

Wollongong Local Planning Panel Assessment Report | 3 December 2021

WLPP No.	Addendum Report to WLPP Item 2- 22 June 2021
DA No.	DA-2021/69
Proposal	Residential - construction of multi-unit housing and Subdivision - Strata title - 17 lots
Property	Lot 15 DP 24874, Lot 25 DP 237812 2-8 Highway Avenue, West Wollongong
Applicant	Kollaras Developments Pty Ltd
Responsible Team	Development Assessment & Certification – City Centre Team (VD)
Prior WLPP meeting	22 June 2021

ADDENDUM REPORT

This report should be read in conjunction with the Council Assessing Officer's reports as presented to Wollongong Local Planning Panel on the 22 June 2021.

1 BACKGROUND AND EXECUTIVE SUMMARY

Reason for consideration by Local Planning Panel - Determination

The proposal has been referred to WLPP for **determination** pursuant to clause 2.19(1)(a) of the Environmental Planning and Assessment Act 1979. The proposal is captured by Clause 2(b) of Schedule 2 of the Local Planning Panels Direction of 30 June 2020, having received over 10 unique submissions by way of objection.

Background

This matter was reported to the WLPP meeting on 22 June 2021. A copy of the Panel's recommendation to the addendum is included at Attachment 1. The Panel determined to defer the development application to allow the applicant an opportunity to address the issues raised by the Panel as follows:

The Panel requires the above information to be provided to Council within twenty-one (21) days. On receipt of the amended plans, Council to provide a supplementary report to the Panel for determination.

Proposal

The proposal seeks consent for approval for the construction of multi-dwelling housing of 17 dwellings comprising 15 two storey townhouses and 2 single storey villas and strata subdivision.

The applicant has provided additional information in response to the issues raised by the Panel.

Permissibility

The subject site is zoned R2 Low Density Residential pursuant to Wollongong Local Environmental Plan (WLEP) 2009. The proposed **multi-dwelling housing** development is a permissible use in the R2 Low Density Residential zone.

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
- SEPP Infrastructure 2007

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 2019
- Wollongong Community Participation Plan 2019

An assessment of the additional information against the relevant planning controls is provided at Attachment 4. For the original assessment refer to Council Assessing Officer's report as presented on the 22 June 2021 to the Wollongong Local Planning Panel.

2 APPLICANT'S RESPONSE TO THE WLPP RECOMMENDATIONS

The applicant has provided additional information in response to the concerns raised by the Panel including:

- Revised Architectural, Civil and Landscape Plans
- Construction Traffic Management Plan prepared by Maker Engineering dated August 2021
- Revised Remediation Action Plan (RAP) prepared by ENRS dated July 2021

3 COUNCIL'S ASSESSING OFFICER'S COMMENTS

Matters Raised by the Panel:

Council's Assessing Officer has reviewed the Panel's recommendations and the Applicant's response to the issues raised and provides the following comments.

The reasons for the decision of the Panel were:

1. A detailed Construction Management Plan that includes, amongst other matters, general construction management measures, truck movements associated with construction and site remediation works, proposed staging of construction and the capacity of the site to accommodate construction parking and loading/unloading within the site.

Comment:

A Construction Traffic Management Plan (CTMP) has been submitted with the application (prepared by Maker Engineering dated August 2021). The CTMP addresses site construction management and timeframes, truck/delivery routes, management of on-site construction and identifies both offsite and onsite parking areas. The CTMP adequately demonstrates that the temporary traffic associated with construction work can be managed appropriately. Draft conditions have been updated to include the

CTMP as part of the conditions of approval. In particular, draft condition 41 requires the submission of a Site Management, Pedestrian and Traffic Management Plan and draft condition 52 requires recommendations from the CTMP be carried out during the course of the construction period. The CTMP is supported from Council's Traffic Department.

2. Details of the final remediation strategy.

Comment:

The panel previously raised concern with the previous remediation strategy. A revised RAP (ENRS dated July 2021) has been submitted with the following recommendation:

In assessing and determining the optimal remediation options available to the project a range of factors were considered as outlined in Section 9.3 of this report. The selected final remediation strategy selected for the project is Excavation and off-Site disposal.

This updated strategy adopts the Panel's views that all excavated material required off-site disposal. Draft conditions of consent have been updated to reflect the recommendations of this report. In particular, draft condition 11 has been amended to state the following:

Site Remediation Work

Civil work for 17 dwellings shall not be commenced and the Construction Certificate shall not be issued until site is remediated as per the remediation action plan prepared by ENRS Consulting (July 2021) works are completed, validated and the final submission of SAS and SAR under CLM Act 1997.

As described in RAP majority of excavated material will be subjected to waste classification and disposed offsite. The site auditor must review the final RAP prior to undertaking of site remediation work.

3. A landscape plan that is consistent with the architectural plans and that includes plantings of local species suited to location and intent.

Comment:

Revised landscaping plans (Attachment 3) has been submitted and assessed by Council's Landscape Department as being satisfactory with the following comments received:

The revised landscape plans by AEJ Pty Ltd, Issue D, dated 30.08.21 have included several improvements; overall amenity, privacy, increased private open space, tree species selection, fencing details and improved planting density to the southern edge of the middle block of dwellings. The proposed layout is satisfactory.

