

Wollongong Local Planning Panel Assessment Report | 3 July 2019

WLPP No.	Item No. 1
DA No.	DA-2018/1610
Proposal	Residential - Demolition of dwelling houses and tree removal, construction of multi dwelling housing - six (6) x townhouses and associated carparking, drainage and landscaping
Property	9 - 11 Bundarra Place, DAPTO NSW 2530
Applicant	Design Workshop Australia
Responsible Team	Development Assessment & Certification – City Wide Planning Team (RT)

ASSESSMENT REPORT AND RECOMMENDATION

Executive Summary

Reason for consideration by Wollongong Local Planning Panel (WLPP)

The proposal has been referred to the WLPP **for advice** pursuant to part 1 of Wollongong City Councils Submissions Policy, as the application includes multi-dwelling housing with a construction cost of more than \$1 Million and is the subject of more than five submissions by way of objection.

Proposal

The proposal seeks consent for the following:

- Demolition of the dwelling houses and tree removal; and
- Construction of multi-dwelling housing and associated carparking, drainage and landscaping.

Permissibility

The subject site is zoned R2 Low Density Residential pursuant to Wollongong Local Environmental Plan (WLEP) 2009. Multi-dwelling housing is permissible with consent in the R2 zone. Demolition and tree removal are ancillary works to facilitate the proposal and as such are also permissible.

Consultation

Details of the original proposal and subsequent amended plans were publicly exhibited in accordance with Appendix 1 of the Wollongong Development Control Plan (WDCP) 2009 over two (2) separate notification periods. Five (5) submissions were received from the first notification period.

A total of two (2) submissions were received from the second notification period. The second notification period was required following receipt of amended architectural plans that reoriented Units 4 to 6 on the site, reduced the size of Units 2,3 and 5 and increased the deep soil zone planting.

The issues identified are discussed at section 1.5 of this report

Internal

Details of the proposal were referred to Council's Stormwater, Traffic, Landscape, Environment and SCAT Officers for assessment. Satisfactory referral advice, comments and/or recommended conditions were provided in each instance. Assessment considerations of internal groups as relates to relevant Chapters of the WDCP 2009 are presented at section 2.3.1 of this report.

Main Issues

The main issues resulting from the assessment process are:-

- Variation requests regarding the front setback development control in Chapter B1 Clause 5.3.2(1) and deep soil zone development control Chapter B1 Clause 5.9.2(2) of WDCP2009; and
- Car parking;

RECOMMENDATION

DA-2018/1610 be approved subject to the conditions provided in **Attachment 5**.

1.0 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 (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

1.2 DETAILED DESCRIPTION OF PROPOSAL

The application comprises the following:

- Demolition of the existing dwellings and ancillary structures on the site and tree removals;
- Construction of multi-dwelling housing consisting of six (6) townhouses and associated drainage and carparking.

1.3 BACKGROUND

The development history of the site is as follows:

PL-2018/22, Residential - dual occupancy and subdivision - torrens title -two lots - Completed

DA-2018/1071, Residential - demolition of garage and tree removals, Subdivision - Torrens title - two (2) lots, construction of dual occupancy on rear lot and Subdivision of dual occupancy - Torrens title - two (2) lots – Current Application

Applications for 9 Bundarra Place, DAPTO NSW 2530

Status

PL-2018/110, Residential - multi unit housing

Completed

DA-2018/1610, Residential - Demolition of dwelling houses and tree removal, construction of multi dwelling housing - six (6) x townhouses and associated carparking, drainage and landscaping

Current Application

Applications for 11 Bundarra Place, DAPTO NSW 2530

Status

BC-1990/705, Cottage

Approved

PL-2018/110, Residential - multi unit housing

Completed

DA-2018/1610, Residential - Demolition of dwelling houses and tree removal, construction of multi dwelling housing - six (6) x townhouses and associated carparking, drainage and landscaping

Current Application

Customer service actions:

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

1.4 SITE DESCRIPTION

The site is located at 9 and 11 Bundarra Place, DAPTO and the title reference is Lot 32 DP 32081 and Lot 31 DP 32081.

Situated on No.9 Bundarra Place is a single storey brick dwelling with a pitched iron roof. There is a detached garage to the rear of the dwelling. Situated on No.11 Bundarra Place is a single storey clad dwelling with a pitched iron roof. There is a small shed to the rear of the dwelling. The subject sites are accessed via driveways off Bundarra Place.

Both lots are irregular shaped allotments situated on the radius of a cul-de-sac. No.9 Bundarra Place has a site area of 739.8m² and No.11 Bundarra Place a site area of 853.7m² each making a combined site area of 1593.5m². The site slopes to the front of the block.

The street scene in the immediate vicinity is characterised by low density residential dwellings predominantly of single storey construction. Adjoining development consists of single storey clad dwellings on either side.



Figure 1: Aerial photograph (2018)

Property constraints

- Acid sulphate soils – Class 5

There are no restrictions on the title.

1.5 SUBMISSIONS

Details of the original proposal and subsequent amended plans were publicly exhibited in accordance with Appendix 1 of the Wollongong Development Control Plan (WDCP) 2009 over two (2) separate notification periods. Five (5) submissions were received from the first notification period.

A total of two (2) submissions were received from the second notification period. The second notification period was required following receipt of amended architectural plans that reoriented Units 4 to 6 on the site, reduced the size of Units 2,3 and 5 and increased the deep soil zone planting. The main issues identified within the submissions are discussed below.

Table 1: Submissions

Concern	Comment
1. Traffic and Parking	<p>Consideration was given to traffic safety and parking in the assessment of the application. Details of the application were referred to Council's Traffic Officer for comment.</p> <p>Advice received indicates that the car parking, traffic generation, access and egress arrangements and manoeuvring are acceptable in this circumstance for the following reasons:</p> <ul style="list-style-type: none"> - Council's DCP requires twelve (12) parking spaces for the proposed new development. The proposal provides twelve (12) onsite parking spaces. - The proposed development satisfies Council's driveway cross over width controls thus minimising impacts on street parking spaces. - The proposed development will result in a maximum of 4 additional trips in and out in the a.m. and p.m. peak hours based on RMS rates. Therefore it is considered that the traffic generated by the proposed development will not be unreasonable in this circumstance, and is within the capacity of the local road network. - The proposed access arrangement will improve existing egress arrangements for the site by allowing vehicles to now leave the site in a forward facing direction. - It is noted that during construction that workers will need to park near the site as with any development under construction. If there are any concerns the residents should consult with the Site Manager. <p>A condition as at Attachment 5 accounts for all loading/unloading operations to take place at all times within the confines of the site or within the road reserve under an approved traffic control plan.</p>
2. Impact on Services	<p>With respect to concerns raised regarding impacts on the existing services, the water and sewer lines are a Sydney Water asset. Conditions as at Attachment 5 account for documentary evidence of consultation with Sydney Water during the Construction Certificate and for the application to obtain a Section 73 Compliance Certificate from Sydney Water. These conditions allow Sydney Water to determine the availability of water and sewer services to the new development and if any works are required to extend, adjust or connect services and to protect Sydney Water assets.</p> <p>With respect to other services, conditions at Attachment 5 require the submission of documentary evidence from the relevant authorities relating to the</p>

Concern	Comment
	connection of electricity and telecommunications to service the proposed lots.
3. Impact on Existing Trees and Landscaping	<p>Concerns were raised by Council's Landscape Officer with regard to impacts on existing trees to be retained including Tree 2 and the provision of deep soil zone planting. Amended Architectural Plans and Landscape Plans reducing impacts on trees considered worthy of retention through amendments to the footprint of the development and increasing the provision of deep soil zone planting on the site were provided by the applicant. These amended plans and documentation have been reviewed by Council's Landscape Officer and are considered to resolve concerns raised</p> <p>Landscaping conditions are included at Attachment 5 specifying trees to be removed, trees to be retained, compensatory plantings and tree protection and management.</p>
4. Character of the Area	<p>Chapter D1 indicates that The residential areas in Dapto are likely to experience some redevelopment with some older dwelling stock being replaced by larger contemporary single or two storey dwellings. Medium density villa or townhouse developments are supportable in areas within close proximity to the Dapto Town Centre.</p> <p>The proposal provides for replacement of older dwelling stock with medium density townhouse development with in close proximity to the Dapto Town Centre, approximately 450m from Dapto Mall.</p> <p>Development within the immediate vicinity of the subject site is characterised by low density residential development with some medium density development located on other streets within the vicinity.</p> <p>The proposed development satisfies Council's Floor Space Ratio and Building Height development standards as identified in the WLEP 2009. Overall the bulk and scale of the proposed development is considered acceptable in this circumstance.</p> <p>The proposed development is a permissible use in the R2 zone and satisfies controls for multi-dwelling housing development under Wollongong Development Control Plan 2009. The proposal is considered to not detract from the existing character of Dapto and is compatible with the desired future character for the locality.</p>
5. Waste	<p>Council's street waste collection service is to be utilised. It is noted that a garbage compactor is proposed with this development so as to minimise the number of bins required for the development and impacts on street</p>

Concern	Comment
	<p>parking on garbage collection days. Council's Traffic Officer has reviewed the proposal providing conditionally satisfactory referral advice.</p>
<p>6. Garbage Compactor</p>	<p>Consideration was given to the proposed garbage compactor and its impacts on the adjoining residences.</p> <p>Additional information was requested by Council regarding the specifications and operational times of the proposed garbage compactor so as to enable a more complete assessment. The additional information has been reviewed by Council's Environment Officer and is considered to be conditionally satisfactory.</p> <p>Conditions as at Attachment 5 specify hours of operation and compliance with NSW EPA Noise and/or acoustic treatment.</p>
<p>7. Stormwater</p>	<p>Concerns were raised by Council's Stormwater Officer regarding stormwater management on the site. Amended stormwater management and landscape plans were submitted and have been reviewed by Council's Stormwater Officer. Advice received indicates that the stormwater drainage design is considered to be conditionally acceptable. The stormwater drainage design is in accordance with WDCP2009 Chapter E14 and incorporates On Site Detention (OSD) so as to limit the flow rate and ensure there is no increase in flow rates from the site. The OSD will ensure that runoff volumes will discharge at a controlled rate.</p> <p>Conditions as at Attachment 5 account for the OSD design and stormwater run-off from the proposed development such that is not directed so as to have an adverse effect on adjoining properties.</p>
<p>8. Size of Development (Yield)</p>	<p>The proposed development satisfies Council's Floor Space Ratio and Building Height development standards as identified in the WLEP 2009, and overall the bulk and scale of the proposed development is considered acceptable in this circumstance.</p> <p>The proposal it is considered satisfies the controls for multi-dwelling housing development under WDCP 2009.</p> <p>The development has been designed so as to minimise impacts on the site and surrounding properties. Inherent site constraints in the form existing mature vegetation have been considered such that significant trees on the subject site are retained and impacts on trees on adjoining properties are minimised.</p> <p>Therefore it is considered that the size of the development as proposed is acceptable in this circumstance.</p>

Concern	Comment
9. Safety and Security	An assessment of the proposal against Council's Crime Prevention Through Environmental Design principles was undertaken and the proposal considered satisfactory - see section Attachment 3 .

Table 2: Number of concerns raised in submissions

Concern	1	2	3	4	5	6	7	8	9
Frequency	5	4	1	2	4	3	4	2	1

1.6 CONSULTATION

1.6.1 INTERNAL CONSULTATION

Stormwater Engineer

Council's Stormwater Officer has assessed the application submission and provided conditionally satisfactory advice.

Traffic Engineer

Council's Traffic Officer has assessed the application submission and provided conditionally satisfactory advice.

Concerns were raised by Council with regard to the number of parking spaces provided for the proposed development and the location of the bicycle parking spaces. Amended Architectural Plans were submitted reducing the Gross Floor Area of Units 2 to 5 thus reducing the number of parking spaces required and relocating the bicycle parking spaces internally to the garages. These amended plans have been reviewed by Council's Traffic Officer and are considered to resolve concerns raised.

Conditions are included at **Attachment 5** specifying the number of carparking spaces to be provided and access provisions and bicycle parking facilities.

Landscape Officer

Council's Landscape Officer has assessed the application submission and provided conditionally satisfactory advice.

It is noted that particular consideration was given to tree removal and impacts of the proposed development on trees to be retained by Council's Landscape Officer.

Concerns were raised by Council's Landscape Officer with regard to impacts on existing trees to be retained and the provision of deep soil zone planting. Amended Architectural Plans and Landscape Plans reducing impacts on trees considered worthy of retention through amendments to the footprint of the development and increasing the provision of deep soil zone planting on the site were provided by the applicant. These amended plans and documentation have been reviewed by Council's Landscape Officer and are considered to resolve concerns raised.

Landscaping conditions are included at **Attachment 5** specifying trees to be removed, trees to be retained, compensatory plantings, tree protection and management.

Environment Officer

Council's Environment Officer has assessed the application submission with particular consideration given to noise impacts from the proposed garbage compactor and provided conditionally satisfactory advice.

Conditions are included at **Attachment 5** specifying noise and operational management measures for use of the garbage compactor.

Safer Community Action Team (SCAT) Officer

Council's SCAT officer has assessed the application submission and considered it conditionally satisfactory.

1.6.1 EXTERNAL CONSULTATION

There was no external consultation required for the proposed development.

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 desktop audit of the subject site revealed there is no previous history of land uses that could be considered to present as a contamination risk. The earthworks are considered minor, reflective of normal residential construction and the proposal does not comprise a change of use. A desktop audit of the subject site revealed there is no previous history of land uses that could be considered to present as a contamination risk. No concerns are raised in regard to contamination as relates to the intended use of the land and the requirements of clause 7.

The site is therefore considered suitable for the proposed development and consistent with the assessment considerations of SEPP 55.

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

SEPP BASIX applies to the development. In accordance with Schedule 1 of the Regulations and the requirements of the SEPP, a BASIX Certificate has been submitted in support of the application demonstrating that the proposed development achieves the BASIX targets.

2.1.4 WOLLONGONG LOCAL ENVIRONMENTAL PLAN 2009

Part 1 Preliminary

Clause 1.4 Definitions

Demolition: In relation to a building means wholly or partly destroy, dismantle or deface the building.

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.

Note. Multi dwelling housing is a type of **residential accommodation**

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**.

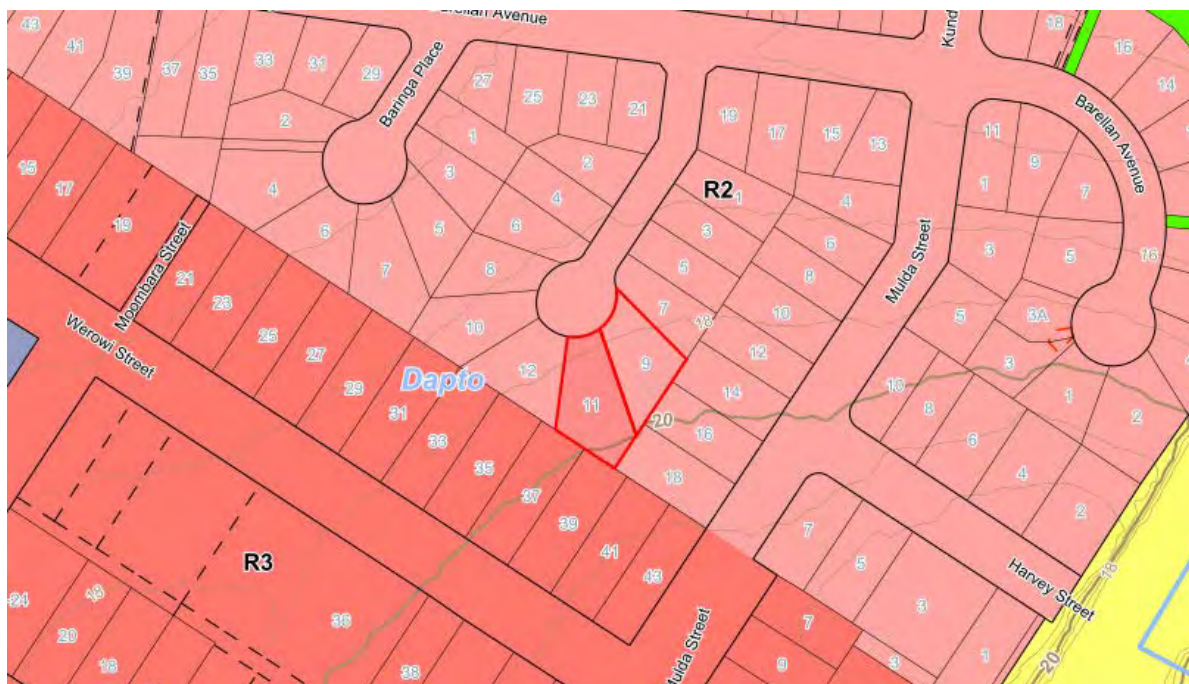


Figure 2: WLEP 2009 zoning map

Clause 2.3 – Zone objectives and land use table

The objectives of the zone R2 Low Density Residential 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.*

It is considered that the proposed dual occupancy is generally satisfactory with regards to the above objectives for Zone R2 Low Density Residential.

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

ZONE R2 Low Density Residential permitted uses:

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Boat launching ramps; Child care centres; Community facilities; Dual occupancies; Dwelling houses; Environmental facilities; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; 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; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Signage; Veterinary hospitals

The proposal is categorised as multi-dwelling housing and is permissible in the R2 Low Density Residential zone with development consent. Demolition and tree removal are ancillary works to facilitate the proposal and as such are also permissible.

Clause 2.7 Demolition requires development consent

Demolition of a building may be carried out only with development consent. The demolition of the existing detached garage on the land is required to facilitate access to the development as proposed.

Part 4 Principal development standards

Clause 4.3 Height of buildings

The following proposed building heights do not exceed the maximum building height of 9m permitted for the site:

- Unit 1: 7.274m
- Unit 2: 7.052m
- Unit 3: 6.936m
- Unit 4: 6.734m.
- Unit 5: 6.671m
- Unit 6: 7.211m

Clause 4.4 Floor space ratio

Maximum FSR permitted for the site: 0.5:1

Resultant FSR provided for Site: $733.014\text{m}^2 / 1593.5\text{m}^2 = 0.46:1$

The proposed floor space ratio does not exceed the maximum permissible for the site.

Part 7 Local provisions – general

Clause 7.1 Public utility infrastructure

The proposal has been assessed against Clause 7.1 of WLEP2009 and it is considered that the subject site is already serviced by public utilities which can be augmented to service the new proposal.

Clause 7.5 Acid Sulfate Soils

The subject site is identified as being affected by Class 5 acid sulphate soils. However as the proposed works for the development are to be located at and above 18m A.H.D and are not likely to lower the water table beyond 1m it is considered that there is minimal impact.

Clause 7.6 Earthworks

Earthworks associated with the proposal are considered minor, reflective of normal residential construction and thus acceptable in this circumstance.

Clause 7.14 Minimum site width

The proposal involves multi-dwelling housing. The subject site consists of two (2) lots situated on the radius of a cul-de-sac with a combined overall frontage of approximately 27.432m at the front boundary and 46.03m at the rear boundary. A condition as **Attachment 5** will require the consolidation of these two (2) lots prior to the issue of the Occupation Certificate. Submitted plans indicate that no part of the proposed development is located on a part of the site with a minimum site width of less than 18m. Therefore the proposed development is considered to satisfy Part 7.14 of WLEP2009 in this circumstance.

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

None applicable to the site or proposed development.

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

2.3.1 WOLLONGONG DEVELOPMENT CONTROL PLAN 2009

The development has been assessed against the relevant chapters of WDCP 2009. Compliance tables can be found at **Attachment 3** to this report. The proposal does involve variations to the front setback control for Unit 1 and the deep soil zone. Variation request statements with justification have been provided by the applicant in accordance with clause 8 of Chapter A1 of WDCP 2009 and

are included at **Attachment 4**. The variation has been considered and is capable of support in this instance as discussed within **Attachment 3** of this report.

2.3.2 WOLLONGONG CITY WIDE DEVELOPMENT CONTRIBUTIONS PLAN 2018

The estimated cost of works is \$1,500,000 and a levy of 1% is applicable under this plan as the threshold value is \$100,000.

2.4 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

2.5 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?

A condition at **Attachment 5** requires compliance with AS 2601 for demolition works.

93 Fire safety and other considerations

Not applicable as there is no change of use proposal.

94 Consent authority may require buildings to be upgraded

Not applicable

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

Context and Setting:

In regard to the matter of context, the planning principle in *Project Venture Developments v Pittwater Council* [2005] NSWLEC 191 is relevant in that it provides guidance in the assessment of compatibility. The two major aspects of compatibility are physical impact and visual impact. In assessing each of these the following questions should be asked:

- Are the proposals physical impacts on surrounding development acceptable? The physical impacts include constraints on the development potential of surrounding sites.
- Is the proposals appearance in harmony with the buildings around it and the character of the street?

In response to the first question, matters such as overshadowing, privacy concerns, bulk scale and setbacks are relevant. The proposed development is for a development involving demolition of existing structures and multi-dwelling housing development. The proposed lots allow for reasonable siting of the proposed dwellings to satisfy the objectives of Council's boundary setback requirements so as to have minimal impact on the adjoining properties in terms of privacy and overshadowing and to allow reasonable solar access to the proposed dwellings.

In regard to the visual impact, the development is considered to be largely in harmony with the surrounding character the area. The immediate area surrounding the site is characterised by low density residential development of varying architectural styles. The proposed development satisfies Council's Floor Space Ratio and Building Height development standards as identified in the WLEP 2009, and overall the bulk and scale of the proposed development is considered acceptable in this circumstance.

The scale of the development as viewed from the street is considered comparable to the future

desired character of the locality.

In summary, the proposal has been assessed with regard to the amenity impacts from the development, the zoning, permissible lot size and existing and future character of the area, and is considered to be compatible with the local area.

Access, Transport and Traffic:

Access to the site will be via an approved driveway to Council's formed roadway which adjoins Council's Local Road. The development is considered not to result in an adverse impact on the traffic movement and access to the site. Council's Traffic Officer has no objections to the proposed access arrangements subject to conditions included at **Attachment 5**.

Public Domain:

The development is considered to be consistent with the amenity of the locality, the development is not considered to result in significant impact on the public domain.

Utilities:

The proposal is not envisaged to place an unreasonable demand on utilities supply. Existing utilities can be augmented to service the proposal.

Heritage:

No heritage items will be impacted by the proposal.

Other land resources:

The proposal is considered to contribute to orderly development of the site and is not envisaged to impact upon valuable land resources.

Water:

The site is presently serviced by Sydney Water, and the proposal is not envisaged to have unreasonable water consumption. A BASIX certificate has been provided for the proposal.

Soils:

It is expected that, with the use of appropriate erosion and sedimentation controls during construction, soil impacts will not be unreasonably adverse.

The soil profile is considered to be acceptable for the construction of the proposed development.

Air and Microclimate:

The proposal is not expected to have a negative impact on air or microclimate.

Flora and Fauna:

Trees are proposed to be removed as part of this proposal to make way for the proposed development. The proposal is not expected to adversely impact fauna. Council's Landscape and Environment Officers have reviewed the application submission including the Arborist report and Landscape Plan and raised no issues with the proposed removal of the trees subject to conditions at **Attachment 5** that specify trees to be removed, trees to be retained, tree protection and management and compensatory plantings.

Conditions are included at that account for inspection of trees for wildlife prior to removal, contacting WIRES for advice and protection of wildlife during tree removal.

Waste:

Waste management during construction can be managed through proper arrangements. A condition is proposed requiring the use of an appropriate receptacle for any waste generated during the construction and compliance with the Site Waste Management and Minimisation Plan provided with

the Application submission.

Council's street waste collection service is to be utilised for the development once occupied. A garbage compactor is proposed with this development so as to minimise the number of bins required for the development and impacts on street parking on garbage collection days. Council's Traffic and Environment Officers have reviewed the proposal providing conditionally satisfactory referral advice.

Energy:

The proposal is not envisaged to have unreasonable energy consumption. A BASIX certificate has been provided for the proposal.

Noise and vibration:

Noise and vibration impacts during demolition, excavation and construction are unavoidable. If the development is approved, a suite of conditions are recommended for imposition (see **Attachment 5**) to minimise nuisance during demolition and construction and operation of the garbage compactor.

Natural hazards:

There are no natural hazards affecting the site that would prevent the proposal.

Technological hazards:

There are no technological hazards affecting the site that would prevent the proposal.

The proposal is identified as being affected by class 5 acid sulphate soils. The application submission has been assessed in this regard and is considered satisfactory. It is considered that there is minimal impact and threat presented by Acid Sulphate Soils.

Safety, Security and Crime Prevention:

This application does not result in greater opportunities for criminal or antisocial behaviour.

Social Impact:

The proposal is not expected to create negative social impacts.

Economic Impact:

The proposal is not expected to create negative economic impacts.

Site Design and Internal Design:

The application does not result in any departures from WLEP 2009 development standards. The application identifies variations to the front setback development control in Chapter B1 Clause 5.3.2(1) and deep soil zone development control Chapter B1 Clause 5.9.2(2) of WDCP2009. These variations have been considered in section 2.3.1 as being adequately justified and are thus capable of support.

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

Cumulative Impacts:

The development is considered consistent with the amenity of the neighbourhood and to be consistent with the surrounding development.

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 with regard to the zoning of the site and is not expected to result in negative impacts on the amenity of the locality or adjoining developments.

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 proposal is not expected to result in 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

The proposed development has been assessed with regard to the relevant prescribed matters for consideration outlined in Section 4.15 of the Environmental Planning & Assessment Act 1979, the provisions of Wollongong Local Environmental Plan 2009 and all relevant Council DCPs, Codes and Policies and found to be satisfactory.

Multi-dwelling housing is permitted in the R2 land use zone with development consent pursuant to the WLEP 2009. The proposal does not result in exceptions to development standards.

The proposal does involve a variation to the front control for Units 1 and deep soil zone control. Variation request statements with justification have been provided by the applicant in accordance with clause 8 of Chapter A1 of WDCP 2009. The variations have been considered and are capable of support in this instance as discussed within section 2.3.1 of this report.

The design of the development is appropriate with regard to the controls outlined in the Wollongong DCP 2009.

Some of the issues raised in the public submissions have been resolved by the applicant in the submission of amended plans/additional information. Any unresolved issues are not considered sufficient to warrant refusal of the application.

All internal referrals are conditionally satisfactory and there are no outstanding issues.

It is considered that the proposed development is unlikely to result in adverse impacts on the character or amenity of the surrounding area, environment and adjoining development.

4 RECOMMENDATION

DA-2018/1610 be approved pursuant to Section 4.16(1) of the Environmental Planning & Assessment Act 1979 subject to the conditions provided at **Attachment 5**.

