

Wollongong Local Planning Panel Assessment Report | 13 February 2018

WLPP No.	Item No. 1
DA No.	DA-2018/1192
Proposal	Residential - demolition of existing structures, tree removals and construction of multi dwelling housing - five (5) townhouses.
Property	28 George Street, THIRROUL NSW 2515 Lot 28 DP 1099628
Applicant	Mr Marko Lisica
Responsible Team	Development Assessment and Certification – City Wide Planning Team (MB)

ASSESSMENT REPORT AND RECOMMENDATION

Executive Summary

Reason for consideration by Wollongong Local Planning Panel - Determination

The proposal has been referred to the Wollongong Local Planning Panel **for determination** pursuant to Section 2(b) of Schedule 2 of the Local Planning Panels Direction of 1 March 2018, as the application is the subject of 10 or more unique submissions by way of objection.

Proposal

The proposal seeks consent for the demolition of the existing dwelling/structures and the construction of five townhouses with tree removal.

Permissibility

The proposed demolition and construction of multi dwelling housing is permissible in the R2 Low Density Residential zone of the Wollongong Local Environmental Plan (WLEP) 2009.

Consultation

The proposal was notified in accordance with Council's Notification Policy and 31 submissions by way of objection were received, including a community submission. These related to a variety of matters and discussed at Section 1.5.

Council's Traffic, Stormwater, Landscape and Community Safety officers have reviewed the application submission and provided satisfactory referral comments. Conditions of consent were recommended in each instance.

Main Issues

Amendments were made to the original design including a reduction in the number of bedrooms, changes to windows, upper and lower floor layouts and façade treatment. This was to improve the scale of the proposal, address traffic matters, and improve outcomes in relation to landscaping and amenity. These issues are considered to have been satisfactorily addressed.

A DCP variation for a 394mm encroachment into the front setback for visitor parking has been sought, which can be supported in this instance as outlined in the body of the report.

Likely impacts

There are not expected to be adverse environmental impacts on either the natural or built environments or adverse social or economic impacts in the locality.

RECOMMENDATION

Development Application DA-2018/1192 be **approved** subject to the conditions contained in **Attachment 3**.

1 APPLICATION OVERVIEW

1.1 PLANNING CONTROLS

The following planning controls apply to the proposal:

State Environmental Planning Policies:

- SEPP No. 55 – Remediation of Land
- SEPP (Vegetation in Non-Rural Areas) 2017
- SEPP (Building Sustainability Index: BASIX) 2004

Local Environmental Planning Policies:

- Wollongong Local Environmental Plan (WLEP) 2009

Development Control Plans:

- Wollongong Development Control Plan (WDCP) 2009

Other policies

- Wollongong City Wide Development Contributions Plan 2018

The proposal is satisfactory with regard to the applicable planning controls as discussed in the body of this report.

1.2 DETAILED DESCRIPTION OF PROPOSAL

The proposal comprises the demolition of the existing dwelling and structures, and the construction of a multi-dwelling development being five (5) townhouses. Tree removal is also proposed.

Each townhouse comprises of a living area at ground level with access to both private open space and parking. On the upper level each unit comprises of two bedrooms, bathroom, ensuite, family room, dining and kitchen areas. The entrance to Unit 1 faces George Street. It also has a balcony off the main living area orientated toward the street.

The proposed development will use a modern cladding system incorporating neutral colours to external walls and the roof. The roof will be finished in colorbond.

Each unit has parking for two cars. Unit 1 has a single garage and a car space. Units 2 to 5 have double garages. A visitor space is provided at the front of the building under Unit 1 and beside the open car space for Unit 1.

The site has a 4.5 metre fall from the rear boundary to the George Street frontage. The units will be stepped down the slope to minimise excavation. The deep soil zone is positioned across the rear of the site. The boundaries with adjoining properties will be landscaped on each side to provide privacy and amenity. Both current driveways on site will be demolished and a driveway will be constructed in a similar location to the existing driveway on the eastern side of the property.

Three trees are located on site and require removal as they are within the proposed building footprint.



Figure 1: Streetscape view of the proposal superimposed over the existing dwelling on site

1.3 BACKGROUND

The development history of the site is as follows:

Application No	Description	Date	Decision
PL-2018/82	Demolition of existing dwelling / structures and proposed multi dwelling development (5 x units)	28/5/2018	Completed
TMO-2010/1677	Remove one tree	17/11/2010	Refused
BA-1969/1230	Garage	8/7/1969	Approved
BA-1977/1254	Addition and garage	23/6/1977	Approved

A pre-lodgement meeting was held 23 May 2018 for a similar proposal. The following advice in summary was provided.

Five units with stacked parking arrangements (for four of the units) are proposed for the site, which is considered an overdevelopment with limited amenity outcomes for future occupants. This arrangement is not supported for new development. Parking should be provided in a double garage. The applicant should consider a smaller development as a more reasonable opportunity for the subject site and in doing so will negate the likely variation requests to Council's controls which are unlikely to be supported.

Customer service actions:

There are no outstanding customer service requests of relevance to the subject property.

Application history:

The subject development application was lodged on 21 September 2018 and notified from 4 October – 24 October 2018. The proposed development was considered overdevelopment of the site and the applicant was provided with an opportunity to withdraw the application or redesign to address both planning matters raised and those raised by Council's Traffic, Stormwater, and Landscaping referral groups. The applicant redesigned the proposal and resubmitted plans and documentation. Units 2 to 5 have been reduced in size and comprise of two bedrooms with no upper balconies and double compliant garages for each.

Following the submission of further amended plans and additional information, the proposal was referred again for comment/conditions. Following review of the additional information, no concerns were raised by referral groups. The application seeks a variation for a 394mm encroachment into the front setback for the visitor car space. The proposal is otherwise compliant with Council's Development Control Plan.

This report has been prepared following review of the most recent additional information submission.

1.4 SITE DESCRIPTION

The site is located at 28 George Street, THIRROUL NSW 2515 Lot 28 DP 1099628. The regular 1054m² site has a primary frontage to George Street. The site falls 4.5 metres from the rear boundary to the George Street frontage.

Single residential dwellings are located on adjacent sites to the west and north. A dual occupancy development is located to the east. The subject site contains an existing dwelling and a garage at the rear on the eastern side of the property. There are two mature trees and one large shrub growing near the western boundary of the site. There is one street tree located at the front of the property and seven trees / large shrubs growing on neighbouring properties.

Surrounding development consists of one and two storey residential development. The street trees frame and screen many of the properties along this stretch of George Street softening the environment and providing character. Kelton Lane is located directly across the street.

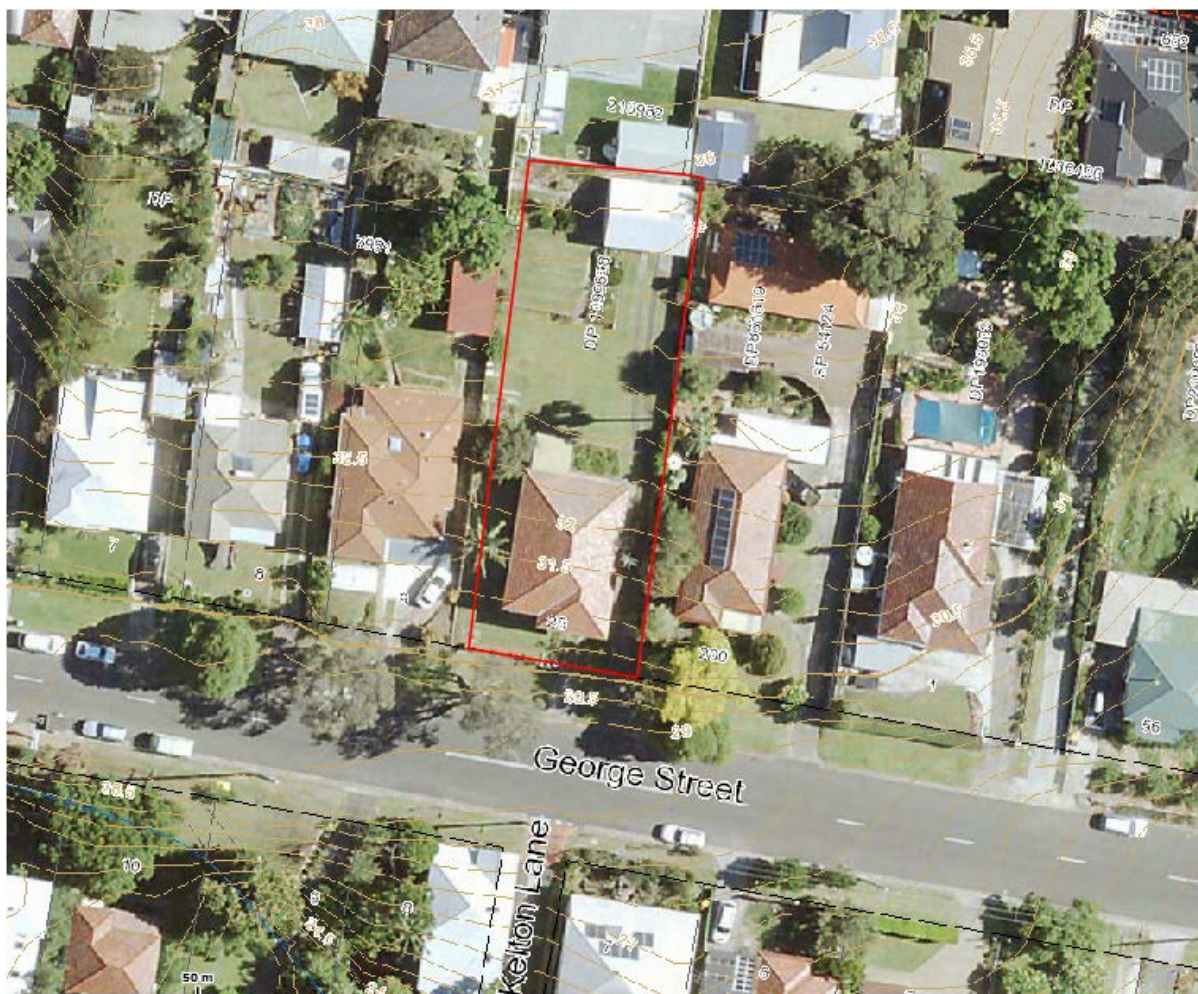


Figure 2: Aerial view (2016)

Property constraints

There are no constraints identified on site that would preclude the proposed development.

1.5 SUBMISSIONS

Details of the proposal were notified in accordance with Council's Notification Policy. The application received 31 submissions including a community submission. The issues raised in the submissions are summarised below:

Table 1: Submissions

Concern	Comment
1. Overdevelopment of Thirroul <ul style="list-style-type: none"> Ongoing development in Thirroul is unsustainable Medium density housing Thirroul not suited to medium density housing Existing traffic problems in Thirroul 	<p>Restricting development in Thirroul and existing traffic problems are wider strategic matters outside the scope of the current DA. The proposal is permissible on the land under the Wollongong Local Environmental Plan 2009 (WLEP).</p> <p>The proposed multi-dwelling housing development is permissible in the R2 Low Density Residential zone and complies with maximum floor space ratio and height as required under WLEP 2009.</p>
2. Overdevelopment of the site:	<p>The proposal is not considered to be an overdevelopment of the site. The proposal has been</p>

Concern	Comment
<ul style="list-style-type: none"> • Inappropriate scale/density of the development – five dwellings is excessive\ • FSR • traffic and environmental impacts • greed • adverse health impacts • old mine 	<p>redesigned and is fully compliant with WLEP 2009. It also complies with Council's Development Control Plan 2009 (WDCP) in relation to height, building setbacks, parking, manoeuvring and landscaping provisions required for such a proposal. The proposal does involve one minor variation to the requirements of the WDCP as related to a maximum 394mm encroachment of the visitor space into the front setback; however, the space is behind screening and the variation has been considered and is supported. The development is stepped in line with the slope of the land and minor excavation is required, which is considered to be acceptable.</p> <p>Monetary and health impacts raised are noted.</p>
<p>3. Out of character for the street:</p> <ul style="list-style-type: none"> • Area is characterised by single dwellings • Design and proximity to neighbour 	<p>The proposal has been redesigned. A contemporary design is proposed; however, as this is not a conservation area, the contemporary form is acceptable taking into account compliant height, number of storeys, floor space ratio, and required setbacks (front, rear, side) to the building.</p> <p>On balance, the proposal is considered not unreasonable development in relation to character as outlined at Section 2.3.1.</p>
<p>4. Amenity impacts to neighbouring properties:</p> <ul style="list-style-type: none"> • Overshadowing • Privacy • Loss of views • Noise 	<p>The proposal was redesigned to address issues raised and to achieve compliance with the WLEP and WDCP. The proposal as amended is considered to have minimal impact on the amenity of neighbouring properties.</p> <p>The submitted shadow diagrams demonstrate compliance with Council's solar access requirements to neighbouring properties. The neighbouring properties would retain the minimum 3 hours of solar access to their living rooms and 50% of their private open space in mid-winter.</p> <p>The proposal has been designed to minimise overlooking to the side boundary through the use of long narrow bench height kitchen windows. No balconies are proposed on upper levels for units 2 to 5. Unit 1 balcony overlooks George Street and the driveway.</p> <p>Noise is not expected to be generated above normal domestic levels.</p>
<p>5. Traffic and parking:</p> <ul style="list-style-type: none"> • Local road network is already over capacity • Number of vehicles required 	<p>The proposal was redesigned to address issues raised and to achieve compliance.</p> <p>Council's Traffic Officer is satisfied that traffic and car parking demand generated by the proposed development is unlikely to impact on the local road</p>

Concern	Comment
<p>under DCP. Number likely to occupy the site.</p> <ul style="list-style-type: none"> Will pose safety risk to pedestrians Opposite a laneway with limited sightlines due to topography Safety, ingress and egress Stacked parking not appropriate No footpaths or lighting. More cars will park on the street. 	<p>network.</p> <p>The proposal complies with Council's parking requirements.</p> <p>Stacked parking arrangement has been removed and manoeuvring has been re-designed to provide forward egress from the site.</p> <p>Council's Traffic Officer is satisfied that the location of the driveway in the similar location as the existing driveway/crossover is satisfactory in relation to Kelton Lane.</p>
6. Stormwater drainage concerns	Council's Development Engineering Officer has reviewed the application and provided conditionally satisfactory referral advice in relation to stormwater matters.
7. Waste servicing	Council waste servicing has been assessed and is satisfactory.
8. Inconsistent with requirements of Council's DCP and WLEP 2009	<p>The proposal was redesigned to address issues raised and to achieve compliancy with the WLEP and WDCP.</p> <p>The proposal is fully compliant with WLEP 2009. The proposal has been assessed under the DCP and but for one minor variation the proposal is compliant. See Section 2.3.1. Council referral groups have provided satisfactory referral advice.</p>
9. Landscaping requirements, tree removal, impacts on fauna and flora	Council's Landscape Officer is satisfied with the amendments made to the design of landscaping to meet requirements and conditionally satisfactory referral advice has been received.

Frequency of Issues Raised:

Issue No.	1	2	3	4	5	6	7	8	9
Frequency	6	12	15	14	22	5	3	11	6

Some of the issues identified in submissions received whilst technically unresolved are considered to have been adequately addressed by way of design changes or conditions of consent. The applicant has provided detailed justification for a variation to Chapter B1 of WDCP 2009 as relates to clause 5.7.2.1 which was considered, and is capable of support.

1.6 CONSULTATION

1.6.1 INTERNAL CONSULTATION

Council's Traffic, Stormwater and Landscape and Community Safety officers have reviewed the application submission and provided satisfactory referral comments. Conditions of consent were recommended in each instance.

1.6.1 EXTERNAL CONSULTATION

None required.

2 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 – 4.15 EVALUATION

2.1 SECTION 4.15(1)(A)(1) ANY ENVIRONMENTAL PLANNING INSTRUMENT

2.1.1 STATE ENVIRONMENTAL PLANNING POLICY NO. 55 – REMEDIATION OF LAND

7 Contamination and remediation to be considered in determining development application

- (1) *A consent authority must not consent to the carrying out of any development on land unless:*
- (a) it has considered whether the land is contaminated, and*
 - (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
 - (c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

A review of Council records does not indicate any previous historic use that would contribute to the contamination of the site. The land has only been used for residential purposes and does not propose a change of use. No concerns are raised in regard to contamination as relates to the intended use of the land and the requirements of clause 7.

2.1.2 STATE ENVIRONMENTAL PLANNING POLICY (VEGETATION IN NON-RURAL AREAS) 2017

Under Clause 7 of State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 a person must not clear any vegetation in any non-rural area of the State to which Part 3 applies without the authority conferred by a permit granted by the council under that Part.

Clause 9 of Part 3 indicates that this Part applies to vegetation in any non-rural area of the State that is declared by a development control plan to be vegetation to which this Part applies.

The subject site is zoned R2 Low Density Residential, a non-rural area. It is considered that the vegetation proposed to be removed is vegetation declared by a development control plan, WDCP 2009 Chapter E17 Preservation and Management of Trees and Vegetation, to which Part 9 would apply. An Arborist Report prepared by Mark Spence dated November 2018 outlines the trees to be removed and retained as follows:

A total of eleven trees were inspected at 28 George Street. One of these trees is a street tree and seven others are located on neighbouring properties.

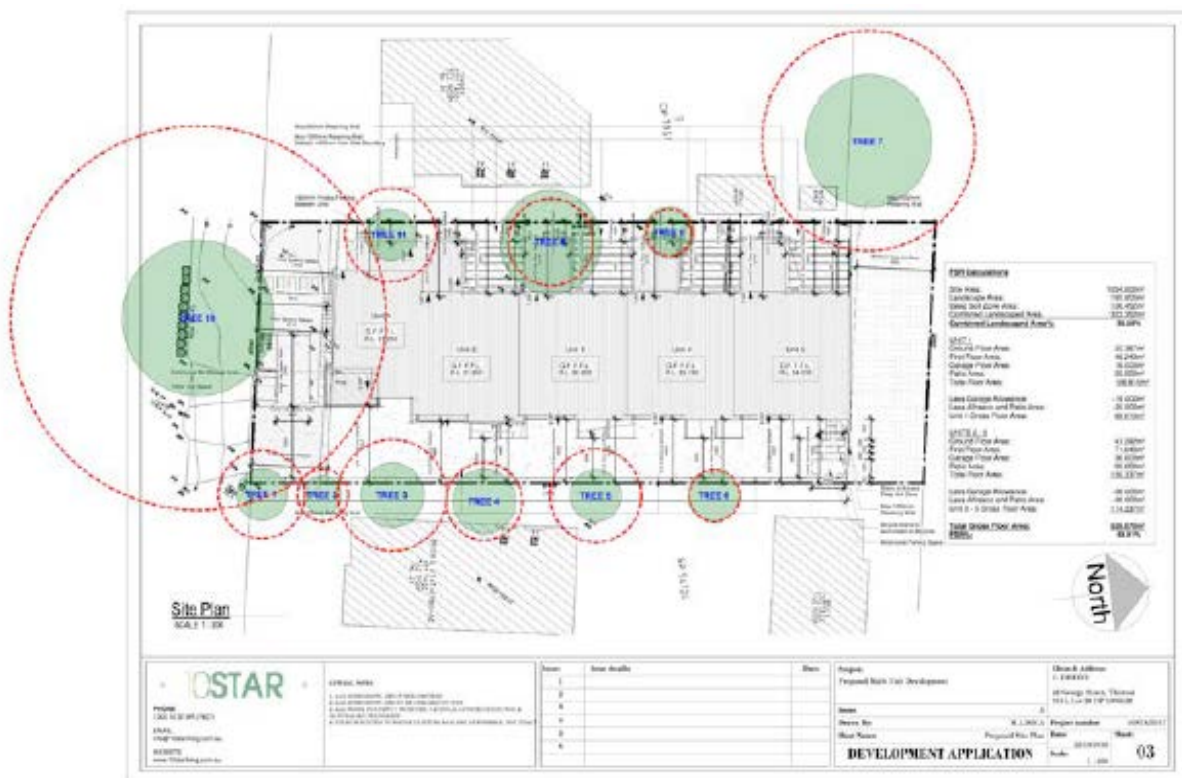


Figure 3: Trees identified in Arborist Report (Prepared by Mark Spence dated November 2018)

Trees to be retained

Trees 1, 2, 3, 4, 5 & 6 on the eastern neighbour's property should be retained and protected. For the purpose of tree protection, the eastern boundary fence should be used to form the TPZ for these trees. Tree 7 on the eastern neighbour's property should be retained and protected.

For the purpose of tree protection, the western boundary fence should be used to form the TPZ for this tree. Tree 10 is the street tree located on George Street. This tree is located well away from the building zone. Nonetheless, it is worthy of protection. A tree protection zone should be established around this tree. Given the tree's location on the grassed verge, it will not be possible to establish a full TPZ of 14.8m. A smaller TPZ that will allow pedestrian traffic to pass this tree is preferred.

Trees nominated for removal

Trees nominated for removal are: Trees 8, 9 & 11. Each of these trees will be adversely affected by the proposed building footprint.

Council's Landscape Officer has reviewed the application submission. Conditionally satisfactory referral advice was received, and conditions specify trees to be removed, trees to be retained, tree protection and management and compensatory plantings.

2.1.3 STATE ENVIRONMENTAL PLANNING POLICY (BUILDING SUSTAINABILITY INDEX: BASIX) 2004

The proposal is BASIX affected development to which this policy applies. In accordance with Schedule 1, Part 1, 2A of the Environmental Planning and Assessment Regulation 2000, a BASIX Certificate has been submitted in support of the application demonstrating that the proposed scheme achieves the BASIX targets.

The BASIX certificate was issued no earlier than 3 months before the date on which the development application was lodged.

Part 2 Permitted or prohibited development

Clause 2.2 – zoning of land to which Plan applies

The zoning map identifies the land as being zoned R2 Low Density Residential, as shown in Figure 4.

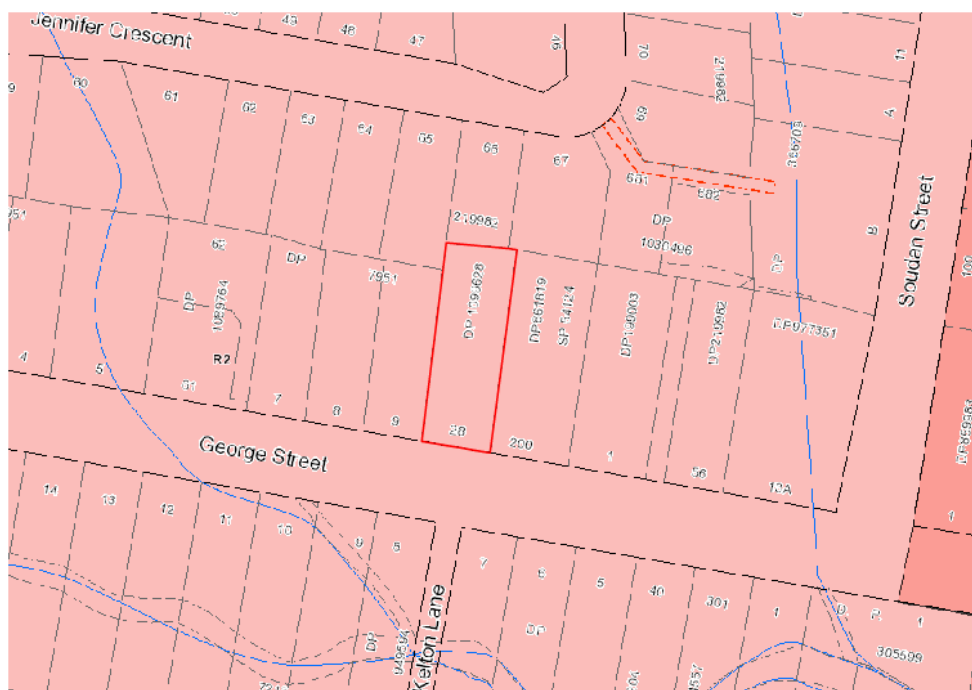


Figure 4: WLEP 2009 zoning map

Clause 2.3 – Zone objectives and land use table

The objectives of the zone are as follows:

- *To provide for the housing needs of the community within a low density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*

The proposal is considered satisfactory with regard to the above objectives as it would provide for additional housing opportunities.

The land use table permits the following uses in the zone.

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Boat launching ramps; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Environmental facilities; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Hospitals; Hostels; Information and education facilities; Jetties; Multi dwelling housing; Neighbourhood shops; Places of public worship; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Signage; Veterinary hospitals

The proposal is categorised as a **Multi dwelling housing** as defined below and is permissible in the zone with development consent.

Clause 1.4 Definitions

Multi dwelling housing means 3 or more dwellings (whether attached or detached) on one lot of land, each with access at ground level, but does not include a residential flat building.

Clause 2.6 Subdivision – consent requirements

Subdivision is not sought as part of this application.

Clause 2.7 Demolition requires development consent

Consent for the demolition of the existing dwelling house (Figure 4), rear garage, driveways/structures are sought as part of the subject application.

Part 4 Principal development standards

Clause 4.3 Height of buildings

The proposed building height of 6.83 metres does not exceed the 9 metre maximum permitted for the site

Clause 4.4 Floor space ratio

Maximum FSR permitted for the zone:	0.5:1	
Site area:	1054 m ²	
	GFA	525.96 m ²
FSR:	1054/525.96 m ² = 0.499:1	

The proposal is compliant.

Unit	Upper Floor GFA	Ground Floor GFA	Total GFA
One	72.08	13.68	85.76
Two to Five	88.05	22.0	110.05 x 5
			525.96

Clause 4.6 Exceptions to development standards

None proposed.

Part 7 Local provisions – general

Clause 7.1 Public utility infrastructure

The existing site is serviced by electricity, water and sewage services.

Clause 7.6 Earthworks

The proposal comprises minor earthworks. Conditions are recommended in this regard.

Clause 7.14 Minimum site width

The site has a dimension of greater than 18 metres (20 115m), meeting the requirements of this clause.

2.2 SECTION 4.15(1)(A)(II) ANY PROPOSED INSTRUMENT

None applicable.

2.3 SECTION 4.15(1)(A)(III) ANY DEVELOPMENT CONTROL PLAN

2.3.1 WOLLONGONG DEVELOPMENT CONTROL PLAN 2009

CHAPTER A1 – INTRODUCTION

8 Variations to development controls in the DCP

A Variation Statement (**Attachment 2**) was submitted by the applicant. The variation is sought as follows:

5.7 Car Parking Requirements

5.7.2.1. - *On site car parking must be positioned to minimise impacts on the streetscape. Car parking must be located behind the building setback and be screened from view with well-designed structures and vegetation. Car parking may also be located within a basement.*

Variation Request

The proposed development seeks a variation as the visitor spot slightly encroaches into the front setback by a max of 394mm.

- The proposed variation has no negative impact to the occupants, neighbouring dwellings, streetscape or manoeuvrability on site.
- The slight variation is considered only minor given that it only encroaches a maximum of 394mm and tapers down to 142mm encroachment. Given the overall size of the visitor spot the encroachment is only 0.09% of the total size, which is considered to need a variation.
- The visitor spot is located behind privacy slats, which screen the visitor open car space and Unit 1 open car space from the streetscape and neighbouring dwellings. Therefore, the encroachment will not be seen or affect the façade or the look of the building.
- Manoeuvring will not be affected by the encroachment and it will have no effect on the occupants on the site.