An updated planting schedule has been provided to include native endemic species to the Wollongong LGA.

4. Amended architectural plans that:

- **relocate the bin storage enclosures away from side boundaries and delete the bin enclosure in front of unit Y4;**

The proposed bin enclosures have been removed and proposed to be in garages as requested by the WLPP.

- ***relocate the rainwater tanks against a side boundary or underground – i.e. remove from the current location central to the principal private open space of units;***

Rainwater tanks are now located away from the principal private open space areas, alongside side boundaries. Rainwater tanks for units within the “W” group along the western edge have been relocated to under the deck or subfloor.

- ***detail privacy mitigation measures between units;***

Details of new fencing between courtyard areas for the units has been provided. Fencing will be 1.8m high timber fencing as detailed in the landscape plans and shown below. A privacy screen as also been included on the southern side of the deck to Unit W2.



Figure 1- proposed fencing details

- ***redesign units X1 to X4 and Y1 to Y4 to achieve:***
 - ***a reduction to 6 units resulting in a reduced building footprint in the unit block centrally location within the site;***
 - ***additional landscape area on the southern edge of the central unit block (adjacent to the entry driveway) and at the northern end of each driveway;***
 - ***provide for improved amenity and an increased size of the rear yards of central block units with improved landscaping which provides for a high level of privacy and amenity; and***
 - ***a revised landscape strategy that addresses significant use of local species, their size and location in rear yards.***

Comment:

The application retains the original number of units (17 units) and a reduction to 6 units has not been carried out. Changes have been made to the overall design including the following:

- Unit Z1 repositioned to have the POS on the north side which resulted in minor modifications to the ground and first floor layouts. This unit has also moved the east.
- Unit Z2 living and kitchen area has been reduced by 500mm and move to the east.
- Setbacks for Z1, Z2, Z3 reduced slightly but maintain compliance with DCP provisions.
- Units Y1-Y3 living and kitchen area reduced by 500mm and move to the east.
- Unit X1-X3 living and kitchen area reduced by 500mm.
- Separation between units X1 to X4 and Y1 to Y4 has been increased by approximately 3m, achieving a minimum separation of over 11m apart at their closest point. Previously 8.250m separation between these units.
- Details of fencing between units provided.
- Additional screen planting and landscaping has been provided in the rear courtyards to further enhance privacy screening and amenity for future residents.

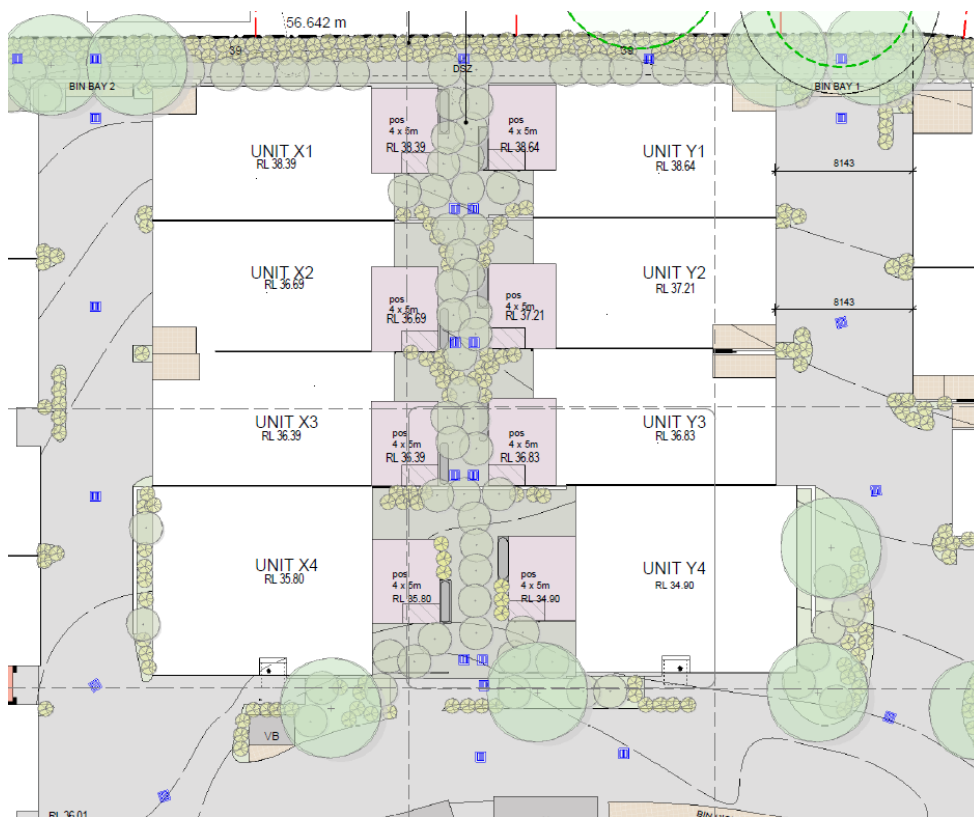


Figure 2- Original submitted design



Figure 3- revised layout design of central landscaping area



Figure 4- Overlay with previous site layout. Red is the previous layout and green is the current proposal.