5 ATTACHMENTS

1	Plans and Arborist Report
2	Site Inspection Photos
3	Compliance table for Wollongong Development Control Plan 2009
4	Clause 8 Variation to Development Control Statements
5	Conditions

PN1752 - 9-11 BUNDERRA PLACE, DAPTO

BUCHANAN/PERRETT

SITE ADDRESS

LOT 31 & 32, 9-11 BUNDERRA PLACE, DAPTO
D.P. 32081

SITE AREA

1593.4sqm TOTAL

SUMMARY

GFA	TOTAL ALLOWABLE	796.70 sqm	UNIT - 1	129.5m2
	TOTAL PROPOSED	720.6 sqm	UNIT - 2	109.9m2
			UNIT - 3	109.6m2
FSR	ALLOWABLE	0.50: 1	UNIT - 4	109.9m2
	PROPOSED	0.45 : 1	UNIT - 5	109.9m2
			UNIT - 6	132.6m2
LANDSCAPED AREA		PROPOSED 628.5 sqm (39%)		
DEEP SOIL AREA		PROPOSED 384 sqm (24%)		
CARPARKING REQUIRED	10	RESIDENTIAL (1.0 SPACES PER UNIT <70sqm) (1.5 SPACES PER UNIT 70-110sqm) UNIT 70-110sqm) (2.0 SPACES PER UNIT 110>sqm)		
	1.2	VISITORS (0.2 SPACES PER UNIT)		
CARPARKING PROVIDED	10 2	RESIDENTIAL VISITORS		
MOTORBIKE SPACES PROVIDED	1	RESIDENTIAL		
BICYCLE SPACES PROVIDED	2 1	RESIDENTIAL VISITOR		

DRAWING LIST

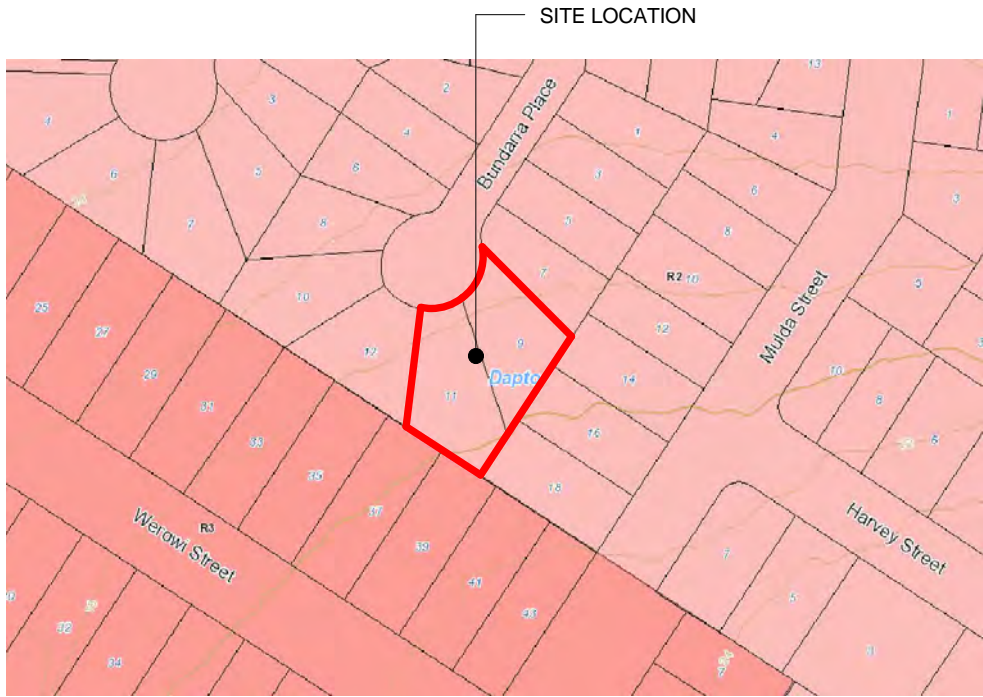
SHEET NO.	SHEET NAME	REV.
00	COVERSHEET	Q
06	DEMOLITION PLAN	Q
10	SITE PLAN	Q
11	GROUND FLOOR	Q
12	FIRST FLOOR	Q
13	FSR PLANS	Q
20	ELEVATIONS	Q
21	ELEVATIONS	Q
22	INTERNAL ELEVATIONS	Q
30	SECTIONS	Q
40	SHADOWS - JUNE	Q
41	SHADOWS - JUNE	Q
42	SHADOWS - JUNE	Q
43	SHADOWS - DEC	Q
50	3D VIEW	Q
60	WINDOW SCHEDULE	Q

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LANDSCAPE	BILL MUIR LANDSCAPE ARCHITECT	BILL MUIR	0411 774 051	bill.la@optusnet.com.au
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PLANNING CONSULTANT	MMJ	LUKE ROLLINSON		luke.rollinson@mmj.com.au
ARBORIST	ALLIED TREES CONSULTING	WARWICK VARLEY	0402 763 414	admin@alliedtrees.com.au

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Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

DEVELOPMENT APPLICATION A.I.

REF. Q	DATE 16.04.2019	AMENDMENT Consultants	Legend: RB01 RENDERED BRICKWORK RB02 RENDERED BRICKWORK FB01 FACE BRICKWORK FB02 FACE BRICKWORK BL BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL S STONework R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR GD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR SLW SLIDING WINDOW FW FIXED WINDOW OB OBSCURE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWT RAINWATER TANK P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING		Wollongong 81a Princes Highway, Fairy Meadow Tel: (02) 4227 1661 P.O. Box 3091, Balgownie NSW 2519 Sydney Suite 704, 31 Market Street, Sydney Email: info@designworkshop.com.au Web: http://www.designworkshop.com.au Nominated Architect: Robert Gizzi (Reg. 8286)	CLIENT: BUCHANAN/ PERRETT MEDIUM DENSITY ADDRESS: 9-11 BUNDARRA PLACE, DAPTO DRAWING NAME: COVERSHEET	DATE: APRIL 18 DRAWN: NT, DL SCALE: 1 : 100 QA: RG	PROJECT No. 1752 DWG No. 00 Q
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BUILDING ZONE

R2 LOW RESIDENTIAL ZONE



MINIMUM LOT SIZE

449 SQUARE PER METER



FLOOR SPACE RATIO

0.5:1



BUILDING HEIGHTS

9 METERS LIMIT



ACID SULFATE SOIL

CLASS 5



STREET VIEW

9-11 BUNDARRA PLACE, DAPTO

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REF.	DATE	AMENDMENT
M	04.12.2018	DEVELOPMENT APPLICATION

Legend:

RB01 RENDERED BRICKWORK	S STONework	SLW SLIDING WINDOW
RB02 RENDERED BRICKWORK	R ROOF	FW FIXED WINDOW
FB01 FACE BRICKWORK	DP DOWNPIPES	OB OBSCURE WINDOW
FB02 FACE BRICKWORK	TB TIMBER BATTENS	AW AWNING WINDOW
BL BLOCKWORK	D DOOR	SK SKYLIGHT
CL01 CLADDING	GD GARAGE DOOR	WH WINDOW HOOD
CL02 CLADDING	SLD SLIDING DOOR	LV LOUVRES
RW RETAINING WALL	BFD BI-FOLD DOOR	RWT RAINWATER TANK



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Nominated Architect: Robert Gizzi (Reg. 8286)

CLIENT: BUCHANAN/ PERRETT
MEDIUM DENSITY
ADDRESS: 9-11 BUNDARRA PLACE, DAPTO
DRAWING NAME: DCP ANALYSIS

DATE: APRIL 18
DRAWN: TN
SCALE:
QA: RG

PROJECT No.
1752
DWG No.
01 M



URBAN CONTEXT

NTS

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REF.	DATE	AMENDMENT
M	04.12.2018	DEVELOPMENT APPLICATION

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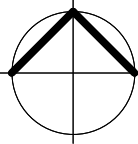
Legend:

RB01 RENDERED BRICKWORK	S STONEWORK	SLW SLIDING WINDOW	P POST
RB02 RENDERED BRICKWORK	R ROOF	FW FIXED WINDOW	T TIMBER FLOORS
FB01 FACE BRICKWORK	DP DOWNPIPES	OB OBSCURE WINDOW	CT CERAMIC TILES
FB02 FACE BRICKWORK	TB TIMBER BATTENS	AW AWNING WINDOW	CPT CARPET
BL BLOCKWORK	D DOOR	SK SKYLIGHT	PC POLISHED CONCRETE
CL01 CLADDING	GD GARAGE DOOR	WH WINDOW HOOD	SP FEATURE SCREENING
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RW RETAINING WALL	BFD BI-FOLD DOOR	RWT RAINWATER TANK	



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Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT: BUCHANAN/ PERRETT
MEDIUM DENSITY
ADDRESS: 9-11 BUNDARRA PLACE, DAPTO
DRAWING NAME: URBAN CONTEXT

DEVELOPMENT APPLICATION

DATE: APRIL 18
DRAWN: TN
SCALE: NTS
QA: RG

PROJECT No.
1752
DWG No.
02 M



STREET MAP

NTS

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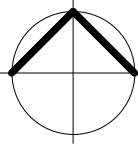
REF.	DATE	AMENDMENT
M	04.12.2018	DEVELOPMENT APPLICATION
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Legend:

RB01 RENDERED BRICKWORK	S STONEWORK	SLW SLIDING WINDOW	P POST
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FB01 FACE BRICKWORK	DP DOWNPIPES	OB OBSCURE WINDOW	CT CERAMIC TILES
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BL BLOCKWORK	D DOOR	SK SKYLIGHT	PC POLISHED CONCRETE
CL01 CLADDING	GD GARAGE DOOR	WH WINDOW HOOD	SP FEATURE SCREENING
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Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT: BUCHANAN/ PERRETT
MEDIUM DENSITY
ADDRESS: 9-11 BUNDARRA PLACE, DAPTO
DRAWING NAME: LOCAL CONTEXT

DEVELOPMENT APPLICATION

DATE: APRIL 18
DRAWN: TN
SCALE: NTS
QA: Checker

PROJECT No.
1752
DWG No.
03 M

SITE SURVEY

1 : 250

SURVEY SUPPLIED BY GEOSURV
PO BOX R1670, ROYAL EXCHANGE NSW 1225
1300 554 675

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Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

REF.	DATE	AMENDMENT
M	04.12.2018	DEVELOPMENT APPLICATION

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Legend:

FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES	FW	FIXED WINDOW	T	TIMBER FLOORS
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSCURE WINDOW	CT	CERAMIC TILES
BL	BLOCKWORK	AW	AWNING WINDOW	CPT	CARPET	PC	POLISHED CONCRETE
CL01	CLADDING	D	DOOR	SK	SKYLIGHT	SP	FEATURE SCREENING
CL02	CLADDING	GD	GARAGE DOOR	WH	WINDOW HOOD	LVS	LOUVRES
RW	RETAINING WALL	SLD	SLIDING DOOR	LV	LOUVRES	IWS	INTEGRAL WALL
		BFD	BI-FOLD DOOR	RWT	RAINWATER TANK		



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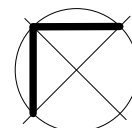
Sydney

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Email: info@designworkshop.com.au

Web: <http://www.designworkshop.com.au>

Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT:

BUCHANAN/ PERRETT
MEDIUM DENSITY

ADDRESS:

9-11 BUNDARRA PLACE, DAPTO

DRAWING NAME: SITE SURVEY

DATE: APRIL 18

DRAWN: NT

SCALE: 1 : 250

QA: RG

PROJECT No.

1752

DWG

No.

05

M

DEVELOPMENT APPLICATION

SITE PLAN

1 : 250

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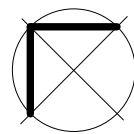
REF.	DATE	AMENDMENT
Q	16.04.2019	Consultants
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Legend:			
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FB02	FACE BRICKWORK TYPE 2	DP	DOWNPipes
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS
BL	BLOCKWORK	D	DOOR
CL01	CLADDING	GD	GARAGE DOOR
CL02	CLADDING	SLD	SLIDING DOOR
RW	RETAINING WALL	BFD	BI-FOLD DOOR
SLW	SLIDING WINDOW	FW	FIXED WINDOW
OB	OBSCURE WINDOW	AW	AWNING WINDOW
SK	SKYLIGHT	WH	WINDOW HOOD
LV	LOUVRES	RWT	RAINWATER TANK
P	POST	T	TIMBER FLOORS
CT	CERAMIC TILES	CPT	CARPET
PC	POLISHED CONCRETE	SP	FEATURE SCREENING
IWS	INTEGRAL WALL		



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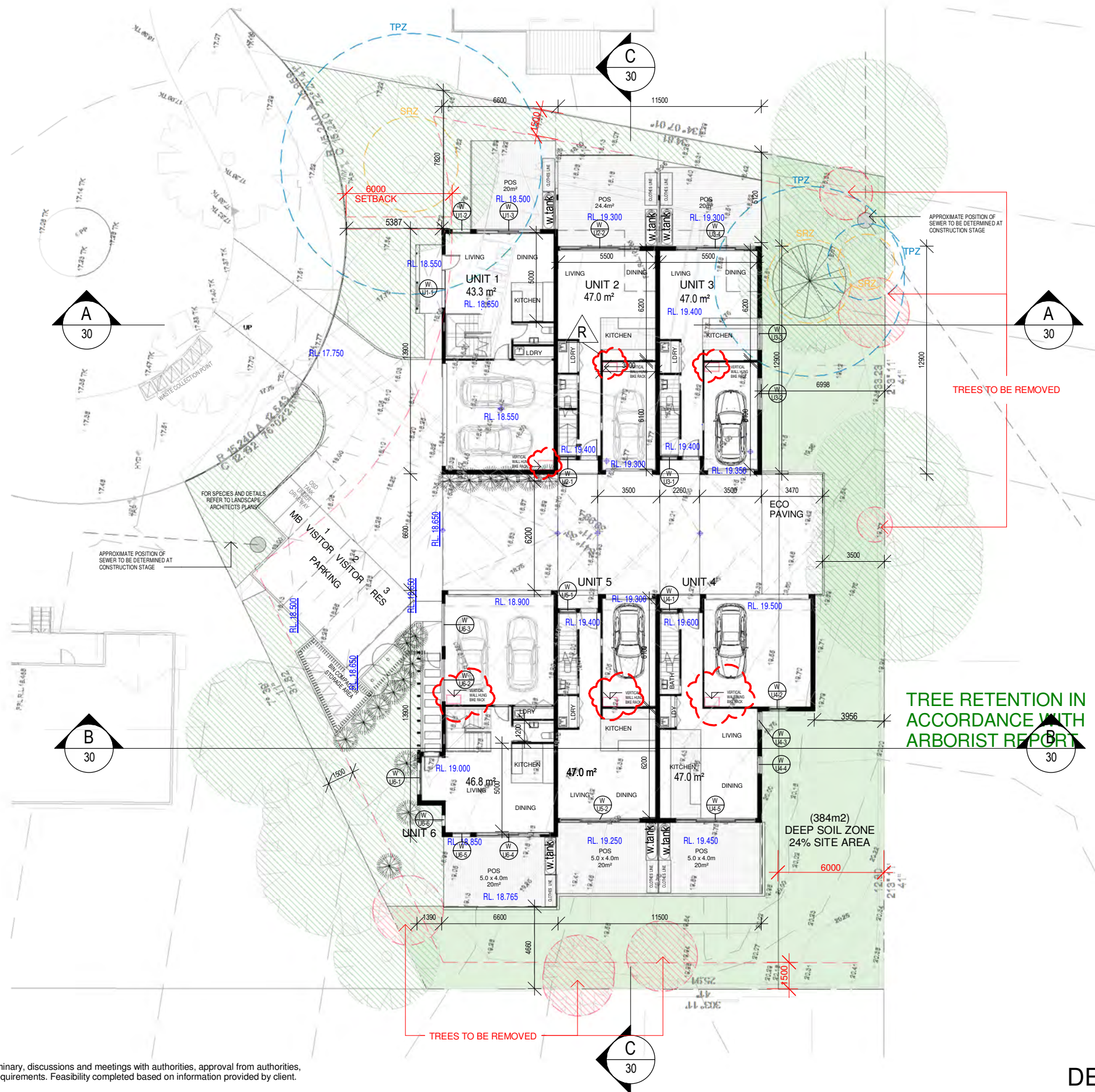
Email: info@designworkshop.com.au
Web: <http://www.designworkshop.com.au>
Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT: BUCHANAN/ PERRETT
MEDIUM DENSITY
ADDRESS: 9-11 BUNDARRA PLACE, DAPTO
DRAWING NAME: SITE PLAN

DATE: APRIL 18
DRAWN: NT, DL
SCALE: As indicated
QA: RG

PROJECT No. 1752
DWG No. 10 Q



GROUND FLOOR

1 : 250

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REF.	DATE	AMENDMENT
S	19.06.2019	Al Front Setback

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Legend:

FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPipes	FW	FIXED WINDOW	T	TIMBER FLOORS
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSCURE WINDOW	CT	CERAMIC TILES
BL	BLOCKWORK	D	DOOR	AW	AWNING WINDOW	CPT	CARPET
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CL02	CLADDING	SLD	SLIDING DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING
RW	RETAINING WALL	LV	LOUVRES	LV	LOUVRES	IWS	INTEGRAL WALL
		BFD	BI-FOLD DOOR	RWT	RAINWATER TANK		



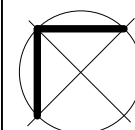
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Sydney

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Email: info@designworkshop.com.au
Web: http://www.designworkshop.com.au
Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT: BUCHANAN/ PERRETT
MEDIUM DENSITY
ADDRESS: 9-11 BUNDARRA PLACE, DAPTO
DRAWING NAME: GROUND FLOOR

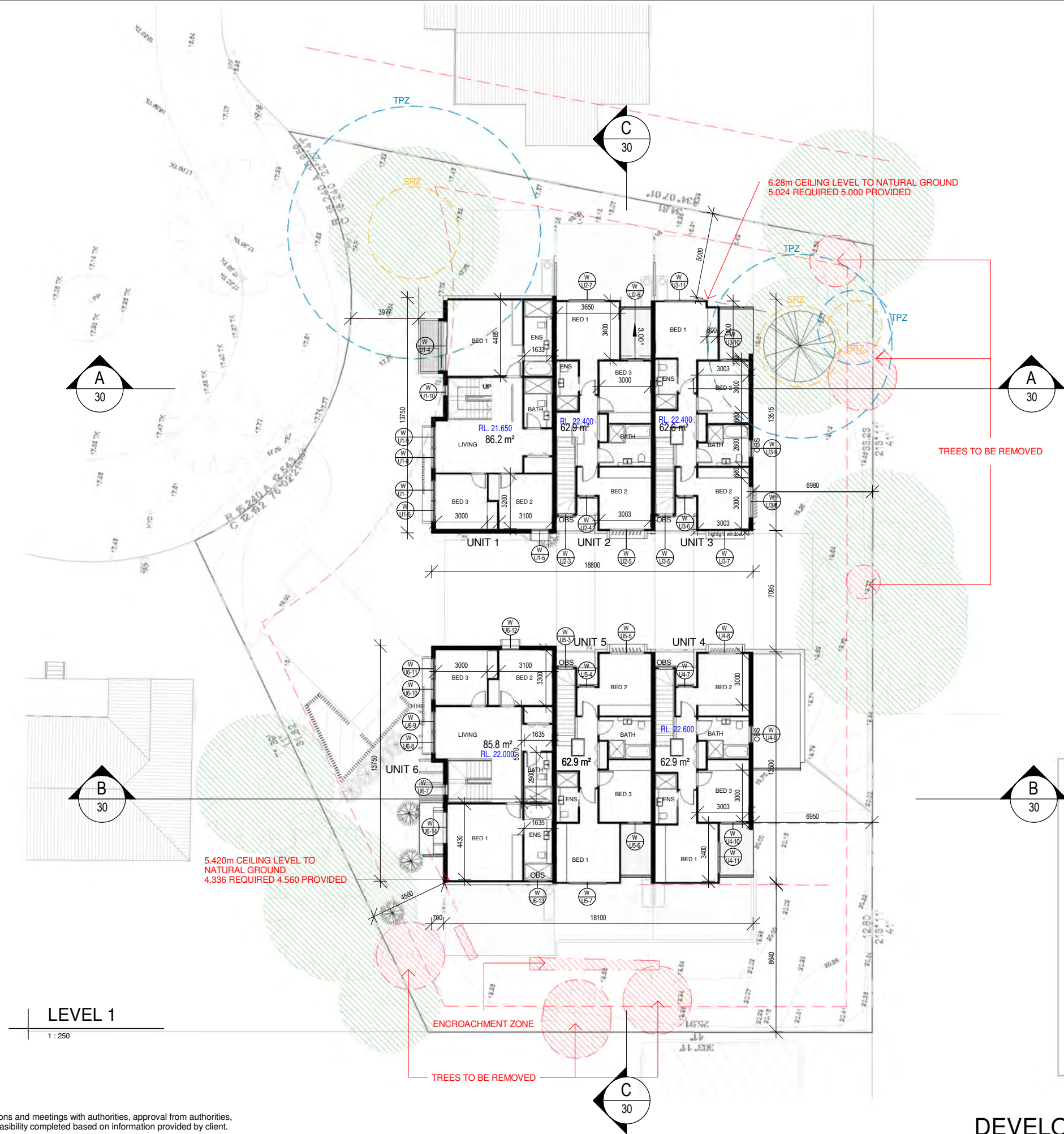
DATE: APRIL 18
DRAWN: NT, DL
SCALE: As indicated
QA: RG

PROJECT No.
1752
DWG No.
11 S

BASIX INFORMATION

FLOORS:	GROUND FLOOR - CONCRETE FIRST FLOOR - TIMBER
EXTERNAL WALLS:	GROUND FLOOR - BRICK VEENER FIRST FLOOR - TIMBER STUD
INTERNAL WALLS:	TIMBER FRAME WITH PLASTERBOARD FINISH
PARTY WALLS:	BORAL SHAFT WALLS
ROOF:	COLOURBOND ROOFING WITH INSULATION
CEILING FANS:	TO BE SUPPLIED TO ALL LIVING AREAS
LIGHTING:	ALL RECESSED DOWNLIGHTS IN THE THERMAL ENVELOPE TO BE SEALED
EXHAUST FANS:	ALL EXHAUST FANS TO BE FITTED WITH DAMPER AND INSULATION UP TO COVER

DEVELOPMENT APPLICATION A.I.



BASIX INFORMATION

FLOORS:	GROUND FLOOR - CONCRETE FIRST FLOOR - TIMBER
EXTERNAL WALLS:	GROUND FLOOR - BRICK VEENER FIRST FLOOR - TIMBER STUD
INTERNAL WALLS:	TIMBER FRAME WITH PLASTERBOARD FINISH
PARTY WALLS:	BORAL SHAFT WALLS
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REF.	DATE	AMENDMENT
S	19.06.2019	At Front Setback

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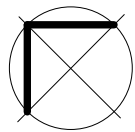
Legend:

FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPipes	FW	FIXED WINDOW	T	TIMBER FLOORS
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Nominated Architect: Robert Gizzi (Reg. 8286)

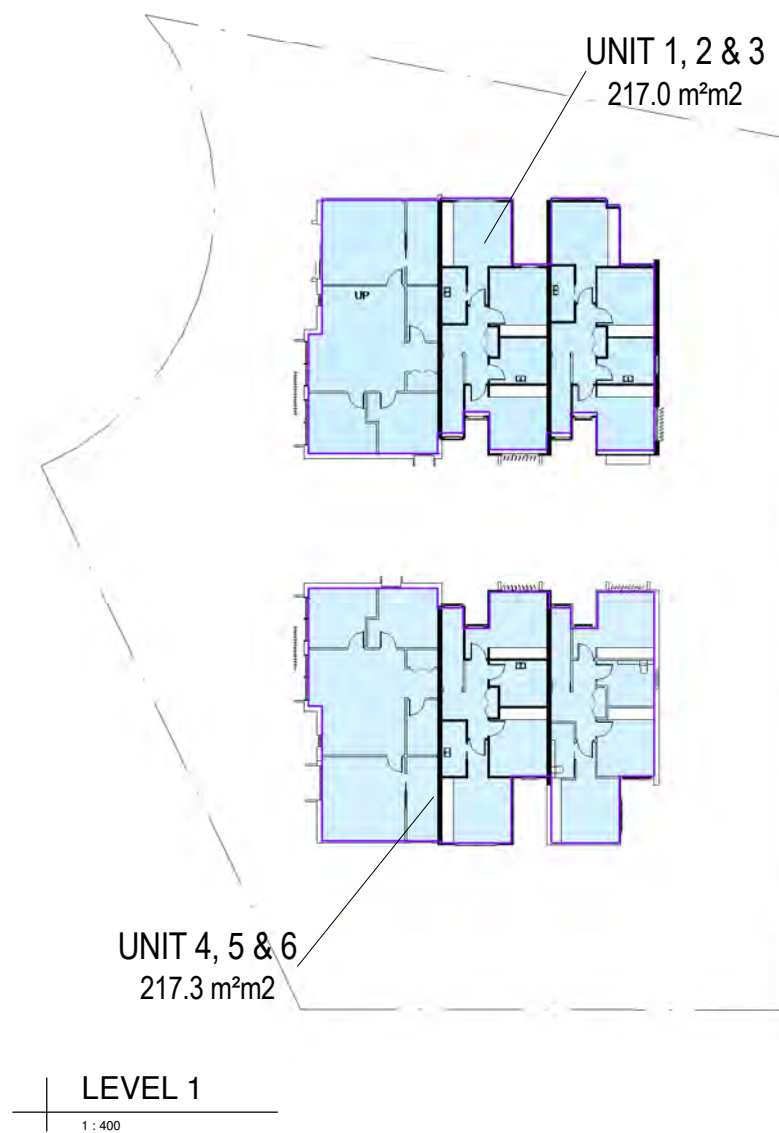


CLIENT: BUCHANAN/ PERRETT
MEDIUM DENSITY
ADDRESS: 9-11 BUNDARRA PLACE, DAPTO
DRAWING NAME: FIRST FLOOR

DATE: APRIL 18
DRAWN: NT, DL
SCALE: As indicated
QA: RG

PROJECT No. 1752
DWG No. 12 S

DEVELOPMENT APPLICATION A.I.

