PIPE WITH ALL PIPES CUT FLUSH WITH SIDE OF PIT, TO ALLOW SMOOTH FLOW OF STORMWATER.
3. PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE WHERE IN TRAFFICABLE AREAS.



NOTES:
1. REFER TO HYDRAULIC ENGINEERS DEAILS FOR PUMP SPECIFICATIONS.

BASEMENT PUMPOUT TANK DETAIL 2
Scale: 1 : 20

LEGEND
- HARDSTAND
- EARTH

CIV - FIXTURES SCHEDULE		
	TYPE	DESCRIPTION
		GRATED STORMWATER PIT
		PERIMETER GRATES
		PERIMETER STRIP DRAIN
		RAINWATER OUTLET
	RWT	RAINWATER TANK

CIV - STANDARD SYMBOLS	
	DESCRIPTION
	FALL ARROW

CIV - STORMWATER SERVICES		
	TYPE	DESCRIPTION
	RM	RISING MAIN
	RW	RAIN WATER
	SS	SUB SOIL DRAINAGE
	STW	STORMWATER

REV.	DATE	BY	DESCRIPTION
4	27.05.22	JPS	ISSUED FOR REVIEW
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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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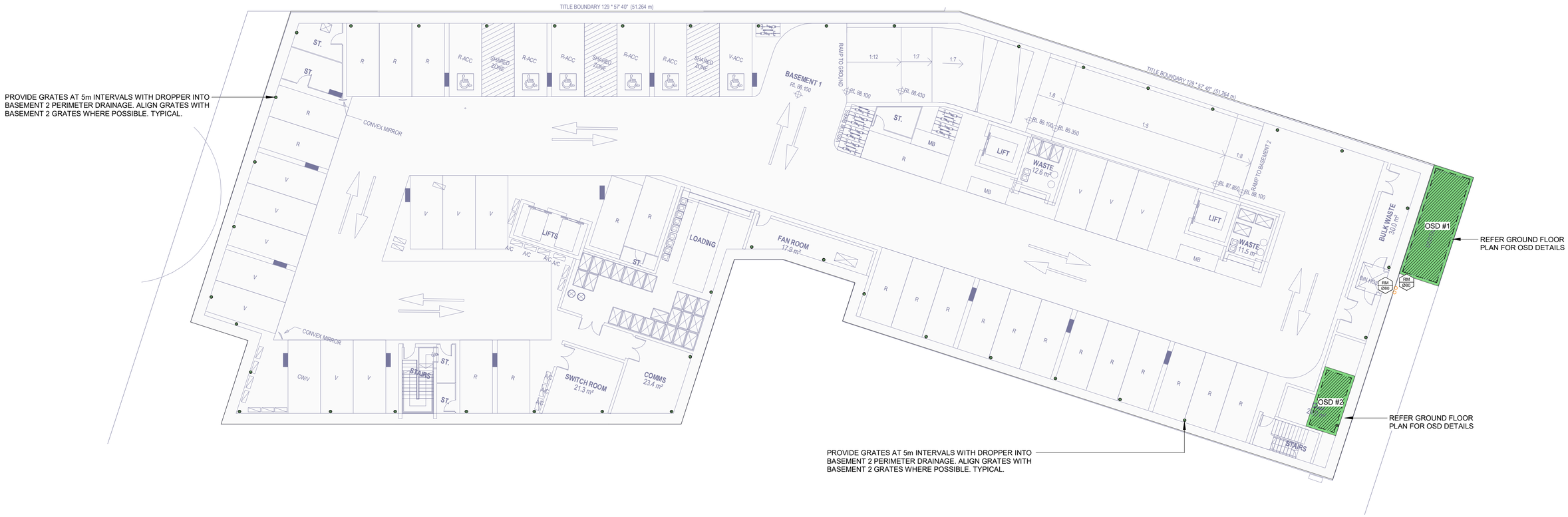
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DESIGN: RC | DRAWN: LAS | CHECKED: AMcK | SIZE: A1 | SCALE: As indicated

CIVIL DESIGN

BASEMENT 2 DRAINAGE PLAN

210223
DA
C02 4



BASEMENT 1 DRAINAGE PLAN
Scale: 1 : 150

1. ALL PIPES TO BE 100mmØ @ 1% MINIMUM UNLESS KNOWN OTHERWISE.
2. ALL BASES OF PITS TO BE BENCHED (TO HALF PIPE DEPTH) TO THE INVERT OF THE OUTLET PIPE WITH ALL PIPES CUT FLUSH WITH SIDE OF PIT, TO ALLOW SMOOTH FLOW OF STORMWATER.
3. PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE WHERE IN TRAFFICABLE AREAS.

OSD CALCULATIONS

- LGA LANE COVE
- NOTE 50yr KERB LIMIT IS 50 L/s
- SSR = 0.025 m³/m²
- PSD = 140 L/S/HA
- SITE AREA = 2966m²
- SSR = 2966*0.025 = 74m³
- PSD = 41 L/s
- VOLUME PROVIDED IN TANKS

LEGEND

- HARDSTAND
- EARTH

CIV - FIXTURES SCHEDULE

	TYPE	DESCRIPTION
		GRATED STORMWATER PIT
		PERIMETER GRATES
		PERIMETER STRIP DRAIN
		RAINWATER OUTLET
	RWT	RAINWATER TANK

CIV - STANDARD SYMBOLS

	DESCRIPTION
	FALL ARROW

CIV - STORMWATER SERVICES

	TYPE	DESCRIPTION
	RM	RISING MAIN
	RW	RAIN WATER
	SS	SUB SOIL DRAINAGE
	STW	STORMWATER

-10 -5 0 10
SCALE 1:100

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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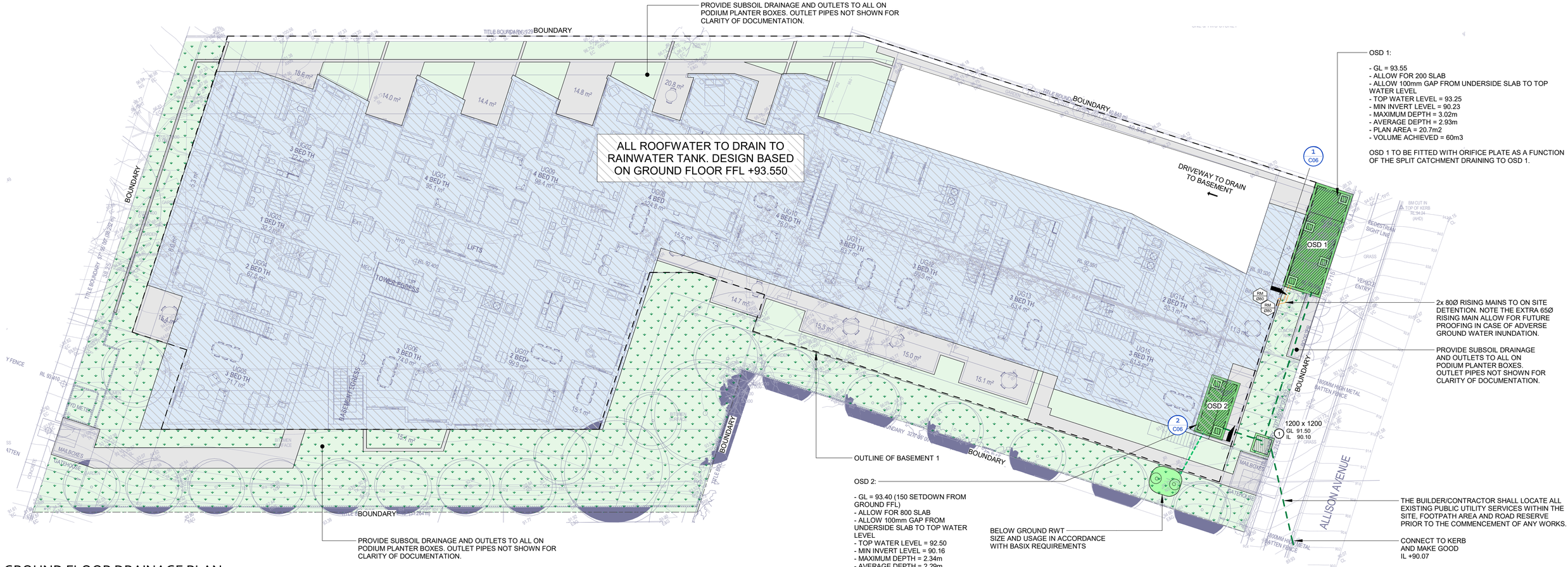
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CIVIL DESIGN

BASEMENT 1 DRAINAGE PLAN

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C03 4



GROUND FLOOR DRAINAGE PLAN
Scale: 1 : 150

1. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
2. THE BUILDER/CONTRACTOR SHALL LOCATE ALL EXISTING PUBLIC UTILITY SERVICES WITHIN THE SITE, FOOTPATH AREA AND ROAD RESERVE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ALL LOCATIONS AND LEVELS OF SERVICES SHALL BE REPORTED TO THE STORMWATER ENGINEER PRIOR TO THE COMMENCEMENT OF ANY WORKS TO ENSURE THERE ARE NO OBSTRUCTIONS IN THE LINE OF THE DRAINAGE DISCHARGE PIPES.
3. PRIOR TO COMMENCING ANY WORKS ON THE SITE, THE BUILDER SHALL ENSURE THAT THE INVERT LEVELS OF WHERE THE SITE STORMWATER SYSTEM CONNECTION INTO COUNCIL'S KERB/DRAINAGE SYSTEM MATCH THE DESIGN LEVELS. ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY
4. ALL STORMWATER DRAINAGE WORK TO AVOID TREE ROOTS. WHERE NOT POSSIBLE, ALL EXCAVATIONS IN VICINITY OF TREE ROOTS ARE TO BE HAND DUG.
5. ALL BASES OF PITS TO BE BENCHED (TO HALF PIPE DEPTH) TO THE INVERT OF THE OUTLET PIPE WITH ALL PIPES CUT FLUSH WITH SIDE OF PIT, TO ALLOW SMOOTH FLOW OF STORMWATER.
6. PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE WHERE IN TRAFFICABLE AREAS.
7. PROVIDE 100mm GAP IN BASE OF FENCE FOR EMERGENCY OVERFLOWS.
8. PROVIDE SUBSOIL DRAINAGE AND OUTLETS TO ALL ON PODIUM PLANTER BOXES. OUTLET PIPES NOT SHOWN FOR CLARITY OF DOCUMENTATION.
9. ALL DOWNPIPES ARE TO BE PIPE CONNECTED INTO THE FORMAL RAINWATER OR STORMWATER LINE UNLESS SPECIFICALLY NOTED ON THE DRAWINGS OTHERWISE.

OSD CALCULATIONS

- LGA LANE COVE
- NOTE 50yr KERB LIMIT IS 50 L/s
- SSR = 0.025 m³/m²
- PSD = 140 L/S/HA
- SITE AREA = 2966m²
- SSR = 2966*0.025 = 74m³
- PSD = 41 L/s
- VOLUME PROVIDED IN TANKS

GENERAL LEGEND

- LANDSCAPE
- LANDSCAPE ON PODIUM SLAB
- HARDSTAND
- ROOF AREA TO DRAIN
- OSD

PROPOSED TREES

EXISTING TREES

CIV - FIXTURES SCHEDULE		
TYPE		DESCRIPTION
		GRATED STORMWATER PIT
		PERIMETER GRATES
		PERIMETER STRIP DRAIN
		RAINWATER OUTLET
RWT		RAINWATER TANK

CIV - STANDARD SYMBOLS	
	DESCRIPTION
	FALL ARROW

CIV - STORMWATER SERVICES		
	TYPE	DESCRIPTION
	RM	RISING MAIN
	RW	RAIN WATER
	SS	SUB SOIL DRAINAGE
	STW	STORMWATER

-10 -5 0 10
SCALE 1:100

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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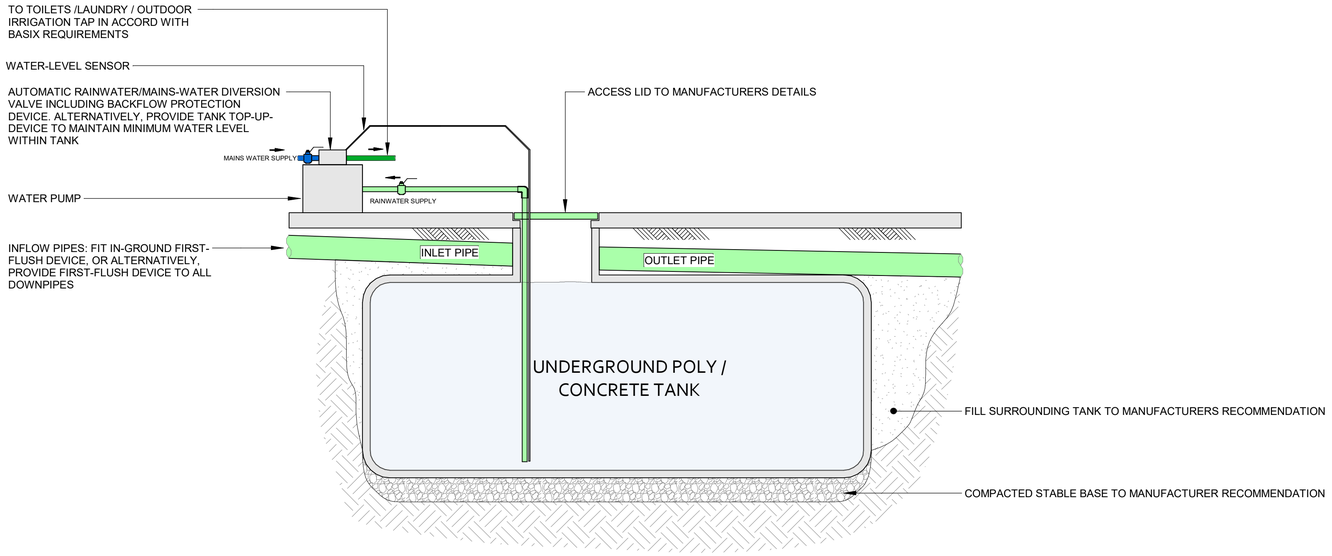
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CIVIL DESIGN

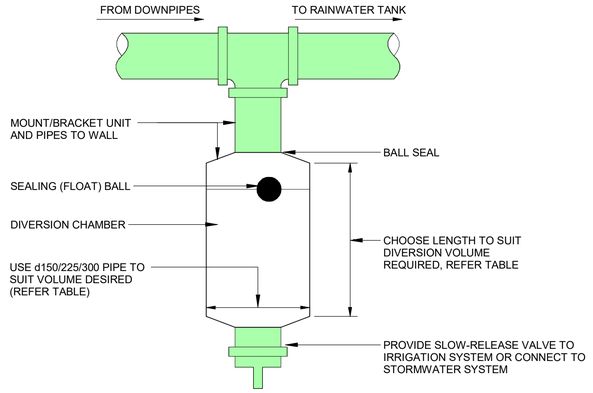
GROUND FLOOR DRAINAGE PLAN

210223
DA
C04 4



1. PROVIDE DIVERSION DEVICE AS SHOWN TO ENSURE MAINS-WATER SWITCH-OVER OCCURS ONCE WATER LEVEL IN TANK REACHES THE MINIMUM LEVEL. ALTERNATIVELY, A TOP-UP DEVICE (OR AIR-BREAK SYSTEM) MAY BE EMPLOYED TO ENSURE THE MINIMUM AFTER LEVEL IN THE TANK IS MAINTAINED.
2. RAINWATER FIXTURES, INFLOW AND OUTFLOW PIPES TO AS3500.1 (2003).
3. ANY CONTAINMENT/BACKFLOW PREVENTION DEVICE TO BE IN ACCORD WITH THE LOCAL WATER AUTHORITY.
4. RAINWATER USAGE AND MINIMUM VOLUMES TO BASIX OR AS SPECIFIED BY THE STORMWATER ENGINEER.
5. ALL PIPING SYSTEMS DELIVERING RAINWATER TO TAPS, FIXTURES, OUTLETS OR APPLIANCES MUST BE INSTALLED BY A LICENSED PLUMBER.