The amended proposal responds to the concerns raised by the WLPP by design rather than a reduction of units. The development is below the permissible FSR for the site and within the prescribed height limits. The total amount of landscaping exceeds the minimum requirements of 30% for the site. The application is supported from Council's Traffic, Stormwater and Landscape Department. Modifications to landscaping and privacy have improved the overall design concept.

Consultation

Public Notification

The amended proposal was not publicly exhibited due to the minor nature of the amendments.

Internal Referrals

Details of the amended proposal were referred to Council's Environment, Traffic, Stormwater and Landscape Divisions. Satisfactory referrals have been received with updated conditions provided and outlined in the draft conditions of approval.

External Referrals

The amended proposal was not referred to Transport for NSW Roads (formerly RMS) as the proposal remains substantially the same development as the original referral. However, draft condition 66 has been deleted following advice that this condition was incorrectly imposed and not relevant to this DA.

CONCLUSION

At the meeting of 22 June 2021, the Panel determined to defer the development application to allow the applicant an opportunity to address outstanding concerns as described in Section 1 of this report. Responding to the recommendations of the WLPP the applicant has submitted additional information. Council is of the view that the amended proposal has satisfactorily addressed the concerns previously raised by the WLPP.

The site is zoned R2 Low Density Residential pursuant to the Wollongong Local Environmental Plan (WLEP) 2009. The proposal is defined as multi dwelling housing and is permissible on land to which the WLEP 2009 applies.

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

It is therefore considered that the proposed development is appropriate given the nature and characteristics of the site and is unlikely to result in significant adverse impacts on the character and amenity of the surrounding area, providing for the orderly development of land in the locality.

RECOMMENDATION

DA-2021/69 be approved subject to the conditions provided at Attachment 5 of this report.

ATTACHMENTS

- 1 Panel Commentary and Decision from meeting of 22 June 2021
- 2 Amended Architectural Plans (dated 30 August 2021)
- 3 Amended landscape plans (dated 30 August 2021)
- 4 Assessment WDCP 2009 Compliance table
- 5 Updated Draft Conditions of Consent

DETERMINATION AND STATEMENT OF REASONS

WOLLONGONG CITY COUNCIL – WOLLONGONG LOCAL PLANNING PANEL (WLPP)

DATE OF DETERMINATION	22 June 2021
PANEL MEMBERS	Alison McCabe (Chair), Helena Miller, Steven Layman, Bernard Hibbard (Community Representative)

Public meeting held at Wollongong City Council, Level 9 Function Room, 41 Burelli Street, Wollongong on 22 June 2021 opened at 5:00pm and closed at 7:23pm.

MATTER DETERMINED

DA-2021/69 – Lot 15 DP 24874, Lot 25 DP 237812, 2-8 Highway Avenue, West Wollongong (as described in detail in schedule 1).

PUBLIC SUBMISSIONS

The Panel was addressed by four (4) submitters.

The Panel heard from the applicant's representatives.

PANEL CONSIDERATION AND DECISION

The Panel considered the matters listed at item 7, and the material presented at the meeting and the matters observed at site inspections listed at item 8 in Schedule 1.

The Panel raised a number of concerns regarding:

- Construction management
- Remediation strategy
- Proposed landscape outcomes
- Internal amenity and privacy impacts arising from elevated decks
- Separation between town houses
- Extent of building footprints
- Communal open space

The Panel noted that the principal issue raised by submitters related to traffic impacts – from construction and from the ongoing use.

Having regard to the above, the Panel is not satisfied that the proposal in its current form is suitable for the site, and appropriately responds to the character and constraints of the site.

It is recognised that the site could reasonably be developed, subject to addressing the above issues with further information and amended plans.

The Panel determined to defer the development application as described in Schedule 1 for the following information.





- 1 A detailed Construction Management Plan that includes, amongst other matters, general construction management measures, truck movements associated with construction and site remediation works, proposed staging of construction and the capacity of the site to accommodate construction parking and loading/unloading within the site.
- 2 Details of the final remediation strategy.

- 3 A landscape plan that is consistent with the architectural plans and that includes plantings of local species suited to location and intent.
- 4 Amended architectural plans that:
- relocate the bin storage enclosures away from side boundaries and delete the bin enclosure in front of unit Y4;
 - relocate the rainwater tanks against a side boundary or underground – ie remove from the current location central to the principal private open space of units;
 - detail privacy mitigation measures between units;
 - redesign units X1 to X4 and Y1 to Y4 to achieve:
 - a reduction to 6 units resulting in a reduced building footprint in the unit block centrally location within the site;
 - additional landscape area on the southern edge of the central unit block (adjacent to the entry driveway) and at the northern end of each driveway;
 - provide for improved amenity and an increased size of the rear yards of central block units with improved landscaping which provides for a high level of privacy and amenity; and
 - a revised landscape strategy that addresses significant use of local species, their size and location in rear yards.