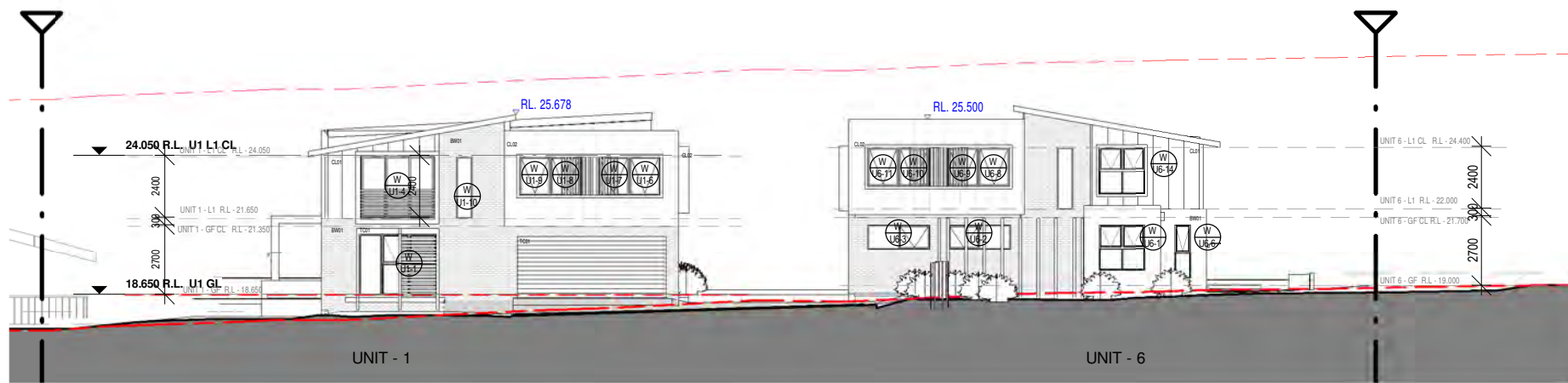


FSR SCHEDULE		
Name	AREA	FSR
GROUND FLOOR		
UNIT 1, 2 & 3	141.9 m²	0.09
UNIT 4, 5 & 6	144.3 m²	0.09
LEVEL 1		
UNIT 1, 2 & 3	217.0 m²	0.14
UNIT 4, 5 & 6	217.3 m²	0.14
	720.6 m²	0.45

SITE AREA - 1593.4m²
ALLOWABLE FSR - 0.5:1

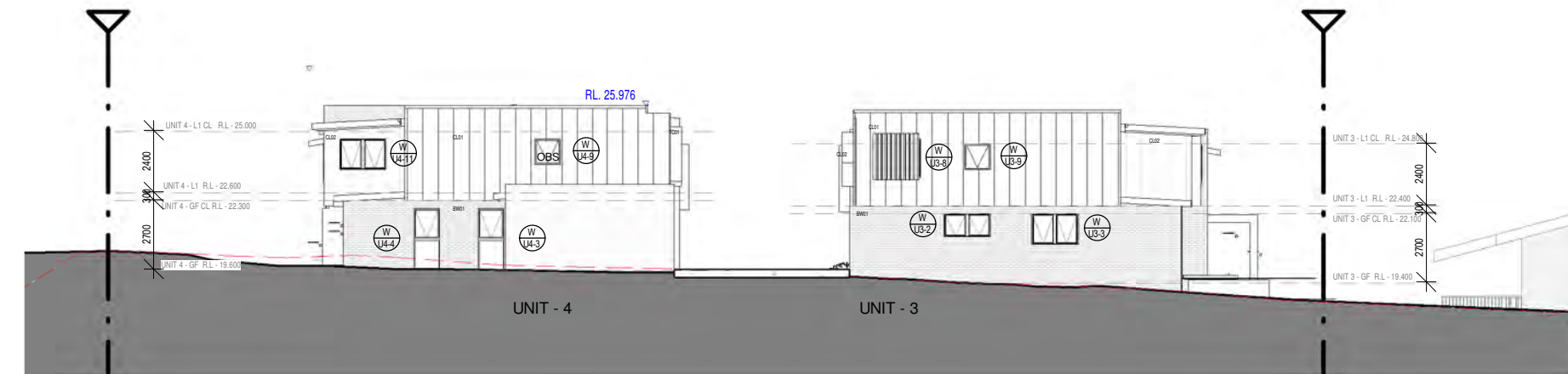
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REF. Q	DATE 16.04.2019	AMENDMENT Consultants	Legend: RB01 RENDERED BRICKWORK RB02 RENDERED BRICKWORK FB01 FACE BRICKWORK FB02 FACE BRICKWORK BL BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL S STONework R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR GD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR SLW SLIDING WINDOW FW FIXED WINDOW OB OBSCURE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWT RAINWATER TANK P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING	DWA DESIGN WORKSHOP AUSTRALIA	Wollongong 81a Princes Highway, Fairy Meadow Tel: (02) 4227 1661 P.O. Box 3091, Balgownie NSW 2519 Sydney Suite 704, 31 Market Street, Sydney Email: info@designworkshop.com.au Web: http://www.designworkshop.com.au Nominated Architect: Robert Gizzi (Reg. 8286)	CLIENT: BUCHANAN/ PERRETT MEDIUM DENSITY ADDRESS: 9-11 BUNDARRA PLACE, DAPTO DRAWING NAME: FSR PLANS	DATE: APRIL 18 DRAWN: NT, DL SCALE: 1 : 400 QA: RG	PROJECT No. 1752 DWG No. 13 Q
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NORTH WEST ELEVATION

1 : 250



SOUTH EAST ELEVATION

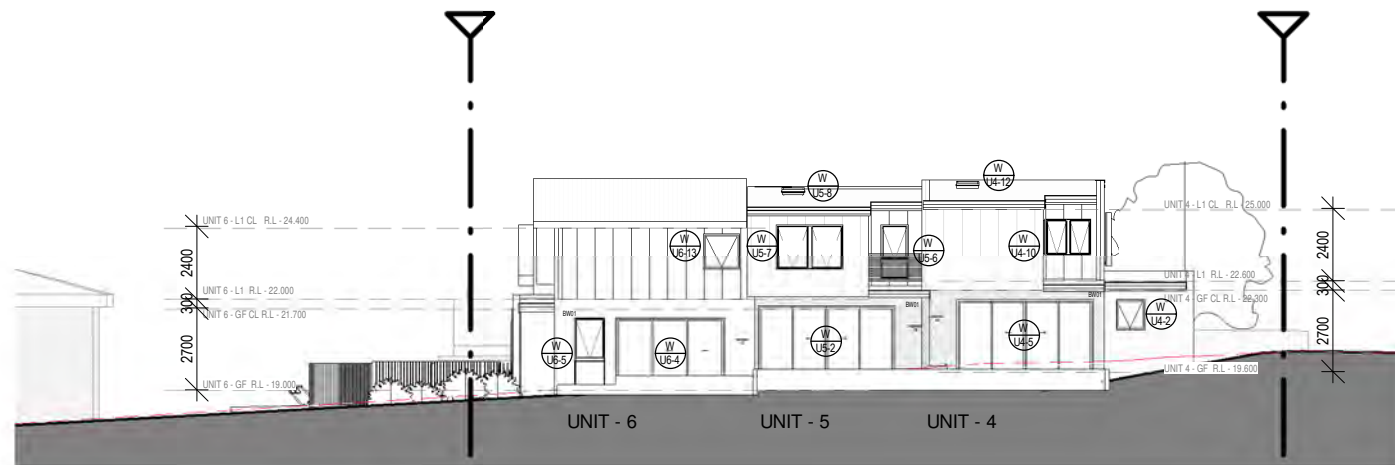
1 : 250

BASIX INFORMATION

FLOORS:	GROUND FLOOR - CONCRETE FIRST FLOOR - TIMBER
EXTERNAL WALLS:	GROUND FLOOR - BRICK VEENER FIRST FLOOR - TIMBER STUD
INTERNAL WALLS:	TIMBER FRAME WITH PLASTERBOARD FINISH
PARTY WALLS:	BORAL SHAFT WALLS
ROOF:	COLOURBOND ROOFING WITH INSULATION
CEILING FANS:	TO BE SUPPLIED TO ALL LIVING AREAS
LIGHTING:	ALL RECESSED DOWNLIGHTS IN THE THERMAL ENVELOPE TO BE SEALED
EXHAUST FANS:	ALL EXHAUST FANS TO BE FITTED WITH DAMPER AND INSULATION UP TO COVER

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REF. Q	DATE 16.04.2019	AMENDMENT Consultants	Legend: RB01 RENDERED BRICKWORK RB02 RENDERED BRICKWORK FB01 FACE BRICKWORK FB02 FACE BRICKWORK BL BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL S STONEWORK R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR GD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR SLW SLIDING WINDOW FW FIXED WINDOW OB OBSCURE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWT RAINWATER TANK P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING	DWA DESIGN WORKSHOP AUSTRALIA	Wollongong 81a Princes Highway, Fairy Meadow Tel: (02) 4227 1661 P.O. Box 3091, Balgownie NSW 2519 Sydney Suite 704, 31 Market Street, Sydney Email: info@designworkshop.com.au Web: http://www.designworkshop.com.au Nominated Architect: Robert Gizzi (Reg. 8286)	CLIENT: BUCHANAN/ PERRETT MEDIUM DENSITY ADDRESS: 9-11 BUNDARRA PLACE, DAPTO DRAWING NAME: ELEVATIONS	DATE: APRIL 18 DRAWN: NT, DL SCALE: As indicated QA: RG	PROJECT No. 1752 DWG No. 20 Q
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SOUTH WEST ELEVATION

1 : 250



NORTH EAST ELEVATION

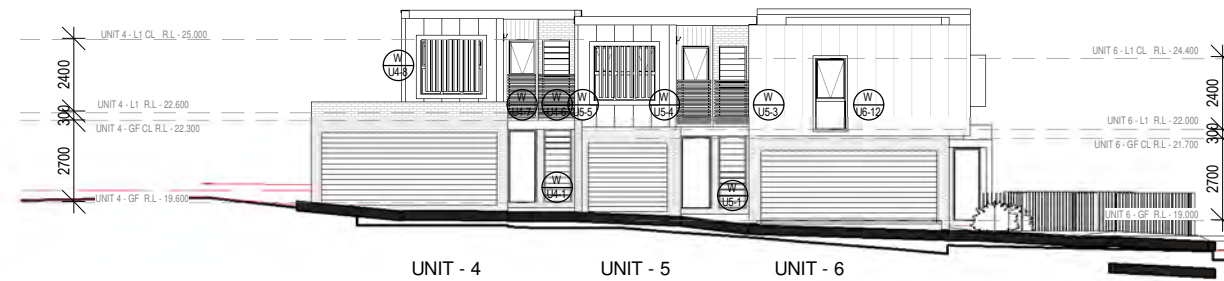
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BASIX INFORMATION

FLOORS:	GROUND FLOOR - CONCRETE FIRST FLOOR - TIMBER
EXTERNAL WALLS:	GROUND FLOOR - BRICK VEENER FIRST FLOOR - TIMBER STUD
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CEILING FANS:	TO BE SUPPLIED TO ALL LIVING AREAS
LIGHTING:	ALL RECESSED DOWNLIGHTS IN THE THERMAL ENVELOPE TO BE SEALED
EXHAUST FANS:	ALL EXHAUST FANS TO BE FIITED WITH DAMPER AND INSULATION UP TO COVER

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

REF. Q	DATE 16.04.2019	AMENDMENT Consultants	Legend: RB01 RENDERED BRICKWORK RB02 RENDERED BRICKWORK FB01 FACE BRICKWORK FB02 FACE BRICKWORK BL BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL S STONework R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR GD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR SLW SLIDING WINDOW FW FIXED WINDOW OB OBSCURE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWT RAINWATER TANK P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING	DWA DESIGN WORKSHOP AUSTRALIA	Wollongong 81a Princes Highway, Fairy Meadow Tel: (02) 4227 1661 P.O. Box 3091, Balgownie NSW 2519 Sydney Suite 704, 31 Market Street, Sydney Email: info@designworkshop.com.au Web: http://www.designworkshop.com.au Nominated Architect: Robert Gizzi (Reg. 8286)	CLIENT: BUCHANAN/ PERRETT MEDIUM DENSITY ADDRESS: 9-11 BUNDARRA PLACE, DAPTO DRAWING NAME: ELEVATIONS	DATE: APRIL 18 DRAWN: NT, DL SCALE: As indicated QA: RG	PROJECT No. 1752 DWG No. 21 Q
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1 INTERNAL NORTH EAST ELEVATION
Scale 1 : 250



2 INTERNAL SOUTH WEST ELEVATION
Scale 1 : 250

BASIX INFORMATION

FLOORS:	GROUND FLOOR - CONCRETE FIRST FLOOR - TIMBER
EXTERNAL WALLS:	GROUND FLOOR - BRICK VEENER FIRST FLOOR - TIMBER STUD
INTERNAL WALLS:	TIMBER FRAME WITH PLASTERBOARD FINISH
PARTY WALLS:	BORAL SHAFT WALLS
ROOF:	COLOURBOND ROOFING WITH INSULATION
CEILING FANS:	TO BE SUPPLIED TO ALL LIVING AREAS
LIGHTING:	ALL RECESSED DOWNLIGHTS IN THE THERMAL ENVELOPE TO BE SEALED
EXHAUST FANS:	ALL EXHAUST FANS TO BE FITED WITH DAMPER AND INSULATION UP TO COVER

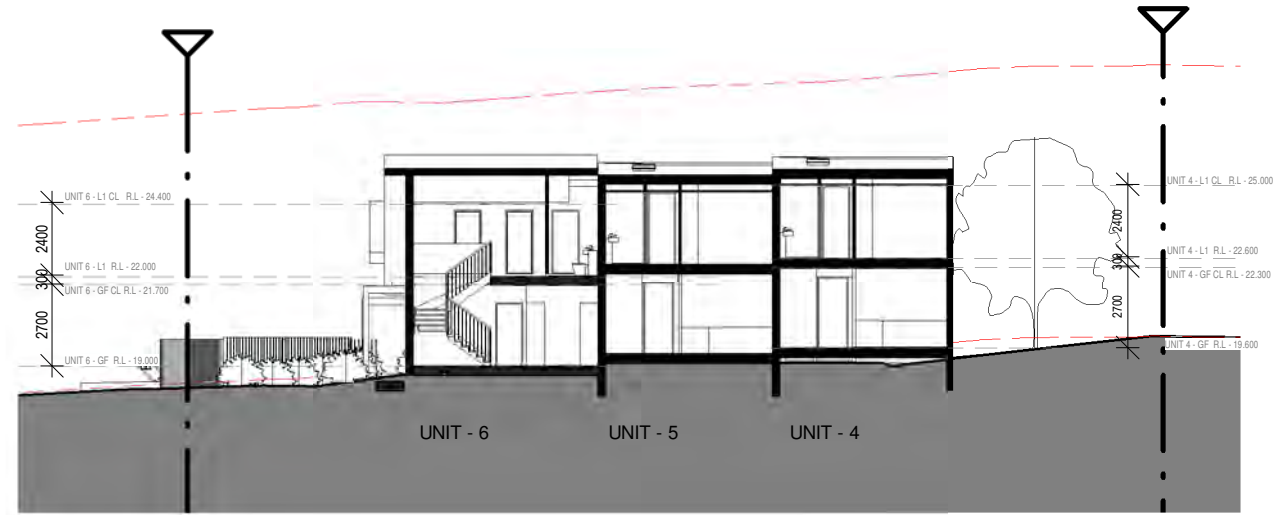
DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

REF. Q	DATE 16.04.2019	AMENDMENT Consultants	Legend: RB01 RENDERED BRICKWORK RB02 RENDERED BRICKWORK FB01 FACE BRICKWORK FB02 FACE BRICKWORK BL BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL S STONEWORK R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR CD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR SLW SLIDING WINDOW FW FIXED WINDOW OB OBSCURE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWT RAINWATER TANK P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING	DWA DESIGN WORKSHOP AUSTRALIA	Wollongong 81a Princes Highway, Fairy Meadow Tel: (02) 4227 1661 P.O. Box 3091, Balgownie NSW 2519 Sydney Suite 704, 31 Market Street, Sydney Email: info@designworkshop.com.au Web: http://www.designworkshop.com.au Nominated Architect: Robert Gizzi (Reg. 8286)	CLIENT: BUCHANAN/ PERRETT MEDIUM DENSITY ADDRESS: 9-11 BUNDARRA PLACE, DAPTO DRAWING NAME: INTERNAL ELEVATIONS	DATE: APRIL 18 DRAWN: NT, DL SCALE: As indicated QA: RG	PROJECT No. 1752 DWG No. 22 Q
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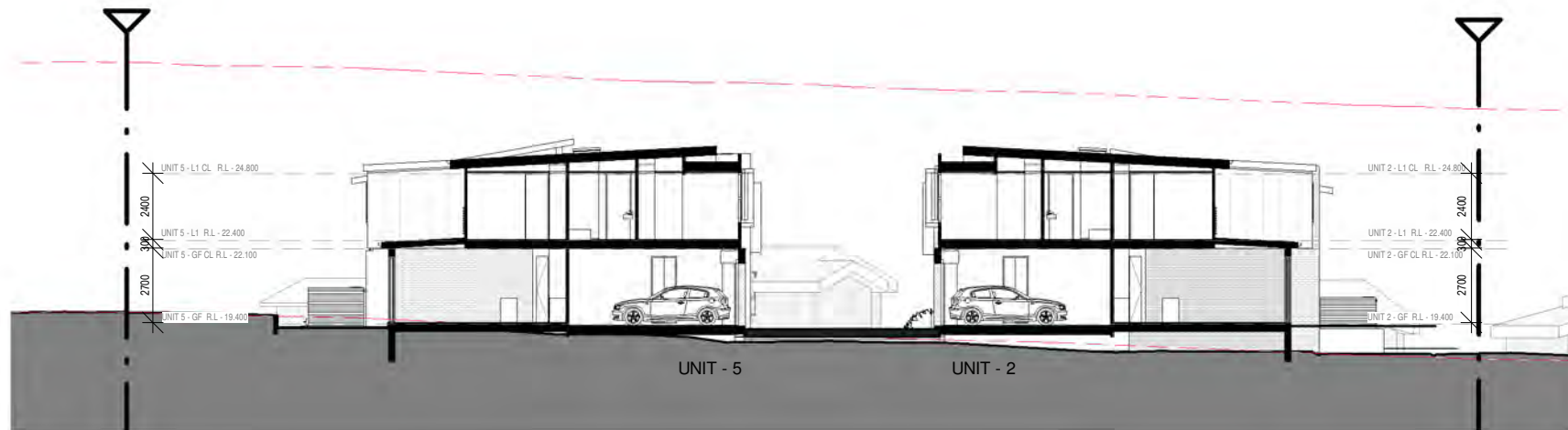
SECTION A-A

1 : 250



SECTION B-B

1 : 250



SECTION C-C

1 : 250

BASIX INFORMATION

FLOORS:	GROUND FLOOR - CONCRETE FIRST FLOOR - TIMBER
EXTERNAL WALLS:	GROUND FLOOR - BRICK VEENER FIRST FLOOR - TIMBER STUD
INTERNAL WALLS:	TIMBER FRAME WITH PLASTERBOARD FINISH
PARTY WALLS:	BORAL SHAFT WALLS
ROOF:	COLOURBOND ROOFING WITH INSULATION
CEILING FANS:	TO BE SUPPLIED TO ALL LIVING AREAS
LIGHTING:	ALL RECESSED DOWNLIGHTS IN THE THERMAL ENVELOPE TO BE SEALED
EXHAUST FANS:	ALL EXHAUST FANS TO BE FITTED WITH DAMPER AND INSULATION UP TO COVER

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REF.	DATE	AMENDMENT
Q	16.04.2019	Consultants

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Legend:			
RB01	RENDERED BRICKWORK	S	STONework
RB02	RENDERED BRICKWORK	R	ROOF
FB01	FACE BRICKWORK	DP	DOWNPIPES
FB02	FACE BRICKWORK	TB	TIMBER BATTENS
BL	BLOCKWORK	D	DOOR
CL01	CLADDING	GD	GARAGE DOOR
CL02	CLADDING	SLD	SLIDING DOOR
RW	RETAINING WALL	BFD	BI-FOLD DOOR
		FW	FIXED WINDOW
		OB	OBSOLETE WINDOW
		AW	AWNING WINDOW
		SK	SKYLIGHT
		WH	WINDOW HOOD
		LV	LOUVRES
		RWT	RAINWATER TANK
		SLW	SLIDING WINDOW
		PC	POLISHED CONCRETE
		SP	FEATURE SCREENING
		P	POST
		T	TIMBER FLOORS
		CT	CERAMIC TILES
		CPT	CARPET
		PC	POLISHED CONCRETE
		SP	FEATURE SCREENING



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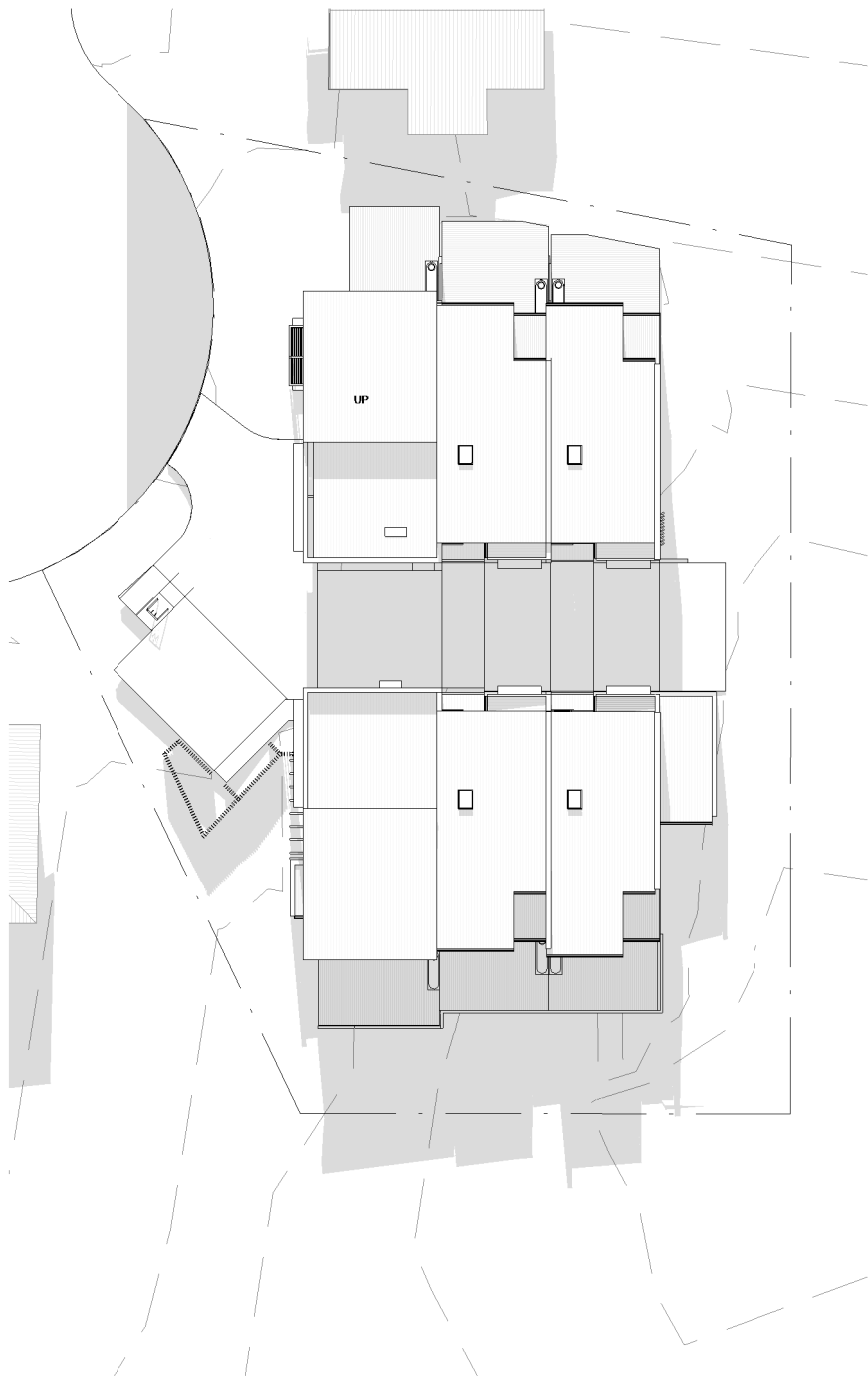
Email: info@designworkshop.com.au
Web: <http://www.designworkshop.com.au>
Nominated Architect: Robert Gizzi (Reg. 8286)

CLIENT:	BUCHANAN/ PERRETT MEDIUM DENSITY	DATE:	APRIL 18	PROJECT No.	1752
ADDRESS:	9-11 BUNDARRA PLACE, DAPTO	DRAWN:	NT, DL	DWG No.	30 Q
DRAWING NAME:	SECTIONS	SCALE:	As indicated		
		QA:	RG		