TYPICAL BELOW GROUND RAINWATER TANK
Scale: 1 : 20



DIVERSION CHAMBER VOLUMES [L]

LENGTH [mm] PIPE SIZE	150Ø	225Ø	300Ø
250	4	10	18
500	9	20	35
1000	18	40	71
1500	27	60	106

TYPICAL WALL MOUNTED FIRST-FLUSH DEVICE
Scale: 1 : 10

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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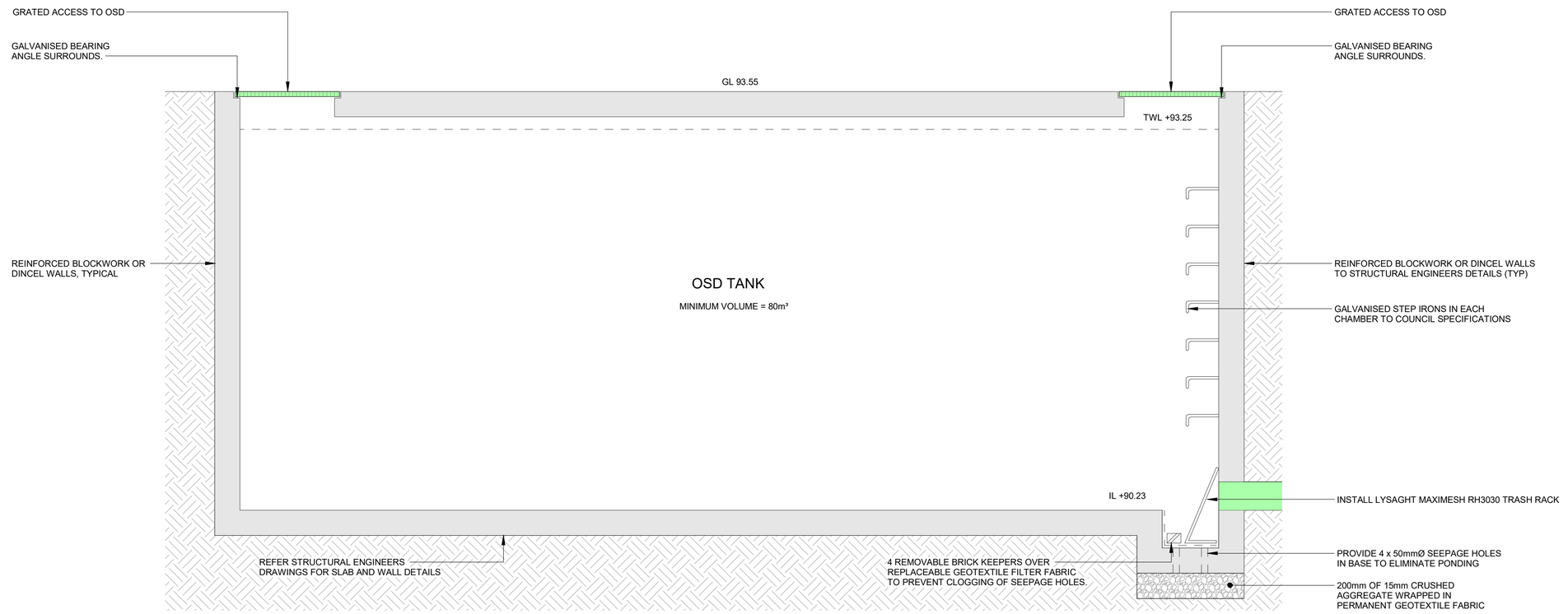
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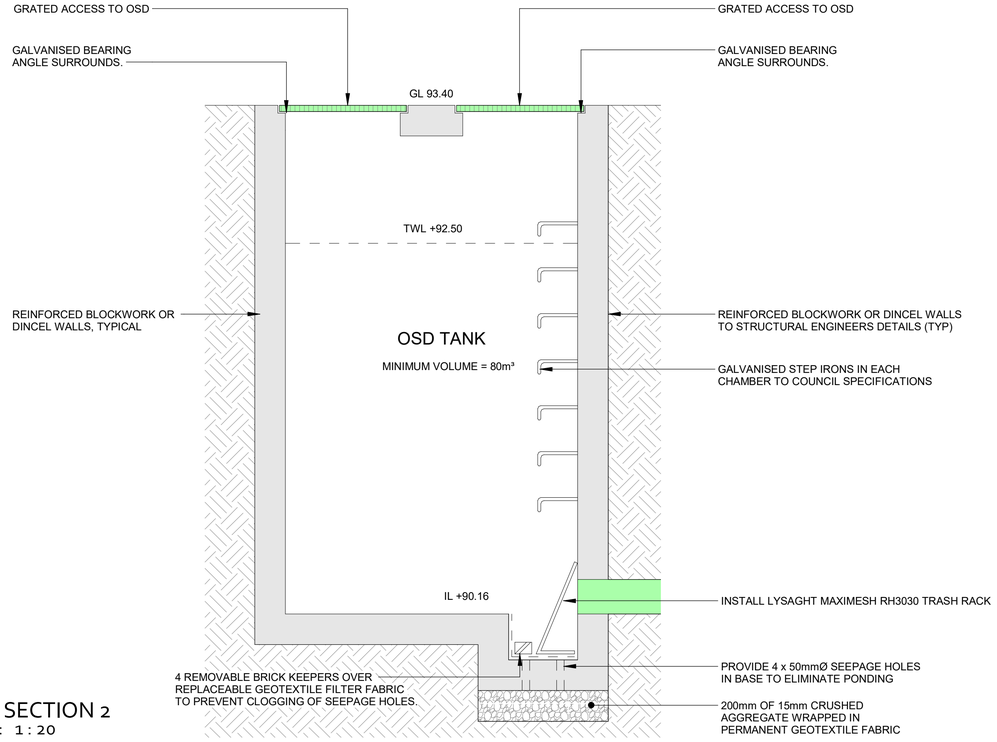
CIVIL DESIGN

SITE STORMWATER DETAILS SHEET 1

210223 DA C05 4



1 / C04 OSD SECTION 1
Scale: 1 : 20



2 / C04 OSD SECTION 2
Scale: 1 : 20

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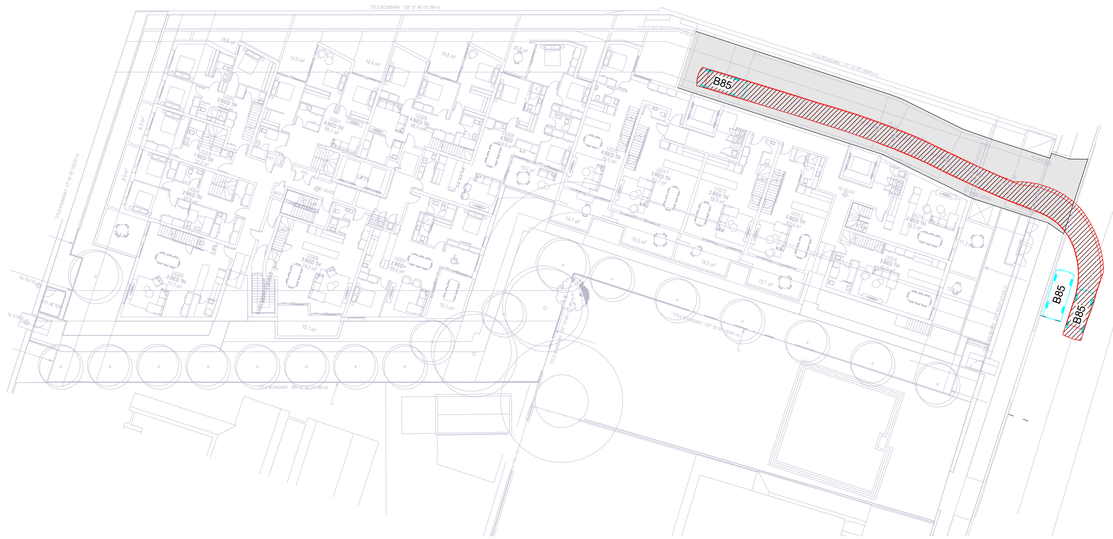
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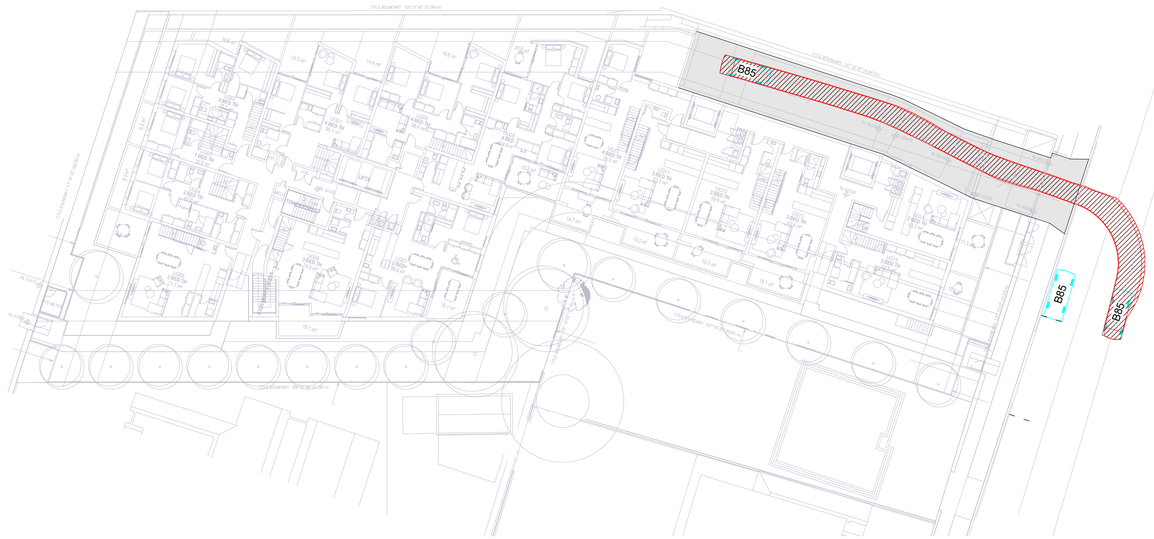
CIVIL DESIGN

SITE STORMWATER DETAILS SHEET 2

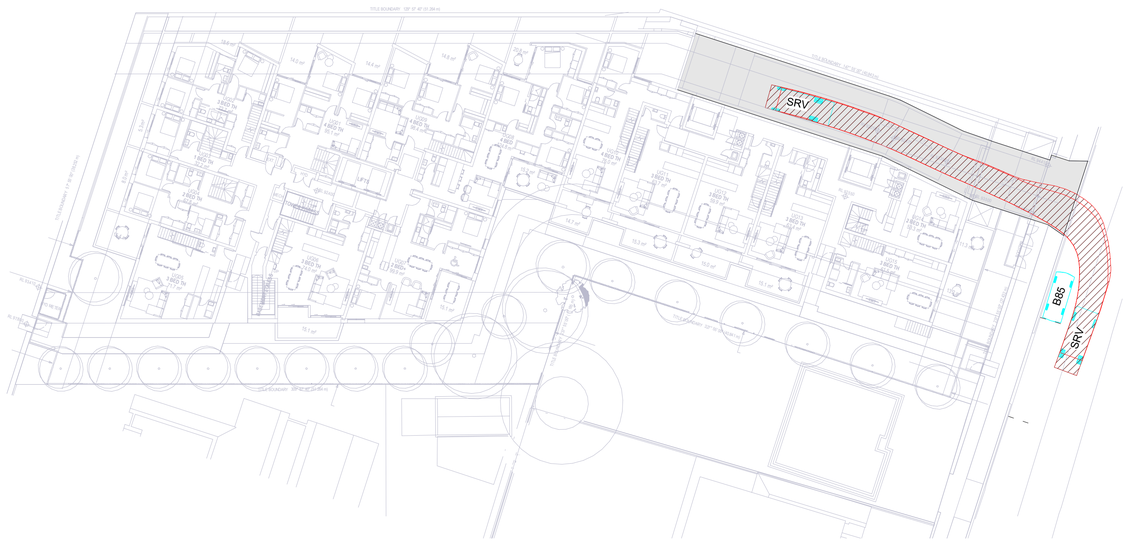
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DA
C06 1



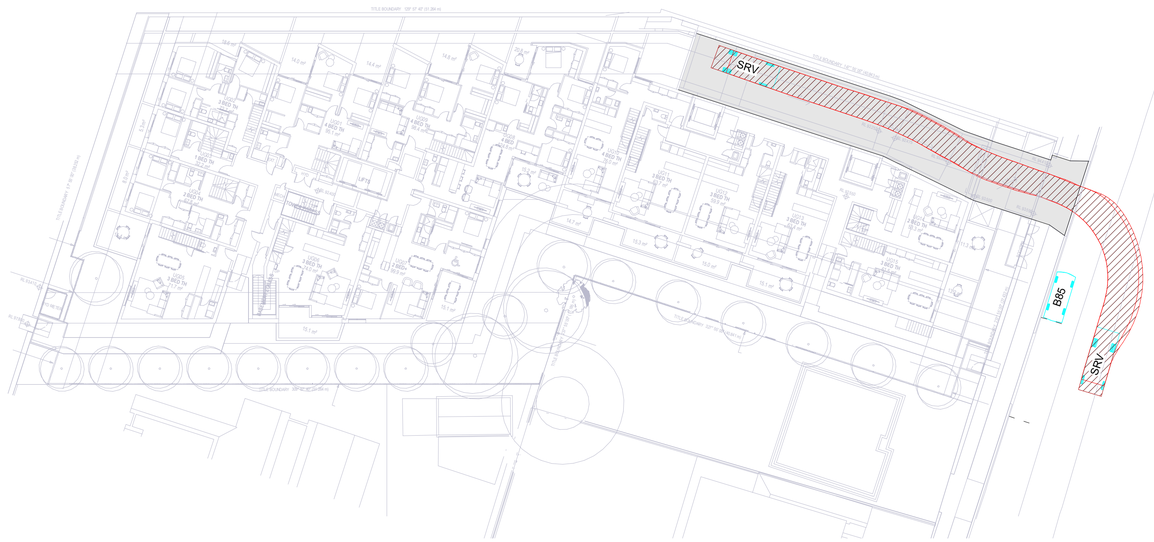
GROUND FLOOR - B85 ENTRY 1
Scale: 1 : 300