The Panel requires the above information to be provided to Council within twenty-one (21) days.

On receipt of the amended plans, Council to provide a supplementary report to the Panel for determination.

The decision was unanimous.

PANEL MEMBERS	
 Alison McCabe (Chair)	 Helena Miller
 Steven Layman	 Bernard Hibbard (Community Representative)

SCHEDULE 1		
1	DA NO.	DA-2021/69
2	PROPOSED DEVELOPMENT	Residential - construction of multi-unit housing and Subdivision - Strata title - 17 lots
3	STREET ADDRESS	Lot 15 DP 24874, Lot 25 DP 237812, 2-8 Highway Avenue, West Wollongong
4	APPLICANT	Kollaras Developments Pty Ltd
5	REASON FOR REFERRAL	The proposal has been referred to WLPP for determination pursuant to clause 2.19(1)(a) of the Environmental Planning and Assessment Act 1979. The proposal is captured by Clause 2(b) of Schedule 2 of the Local Planning Panels Direction of 30 June 2020, having received over 10 unique submissions by way of objection.
6	RELEVANT MANDATORY CONSIDERATIONS	<ul style="list-style-type: none"> • Environmental planning instruments: <ul style="list-style-type: none"> ○ State Environmental Planning Policy (Infrastructure) 2007 ○ State Environmental Planning Policy No 55 – Remediation of Land ○ State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 ○ Wollongong Local Environment Plan 2009 • Wollongong Section 94A Development Contributions Plan • Draft environmental planning instruments: N/A • Development control plans: <ul style="list-style-type: none"> ○ Wollongong Development Control Plan 2009 • Planning agreements: N/A • The likely impacts of the development, including environmental impacts on the natural and built environment and social and economic impacts in the locality • The suitability of the site for the development • Any submissions made in accordance with the <i>Environmental Planning and Assessment Act 1979</i> or regulations • The public interest, including the principles of ecologically sustainable development
7	MATERIAL CONSIDERED BY THE PANEL	<ul style="list-style-type: none"> • Council assessment report dated 22 June 2021 • Written submissions during public exhibition: twelve (12) submissions • Verbal submissions at the public meeting: four (4)
8	SITE INSPECTIONS BY THE PANEL	<p>Site inspection 22 June 2021. Attendees:</p> <ul style="list-style-type: none"> ○ <u>Panel members</u>: Alison McCabe (Chair), Helena Miller, Steven Layman, Bernard Hibbard (Community Representative) ○ <u>Council assessment staff</u>: Vanessa Davis
9	COUNCIL RECOMMENDATION	Approve
10	DRAFT CONDITIONS	Attached to the Council assessment report

DA000	SITE ANALYSIS
DA001	SITE PLAN
DA004	ROOF PLAN
DA005	FLOOR PLANS ROW W
DA006	FLOOR PLANS ROW X
DA007	FLOOR PLANS ROW Y
DA008	FLOOR PLANS ROW Z
DA009.1	SITE SECTIONS
DA009.2	SITE SECTIONS
DA010.1	SECTIONS A-C PART 1
DA010.2	SECTIONS A-C PART 2
DA010.3	ELEVATIONS NORTH AND SOUTH PART 1
DA010.4	ELEVATIONS NORTH AND SOUTH PART 2
DA011.1	ELEVATIONS ROW W
DA011.2	ELEVATIONS ROW X
DA011.3	ELEVATIONS ROW Y
DA011.4	ELEVATIONS ROW Z
DA012.1	SHADOW DIAGRAMS SOUTHERN NEIGHBOURS
DA012.2	SOLAR ACCESS - PRIVATE OPEN SPACE & COMMUNITY OPEN SPACE
DA014	3D PERSPECTIVES AND MATERIALS
DA015	LANDSCAPE MASTER PLAN
DA016	DETAIL LANDSCAPE PLAN - NORTH WEST
DA017	DETAIL LANDSCAPE PLAN - NORTH EAST
DA018	DETAIL LANDSCAPE PLAN - SOUTH WEST
DA019	DETAIL LANDSCAPE PLAN - SOUTH EAST
DA020	LANDSCAPE TYPICAL DETAILS & PLANTING SCHEDULE
DA021	LANDSCAPE PLANTING PALETTE
DA024	CONCEPT STRATA PLAN

SITE
LOCATION



Proposed Residential Development

For
For Kollaras Developments

At
At 2-8 Highway Avenue West Wollongong
Lot 25 DP 237812 and Lot 15 DP24874



Wollongong	Nowra	Batemans Bay
Level 1,147 Crown Street, Wollongong NSW 2500 T: 02 4226 1387	92 North Street Nowra, NSW 2541 T: 02 4421 6822	Unit 6, 9-11 Orient Street, Batemans Bay NSW 2536 T: 02 4472 7388
W: www.aej.com.au E: aej@aej.com.au		