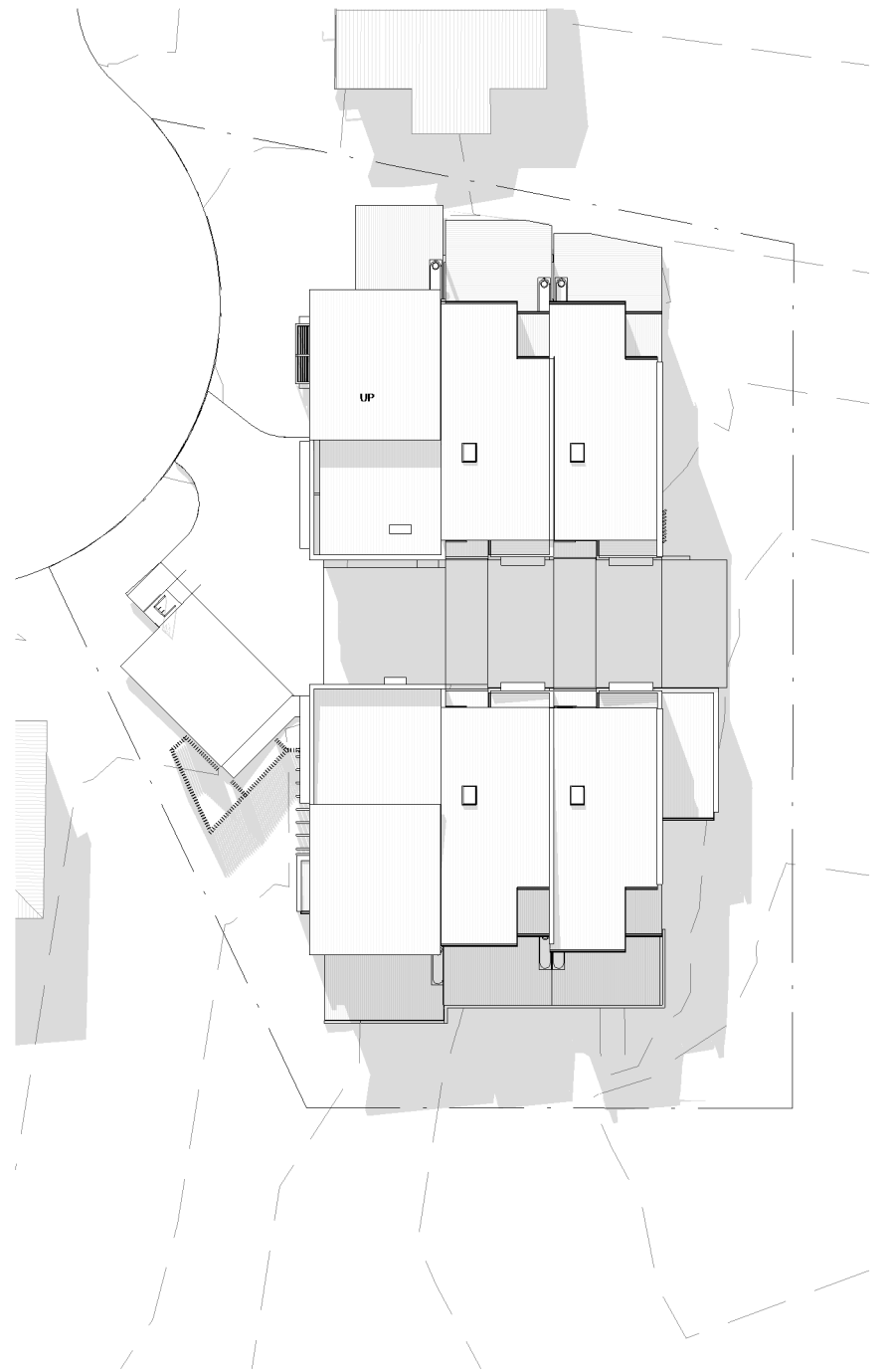
S- JUNE 9AM

1 : 400



S- JUNE 10AM

1 : 400



S- JUNE 11AM

1 : 400

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REF.	DATE	AMENDMENT
Q	16.04.2019	Consultants

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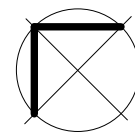
Legend:

RB01	RENDERED BRICKWORK	S	STONework	SLW	SLIDING WINDOW	P	POST
RB02	RENDERED BRICKWORK	R	ROOF	FW	FIXED WINDOW	T	TIMBER FLOORS
FB01	FACE BRICKWORK	DP	DOWNPIPES	OB	OBSCURE WINDOW	CT	CERAMIC TILES
FB02	FACE BRICKWORK	TB	TIMBER BATTENS	AW	AWNING WINDOW	CPT	CARPET
BL	BLOCKWORK	D	DOOR	SK	SKYLIGHT	PC	POLISHED CONCRETE
CL01	CLADDING	GD	GARAGE DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING
CL02	CLADDING	SLD	SLIDING DOOR	LV	LOUVRES		
RW	RETAINING WALL	BFD	BI-FOLD DOOR	RWT	RAINWATER TANK		



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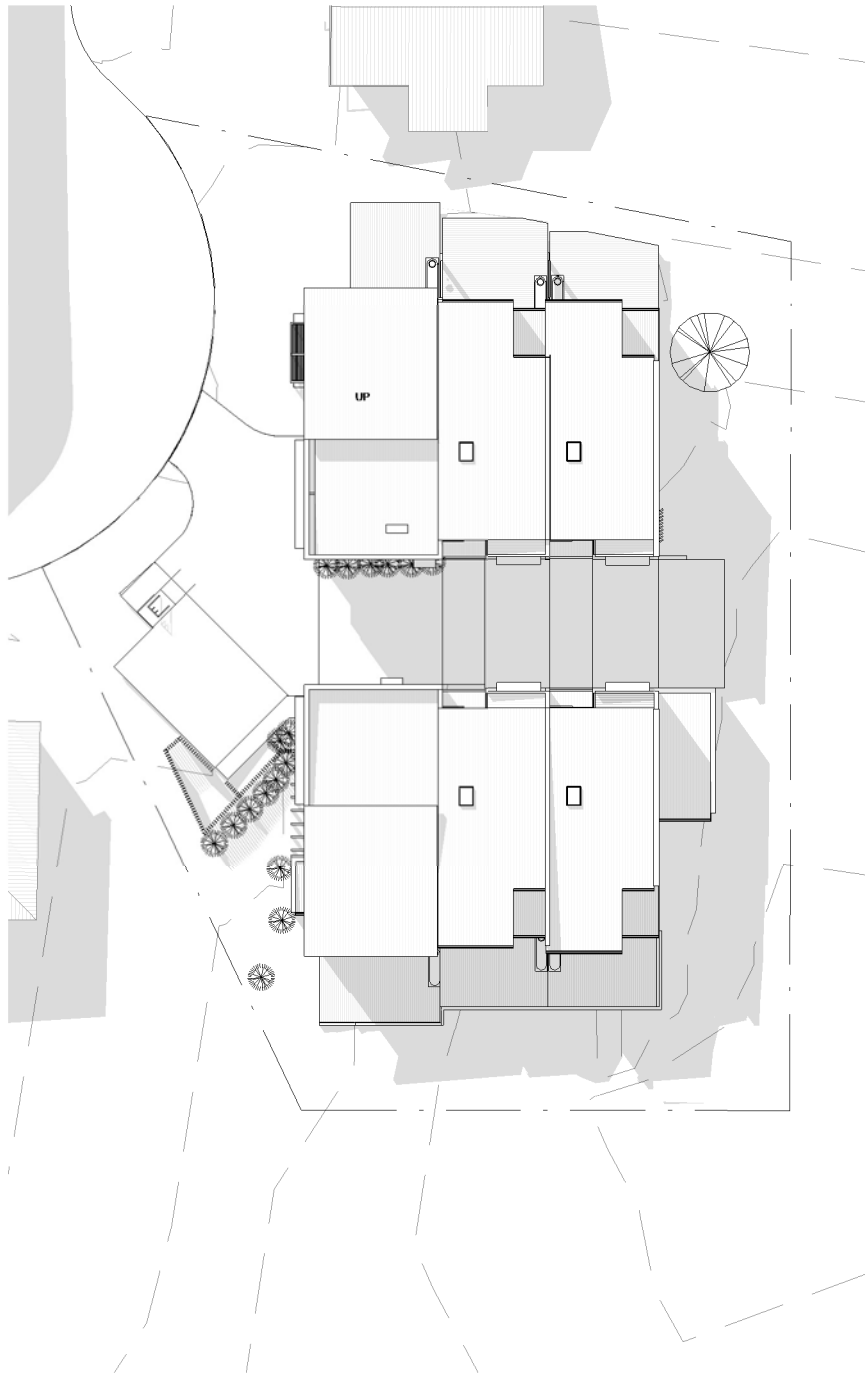
Email: info@designworkshop.com.au
Web: <http://www.designworkshop.com.au>
Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT: BUCHANAN/ PERRETT
MEDIUM DENSITY
ADDRESS: 9-11 BUNDARRA PLACE, DAPTO
DRAWING NAME: SHADOWS - JUNE

DATE: APRIL 18
DRAWN: NT, DL
SCALE: 1 : 400
QA: RG

PROJECT No.
1752
DWG No.
40 Q



S- JUNE 12PM

1 : 400



S- JUNE 1PM

1 : 400



S- JUNE 2PM

1 : 400

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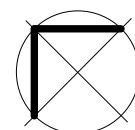
REF.	DATE	AMENDMENT
Q	16.04.2019	Consultants

Legend:			
RB01	RENDERED BRICKWORK	S	STONework
RB02	RENDERED BRICKWORK	R	ROOF
FB01	FACE BRICKWORK	DP	DOWNPIPES
FB02	FACE BRICKWORK	TB	TIMBER BATTENS
BL	BLOCKWORK	D	DOOR
CLD1	CLADDING	GD	GARAGE DOOR
CLD2	CLADDING	SLD	SLIDING DOOR
RW	RETAINING WALL	BFD	BI-FOLD DOOR
		FW	FIXED WINDOW
		OB	OBSCURE WINDOW
		AW	AWNING WINDOW
		SK	SKYLIGHT
		WH	WINDOW HOOD
		LV	LOUVRES
		RWT	RAINWATER TANK
		P	POST
		T	TIMBER FLOORS
		CT	CERAMIC TILES
		CPT	CARPET
		PC	POLISHED CONCRETE
		SP	FEATURE SCREENING



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CLIENT: BUCHANAN/ PERRETT
MEDIUM DENSITY
ADDRESS: 9-11 BUNDARRA PLACE, DAPTO
DRAWING NAME: SHADOWS - JUNE

DATE: APRIL 18
DRAWN: NT, DL
SCALE: 1 : 400
QA: RG
PROJECT No. 1752
DWG No. 41 Q



S- JUNE 3PM

1 : 400



S- JUNE 4PM

1 : 400

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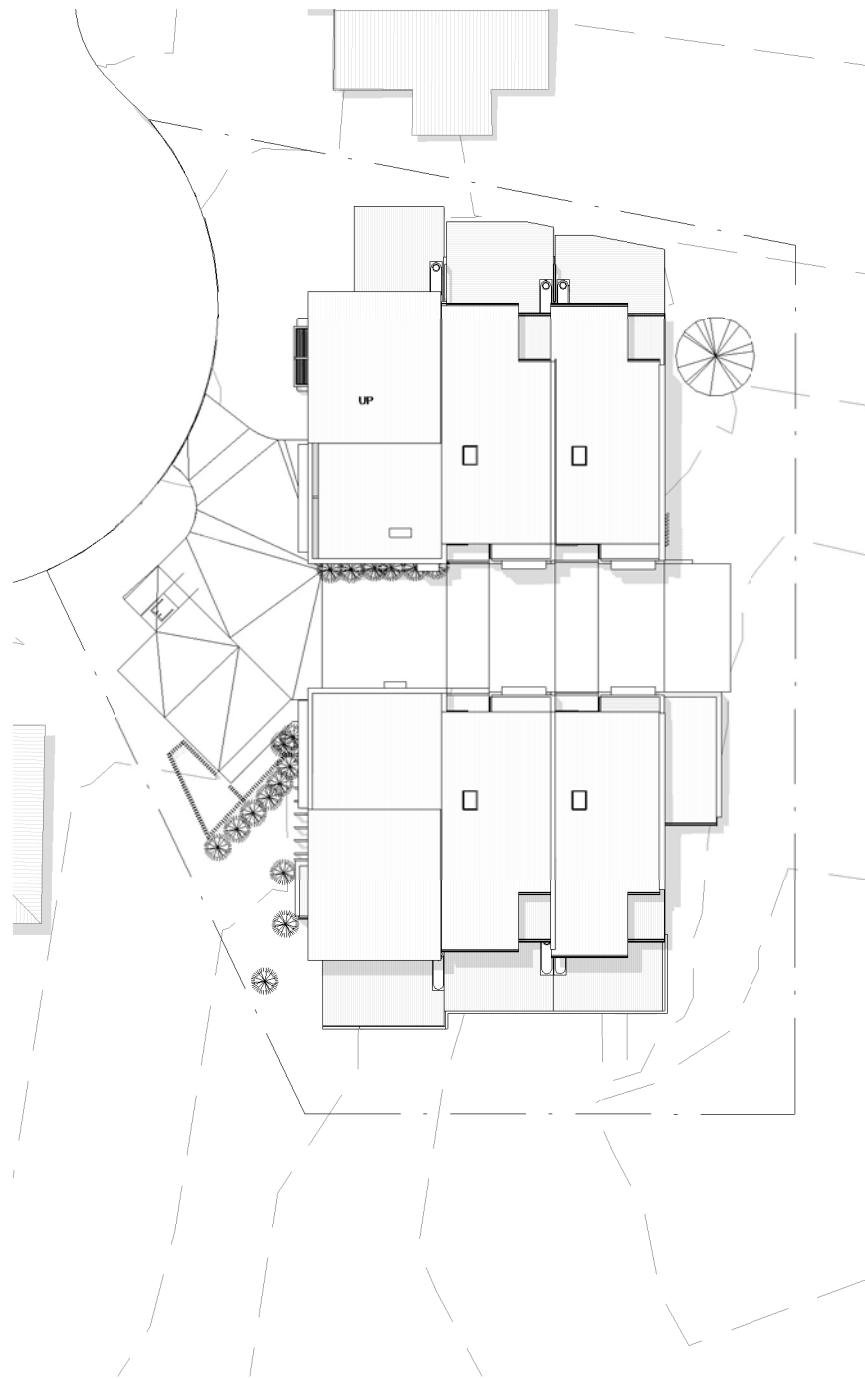
DEVELOPMENT APPLICATION A.I.

REF. Q	DATE 16.04.2019	AMENDMENT Consultants	Legend: RB01 RENDERED BRICKWORK RB02 RENDERED BRICKWORK FB01 FACE BRICKWORK FB02 FACE BRICKWORK BL BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL S STONEWORK R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR GD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR SLW SLIDING WINDOW FW FIXED WINDOW OB OBSCURE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWT RAINWATER TANK P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING	DWA DESIGN WORKSHOP AUSTRALIA	Wollongong 81a Princes Highway, Fairy Meadow Tel: (02) 4227 1661 P.O. Box 3091, Balgownie NSW 2519 Sydney Suite 704, 31 Market Street, Sydney Email: info@designworkshop.com.au Web: http://www.designworkshop.com.au Nominated Architect: Robert Gizzi (Reg. 8286)		CLIENT: BUCHANAN/ PERRETT MEDIUM DENSITY ADDRESS: 9-11 BUNDARRA PLACE, DAPTO DRAWING NAME: SHADOWS - JUNE	DATE: APRIL 18 DRAWN: NT, DL SCALE: 1 : 400 QA: RG	PROJECT No. 1752 DWG No. 42 Q
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S- DEC 9AM

1 : 400



S- DEC 12PM

1 : 400



S- DEC 3PM

1 : 400

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REF.	DATE	AMENDMENT
Q	16.04.2019	Consultants

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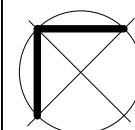
Legend:

FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES	FW	FIXED WINDOW	T	TIMBER FLOORS
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSCURE WINDOW	CT	CERAMIC TILES
BL	BLOCKWORK	D	DOOR	AW	AWNING WINDOW	CPT	CARPET
CL01	CLADDING	GD	GARAGE DOOR	SK	SKYLIGHT	PC	POLISHED CONCRETE
CL02	CLADDING	SD	SLIDING DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING
RW	RETAINING WALL	LVD	BI-FOLD DOOR	LV	LOUVRES	IWS	INTEGRAL WALL



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Web: <http://www.designworkshop.com.au>
Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT:	BUCHANAN/ PERRETT MEDIUM DENSITY	DATE:	APRIL 18	PROJECT No.	1752
ADDRESS:	9-11 BUNDARRA PLACE, DAPTO	DRAWN:	NT, DL	DWG No.	43
DRAWING NAME:	SHADOWS - DEC	SCALE:	1 : 400	Q	
		QA:	RG		



3D VIEW

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

REF. Q	DATE 16.04.2019	AMENDMENT Consultants	Legend:											Wollongong 81a Princes Highway, Fairy Meadow Tel: (02) 4227 1661 P.O. Box 3091, Balgownie NSW 2519 Sydney Suite 704, 31 Market Street, Sydney	Email: info@designworkshop.com.au Web: http://www.designworkshop.com.au Nominated Architect: Robert Gizzi (Reg. 8286)		CLIENT: BUCHANAN/ PERRETT MEDIUM DENSITY	DATE: APRIL 18	PROJECT No. 1752
			FB01 FACE BRICKWORK TYPE 1	R ROOF	SLW SLIDING WINDOW	P POST	T TIMBER FLOORS												
			FB02 FACE BRICKWORK TYPE 2	DP DOWNPIPES	FW FIXED WINDOW	CT CERAMIC TILES													
			FB03 FACE BRICKWORK TYPE 3	TB TIMBER BATTENS	AW AWNING WINDOW	CPT CARPET													
			BL BLOCKWORK	D DOOR	SK SKYLIGHT	PC POLISHED CONCRETE													
			CL01 CLADDING	GD GARAGE DOOR	WH WINDOW HOOD	SP FEATURE SCREENING													
			CL02 CLADDING	SLD SLIDING DOOR	LV LOUVRES	IWS INTEGRAL WALL													
			RW RETAINING WALL	BFD BI-FOLD DOOR	RWT RAINWATER TANK														
DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA.										ADDRESS: 9-11 BUNDARRA PLACE, DAPTO	SCALE: DRAWN: NT, DL	DWG No. 50							
										DRAWING NAME: 3D VIEW	QA: RG	Q							

DEVELOPMENT APPLICATION A.I.

WINDOW SCHEDULE						
UNIT NO.	LEVEL	CODE	HEIGHT	WIDTH	SILL HEIGHT	WINDOW TYPE

UNIT 1

UNIT 1	U1 GL	U1-1	2400	2100	0	AWNING
UNIT 1	U1 GL	U1-2	2400	1000	0	AWNING
UNIT 1	U1 GL	U1-3	2400	3600	0	SLIDING DOOR
UNIT 1	U1 L1	U1-4	2400	2800	0	
UNIT 1	U1 L1	U1-5	2400	1000	300	AWNING
UNIT 1	U1 L1	U1-6	1500	1200	900	AWNING
UNIT 1	U1 L1	U1-7	1500	1200	900	AWNING
UNIT 1	U1 L1	U1-8	1500	1200	900	AWNING
UNIT 1	U1 L1	U1-9	1500	1200	900	AWNING
UNIT 1	U1 GL	U1-10	2400	600	3000	FIXED

UNIT 2

UNIT 2	GROUND FLOOR	U2-1	2400	900	0	LOUVRE
UNIT 2	GROUND FLOOR	U2-2	2400	4500	0	SLIDING DOOR
UNIT 2	LEVEL 1	U2-3	2400	900	0	AWNING
UNIT 2	LEVEL 1	U2-4	2400	900	0	
UNIT 2	LEVEL 1	U2-5	1800	2000	600	AWNING
UNIT 2	LEVEL 1	U2-6	1800	900	300	AWNING
UNIT 2	LEVEL 1	U2-7	1500	2200	600	AWNING
UNIT 2	LEVEL 1	U2-8	965	711		SKYLIGHT

UNIT 3

UNIT 3	GROUND FLOOR	U3-1	2400	900	0	LOUVRE
UNIT 3	GROUND FLOOR	U3-2	900	1800	1500	
UNIT 3	GROUND FLOOR	U3-3	1200	1800	1200	
UNIT 3	GROUND FLOOR	U3-4	2400	4500	0	SLIDING DOOR
UNIT 3	LEVEL 1	U3-5	2400	900	0	AWNING
UNIT 3	LEVEL 1	U3-6	2400	900	0	
UNIT 3	LEVEL 1	U3-7	900	2000	1500	AWNING
UNIT 3	LEVEL 1	U3-8	1500	1800	800	
UNIT 3	LEVEL 1	U3-9	1000	1000	1100	
UNIT 3	LEVEL 1	U3-10	1200	1500	900	
UNIT 3	LEVEL 1	U3-11	1200	1800	900	AWNING
UNIT 3	LEVEL 1	U3-12	965	711		SKYLIGHT

WINDOW SCHEDULE						
UNIT NO.	LEVEL	CODE	HEIGHT	WIDTH	SILL HEIGHT	WINDOW TYPE

UNIT 4

UNIT 4	GROUND FLOOR	U4-1	2400	900	0	LOUVRE
UNIT 4	GROUND FLOOR	U4-2	1000	1000	1400	
UNIT 4	GROUND FLOOR	U4-3	2400	1000	0	
UNIT 4	GROUND FLOOR	U4-4	2400	1000	0	
UNIT 4	GROUND FLOOR	U4-5	2400	4500	0	SLIDING DOOR
UNIT 4	LEVEL 1	U4-6	2400	900	0	AWNING
UNIT 4	LEVEL 1	U4-7	2400	900	0	
UNIT 4	LEVEL 1	U4-8	1800	2000	600	AWNING
UNIT 4	LEVEL 1	U4-9	1000	1000	1100	
UNIT 4	LEVEL 1	U4-10	1200	1500	900	
UNIT 4	LEVEL 1	U4-11	1200	1800	900	AWNING
UNIT 4	LEVEL 1	U4-12	965	711		SKYLIGHT

UNIT 5

UNIT 5	GROUND FLOOR	U5-1	2400	900	0	LOUVRE
UNIT 5	GROUND FLOOR	U5-2	2400	4500	0	SLIDING DOOR
UNIT 5	LEVEL 1	U5-3	2400	900	0	AWNING
UNIT 5	LEVEL 1	U5-4	2400	900	0	
UNIT 5	LEVEL 1	U5-5	1800	2000	600	AWNING
UNIT 5	LEVEL 1	U5-6	1800	900	300	AWNING
UNIT 5	LEVEL 1	U5-7	1500	2200	600	AWNING
UNIT 5	LEVEL 1	U5-8	965	711		SKYLIGHT

UNIT 6

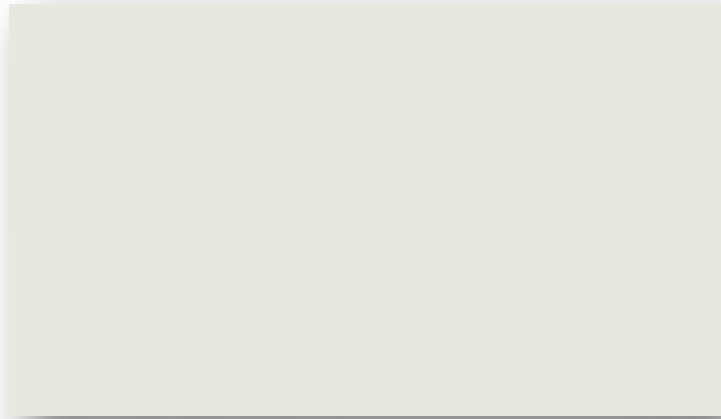
UNIT 6	U6 GL	U6-1	1800	1800	600	
UNIT 6	LEVEL 4	U6-2	940	2410	421	
UNIT 6	GROUND FLOOR	U6-3	940	2410	1460	
UNIT 6	U6 GL	U6-4	2400	3600	0	SLIDING DOOR
UNIT 6	U6 GL	U6-5	2400	1000	0	AWNING
UNIT 6	U6 GL	U6-6	2100	600	300	
UNIT 6	GROUND FLOOR	U6-7	2400	600	3000	FIXED
UNIT 6	U6 L1	U6-8	1500	1200	900	AWNING
UNIT 6	U6 L1	U6-9	1500	1200	900	AWNING
UNIT 6	U6 L1	U6-10	1500	1200	900	AWNING
UNIT 6	U6 L1	U6-11	1500	1200	900	AWNING
UNIT 6	U6 L1	U6-12	2400	1000	0	AWNING
UNIT 6	LEVEL 1	U6-13	1200	1200	900	
UNIT 6	U6 L1	U6-14	1800	1800	600	

DISCLAIMER

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REF. Q	DATE 16.04.2019	AMENDMENT Consultants	Legend: <div>FB01 FACE BRICKWORK TYPE 1 FB02 FACE BRICKWORK TYPE 2 FB03 FACE BRICKWORK TYPE 3 BL BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL</div> <div>R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR GD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR</div> <div>SLW SLIDING WINDOW FW FIXED WINDOW OB OBSCURE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWT RAINWATER TANK</div> <div>P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING IWS INTEGRAL WALL</div>	DWA DESIGN WORKSHOP AUSTRALIA	Wollongong 81a Princes Highway, Fairy Meadow Tel: (02) 4227 1661 P.O. Box 3091, Balgownie NSW 2519 Sydney Suite 704, 31 Market Street, Sydney	Email: info@designworkshop.com.au Web: http://www.designworkshop.com.au Nominated Architect: Robert Gizzi (Reg. 8286)	CLIENT: BUCHANAN/ PERRETT MEDIUM DENSITY ADDRESS: 9-11 BUNDARRA PLACE, DAPTO DRAWING NAME: WINDOW SCHEDULE	DATE: APRIL 18 DRAWN: NT, DL SCALE: QA: RG	PROJECT No. 1752 DWG No. 60 Q
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PN1752 – EXTERNAL COLOUR PALETTE – 9-11 BUNDERRA PLACE, DAPTO



CL01 DULUX 'SURFMIST'



CL02 DULUX 'MONUMENT'



R01 ROOFING 'BASALT'



TC01 GARAGE DOORS, FEATURE HOODS
TIMBER 'NATURAL STAIN'



BW01 PGH 'OLYMPUS'





LEGEND

• T2 RETAIN
T1 REMOVE
RL 13.10
18.25

DESIGN LEVEL
EXISTING GROUND LEVEL

TAP & DRAIN
CONNECT TO SW. AND WATER SERVICE.

SIR WALTER BUFFALO TURF

LANDSCAPE - PLANTING

LANDSCAPE - DEEP SOIL

GE GARDEN EDGE

P1 PERMEABLE PAVER
ADBRI - ECOTRIHEX 80 OR EQ.
CHARCOAL

P2 P2 - BLACK OXIDE COLOURED
CONCRETE, EXPOSED 10mm
BLUE METAL AGGREGATE
FINISH

P1 SELECTED PAVING

STEPPING STONES
400x400

F1 F1 - FENCING 1800
COLOURBOND BETWEEN
DWELLINGS

F2 F2 - 1200 PICKET FRONT
FENCING

MAIL SUPPLY AND INSTALL
LETTER BOX

PIER & BEAM CONST OVER
TPZ

THIS OFFICE WILL NOT CERTIFY LANDSCAPE
CONSTRUCTION WORKS THAT HAVE BEEN CHANGED
OUTSIDE THE STATUTORY DA AND CC PROCESS.