GROUND FLOOR - B85 EXIT 1
Scale: 1 : 300



GROUND FLOOR - SRV ENTRY 1
Scale: 1 : 300



GROUND FLOOR - SRV EXIT 1
Scale: 1 : 300

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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CIVIL DESIGN

GROUND FLOOR TURNING PATHS SHEET 1

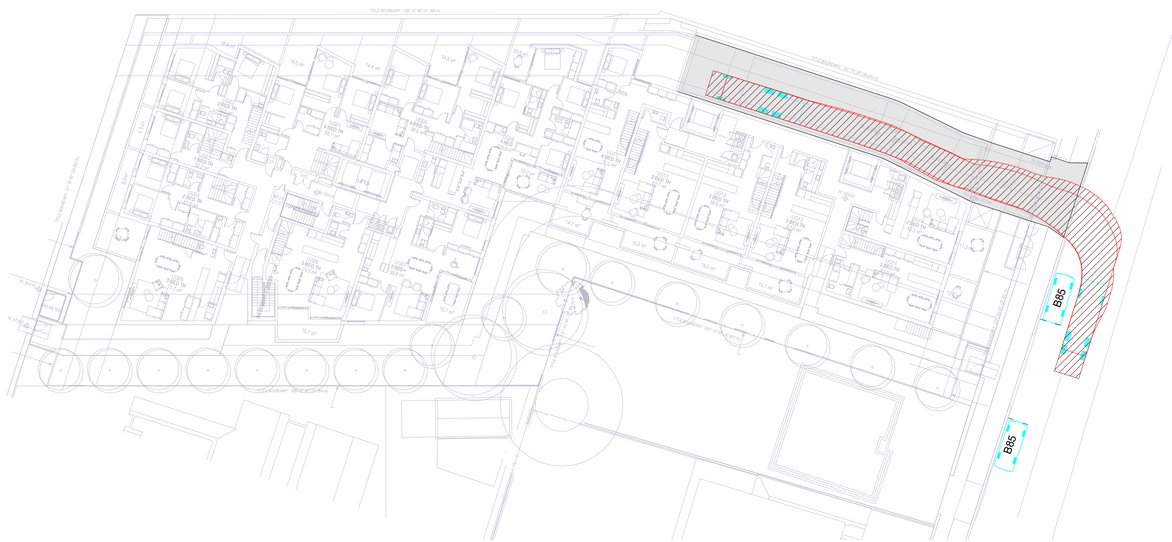
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C10 5



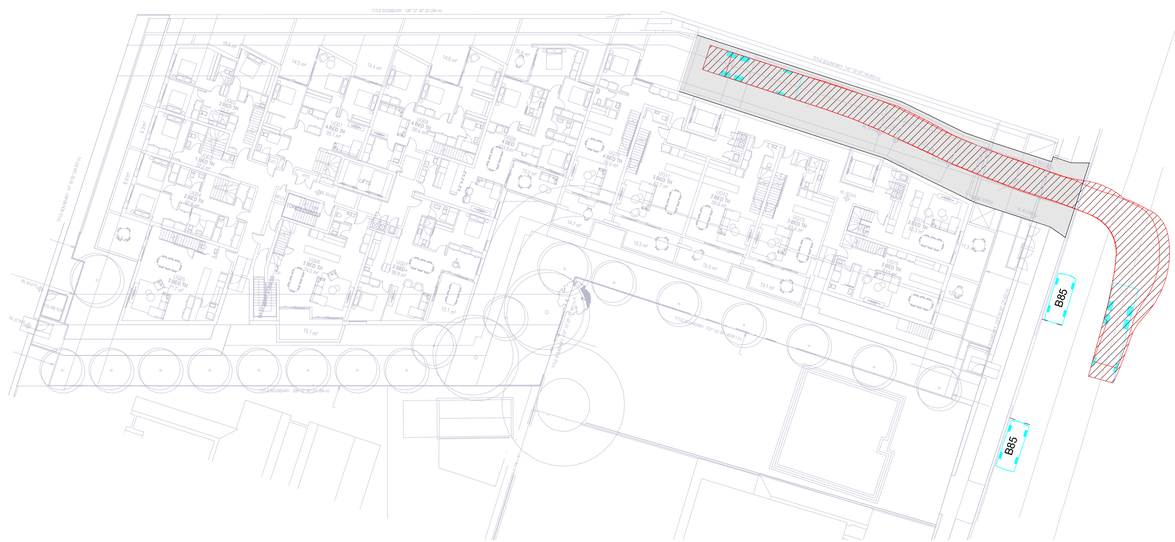
GROUND FLOOR - B85 & SRV PASSING 1
Scale: 1 : 300



GROUND FLOOR - B85 & SRV PASSING 2
Scale: 1 : 300



GROUND FLOOR - WASTE SERVICES TRUCK ENTRY 1
Scale: 1 : 300



GROUND FLOOR - WASTE SERVICES TRUCK EXIT 1
Scale: 1 : 300

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PROPOSED DEVELOPMENT

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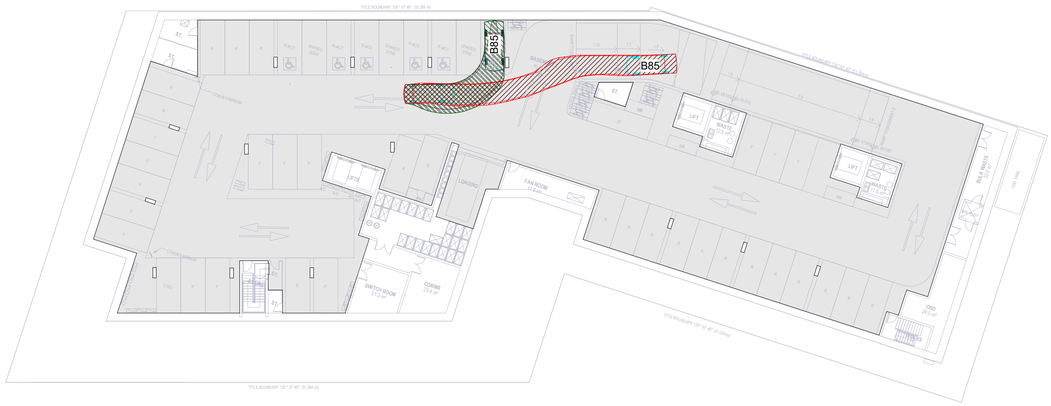
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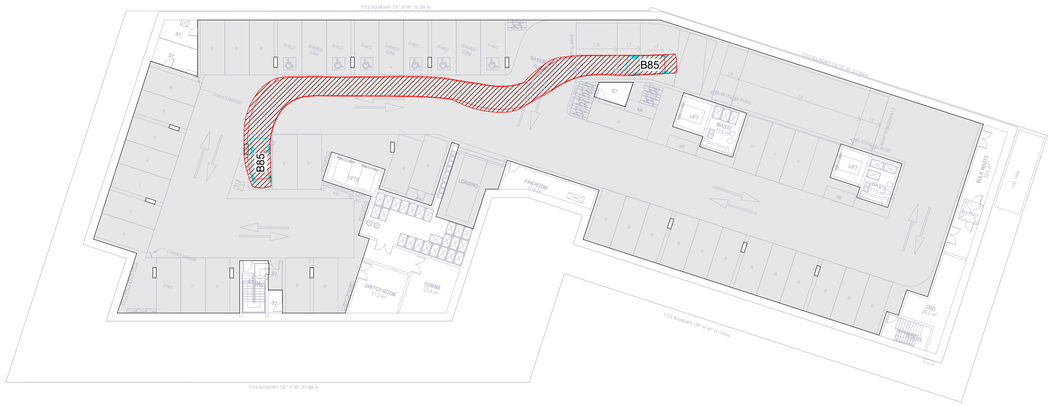
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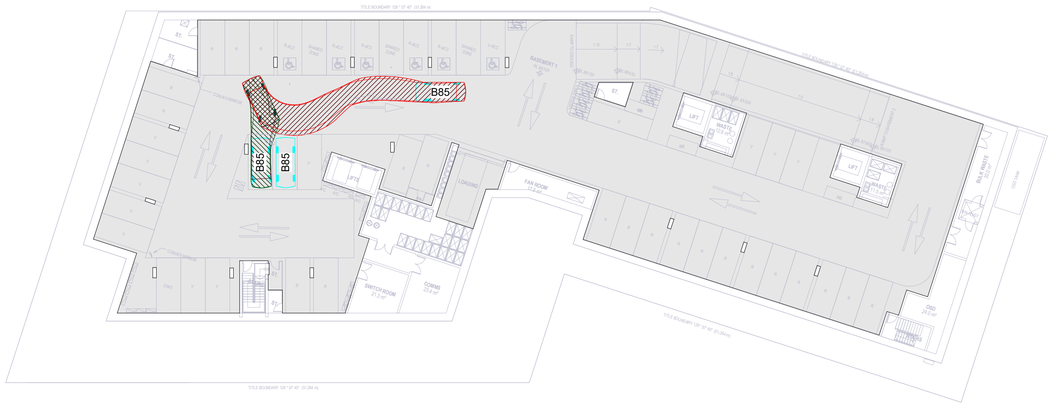
GROUND FLOOR TURNING PATHS SHEET 2

210223
DA
C11 3

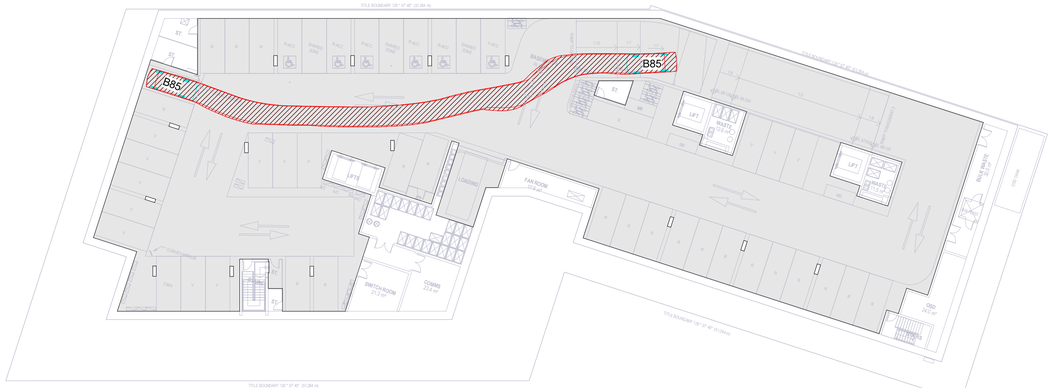

B85
B85
TITLE BOUNDARY 135° 12' 40" 23.384 m
TITLE BOUNDARY 135° 12' 40" 23.384 m
TITLE BOUNDARY 135° 12' 40" 23.384 m
LIFT
LIFT
LIFT
LIFT
LOADING
FAN ROOM
SWITCH ROOM
COMMS
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RAMP DOWN
RAMP UP
RAMP UP
DRY
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SPRINKLER
RISER
RISER
RIS