5.7.1 Objectives

(a) To provide an adequate level of onsite car parking based upon anticipated occupancy rates and proximity to public transport.

The proposed development provides the required number of car spaces as set out by Wollongong City Council. The variation has no impact on the number of car spaces within the site.

(b) To ensure that there is adequate provision for access to and manoeuvring within the development.

The proposed development provides the adequate manoeuvrability and access within the site. The variation has no impact on the access or the manoeuvrability within the site.

(c) To ensure that residential developments are designed to be accessible for pedestrians, cyclists and motorists.

The proposed development provides the adequate access for pedestrians, cyclists and motorists. The visitor spot is located just behind the front building line which is the most ideal spot for visitors that come to the site, as this space is the first to be seen and visitor may see whether the space is free or not without disrupting the occupants. The variation has no impact on the accessibility for pedestrians, cyclists and motorists.

(d) To ensure that integrated design of car parking facilities to minimise visual impacts.

The proposed development provides privacy screening along the entire car space length minimising visual impacts to the occupants, streetscape and neighbouring dwellings. The variation has no impact on the minimising visual impacts of parking.

(e) To ensure the provision of facilities such as bike racks, which encourage the use of alternative methods of transport.

The proposed development provides bicycle storage for each of the residents with sufficient area located under the stairs to store bicycles. Motorcyclists parking is also provided on site and all parking requirements set out by Wollongong City Council have been met. The variation has no impact on the alternative methods of parking or transport.

Planner's Comment

The visitor car space slightly encroaches over the front building line by a maximum of 394mm and is screened by privacy slats. The proposal is considered to be consistent with the objectives of the clause. The variation has been considered and may be supported for the reasons provided by the applicant.

CHAPTER A2 – ECOLOGICALLY SUSTAINABLE DEVELOPMENT

Development controls to improve the sustainability of development throughout Wollongong are integrated into the relevant chapters of this DCP.

Generally speaking, the proposal is considered to be consistent with the principles of Ecologically Sustainable Development as a BASIX certificate has been submitted detailing the energy and water saving targets that will be implemented in the development.

CHAPTER B1 – RESIDENTIAL DEVELOPMENT

4.0 General Residential controls

<i>Controls/objectives</i>	<i>Comment</i>	<i>Compliance</i>
<u>4.12 Site Facilities</u>	The proposal has adequate area for the provision of the site facilities for the development.	Yes
<u>4.13 Fire Brigade Servicing</u>	Established neighbourhood with existing fire brigade servicing.	Yes
<u>4.14 Services</u>	The site is already serviced.	Yes
<u>4.15 Development near the coastline</u>	The site is not located near the coastline.	Yes
<u>4.16 View sharing</u>	It is considered the proposal will not adversely impact significant views from public places and/or adjoining/nearby properties.	Yes
<u>4.17. Retaining walls</u>	Compliant retaining walls are proposed.	Yes
<u>4.18 Swimming pools and spas</u>	No swimming pool/spa is proposed.	N/A
<u>4.19 Development near railway corridors and major roads</u>	The site is not located near a railway corridor or major road.	N/A

5.0 Attached dwellings and multi -dwelling housing

Controls/objectives

Comment

Compliance

<u>5.1 Minimum Site Width Requirement</u>	The site has a width of 20 115 metres and exceeds the minimum 18m width requirement.	Yes																																																												
<u>5.2 Number of Storeys</u>	The site is located in a R2 zone and allows a maximum of 2 storeys. The proposal does not exceed 2 storeys.	Yes																																																												
<u>5.3 Front Setbacks</u>	<p>A minimum setback to George Street of 6m.</p> <p>The entry patio/awning for Unit One extends up to 500mm into the front setback at its closest point, which complies with the required 900mm for building elements such as patios/balconies.</p>	<p>Yes</p> <p>Yes</p>																																																												
<u>5.4 Side and Rear Setbacks</u> For an attached and multi-dwelling housing, the rear boundary setbacks are measured from the wall of the building or the outer edge of a balcony/deck, to the adjacent property boundary. The minimum rear boundary setbacks are as follows: <div data-bbox="193 1086 663 1357" data-label="Table"> <table> <tr> <th colspan="3">Side and Rear Boundary Setbacks Attached and Multi-Dwelling Development</th></tr> <tr> <th>Zone</th><th>Minimum side and rear setback</th><th>Minimum side and rear setbacks where balconies or windows of living areas face the rear boundary at first floor level or above</th></tr> <tr> <td>All zones</td><td>1.5m</td><td>1.5m</td></tr> <tr> <td>R2 Low Density Residential Zone</td><td>0.8 x ceiling height</td><td>1.0 x ceiling height</td></tr> </table> </div>	Side and Rear Boundary Setbacks Attached and Multi-Dwelling Development			Zone	Minimum side and rear setback	Minimum side and rear setbacks where balconies or windows of living areas face the rear boundary at first floor level or above	All zones	1.5m	1.5m	R2 Low Density Residential Zone	0.8 x ceiling height	1.0 x ceiling height	<p>All units</p> <p>GF Ceiling Height – 2.44 metres</p> <p>FF Ceiling Height – 2.44 metres</p> <table border="1" data-bbox="756 976 1217 1245"> <thead> <tr> <th>Unit 1</th><th>required</th><th>provided</th></tr> </thead> <tbody> <tr> <td>East GF</td><td>1.92m</td><td>13.25m</td></tr> <tr> <td>East FF</td><td>4.08m</td><td>4.74m</td></tr> <tr> <td>West GF</td><td>1.92m</td><td>2.74m</td></tr> <tr> <td>West FF</td><td>4.08</td><td>4.1m</td></tr> </tbody> </table> <table border="1" data-bbox="756 1294 1217 1563"> <thead> <tr> <th>Unit 2-5</th><th>required</th><th>provided</th></tr> </thead> <tbody> <tr> <td>East GF</td><td>1.92m</td><td>7.8m</td></tr> <tr> <td>East FF</td><td>4.08m</td><td>4.34m</td></tr> <tr> <td>West GF</td><td>1.92m</td><td>2.74m</td></tr> <tr> <td>West FF</td><td>4.08</td><td>4.1m</td></tr> </tbody> </table> <table border="1" data-bbox="756 1612 1217 1971"> <thead> <tr> <th>Unit 5</th><th>required</th><th>provided</th></tr> </thead> <tbody> <tr> <td>East GF</td><td>1.92m</td><td>7.8m</td></tr> <tr> <td>East FF</td><td>4.08m</td><td>4.34m</td></tr> <tr> <td>West GF</td><td>1.92m</td><td>2.74m</td></tr> <tr> <td>West FF</td><td>4.08m</td><td>4.1m</td></tr> <tr> <td>Northern boundary</td><td>4.08m</td><td>6.0m</td></tr> </tbody> </table>	Unit 1	required	provided	East GF	1.92m	13.25m	East FF	4.08m	4.74m	West GF	1.92m	2.74m	West FF	4.08	4.1m	Unit 2-5	required	provided	East GF	1.92m	7.8m	East FF	4.08m	4.34m	West GF	1.92m	2.74m	West FF	4.08	4.1m	Unit 5	required	provided	East GF	1.92m	7.8m	East FF	4.08m	4.34m	West GF	1.92m	2.74m	West FF	4.08m	4.1m	Northern boundary	4.08m	6.0m	<p>Yes</p>
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East GF	1.92m	7.8m																																																												
East FF	4.08m	4.34m																																																												
West GF	1.92m	2.74m																																																												
West FF	4.08m	4.1m																																																												
Northern boundary	4.08m	6.0m																																																												

<p><u>5.5 Building Character and Form</u></p>	<p>Unit One has an entry located on the street frontage. Habitable rooms face the street on both levels. None of the walls on the front elevation contain utility windows. Entries to all units are clearly identified.</p> <p>The dwellings provide articulation and different building materials have been utilised.</p> <p>Carparking is provided and screened from the streetscape.</p>	<p>Yes</p>									
<p><u>5.6 Access / Driveway Requirements</u></p> <p>Crossover and driveway widths relating must comply with the following:</p> <p>Table 1: Crossover and driveway widths</p> <table border="1"> <thead> <tr> <th>No. Dwellings</th><th>Crossover Width</th><th>Driveway Width</th></tr> </thead> <tbody> <tr> <td>1 to 2</td><td>Minimum 2.75m</td><td>Minimum 2.75m</td></tr> <tr> <td>3 to 5</td><td>3 –4m combined</td><td>Minimum 3m</td></tr> </tbody> </table>	No. Dwellings	Crossover Width	Driveway Width	1 to 2	Minimum 2.75m	Minimum 2.75m	3 to 5	3 –4m combined	Minimum 3m	<p>The proposal has an existing crossover on George Street. The proposed driveway is designed to provide safe access for passing for the first six metres of the driveway.</p> <p>The driveway is provided with a compliant landscaping strip 1.5 metres wide to the eastern side, which will be planted to afford amenity for the adjoining neighbour.</p> <p>There is adequate manoeuvring area within the site for the vehicles to enter and exit the site in a forward direction.</p> <p>The application has also been reviewed by Council's Traffic Officer and no objections were raised subject to recommended conditions.</p>	<p>Yes</p>
No. Dwellings	Crossover Width	Driveway Width									
1 to 2	Minimum 2.75m	Minimum 2.75m									
3 to 5	3 –4m combined	Minimum 3m									
<p><u>5.7 Car Parking Requirements</u></p> <p><u>Required:</u></p> <p>Unit 1 < 110m² 1.5</p> <p>Units 2- 5 < 110m² 2.0 each</p> <p>Visitors Carparking Required 0.2 = 1</p> <p>Car parking must be located behind the building setback and be screened from view with well-designed structures and vegetation.</p>	<p>Total Carparking Required and provided: 11</p> <p>Unit 1 – 1 x Single Car Garage</p> <p>1 x Open Car space</p> <p>Unit 2 to 5 - 1 x Double Car Garage each and 10 in total</p> <p>Visitor Car Space – 1 x open car space.</p> <p>Motorcycle Space – 1 x open motorcycle space.</p> <p>Bicycle –provided</p> <p>A variation has been sought for an encroachment into the front building line of 394mm as outlined at Chapter A1 above.</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No but variation can be supported.</p>									

<p><u>5.8 Landscaping Requirements</u></p> <p>1. A minimum of 30% of the total site area must be provided as landscaped area. Any landscaped area on the site which is less than 1.5 metres in width is not included within the landscaped area calculations.</p> <p>Any landscaped or grassed areas within the front setback area will be included in the landscaped area calculations.</p> <p>The required landscaped area must include a minimum 1.5 metre wide landscaping bed, which is provided along the side and rear boundaries of the site.</p>	<p>Landscaped area: 237.58m²</p> <p>Deep Soil Zone: 126.45m²</p> <p>Total Landscape area: 362.03m²</p> <p>30% required & 34.35% provided</p> <p>1.5 metre wide landscaping bed is provided along the side and rear boundaries of the site.</p> <p>Council's Landscape officer has reviewed the proposal and has provided conditionally satisfactory landscape advice.</p>	<p>Yes</p> <p>Yes</p>
<p><u>5.9 Deep Soil Planting</u></p> <p>... the deep soil may extend along the full length of the rear of the site, with a minimum width of 6m. The area of deep soil planting must be continuous.</p> <p>The deep soil zone shall be densely planted with trees and shrubs.</p>	<p>A compliant area of deep soil zone is located across the rear of the site and has a depth of 6 metres.</p> <p>Council's Landscape officer has reviewed the proposal and has provided conditionally satisfactory landscape advice.</p>	<p>Yes</p>
<p><u>5.10 Communal Open Space</u></p>	<p>Communal open space is required for developments with more than 10 dwellings. The proposal is for 5 dwellings.</p>	<p>N/A</p>
<p><u>5.11 Private Open Space</u></p> <p>1. Private open space must be provided for each dwelling within an attached dwelling development in the form of a balcony, courtyard, terrace and/or roof garden.</p> <p>2. Private open space for each dwelling within an attached dwelling housing development must comply with the following:</p> <p>(a) Private open space must be provided at the ground level or podium level. The courtyard or terrace must have a minimum dimension of 4 metres x 5 metres. This area must be separated from boundaries by at least 1.5 metres with a vegetated landscaping bed and must not encroach upon deep soil zone landscaping areas. Where a level courtyard is not possible, a deck or split level courtyard must have a minimum depth of 3 metres.</p> <p>(b) The primary private open area of at least 70% of the dwellings within a multi dwelling housing development must receive a</p>	<p>Private open space is provided in the form of a level courtyard for each dwelling directly connected to the living areas and measuring 4m x 5m. It is considered that the POS is of sufficient size to accommodate a range of uses being accessible and connected to a living area.</p> <p>The POS is also setback 1.5m from the side boundaries. All of the proposed POS is located behind the primary or secondary building line.</p> <p>50% of the POS for 4 of the 5 dwellings (80%) will receive the minimum 3 hours of direct sunlight between 9am to 3pm on June 21 compliant with the</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>

<p>minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.</p> <p>(c) Private open space areas (courtyards) must not extend forward of the front building setback by greater than 900mm.</p> <p>(d) Private open space should be sited in a location, which provides privacy, solar access, and pleasing outlook and has a limited impact upon adjoining neighbours.</p> <p>(e) Design private open spaces so that they act as direct extensions of the living areas of the dwellings they serve.</p> <p>(f) Clearly define private open space through use of planting, fencing or landscaping features.</p> <p>(g) Screen private open space where appropriate to ensure privacy.</p>	<p>minimum 70% required.</p> <p>Fencing/privacy screening is provided for the POS between each unit.</p>	<p>Yes</p>
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<p><u>5.12 Solar Access Requirements</u></p> <ol style="list-style-type: none"> 1. Windows to living rooms of adjoining dwellings must receive 3 hours of sunlight between 9.00am and 3.00pm on 21 June. 2. At least 50% of the private open areas of adjoining residential properties must receive at least 3 hours of sunlight between 9.00am and 3.00pm on June 21. 3. The primary balcony of at least 70% of the dwellings within a multi dwelling housing development shall receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21. 4. Windows to north facing living rooms for each of the subject dwellings in the development must receive at least 3 hours of sunlight between 9.00am and 3.00pm on 21 June. 5. At least 50% of the private open space area for each of the subject dwellings in the development must receive at least 3 hours of sunlight between 9.00am and 3.00pm on 21 June. 6. Shadow diagrams will be required for hourly intervals between 9.00 am and 3.00 pm for the 21 June winter solstice period which show the extent of overshadowing upon dwellings and rear private open space areas of adjoining dwellings. 	<p>The applicant has provided hourly shadow diagrams for the proposal between 9am to 3pm on June 21. It is considered the proposal has demonstrated that the adjoining properties will receive the required solar access and will not be adversely affected.</p> <p>An assessment of the solar access received for the POS of the proposed dwellings on June 21 has demonstrated that a minimum of 50% of the POS for all units will receive solar access between 12 noon and 3pm.</p> <p>All units have east facing family room windows and west facing kitchen and living room windows. It is considered that units will receive sunlight between 9am to 3pm on June 21.</p>	<p>Yes</p>
<p><u>5.13 Additional Control for Multi Dwelling Housing - Dwelling Mix and Layout</u></p>	<p>This is control is applicable for development with 10 or more dwellings therefore not applicable for this proposal.</p>	<p>N/A</p>
<p><u>5.14 Additional Control for Multi Dwelling Housing - Adaptable Housing</u></p>	<p>Adaptable housing is required where there are 6 or more dwellings in the development. The proposal comprises of 5 dwellings and such adaptable housing is not required.</p>	<p>N/A</p>
<p><u>5.15 Additional Control for Multi Dwelling Housing – Crime Prevention through Environmental Design</u></p>	<p>Refer to discussion of CPTED in Chapter E2</p>	<p>Yes</p>

CHAPTER D1 – CHARACTER STATEMENTS

Thirroul

Future Desired Character

...Residential development will remain primarily low density in nature. Some restricted medium density within close vicinity to the Thirroul village centre and the railway station is envisaged. Any new housing must be sympathetic with the existing Thirroul village built form and streetscape, particularly in older areas with weatherboard housed, pitched roofs and wide eaves...

The proposal is in an older area of Thirroul, which is characterised by weatherboard housing with pitched roofs. The proposed contemporary building provides articulation and utilises a variety of building materials. Nonetheless, as this is not a conservation area, the contemporary form is acceptable because at 6.83 metres in height, it is below the 9 metre height limit, it is also compliant with regard to floor space ratio, and the setbacks (front, rear, side) to the building.

The site of the proposed townhouses is within close proximity to the Railway Station (500m approx.) where townhouse development is envisaged. It is also in close proximity (250m) to the B2 commercial zone.

On balance, the proposal is not considered an unreasonable development in relation to the requirements of this Chapter.

CHAPTER E2: CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

<i>Control/objective</i>	<i>Comment</i>	<i>Compliance</i>
<u>3.1 Lighting</u>	Indicative lighting details have been proposed.	Yes
<u>3.2 Natural surveillance and sightlines</u>	The dwellings have been designed to provide natural surveillance within the site with windows of habitable room looking into the driveway/car parking area and the street. The design of the development provides for passive surveillance and good sightlines to the entries of each unit.	Yes
<u>3.3 Signage</u>	No specific signage has been proposed for the development however, it is considered the proposed parking for the site is clearly visible close to where the dwellings are located.	Yes
<u>3.4 Building design</u>	The design of the dwellings has the entries clearly defined and easily identifiable. No blank walls are proposed. Overall it is considered the proposal minimises the potential areas for entrapment and provides for casual surveillance internally within the site.	Yes
<u>3.5 Landscaping</u>	Landscaping proposed within the front	Yes

	building line and along the driveway generally comprises of lawn area, low shrubs such that entry points and windows will not be obscured.	
<u>3.6 Public open space and parks.</u>	The proposal does not adjoin public open space/park.	N/A
<u>3.7 Community facilities and public amenities</u>	The proposal is for a multi dwelling development.	N/A
<u>3.8 Bus stops and taxi ranks</u>	The proposal does not relate to a bus stop/taxi rank.	N/A

CHAPTER E3: CAR PARKING, ACCESS, SERVICING/LOADING FACILITIES AND TRAFFIC MANAGEMENT

Access and parking is provided in accordance with this Chapter. Council's Traffic Officer has no objections subject to recommended conditions.

The proposal provides a total of 9 garaged car parking spaces and 2 hardstand spaces one being a visitor car space. The number of spaces provided for the proposal complies with the requirements in this chapter. There is adequate manoeuvring area within the site for the vehicles to enter and exit the site in a forward direction.

Council's Traffic Officer is satisfied that traffic and car parking demand generated by the proposed development is unlikely to impact adversely on local traffic. The access design and car parking provision meets AS2890.1 and Council requirements.

CHAPTER E6: LANDSCAPING

Proposed landscaping is compliant with the requirements of this Chapter. Council's Landscape officer has reviewed the application and provided satisfactory referral advice with the imposition of conditions including compensatory planting.

CHAPTER E7: WASTE MANAGEMENT

A Demolition Plan and Site Waste Minimisation and Management Plan provided as required by this Chapter outlining ways to minimise and manage waste during demolition/construction and operational waste.

CHAPTER E14 STORMWATER MANAGEMENT

Stormwater from the development is proposed to be collected in rainwater tanks and discharged to the kerb via an OSD system. Council's Development Engineering officer has assessed the application and is satisfied.

CHAPTER E17 PRESERVATION AND MANAGEMENT OF TREES AND VEGETATION

The proposal includes the removal of a number of trees and the application was referred to Council's Landscape Officer and satisfactory referral advice was provided with the inclusion of compensatory planting, tree removal and tree retention as discussed at section 2.1.2.

CHAPTER E19 EARTHWORKS (LAND RESHAPING WORKS)

The proposal involves minimal earthworks to prepare the site for the development.

CHAPTER E20 CONTAMINATED LAND MANAGEMENT

No concerns are raised in regard to contamination. See Section 2.1.1.

CHAPTER E21 DEMOLITION AND HAZARDOUS BUILDING MATERIALS MANAGEMENT

The proposal involves demolition of all structures on site and a Site Waste Management Plan has been submitted. Standard demolition and asbestos management conditions will be imposed on any consent to be issued.

CHAPTER E22 SOIL EROSION AND SEDIMENT CONTROL

Conditions of consent are recommended in regard to appropriate sediment and erosion control measures to be in place during works.

2.4 WOLLONGONG CITY-WIDE DEVELOPMENT CONTRIBUTIONS PLAN 2018

The estimated cost of works is >\$100,000 (\$916,300) and a levy of 1% is applicable under this plan as the threshold value is \$100,000.

2.5 SECTION 4.15(1)(A)(IIIA) ANY PLANNING AGREEMENT THAT HAS BEEN ENTERED INTO UNDER SECTION 7.4, OR ANY DRAFT PLANNING AGREEMENT THAT A DEVELOPER HAS OFFERED TO ENTER INTO UNDER SECTION 7.4

There are no planning agreements entered into or any draft agreement offered to enter into under S7.4 which affect the development

2.6 SECTION 4.15(A)(IV) THE REGULATIONS (TO THE EXTENT THAT THEY PRESCRIBE MATTERS FOR THE PURPOSES OF THIS PARAGRAPH)

92 What additional matters must a consent authority take into consideration in determining a development application?

Conditions of consent will be imposed with regard to demolition.

93 Fire safety and other considerations

Not applicable.

94 Consent authority may require buildings to be upgraded

Not applicable

2.7 SECTION 4.15(1)(B) THE LIKELY IMPACTS OF DEVELOPMENT

Context and Setting:

The proposal is a contemporary design; however the area is characterised by a mix of single storey and two storey dwelling-houses of traditional and contemporary construction. It is likely the older housing stock will be modernised over time. The contemporary form is acceptable taking into account compliant height, number of storeys, floor space ratio, and required setbacks (front, rear, side) to the building.

Access, Transport and Traffic:

The development provides for the required number of car parking spaces and manoeuvring. Council's Traffic officer has considered the development with regard to impacts on the wider traffic network, and raised no objections to the proposal.

Public Domain:

The development is considered unlikely to result in impacts on the public domain with regard to the bulk and scale.

<p><u>Utilities:</u></p> <p>The proposal would not be envisaged to place an unreasonable demand on utilities supply.</p>
<p><u>Heritage:</u></p> <p>The site is not located in the visual catchment of any nearby heritage items.</p>
<p><u>Other land resources:</u></p> <p>The proposal would not be envisaged to impact upon valuable land resources.</p>
<p><u>Water:</u></p> <p>The site is presently serviced by Sydney Water, which could be readily extended to meet the requirements of the proposed development.</p> <p>The proposal would not be envisaged to have unreasonable water consumption.</p>
<p><u>Soils:</u></p> <p>The proposal would not be expected to result in negative impact on soils.</p>
<p><u>Air and Microclimate:</u></p> <p>The proposal would not be expected to result in negative impact on air or microclimate.</p>
<p><u>Flora and Fauna:</u></p> <p>Councils Landscape Officer has considered the proposed development and raised no objection subject to conditions. Conditions are recommended with regard to tree removal including compensatory planting.</p>
<p><u>Waste:</u></p> <p>A condition will be attached to any consent granted that an appropriate receptacle be in place for any waste generated during the construction.</p>
<p><u>Energy:</u></p> <p>The proposal would not be expected to have unreasonable energy consumption. A BASIX Certificate has been provided. See Section 2.1.3.</p>
<p><u>Noise and vibration:</u></p> <p>A condition will be attached to any consent granted, that nuisance be minimised during any construction, demolition, or works.</p>
<p><u>Natural hazards:</u></p> <p>There are no natural hazards identified on site that would preclude the proposed development.</p>
<p><u>Technological hazards:</u></p> <p>There are no technological hazards identified on site that would preclude the proposed development.</p>
<p><u>Safety, Security and Crime Prevention:</u></p> <p>There are no concerns with regard to safety and security.</p>
<p><u>Social Impact:</u></p> <p>The proposal would not be envisaged to result in negative social impacts.</p>

Economic Impact:

The proposal is not expected to create negative economic impact.

Site Design and Internal Design:

The application does not result in any departures from WLEP 2009 development standards. The proposal does request consideration of a variation to WDCP 2009 Chapter B1 for a 394mm encroachment into the front setback for visitor parking. A variation request has been submitted. Considering the nature of the variation request and the resultant impacts, the variation can be supported in this case.

Site design, manoeuvring and internal design are considered to be satisfactory.

Construction:

Conditions of consent are recommended in relation to construction impacts such as hours of work, erosion and sedimentation controls, works in the road reserve, excavation, demolition and use of any crane, hoist, plant or scaffolding.

A condition would be attached to any consent granted that all works are to be in compliance with the Building Code of Australia.

Cumulative Impacts:

Considering the matters outlined throughout this report, the proposal is considered unlikely to result in adverse cumulative impacts.

2.8 SECTION 4.15(1)(C) THE SUITABILITY OF THE SITE FOR DEVELOPMENT

Does the proposal fit in the locality?

The proposal is considered appropriate in relation to impacts on the amenity of the locality and/or adjoining developments as discussed in the body of this report.

Are the site attributes conducive to development?

There are no site constraints that would prevent the proposal.

2.9 SECTION 4.15(1)(D) ANY SUBMISSIONS MADE IN ACCORDANCE WITH THIS ACT OR THE REGULATIONS

See section 1.5 of this report.

2.10 SECTION 4.15(1)(E) THE PUBLIC INTEREST

The application is not expected to have unreasonable impacts on the environment or the amenity of the locality. It is considered appropriate with consideration to the zoning and the character of the area and is therefore, considered to be in the public interest.

3 CONCLUSION

This application has been assessed as satisfactory having regard to the Heads of Consideration under Section 4.15 of the Environmental Planning and Assessment Act 1979.

Some of the issues identified in submissions received whilst technically unresolved are considered to have been adequately addressed by way of design changes or conditions of consent. The applicant has provided detailed justification for a variation to Chapter B1 of WDCP 2009 as relates to Clause 5.7.2.1 which was considered and is capable of support.

Satisfactory referral advice was provided by internal referral groups and there are no outstanding issues. It is considered the proposed development has been designed appropriately given the constraints and characteristics of the site, is not inconsistent with the existing and desired future character of the locality and is unlikely to result in significant adverse impacts on the amenity of the surrounding area.

4 RECOMMENDATION

It is recommended that the development application DA-2018/1192 be **approved** subject to the conditions at **Attachment 3**.