NOTES

- FOR DRAINAGE POINTS IN PAVING AND PLANTER
BOXES - SEE HYDRAULIC DWGS
- 800mm SOIL COVER MINIMUM OVER ALL CONCRETE
STRUCTURES IN LANDSCAPE AREAS. GREATER WHERE
INDICATED ON PLANS AND DETAILS
- INSTALL DRIPPER FEED IRRIGATION TO PLANTING BEDS,
PLANTING BOXES, AND TURF AREAS.
SHOP DWG BY CONTRACTOR.
- FOR ALL HARD SURFACES AND DETAILING
REFER TO ARCH. DRAWINGS.
- LANDSCAPE AND DRAINAGE DRAWINGS ARE
COMPATIBLE [checked 18-04-2019](#)

rev. no	description	date	drawn
03	NEW SITE PLAN LAYOUT	20-04-2019	
02	For DA	17-10-2018	WJM
01	Preliminary	00-00-2014	WJM

Project:
Proposed Medium Density Development:
9-11 Bundarra Place, Dapto

Client: Buchanan / Perrett

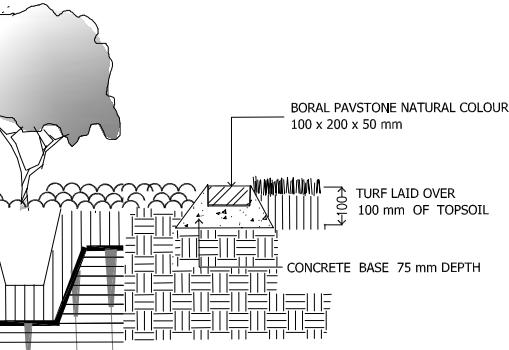
BILL MUIR LA LANDSCAPE ARCHITECT
16/105 Corimal Street, WOLLONGONG
MOBILE: 0411 774051
bill.la@optusnet.com.au

SCALE 1:100 @A1, 1:200 @A3
Aug 2018
SHEET 1 OF 2

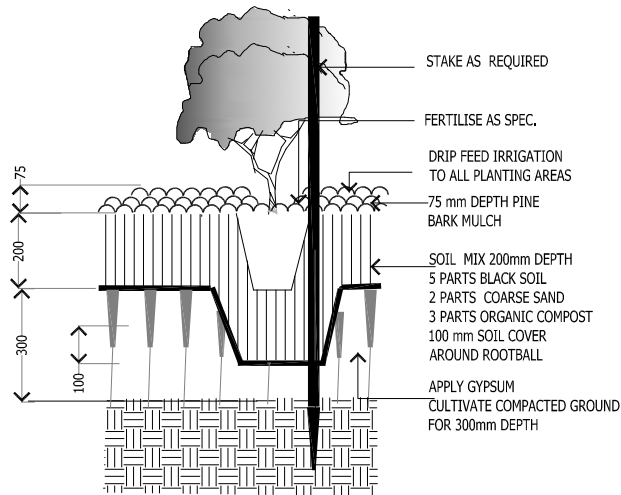
LA.DA.01 LANDSCAPE PLANTING PLAN 1

PLANTING SCHEDULE

TREES				
Symb.	Botanical Name	Common Name	Size	No.
ER	Elaeocarpus reticulatus	Blueberry Ash	25 Litre	10
GLF	Glochidion ferdinandi	Cheese Tree	25 Litre	8
LI	Lagerstroemca indica	Crepe Myrtle	25 Litre	4
TL	Tristaniopus laurina x Luscious	Water Gum	25 Litre	13
WS	Waterhousia floribunda	'Sweeper' Waterhousia	25 Litre	4
SHRUBS				
AM	Acmena smithii var minor	Acmena Allyn Magic	5 Litre	8
BJ	Buxus japonica	Japanese Buxus	5 Litre	35
CL	Callistemon viminalis	Little John Bottlebrush	5 Litre	9
GfW	Grevillea hybrid	Fireworks	5 Litre	116
GRO	Grevillea rosmarinifolia	Rosemary Grevillea	5 Litre	15
LL	Lomandra longifolia	Swordgrass	140mm	35
LR	Loropetalum rubrum	China Pink	5 Litre	11
LT	Lomandra sp.	Tanika	140mm	301
MF	Metrosiderous collina	Fiji Fire	5 Litre	19
MP	Muraya paniculata	Mock Orange	5 Litre	44
MT	Metrosiderous collina	Tahiti	5 Litre	37
SC	Syzigium wilsonii 'Cascade'	Cascade Lilly Pilly	5 Litre	3
SR	Syzigium australe	Resilience	5 Litre	83
GROUND COVERS				
GR	Grevilea poorinda	Grevillea Royal Mantle	140mm	114



A
2
GARDEN EDGE
SCALE 1:20 @ A3



B
2
PLANTING BED DETAIL
SCALE 1:20 @ A3

MAINTENANCE

MAINTENANCE SHALL MEAN CONTINUING CARE OF THE LANDSCAPE AREAS BY ACCEPTED HORTICULTURAL PRACTICES, AS WELL AS RECTIFYING ANY DEFECTS THAT BECOME APPARENT IN THE WORKS UNDER NORMAL USE.

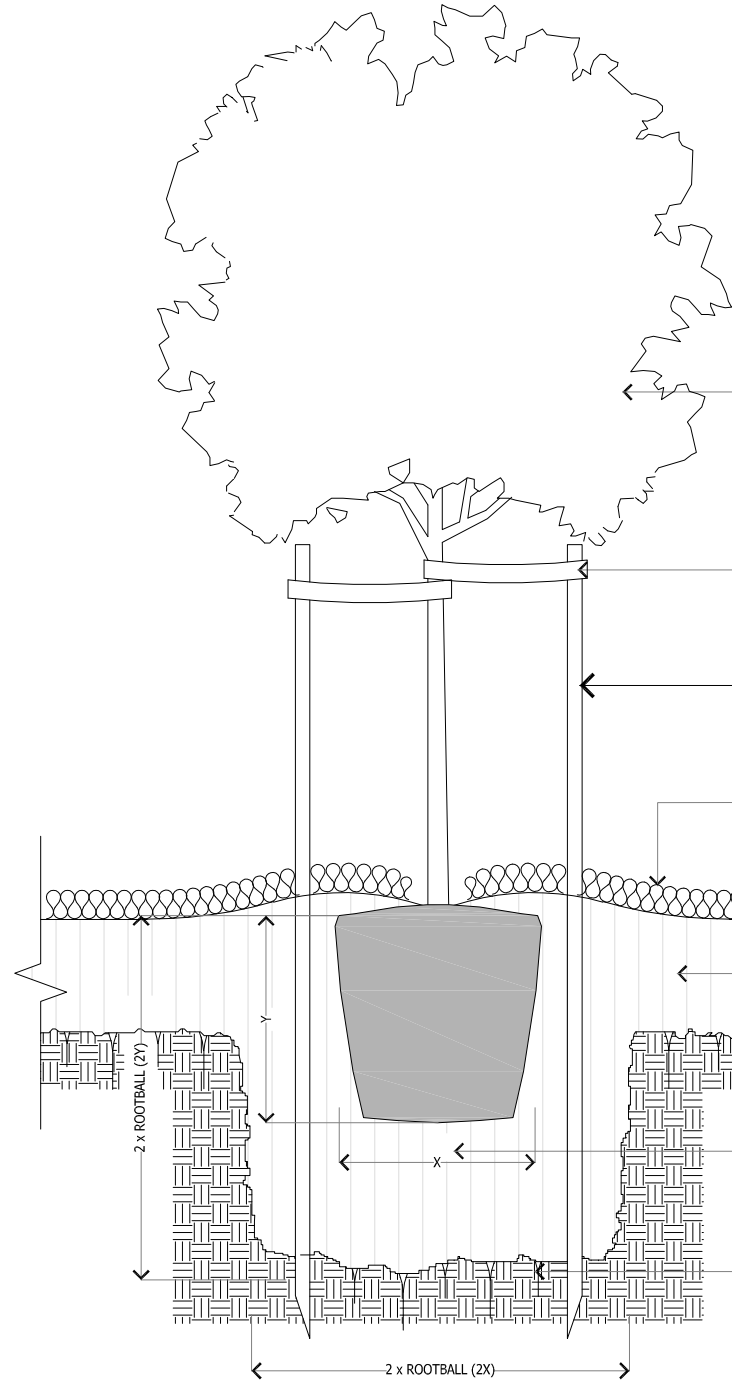
THE MAINTENANCE PERIOD SHALL BE IN TWO PARTS.

1. PLANTING ESTABLISHMENT PERIOD OF 13 WEEKS.

2. CONTINUING CARE AND MAINTENANCE CORRESPONDING WITH THE DEFECTS LIABILITY PERIOD. 12 MONTHS MINIMUM MAINTENANCE PERIOD.

THE PLANTING ESTABLISHMENT PERIOD COMMENCES AT THE DATE OF PRACTICAL COMPLETION.

THE MAINTENANCE PROGRAM SHALL INCLUDE THE FOLLOWING HORTICULTURAL ITEMS, WHERE AND AS REQUIRED: WATERING, MOWING, FERTILIZING, TURFING, EDGING, WEEDING, PEST AND DISEASE CONTROL, STAKING AND TYING, REPLANTING, CULTIVATION, PRUNING, TOP UP CONSOLIDATED MULCH DEPTHS, RECTIFY DRAINAGE DEFECTS, MAINTAIN SITE NEAT AND TIDY.



C
2
MATURE TREE PLANTING DETAIL
SCALE 1:20 @ A3

NOTE: VERIFY LOCATION OF SERVICES PRIOR TO EXCAVATION OF TREE HOLE.

PROPOSED TREE AS SPECIFIED (REFER TO PLANT SCHEDULE) ENSURE TRUNK IS VERTICAL

STAKE TREES AS PER PLANT SCHEDULE AND AS SPECIFIED. DRIVE INTO GROUND WELL AWAY FROM ROOTBALL OF TREE. TIE AS SPECIFIED IN A FIGURE EIGHT MANNER AROUND TRUNK.

STAKING
3 No. 50 x 50 x 2400mm
HARDWOOD STAKES
HESSIAN WEBBING TIES

MULCH AS SPECIFIED. FINISH MULCH FLUSH WITH ADJACENT F.S.L.

TOPSOIL DEPTH AS SPECIFIED TO SURROUNDING PLANTING BEDS

EXCAVATE THE HOLE TWICE THE WIDTH (2 X) AND TWICE THE DEPTH (2 Y). FILL WITH TOPSOIL MIX AS SPECIFIED TO SUPPORT TREE GROWTH.

CULTIVATE SIDES & BASE OF PLANTING HOLE.

NOTES

- FOR DRAINAGE POINTS IN PAVING AND PLANTER BOXES - SEE HYDRAULIC DWGS
- 800mm SOIL COVER MINIMUM OVER ALL CONCRETE STRUCTURES IN LANDSCAPE AREAS. GREATER WHERE INDICATED ON PLANS AND DETAILS
- INSTALL DRIPPER FEED IRRIGATION TO PLANTING BEDS, PLANTING BOXES, AND TURF AREAS. SHOP DWG BY CONTRACTOR.
- FOR ALL HARD SURFACES AND DETAILING REFER TO ARCH. DRAWINGS.
- LANDSCAPE AND DRAINAGE DRAWINGS ARE COMPATIBLE

02	For DA	20-04-2019	WJM
01	Preliminary	00-00-2014	WJM
rev. no	description	date	drawn

Project:
Proposed Medium Density Development
9-11 Bundarra Place, Dapto

Client: Buchanan / Perrett

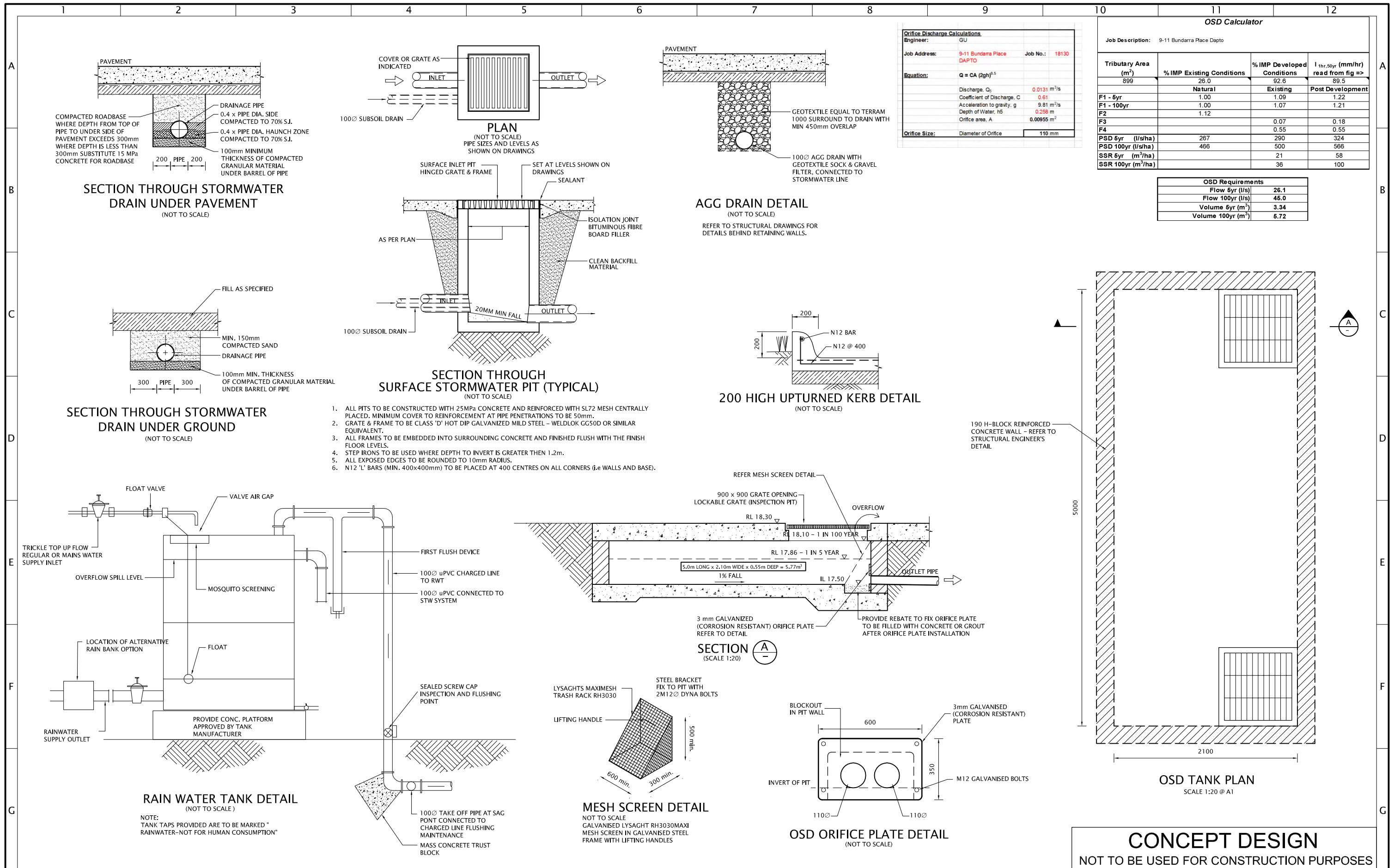
BILL MUIR

LA LANDSCAPE ARCHITECT

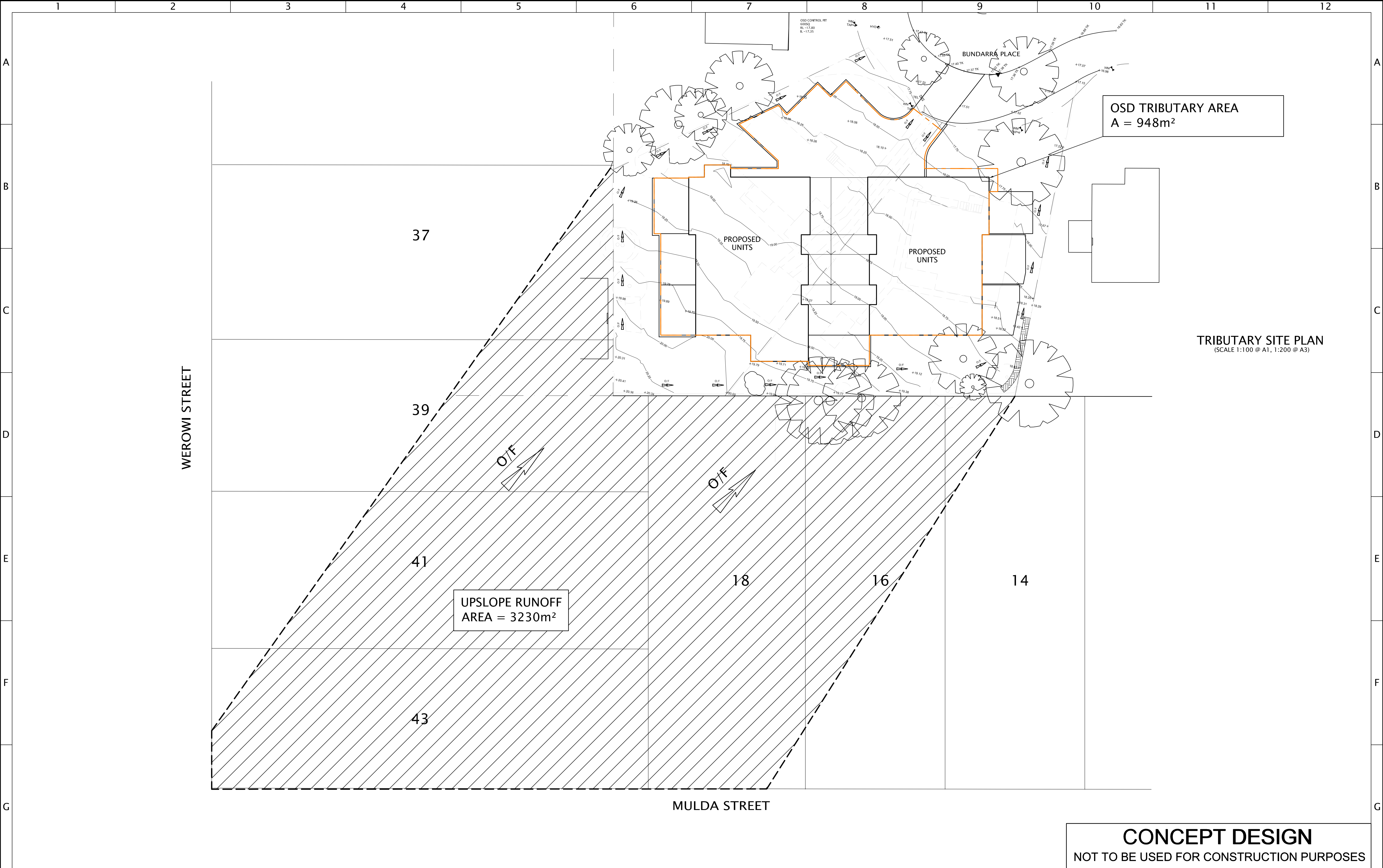
16/105 Corimal Street, WOLLONGONG
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bill@optusnet.com.au

JOB NO: 1240	Aug 2018
	SHEET 2 OF 2
LA.DA.02 LANDSCAPE DETAILS	

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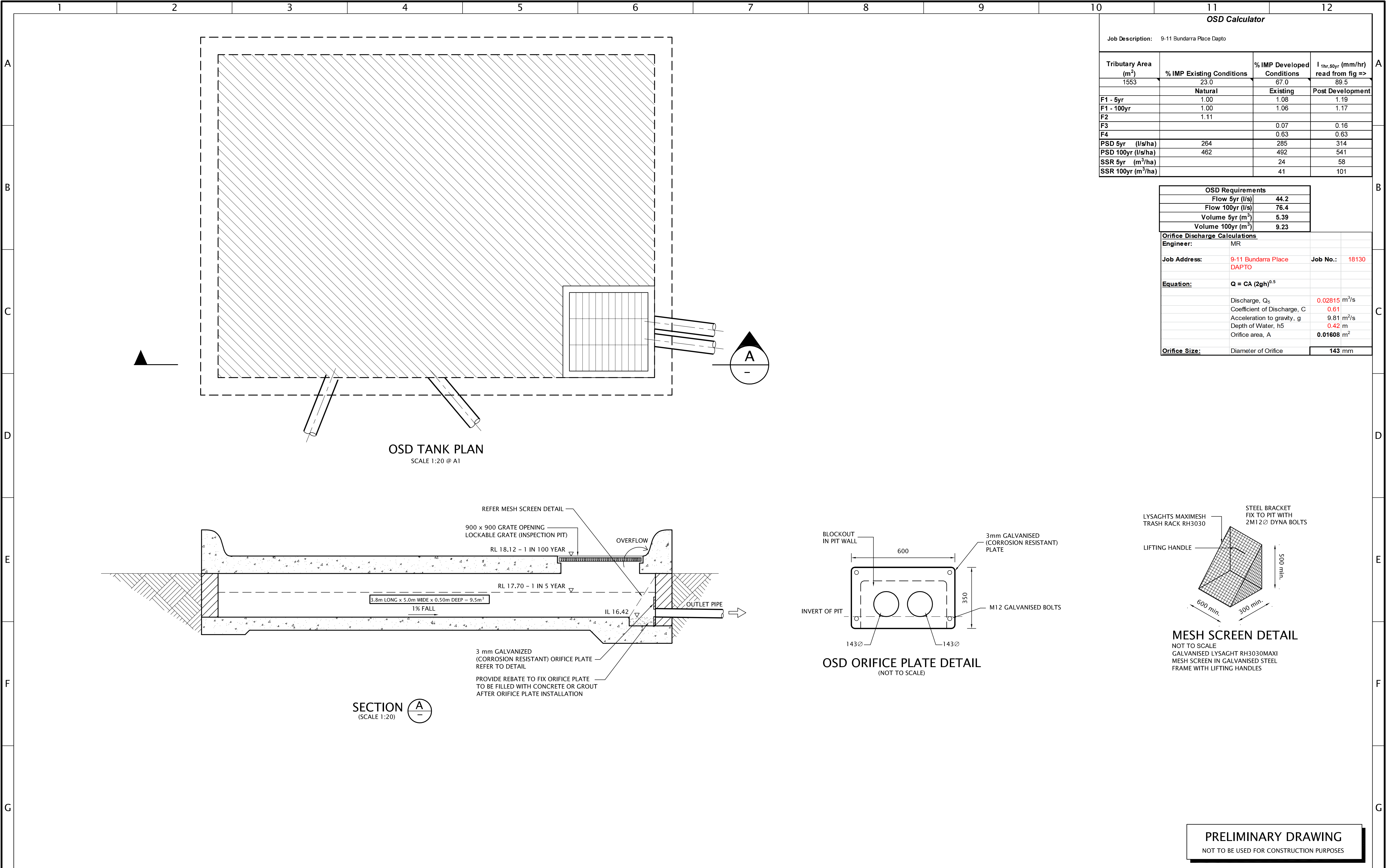


ISSUE		AMENDMENT	DATE	PLANS		0 1000 2000 3000 4000 5000				11 VICTORIA STREET WOLLONGONG NSW 2500 TELEPHONE: 02 42 266 646 Email: info@atbconsulting.com.au		Title		STORMWATER DETAILS		SCALES		AS SHOWN	DATE PLOTTED								
A	ISSUE FOR DA APPLICATION	12/10/18	<div>DO NOT SCALE IF IN DOUBT ASK</div> <div>THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS</div> <div>COPYRIGHT: Concepts and information contained in these engineering drawings and related documents are the copyright of ATB Consulting Engineers Pty. Ltd. Unauthorised copying of part or whole of the document/s is a breach of copyright.</div>	A1	<div>Project</div> <div>At</div> <div>Client</div>	PROPOSED MEDIUM DENSITY	9-11 BUNDARRA PLACE DAPTO, NSW					BUCHANAN / PERRETT	DRAWN	D.K.	DESIGNED	G.U.	CHECKED	G.U.	DATE CHK'D	12/10/18	PROJECT No	18130	DWG	SW3	REVISION	D	DATUM A.H.D.