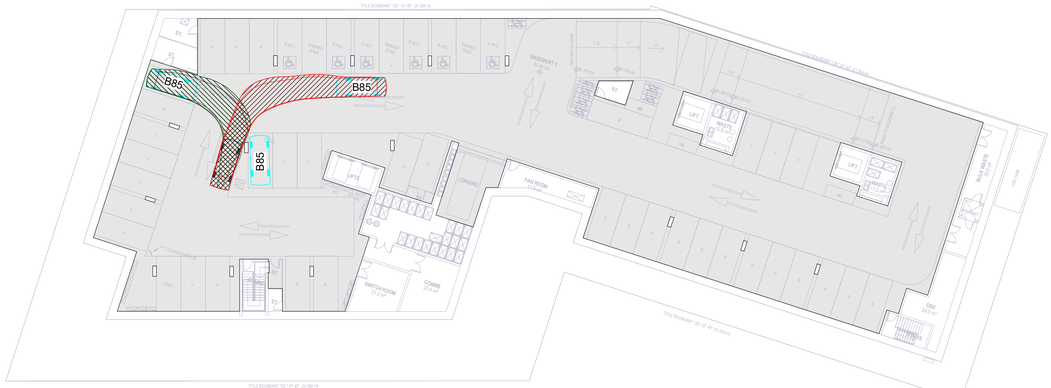
BASEMENT 1 - B85 ENTRY 4
Scale: 1 : 300



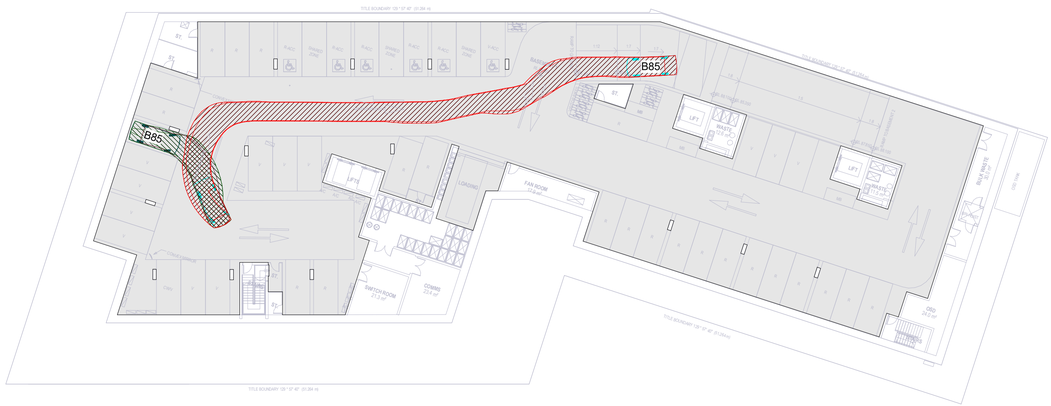
BASEMENT 1 - B85 EXIT 4
Scale: 1 : 300



BASEMENT 1 - B85 ENTRY 5
Scale: 1 : 300



BASEMENT 1 - B85 EXIT 5
Scale: 1 : 300



BASEMENT 1 - B85 ENTRY 6
Scale: 1 : 300



BASEMENT 1 - B85 EXIT 6
Scale: 1 : 300

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

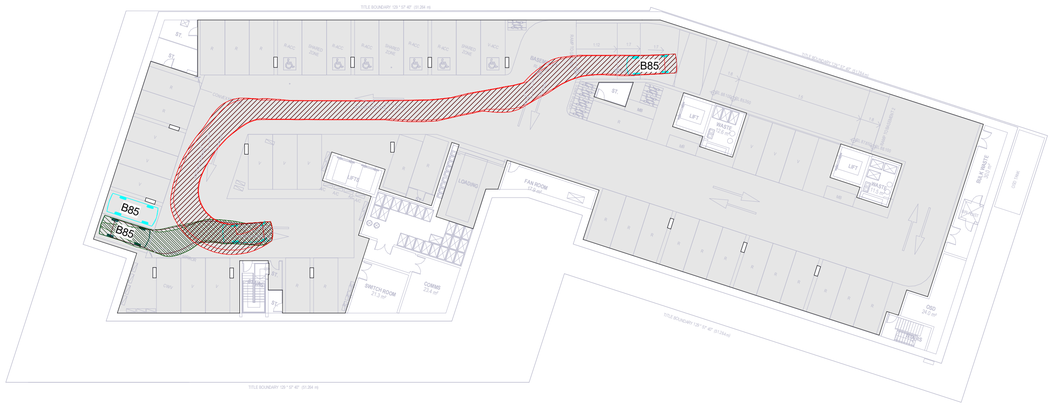
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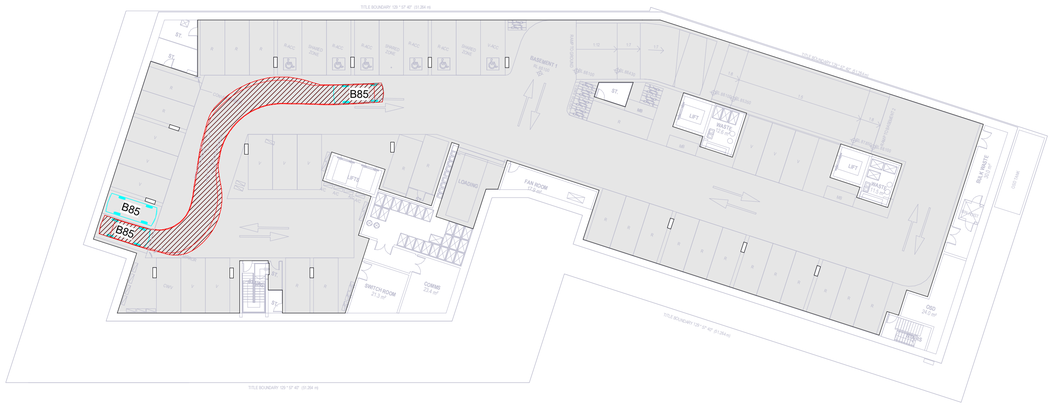
CIVIL DESIGN

BASEMENT 1 TURNING PATHS SHEET 2

210223
DA
C13 5



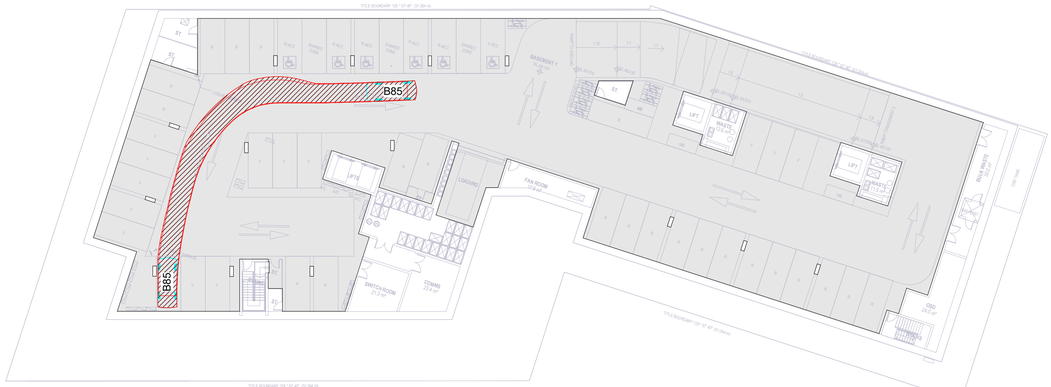
BASEMENT 1 - B85 ENTRY 7
Scale: 1 : 300



BASEMENT 1 - B85 EXIT 7
Scale: 1 : 300



BASEMENT 1 - B85 ENTRY 8
Scale: 1 : 300



BASEMENT 1 - B85 EXIT 8
Scale: 1 : 300



BASEMENT 1 - B85 ENTRY 9
Scale: 1 : 300



BASEMENT 1 - B85 EXIT 9
Scale: 1 : 300

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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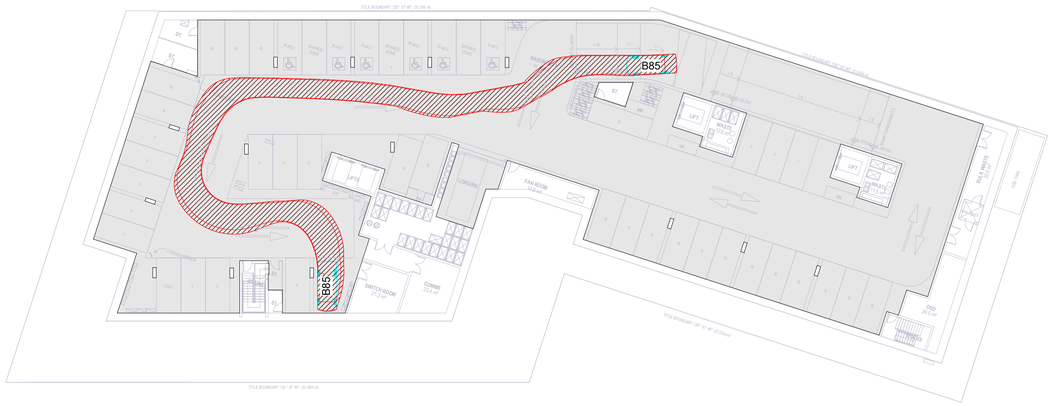
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CIVIL DESIGN

BASEMENT 1 TURNING PATHS SHEET 3

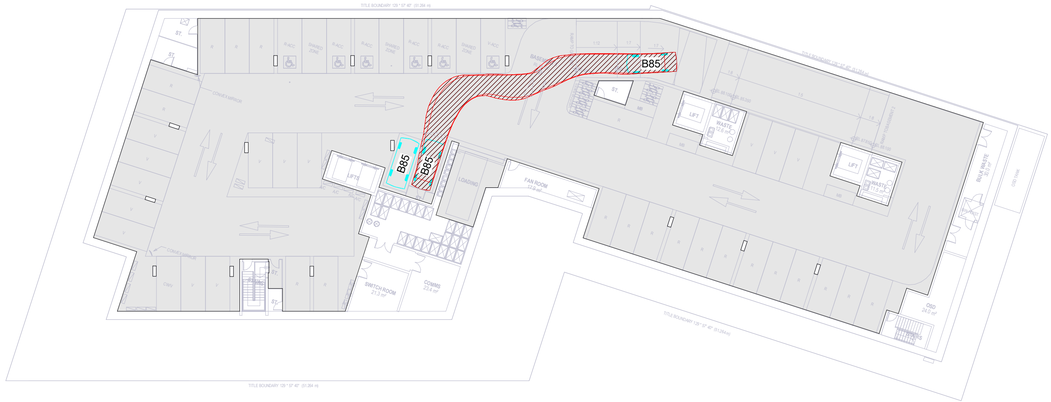
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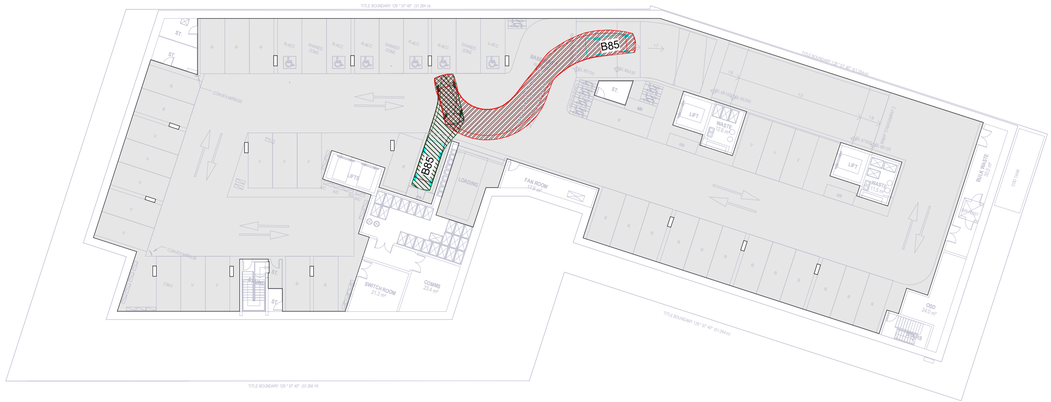
BASEMENT 1 - B85 ENTRY 10
Scale: 1 : 300



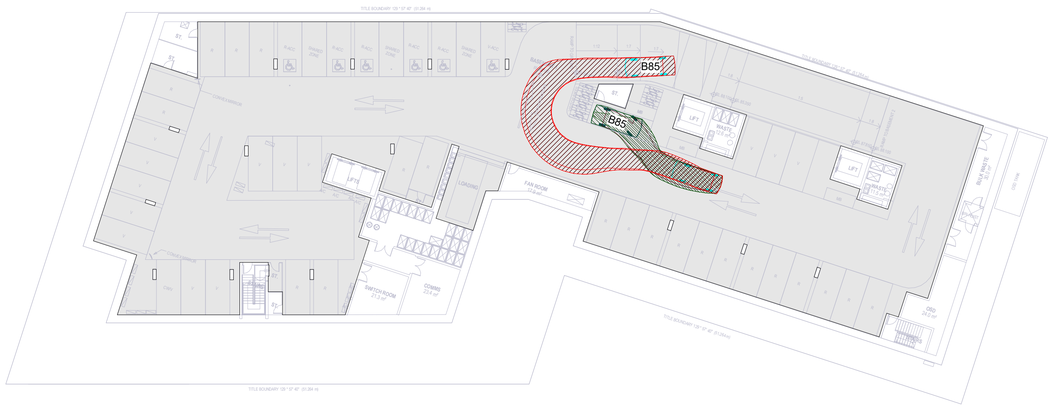
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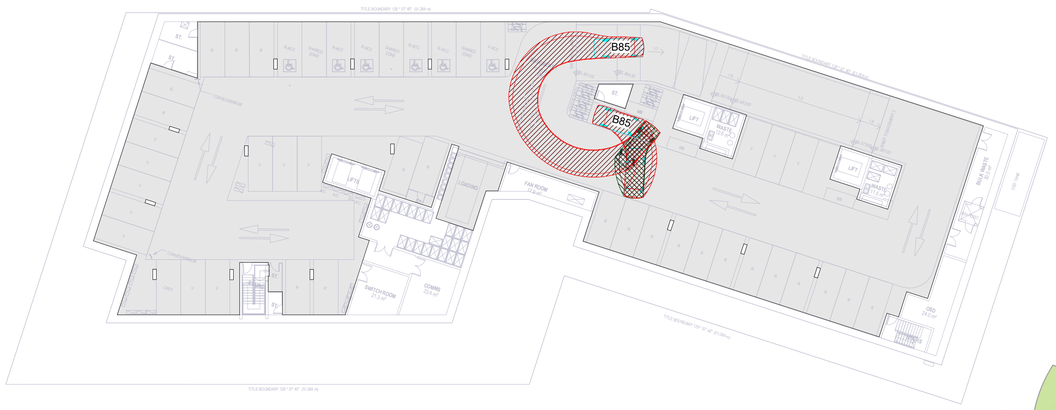
BASEMENT 1 - B85 ENTRY 11
Scale: 1 : 300



BASEMENT 1 - B85 EXIT 11
Scale: 1 : 300



BASEMENT 1 - B85 ENTRY 12
Scale: 1 : 300



BASEMENT 1 - B85 EXIT 12
Scale: 1 : 300

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2	26.04.21	LAS	PRELIMINARY ISSUE
1	07.04.21	LAS	PRELIMINARY ISSUE

PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

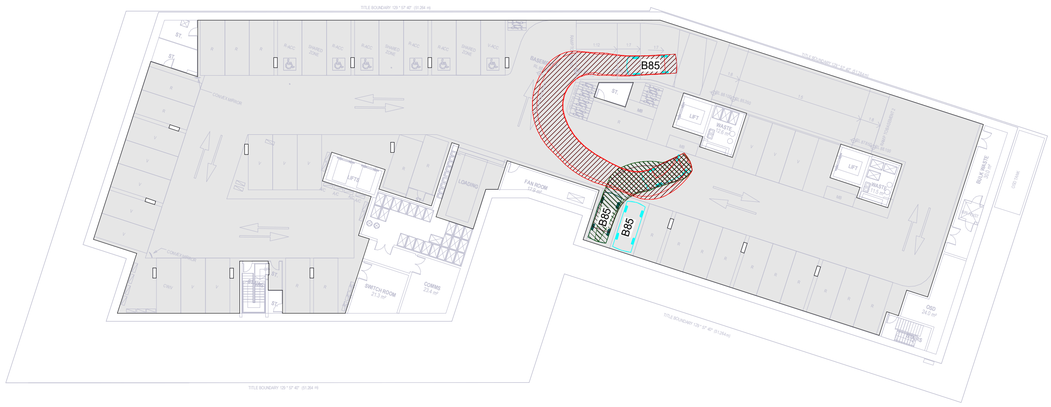
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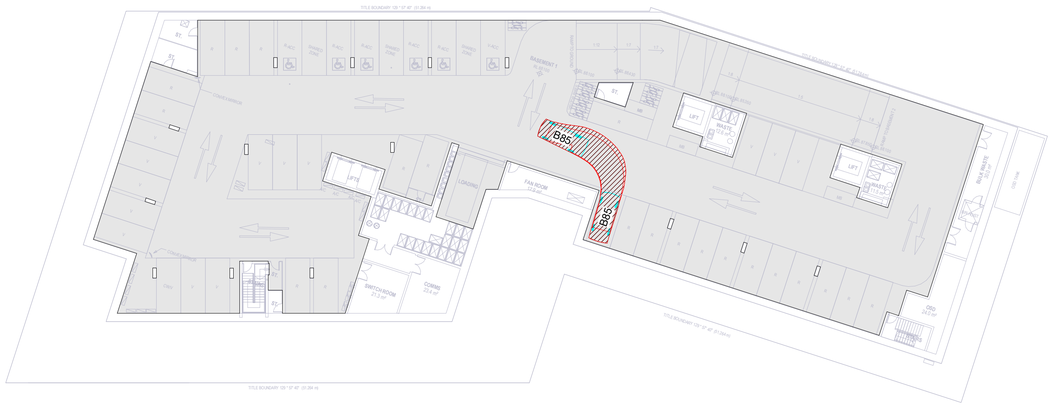
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BASEMENT 1 TURNING PATHS SHEET 4