SCHEDULE OF AREAS			
SITE AREA	5432 m ²		
m ²	LEP / DCP CONTROLS	PROPOSED	COMPLIANCE
PROPOSED GROSS FLOOR AREAS			
EXCL. GARAGES			
2 STOREY 3BR (X1 X2 X3 Y1 Y2 Y3 Z2 Z3 Z4) 129 X 9		1161	
2 STOREY 3BR (W1 W2 Z1) 142 X 3		426	
1 STOREY ACCESSIBLE VILLA (X4 + Y4) 94 X 2		188	
2 STOREY 3BR (W3 W4 W5) 134 X 3		402	
TOTAL GROSS FLOOR AREA	2716 (0.5 FSR)	2177 (0.40 FSR)	EXCEEDS COMPLIANCE
LANDSCAPE			
DEEP SOIL ZONE (DSZ)	REAR 6m	WEST 6m NORTH 2.3m	EXCEEDS COMPLIANCE
TOTAL LANDSCAPE (INCLUDES DSZ & COS)	30% = 1630m ²	32% = 1740m ²	COMPLYING
COMMUNAL OPEN SPACE (COS)	85 (5m ² / UNIT)	295	EXCEEDS COMPLIANCE
PARKING			
1.5/ DWELLING 70-110m ² . 2 x 1.5 = 3 2/DWELLING >110m ² . 15 X 2 = 30	33	34	EXCEEDS COMPLIANCE
VISITOR 0.2 PER DWELLING 0.2 x 17	3.4	8	EXCEEDS COMPLIANCE
BICYCLE			
5 INSIDE GARAGES (UNIT W1, X1, Y1, W2, Z1)			
4 VISITOR			
TOTAL BICYCLE		9	COMPLYING
MOTORCYCLE	2	2	COMPLYING
LEGEND			
v	visitor parking		
pos	private open-space		
COS	communal open-space		
dsz	deep soil zone		
VB	visitor bicycle parking		
MB	motorbike parking		
-----	Relocated sewer		
---	Setback landscape		
---	Fence New		
---	Contours Existing		
---	Continuous Path Of Travel		
---	Deep Soil Zone		
---	Landscape		
---	Communal Open Space		
---	Private Open Space		
---	Dwelling Living Spaces		
---	Garage		
---	Trees Retained		
---	Trees Removed		

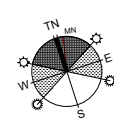
NOTES

CONTOURS SHOWN ARE EXISTING
RLS SHOWN ARE PROPOSED

BIN STORAGE ENCLOSURES TO BE ALUMINIUM SLAT SCREENING
AT A HEIGHT OF 1200mm

Proposed Residential Development For Kollaras Developments At 2-8 Highway Avenue West Wollongong Lot 25 DP 237812 and Lot 15 DP24874

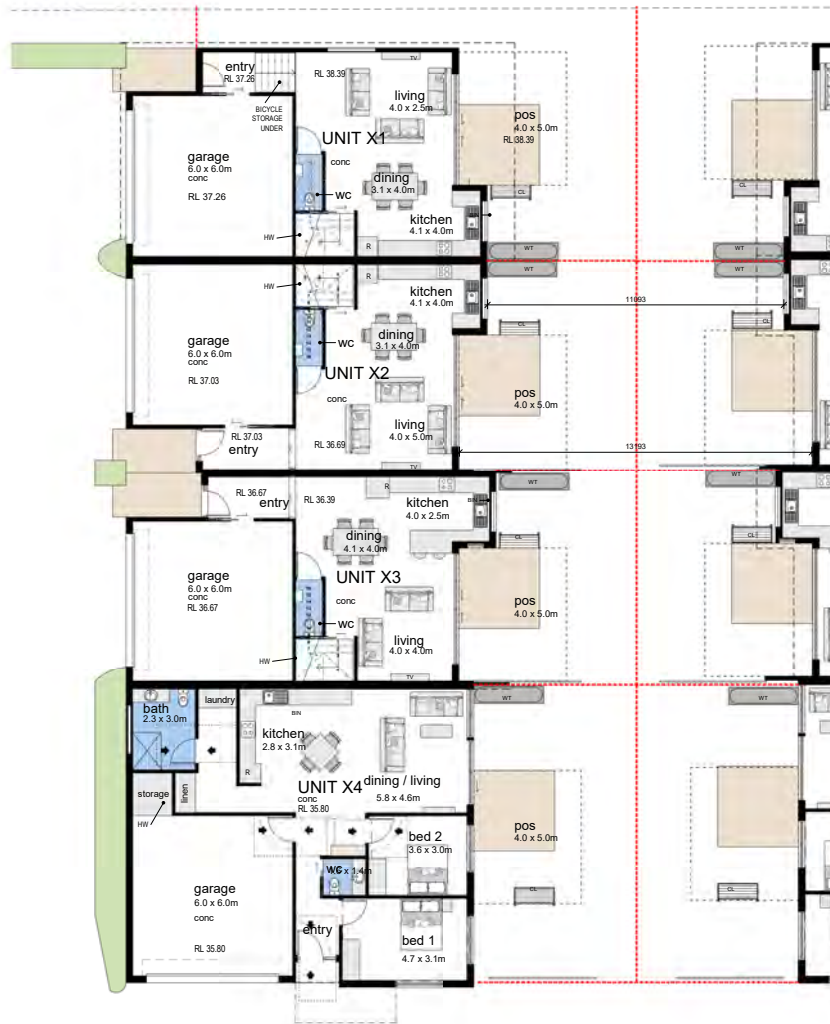
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BIM 360/118-0029 Kollaras WW/18-0029 KOLLARAS RES DEV WW D03.rvt