CONCEPT DESIGN
NOT TO BE USED FOR CONSTRUCTION PURPOSES

ISSUE		AMENDMENT	DATE	PLANS			11 VICTORIA STREET WOLLONGONG NSW 2500 TELEPHONE: 02 42 266 646 Email: info@atbconsulting.com.au		The Association of Consulting Engineers Australia	Title	SITE PLAN		SCALES AS SHOWN		DATE PLOTTED	
A B	ISSUE FOR DA APPLICATION ISSUE FOR DA APPLICATION	12/10/18 10/04/19		Project						PROPOSED MEDIUM DENSITY		DRAWN D.K.		12/10/18		
				At						9-11 BUNDARRA PLACE DAPTO, NSW	DESIGNED G.U.		DATUM A.H.D.			
											CHECKED G.U.	DATE CHK'D 12/10/18	PROJECT No 18130	DWG SW4	REVISION B	
																Client

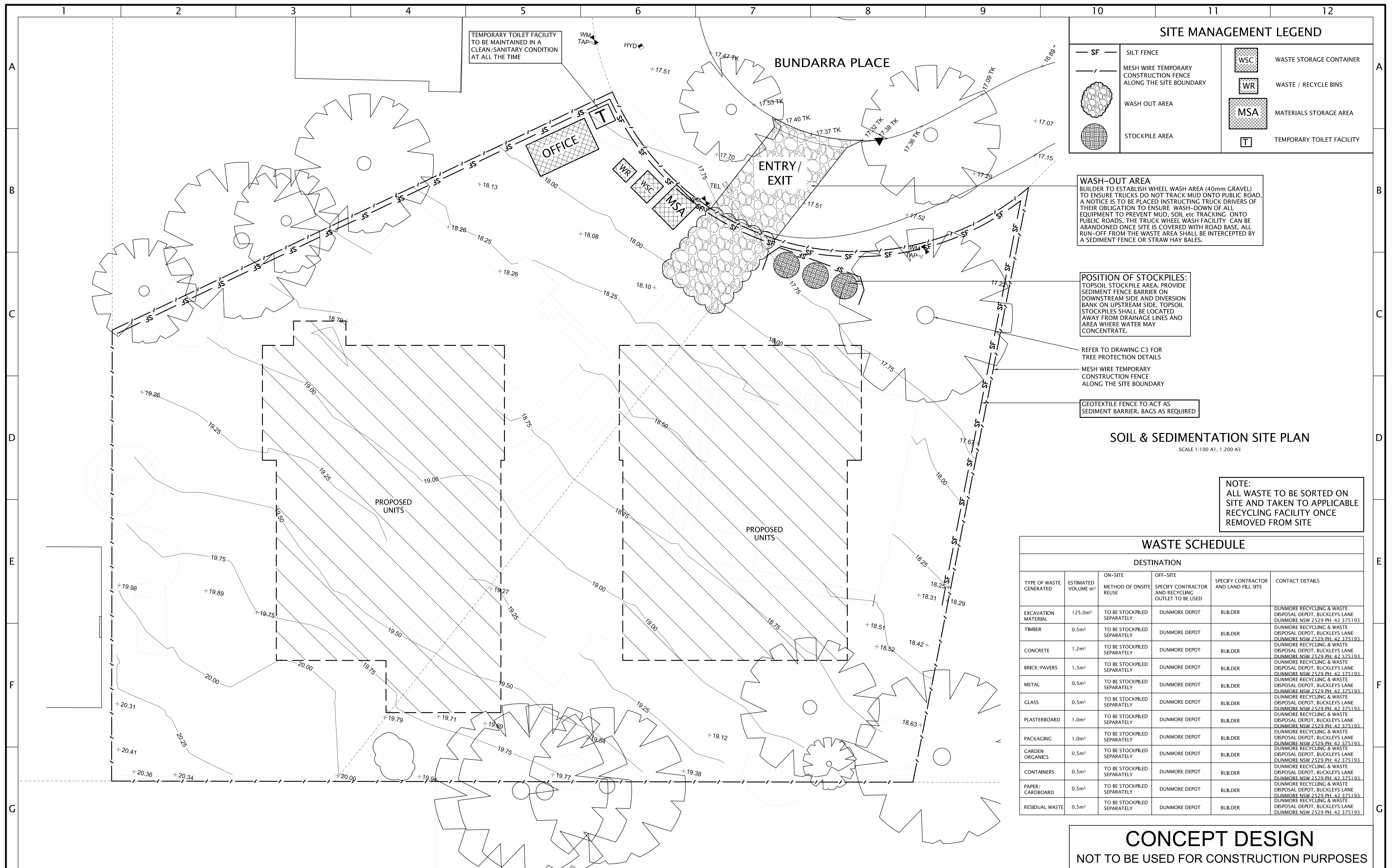


OSD Calculator			
Job Description: 9-11 Bundarra Place Dapto			
Tributary Area (m ²)	% IMP Existing Conditions	% IMP Developed Conditions	I _{1hr,50yr} (mm/hr) read from fig =>
1553	23.0	67.0	89.5
	Natural	Existing	Post Development
F1 - 5yr	1.00	1.08	1.19
F1 - 100yr	1.00	1.06	1.17
F2	1.11		
F3		0.07	0.16
F4		0.63	0.63
PSD 5yr (l/s/ha)	264	285	314
PSD 100yr (l/s/ha)	462	492	541
SSR 5yr (m ³ /ha)		24	58
SSR 100yr (m ³ /ha)		41	101

OSD Requirements	
Flow 5yr (l/s)	44.2
Flow 100yr (l/s)	76.4
Volume 5yr (m ³)	5.39
Volume 100yr (m ³)	9.23

Orifice Discharge Calculations			
Engineer:	MR		
Job Address:	9-11 Bundarra Place DAPTO	Job No.:	18130
Equation:	Q = CA (2gh) ^{0.5}		
	Discharge, Q _s	0.02815 m ³ /s	
	Coefficient of Discharge, C	0.61	
	Acceleration to gravity, g	9.81 m ² /s	
	Depth of Water, h ₅	0.42 m	
	Orifice area, A	0.01608 m ²	
Orifice Size:	Diameter of Orifice	143 mm	

	1	2	3	4	5	6	7	8	9	10	11	12	
A	<h2>SOIL EROSION & DUST MANAGEMENT CONTROLS</h2> <p>1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING RE-VEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE NSW LANDCOM PUBLICATION TITLED MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION VOL. 14th ED. MARCH 2004(BLUE BOOK) OR THE LATEST VERSION OF THIS PUBLICATION</p> <p>2. THE HEAD CONTRACTOR IS TO INFORM ALL SITE STAFF AND SUB-CONTRACTORS OF THEIR OBLIGATIONS UNDER THE EROSION AND SEDIMENT CONTROL PLAN.</p> <p>3. THE CONTRACTOR SHALL NOT DEVIATE FROM THE APPROVED PROGRAM WITHOUT THE SUPERINTENDENT'S APPROVAL FOR TEMPORARY ACCESS/CONSTRUCTION FROM BUNDARRA PLACE.</p> <p>4. PRIOR TO BREAKING EXISTING GROUND THE CONTRACTOR SHALL HAVE IN PLACE DRAINAGE AND FILTER CONTROLS FOR RETENTION OF SEDIMENT. A FILTER FABRIC FENCE AND HAY BALE BARRIERS ARE TO BE USED WHERE ANY LOW POINTS ALLOW SURFACE WATER TO ESCAPE BEFORE CONSTRUCTION OF FINISHED LEVELS.</p> <p>5. WASHING DOWN OF WHEELS AND MUDDIED BODY SURFACES OF ALL VEHICLES AND PLANT LEAVING THE SITE TO PREVENT THE CARRIAGE OF SEDIMENT ONTO STREETS IS REQUIRED DURING INCLEMENT WEATHER.</p> <p>6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ADJACENT ROADS AND STREETS. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE ENTRANCE WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEARANCE OF ANY MEASURES USED TO TRAP SEDIMENT.</p> <p>7. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO ROADS MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.</p> <p>8. DIVERT RUNOFF AWAY FROM ACCESS POINT. SEDIMENT FENCES AND BARRIERS SHALL BE MAINTAINED IN GOOD CONDITION AND CHECKED WHEN RAIN PERIODS ARE IMMINENT AND AT CLOSE WEEK'S WORK.</p> <p>9. MACHINERY MOVEMENT AND TRUCKS SUPPLYING MATERIALS SHALL BE CONFINED TO THE CONTRACTORS ACCESS ROUTE.</p> <p>10. ALL CONTROLS SHALL REMAIN IN PLACE UNTIL ROAD BASE FOR NEW PAVEMENT FORMATION IS LAID.</p> <p>11. DESIGNATED PLANT AND MACHINERY ACCESS WAYS TO BE DEFINED ONSITE BY THE INSTALLATION OF PARAWEBBING FENCING TO MINIMISE UNNECESSARY SITE DISTURBANCE.</p> <p>12. THE CONTRACTOR SHALL HAVE STANDBY LABOR AND ARRANGEMENT FOR DEALING WITH DUST SUPPRESSION FLOCCULATION / DE-WATERING SEDIMENT BASINS AND OTHER URGENT REMEDIAL MAINTENANCE TO EROSION CONTROL MEASURES DURING WEEKENDS AND EXTENDED CLOSED PERIODS.</p> <p>13. SHOULD ADVERSE WIND CONDITIONS ARISE. MACHINERY / PLANT MOVEMENTS SHALL BE RESTRICTED TO THE MINIMUM.</p> <p>14. PROVIDE BARRIERS AROUND ALL CONSTRUCTION WORKS WITHIN THE FOOTPATH AREA TO PROVIDE SAFE ACCESS FOR PEDESTRIANS.</p> <p>15. CONCRETE PUMPS AND CRANES ARE TO OPERATE FROM WITHIN THE BALLAST ENTRY DRIVEWAY AREA AND NOT TO OPERATE FROM THE PUBLIC ROADWAY UNLESS SPECIFIC COUNCIL PERMISSION IS OBTAINED.</p> <p>16. TOILET FACILITIES MUST BE EITHER A FLUSHING TYPE OR APPROVED PORTABLE CHEMICAL CLOSET. CHEMICAL CLOSETS ARE TO BE MAINTAINED AND SERVICED ON A REGULAR BASIS SO THAT OFFENSIVE ODOUR IS NOT EMITTED.</p> <p>17. DURING TRENCH EXCAVATION ALL SPOIL SHALL BE MOUNTED ON THE UPHILL SIDE OF TRENCHES AND PLACEMENT IS TO COMPLY WITH THE SUPERINTENDENTS REQUIREMENTS.</p> <p>18. DIVERSION BANKS SHOULD BE CONSTRUCTED BY MOUNDING STRIPPED TOPSOIL (MIN. HEIGHT 600mm) WHERE DIRECTED. MATERIAL TO BE RE-SPREAD ON FOOT WAYS AFTER FINAL TRIMMING.</p> <p>19. TRAFFIC MANAGEMENT MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH 'RTA' TRAFFIC CONTROL AT WORK SITES – CURRENT EDITION AND AS 1742 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.</p> <p>20. PEDESTRIAN CONTROL MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH AS 1742 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.</p>												A
B													B
C													C
D													D
E													E
F													F
G													G
<div><div><div>ISSUE</div><div>A</div></div><div><div>AMENDMENT</div><div>ISSUE FOR DA</div></div><div><div>DATE</div><div>08.10.18</div></div></div> <div><div>PLANS</div><div><div>010002000300040005000</div><div><div></div><div></div><div></div><div></div><div></div></div></div><div><div>DO NOT SCALE IF IN DOUBT ASK</div><div>A1</div></div><div><div>THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS</div><div>COPYRIGHT: Concepts and information contained in these engineering drawings and related documents are the copyright of ATB Consulting Engineers Pty. Ltd. Unauthorised copying of part or whole of the document/s is a breach of copyright.</div></div></div> <div><div><div><div></div><div></div></div><div>11 VICTORIA STREET WOLLONGONG NSW 2500 TELEPHONE: 02 42 266 646 Email: info@atbconsulting.com.au</div></div><div><div><div></div><div></div></div><div>ATB CONSULTING ENGINEERS CIVIL & STRUCTURAL</div></div><div><div><div></div><div></div></div><div>The Association of Consulting Engineers Australia</div></div></div> <div><div><div>Title</div><div>SOIL & SEDIMENTATION NOTES</div></div><div><div>Project</div><div>PROPOSED MEDIUM DENSITY</div></div><div><div>At</div><div>9-11 BUNDARRA PLACE DAPTO, NSW</div></div><div><div>Client</div><div>BUCHANAN / PERRETT</div></div></div> <div><div><div>SCALES</div><div>AS SHOWN</div></div><div><div>DRAWN</div><div>D.K.</div></div><div><div>DESIGNED</div><div>G.U.</div></div><div><div>CHECKED</div><div>G.U.</div></div><div><div>DATE CHK'D</div><div>12/10/18</div></div><div><div>PROJECT No</div><div>18130</div></div><div><div>DWC</div><div>C1</div></div><div><div>REVISION</div><div>A</div></div></div> <div><div>DATE PLOTTED</div><div>12/10/18</div></div> <div><div>DATUM A.H.D.</div><div></div></div> <div><div colspan="2">CONCEPT DESIGN</div><div>NOT TO BE USED FOR CONSTRUCTION PURPOSES</div></div>													

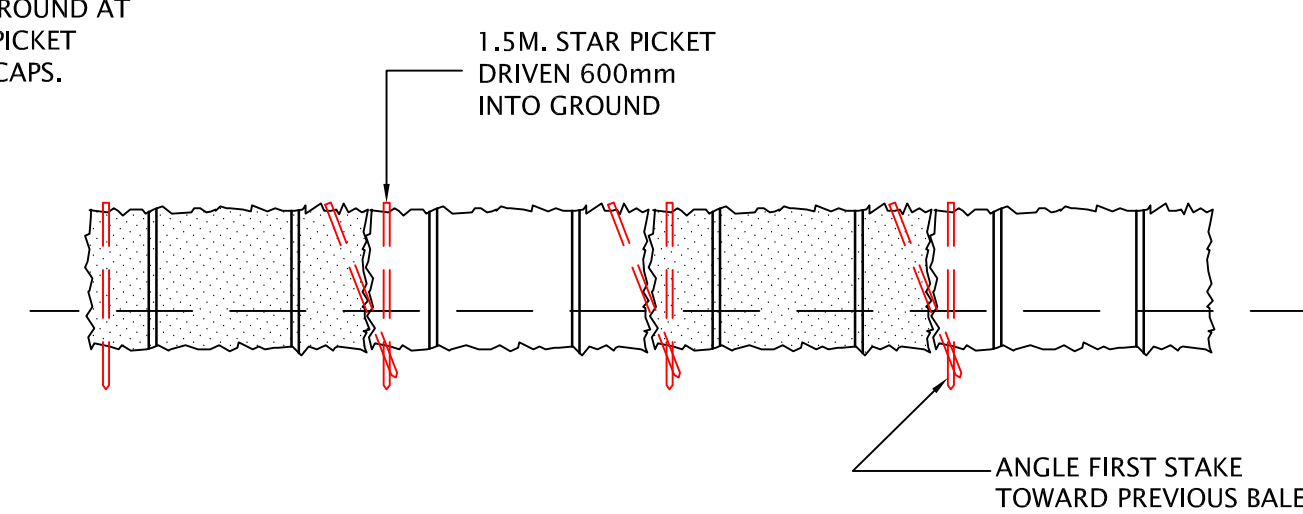


ISSUE		AMENDMENT		DATE	PLANS 0 1000 2000 3000 4000 5000				11 VICTORIA STREET WOLLONGONG NSW 2500 TELEPHONE: 02 42 266 646 Email: Info@atbcconsulting.com.au		Title SOIL & SEDIMENTATION PLAN		SCALES AS SHOWN		DATE PLOTTED		
A	ISSUE FOR DA ISSUE FOR DA	08.10.18 10.04.19									DRAWN D.K.		12/10/18				
B											DESIGNED G.U.		DATUM A.H.D.				
											CHECKED G.U.		DATE CHK'D 12/10/18				
													PROJECT No 18130 DWG C2 REVISION B				
						DO NOT SCALE IF IN DOUBT ASK A1											
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												Client BUCHANAN / PERRETT					

BUILDING MATERIAL STOCKPILE DETAILS

(NOT TO SCALE)

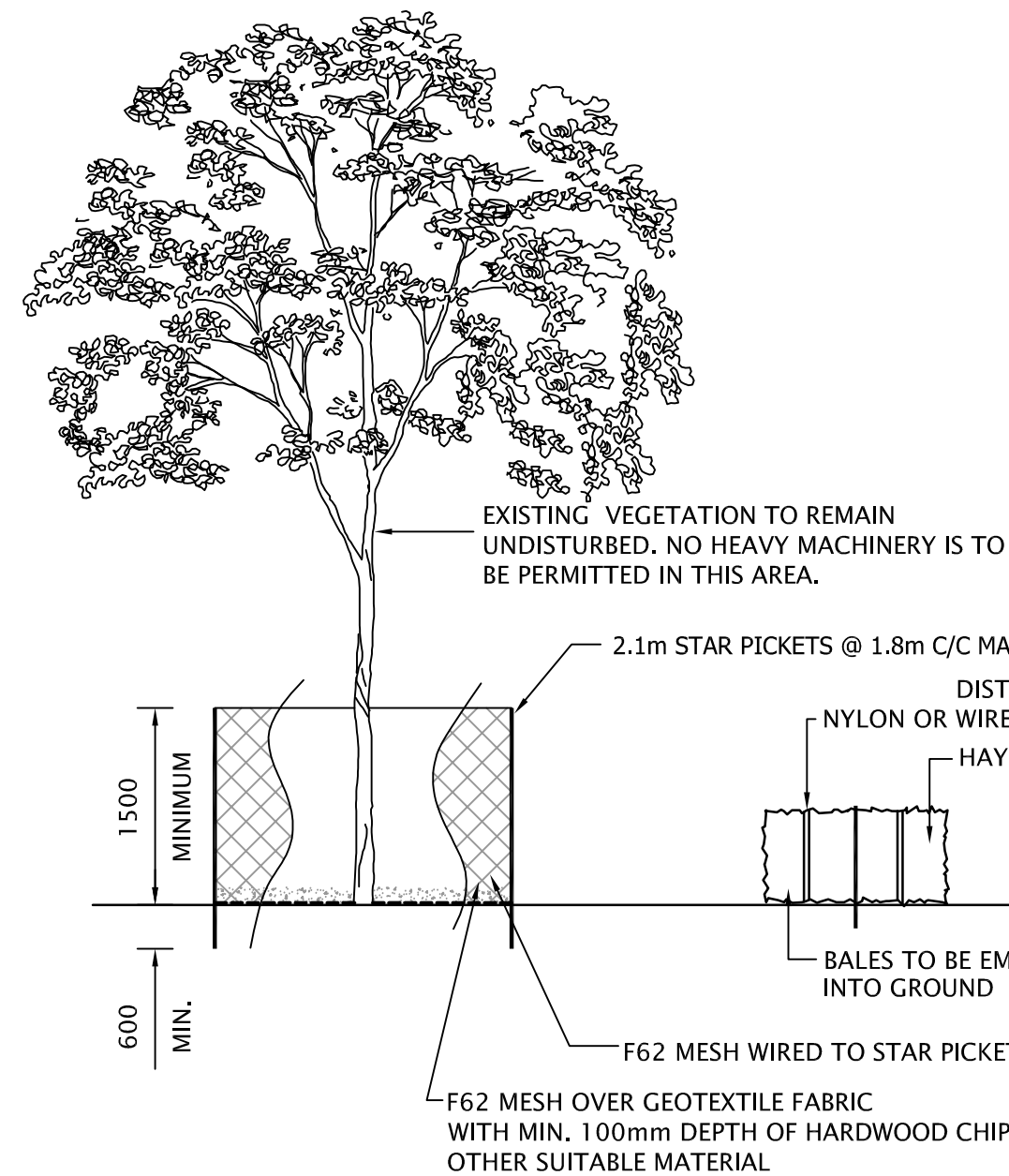
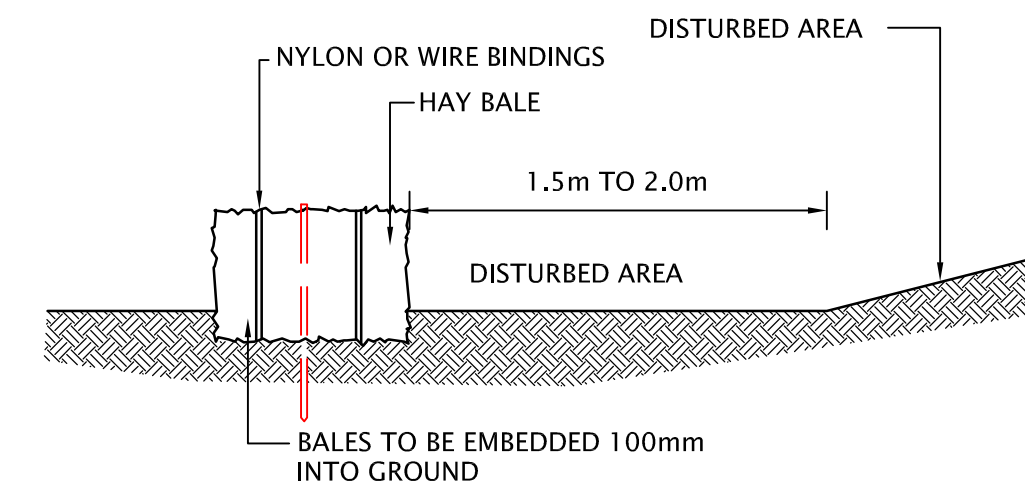
TYPICAL SILT BARRIER FENCE.
(NOT TO SCALE)



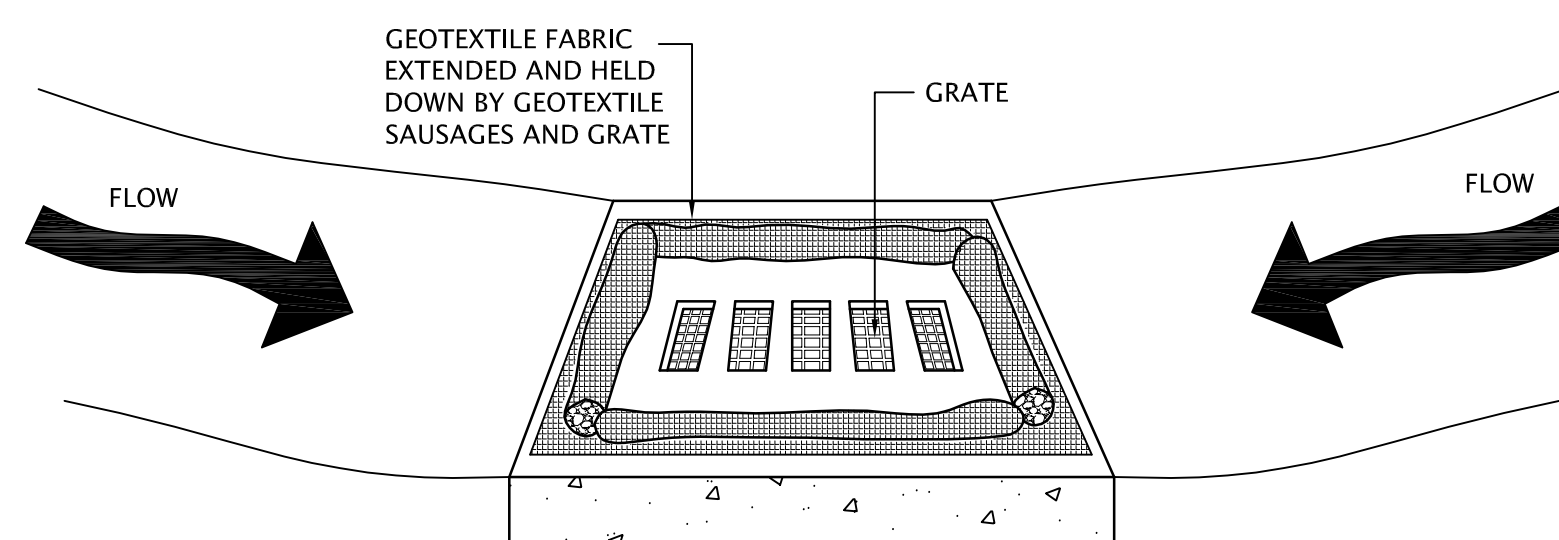
HAY BALE ELEVATION

(NOT TO SCALE)

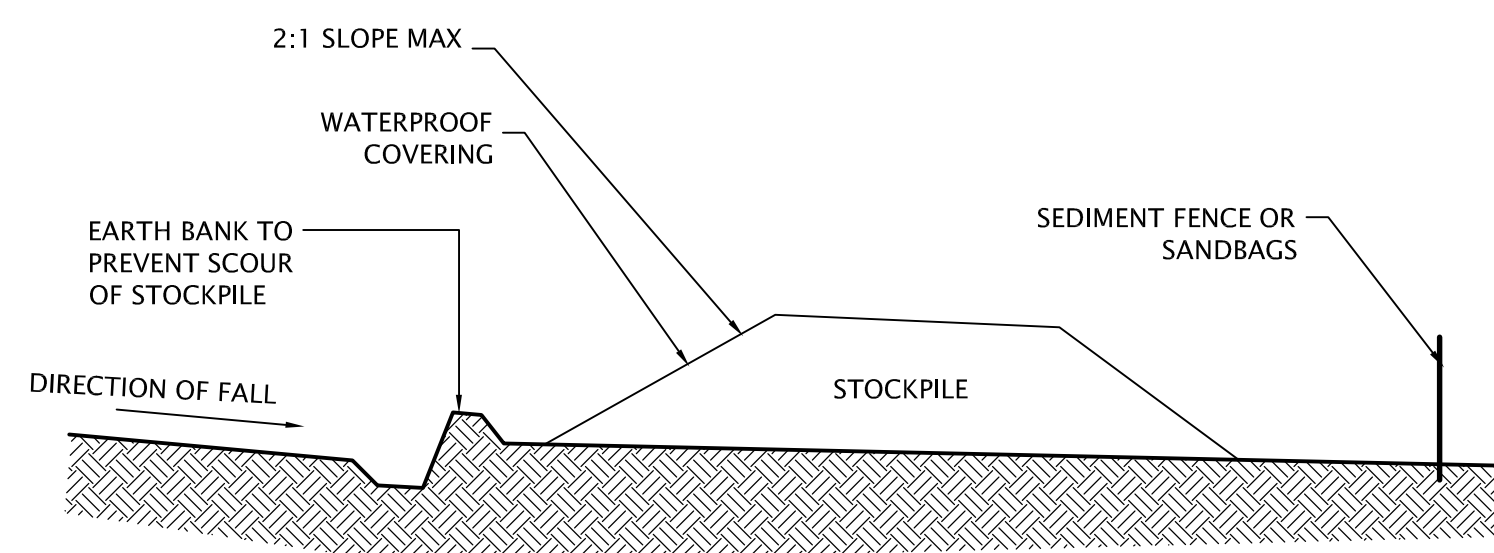
1. CONSTRUCT STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF THE SLOPE.
2. PLACE BALES LENGTH WISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE LOOSE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS TO BE PLACED PARALLEL TO GROUND.
3. ENSURE THAT THE MAXIMUM HEIGHT OF FILTER IS ONE BALE.
4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH 2 1.2 METER STAR PICKETS OR STAKES. ANGLE THE FIRST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOE OF THE BALE.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE BALES SHOULD BE LOCATED 1.5 – 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.
6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED- THEY COULD REQUIRE REPLACEMENT EACH TWO OR FOUR MONTHS



TREE PROTECTION DETAIL
(NOT TO SCALE)



STORMWATER INLET SEDIMENT CONTROL
(NOT TO SCALE)

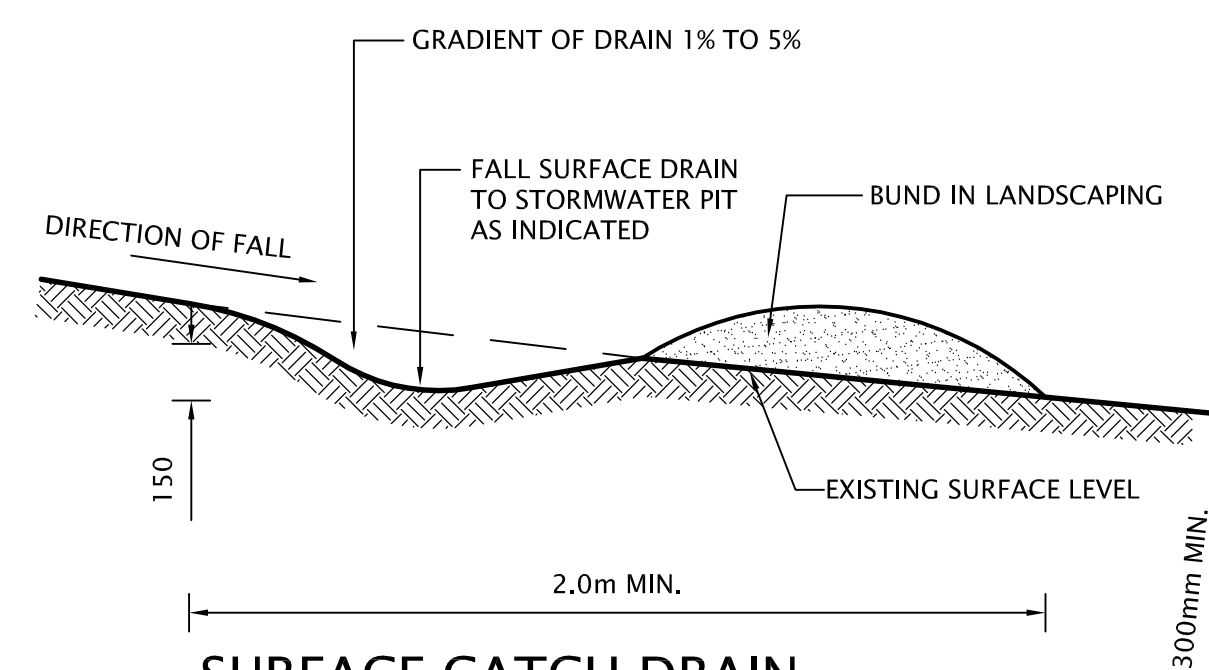


BUILDING MATERIAL STOCKPILE DETAILS

(NOT TO SCALE)

CONSTRUCTION NOTES

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METERS FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW ROADS AND HAZARD AREAS
2. COE CONTOUR AS LOW, FLAT, ELONGATED MOUND
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METERS IN HEIGHT.
4. WHERE ARE TO BE PLACED FOR MORE THAN 10 DAYS, STABILIZE THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS ON THE UP SLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2M DOWN SLOPE.