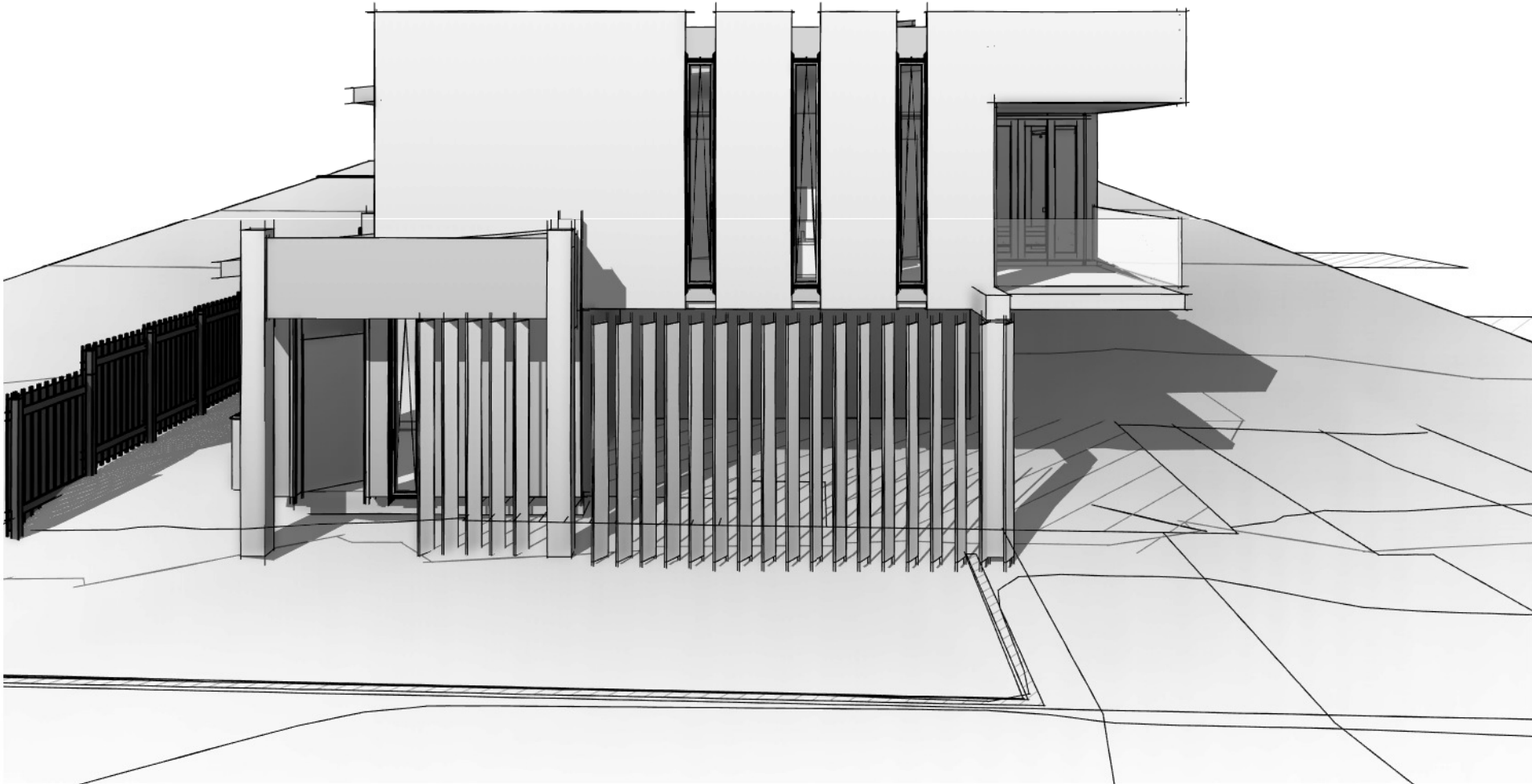
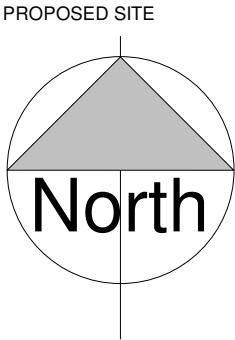
5 ATTACHMENTS

- 1 Architectural Plans
- 2 Applicant Variation Request Statement
- 3 Conditions

PROPOSED MULTI UNIT DEVELOPMENT

28 GEORGE STREET, THIRROUL, 2515, LOT 28 DP1099628

Sheet Number	Sheet Name
01	Cover Page
02	Site Analysis Plan
03	Proposed Site Plan
04	Unit 1 - 5 Ground Floor Plan
05	Unit 1 - 5 First Floor Plan
06	Roof Plan
07	North and South Elevation
08	East and West Elevation - Units 1 - 5
09	East and West Elevation - Unit 1
10	East and West Elevation - Unit 2
11	East and West Elevation - Unit 3
12	East and West Elevation - Unit 4
13	East and West Elevation - Unit 5
14	Unit 2 Section AA
15	Concept Site Coverage Plan
16	Shadow Diagrams 9am - 12pm
17	Shadow Diagrams 1pm - 3pm
18	BASIX and Schedules
19	Site Waste Management Plan
20	3d Perspectives
21	Ground Floor Unit 1 - 5
22	First Floor Unit 1 - 5
23	POS Shadow Diagram 1 - 3pm



★10STAR★

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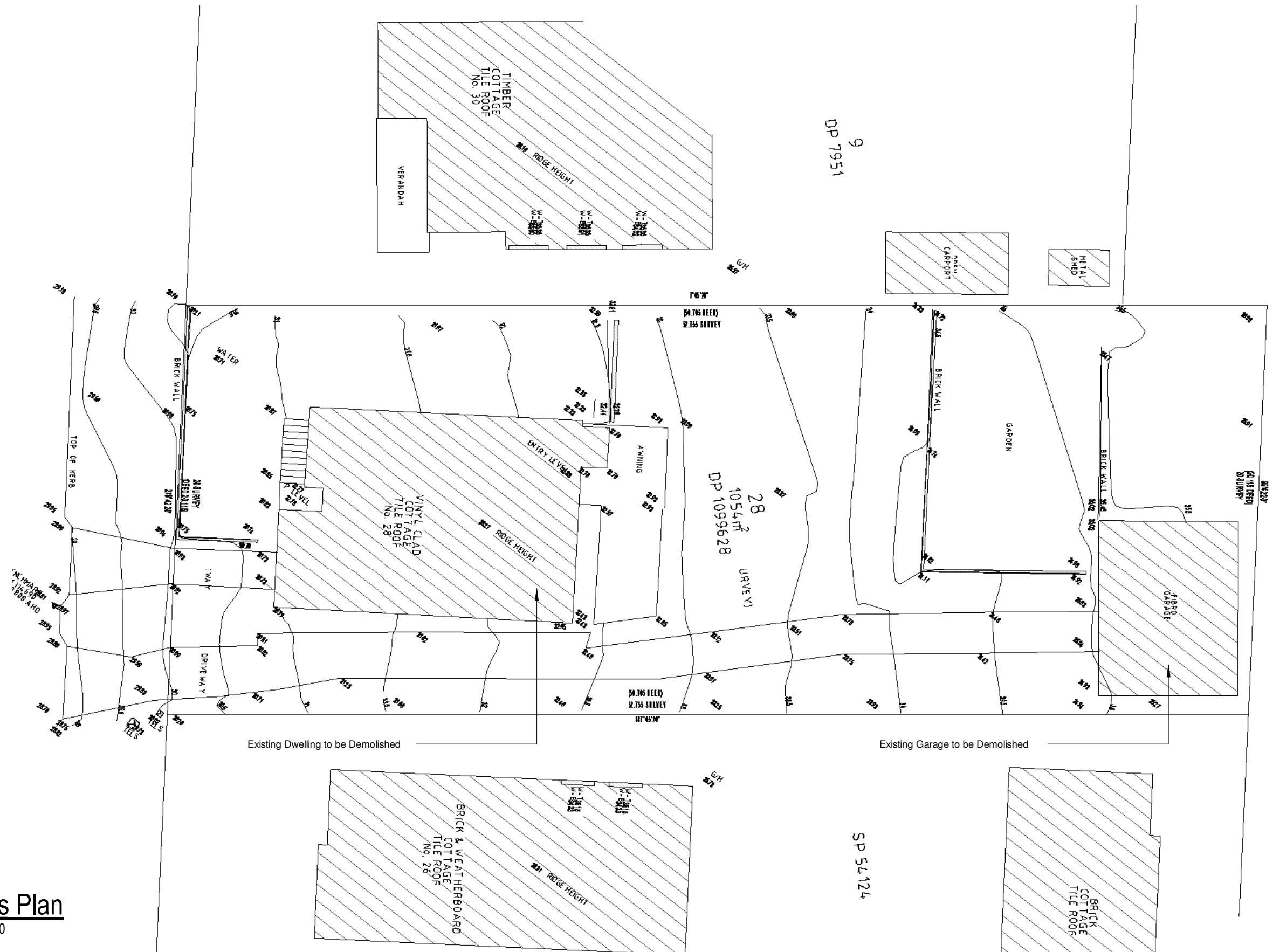
- GENERAL NOTES:
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 2. ALL DIMENSIONS ARE TO BE CHECKED ON SITE
 3. ALL WORK TO COMPLY WITH THE NATIONAL CONSTRUCTION (NCC) & AUSTRALIAN STANDARDS
 4. ITEMS SPECIFIED TO MATCH EXISTING AS CLOSE AS POSSIBLE, NOT EXACT

Issue:	Issue details:	Date:
1		
2		
3		
4		
5		
6		

Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A			
Drawn By: M.LISICA		Project number: 10STAR017	
Sheet Name: Cover Page		Date: 31/01/19	Sheet: 01
DEVELOPMENT APPLICATION		Scale:	

Site Analysis Plan

SCALE 1 : 200



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GENERAL NOTES:

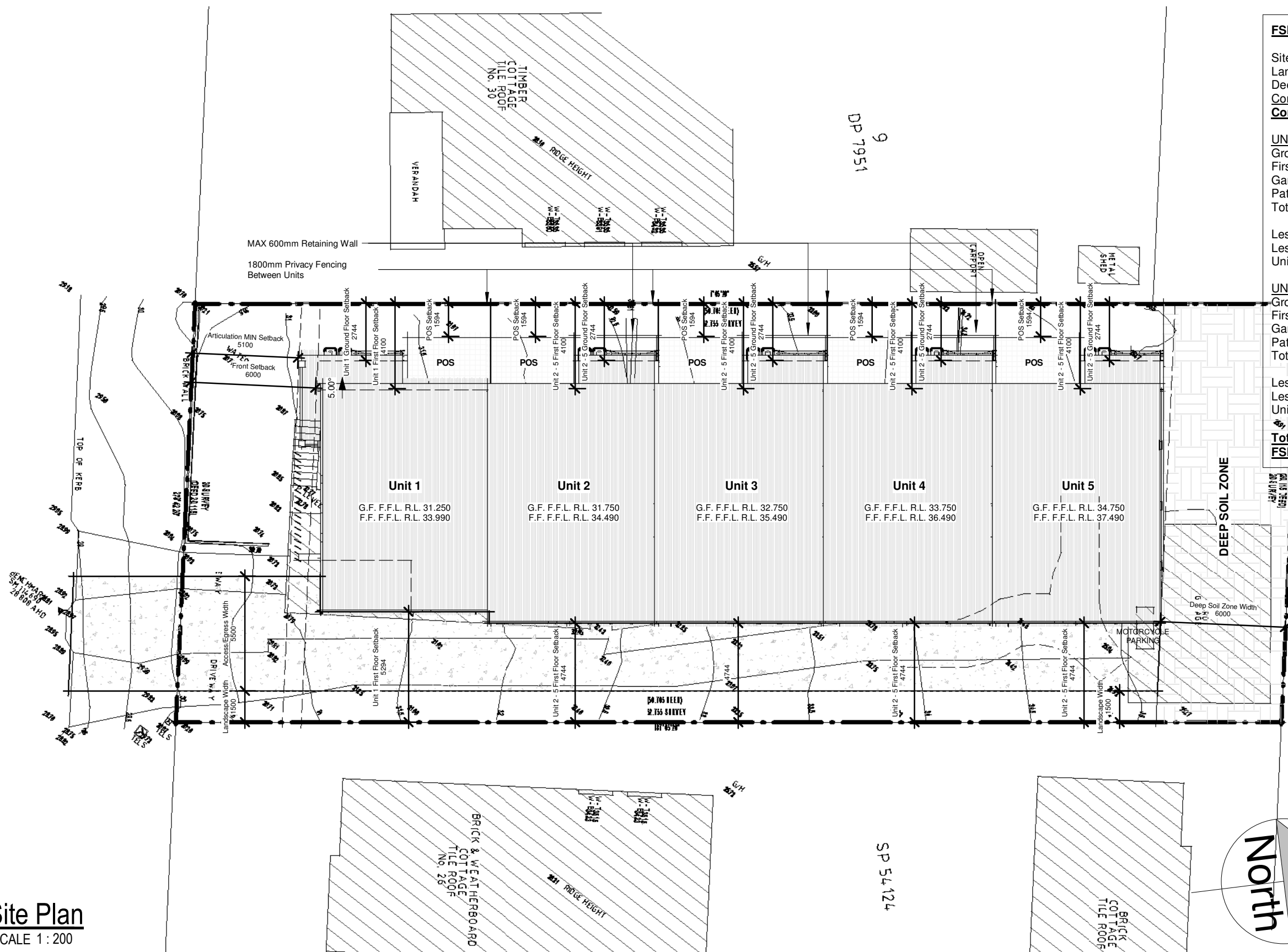
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6		

Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue:		A	
Drawn By:		M.LISICA	
Sheet Name:		Site Analysis Plan	
DEVELOPMENT APPLICATION		Date: 31/01/19	Sheet: 02
		Scale: 1 : 200	

Site Plan

SCALE 1 : 200



FSR Calculations

Site Area:	1054.000m ²
Landscape Area:	237.578m ²
Deep Soil Zone Area:	126.452m ²
Combined Landscaped Area	362.030m ²
Combined Landscaped Area%:	34.35%

UNIT 1

Ground Floor Area:	13.680m ²
First Floor Area:	72.084m ²
Garage Floor Area:	18.000m ²
Patio Area:	20.000m ²
Total Floor Area:	123.764m ²

Less Garage Allowance:	-18.000m ²
Less Alfresco and Patio Area:	-20.000m ²
Unit 1 Gross Floor Area:	85.764m ²

UNITS 2 - 5

Ground Floor Area:	22.914m ²
First Floor Area:	87.342m ²
Garage Floor Area:	36.000m ²
Patio Area:	20.000m ²
Total Floor Area:	166.256m ²

Less Garage Allowance:	-36.000m ²
Less Alfresco and Patio Area:	-00.000m ²
Unit 2 - 5 Gross Floor Area:	110.256m ²

Total Gross Floor Area:	526.788m²
FSR%:	49.98%

Setbacks

Ground Floor Ceiling Height - 2.44m

First Floor Ceiling Height - 2.44m

U1 Ground Floor Setbacks

U1 East Setback Minimum:	1.92m
U1 East Setback Proposed:	13.25m

U1 West Setback Minimum:	1.92m
U1 West Setback Minimum:	2.74m

U1 First Floor Setbacks

U1 East Setback Minimum:	4.08m
U1 East Setback Proposed:	4.74m

U1 West Setback Minimum:	4.08m
U1 West Setback Minimum:	4.1m

U2 - 5 Ground Floor Setbacks

U1 East Setback Minimum:	1.92m
U1 East Setback Proposed:	7.8m

U1 West Setback Minimum:	1.92m
U1 West Setback Minimum:	2.74m

U2 - 5 First Floor Setbacks

U1 East Setback Minimum:	5.1m
U1 East Setback Proposed:	5.29m

U1 West Setback Minimum:	4.08m
U1 West Setback Minimum:	4.1m



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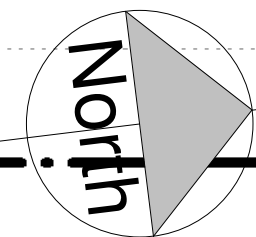
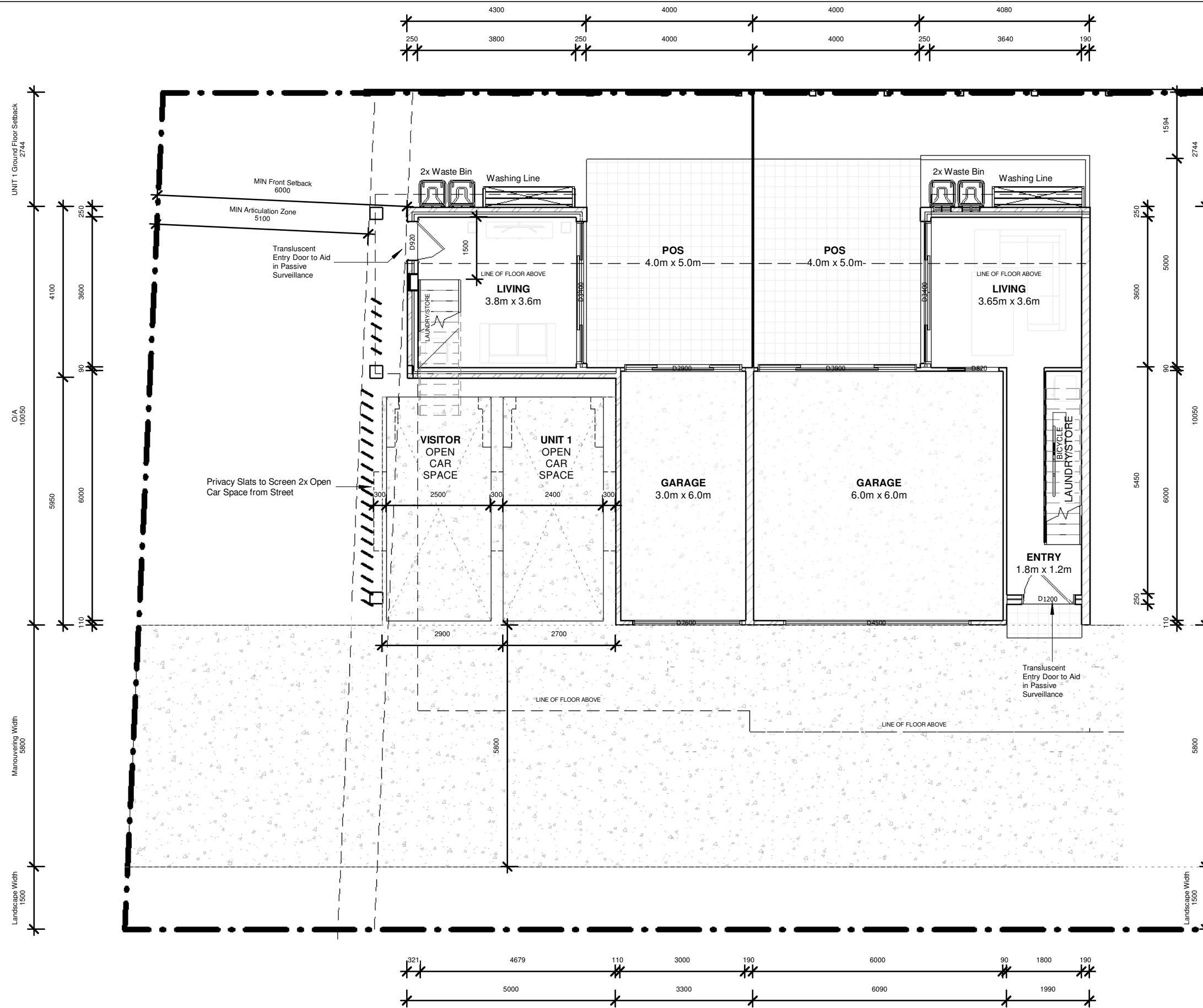
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Issue:	Issue details:	Date:
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6		

Project: Proposed Multi Unit Development	Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A	Project number: 10STAR017	
Drawn By: M.LISICA	Date: 31/01/19	Sheet: 03
Sheet Name: Proposed Site Plan	Scale: 1 : 200	
DEVELOPMENT APPLICATION		

Ground Floor
SCALE 1 : 100



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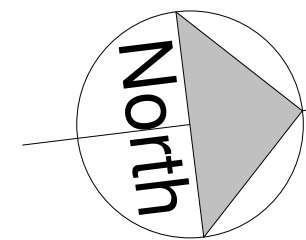
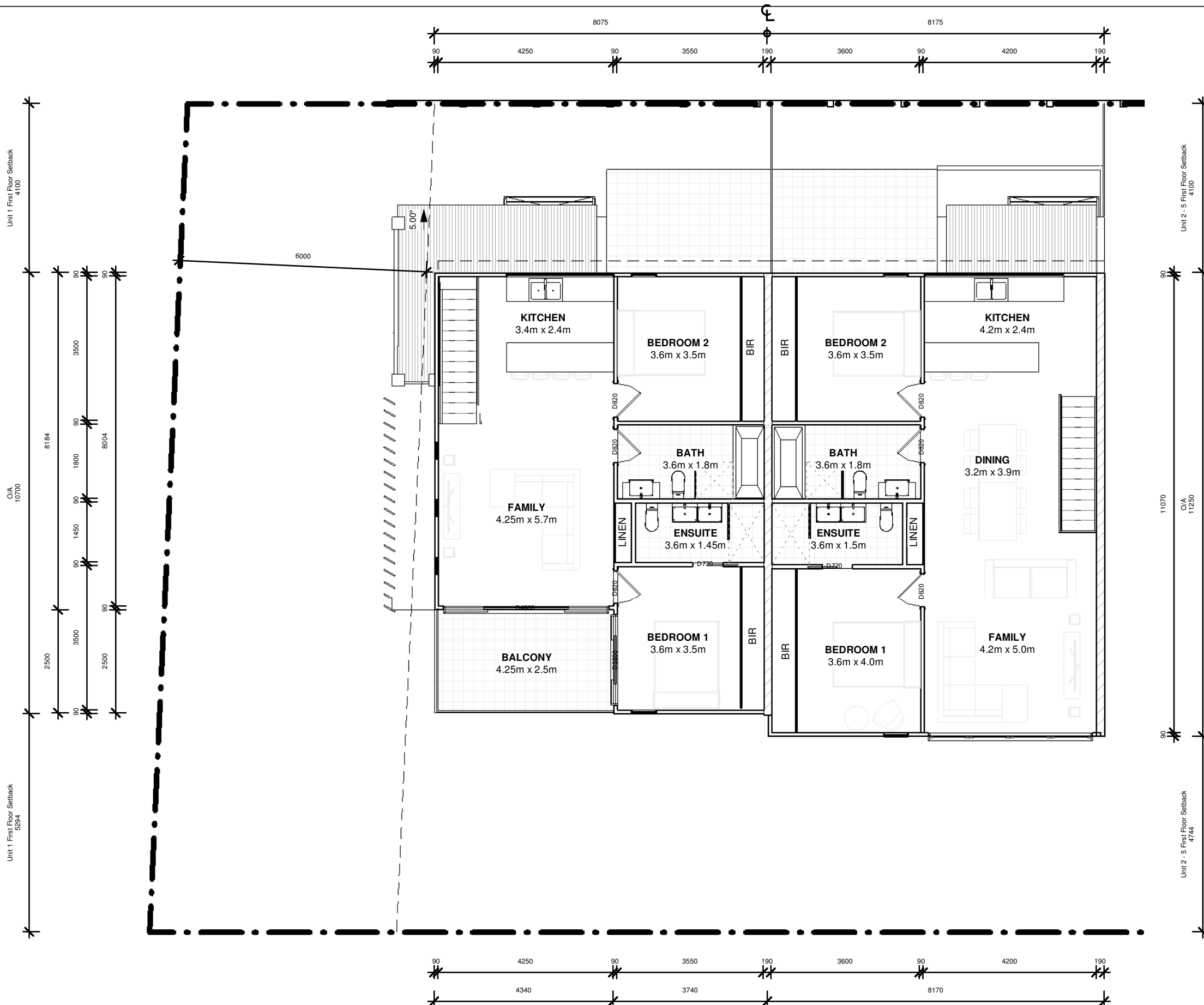
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Issue:	Issue details:	Date:
1		
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6		

Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A		Project number: 10STAR017	
Drawn By: M.LISICA		Date: 31/01/19	
Sheet Name: Unit 1 - 5 Ground Floor Plan		Scale: 1 : 100	
DEVELOPMENT APPLICATION		04	

First Floor

SCALE 1 : 100



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Issue:	Issue details:	Date:
1		
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6		

Project:
Proposed Multi Unit Development

Issue: A

Drawn By: M.LISICA

Sheet Name: Unit 1 - 5 First Floor Plan

DEVELOPMENT APPLICATION

Client & Address:
C. DREIZI
28 George Street, Thirroul
2515, Lot 28 DP 1099628

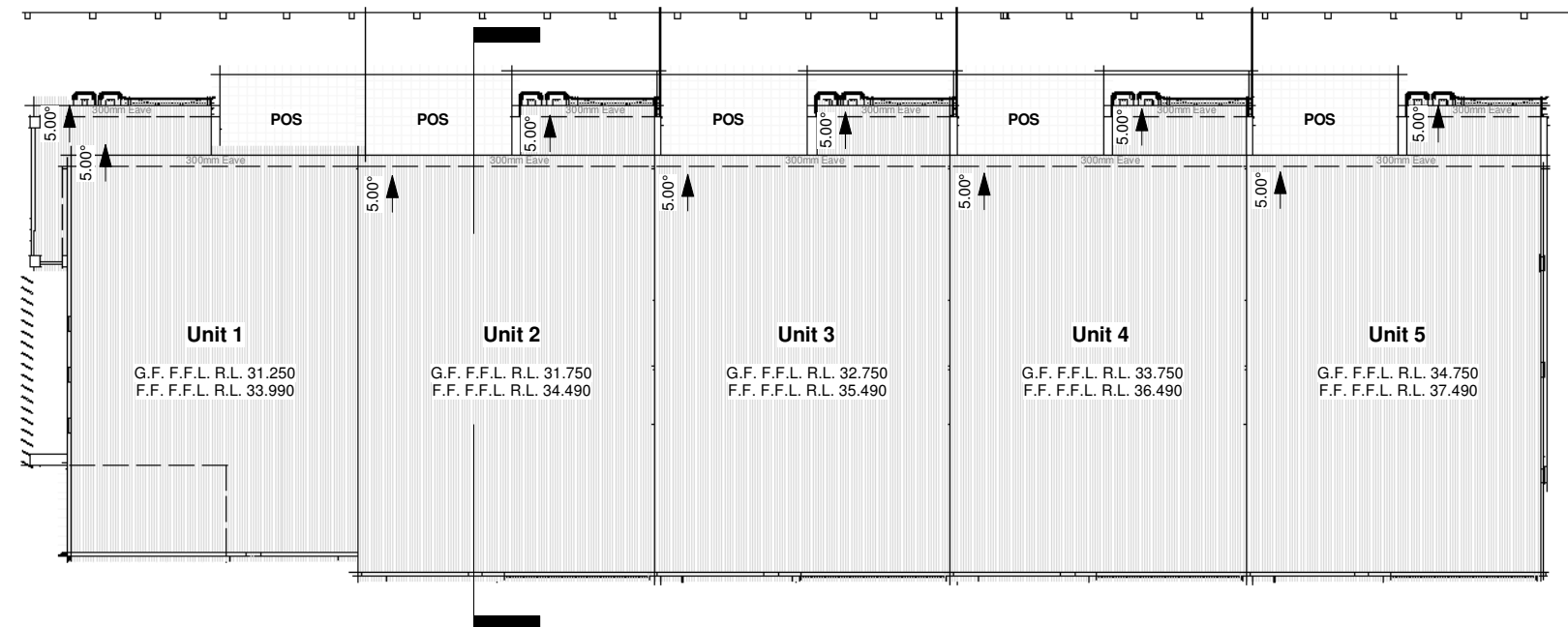
Project number: 10STAR017

Date: 31/01/19

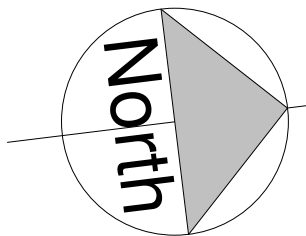
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Sheet:

05



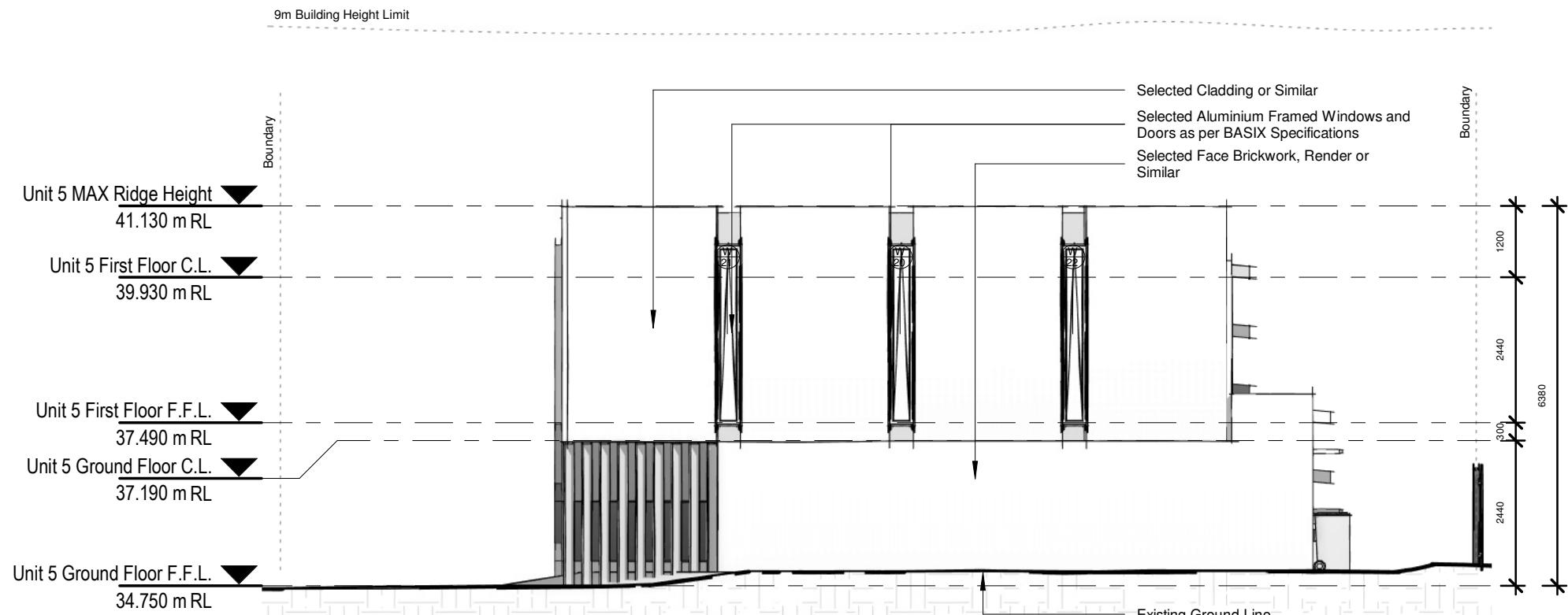
Roof Plan
SCALE 1 : 200



<div>★ 10STAR ★</div> <div>PHONE 1300 10 STAR (7827)</div> <div>EMAIL info@10starliving.com.au</div> <div>WEBSITE www.10starliving.com.au</div>	<div>GENERAL NOTES:</div> <div>1. ALL DIMENSIONS ARE IN MILLIMETERS</div> <div>2. ALL DIMENSIONS ARE TO BE CHECKED ON SITE</div> <div>3. ALL WORK TO COMPLY WITH THE NATIONAL CONSTRUCTION (NCC) & AUSTRALIAN STANDARDS</div> <div>4. ITEMS SPECIFIED TO MATCH EXISTING AS CLOSE AS POSSIBLE, NOT EXACT</div>	<table><tr><th>Issue:</th><th>Issue details:</th><th>Date:</th></tr><tr><td>1</td><td></td><td></td></tr><tr><td>2</td><td></td><td></td></tr><tr><td>3</td><td></td><td></td></tr><tr><td>4</td><td></td><td></td></tr><tr><td>5</td><td></td><td></td></tr><tr><td>6</td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	Issue:	Issue details:	Date:	1			2			3			4			5			6						<table><tr><td><div>Project:</div><div>Proposed Multi Unit Development</div></td><td><div>Client & Address:</div><div>C. DREIZI</div><div>28 George Street, Thirroul</div><div>2515, Lot 28 DP 1099628</div></td></tr><tr><td><div>Issue:</div><div>A</div></td><td></td></tr><tr><td><div>Drawn By:</div><div>M.LISICA</div></td><td><div>Project number:</div><div>10STAR017</div></td></tr><tr><td><div>Sheet Name:</div><div>Roof Plan</div></td><td><table><tr><td><div>Date:</div><div>31/01/19</div></td><td rowspan="2"><div>Sheet:</div><div>06</div></td></tr><tr><td><div>Scale:</div><div>1 : 200</div></td></tr></table></td></tr><tr><td colspan="2"><div>DEVELOPMENT APPLICATION</div></td></tr></table>	<div>Project:</div> <div>Proposed Multi Unit Development</div>	<div>Client & Address:</div> <div>C. DREIZI</div> <div>28 George Street, Thirroul</div> <div>2515, Lot 28 DP 1099628</div>	<div>Issue:</div> <div>A</div>		<div>Drawn By:</div> <div>M.LISICA</div>	<div>Project number:</div> <div>10STAR017</div>	<div>Sheet Name:</div> <div>Roof Plan</div>	<table><tr><td><div>Date:</div><div>31/01/19</div></td><td rowspan="2"><div>Sheet:</div><div>06</div></td></tr><tr><td><div>Scale:</div><div>1 : 200</div></td></tr></table>	<div>Date:</div> <div>31/01/19</div>	<div>Sheet:</div> <div>06</div>	<div>Scale:</div> <div>1 : 200</div>	<div>DEVELOPMENT APPLICATION</div>	
Issue:	Issue details:	Date:																																						
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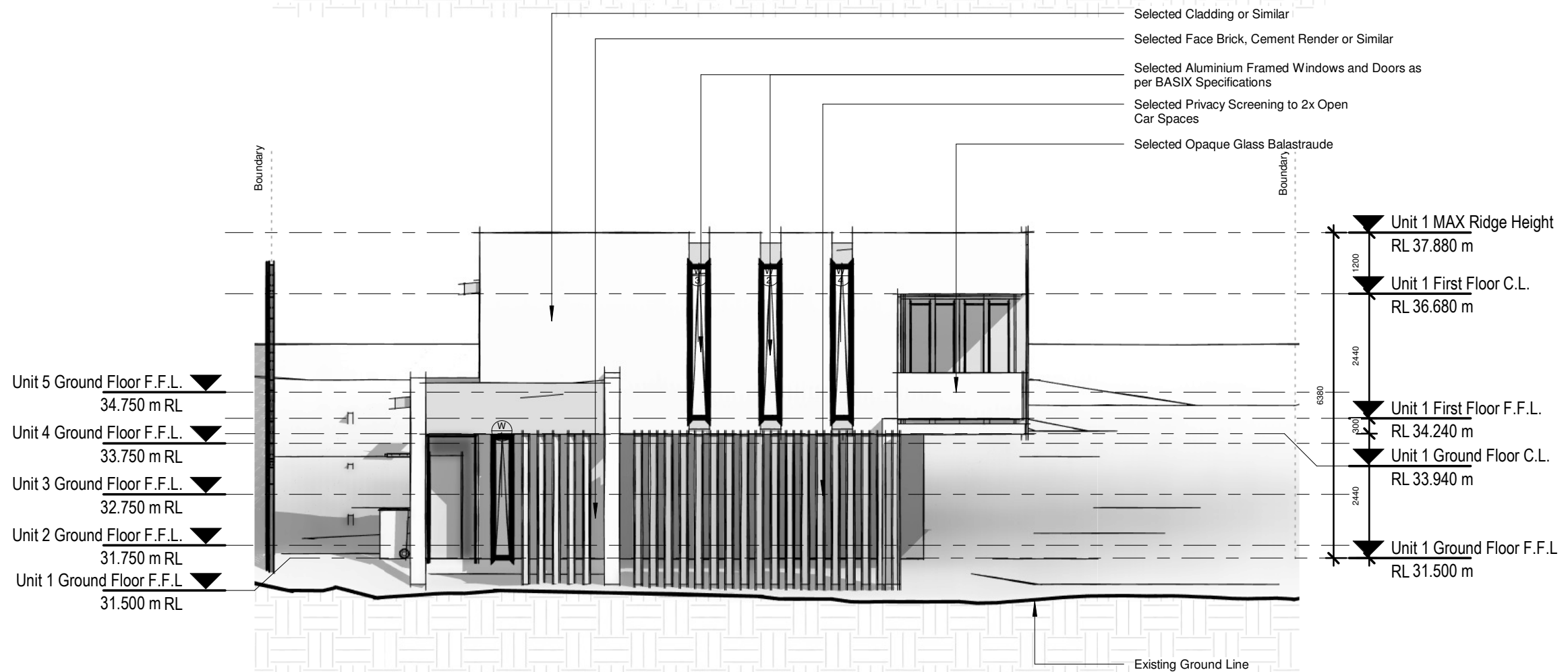
North Elevation

SCALE 1 : 100



South Elevation

SCALE 1 : 100



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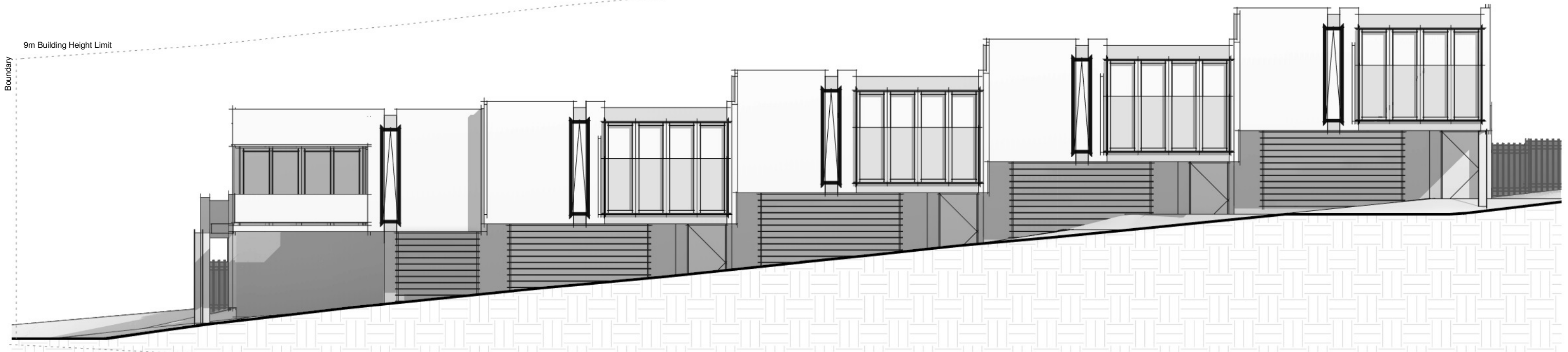
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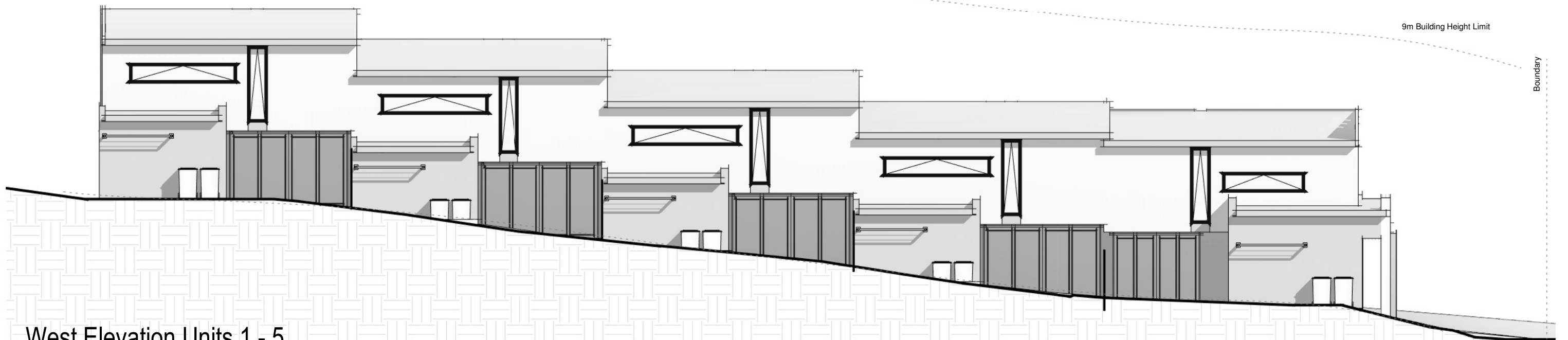
Issue:	Issue details:	Date:
1		
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Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A		Project number: 10STAR017	
Drawn By: M.LISICA		Date: 31/01/19	
Sheet Name: North and South Elevation		Sheet: 07	
DEVELOPMENT APPLICATION		Scale: 1 : 100	



East Elevation Units 1 - 5

SCALE 1 : 125



West Elevation Units 1 - 5

SCALE 1 : 125



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Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A		Project number: 10STAR017	
Drawn By: M.LISICA		Date: 31/01/19	
Sheet Name: East and West Elevation - Units 1 - 5		Scale: 1 : 125	
DEVELOPMENT APPLICATION		Sheet: 08	

5.1

NATIONWIDE

ENERGY RATING SCHEME

63.9

MJ/m²

www.nathers.gov.au

Certificate Number:

Assessor Name:

Accreditation number:

Certificate date:

Dwelling address:

1, 28 George Street

Thirroul NSW 2515

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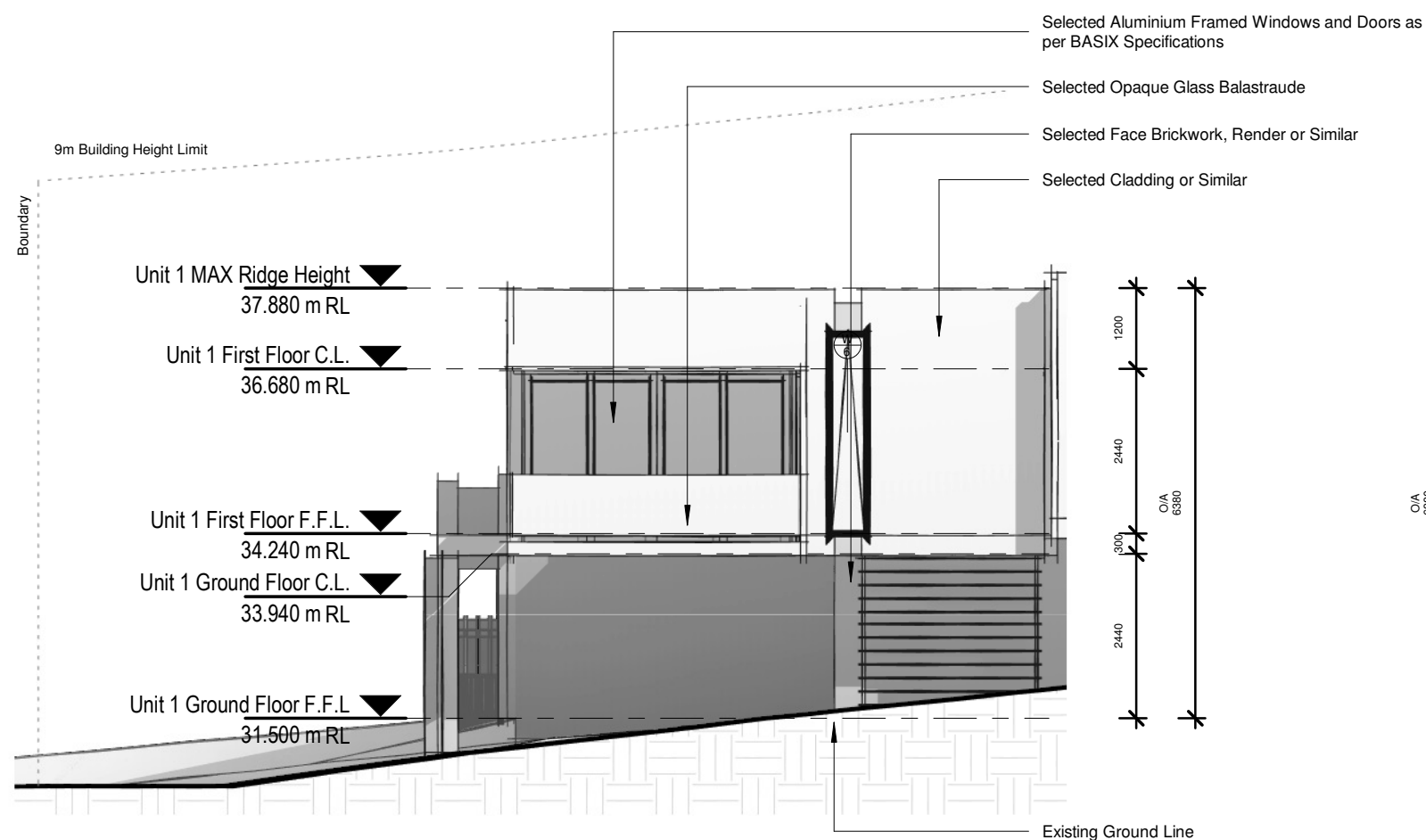
PVQMHE5442

Marko Lisica

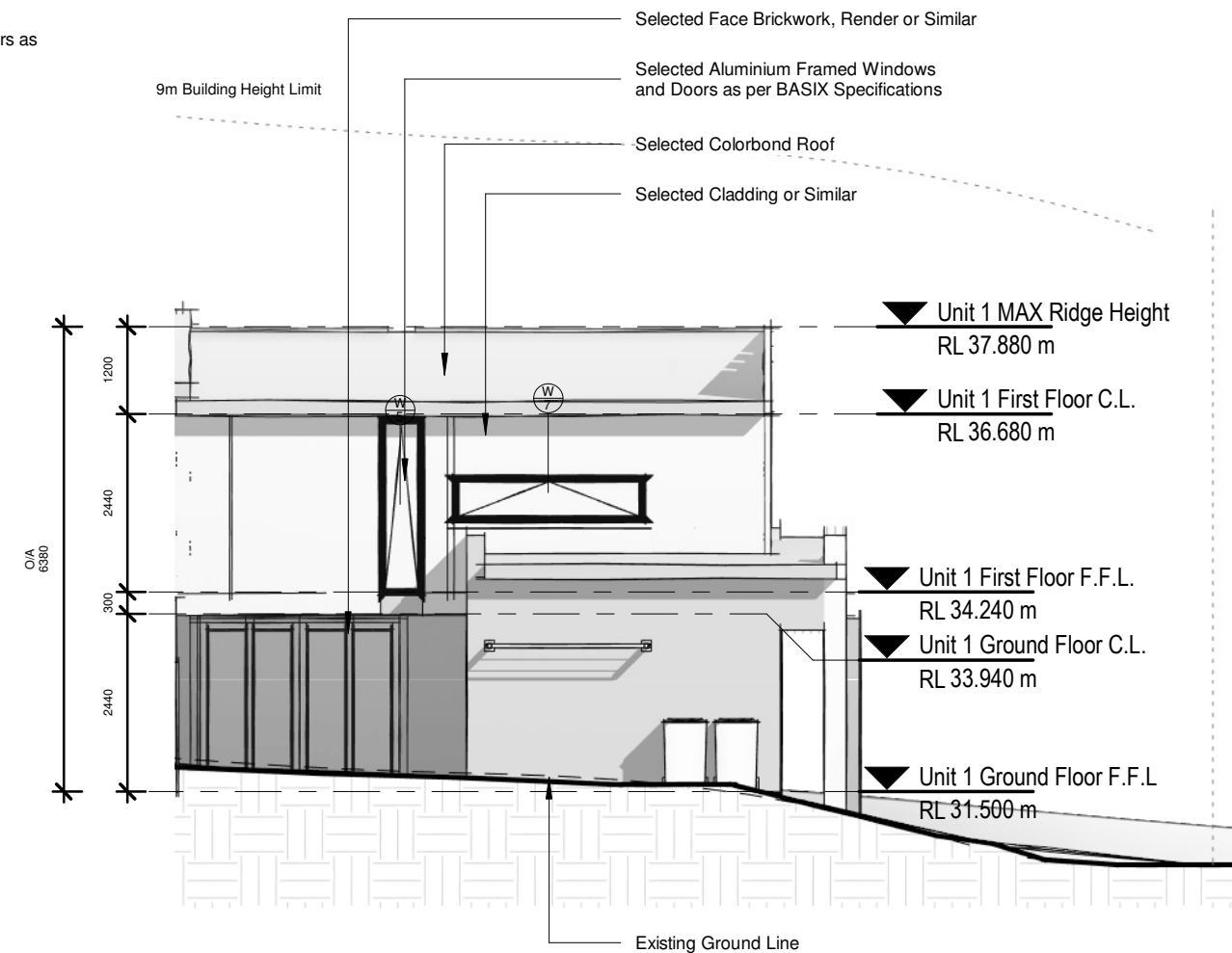
VIC/BDV/16/1728

8 Jan 2019

<https://www.i5.com.au/QRCODE/Landing?PublicId=PVQMHE5442>



East Elevation - Unit 1
SCALE 1 : 100



West Elevation - Unit 1
SCALE 1 : 100



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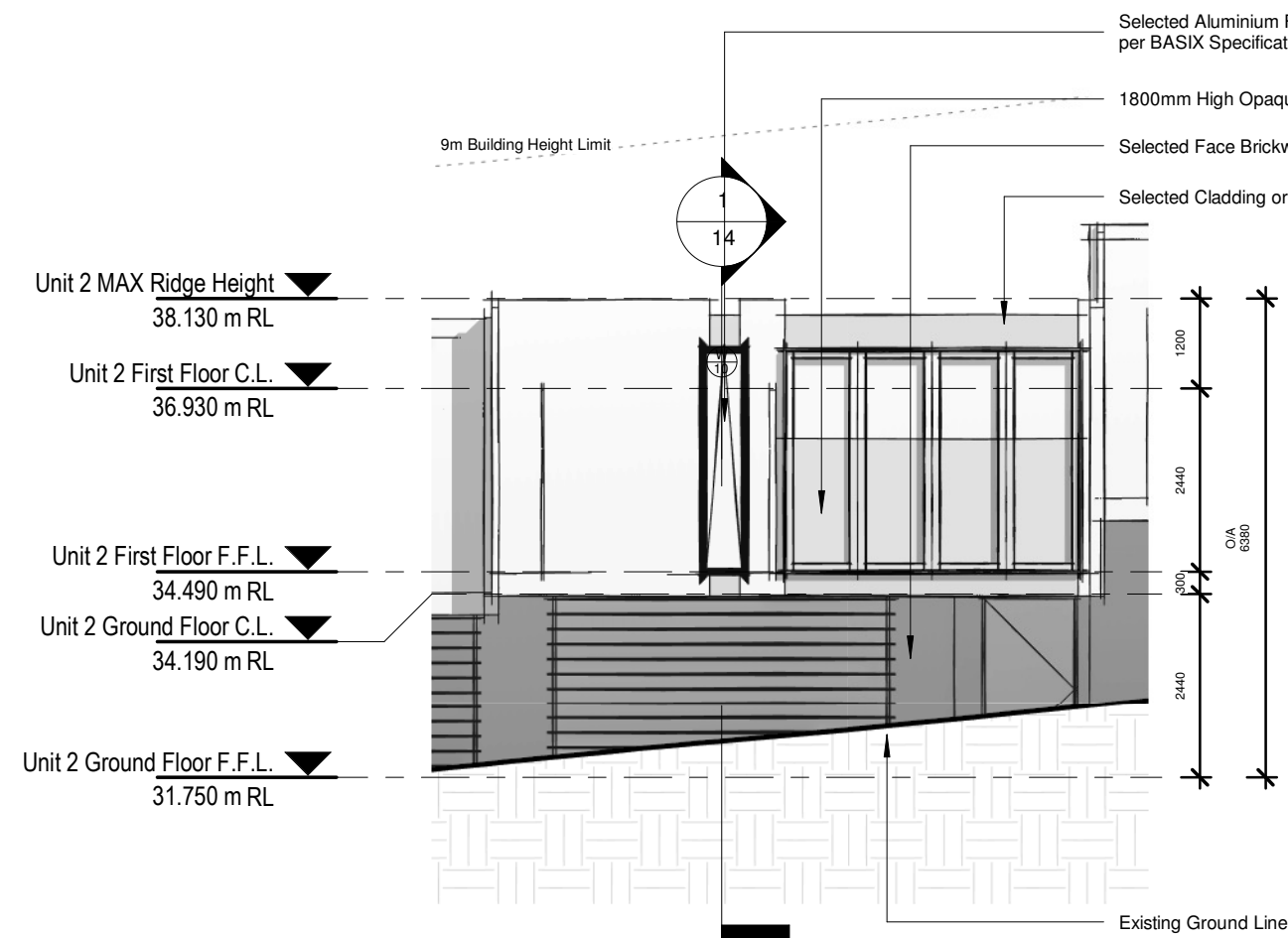
Issue:	Issue details:	Date:
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Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A		Project number: 10STAR017	
Drawn By: M.LISICA		Date: 31/01/19	
Sheet Name: East and West Elevation - Unit 1		Scale: 1 : 100	
DEVELOPMENT APPLICATION		09	