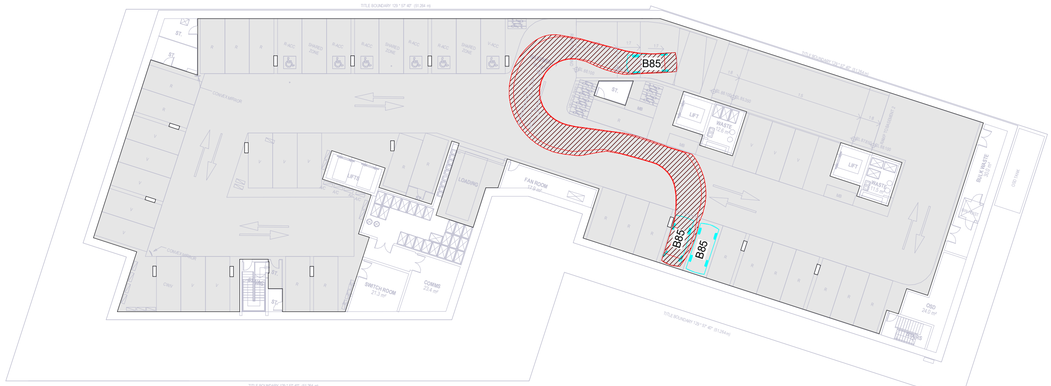
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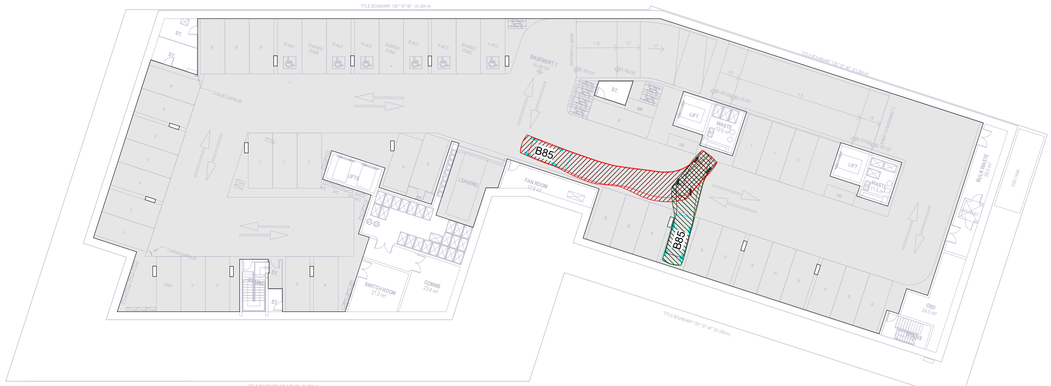
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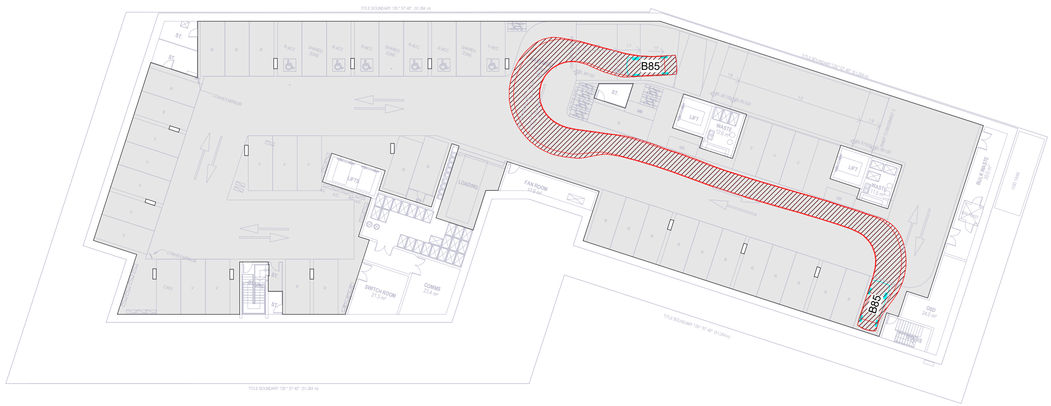
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BASEMENT 1 - B85 ENTRY 14
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BASEMENT 1 - B85 EXIT 14
Scale: 1 : 300



BASEMENT 1 - B85 ENTRY 15
Scale: 1 : 300



BASEMENT 1 - B85 EXIT 15
Scale: 1 : 300

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1	07.04.21	LAS	PRELIMINARY ISSUE

PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

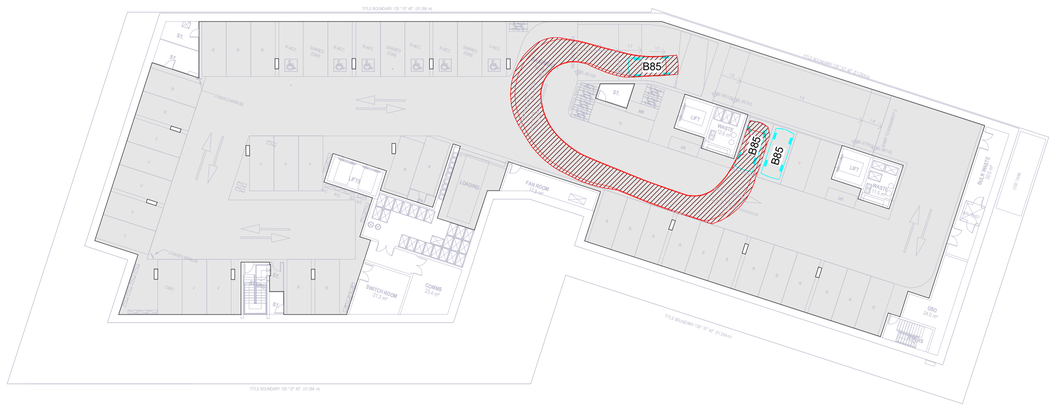
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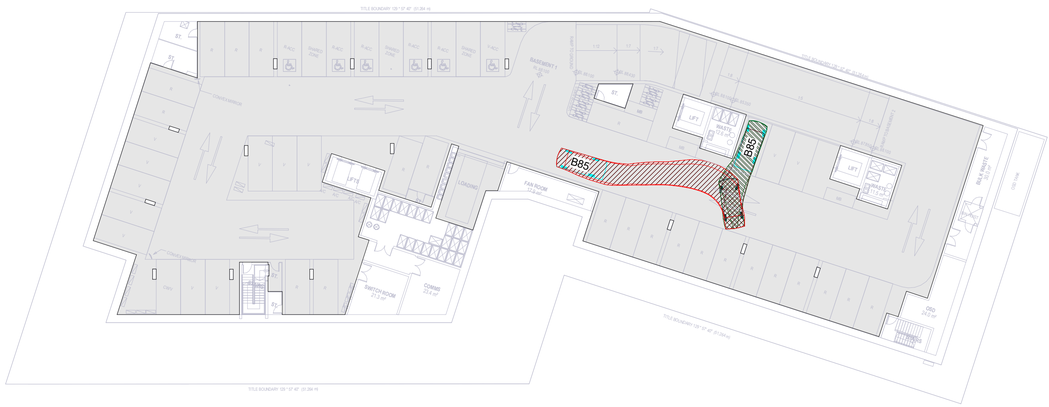
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BASEMENT 1 TURNING PATHS SHEET 5

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BASEMENT 1 - B85 ENTRY 16
Scale: 1 : 300



BASEMENT 1 - B85 EXIT 16
Scale: 1 : 300



BASEMENT 1 - WASTE/SERVICE TRUCK ENTRY 1a
Scale: 1 : 300



BASEMENT 1 - WASTE/SERVICE TRUCK EXIT 1
Scale: 1 : 300



BASEMENT 1 - WASTE/SERVICE TRUCK ENTRY 1b
Scale: 1 : 300

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

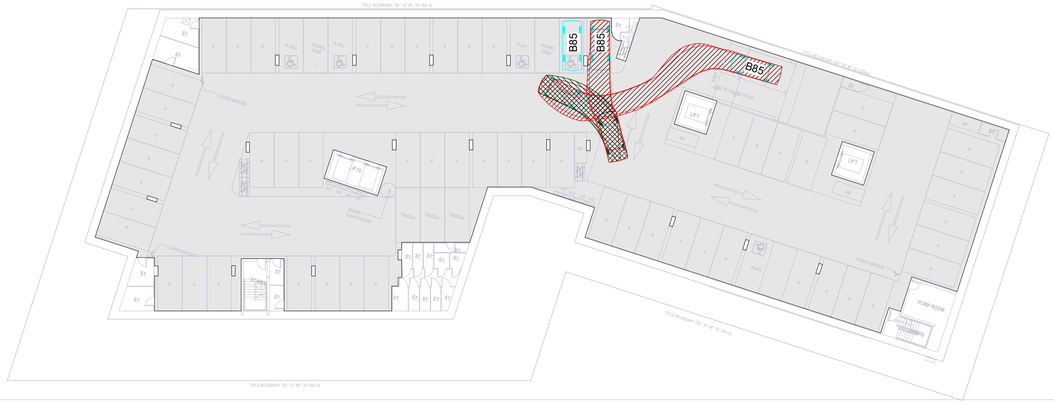
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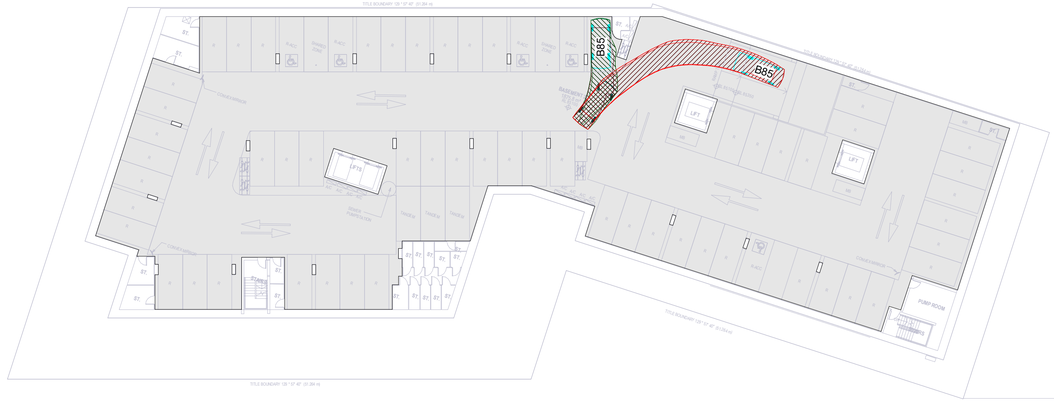
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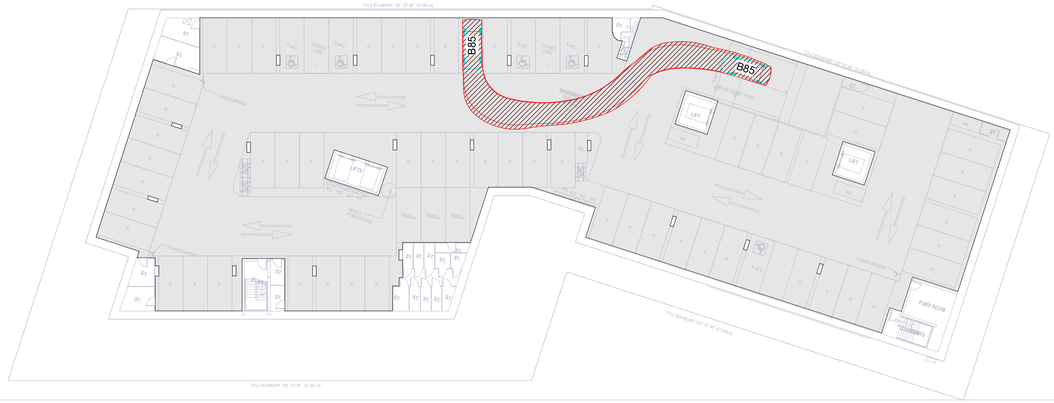
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BASEMENT 2 - B85 EXIT 1
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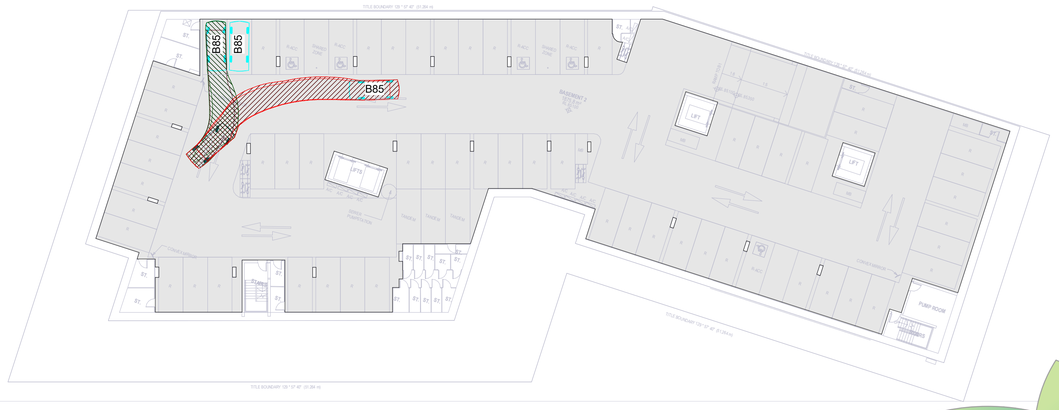
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BASEMENT 2 - B85 EXIT 2
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 3
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 3
Scale: 1 : 300