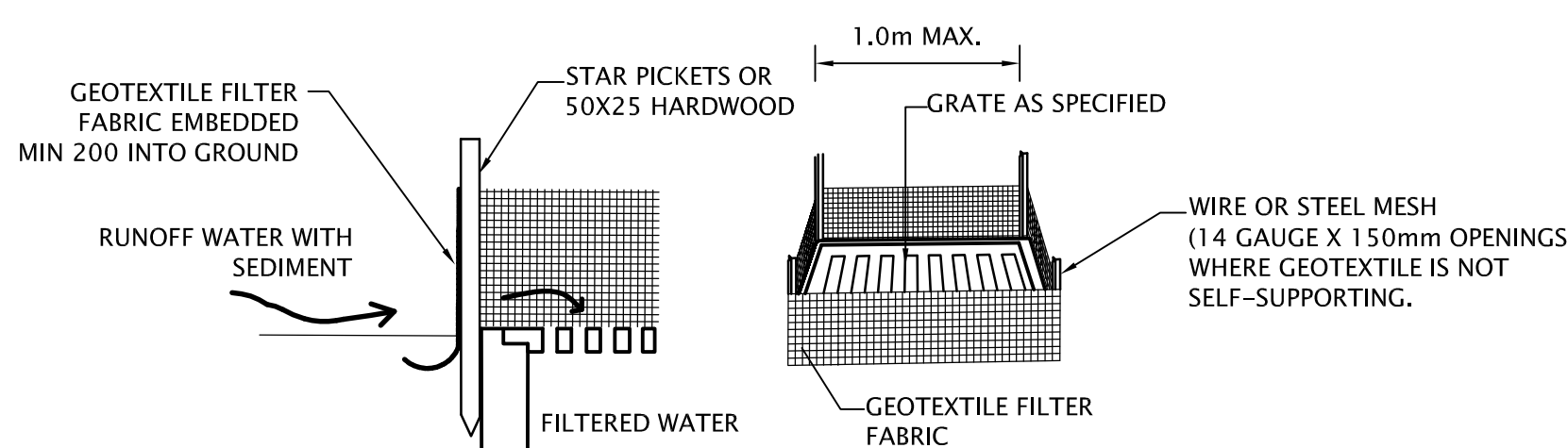
SURFACE CATCH DRAIN

NOTE TO SCALE

ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UP
SLOPE LENGTH IS 80m

CONSTRUCTION NOTES

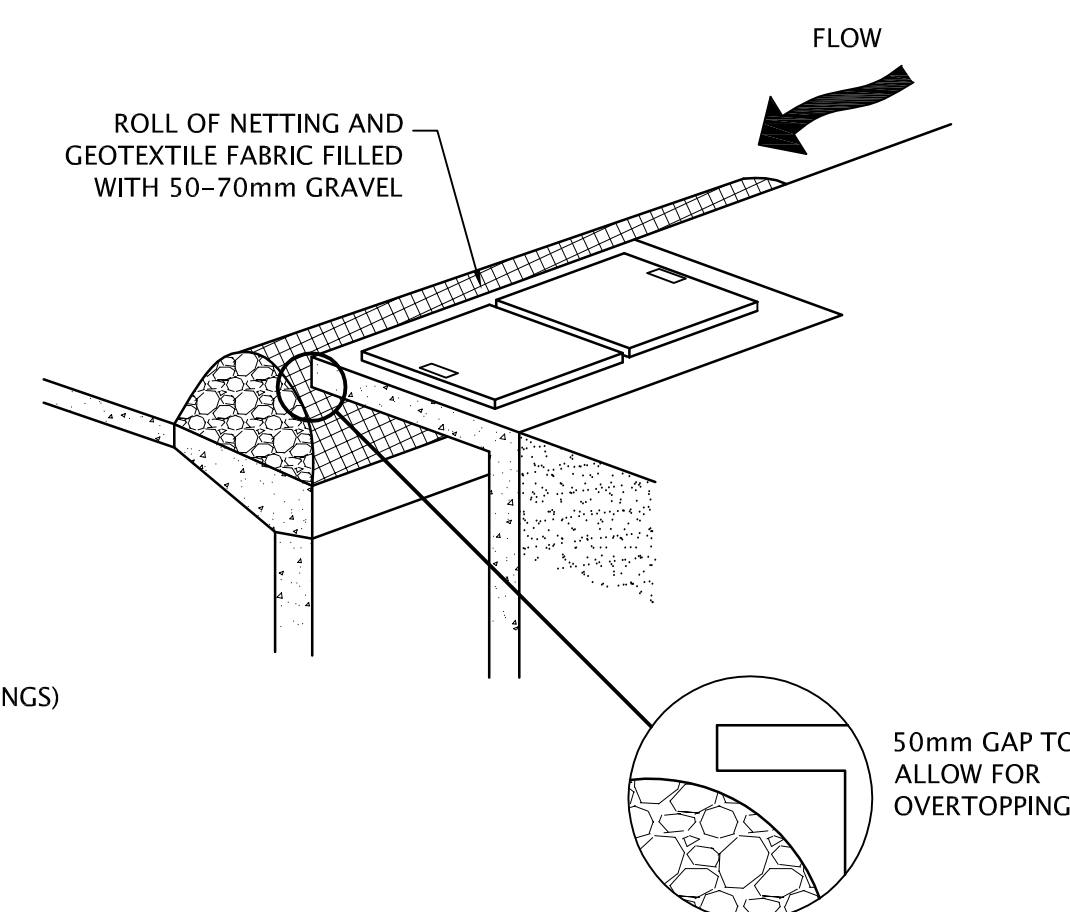
1. BUILD WITH GRADIENTS BETWEEN 1 PERCENT AND 5 PERCENT
2. AVOID REMOVING SHRUBS AND TREES IF POSSIBLE-WORK AROUND THEM
3. ENSURE THE STRUCTURE IS FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS NOT V SHAPED
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE
6. COMPLETE PERMANENT OR TEMPORARY STABILIZATION WITHIN 10 DAYS OF CONSTRUCTIONS



GEOTEXTILE INLET FILTER

(NOT TO SCALE)

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW PROCEDURE FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1.0m CENTRES.
3. IN WATERWAY, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWINGS.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATER TO BYPASS IT.



SEDIMENT PROTECTION ON EXISTING STREET PIT-TYPICAL

(NOT TO SCALE)

1. ALL SEDIMENT DAMS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM OF 60 % FULL OF SOIL & DEBRIS
2. FILTER SHALL BE CONSTRUCTED BY REMOVING & WRAPPING GRATE IN FILTER FABRIC (PROPEX OR APPROVED EQUIVALENT) WITH MINIMUM 75mm FREE FABRIC OUTSIDE ALL EDGES OF GRATE WHEN IT IS REINSTALLED

CONCEPT DESIGN

NOT TO BE USED FOR CONSTRUCTION PURPOSES

ISSUE	AMENDMENT	DATE	PLANS	010002000300040005000			<p>11 VICTORIA STREET WOLLONGONG NSW 2500 TELEPHONE: 02 42 286 646 Email: info@atbconsulting.com.au</p>		Title	SOIL & SEDIMENTATION DETAILS		SCALES	AS SHOWN	DATE PLOTTED
A	ISSUE FOR DA	08.10.18							Project	PROPOSED MEDIUM DENSITY		DRAWN	D.K.	12/10/18
									At	9-11 BUNDARRA PLACE DAPTO, NSW		DESIGNED	G.U.	DATUM A.H.D.
												CHECKED	G.U.	DATE CHK'D 12/10/18
														PROJECT No 18130
			DO NOT SCALE IF IN DOUBT ASK		A1									
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Date: 1 February 2019

Description: Vegetation rear Eastern corner of No.9 Bundarra Place.



Date: 1 February 2019

Description: View to the rear, South east of No.9 Bundarra Place.



Date: 1 February 2019

Description: View to the East of adjoining dwellings to the rear of No.9 Bundarra Place.



Date: 1 February 2019

Description: View to the rear of No.9 Bundarra Place. Photo shows shed to the rear of dwelling.



Date: 1 February 2019

Description: View along North eastern side boundary of No.9 Bundarra Place.



Date: 1 February 2019

Description: Adjoining dwelling to the North east No.7 Bundarra Place.



Date: 1 February 2019

Description: Nos. 9 and 11 Bundarra Place as viewed from the street.



Date: 1 February 2019

Description: Nos. 9 and 11 Bundarra Place as viewed from the street.



Date: 1 February 2019

Description: No.9 Bundarra Place as viewed from the street.



Date: 1 February 2019

Description: Existing dwelling on No.9 Bundarra Place.



Attachment 2 – Site Inspection Photos (taken 1 February 2019)

Date: 1 February 2019

Description: Adjoining dwelling to the West No.12 Bundarra Place as viewed from the street forward of No.11 Bundarra Place.



Date: 1 February 2019

Description: No.11 Bundarra Place as viewed from the street.



Date: 1 February 2019

Description: View to the North from the rear yard of No.11 Bundarra Place. No.9 Bundarra Place is foreground.



Date: 1 February 2019

Description: View to the North east from the rear yard of No.11 Bundarra Place.



Date: 1 February 2019

Description: Rear of existing dwelling and detached garage on No.11 Bundarra Place.



Date: 1 February 2019

Description: View to the Eats form rear yard of No.11 Bundarra Place.



Date: 1 February 2019

Description: View to South east of adjoining dwelling to the rear of No.11 Bundarra Place.



Date: 1 February 2019

Description: View to the South of adjoining development to the rear of No.11 Bundarra Place.



Date: 1 February 2019

Description: View to the South west from rear yard of No.11 Bundarra Place.



Date: 1 February 2019

Description: View North west from rear yard of No.11 Bundarra Place.



Date: 1 February 2019

Description: Rear of existing dwelling on No.11 Bundarra Place.



Attachment 3: WDCP 2009 compliance table

CHAPTER A1 – INTRODUCTION

8 Variations to development controls in the DCP

The applicant proposes variations to Clauses 4.1.2(1) of Chapter B1. The variation request is considered justified and supportable. See considerations at Chapter B1 Residential Development table below.

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 could be considered to be consistent with the principles of Ecologically Sustainable Development.

CHAPTER B1 – RESIDENTIAL DEVELOPMENT

4.0 General Residential controls

Chapter B1 contains residential development controls for multi dwelling housing. Clause 5 applies to multi-dwelling housing and provides additional controls to those in Section 4 (excluding 4.1 to 4.11 and 4.19 to 4.22 that must also be taken into consideration.

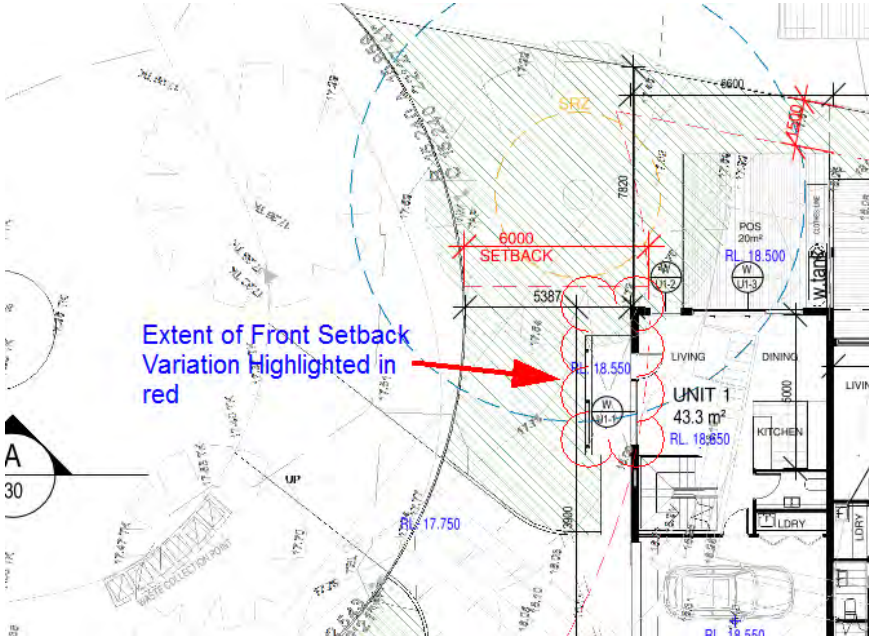
4.0 General Residential controls

<i>Controls/objectives</i>	<i>Comment</i>	<i>Compliance</i>
<u>4.11 Storage Facilities</u> <ul style="list-style-type: none">3 bedroom- 10m³ storage volume to 5m² storage area	The proposed development will provide adequate storage facilities.	Yes
<u>4.12 Site Facilities</u> <ul style="list-style-type: none">letterboxes in an accessible locationair-con, satellite dishes and other ancillary structures to be located away from street frontage, not in a place where they are a skyline feature and adequately setback	The necessary site facilities have been provided and are acceptable in this circumstance.	Yes
<u>4.13 Fire Brigade Servicing</u> <ul style="list-style-type: none">All dwellings located within 60m of a fire hydrant	The subject site can be adequately serviced by fire fighting vehicles in this circumstance.	Yes
<u>4.14 Services</u> <ul style="list-style-type: none">Encourage early consideration of servicing requirements	Water, electricity, sewage and telephone services are available to the site	Yes
<u>4.15 Development near the coastline</u> <ul style="list-style-type: none">Must minimise built intrusions into coastal landscapeRetain views to the ocean from roads and public spacesMaintain buildings consistent with coastal character	Not Applicable	N/A
<u>4.16 View sharing</u> <ul style="list-style-type: none">To protect and enhance view sharing, significant view corridors	The proposed development will have minimal impact on view corridors of	Yes

<ul style="list-style-type: none"> A range of view sharing measures to be considered for building design 	existing development.	
<u>4.17 Retaining walls</u> <ul style="list-style-type: none"> To ensure well designed retaining walls that are structurally sound 	The proposed retaining walls are considered acceptable in this circumstance as reasonable wall heights and setbacks to the site boundaries have been maintained. The proposed retaining walls are internal to the site and treatment at the North eastern and Western side boundaries consists of small earthen bund walls to prevent the concentration of overland flows onto adjoining properties. Treatment at all other site boundaries is at existing grade .	Yes
<u>4.18 Swimming pools and spas</u> <ul style="list-style-type: none"> To ensure relevant safety standards meet user's needs. To ensure site and design maintain the amenity of the area 	Not Applicable.	N/A

5 Attached dwellings and multi - dwelling housing

<i>Controls/objectives</i>	<i>Comment</i>	<i>Compliance</i>
<u>5.1 Minimum Site Width Requirement</u> 18m for multi-dwelling	The proposal involves multi-dwelling housing. The subject site consists of two (2) lots situated on the radius of a cul-de-sac with a combined overall frontage of approximately 27.432m at the front boundary and 46.03m at the rear boundary. A condition as Attachment 5 will require the consolidation of these two (2) lots prior to the issue of the Occupation Certificate. Submitted plans indicate that no part of the proposed development is located on a part of the site with a minimum site width of less than 18m. Therefore the proposed development satisfies the objectives of Council's Minimum Site Width controls and policies for multi-dwelling housing.	Yes
<u>5.2 Number of Storeys</u> Maximum 2 Storeys for Zone R2 Low Density Residential	All proposed units are two (2) storeys. Maximum overall building heights of: <ul style="list-style-type: none"> Unit 1: 7.274m 	Yes

Controls/objectives	Comment	Compliance
<p><u>5.3 Front Setbacks</u></p> <ul style="list-style-type: none"> Infill 6m minimum 	<ul style="list-style-type: none"> Unit 2: 7.052m Unit 3: 6.936m Unit 4: 6.734m. Unit 5: 6.671m Unit 6: 7.211m <p>Proposed:</p> <p>Unit 1: 5.4m to the front façade and 3.9m to front entry landing</p> <p>Unit 6: 13.9m</p> <p>Justification for Front Setback Variation:</p> <p>The applicant has proposed a front setback of 5.4m to the front façade and 3.9m to the front entry landing of Unit 1 requesting a variation to Council's controls. A copy of the variation request statement is provided at Attachment 4. It is considered that the variation can be supported for the following reasons:</p> <ul style="list-style-type: none"> Council's setback controls indicate that the minimum front setback for the subject site is 6m. Therefore the proposed variation is considered minor point encroachment for 5m of the front façade with the remaining 8.8m of the front façade of Unit 1 complying with the 6m front setback control as can be seen in Figure 1 below. 	<p>No -refer to considerations below</p> <p>Yes</p> <p>Variation request considered and capable of support</p>
 <p>Figure 1: Extent of front setback variation highlighted in red.</p>		
<ul style="list-style-type: none"> It is considered that the proposed front setback will have minimal impact on the existing character of the street and compatibility in front setbacks as the encroachment is minor and the building line within the street appears varied. It is considered that the dwelling has been sited with regards to site constraints minimising impacts on existing mature trees to be retained. 		

<i>Controls/objectives</i>	<i>Comment</i>	<i>Compliance</i>
<ul style="list-style-type: none"> The proposed front setback will have minimal impacts on view corridors from adjoining dwellings. Although the numerical requirements have not been strictly met in this circumstance it is considered that the objectives of the clause have been met ensuring minimal impact on the street scene and on the amenity of the adjoining dwellings. 		
<u>5.4 Side and Rear Setbacks</u>		
<ul style="list-style-type: none"> 0.8 x ceiling height min 1.0 x ceiling height where windows of living areas face the rear or side boundary at first floor level. 		
<u>Required Side Setbacks</u>	<u>Proposed Side Setbacks</u>	
Unit 1	Unit 1	
Ground Floor: 2.9m (North east)	Ground Floor: 6.4m (North east)	Yes
First Floor: 5.1m (North east)	First Floor: 6.4m (North east)	Yes
Unit 2	Unit 2	
Ground Floor: 3.18m (North east)	Ground Floor: 6.38m (North east)	Yes
First Floor: 5.34m (North east)	First Floor: 6.38m (North east)	Yes
Unit 3	Unit 3	
Ground Floor: 3m (North east)	Ground Floor: 5.12m (North east)	Yes
First Floor: 5.08m (North east)	First Floor: 5.12m (North east)	Yes
Unit 4	Unit 4	
Ground Floor: 2.62m (South west)	Ground Floor: 9.47m (South west)	Yes
First Floor: 5.1m (South west)	First Floor: 8.64m (South west)	Yes
Unit 5	Unit 5	
Ground Floor: 2.62m (South west)	Ground Floor: 9.47m (South west)	Yes
First Floor: 5.1m (South west)	First Floor: 8.64m (South west)	Yes
Unit 6	Unit 6	
Ground Floor: 2.26m (West)	Ground Floor: 4.56m (South west)	Yes
First Floor: 4.42m (West)	First Floor: 4.56m (South west)	Yes
<u>Required Rear Setbacks Units 3 and 4:</u>	<u>Rear Setbacks:</u>	
Unit 3	Unit 3	
Ground Floor: 3m	Ground Floor: 6.998m	Yes
First Floor: 5.08m	First Floor: 6.998m	Yes
Unit 4	Unit 4	
Ground Floor: 2.62m	Ground Floor: 3.956m	Yes
First Floor: 5.1m	First Floor: 6.95m	Yes
<u>5.5 Building Character and Form</u>		
<ul style="list-style-type: none"> To design residential development to respond to the streetscape character. The Site and Context 	It is considered that the design, height and siting of the proposed dwellings	Yes

Controls/objectives	Comment	Compliance
<p>Analysis must inform the development proposal.</p> <ul style="list-style-type: none"> To complement and enhance the visual character of the street and neighbourhood through appropriate building scale, form and detail. 	<p>respond to the site context.</p> <p>The proposal defines the street edge and allows for surveillance of the street, with all units clearly addressing the street frontage. Significant articulation is provided on all elevations and the proposal does not present as inappropriate in scale or form when considered in relation to the zoning of the site and desired future character.</p>	
<p><u>5.6 Access / Driveway Requirements</u></p>	<p>The proposed development satisfies the objectives of Council's Access/Driveway Requirements controls and policies.</p> <p>Council's Traffic Officer has no objections to the proposed access arrangements.</p>	<p>Yes</p>
<p><u>5.7 Car Parking Requirements</u></p> <ul style="list-style-type: none"> 1 car parking spaces per dwelling with a GFA of less than 70m² 1.5 parking spaces per dwelling with a GFA between 70m² and 110m². 2 car parking spaces per dwelling with a GFA of greater than 110m². Plus 0.2 car parking spaces per dwelling <p>Required Parking:</p> <p>Units 1 and 6</p> <p>2 spaces per dwelling = 4 spaces</p> <p>Units 2-5</p> <p>1.5 spaces per dwelling = 6 spaces</p> <p>0.2 x 6 dwellings = 1.2 Spaces</p> <p>Therefore a total of twelve (12) spaces are required for the proposed development.</p>	<p>Proposed Parking:</p> <ul style="list-style-type: none"> The proposal provides a double garage for Units 1 and 6. A double garage has been provided for Unit 4 and single garages for 2, 3 and 5. A further one (1) resident parking space and two (2) visitor parking spaces have been provided forward of Unit 6. <p>Therefore a total twelve (12) onsite parking spaces are proposed.</p> <p>The visitor and resident spaces are proposed forward of the building façade of Unit 6 which has been setback 13.6m from the front boundary due to the irregular shape of the allotment being located on the radius of a cul-de-sac and to allow vehicular manoeuvring to the rear units. It is noted that the proposed spaces are largely setback behind the 6m building line with exception of a minor point encroachment as required under Clause 5.3 of Chapter B1. It is considered that the proposed landscaping minimises the impacts of</p>	<p>Yes</p>

Controls/objectives	Comment	Compliance
	<p>the proposed visitor parking space on the street scape. Therefore the location of the proposed visitor space is considered acceptable in this circumstance.</p> <p>Council's Traffic Officer has raised no objections to the proposed car parking.</p> <p>The proposed development satisfies the objectives of Council's Car Parking Requirements controls and policies.</p>	
<p><u>5.8 Landscaping Requirements</u></p> <ul style="list-style-type: none"> A minimum of 30% of the total site area must be provided as landscaped area. 	<p>Landscaped Area Proposed: 38%</p> <p>The proposed development satisfies the objectives of Council's landscaped area controls and policies.</p> <p>Council's Landscape Officer has raised no objections to the proposed landscaping.</p>	<p>Yes</p>
<p><u>5.9 Deep Soil Planting</u></p> <ul style="list-style-type: none"> A minimum of half of the landscaped area (i.e. 15% of the site) must be provided as a deep soil zone, where the deep soil zone is not located at the rear of the site. The deep soil zone may be located in any position on the site, other than forward of the building line, subject to this area having a minimum dimension of 6m. No structures, basement carparks, driveways, hard paving, decks, balconies or drying areas are permitted within the deep soil zone. The deep soil zone shall be densely planted with trees and shrubs. 	<p>The proposal provides for 384m² (24% of site area) of deep soil zone planting along the rear and South western side boundary. A continuous 6m width for the deep soil zone, however has not been maintained for the entire deep soil zone</p> <p>The proposed development satisfies the objectives of Council's Deep Soil Planting controls and policies.</p>	<p>No -refer to considerations below</p>
<p>Justification for Front Setback Variation:</p> <p>The applicant has proposed a deep soil zone that does not maintain a continuous 6m width for the entire deep soil zone proposing areas with a width of 3.5m and 4.684m requesting a variation to Council's controls. A copy of the variation request statement is provided at Attachment 4. It is considered that the variation can be supported for the following reasons:</p> <ul style="list-style-type: none"> The proposed amount of deep soil zone planting is approximately 384m² which equates to approximately 24% of the site area exceeding the minimum 15% required under Clause 5.9.2(2). It is noted that Chapter B1 		<p>Variation request considered and capable of support</p>

Controls/objectives	Comment	Compliance
<p>Clause 4.23.2(1) permits deep soil zones to have minimum dimension of 3m. The proposed encroachments on the 6m deep soil zone width are to enable vehicular manoeuvring. Permeable paving has been used in this area so as to enable water infiltration.</p> <ul style="list-style-type: none"> It is considered that the proposed development allows for increased water infiltration on the site. Council's Stormwater Officer has no objections to the onsite stormwater management. It is considered that the proposed deep soil has been sited and designed so as to protect existing mature trees on both the subject site and adjoining properties whilst encouraging the planting of significant trees. Council's Landscape Officer has no objections to the proposed deep soil planting. Although the numerical requirements have not been strictly met in this circumstance it is considered that the objectives of the clause have been met ensuring minimal impact on the environment and on the amenity of the adjoining dwellings. 		
<p><u>5.10 Communal Open Space</u></p>		
<p>Required for greater than ten (10) dwellings</p>	<p>The proposal is for a six (6) unit multi-dwelling housing development only.</p>	<p>N/A</p>
<p><u>5.11 Private Open Space</u></p>		
	<p>All units have private open space with a minimum area of 4m x 5m separated from the boundary by a vegetated landscape bed. Reasonable solar access is afforded.</p>	<p>Yes</p>
<p><u>5.12 Solar Access Requirements</u></p>		
	<p>The proposed development will have minimal impact on adjoining properties in terms of Solar Access as reasonable setbacks and building heights have been maintained.</p> <p>The units have been oriented on the lot so as to maximise the amount of sunlight received by the living areas and private open space.</p> <p>It is considered that the proposed development can receive a reasonable amount of sunlight to private open space areas.</p>	<p>Yes</p>
<p><u>5.13 Additional Control for Multi Dwelling Housing - Dwelling Mix and Layout</u></p>		
<p>Required for greater than ten (10) dwellings.</p>	<p>The proposal is for a six (6) unit multi-dwelling housing development only.</p>	<p>N/A</p>

<i>Controls/objectives</i>	<i>Comment</i>	<i>Compliance</i>
<u>5.14 Additional Control for Multi Dwelling Housing - Adaptable Housing</u> Required for greater than six (6) dwellings.	The proposal is for a six (6) unit multi-dwelling housing development only.	N/A
<u>5.15 Additional Control for Multi Dwelling Housing – Crime Prevention through Environmental Design</u>	The proposed development satisfies the objectives of Council's Crime Prevention Through Environmental Design controls and policies in this circumstance, minimising areas for entrapment and concealment. See chapter E2 comments below.	Yes

CHAPTER D1: DAPTO

Chapter D1 indicates that The residential areas in Dapto are likely to experience some redevelopment with some older dwelling stock being replaced by larger contemporary single or two storey dwellings. Medium density villa or townhouse developments are supportable in areas within close proximity to the Dapto Town Centre.