5.1
NATIONWIDE
HOUSE
ENERGY RATING SCHEME
65.1 MJ/m²
www.nathers.gov.au

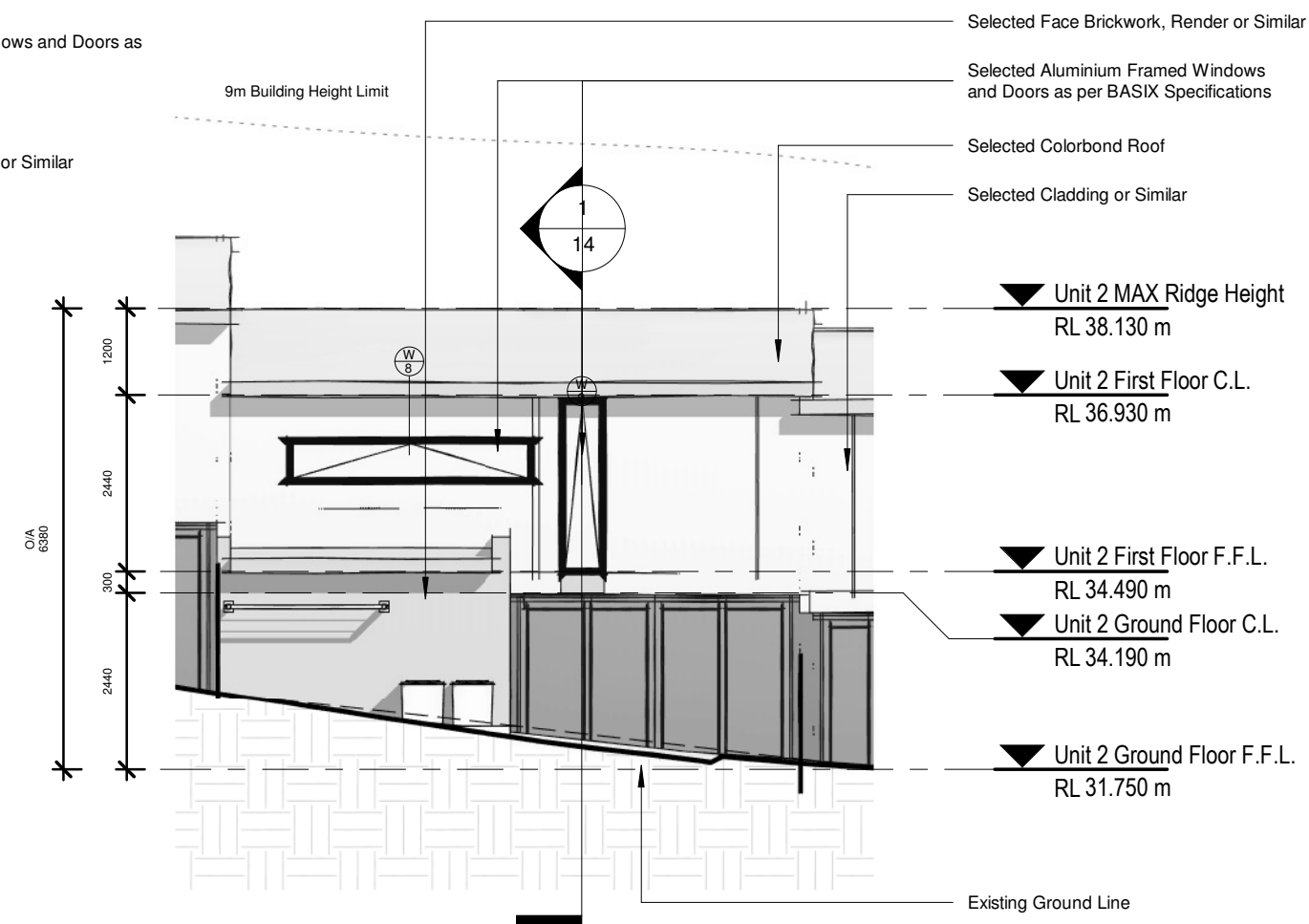
Certificate Number: Y7Q5C3A5LY
Assessor Name: Marko Lisica
Accreditation number: VIC/BDAY/16/1728
Certificate date: 8 Jan 2019
Dwelling address: 2, 28 George Street
Thirroul NSW 2515
www.nathers.gov.au

https://www.i5.com.au/QRCODE/Landing?PublicId=Y7Q5C3A5LY



East Elevation - Unit 2

SCALE 1 : 100



West Elevation - Unit 2

SCALE 1 : 100

★

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Issue:	Issue details:	Date:
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Project:
Proposed Multi Unit Development

Issue: A

Drawn By: M.LISICA

Sheet Name: East and West Elevation - Unit 2

DEVELOPMENT APPLICATION

Client & Address:
C. DREIZI
28 George Street, Thirroul
2515, Lot 28 DP 1099628

Project number: 10STAR017

Date: 31/01/19	Sheet: <div>10</div>
Scale: 1 : 100	

5.2

NATIONWIDE
HOUSE

ENERGY RATING SCHEME

63.1

MJ/m²

www.nathers.gov.au

Certificate Number:
Assessor Name:
Accreditation number:
Certificate date:
Dwelling address:

Z05443SBH8
Marko Lisica
VIC/BDV/16/1728
8 Jan 2019
3, 28 George Street
Thirroul NSW 2515
www.nathers.gov.au



<https://www.n5.com.au/QRCODE/Landing?PublicId=Z05443SBH8>

Unit 3 MAX Ridge Height
39.130 m RL

Unit 3 First Floor C.L.
37.930 m RL

Unit 3 First Floor F.F.L.
35.490 m RL

Unit 3 Ground Floor C.L.
35.190 m RL

Unit 3 Ground Floor F.F.L.
32.750 m RL



Selected Aluminium Framed Windows and Doors as per BASIX Specifications

1800mm High Opaque Glass

Selected Face Brickwork, Render or Similar

Selected Cladding or Similar

9m Building Height Limit

Existing Ground Line

Unit 3 MAX Ridge Height
RL 39.130 m

Unit 3 First Floor C.L.
RL 37.930 m

Unit 3 First Floor F.F.L.
RL 35.490 m

Unit 3 Ground Floor C.L.
RL 35.190 m

Unit 3 Ground Floor F.F.L.
RL 32.750 m

Unit 3 MAX Ridge Height
RL 39.130 m

Unit 3 First Floor C.L.
RL 37.930 m

Unit 3 First Floor F.F.L.
RL 35.490 m

Unit 3 Ground Floor C.L.
RL 35.190 m

Unit 3 Ground Floor F.F.L.
RL 32.750 m



Selected Face Brickwork, Render or Similar

Selected Aluminium Framed Windows and Doors as per BASIX Specifications

Selected Colorbond Roof

Selected Cladding or Similar

9m Building Height Limit

Existing Ground Line

Unit 3 MAX Ridge Height
RL 39.130 m

Unit 3 First Floor C.L.
RL 37.930 m

Unit 3 First Floor F.F.L.
RL 35.490 m

Unit 3 Ground Floor C.L.
RL 35.190 m

Unit 3 Ground Floor F.F.L.
RL 32.750 m

East Elevation - Unit 3
SCALE 1 : 100

West Elevation - Unit 3
SCALE 1 : 100

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Issue:	Issue details:	Date:
1		
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Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A		Project number: 10STAR017	
Drawn By: M.LISICA		Date: 31/01/19	
Sheet Name: East and West Elevation - Unit 3		Scale: 1 : 100	
DEVELOPMENT APPLICATION		11	

5.1

NATIONWIDE

HOUSE

ENERGY RATING SCHEME

64.3 MJ/m²

www.nathers.gov.au

Certificate Number:
Assessor Name:
Accreditation number:
Certificate date:
Dwelling address:
4, 28 George Street
Thirroul NSW 2515
www.nathers.gov.au

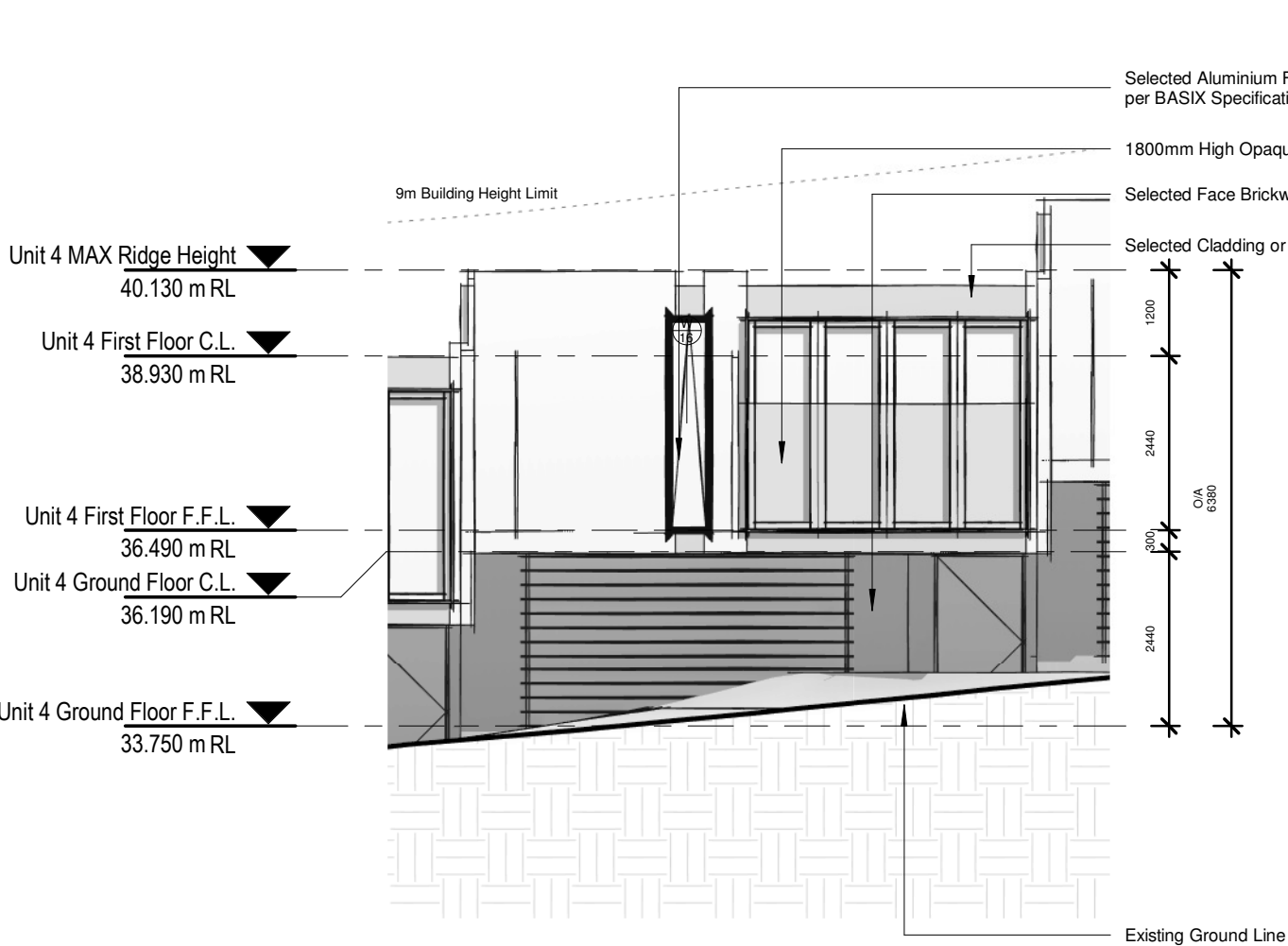
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Marko Lisica

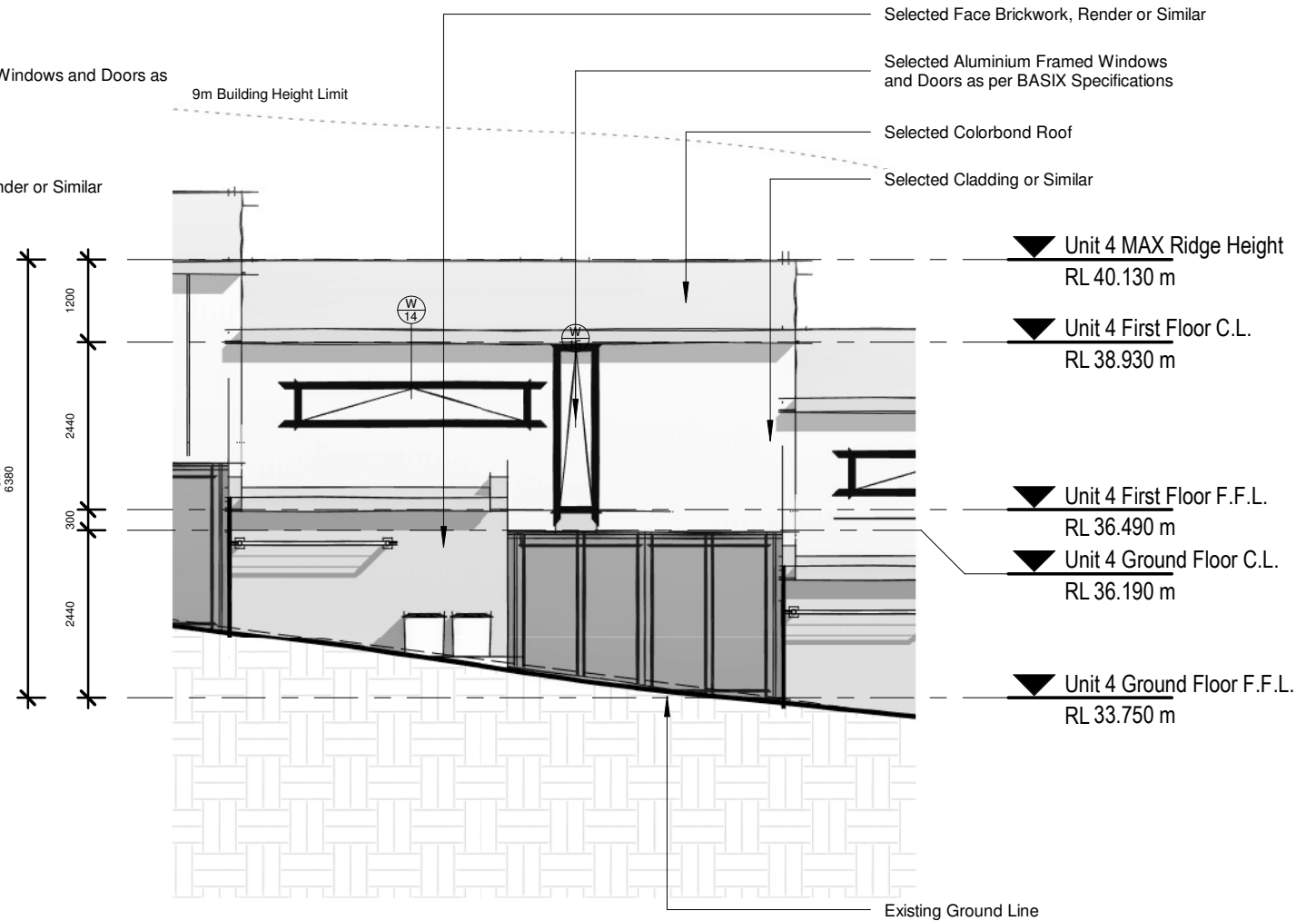
VIC/BDAY/16/1728

8 Jan 2019

https://www.15.com.au/QRCODE/Landing?PublicId=LHXDS76VQS



East Elevation - Unit 4
SCALE 1 : 100



West Elevation - Unit 4
SCALE 1 : 100

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Issue:	Issue details:	Date:
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Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A			
Drawn By: M.LISICA		Project number: 10STAR017	
Sheet Name: East and West Elevation - Unit 4		Date: 31/01/19	Sheet: 12
DEVELOPMENT APPLICATION		Scale: 1 : 100	

5.1

NATIONWIDE
HOUSE

ENERGY RATING SCHEME

64.5 MJ/m²

www.nathers.gov.au

Certificate Number:

Assessor Name:

Accreditation number:

Certificate date:

Dwelling address:

5, 28 George Street
Thirroul NSW 2515

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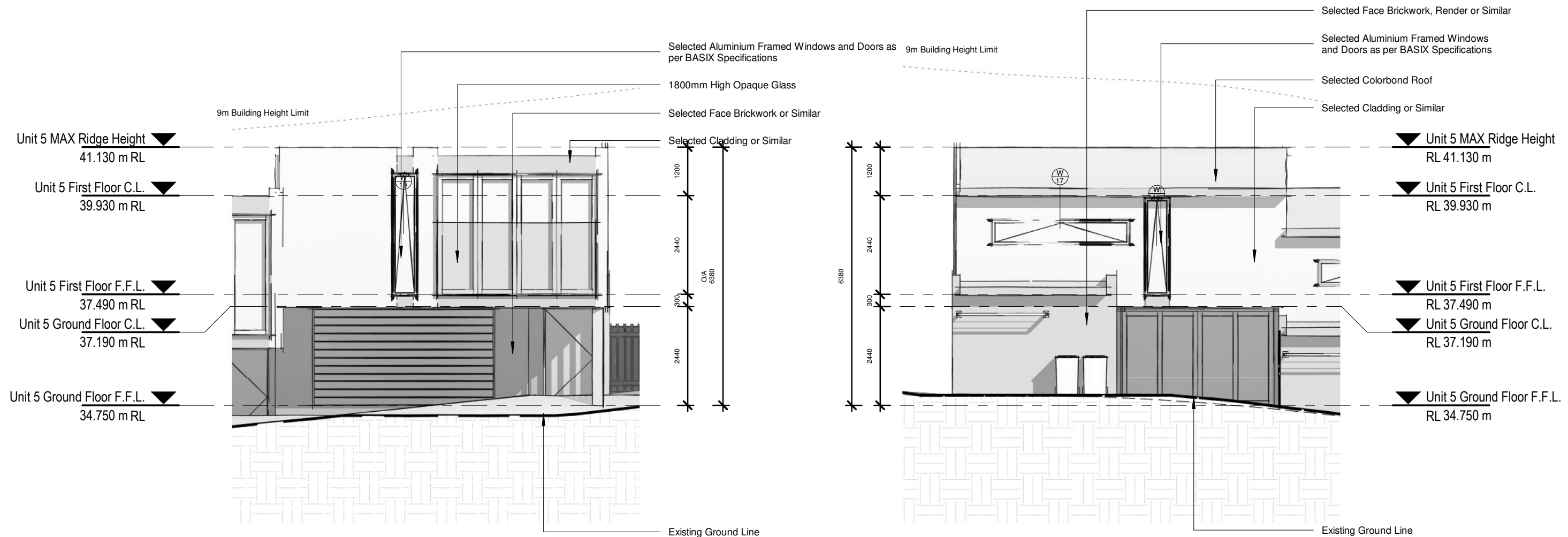
K4E6Y4O2W1

Marko Lisica

VIC/BDAY/16/1728

8 Jan 2019

<https://www.n5.com.au/QRCODE/Landing?PublicId=K4E6Y4O2W1>



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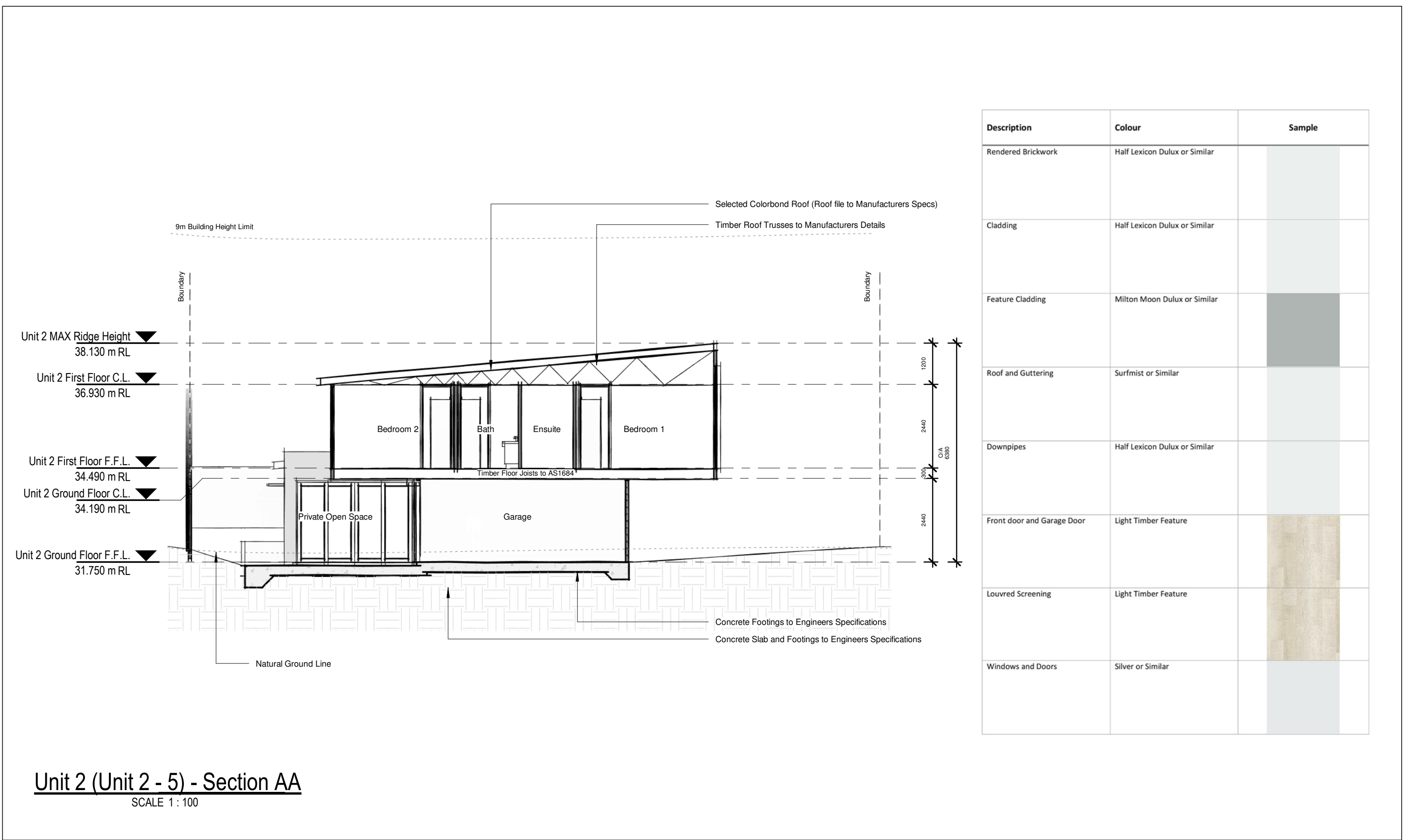
WEBSITE
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Issue:	Issue details:	Date:
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6		

Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A		Project number: 10STAR017	
Drawn By: M.LISICA		Date: 31/01/19	
Sheet Name: East and West Elevation - Unit 5		Scale: 1 : 100	
DEVELOPMENT APPLICATION		13	



Unit 2 (Unit 2 - 5) - Section AA
SCALE 1 : 100

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Issue:	Issue details:	Date:
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Project:
Proposed Multi Unit Development

Issue: A

Drawn By: M.LISICA

Sheet Name: Unit 2 Section AA

DEVELOPMENT APPLICATION

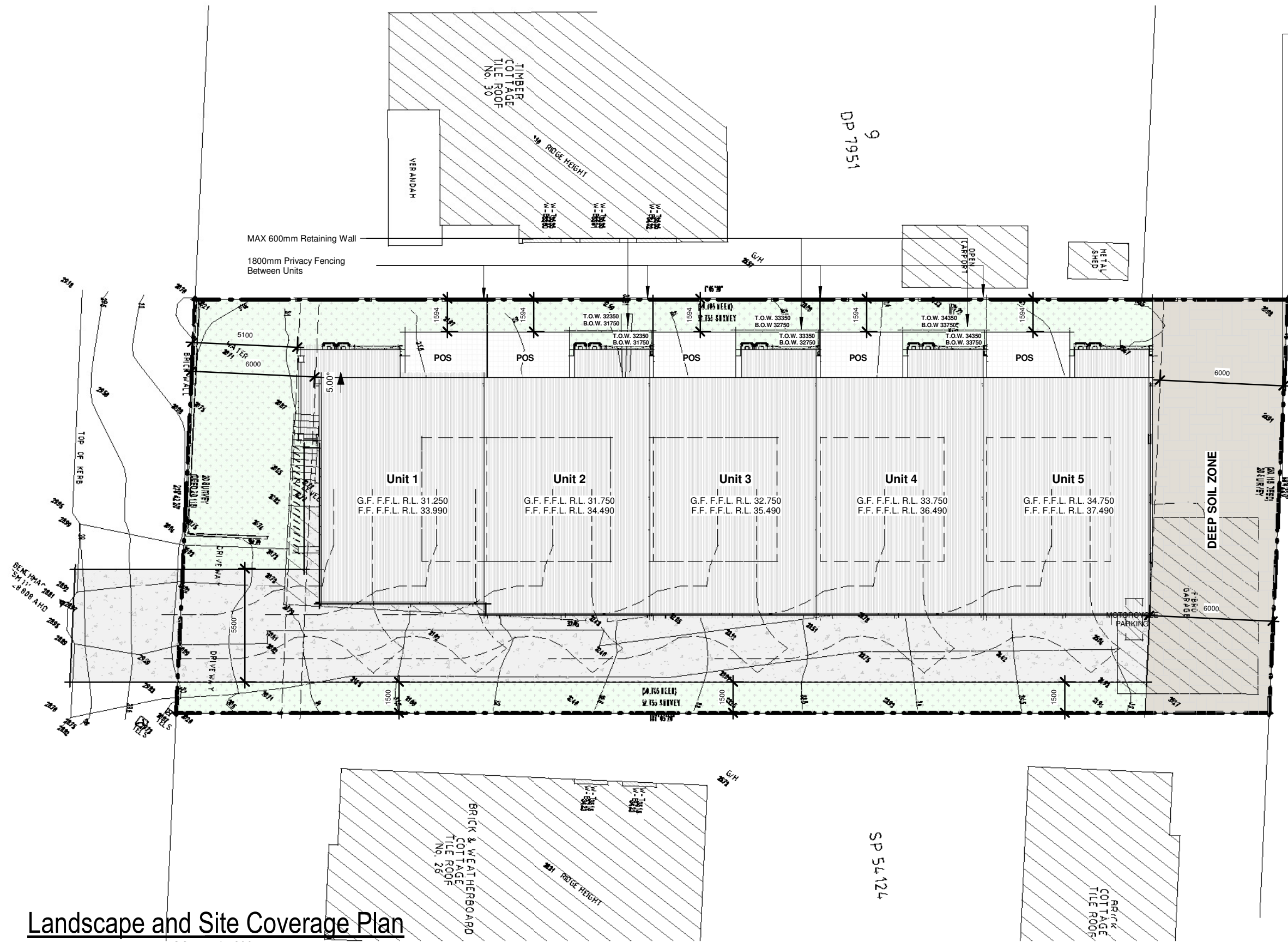
Client & Address:
C. DREIZI
28 George Street, Thirroul
2515, Lot 28 DP 1099628

Project number: 10STAR017

Date: 31/01/19

Scale: 1 : 100

Sheet: 14



FSR Calculations

Site Area:	1054.000m ²
Landscape Area:	237.578m ²
Deep Soil Zone Area:	126.452m ²
Combined Landscaped Area:	362.030m ²
Combined Landscaped Area%:	34.35%

UNIT 1	
Ground Floor Area:	13.680m ²
First Floor Area:	72.084m ²
Garage Floor Area:	18.000m ²
Patio Area:	20.000m ²
Total Floor Area:	123.764m ²

Less Garage Allowance:	-18.000m ²
Less Alfresco and Patio Area:	-20.000m ²
Unit 1 Gross Floor Area:	85.764m ²

UNITS 2 - 5	
Ground Floor Area:	22.914m ²
First Floor Area:	87.342m ²
Garage Floor Area:	36.000m ²
Patio Area:	20.000m ²
Total Floor Area:	166.256m ²

Less Garage Allowance:	-36.000m ²
Less Alfresco and Patio Area:	-00.000m ²
Unit 2 - 5 Gross Floor Area:	110.256m ²

Total Gross Floor Area:	526.788m²
FSR%:	49.98%

Landscape and Site Coverage Plan

SCALE 1 : 200



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Issue:	Issue details:	Date:
1		
2		
3		
4		
5		
6		

Project:
Proposed Multi Unit Development

Issue: A

Drawn By: M.LISICA

Sheet Name: Concept Site Coverage Plan

DEVELOPMENT APPLICATION

Client & Address:
C. DREIZI
28 George Street, Thirroul
2515, Lot 28 DP 1099628

Project number: 10STAR017

Date: 31/01/19

Scale: 1 : 200

Sheet:

15

SOLAR ACCESS

At least 50% of the private open areas of adjoining residential properties must receive at least 3 hours of sunlight between 9.00am and 3.00pm on June 21.