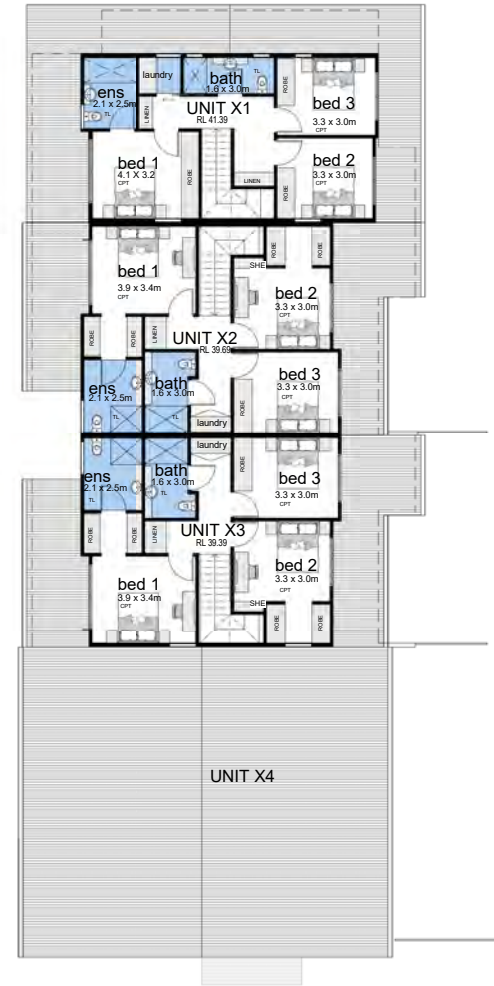
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02	COS	19/11/20	
03	LANDSCAPE	26/11/20	
04	DO	14/12/20	
05	DO	17/12/20	
06	BIN ENCLOSURES UPDATED	26/03/21	
07	PARKING COS & BIN PICKUP	31/03/21	
08	Revised issue - increased separation	22/07/21	
09	POC reduced, WTs & bins relocated	19/08/21	
10	Site Name for coordination	17/08/21	
11	REVISED DATE	30/09/21	

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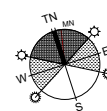


FIRST

LEGEND	
T	TUB
WM	WASHINE MACHINE
R	REFRIGERATOR
PA	PANTRY
TL	TILES
CL	CLOTHES LINE
LI	LINEN
CPT	CARPET
CONC	CONCRETE
POS	PRIVATE OPEN SPACE
CPD	CUPBOARD
HWS	HOT WATER SERVICE
WT	WATER TANK
-----	FENCE