The proposal provides for replacement of older dwelling stock with medium density townhouse development with in close proximity to the Dapto Town Centre, approximately 450m from Dapto Mall.

Development within the immediate vicinity of the subject site is characterised by low density residential development with some medium density development located on other streets within the vicinity as can be seen at **Figure 1** - Aerial Photograph (2018) of the assessment report.

The proposed development is a permissible use in the R2 zone and reasonably satisfies controls for multi-dwelling housing development under Wollongong Development Control Plan 2009. The proposal is considered to not detract from the existing character of Dapto and is compatible with the desired future character for the locality.

CHAPTER E2: CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

<i>Control/objective</i>	<i>Comment</i>	<i>Compliance</i>
<u>3.1 Lighting</u>	It is considered that the proposed development will improve existing lighting conditions on the subject site which is currently vacant. A condition as at Attachment 5 is proposed in regards to providing adequate general area lighting.	Yes
<u>3.2 Natural surveillance and sightlines</u>	The proposed development will improve natural surveillance and sight lines of adjoining properties and the street.	Yes

<i>Control/objective</i>	<i>Comment</i>	<i>Compliance</i>
<u>3.3 Signage</u>	No signage is proposed with this application and the proposed development will have minimal impact on the existing signage within the vicinity.	Yes
<u>3.4 Building design</u>	The proposal is for a six (6) unit multi-dwelling housing development. Unit 1 is generally centrally located to the site frontage and has been designed to address the Street. It is considered that the proposed development satisfies Council's building design policies and controls for Crime Prevention Through Environmental Design as relates to minimising areas of entrapment.	Yes
<u>3.5 Landscaping</u>	The proposal is considered to satisfy the landscaping controls for CPTED in this circumstance as relates to minimising areas of concealment. Council's Landscape Officer has reviewed the proposed landscaping including the submitted arborist report and raised no objections.	Yes
<u>3.6 Public open space and parks.</u>	The proposal is for a six (6) unit multi-dwelling housing development only on a privately owned lot.	N/A
<u>3.7 Community facilities & Public Amenities</u>	The proposal is for a six (6) unit multi-dwelling housing development only on a privately owned lot.	N/A
<u>3.8 Bus stops and taxi ranks</u>	The subject site is not adjacent to any major bus stops or taxi ranks.	Yes

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

Council's Traffic Officer has reviewed the proposal in relation to this chapter and provided a satisfactory response commenting that the number of parking spaces, access arrangements and manoeuvring are acceptable. Conditions have been included at **Attachment 5** relating to these matters.

CHAPTER E6: LANDSCAPING

The proposed landscape plan was referred to Council's Landscape Officer for comment with referral advice indicating the proposal as satisfactory subject to conditions.

CHAPTER E7: WASTE MANAGEMENT

It is considered that the proposed development satisfies the objectives of this Chapter. Council's street waste collection service is to be utilised. It is noted that a garbage compactor is proposed with this development so as to minimise the number of bins required for the development and impacts on street parking on garbage collection days. Council's Traffic Officer has reviewed the proposal providing conditionally satisfactory referral advice.

CHAPTER E14 STORMWATER MANAGEMENT

Council's Stormwater Officer has assessed the application in this regard against the submitted concept stormwater drainage plan and has not raised any issues subject to draft conditions.

CHAPTER E17 PRESERVATION AND MANAGEMENT OF TREES AND VEGETATION

The application proposes the removal of several trees to facilitate the proposal. Council's Landscape Officer has assessed the application submission, which included an Arborist Report. Conditionally satisfactory referral advice was received and conditions as at **Attachment 5** specify trees to be removed, trees to be retained, compensatory plantings and tree protection and management.

CHAPTER E19 EARTHWORKS (LAND RESHAPING WORKS)

The proposal involves earthworks to facilitate the proposed development. A geotechnical report and information regarding the earthworks to reshape the land were submitted with the application.

The application submission was referred to Council's Stormwater Officer for comment and no objections were raised subject to conditions. It is considered that the earthworks will have minimal detrimental impact on environmental functions and processes, neighbouring uses items and features of the surrounding land.

CHAPTER E21 DEMOLITION AND ASBESTOS MANAGEMENT

The proposal will require demolition works. Appropriate conditions are included in **Attachment 5** of this report to minimise impacts and ensure that demolition is carried out to Council's and Work Safe NSW requirements.

CHAPTER E22 SOIL EROSION AND SEDIMENT CONTROL

Conditions are included in **Attachment 5** in this regard so as to minimise the impacts of the proposed works on the environment.

Attachment 4: Clause 8 Variation to Development Control Statements

Front Setbacks (Section 5.3)

Council's DCP requires a minimum front setback of 6m measured to the front façade. In this regard, the proposed development seeks to vary this as a result of a minor encroachment associated with Unit 1. As suggested, the nature of the encroachment is relatively minor considering the variation results in only some 2.5% of Unit 1 been non-compliant with the front setback requirement. Numerically, the variation being sought includes a reduced setback of 4.684 m measured to the primary building façade and a 3.6 m setback to the associated porch of Unit 1. In acknowledging the existing character and building setbacks, whilst the proposed dwelling is forward of adjoining properties the nature of the cul-de-sac frontage along with the minor encroachment proposed it is considered that the proposed reduction to the front setback will not be detrimental to the surrounding streetscape or adversely impact adjoining properties. This is reinforced by the fact proposed Unit 1 located some 7.8 m from the adjoining north-east side boundary and a further 4.5m to the adjoining dwelling located at No. 7 Bundarra Place. This will be further mitigated by the proposed landscape planning scheme and vegetated buffer that will be established as part of the proposed development. Therefore, assessed on its merits it is considered the front setback variation can be supported.

Deep Soil Planting (Section 5.9)

As proposed, the proposed development seeks to include all areas with a minimum 3.5 m width as deep soil planting, contradictory to the 6 m minimum dimension as required under the DCP. In nominating a minimum 3.5 m width, it is considered there is a degree of acceptance within the local and state planning guidelines that a 3 m width has the capacity to accommodate for deep soil planting. This includes the *NSW Apartment Design Guide* criteria for residential flat buildings and *Wollongong City Council DCP* requirement for deep soil planting in a dual occupancy development. Although the proposed development falls outside these development forms, the acceptance that 3 m in width is sufficient for deep soil planting is what is being sought to be applied in this instance.

Furthermore, the proposed deep soil area exceeds the minimum requirement of 15% of the site area and satisfies the relevant objectives of *Section 5.9.1* which seek to encourage vegetated linkages to provide habitat for native plants and birds, which will contribute to biodiversity and allow for increased water filtration. Notably, in the proposed development implementing a densely planted perimeter (including approximately 24% deep soil planting to the rear boundaries, and side boundaries landscaping in excess of the minimum 1.5m landscaping), it is considered the proposed landscaping concept will provide us far superior continuously vegetated linkage to the entire periphery rather than solely the rear boundary. This is further justified by the fact that the subject development site has some seven (7) adjoining properties, all of which generally benefit from the densely planted perimeter as proposed.

Notwithstanding, despite the afore-mentioned non-compliance, the development satisfies the intent of the objectives controls and provides a continuous deep soil area that is suitable of accommodating a variety of mature trees and other significant vegetation including the retention of significantly established trees as proposed. In this regard, the proposal is considered to be worthy of support.

As such, this proposed minor variation will not contradict the intent or objectives of these development controls. Further, collectively the proposed variations do not result in cumulative impacts as a consequence of one another nor equate to overdevelopment of the site, rather individually they are considered relatively minor or in the circumstance of the deep soil planting are considered to be justified accordingly and able to be assessed on their individual merits.

Attachment 5: Conditions

Plans and Specifications

- 1) The development shall be implemented substantially in accordance with the details and specifications set out on Project No. 1752 Drawings 06-Q, 10-Q, 20-Q to 22-Q and 30-Q dated 16 April 2019 and 11-S to 12-S dated 19 June 2019 prepared by Design Workshop Australia and any details on the application form, and with any supporting information received, except as amended by the conditions specified and imposed hereunder.

General Matters

- 2) **Building Work - Compliance with the Building Code of Australia**
All building work must be carried out in compliance with the provisions of the Building Code of Australia.
- 3) **Construction Certificate**
A Construction Certificate must be obtained from Council or an Accredited Certifier prior to work commencing.

A Construction Certificate certifies that the provisions of Clauses 139-148 of the Environmental Planning and Assessment Amendment Regulations, 2000 have been satisfied, including compliance with all relevant conditions of Development Consent and the Building Code of Australia.

Note: The certifying authority must cause notice of its determination to be given to the consent authority, and to the council, by forwarding to it, within two (2) days after the date of the determination, the plans and documentation referred to in clause 142 (2) of the Environmental Planning and Assessment Regulation 2000.
- 4) **Mailboxes**
The developer must install mailboxes along street frontage of the property boundary in accordance with Australia Post Guidelines. 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.

Mailboxes shall be individually keyed.
- 5) **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.
- 6) **Tree Retention / Removal**
The developer shall retain the existing tree(s) indicated on the Landscape Planting Plan, Bill Muir, 20-4-19 and Arboriculture Impact Assessment by Allied Tree Consultancy, dated November 2018 consisting of tree(s) numbered 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13 and 14.

Any branch 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 AS4970-2009 Protection of Trees on development Sites.

All recommendations in Arborist's Report by Arboriculture Impact Assessment by Allied Tree Consultancy, dated November 2018 page no. 10 – 16 sections 7, 8 and 9 to be implemented including and not restricted to: remedial tree pruning, deadwooding, fencing and signage, sediment buffer, stem protection, establishing tree protection zones and watering and root hormone application if required.

This consent permits the removal of trees numbered 8 and 14 as indicated on the Landscape Planting Plan, Bill Muir, 20-4-19. No other trees shall be removed without prior written approval of Council.

Prior to the Issue of the Construction Certificate

- 7) **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.
- 8) **Privacy Screen**
A 1.8m high privacy screen shall be provided for the entire length of the North eastern elevation of the private open space decks for Units 1, 2 and 3.

These details shall be reflected on the Construction Certificate plans and supporting documentation for the endorsement of the Principal Certifying Authority prior to the issue of the Construction Certificate.
- 9) **Acoustic Report for Garbage Compactor**
The applicant shall engage an acoustic consultant to determine the impact of the garbage compactor operational noise on neighbouring residences. If noise levels do not comply with NSW EPA Noise Guideline, the consultant must recommend either a suitable acoustic enclosure to garbage compactor or acoustic treated dividing fence. A copy of the acoustic report with recommended attenuation measures must be submitted to Principal Certifying Authority prior to the issue of construction certificate.
- 10) **Crime Prevention Through Environmental Design (CPTED) - Lighting**
The proposed development shall incorporate 'low impact' lighting to ameliorate any light spillage and/or glare impacts upon surrounding properties in accordance with Council's CPTED principles. The final design details of the proposed lighting system shall be reflected on the Construction Certificate plans. The erection of the lighting system shall be in accordance with the approved final design.
- 11) **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.
- 12) **Endeavour Energy Requirements**
The submission of documentary evidence from Endeavour Energy to the Principal Certifying Authority is required confirming that satisfactory arrangements have been made with Endeavour Energy for the provision of electricity supplies to the development, prior to the release of the Construction Certificate.

Note: Applications should be made to Customer Connections – South Coast, Endeavour Energy PO Box 811 Seven Hills NSW 1730.
- 13) **Telecommunications**
The submission of documentary evidence from an approved telecommunications carrier to the Principal Certifying Authority confirming that underground telecommunication services are available for this development is required prior to the issue of the Construction Certificate.

- 14) **Obscure Glazing for all Bathroom and WC windows**
The bathroom and WC windows for each dwelling in the development shall be frosted or opaque glass. This requirement shall be reflected on the Construction Certificate plans.
- 15) **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;
 - b rear and side property boundaries (behind the building line) where not currently provided with minimum 1.8 metre high brick, timber lapped and capped, palisade or colorbond fences 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.
- 16) **Crime Prevention through Environmental Design (CPTED) - Landscaping**
In order to reduce the opportunities for “hiding places” the proposed landscaping must:
- a) use shrubs/plants which are no higher than 1 metre adjacent to pathways.
 - b) the type of trees proposed must have a sufficiently high canopy, when installed and fully grown, so that pedestrian vision is not impeded.
 - c) Shrub planting to be set back min. 1 metres from the edge of the pathway. Groundcover planting acceptable.
- This requirement shall be reflected on the Construction Certificate plans.
- 17) **Car Parking and Access**
The development shall make provision for a total of 12 car parking spaces, a minimum of 2 secure (Class B) residential bicycle spaces, a minimum of 1 (Class C) visitor bicycle space and 1 motorcycle parking space. This requirement shall be reflected on the Construction Certificate plans. Any change in above parking numbers shown on the approved DA plans shall be dealt with via a section 4.55 modification to the development. The approved car parking spaces shall be maintained to the satisfaction of Council, at all times.
- 18) 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.
- 19) 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.
- 20) **Landscaping**
The submission of a final Landscape Plan will be required in accordance with the requirements of Wollongong City Council DCP 2009 Chapter E6 and the approved Landscape Plan (ie as part of this consent) for the approval by the Principal Certifying Authority, prior to the release of the Construction Certificate.
- 21) 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.
- 22) 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.

23) **Tree Protection and Management**

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:

- 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.
- Installation of Tree Protection Fencing - A one (1) metre high exclusion fence must be installed around the extremity of the dripline of the tree/trees to be retained prior to any site works commencing. The minimum acceptable standard is a 3 strand wire fence with star pickets at 1.8 metre centres. This fence must be maintained throughout the period of construction to prevent any access within the tree protection area. Details of tree protection and its locations must be indicated on the architectural and engineering plans to be submitted to the Principal Certifying Authority prior to release of the Construction Certificate.
- 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.
- Irrigate: Areas within the Tree Protection Zone are to be regularly watered in accordance with the arborist's recommendations.

24) **Engineering Plans and Specifications - Retaining Wall Structures Greater than 1m**

The submission of engineering plans and supporting documentation of all proposed retaining walls greater than 1m to the Principal Certifying Authority for approval prior to the issue of the Construction Certificate. The retaining walls shall be designed by a suitably qualified and experienced civil and/or structural engineer. The required engineering plans and supporting documentation shall include the following:

- 24.1 A plan of the wall showing location and proximity to property boundaries;
- 24.2 An elevation of the wall showing ground levels, maximum height of the wall, materials to be used and details of the footing design and longitudinal steps that may be required along the length of the wall;
- 24.3 Details of fencing or handrails to be erected on top of the wall;
- 24.4 Sections of the wall showing wall and footing design, property boundaries and backfill material. Sections shall be provided at sufficient intervals to determine the impact of the wall on existing ground levels. The developer shall note that the retaining wall and footing structure must be contained wholly within the subject property;
- 24.5 The proposed method of subsurface and surface drainage, including water disposal;
- 24.6 Reinforcing and joining details of any bend in the wall;
- 24.7 The assumed loading used by the engineer for the wall design.
- 24.8 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.

25) **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.**

26) **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.

27) **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 lodged for development approval, prepared by ATB Consulting Engineers, Project No. 18130, Drawing No. SW2 (Revision F dated 12/06/2019).
- 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.

28) **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:

- 1 Must be prepared by a suitable qualified engineer in accordance with Chapter E14 of the Wollongong DCP 2009.
- 2 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.
- 3 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.
- 4 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.

- 5 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.
- 6 Details of the orifice plate including diameter of orifice and method of fixing shall be provided.
- 7 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:
 - i. The structure is an OSD facility, being part of the stormwater drainage network, and is not to be tampered with.
 - ii. Identification number DA-2018/1610.
 - iii. Any specialist maintenance requirements.
- 8 Must include a maintenance schedule for the OSD system, generally in accordance with Chapter E14 of the Wollongong DCP2009.

29) **Designated Overland Flow Paths**

Designated overland flow paths (e.g. bund walls) shall be provided within the site along the north-eastern and western boundaries, generally in accordance with the concept stormwater plan lodged for development approval, prepared by ATB Consulting Engineers, Project No. 18130, Drawing No. SW2 (Revision F dated 12/06/2019). Each flow path shall be designed to ensure all upslope runoff contributing to the site (i.e. external to the development footprint) will be accepted, contained, and conveyed within the site to Bundarra Place in a controlled manner, ensuring no obstruction, diversion and/or concentration of surface water flows on any adjoining property. Details of each flow path shall be provided with the detailed drainage design. Each flow path shall be capable of catering for the 1 in 100 year storm event flows from the contributing catchment area and shall be free of any vegetation and/or structures that are likely to impede overland flow, or make provision for such obstructions, so there will be no adverse stormwater impacts upon the subject land and adjoining properties. Full details and hydrologic/hydraulic calculations shall be provided for each flow path, including contributing flows, cross-sectional flow area, and hydraulic capacity. These requirements shall be reflected on the detailed drainage design and Construction Certificate plans. Evidence that these requirements have been satisfied shall be submitted to the Principal Certifying Authority prior to the release of the Construction Certificate.

30) **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.

31) **Scour Protection**

All surface flow paths must be treated with appropriate scour/erosion protection measures designed in accordance with good engineering practice based on calculated 1 in 100 year ARI flow velocities. The final details of the proposed scour protection measures shall be reflected on the Construction Certificate plans.

32) **Fire Hydrants**

The development must be adequately serviced by a fire hydrant. Should the development not be adequately serviced by an existing fire hydrant a fire hydrant must be provided to the development in accordance with the *Fire Hydrants for Minor Residential Development, Version 2 dated 1 September 2016 produced by NSW Fire & Rescue*. The fire hydrant(s) must be shown on the construction certificate plans.

33) **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 \$15,000.00 (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:

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

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: 1066969	<ul style="list-style-type: none">• Credit Card
In Person	Wollongong City Council Administration Building - Customer Service Centre Ground Floor 41 Burelli Street, WOLLONGONG	<ul style="list-style-type: none">• 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

34) **Appointment of Principal Certifying Authority**

Prior to commencement of work, the person having the benefit of the Development Consent and a Construction Certificate must:

- Appoint a Principal Certifying Authority (PCA) and notify Council in writing of the appointment irrespective of whether Council or an accredited private certifier is appointed; and
- notify Council in writing of their intention to commence work (at least two days notice is required).

The Principal Certifying Authority must determine when inspections and compliance certificates are required.

35) **Residential Building Work – Compliance with the Requirements of the Home Building Act 1989**

Building work involving residential building work within the meaning of the Home Building Act 1989 must not be carried out unless the Principal Certifying Authority for the development to which the work relates

- a) in the case of work to be done by a licensee under that Act:
 - i) has been informed in writing of the licensee's name, contractor license number and contact address details (in the case of building work undertaken by a contractor under the Home Building Act 1989); and
 - ii) is satisfied that the licensee has complied with the requirements of Part 6 of the Home Building Act 1989; or
- b) in the case of work to be done by any other person:
 - i) has been informed in writing of the persons name, contact address details and owner-builder permit number; and
 - ii) has been given a declaration signed by the property owner(s) of the land that states that the reasonable market cost of the labour and materials involved in the work is less than the amount prescribed for the purposes of the definition of owner-builder work in Section 29 of the Home Building Act 1989 and is given appropriate information and declarations under paragraphs (a) and (b) whenever arrangements for the doing of the work are changed in such a manner as to render out of date any information or declaration previously given under either of those paragraphs.

Note: A certificate issued by an approved insurer under Part 6 of the Home Building Act 1989 that states that the specific person or licensed contractor is the holder of an insurance policy issued for the purposes of that Part of the Act is, for the purposes of this condition, sufficient evidence that the person has complied with the requirements of that Part of the Act.

36) **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.

37) **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.

38) **Structural Engineer's Details**

Structural engineer's details for all structurally designed building works such as reinforced concrete footings, reinforced concrete slabs and structural steelwork must be submitted to the Principal Certifying Authority, prior to the commencement of any works on the site.

39) **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.

40) **Demolition Works**

The demolition works associated with this development 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 NSW WorkCover Authority.

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.

41) **Demolition Notification to Surrounding Residents**

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

42) **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.

43) **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.

44) **Certification from Arborist - Adequate Protection of Trees to be Retained**

A qualified arborist is required to be engaged for the supervision of all on-site excavation or land clearing works. The submission of appropriate certification from the appointed arborist to the Principal Certifying Authority is required which confirms that all trees and other vegetation to be retained are protected by fencing and other measures, prior to the commencement of any such excavation or land clearing works.

45) **Notification to Council of any Damage to Council's Infrastructure**

Council must be notified in the event of any existing damage to any of Council's infrastructure including, but not limited to the road, kerb and gutter, road shoulder, footpath, drainage structures and street trees fronting the development prior to the commencement of work. Adequate protection must be provided to Council infrastructure prior to work commencing and during the construction period. Any damage to Council's assets shall be restored in a satisfactory manner prior to the issue of the Occupation Certificate.

46) **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.

47) **Works in Road Reserve - Minor Works**

Approval, under Section 138 of the Roads Act must be obtained from Wollongong City Council's Development Engineering Team prior to any works commencing or any proposed interruption to pedestrian and/or vehicular traffic within the road reserve caused by the construction of this development.

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, 5 days prior to the works within the road reserve are intended to commence. The Applicant is responsible for the restoration of all Council assets within the road reserve which are impacted by the works/occupation. 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.

48) **Tree Protection**

Prior to commencement of any work on the site, including any demolition, all trees not approved for removal as part of this consent that may be subjected to impacts of this approved development must be protected in accordance with Section 4 of the Australian Standard Protection of Trees on Development Sites (AS 4970-2009).

Tree protection zones must be established prior to the commencement of any work associated with this approved development.

No excavation, construction activity, grade changes, storage of materials stockpiling, siting of works sheds, preparation of mixes or cleaning of tools is permitted within Tree Protection Zones.

During Demolition, Excavation or Construction

49) **Supervision of Engineering Works**

All engineering works associated with the development are to be carried out under the supervision of a practicing engineer.

50) **Piping of Stormwater to Existing Stormwater Drainage System**

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

51) **No Adverse Run-off Impacts on Adjoining Properties**

The construction 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.

52) **Copy of Consent to be in Possession of Person carrying out Tree Removal**

The developer must ensure that any person carrying out tree removal clearance is in possession of this development consent and the approved landscape plan, in respect to the trees which have been given approval to be removed in accordance with this consent.

53) **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.

- 54) If an excavation associated with the erection or demolition of a building extends below the level of the base of the footings of a building on adjoining allotment of land, the person causing the excavation to be made:
- a) must preserve and protect the adjoining building from damage; and
 - b) if necessary, must underpin and support the building in an approved manner; and
 - c) must, at least seven (7) days before excavation below the level of the base of the footings of a building on an adjoining allotment of land, give notice of intention to do so to the owner of the adjoining allotment of land and furnish particulars of the excavation.

- 55) **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>).

- 56) **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.

- 57) **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.

- 58) **BASIX**

All the commitments listed in each relevant BASIX Certificate for the development must be fulfilled in accordance with Clause 97A(2) of the Environmental Planning & Assessment Regulation 2000.

A relevant BASIX Certificate means:

A BASIX Certificate that was applicable to the development when this development consent was granted (or, if the development consent is modified under section 4.55 of the Environmental Planning & Assessment Act 1979, a BASIX Certificate that is applicable to the development when this development consent is modified); or

- a if a replacement BASIX Certificate accompanies any subsequent application for a construction certificate, the replacement BASIX Certificate; and
- b BASIX Certificate has the meaning given to that term in the Environmental Planning & Assessment Regulation 2000.”

59) **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.

Prior to the Issue of the Occupation Certificate

60) **Acoustic Compliance Report**

Prior to issue of an Occupation Certificate, the applicant shall submit a noise compliance report to both the Principal Certifying Authority and Council prepared by an acoustic consultant who is a member of the Australian Acoustic Society (AAS) or the Association of Australian Acoustic Consultants (AAAC) in relation to the garbage compactor operational noise and its compliance with the NSW EPA Guidelines.

61) A Section 73 Certificate must be submitted to the Principal Certifying Authority prior to occupation of the development.

62) **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.

63) **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.

64) **Retaining Wall Certification**

The submission of a certificate from a suitably qualified and experienced structural engineer or civil engineer to the Principal Certifying Authority is required, prior to the issue of the Occupation Certificate or commencement of the use. This certification is required to verify the structural adequacy of the retaining walls and that the retaining walls have been constructed in accordance with plans approved by the Principal Certifying Authority.

65) **Occupation Certificate**

A 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.

66) **BASIX**

A final occupation certificate must not be issued unless accompanied by the BASIX Certificate applicable to the development. The Principal Certifying Authority must not issue the final

occupation certificate unless satisfied that selected commitments have been complied with as specified in the relevant BASIX Certificate. NOTE: Clause 154B of the Environmental Planning and Assessment Regulation 2000 provides for independent verification of compliance in relation to certain BASIX commitments.

67) **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.

68) **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.

69) **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.

70) **Drainage WAE**

The developer shall obtain written verification from a suitably qualified civil engineer, stating that all stormwater drainage and related work has been constructed in accordance with the approved Construction Certificate plans, including overland flow paths along the north-eastern and western boundary conveying upslope runoff to the Bundarra Place. In addition, full works-as-executed plans, prepared and signed by a Registered Surveyor shall be submitted. These plans shall include levels and location for all drainage structures and works, buildings (including floor levels), overland flow paths, and finished ground and pavement surface levels. This information shall be submitted to the Principal Certifying Authority prior to the issue of the final occupation certificate.

71) **Completion of Landscape Works on Council Owned or Controlled Land**

The Developer must complete all landscape works required within Council's road reserve, or other Council owned or controlled land, in accordance with the conditions of this consent. The total cost of all such landscape works shall be fully borne by the Developer and any damage to Council's assets shall be the subject of restoration works sufficient to restore the asset to its previous state and configuration previous to the commencement of works. Evidence that this requirement has been met must be satisfied prior to the issue of the Occupation Certificate.

Operational Phases of the Development/Use of the Site

72) **Restricted Hours of Operation – Garbage Compactor**

The hours of operation for the garbage compactor shall be restricted to between the hours of 8:00am and 3:00pm only seven (7) days week.

73) **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.