26 George Street - 9am -12pm

COMPLIES

30 George Street - 10am -12pm

COMPLIES

The primary private open area of at least 70% of the dwellings within a multi dwelling housing development must receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.

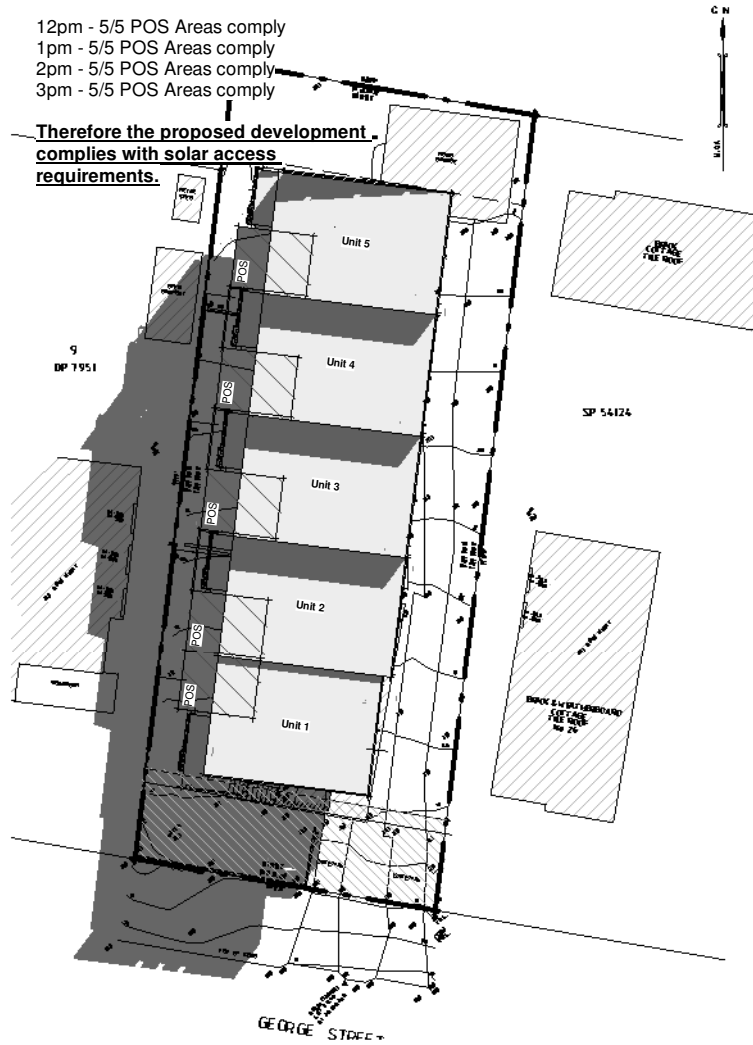
12pm - 5/5 POS Areas comply

1pm - 5/5 POS Areas comply

2pm - 5/5 POS Areas comply

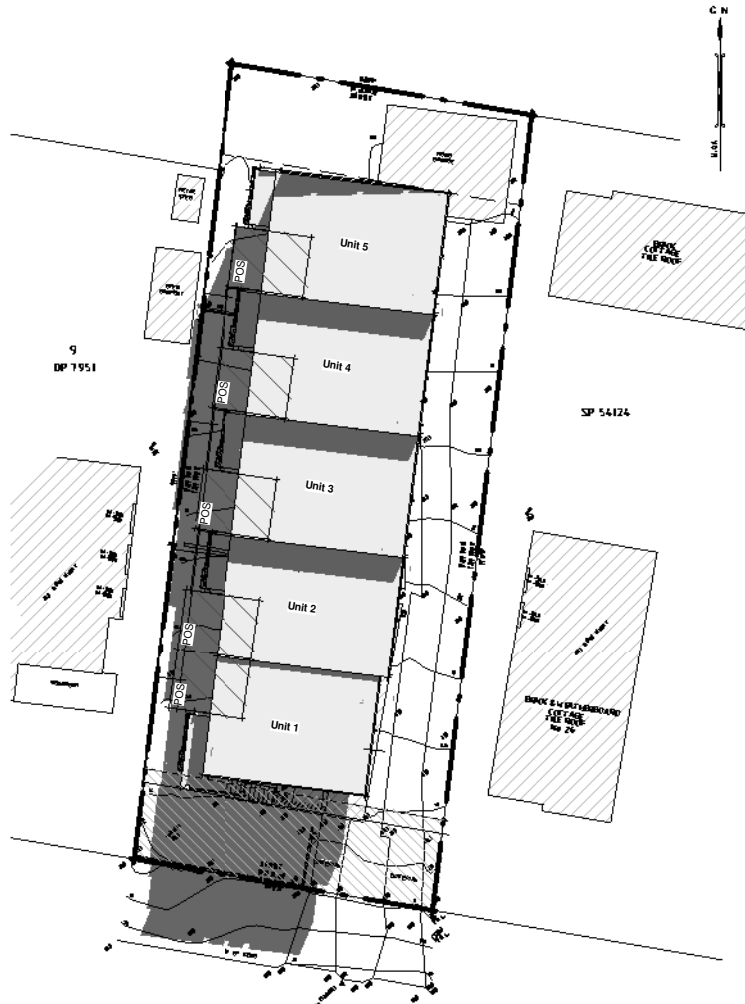
3pm - 5/5 POS Areas comply

Therefore the proposed development complies with solar access requirements.



Shadow Diagram 1 - 9am

SCALE 1 : 500



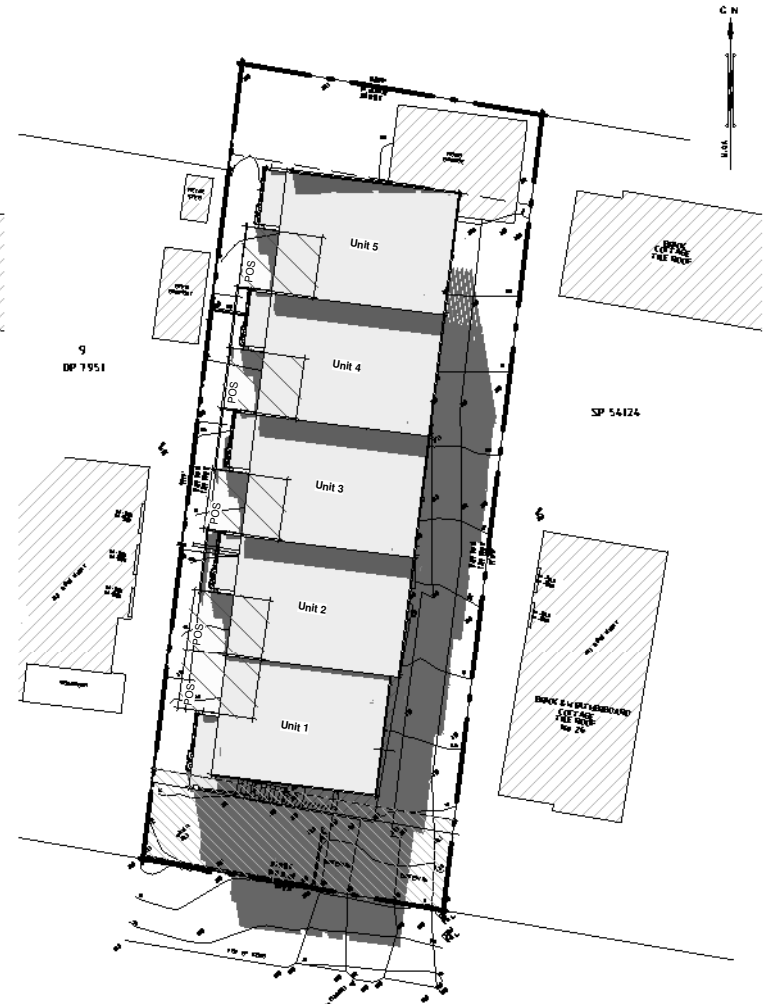
Shadow Diagram 2 - 10am

SCALE 1 : 500



Shadow Diagram 3 - 11am

SCALE 1 : 500



Shadow Diagram 4 - 12pm

SCALE 1 : 500

5/5 POS Areas have greater than 50% solar access during this hour.



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Issue:	Issue details:	Date:
1		
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Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A			
Drawn By: M.LISICA		Project number: 10STAR017	
Sheet Name: Shadow Diagrams 9am - 12pm		Date: 31/01/19	Sheet: 16
DEVELOPMENT APPLICATION		Scale: 1 : 500	

SOLAR ACCESS

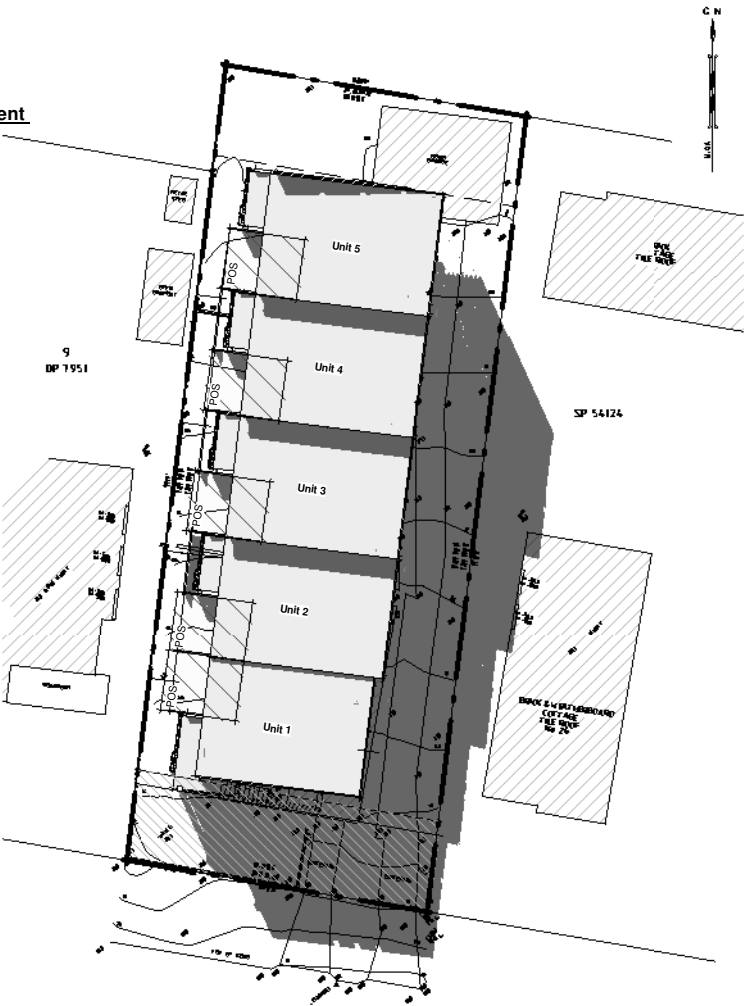
At least 50% of the private open areas of adjoining residential properties must receive at least 3 hours of sunlight between 9.00am and 3.00pm on June 21.

26 George Street - 9am -12pm
COMPLIES
30 George Street - 10am -12pm
COMPLIES

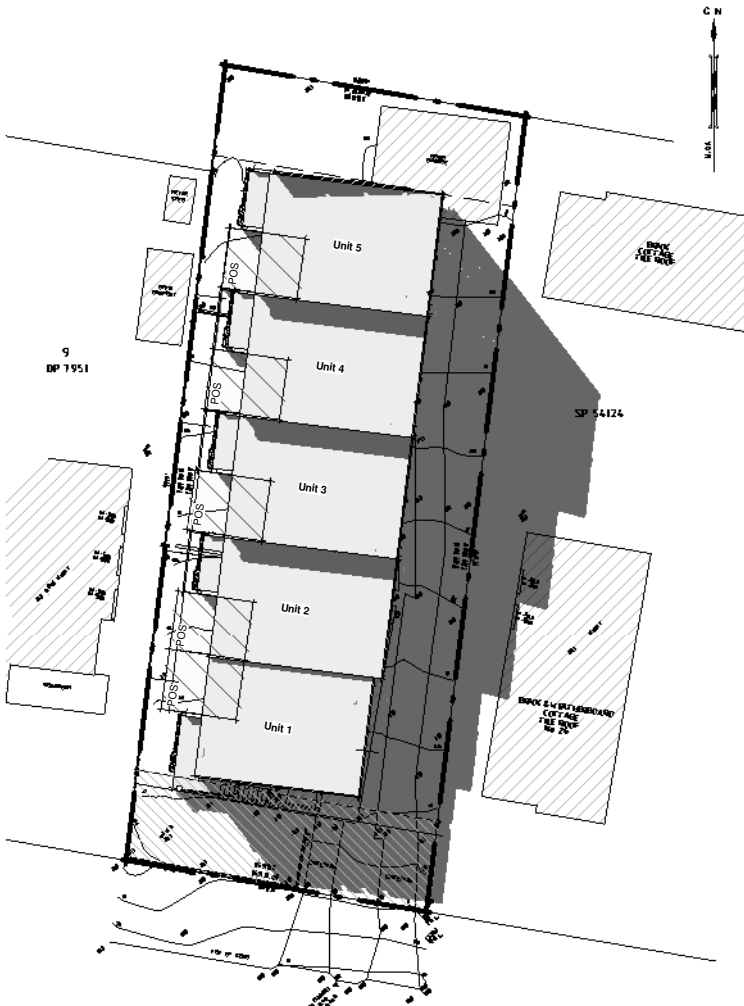
The primary private open area of at least 70% of the dwellings within a multi dwelling housing development must receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.

12pm - 5/5 POS Areas comply
1pm - 5/5 POS Areas comply
2pm - 5/5 POS Areas comply
3pm - 5/5 POS Areas comply

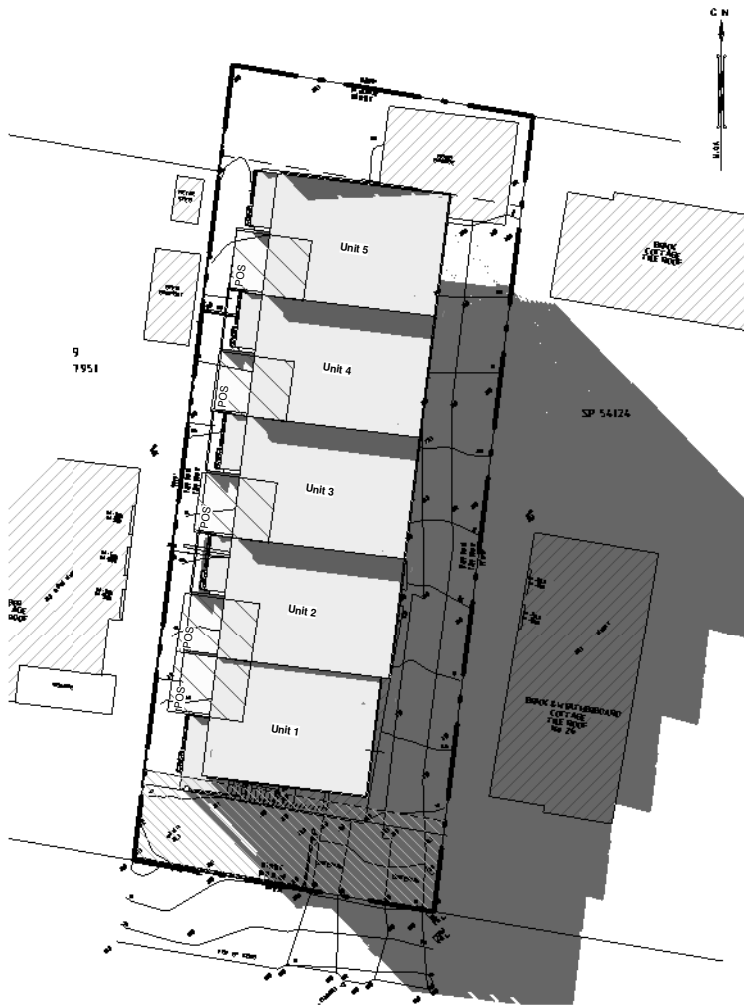
Therefore the proposed development complies with solar access requirements.



5/5 POS Areas have greater then 50% solar access during this hour.



5/5 POS Areas have greater then 50% solar access during this hour.



5/5 POS Areas have greater then 50% solar access during this hour.

Shadow Diagram 5 - 1pm
SCALE 1 : 500

Shadow Diagram 6 - 2pm
SCALE 1 : 500

Shadow Diagram 7 - 3pm
SCALE 1 : 500

★10STAR★

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1		
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3		
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5		
6		

Project:
Proposed Multi Unit Development

Issue:
A

Drawn By:
M.LISICA

Sheet Name:
Shadow Diagrams 1pm - 3pm

DEVELOPMENT APPLICATION

Client & Address:
C. DREIZI
28 George Street, Thirroul
2515, Lot 28 DP 1099628

Project number:
10STAR017

Date:
31/01/19

Scale:
1 : 500

Sheet:
17

Window Schedule					
Mark	Height	Width	Model	Comments	Remarks
1	2400	400	Aluminium Awning Window		Unit 1
2	3000	400	Aluminium Awning Window		Unit 1
3	3000	400	Aluminium Awning Window		Unit 1
4	3000	400	Aluminium Awning Window		Unit 1
5	2400	600	Aluminium Awning Window		Unit 1
6	3000	600	Aluminium Awning Window		Unit 1

Window Schedule					
Mark	Height	Width	Model	Comments	Remarks

7	600	2600	Aluminium Sliding Window		Unit 1
8	600	3400	Aluminium Sliding Window		Unit 2
9	2400	600	Aluminium Awning Window		Unit 2

Window Schedule					
Mark	Height	Width	Model	Comments	Remarks

10	3000	600	Aluminium Awning Window		Unit 2
11	600	3400	Aluminium Sliding Window		Unit 3
12	2400	600	Aluminium Awning Window		Unit 3

Window Schedule					
Mark	Height	Width	Model	Comments	Remarks

13	3000	600	Aluminium Awning Window		Unit 3
14	600	3400	Aluminium Sliding Window		Unit 4
15	2400	600	Aluminium Awning Window		Unit 4

Window Schedule					
Mark	Height	Width	Model	Comments	Remarks

16	3000	600	Aluminium Awning Window		Unit 4
17	600	3400	Aluminium Sliding Window		Unit 5
18	2400	600	Aluminium Awning Window		Unit 5
19	3000	600	Aluminium Awning Window		Unit 5
20	3000	400	Aluminium Awning Window		Unit 5
21	3000	400	Aluminium Awning Window		Unit 5
22	3000	400	Aluminium Awning Window		Unit 5

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Multi Dwelling

Certificate number: 962371M_02

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 08/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

This certificate is a revision of certificate number 962371M lodged with the consent authority or certifier on 12 October 2016 with application DA 20161192

It is the responsibility of the applicant to verify with the consent authority that the original, or any revised certificate, complies with the requirements of Schedule 1 Clause 2A, 4A or 6A of the Environmental Planning and Assessment Regulation 2000

Secretary
Date of issue: Tuesday, 08 January 2019
To be valid, this certificate must be lodged within 3 months of the date of issue.



Certificate Prepared by		
Name / Company Name: 10 Star PTY LTD		
ABN (if applicable): 15610355281		

BASIX Planning & Environment www.basix.nsw.gov.au Version: 3.0 / DARWINIA_3_7_9 Certificate No.: 962371M_02 Tuesday, 08 January 2019 page 1/13

BASIX														
Dwelling no.	Fixtures				Appliances			Individual pool		Individual spa				
	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (min volume)	Pool cover	Pool location	Pool shaded	Volume (min volume)	Spa cover	Spa shaded
All dwellings	3 star (> 4.5 l/s) 1 star (< 4.5 l/s)	3 star	3 star	3 star	no	-	-	-	-	-	-	-	-	-
Alternative water source														
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (S)	Laundry connection	Pool top-up	Spa top-up						
All dwellings	individual water tank (no. 1)	Tank size (min) 2000.0 litres	To collect run-off from at least: 100.0 square metres of roof area, 25.0 square metres of impervious area, 15.0 square metres of garden and lawn area, and 0.0 square metres of planter box area.	yes	yes	yes	no	no						
None	-	-	-	-	-	-	-	-						
(i) Energy														
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.														
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.														
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.														
(d) The applicant must install the cooling and heating systems specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling, if no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no system may be installed in any such areas. If the term "zone" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.														

BASIX Planning & Environment www.basix.nsw.gov.au Version: 3.0 / DARWINIA_3_7_9 Certificate No.: 962371M_02 Tuesday, 08 January 2019 page 1/13

BASIX												
Dwelling no.	Cooling		Heating		Artificial lighting				Natural lighting			
	Living areas	Bedroom areas	Living areas	Bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bedrooms &/or toilets	Master kitchen
All dwellings	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.0 - 3.5	2	2	yes	yes	yes	yes	0	yes
Individual pool												
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge cabinet	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or sheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	-	-	-	yes	yes
Alternative energy												
Dwelling no.	Photovoltaic system (min rated electrical output in peak kW)											
5	2.0											
All other dwellings												
(iii) Thermal Comfort												
							Show on DA plans	Show on CC-CDC plans & sections	Certifier check			
(a) The applicant must attach the certificate referred to under 'Assessor details' on the front page of its BASIX certificate (the 'BASIX certificate') to the development application and construction certificate application for the proposed development. If the applicant is not a BASIX registered design professional, the BASIX certificate must be signed by a BASIX registered design professional who is also attached the Assessor Certificate to the application for a final occupation certificate for the proposed development.												
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.												

BASIX Planning & Environment www.basix.nsw.gov.au Version: 3.0 / DARWINIA_3_7_9 Certificate No.: 962371M_02 Tuesday, 08 January 2019 page 1/13

Schedule of BASIX commitments			
The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.			
1. Commitments for multi-dwelling houses			
(a) Dwellings			
(i) Water			
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.	✓	✓	✓
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).		✓	✓
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install:		✓	✓
(a) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and		✓	✓
(b) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓	✓
(f) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	✓
(g) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	✓
(h) The pool or spa must be located as specified in the table.	✓	✓	✓
(i) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (including any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓

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(ii) Energy			
(a) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.	✓	✓	✓
(b) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.		✓	✓
(c) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must:		✓	✓
(a) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool); if specified, the applicant must install a timer, to control the pool's pump; and		✓	✓
(b) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓	✓
(d) The applicant must install in the dwelling:		✓	✓
(a) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below;		✓	✓
(b) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has the minimum rating; and		✓	✓
(c) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓	✓
(f) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	✓
(g) The applicant must install the photovoltaic system specified for the dwelling under the "Photovoltaic system" heading of the "Alternative energy" column of the table below, and connect the system to that dwelling's electrical system.	✓	✓	✓

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(iii) Thermal Comfort			
(a) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.	✓	✓	✓
(b) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. These plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.		✓	✓
(c) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed certificate which were used to calculate those specifications.		✓	✓
(d) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
(e) Where there is an in-slab heating or cooling system, the applicant must:		✓	✓
(a) install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or		✓	✓
(b) on a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.		✓	✓
(f) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✓	✓	✓

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Thermal loads			
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)	
1	39.5	24.4	
2	39.3	25.9	
3	39.5	23.9	
4	39.5	24.9	
All other dwellings	39.8	24.7	