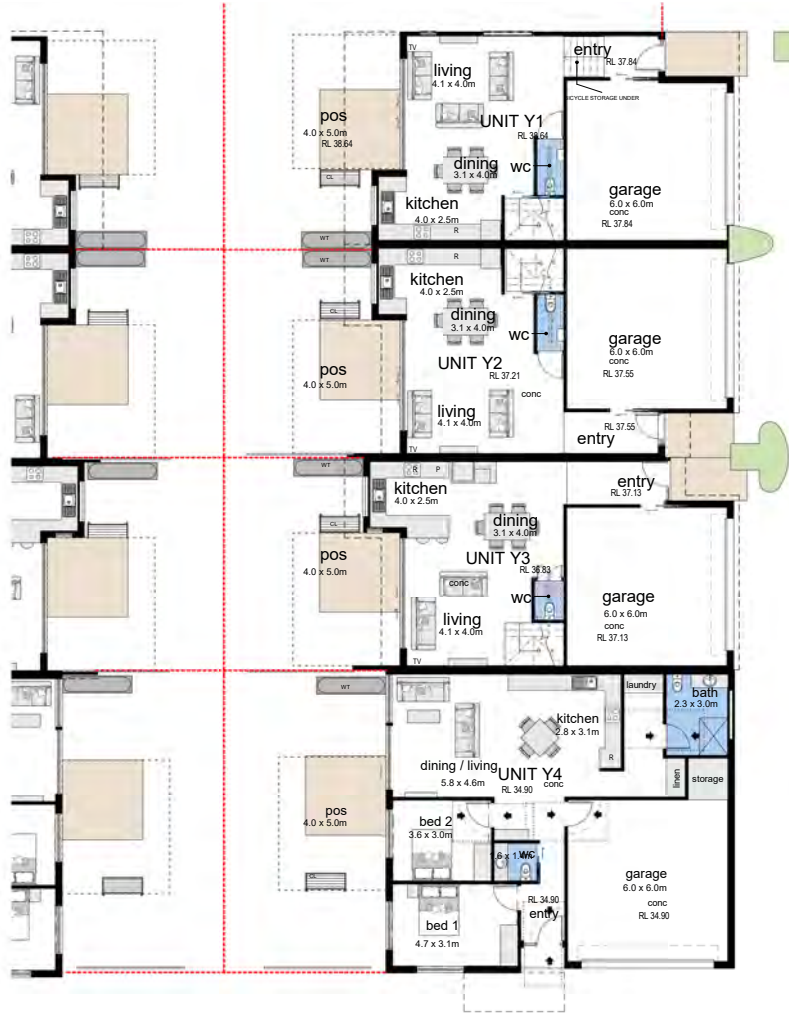
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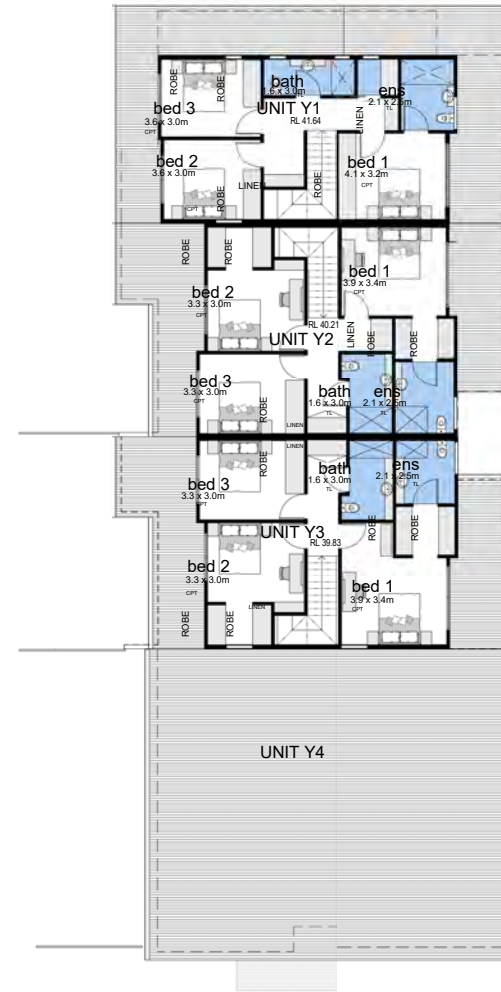


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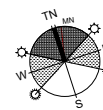


FIRST

LEGEND	
T	TUB
WM	WASHINE MACHINE
R	REFRIDGERATOR
PA	PANTRY
TL	TILES
CL	CLOTHES LINE
LI	LINEN
CPT	CARPET
CONC	CONCRETE
POS	PRIVATE OPEN SPACE
CPD	CUPBOARD
HWS	HOT WATER SERVICE
WT	WATER TANK
-----	FENCE

Proposed Residential Development For Kollaras Developments At 2-8 Highway Avenue West Wollongong Lot 25 DP 237812 and Lot 15 DP24874

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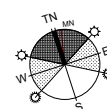


FIRST

LEGEND	
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WM	WASHING MACHINE
R	REFRIGERATOR
PA	PANTRY
TL	TILES
CL	CLOTHES LINE
LI	LINEN
CPT	CARPET
CONC	CONCRETE
POS	PRIVATE OPEN SPACE
CPD	CUPBOARD
HWS	HOT WATER SERVICE
WT	WATER TANK
-----	FENCE

Proposed Residential Development For Kollaras Developments At 2-8 Highway Avenue West Wollongong Lot 25 DP 237812 and Lot 15 DP24874

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REV	DESCRIPTION	DATE	DRAWING TITLE	PROJECT #
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









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UNIT Y4



UNIT Z4



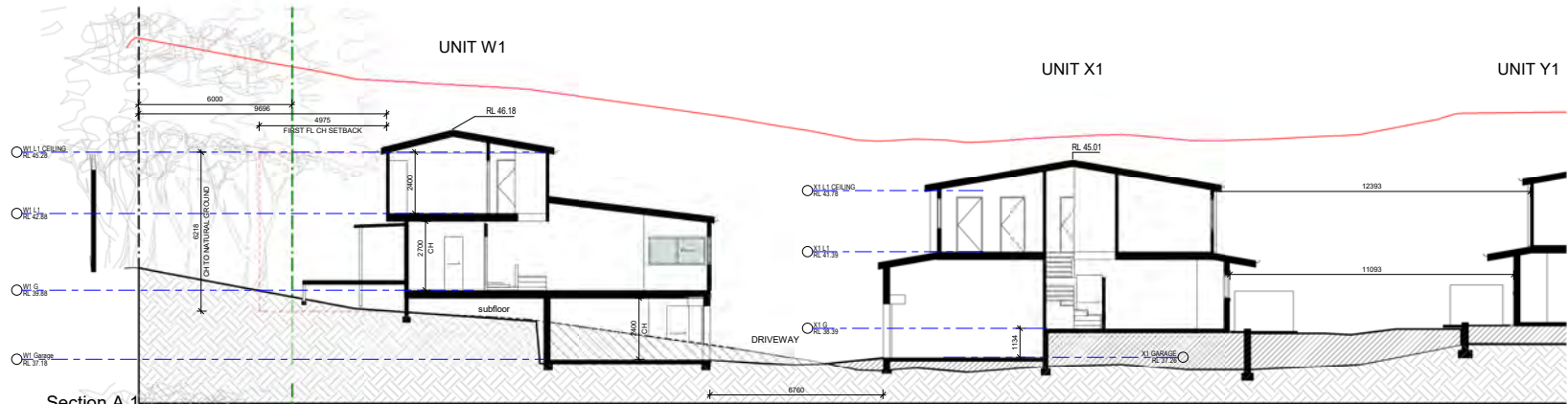
	EXISTING GROUND
	CUT
	FILL
	PREVIOUS ROOFLINE
	BOUNDARY
	FINISHED GROUND
	EXISTING GROUND
	9m HEIGHT LIMIT
	0.8 X CEILING HEIGHT SETBACK
	6m DSZ SETBACK