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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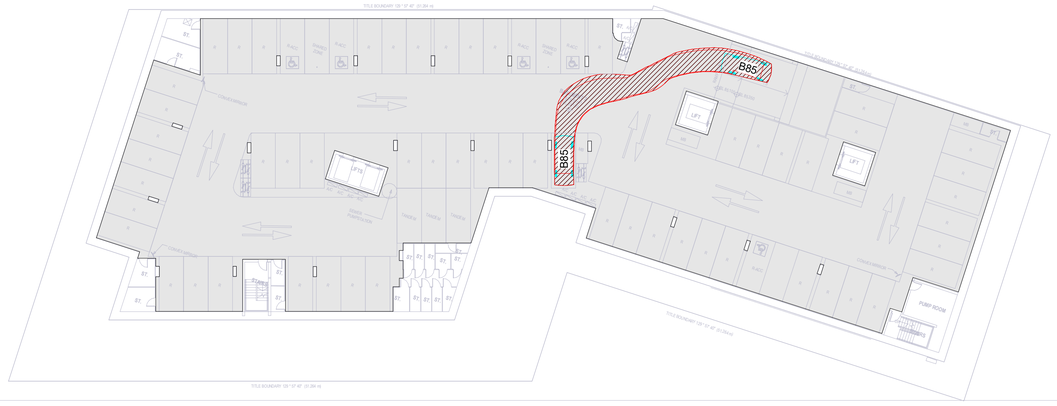
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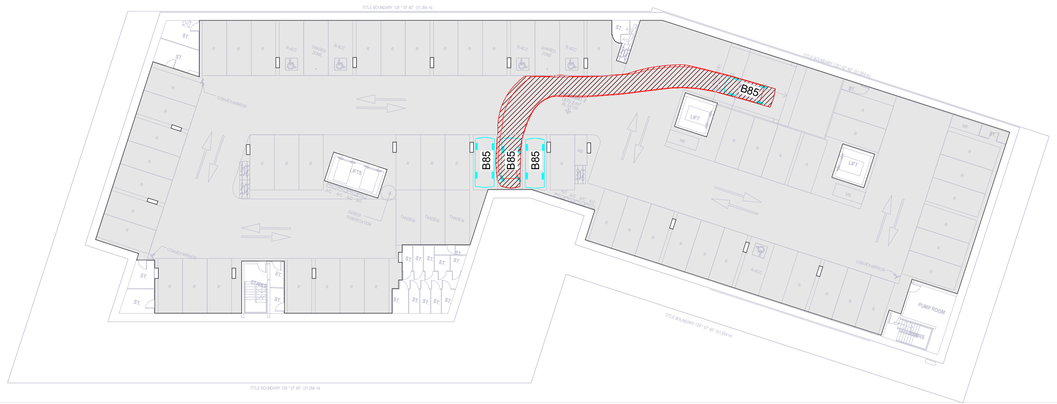
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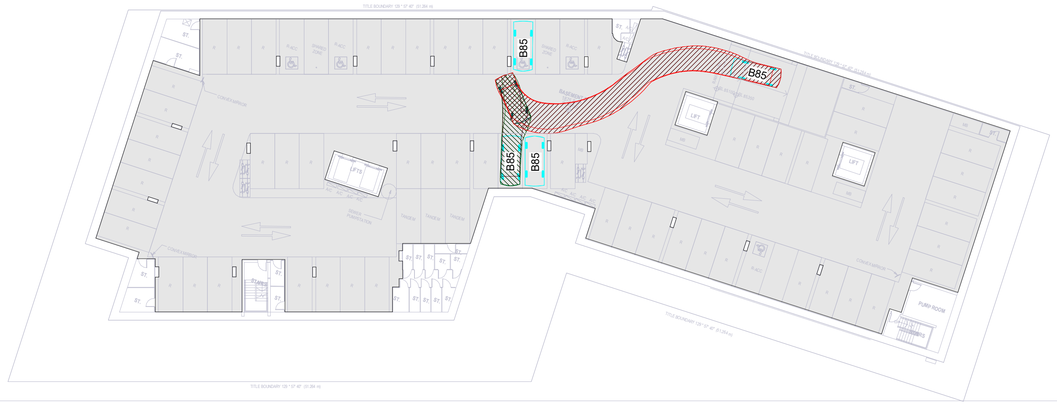
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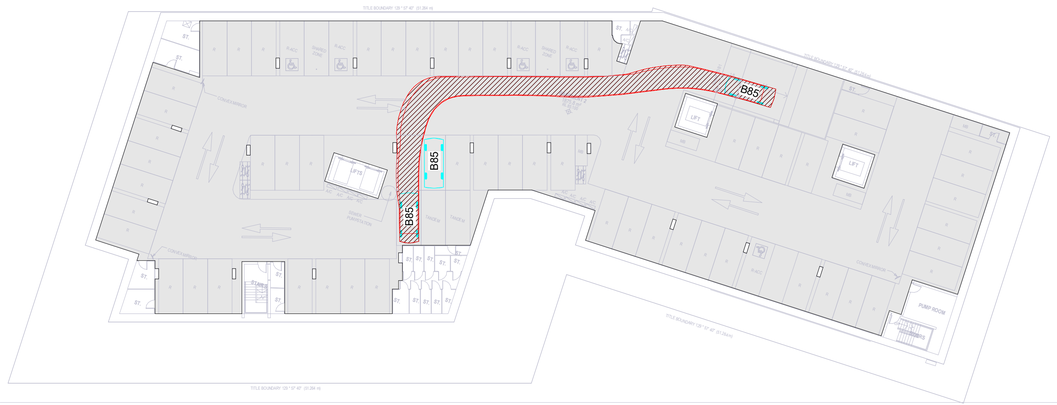
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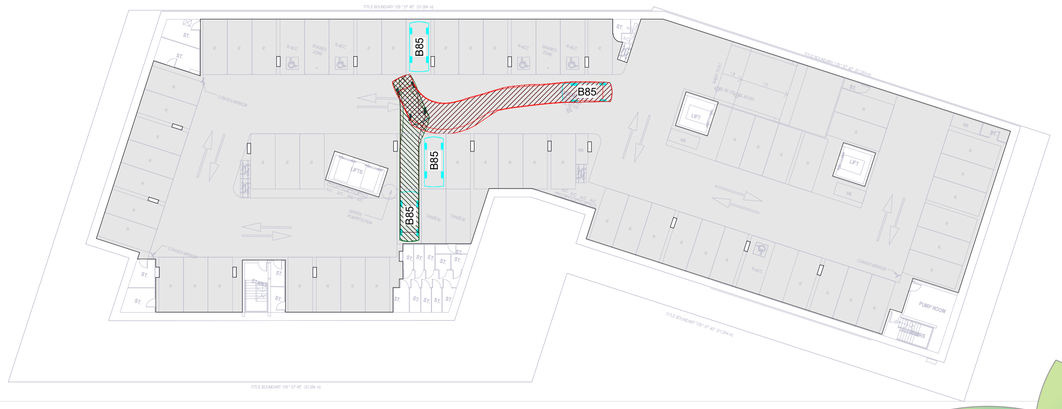
BASEMENT 2 - B85 ENTRY 5
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 5
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 6
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 6
Scale: 1 : 300

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

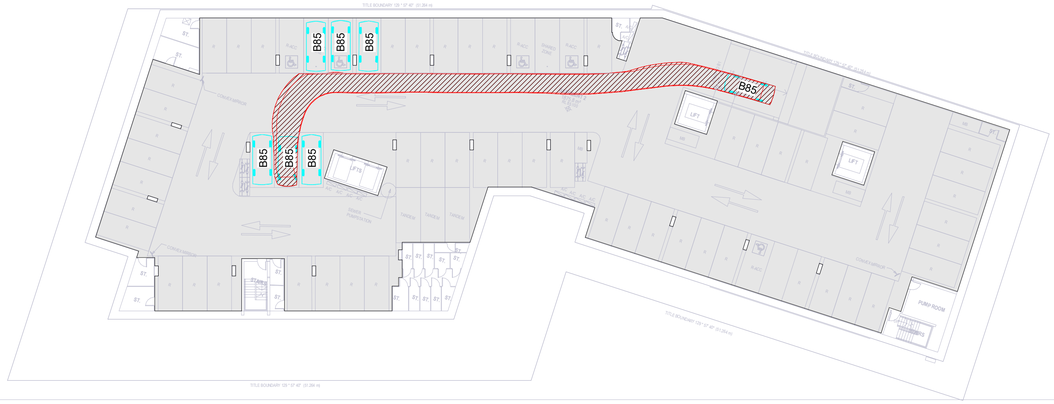
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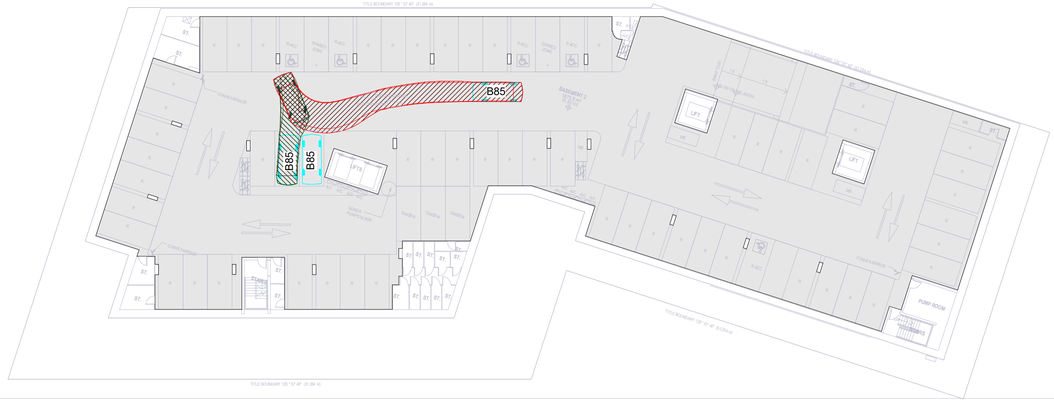
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BASEMENT 2 TURNING PATHS SHEET 2

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BASEMENT 2 - B85 EXIT 7
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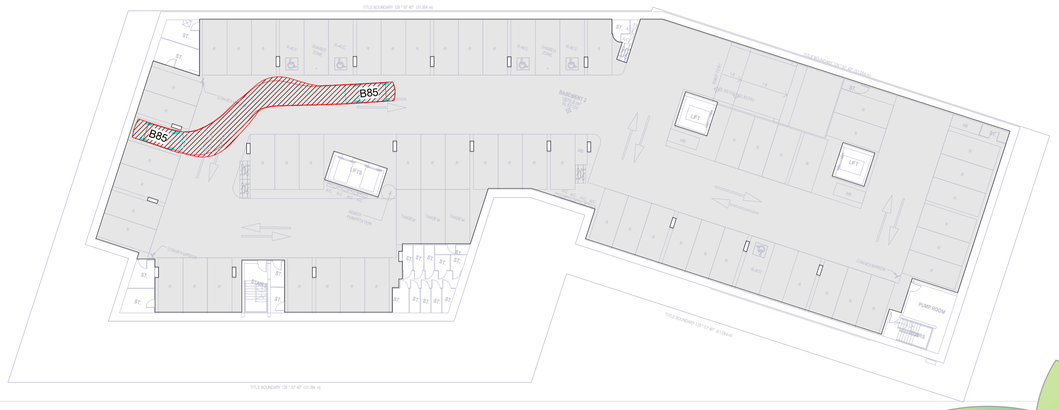
BASEMENT 2 - B85 ENTRY 8
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BASEMENT 2 - B85 EXIT 8
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 9
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 9
Scale: 1 : 300

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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

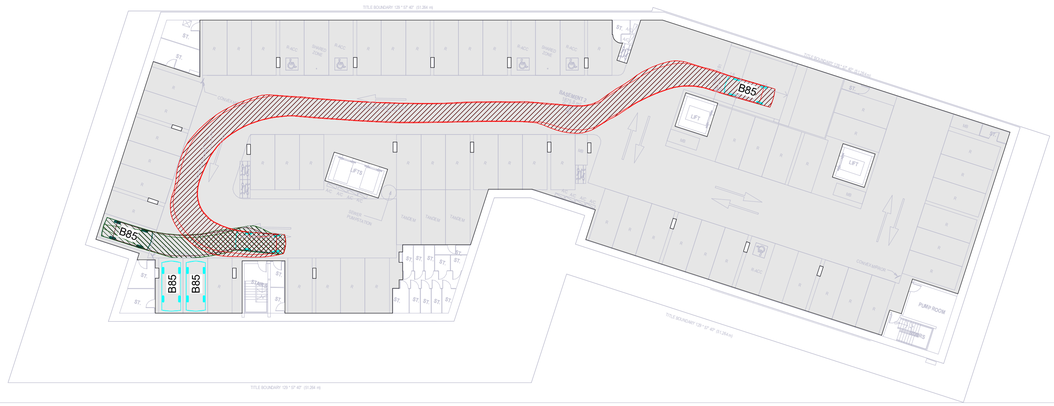
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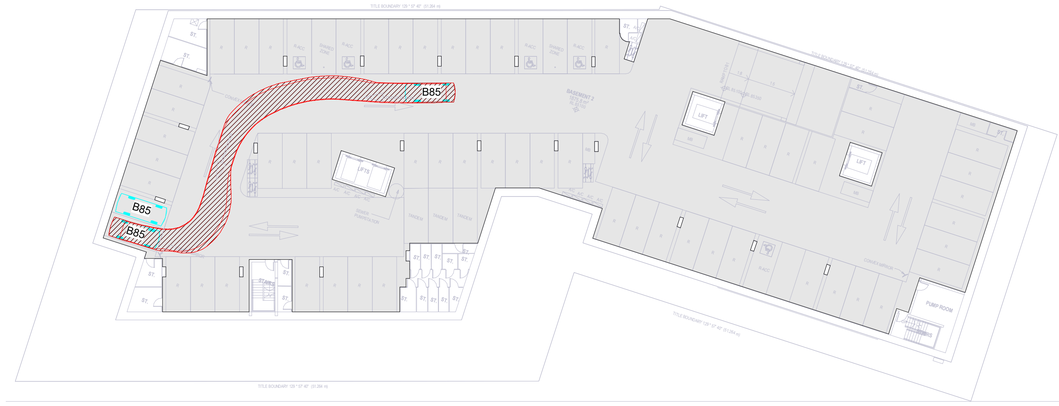
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BASEMENT 2 TURNING PATHS SHEET 3

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BASEMENT 2 - B85 ENTRY 10
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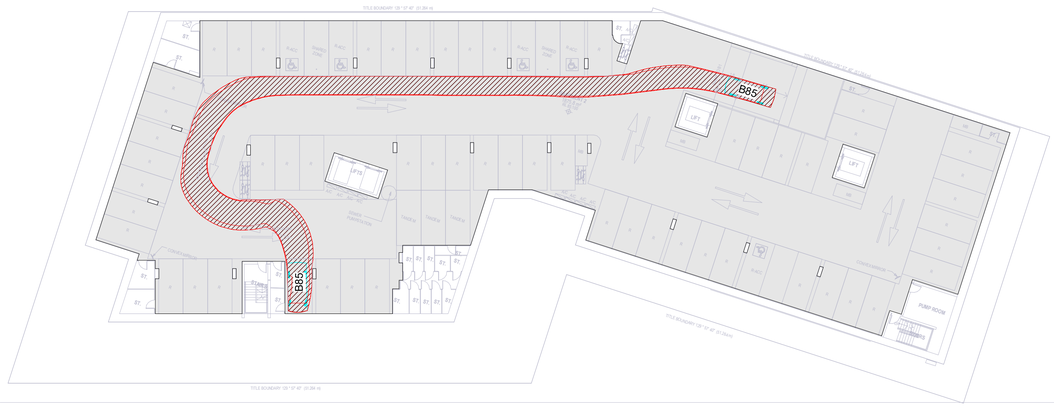
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BASEMENT 2 - B85 ENTRY 11
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 11
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 12
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 12
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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