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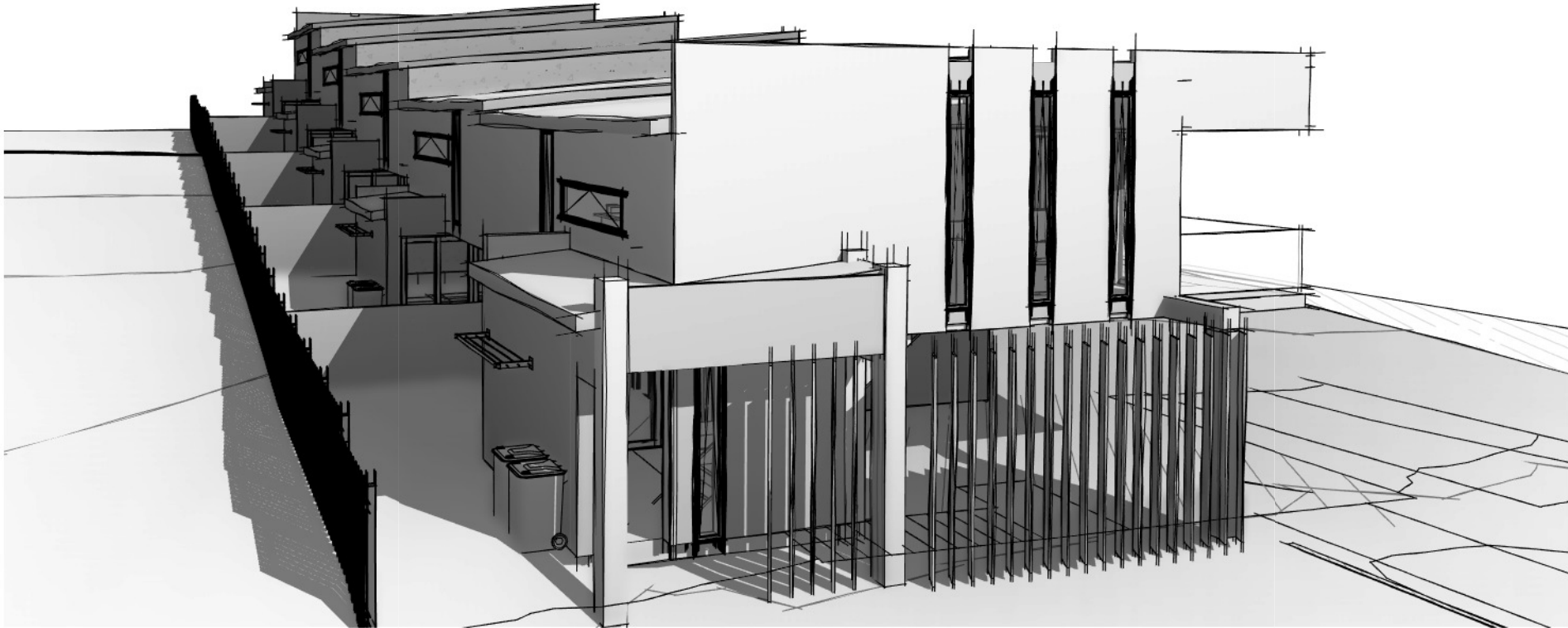
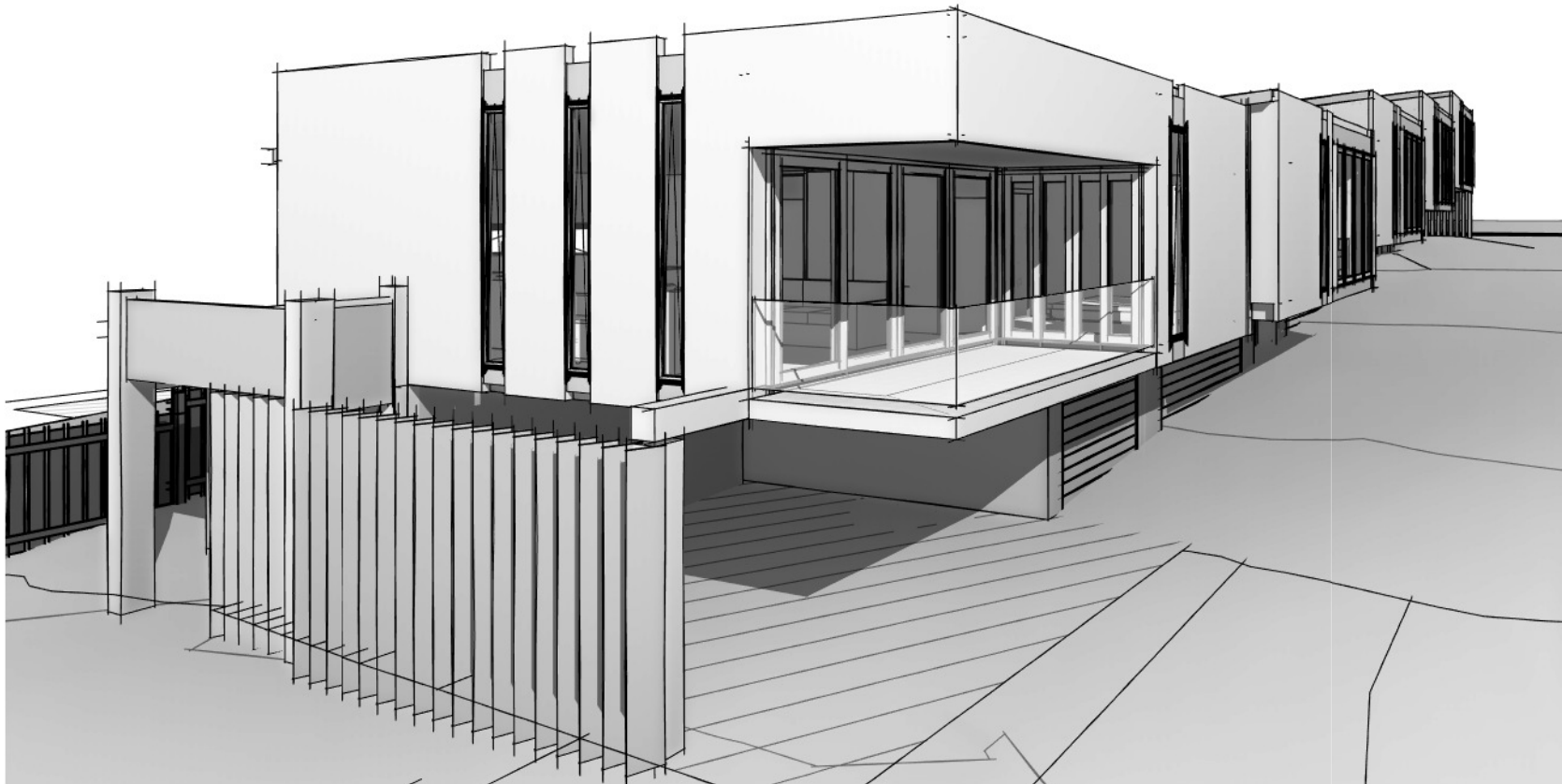
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Issue:	Issue details:	Date:
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6		

Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue:	A		
Drawn By:	M.LISICA	Project number: 10STAR017	
Sheet Name:	BASIX and Schedules	Date: 31/01/19	Sheet:
DEVELOPMENT APPLICATION		Scale:	18



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1		
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Issue: A		Project number: 10STAR017	
Drawn By: M.LISICA		Date: 31/01/19	
Sheet Name: 3d Perspectives		Sheet: 20	
DEVELOPMENT APPLICATION		Scale:	



Ground Floor Unit 1 - 5

SCALE 1 : 125



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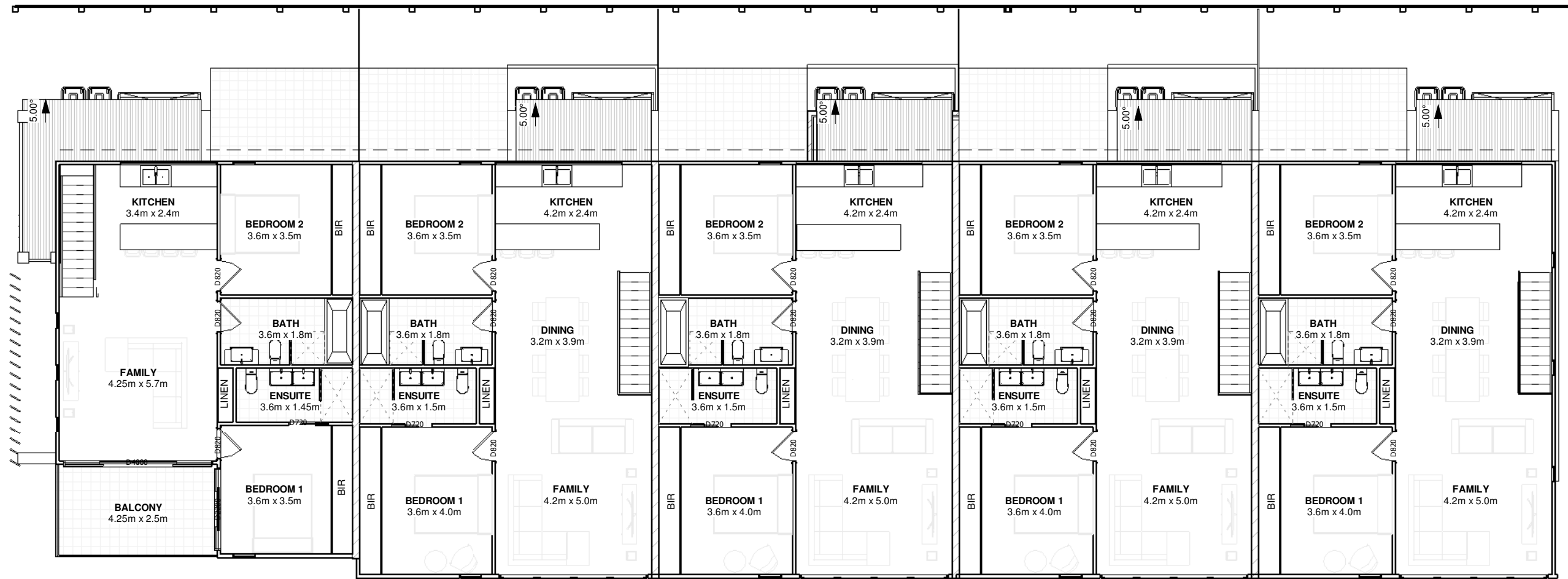
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Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A		Project number: 10STAR017	
Drawn By: M.LISICA		Date: 31/01/19	Sheet: 21
Sheet Name: Ground Floor Unit 1 - 5			
DEVELOPMENT APPLICATION			



First Floor Unit 1 - 5

SCALE 1 : 125



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Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue: A		Project number: 10STAR017	
Drawn By: M.LISICA		Date: 31/01/19	Sheet:



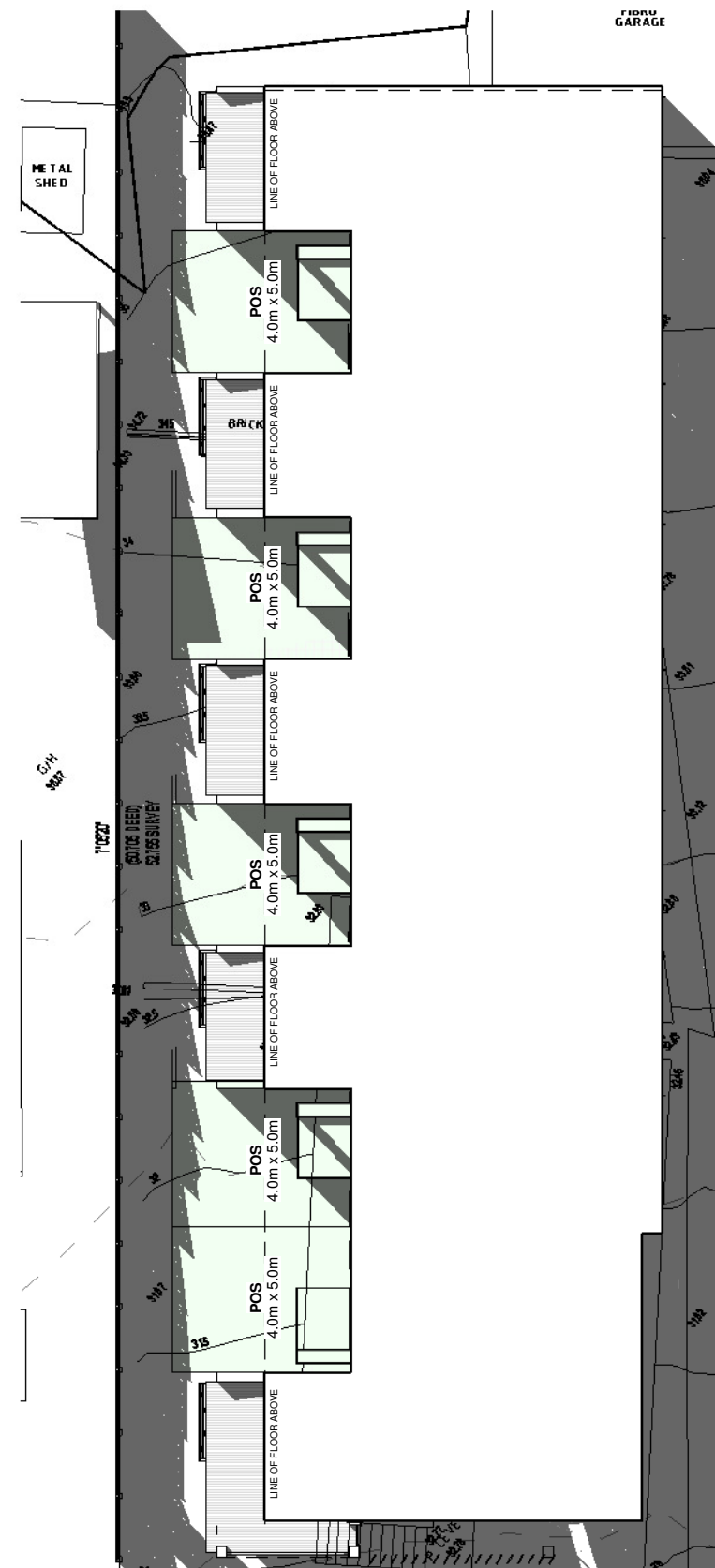
POS Shadow Diagram - Unit 1 - 5 - 1pm

SCALE 1 : 200



POS Shadow Diagram - Unit 1 - 5 - 2pm

SCALE 1 : 200



POS Shadow Diagram - Unit 1 - 5 - 3pm

SCALE 1 : 200

ADDITIONAL SOLAR ACCESS REPORT

Inclusive of Western Boundary Timber Slat Fence and 30 George Street Carport on Eastern Boundary.

The primary private open area of at least 70% of the dwellings within a multi dwelling housing development must receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.

1pm - 5/5 POS Areas comply

2pm - 5/5 POS Areas comply

3pm - 4/5 POS Areas comply

Therefore the proposed development complies with solar access requirements.



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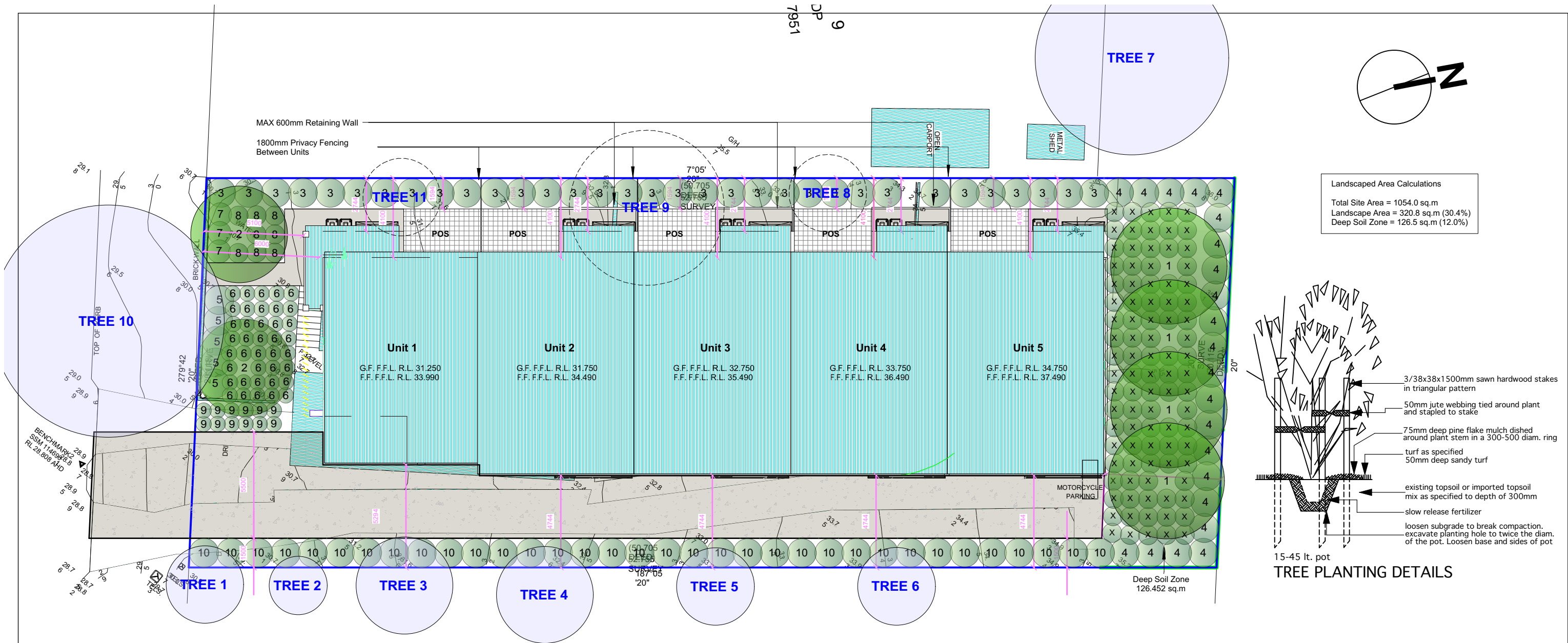
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Issue:	Issue details:	Date:
1		
2		
3		
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Project: Proposed Multi Unit Development		Client & Address: C. DREIZI 28 George Street, Thirroul 2515, Lot 28 DP 1099628	
Issue:		Checker	
Drawn By:		Author	
Sheet Name:		POS Shadow Diagram 1 - 3pm	
DEVELOPMENT APPLICATION		Project number: 10STAR017	
		Date: 31/01/19	Sheet: 23
		Scale: 1 : 200	



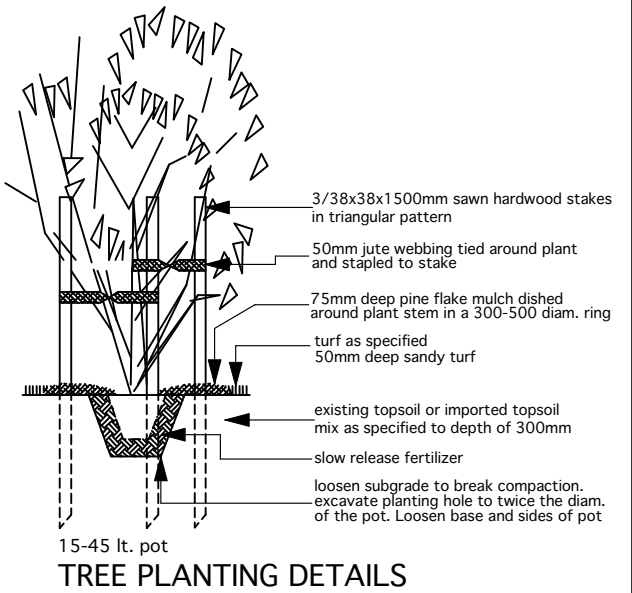
PLANTING DETAILS

- 1- PLANT MATERIAL. Shall be pest and disease free and of correct shape and form. Plants should be well advanced in the growing container but not potbound.
- 2- STAKING Shall be hardwood timber stakes measuring 38x38x1500mm, three stakes per tree. Jute webbing or similar should be used to fix tree species to the stakes.
- 3- MULCHING. Is to be placed in all areas of planting to a depth of 75mm. Mulch should be of shredded cypress pine flake or similar. A consistent depth of mulch is to be maintained for a period of 12 months following initial landscape installation.

MAINTENANCE PROGRAMME

- 4- WATERING. Planted areas shall be watered regularly to ensure continuous and healthy growth. Water shall be frequently applied in the initial period following planting to the extent that healthy plant growth continues and establishment is rapid. Water shall be made available to all new plantings on as need basis, this is a climate dependant variable.
- 5- TURF. If required should be quality kikuyu, buffalo or varietal couch grass that is weed, pest and disease free. Turf shall be maintained at regular intervals with fortnightly cutting in the growing season and monthly cutting in the cool season months for the maintenance period. Cutting height shall ensure that turf is not scalped or damaged by mowing.
- 6- MAINTENANCE PERIOD. Shall be for a period of 12 months commencing from completion of initial landscape works.

LANDSCAPE PLANTING SCHEDULE					
BOTANIC NAME	COMMON NAME	(H) x (W)	SIZE	QTY	STAKING
1 Tristaniopsis laurina 'Luscious'	Luscious Water Gum	8 m x 6 m	45 litre	4	YES
2 Elaeocarpus reticulatus	Blueberry Ash	8 m x 5 m	45 litre	2	YES
3 Syzygium australe 'Resilience'	Resilience Lily Pili	3 m x 1.5 m	200 mm	33	NO
4 Callistemon viminalis 'Red Alert'	Red Alert Bottlebrush	2.5 m x 1.5 m	200 mm	22	NO
5 Correa alba 'Coastal Pink'	Coastal Pink 'COR10' PBR	1.5 m x 1.5 m	200 mm	5	NO
6 Carex appressa	Tall Sedge	0.8 m x 0.8 m	150 mm	39	NO
7 Lomandra hystrix 'Katie Belles'	Katie Belles Lomandra	1.5 m x 1.2 m	200 mm	3	NO
8 Acacia cognata 'Limelight'	Limelight Acacia	0.8 m x 1 m	200 mm	8	NO
9 Raphiolepis 'Springtime'	Springtime Indian Hawthorn	0.8 m x 0.8 m	200 mm	12	NO
X Grevillea juniperina 'Gold Cluster'	Gold Cluster 'H22' PBR	0.3 m x 1 m	150 mm	90	NO
10 Viburnum 'Dense Fence'	Dense Fence Viburnum	2.5 m x 1.5 m	200 mm	34	NO



NO.	DATE	REVISION DETAILS	BY	PROJECT	CLIENT	PROJECT #	MS2018194
A	16/11/18	LAYOUT & PLANTING	MS	LANDSCAPE DESIGN ADDRESS 28 GEORGE STREET, THIRROUL	10STAR LIVING	DWG DATE	05 / 01 / 2019
B	05/01/19	LAYOUT & PLANTING	MS			SCALE @ A3	1 : 200
						DRAWN BY	MARK SPENCE
						FILE NAME	MS2019002
						PAGE #	PAGE 1 OF 1





MARK SPENCE

ENVIRONMENTAL & LANDSCAPE SERVICES
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Cert. 5 Hort. (Arboriculture). MPLA

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Phone: (02) 42273650 / 0421642763
Email: markspence@optusnet.com.au

ABN: 54 132 590 517

VARTIATION STATEMENT

Please see below variation statement requested by council on the below Development control.

5.7 Car Parking Requirements

5.7.2.1. - On site car parking must be positioned to minimise impacts on the streetscape. Car parking must be located behind the building setback and be screened from view with well designed structures and vegetation. Car parking may also be located within a basement.

Variation Request

The proposed development seeks a variation to the above DCP clause 5.7.2.1. the visitor spot slightly encroaches into the front setback by a max of 394mm. Please refer to the image below for more information.

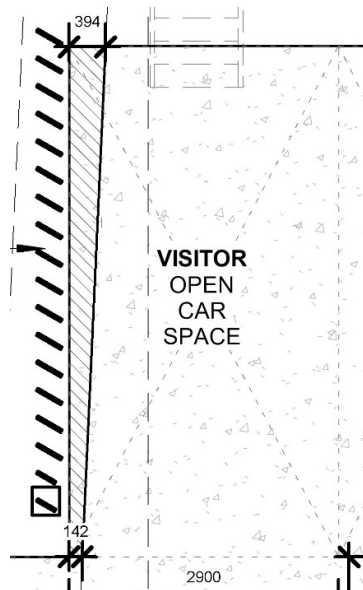


Image above shows amount of encroachment diagonally hatched.

We ask council to consider a variation to the above DCP clause for the following reasons stated below:

- The proposed variation has no negative impact to the occupants, neighbouring dwellings, streetscape or manoeuvrability on site.
- The slight variation is considered only minor given that it only encroaches a maximum of 394mm and tapers down to 142mm encroachment. Given the overall size of the visitor spot the encroachment is only 0.09% of the total size which is considered to need a variation.
- The visitor spot is located behind privacy slats which screen the visitor open car space and Unit 1 open car space from the streetscape and neighbouring dwellings. Therefore, the encroachment will not be seen or affect the façade or the look of the building.
- Manoeuvring will not be affected by the encroachment and it will have no affect on the occupants on the site.

5.7.1 Objectives

(a) To provide an adequate level of onsite car parking based upon anticipated occupancy rates and proximity to public transport.

The proposed development provides the required number of car spaces as set out by Wollongong City Council. The variation has no impact on the number of car spaces within the site.

(b) To ensure that there is adequate provision for access to and manoeuvring within the development.

The proposed development provides the adequate manoeuvrability and access within the site. The variation has no impact on the access or the manoeuvrability within the site.

(c) To ensure that residential developments are designed to be accessible for pedestrians, cyclists and motorists.

The proposed development provides the adequate access for pedestrians, cyclists and motorists. The visitor spot is located just behind the front building line which is the most ideal spot for visitors that come to the site, as this space is the first to be seen and visitor may see whether the space is free or not without disrupting the occupants. The variation has no impact on the accessibility for pedestrians, cyclists and motorists.

(d) To ensure that integrated design of car parking facilities to minimise visual impacts.

The proposed development provides privacy screening along the entire car space length minimising visual impacts to the occupants, streetscape and neighbouring dwellings. The variation has no impact on the minimising visual impacts of parking.

(e) To ensure the provision of facilities such as bike racks, which encourage the use of alternative methods of transport.

The proposed development provides bicycle storage for each of the residents with sufficient area located under the stairs to store bicycles. Motorcyclists parking is also provided on site and all parking requirements set out by Wollongong City Council have been met. The variation has no impact on the alternative methods of parking or transport.

Conclusion

In conclusion, the above variation is slightly varying from the code 5.7.2.1. as set out by Wollongong City Council Development Control Plan. The visitor car space only slightly encroaches over the front building line by a MAX of 394mm and is screened by privacy slats. The proposed variation has no negative impact to the occupants, neighbouring dwellings, streetscape, access, transport methods or manoeuvrability on site therefore is permissible from a planning perspective.

Attachment 3 – Recommended Conditions

Approved Plans and Specifications

- 1 The development shall be implemented substantially in accordance with the details and specifications set out on Project No 10STAR017 Drawing sheet 03 to 15, 21 and 22 dated 31 January 2019 prepared by 10Star and any details on the application form, and with any supporting information received, except as amended by the conditions specified and imposed hereunder.
- 2 **Mailboxes**
The developer must install mailboxes along street frontage of the property boundary in accordance with Australia Post Guidelines. All letterboxes must be individually keyed, NOT master keyed. Prominent house numbers are to be displayed, with a minimum number size of 150 mm in height for each number and letter in the alphabet. The developer must install minimum two (2 No.) reflective paint house number on face of kerb along street frontage of the property to assist emergency services/ deliveries/ visitors.
- 3 **Occupation Certificate**
An Occupation Certificate must be issued by the Principal Certifying Authority prior to occupation or use of the development. In issuing an Occupation Certificate, the Principal Certifying Authority must be satisfied that the requirements of section 6.9 of the Environmental Planning and Assessment Act 1979, have been complied with as well as all of the conditions of the Development Consent.
- 4 **Tree Management**
The developer shall retain existing trees indicated on Concept Landscape Plan by Mark Spence Drafting Dwg. No. MS2018194 Issue B dated 5 January 2018 consisting of tree numbered 1, 2, 3, 4, 5, 6, 7 and 10 on adjacent properties. Total number: eight (8 No.).

Any branch or root pruning which has been given approval, must be carried out by a qualified arborist in accordance with Australian Standard AS4373 (2007).

All tree protection measures are to be installed in accordance with Australian standard AS4790-2009 Protection of Trees on development Sites.

Tree Protection measures to be implemented including and not restricted to: site induction, compliance documentation, modified footings, sub surface utility siting, crown lifting, remedial tree pruning, deadwooding, fencing and signage, sediment buffer, stem protection, establishing tree protection zones (TPZ) and watering and root hormone application if required. Soil levels within the TPZ must remain the same.

The developer shall transplant tree numbered 8 and 11 (Total number: two (2 No.)) to an appropriate location on site by an experienced and qualified contractor.

The developer shall remove existing tree number 9. Total number: one (1 No.) No other trees shall be removed without prior written approval of Council.

Prior to the Issue of the Construction Certificate

- 5 **Flows from Adjoining Properties**
Flows from adjoining properties shall be accepted and catered for within the site. Finished ground and top of retaining wall levels on the boundary shall be no higher than the existing upslope adjacent ground levels. The above requirements must be clearly shown on construction certificate plans prior to the release of the construction certificate.
- 6 **Present Plans to Sydney Water**
Approved plans must be submitted online using Sydney Water Tap, available through www.sydneywater.com.au to determine whether the development will affect Sydney Water's sewer and water mains, stormwater drains and/or easements, and if further requirements need to be met.

The Certifying Authority must ensure that Sydney Water has issued an approval receipt prior to

the issue of a Construction Certificate.

Visit www.sydneywater.com.au or telephone 13 20 92 for further information.