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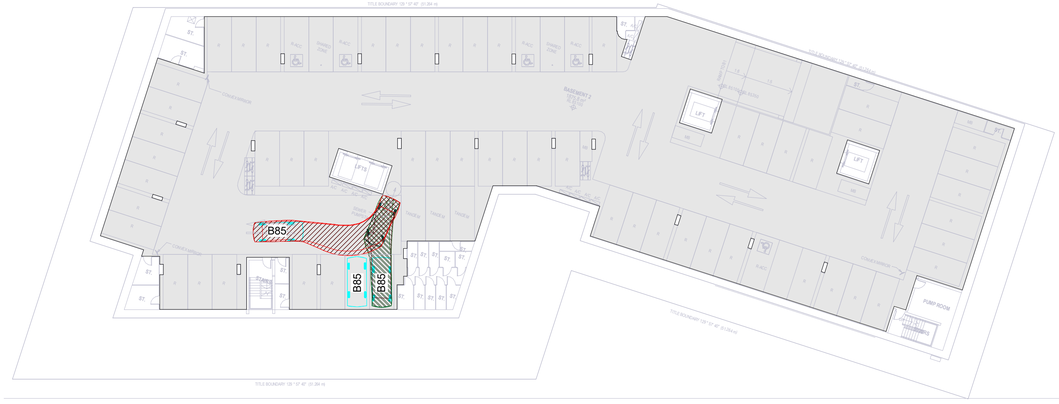
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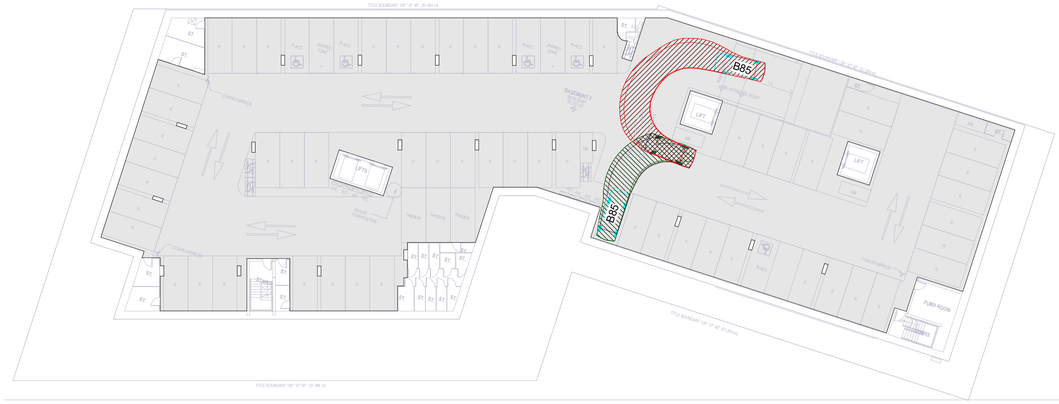
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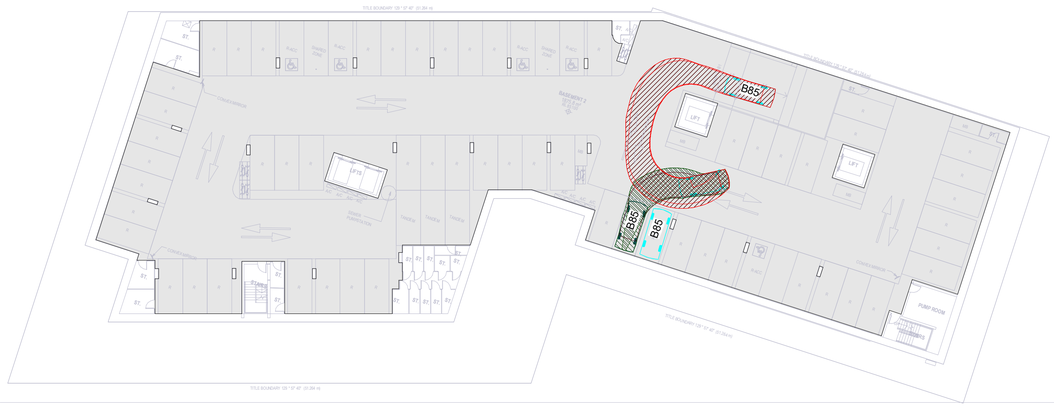
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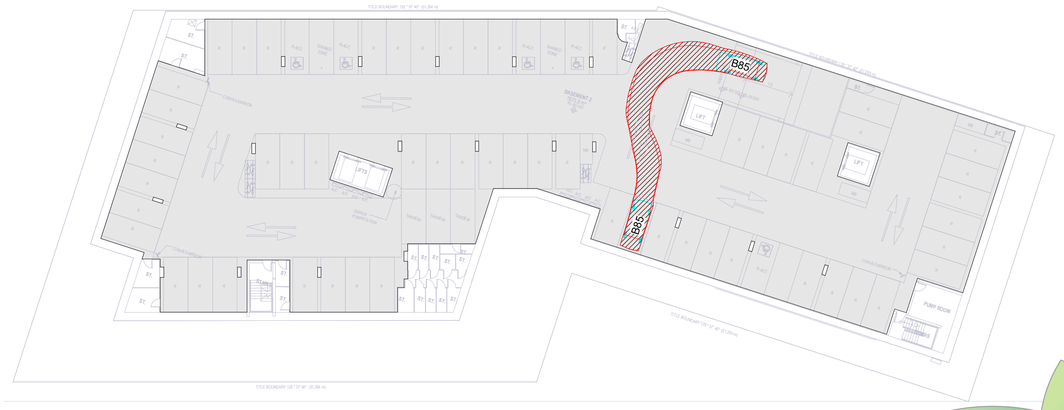
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BASEMENT 2 - B85 EXIT 14
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BASEMENT 2 - B85 ENTRY 15
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 15
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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

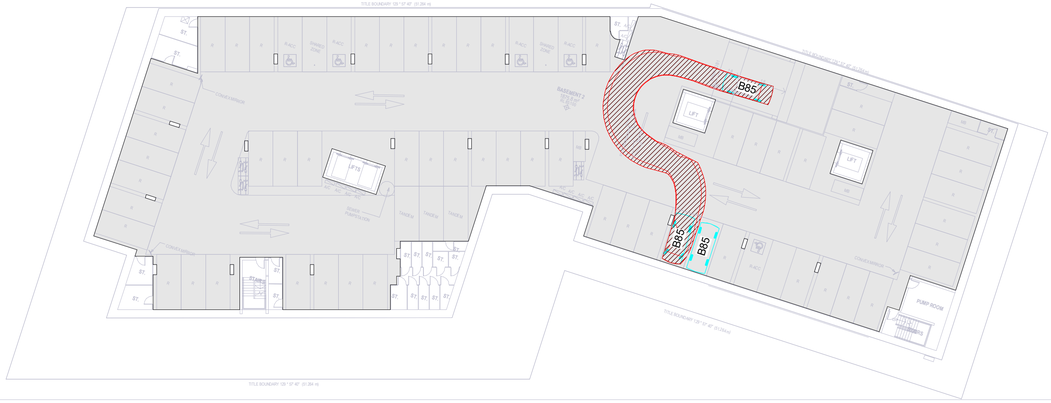
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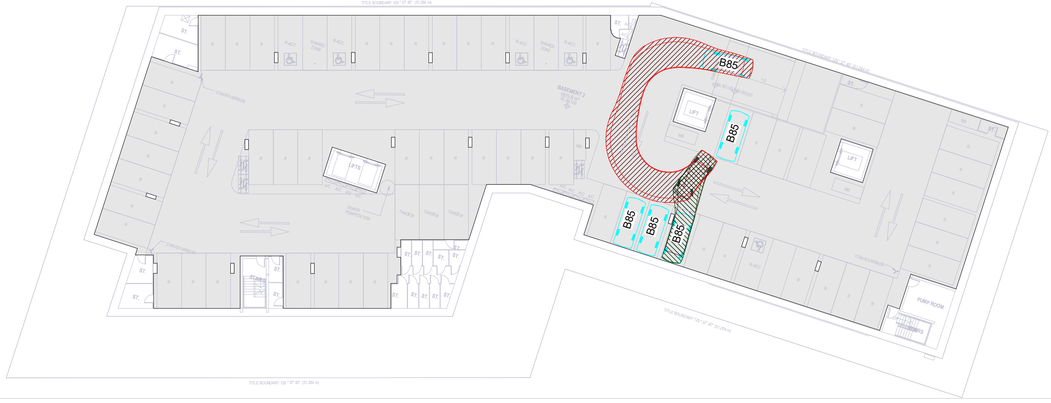
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BASEMENT 2 TURNING PATHS SHEET 5

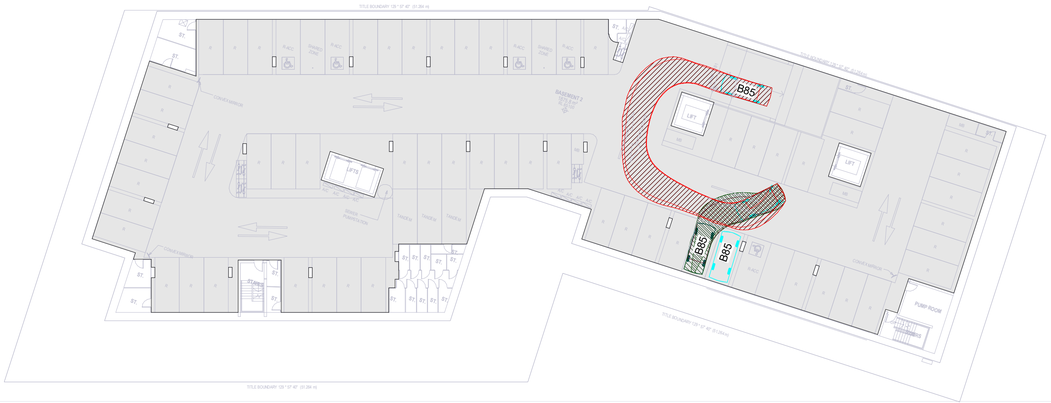
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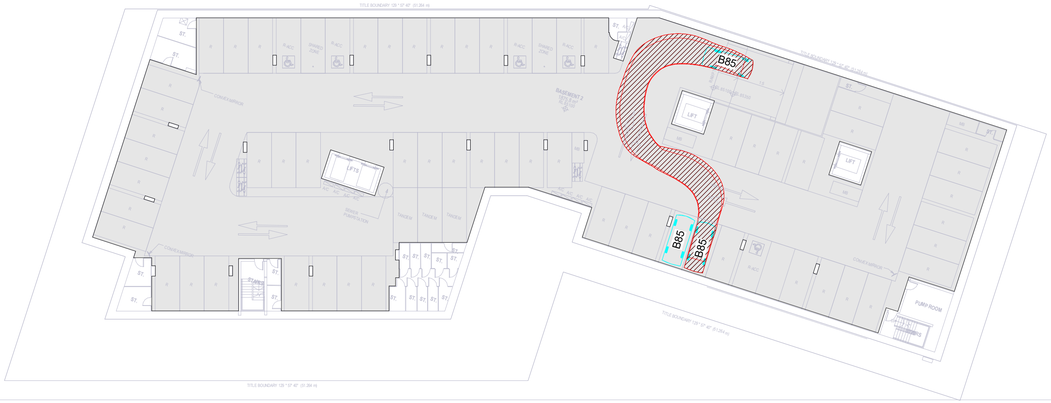
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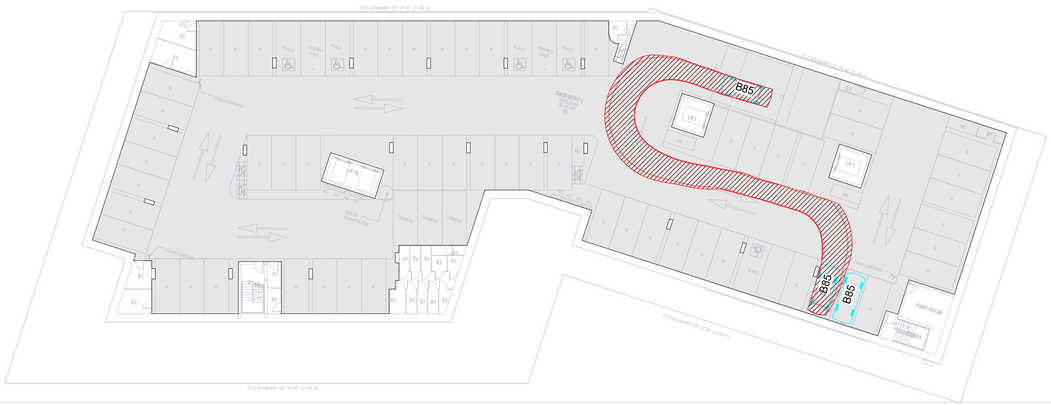
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BASEMENT 2 - B85 ENTRY 17
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BASEMENT 2 - B85 EXIT 17
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 18
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BASEMENT 2 - B85 EXIT 18
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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

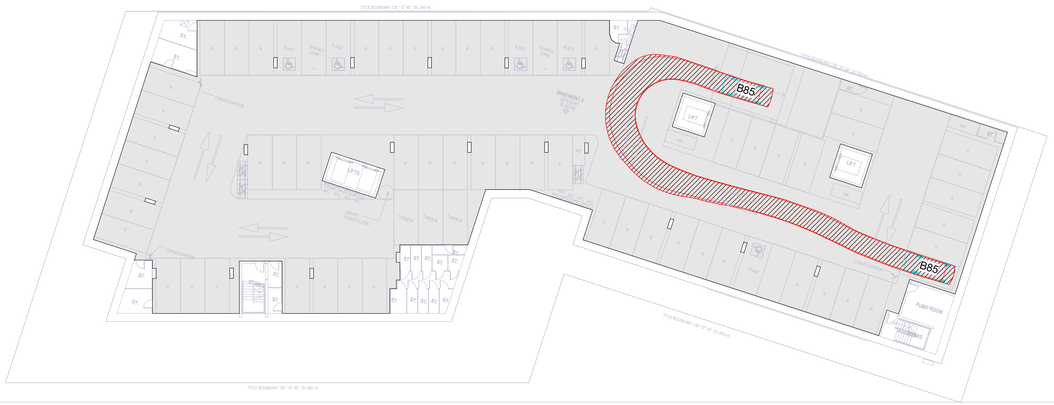
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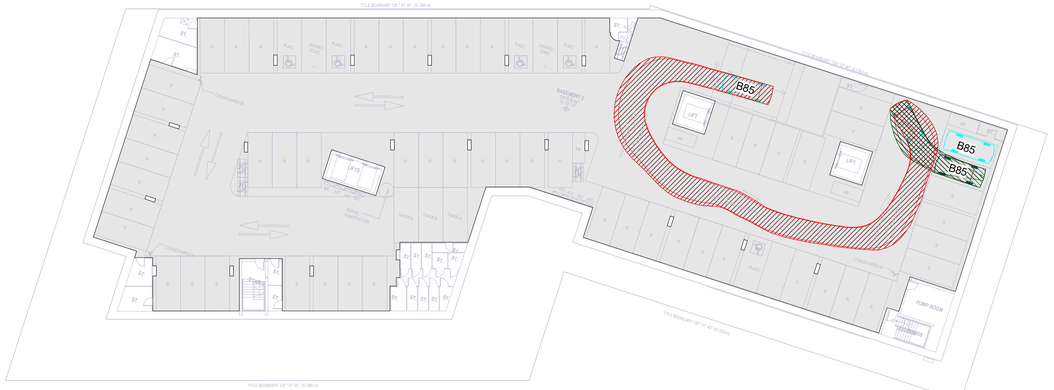
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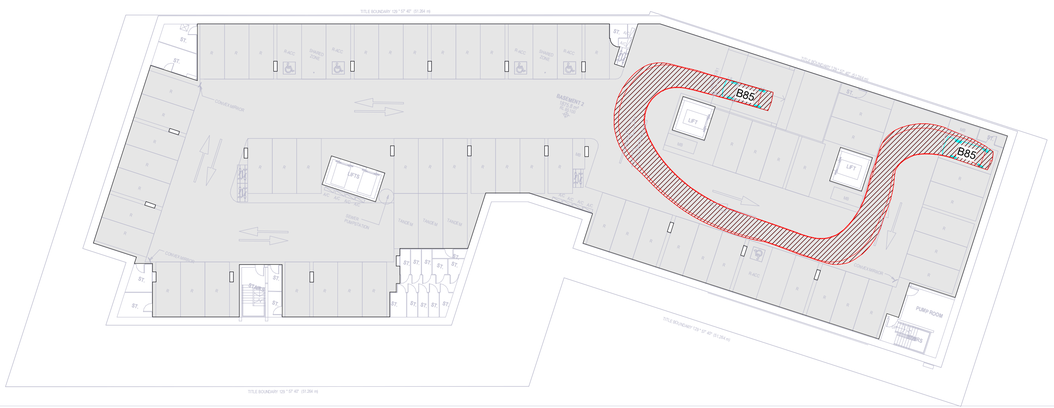
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BASEMENT 2 - B85 ENTRY 20
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 20
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 21
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PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

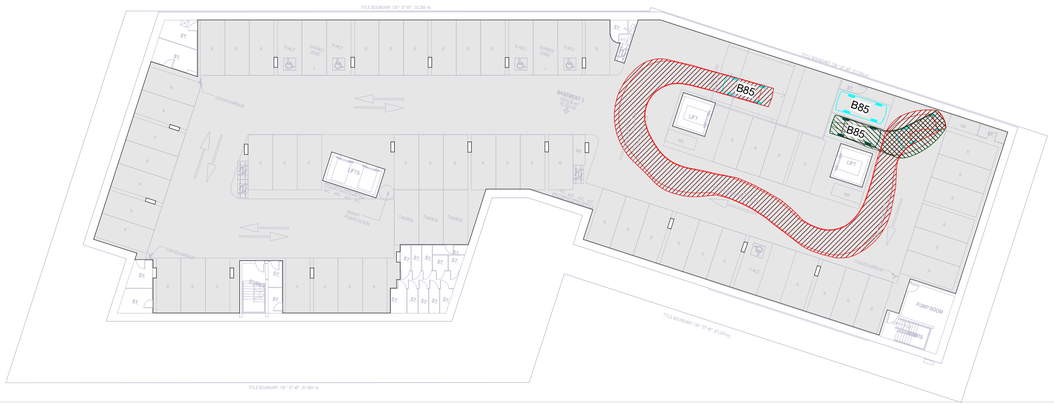
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CIVIL DESIGN

BASEMENT 2 TURNING PATHS SHEET 7

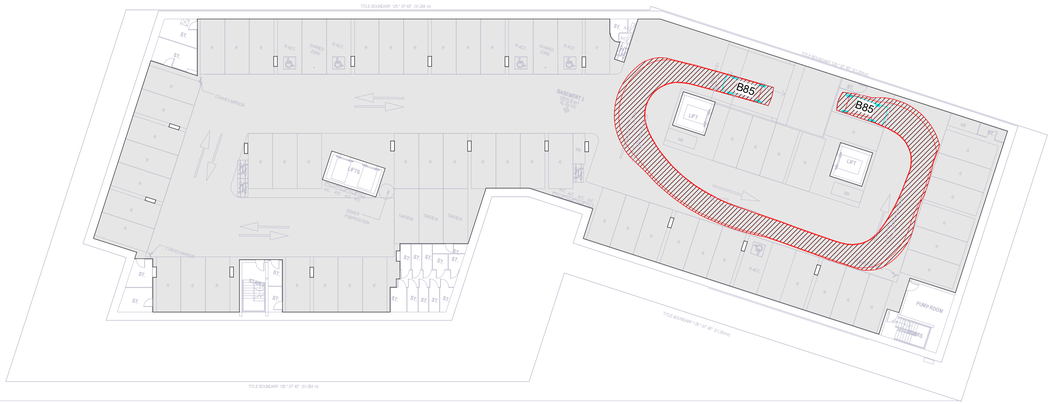
210223
DA
C24 4



BASEMENT 2 - B85 ENTRY 22
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 22
Scale: 1 : 300



BASEMENT 2 - B85 ENTRY 23
Scale: 1 : 300



BASEMENT 2 - B85 EXIT 23
Scale: 1 : 300

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REV.	DATE	BY	DESCRIPTION
1	27.05.22	JPS	ISSUED FOR REVIEW

PROPOSED DEVELOPMENT

1 Gatacre Av, Lane Cove, NSW

WINIM Developments Pty Ltd

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DESIGN: RC | DRAWN: LAS | CHECKED: AMcK | SIZE: A1 | SCALE: 1 : 300

CIVIL DESIGN

BASEMENT 2 TURNING PATHS SHEET 8

210223
DA
C25 1

Architecture
Urban Design
Interiors

rothelowman

03.06.2022

Brisbane
Gold Coast
Melbourne
Sydney
rothelowman.com.au

1 Gatacre Avenue and 1-5 Allison Avenue
Lane Cove NSW
Section 34 - Amendments

Schedule of Amendments

Drawing Number	Drawing Title	Modifications
TP00.00	Cover Sheet	1. Drawing list amended with additional drawings 2. Façade render updated to reflect amended design
TP00.01	Development Summary	1. Residential, parking, circulation/services and terrace areas adjusted as a result of building footprint changes 2. Unit mix adjusted as a result of building area changes – number of 1, 2, 3, 4 and 5 bedroom units amended 3. GFA adjusted as a result of building footprint changes – GFA reduced 4. Car park numbers and allocations adjusted to suit new unit mix 5. Unit and terrace areas adjusted as a result of building footprint changes
TP00.02	Site Plan	1. Building footprint amended to reflect plan changes noted below
TP00.03	Survey	1. No change
TP00.04	Demolition Plan	1. No change
TP00.05	Excavation and Fill plan	1. Basement extent and levels amended to reflect basement changes noted below
TP01.01	Basement 2	1. Basement footprint adjusted and parking moved accordingly 2. Southern setback towards Allison Avenue increased from1m to 3m 3. Southern setback towards Gatacre Avenue increased from 3m to 6m 4. Eastern setback increased to 3m

Principals
Shane Rothe, Kim Lowman,
Nigel Hobart, Chris Hayton,
Stuart Marsland, Jeff Brown,
Jonothan Cowle, Chris Exner
Duncan Betts, Ben Pomroy

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		5. Western setback increased to 3m 6. Northern setback reduced 7. Eastern lift cores moved north 8. Egress stairs relocated to suit new basement exit strategy 9. Basement entry ramp moved to northern boundary 10. Storage allocations and services adjusted – locations amended to suit new layout
TP01.02	Basement 1	1. Basement footprint adjusted and parking moved accordingly 2. Southern setback towards Allison Avenue increased from1m to 3m 3. Southern setback towards Gatacre Avenue increased from 3m to 6m 4. Eastern setback increased to 3m 5. Western setback increased to 3m 6. Northern setback reduced 7. Eastern lift cores moved north 8. Egress stairs relocated to suit new basement exit strategy 9. Basement entry ramp moved to northern boundary 10. Storage allocations and services adjusted – locations amended to suit new layout
TP01.03	Ground	1. Basement entry ramp moved to northern boundary 2. Gatacre Avenue setback increased to 4.5m to northern half of site and 7.5m to southern half 3. Southern setback reduced to 6m to building line 4. Allison Avenue setback increased to 6m 5. Unit layouts amended as a result of setback changes 6. Two storey units introduced to manage overlooking to neighbouring houses 7. Gatacre Avenue lobby relocated to accommodate new egress stair location 8. Allison Avenue lobby entry relocated to accommodate new basement ramp location

		9. Profile of northern walls adjusted to increase aspect and daylight to units
TP01.04	Level 1	1. Gatacre Avenue setback increased to 4.5m to northern half of site and 7.5m to southern half 2. Southern setback reduced to 6m 3. Allison Avenue setback increased to 6m 4. Unit layouts amended as a result of setback changes 5. Two storey units introduced to manage overlooking to neighbouring houses – balconies & living rooms removed from Level 1 where facing southern boundary 6. Profile of northern walls adjusted to increase aspect and daylight to units 7. Window added to common corridors to provide natural light and ventilation 8. Landscaped enclosure and egress paths added over basement entry ramp
TP01.05	Level 2	1. Gatacre Avenue setback increased to 4.5m to northern half of site and 7.5m to southern half 2. Allison Avenue setback increased to 6m 3. Southern setback increased to 9m 4. Landscaping added over the level 1 units 5. Profile of northern walls adjusted to increase aspect and daylight to units 6. Window added to common corridors to provide natural light and ventilation 7. Unit layouts amended as a result of setback changes
TP01.06	Level 3	1. Drawing added 2. Gatacre Avenue setback increased to 4.5m to northern half of site and 7.5m to southern half 3. Allison Avenue setback increased to 6m 4. Southern setback increased to 9m 5. Profile of northern walls adjusted to increase aspect and daylight to units 6. Window added to common corridors to provide natural light and ventilation 7. Unit layouts amended as a result of setback changes

TP01.07	Level 4	1. Gatacre Avenue setback increased to 4.5m to northern half of site and 7.5m to southern half 2. Allison Avenue setback increased to 6m 3. Southern setback increased to 12m 4. Landscaping added over the level 3 units 5. Profile of northern walls adjusted to increase aspect and daylight to units 6. Skylight and windows added to common corridors to provide natural light and ventilation 7. Unit layouts amended as a result of setback changes
TP01.08	Level 5	1. Gatacre Avenue setback increased to 4.5m to 2. Communal open space adjusted as a result of setback changes below 3. North facing balconies provided with screnning 4. Habitable floor area amended so 2700H ceiling is below the height plane
TP01.09	Roof	1. Roof slabs adjusted as a result of setback changes below
TP02.01	East & West Elevation	1. Building form and windows amended to suit plan changes
TP02.02	North & South Elevation	1. Building form and windows amended to suit plan changes
TP03.01	Sections	1. Building form amended to suit plan changes
TP03.02	Sections 2	1. Building form amended to suit plan changes
TP03.03	Sections 3	1. Drawing added
TP03.04	Sections 4	1. Drawing added 2. Basement setbacks and driveway locations adjusted 3. Southern setbacks adjusted 4. Landscaping added of ground floor and Level 3 units
TP03.05	Sections 5	1. Drawing added
TP04.01	GFA	1. GFA reduced in accordance with adjusted areas

TP04.02	SEPP65	1. Compliant units adjusted 2. Additional data provided about units that had achieved solar compliance with MPRs
TP04.03	Height Plane	1. Building form amended to reflect changes noted above
TP04.04	Solar POV	1. Drawing removed – replaced with TP06 series
TP04.05	Solar POV 2	1. Drawing removed – replaced with TP06 series
TP04.06	Solar POV 3	1. Drawing removed – replaced with TP06 series
TP04.08	Shadow Diagrams	1. Building form amended to reflect changes noted above
TP04.09	Deep Soil, Communal Open Space	1. Deep soil and COS areas adjusted to suit new basement layout and setbacks
TP04.10	Landscaped Area	1. Landscape areas adjusted to suit new ground floor layout, terraced units and amended roof top design
TP04.12	Storage Plans and Schedule	1. Unit layouts and storage allocations amended to reflect changes noted above
TP04.13	Basix	1. Basix commitments amended to reflect changes noted above
TP04.20	Adaptable Plans	1. Adaptable and LHA layouts amended to suit new unit plans
TP04.21	Adaptable Plans	1. Adaptable and LHA layouts amended to suit new unit plans
TP04.22	Adaptable Plans	1. Adaptable and LHA layouts amended to suit new unit plans
TP05.02	Notification Plans	1. Drawings amended to reflect changes noted above
TP06.01	Sun View – 9am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.02	Sun View – 9:15am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image

		3. Comparison outlines added to show existing and DCP compliant shadows
TP06.03	Sun View – 9:30am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.04	Sun View – 9:45am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.05	Sun View – 10am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.06	Sun View – 10:15am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.07	Sun View – 10:30am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.08	Sun View – 10:45am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.09	Sun View – 11am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.10	Sun View – 11:15am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows

TP06.11	Sun View – 11:30am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.12	Sun View – 11:45am	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.13	Sun View – 12pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.14	Sun View – 12:15pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.15	Sun View – 12:30pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.16	Sun View – 12:45pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.17	Sun View – 1pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.18	Sun View – 1:15pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.19	Sun View – 1:30pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image

		3. Comparison outlines added to show existing and DCP compliant shadows
TP06.20	Sun View – 1:45pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.21	Sun View – 2pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.22	Sun View – 2:15pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.23	Sun View – 2:30pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.24	Sun View – 2:45pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows
TP06.25	Sun View – 3pm	1. Built form adjusted to reflect setback changes 2. Neighbouring context added to image 3. Comparison outlines added to show existing and DCP compliant shadows