7

Fencing

The development is to be provided with fencing and screen walls at full cost to the applicant/developer as follows:

- a where a screen wall faces the road, pedestrian walkway, reserve or public place that wall shall be constructed of the same brickwork as that used in the external wall of the building/ timber slats;
- b rear and side property boundaries (behind the building line) and private rear courtyards are to be provided with minimum 1.8 metre high brick, timber lapped and capped, palisade or colorbond fences;
- c Any new fences or screens constructed on the site shall be of a type that will not obstruct the free flow of surface runoff from adjoining properties and be compatible with stormwater drainage requirements; and;
- d fencing to suit character of local area.

This requirement is to be reflected on the Construction Certificate plans.

8

Car Parking and Access

The development shall make provision for a total of 11 car parking spaces, 1 motorcycle parking space, a minimum of 2 secure (Class B) residential bicycle spaces and a minimum of 1 visitor bicycle space (Class C). This requirement shall be reflected on the Construction Certificate plans. Any change in the above parking numbers shown on the approved DA plans shall be dealt with via a section 96 modification to the development. The approved parking spaces shall be maintained to the satisfaction of Council, at all times.

9

The parking dimensions, internal circulation, aisle widths, kerb splay corners, head clearance heights, ramp widths and grades of the car parking areas are to be in conformity with the current relevant Australian Standard AS2890.1, except where amended by other conditions of this consent. Details of such compliance are to be reflected on the Construction Certificate plans.

10

A change in driveway paving is required at the entrance threshold within the property boundary to clearly show motorists they are crossing a pedestrian area. Between the property boundary and the kerb, the developer must construct the driveway pavement in accordance with the conditions, technical specifications and levels to be obtained from Council's Manager Works. This requirement shall be reflected on the Construction Certificate plans and any supporting documentation.

11

Structures Adjacent to Driveway

Any proposed structures adjacent to the driveway shall comply with the requirements of the current relevant Australian Standard AS2890.1 (figure 3.2 and 3.3) to provide for adequate pedestrian and vehicle sight distance. This includes, but is not limited to, structures such as signs, letterboxes, retaining walls, dense planting etc. This requirement shall be reflected on the Construction Certificate plans.

12

Water/Wastewater Entering Road Reserve

Provision shall be made for a minimum 200mm wide grated box drain along the boundary of the property at the vehicular crossing/s to prevent surface water entering the road reserve. This requirement shall be reflected on the Construction Certificate plans.

13

The depth and location of all services (ie gas, water, sewer, electricity, telephone, traffic lights, etc) must be ascertained and reflected on the Construction Certificate plans and supporting documentation.

14

Landscaping

The submission of a final Landscape Plan to the Principal Certifying Authority, prior to the release of the Construction Certificate. The final Landscape Plan shall address the following requirements:

- a planting of indigenous plant species typical of the Illawarra Region such as: *Syzygium smithii* (formerly *Acmena smithii*) Lilly pilly, *Archontophoenix cunninghamiana* Bangalow palm, *Backhousia myrtifolia* Grey myrtle, *Elaeocarpus reticulatus* Blueberry ash, *Glochidion ferdinandii* Cheese tree, *Livistona australis* Cabbage palm tree, *Brachychiton acerifolius* Illawarra Flame Tree.; A further list of suitable suggested species for the Thirroul area may be found in Wollongong Development Control Plan 2009 – Chapter E6: Landscaping;
- b a schedule of proposed planting, including botanic name, common name, expected mature height and staking requirements as well as number of plants and pot sizes;
- c the location of all proposed and existing overhead and underground service lines. The location of such service lines shall be clear of the dripline of existing and proposed trees;
- d any proposed hard surface under the canopy of an existing trees shall be permeable and must be laid such that the finished surface levels match the existing level. Permeable paving is to be installed in accordance with the manufacturer's recommendations;
- e the developer shall ensure that proposed planting is child friendly and must **not** include any of the types of plants listed below: **i)** plants known to produce toxins; **ii)** plant with high allergen properties; **vi)** any weed or potential weed species;
- f deletion of the following plant species since they are unsuitable for this type of development *Tristania laurina* 'Luscious' Suggested species *Waterhousea floribunda* 'Sweeper'; and;
- g any fill material should not cover topsoil. Topsoil shall be removed, stockpiled, ameliorated and replaced over any fill material to a minimum depth of 100mm.

The completion of the landscaping works as per the final approved Landscape Plan is required, prior to the issue of Occupation Certificate or commencement of the development.

- 15 The submission of certification from a suitably qualified and experienced landscape designer and drainage consultant to the Principal Certifying Authority prior to the release of the Construction Certificate, confirming that the landscape plan and the drainage plan are compatible.
- 16 The implementation of a landscape maintenance program in accordance with the approved Landscape Plan for a minimum period of 12 months to ensure that all landscape work becomes well established by regular maintenance. Details of the program must be submitted with the Landscape Plan to the Principal Certifying Authority prior to release of the Construction Certificate.

17 **Tree Protection Measures**

The existing trees are to be retained upon the subject property and any trees on adjoining properties shall not be impacted upon during the excavation or construction phases of the development. This will require the installation and maintenance of appropriate tree protection measures, including (but not necessarily limited to) the following:

- a Installation of Tree Protection Fencing - Protective fencing shall be 1.8 metre cyclone chainmesh fence, with posts and portable concrete footings. Details and location of protective fencing must be indicated on the architectural and engineering plans to be submitted to the Principal Certifying Authority prior to release of the Construction Certificate.
- b Mulch Tree Protection Zone: Areas within a Tree Protection Zone are to be mulched with minimum 75 mm thick 100% recycled hardwood chip/leaf litter mulch.
- c Irrigate: Areas within the Tree Protection Zone are to be regularly watered in accordance with the arborist's recommendations.

The submission of a final Site Plan to the Principal Certifying Authority indicating required tree protection fencing is required, prior to the release of the Construction Certificate.

18 **Roof Water Connection to Kerb**

Connection across footways shall be by means of one or two (maximum), sewer grade UPVC pipe(s), 100mm diameter pipes with a continuous downslope gradient to the kerb. Connection to the kerb shall be made with a rectangular, hot dipped galvanised mild steel weephole(s) shaped to suit the kerb profile, with each weephole having the capacity equal to a 100mm diameter pipe.

Alternatively, a maximum of two 150mm x 100mm hot dipped galvanised steel pipes may be used across footways, with the 150mm dimension being parallel to the road surface to suit the kerb profile.

19 **Pier and Beam Footings Adjacent to any Drainage Easement**

Buildings and structures (including brick fences) adjacent to easements shall be supported on pier and beam footings outside the easement. The base of the piers shall be a minimum 900 mm below ground level and shall extend below the invert level of the drainage pipelines within the easement. Structural engineers details are required detailing the size and levels of the existing drainage pipelines and the design levels for the base of the piers adjacent to the easement.

20 Bicycle parking facilities must have adequate weather protection and provide the appropriate level of security as required by the current relevant Australian Standard AS2890.3 - Bicycle Parking Facilities. This requirement shall be reflected on the Construction Certificate plans.

21 **Property Addressing Policy Compliance**

Prior to the issue of any construction certificate, the developer must ensure that any site addressing complies with Council's **Property Addressing Policy** (as amended). Where appropriate, the developer must also lodge a written request to Council's **Infrastructure Systems & Support – Property Addressing** (propertyaddressing@wollongong.nsw.gov.au), for the site addressing prior to the issue of the construction certificate. Please allow up to 3-5 business days for a reply. Enquiries regarding property addressing may be made by calling 4227 8660.

22 **Sizing of Drainage**

All roof gutters, downpipes, pits, and pipelines draining roof areas and other impervious surfaces with no deliberate overflow path to the on-site stormwater detention (OSD) facility, shall be designed to cater for a 1 in 100 year ARI storm event in accordance with AS 3500.3 – Plumbing and Drainage (Stormwater Drainage). Details of gutter/downpipe/pipeline sizes and locations shall be reflected on the Construction Certificate plans.

23 **Stormwater Drainage Design**

A detailed drainage design for the development must be submitted to and approved by the Principal Certifying Authority prior to the release of the Construction Certificate. The detailed drainage design must satisfy the following requirements:

- a Be prepared by a suitably qualified civil engineer in accordance with Chapter E14 of Wollongong City Council's Development Control Plan 2009, Subdivision Policy, conditions listed under this consent, and generally in accordance with the Concept Stormwater Plan concept plan/s lodged for development approval, prepared by Gary Marsh and Associates, Reference No. 1806-06-01, revision A, dated June 2018.
- b Include details of the method of stormwater disposal. Stormwater from the development must be piped to Council's existing stormwater drainage system.
- c Engineering plans and supporting calculations for the stormwater drainage system are to be prepared by a suitably qualified engineer and be designed to ensure that stormwater runoff from upstream properties is conveyed through the site without adverse impact on the development or adjoining properties. The plan must indicate the method of disposal of all stormwater and must include rainwater tanks, existing ground levels, finished surface levels on all paved areas, estimated flow rates, invert levels and sizes of all pipelines.
- d Overflow paths shall be provided to allow for flows of water in excess of the capacity of the pipe/drainage system draining the land, as well as from any detention storage on the land. Blocked pipe situations with 1 in 100 year ARI events shall be incorporated in the design. Overflow paths shall also be provided in low points and depressions. Each overflow path shall be designed to ensure no entry of surface water flows into any building and no concentration of surface water flows onto any adjoining property. Details of each overflow path shall be shown on the detailed drainage design.

24 **On-Site Stormwater Detention (OSD) Design**

The developer must provide on-site stormwater detention (OSD) storage for stormwater runoff

from the development. The design and details of the OSD system must be provided in conjunction with the detailed drainage design and approved by the Principal Certifying Authority prior to the release of the Construction Certificate. The OSD design and details must satisfy the following requirements:

- a Must be prepared by a suitable qualified engineer in accordance with Chapter E14 of the Wollongong DCP 2009.
- b Must include details of the Site Storage Requirement (SSR) and Permissible Site Discharge (PSD) values for the site in accordance with Section 12.2.4 of Chapter E14 of the Wollongong DCP2009.
- c The OSD facility must be designed to withstand the maximum loadings occurring from any combination of traffic (with consideration to residential and heavy vehicles), hydrostatic, earth, and buoyancy forces. Details must be provided demonstrating these requirements have been achieved.
- d The OSD facility shall incorporate a minimum 900mm x 900mm square lockable grate for access and maintenance purposes, provision for safety, debris control screen, and a suitably graded invert to the outlet to prevent ponding.
- e Must include discharge control calculations (i.e. orifice/weir calculations) generally in accordance with Section 12.2.6 and 12.5.4 of Chapter E14 of the Wollongong DCP2009.
- f Details of the orifice plate including diameter of orifice and method of fixing shall be provided.
- g Must include details of a corrosion resistant identification plaque for location on or close to the OSD facility. The plaque shall include the following information and shall be installed prior to the issue of the occupation certificate:
 - The structure is an OSD facility, being part of the stormwater drainage network, and is not to be tampered with.
 - Identification number DA-2018/1192.
 - Any specialist maintenance requirements.
- h Must include a maintenance schedule for the OSD system, generally in accordance with Chapter E14 of the Wollongong DCP2009.

25 **Council Footpath Reserve Works**

All redundant vehicular crossings and laybacks rendered unnecessary by this development must be reconstructed to normal kerb and gutter or existing edge of carriageway treatment to match the existing. The verge from the back of kerb to the boundary must be removed and the area appropriately graded, topsoiled and turfed in a manner that conforms with adjoining road reserve. The area forward of the front boundary must be kept smooth, even and free from any trip hazards. All alterations of public infrastructure where necessary are at the developer's expense.

All new driveway laybacks and driveway crossings must be designed in accordance with Wollongong City Council Standards. Details and locations are to be shown on the Construction Certificate Plans.

26 **Development Contributions**

Pursuant to Section 4.17 of the Environmental Planning and Assessment Act 1979 and the Wollongong City-Wide Development Contributions Plan (2018), a monetary contribution of \$9,160.00 (subject to indexation) must be paid to Council towards the provision of public amenities and services, prior to the release of any associated Construction Certificate.

This amount has been calculated based on the estimated cost of development and the applicable percentage rate.

The contribution amount will be subject to indexation until the date of payment. The formula for indexing the contribution is:

$$\text{Contribution at time of payment} = \$C \times (CP2/CP1)$$

Where:

\$C is the original contribution as set out in the Consent

CP1 is the Consumer Price Index; All Groups CPI; Sydney at the time the consent was issued

CP2 is the Consumer Price Index; All Groups CPI; Sydney at the time of payment

Details of CP1 and CP2 can be found in the Australian Bureau of Statistics website – Catalogue No. 6401.0 - Consumer Price Index, Australia.

The following payment methods are available:

METHOD	HOW	PAYMENT TYPE
Online	http://www.wollongong.nsw.gov.au/applicationpayments Your Payment Reference: 1034793	• Credit Card
In Person	Wollongong City Council Administration Building - Customer Service Centre Ground Floor 41 Burelli Street, WOLLONGONG	• Cash • Credit Card • Bank Cheque
PLEASE MAKE BANK CHEQUE PAYABLE TO: Wollongong City Council (Personal or company cheques are not accepted)		

A copy of the Wollongong City-Wide Development Contributions Plan (2018) and accompanying Fact Sheet may be inspected or obtained from the Wollongong City Council Administration Building, 41 Burelli Street, Wollongong during business hours or on Council's web site at www.wollongong.nsw.gov.au

Prior to the Commencement of Works

27 Plant Recovery Program

Prior to the commencement of demolition and construction on site the developer shall implement a plant recovery program to remove from site groundcover, shrubs and climbing plants worthy of retention and reuse.

28 Sign – Supervisor Contact Details

Before commencement of any work, a sign must be erected in a prominent, visible position:

- a stating that unauthorised entry to the work site is not permitted;
- b showing the name, address and telephone number of the Principal Certifying Authority for the work; and
- c showing the name and address of the principal contractor in charge of the work site and a telephone number at which that person can be contacted at any time for business purposes.

This sign shall be maintained while the work is being carried out and removed upon the completion of the construction works.

29 Temporary Toilet/Closet Facilities

Toilet facilities are to be provided at or in the vicinity of the work site on which work involved in the erection or demolition of a building is being carried out at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

Each toilet provided must be:

- a a standard flushing toilet; and
- b connected to either:
 - i the Sydney Water Corporation Ltd sewerage system or
 - ii an accredited sewage management facility or
 - iii an approved chemical closet.

The toilet facilities shall be provided on-site, prior to the commencement of any works.

30 Enclosure of the Site

The site must be enclosed with a suitable security fence to prohibit unauthorised access, to be

approved by the Principal Certifying Authority. No building work is to commence until the fence is erected.

31 **Demolition Works**

The demolition of the existing structures shall be carried out in accordance with Australian Standard AS2601 (2001): The Demolition of Structures or any other subsequent relevant Australian Standard and the requirements of the SafeWork NSW.

No demolition materials shall be burnt or buried on-site. The person responsible for the demolition works shall ensure that all vehicles leaving the site carrying demolition materials have their loads covered and do not track soil or waste materials onto the road. Any unforeseen hazardous and/or intractable wastes shall be disposed of to the satisfaction of the Principal Certifying Authority. In the event that the demolition works may involve the obstruction of any road reserve/footpath or other Council owned land, a separate application shall be made to Council to enclose the public place with a hoarding or fence over the footpath or other Council owned land.

32 **Demolition Notification to Surrounding Residents**

Demolition must not commence unless at least two (2) days written notice has been given to adjoining residents of the date on which demolition works will commence.

33 **Consultation with SafeWork NSW – Prior to Asbestos Removal**

A licensed asbestos removalist must give written notice to SafeWork NSW at least five (5) days before licensed asbestos removal work is commenced.

34 **Survey Report – Siting of Development within Property Boundaries**

A survey report prepared by a registered surveyor is required to be submitted to the Principal Certifying Authority to ensure that the proposed development is located on the correct allotment and at the approved distances from the boundary. This must be verified by pegging the site prior to commencement of works.

35 **Tree Protection Implementation**

The existing trees are to be retained upon the subject property and any trees on adjoining properties shall not be impacted upon during the excavation or construction phases of the development. This will require the installation and maintenance of appropriate tree protection measures, including (but not necessarily limited to) the following:

- a installation of Tree Protection Fencing - Protective fencing shall be 1.8 m cyclone chainmesh fence, with posts and portable concrete footings;
- b mulch Tree Protection Zone: Areas within a Tree Protection Zone are to be mulched with minimum 75 mm thick 100% recycled hardwood chip/leaf litter mulch;
- c irrigate: Areas within the Tree Protection Zone are to be regularly watered in accordance with the arborist's recommendations.

The tree protection fencing shall be installed prior to the commencement of any demolition, excavation or construction works and shall be maintained throughout the entire construction phases of the development.

36 **Supervising Arborist – Tree Inspection and Installation of Tree Protection Measures**

Prior to the commencement of any demolition, excavation or construction works, the supervising arborist must certify in writing that tree protection measures have been inspected and installed in accordance with the arborist's recommendations and relevant conditions of this consent.

37 **Footpath Levels**

Where required to construct footpath paving for the entire frontage of the development or build up to the property boundary, footpath levels must be obtained from Council's Development Engineering Division prior to the issue of Construction Certificate. This can be achieved by filling out an Application for Footpath Levels form and payment of the relevant fee.

All such structures, finished floor levels and internal driveway slabs shall be constructed to these approved levels.

The longitudinal grade of the footpath must be parallel to the top of kerb level and all building entrance adjustments for level access to building floor levels must be developed within the private property of the building in accordance with the requirements of the latest versions of AS1428.1 (2009), the Building Code of Australia and the Disability Discrimination Act. No adjustments to the uniform and even longitudinal grade of the footpath at the boundary line will be permitted for access points to buildings.

A copy of the approved levels shall be submitted to the Principal Certifying Authority prior to works commencing.

38

Application for Occupation, Use, Disturbance or Work on Footpath/Roadway

Any occupation, use, disturbance or work on the footpath or road reserve for construction purposes, which is likely to cause an interruption to existing pedestrian and/or vehicular traffic flows requires Council consent under Section 138 of the Roads Act 1993. An application must be submitted and approved by Council prior to the works commencing where it is proposed to carry out activities such as, but not limited to, the following:

- a Digging or disruption to footpath/road reserve surface;
- b Loading or unloading machinery/equipment/deliveries;
- c Installation of a fence or hoarding;
- d Stand mobile crane/plant/concrete pump/materials/waste storage containers;
- e Pumping stormwater from the site to Council's stormwater drains;
- f Installation of services, including water, sewer, gas, stormwater, telecommunications and power;
- g Construction of new vehicular crossings or footpaths;
- h Removal of street trees;
- i Carrying out demolition works.

39

Works in Road Reserve – Major Works

Any occupation, use, disturbance or work on the footpath or road reserve for construction purposes, which is likely to cause an interruption to existing pedestrian and/or vehicular traffic flows requires Council consent under Section 138 of the Roads Act 1993.

The application form for Works within the Road Reserve – Section 138 Roads Act can be found on Council's website. The form outlines the requirements to be submitted with the application, to give approval to commence works under the roads act. It is advised that all applications are submitted and fees paid, five (5) days prior to the works within the road reserve are intended to commence. An application must be submitted must be obtained from Wollongong City Council's Development Engineering Team prior to any works commencing where it is proposed to carry out activities such as, but not limited to, the following:

- a Digging or disruption to footpath/road reserve surface;
- b Loading or unloading machinery/equipment/deliveries;
- c Installation of a fence or hoarding;
- d Stand mobile crane/plant/concrete pump/materials/waste storage containers;
- e Pumping stormwater from the site to Council's stormwater drains;
- f Installation of services, including water, sewer, gas, stormwater, telecommunications and power;
- g Construction of new vehicular crossings or footpaths;
- h Removal of street trees;
- i Carrying out demolition works.

Restoration must be in accordance with the following requirements:

- a All restorations are at the cost of the Applicant and must be undertaken in accordance with Council's standard document, "Specification for work within Council's Road reserve".
- b Any existing damage within the immediate work area or caused as a result of the work/occupation, must also be restored with the final works.

40

Protection of Public Infrastructure

Council must be notified in the event of any existing damage to any of its infrastructure such as

the road, kerb and gutter, road shoulder, footpath, drainage structures and street trees fronting the development site, prior to commencement of any work.

Adequate protection must be provided for Council infrastructure prior to work commencing and during building operations.

Any damage to Council's assets shall be made good, prior to the issue of any Occupation Certificate or commencement of the operation.

During Demolition, Excavation or Construction

41 **Survey Certificate**

The submission of a Survey Certificate to the Principal Certifying Authority confirming:

- a the set out of the boundaries of the site,
- b actual siting of the buildings and
- c levels comply with the approved plans.

42 **Piping of Stormwater to Existing Stormwater Drainage System**

Stormwater for the land must be piped to Council's existing stormwater drainage system.

43 **No Adverse Run-off Impacts on Adjoining Properties**

The design of the development shall ensure there are no adverse effects to adjoining properties as a result of flood or stormwater run-off. Attention must be paid to ensure adequate protection for buildings against the ingress of surface run-off.

Allowance must be made for surface run-off from adjoining properties. Any redirection or treatment of that run-off must not adversely affect any other property.

44 **Restricted Hours of Construction Work**

The developer must not carry out any work, other than emergency procedures, to control dust or sediment laden runoff outside the normal working hours, namely, 7.00 am to 5.00 pm, Monday to Saturday, without the prior written consent of the Principal Certifying Authority and Council. No work is permitted on public holidays or Sundays.

Any request to vary these hours shall be submitted to the **Council** in writing detailing:

- a the variation in hours required (length of duration);
- b the reason for that variation (scope of works);
- c the type of work and machinery to be used;
- d method of neighbour notification;
- e supervisor contact number;
- f any proposed measures required to mitigate the impacts of the works.

Note: The developer is advised that other legislation may control the activities for which Council has granted consent, including but not limited to, the Protection of the Environment Operations Act 1997.

45 **Asbestos – Removal, Handling and Disposal Measures/Requirements Asbestos Removal by a Licensed Asbestos Removalist**

The removal of any asbestos material must be carried out by a licensed asbestos removalist if over 10 square metres in area of non-friable asbestos, or if any type of friable asbestos in strict accordance with SafeWork NSW requirements (<http://www.safework.nsw.gov.au>).

46 **Asbestos Waste Collection, Transportation and Disposal**

Asbestos waste must be prepared, contained, transported and disposed of in accordance with SafeWork NSW and NSW Environment Protection Authority requirements. Asbestos waste must only be disposed of at a landfill site that can lawfully receive this type of waste. A receipt must be retained and submitted to the Principal Certifying Authority, and a copy submitted to Council (in the event that Council is not the Principal Certifying Authority), prior to commencement of the construction works.

47 **Provision of Waste Receptacle**

The developer must provide an adequate receptacle to store all waste generated by the development, pending disposal. The receptacle must be regularly emptied and waste must not be allowed to lie or accumulate on the property other than in the receptacle. Consideration should be given to the source separation of recyclable and re-usable materials.

48 **Provision of Taps/Irrigation System**

The provision of common taps and/or an irrigation system is required to guarantee that all landscape works are adequately watered. The location of common taps and/or irrigation system must be implemented in accordance with the approved Landscape Plan.

49 **Screen Planting**

To mitigate impact to adjoining dwellings a continuous hedge is to be established along eastern and western boundaries for the length of property boundary. Recommended species: *Callistemon viminalis* 'Slim', *Photinia glabra* Rubens, *Viburnum tinus*, *Syzygium australe* Aussie Southern, *Syzygium*, 'Resilience', *Viburnum odoratissimum* Dense Fence or *Waterhousea floribunda* Sweeper. Minimum spacing 1000mm. Minimum pot size 5 lt. A further list of suitable suggested species may be found in Wollongong Development Control Plan 2009 – Chapter E6: Landscaping.

Prior to the Issue of the Occupation Certificate

50 **Drainage**

The developer must obtain a certificate of Hydraulic Compliance (using Council's M19 form) from a suitably qualified civil engineer, to confirm that all stormwater drainage and on-site detention works have been constructed in accordance with the approved plans. In addition, full works-as-executed plans, prepared and signed by a Registered Surveyor must be submitted. These plans and certification must satisfy all the stormwater requirements stated in Chapter E14 of the Wollongong DCP2009. This information must be submitted to the Principal Certifying Authority prior to the issue of the final Occupation Certificate.

51 **Restriction on Use – On-site Detention System**

The applicant must create a restriction on use under the Conveyancing Act 1919 over the on-site detention system. The following terms must be included in an appropriate instrument created under the Conveyancing Act 1919 for approval of Council:

“The registered proprietor of the lot burdened must not make or permit or suffer the making of any alterations to any on-site stormwater detention system on the lot(s) burdened without the prior consent in writing of the authority benefited. The expression ‘on-site stormwater detention system’ shall include all ancillary gutters, pipes, drains, walls, kerbs, pits, grates, tanks, chambers, basins and surfaces designed to temporarily detain stormwater as well as all surfaces graded to direct stormwater to those structures.

Name of the authority having the power to release, vary or modify the restriction referred to is Wollongong City Council.”

The instrument, showing the restriction, must be submitted to the Principal Certifying Authority for endorsement prior to the issue of the final Occupation Certificate and the use of the development.

52 **Compensatory Planting**

The developer must make compensatory provision for the trees required to be removed as a result of the development. In this regard, one (1 No.) 75 litre container advanced mature plant stock shall be placed within the property boundary of the site in appropriate locations. The suggested species are to be selected from the following list: *Elaeocarpus reticulatus* Blueberry ash, *Livistona australis* Cabbage palm tree, or *Brachychiton acerifolius* Illawarra Flame Tree. A further list of suitable suggested species may be found in Wollongong Development Control Plan 2009 – Chapter E6: Landscaping.

53 **Positive Covenant – On-Site Detention Maintenance Schedule**

A positive covenant shall be created under the Conveyancing Act 1919, requiring the property owner(s) to undertake maintenance in accordance with the Construction Certificate approved On-Site Stormwater Detention System and Maintenance Schedule (application number to be

referenced).

The instrument, showing the positive covenant must be submitted to the Principal Certifying Authority for endorsement prior to the issue of the final Occupation Certificate and the use of the development.

54 **On-Site Detention – Structural Certification**

The submission of a certificate from a suitably qualified practising civil and/or structural engineer to the Principal Certifying Authority is required prior to the issue of the final Occupation Certificate. This certification is required to verify the structural adequacy of the on-site detention facility and that the facility has been constructed in accordance with the approved Construction Certificate plans.

55 **Completion of Landscape Works**

The completion of the landscaping works as per the final approved Landscape Plan is required prior to the issue of Occupation Certificate.

Operational Phases of the Development/Use of the Site

56 **Site Facilities**

Site facilities, such as air-conditioning units, satellite dishes and other ancillary structures are to be adequately setback from neighbouring properties, located away from the street frontage and not in a place where they are a skyline feature. Space shall be provided for clothes lines and waste/recycling bins for all dwellings behind the front building line but outside of the private open space area.

57 **Visitor Car Parking Signage**

The visitor car space shall be clearly identified with appropriate signage.

58 **Loading/Unloading Operations/Activities**

All loading/unloading operations are to take place at all times wholly within the confines of the site or within the road reserve under an approved traffic control plan.