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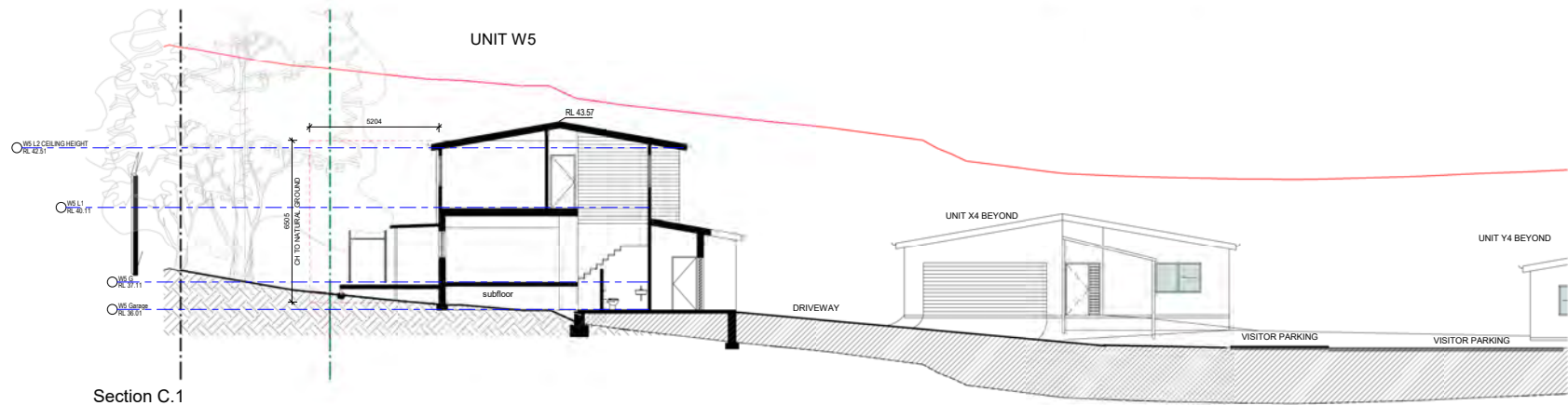
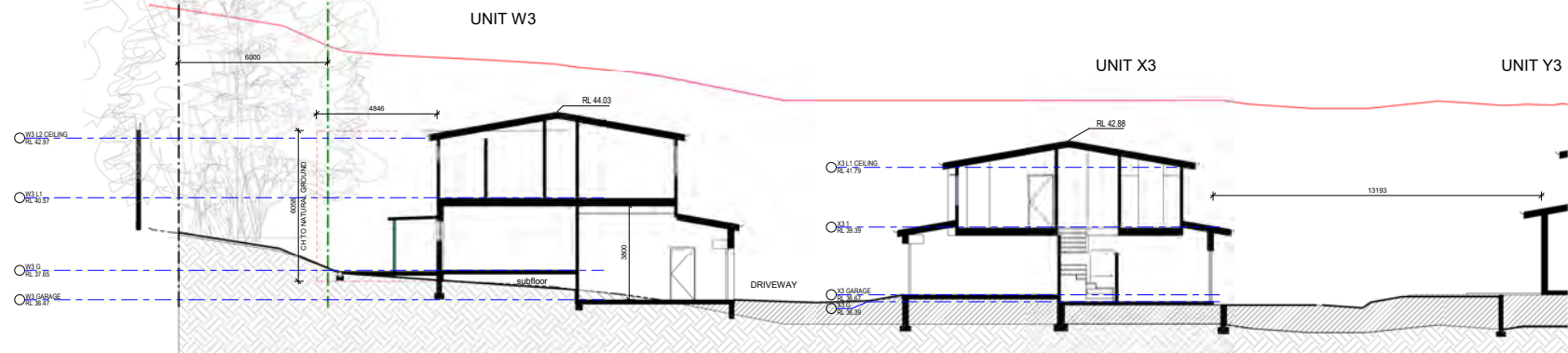


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A	INTERSCO AMENDMENTS	04/08/20	SITE SECTIONS	DATE 3/08/21 DRAWN BY
B	INT CHANGES REVISED	20/08/20		
C	ADDITIONAL INFO	21/10/20		
D	CUT AND FILL	01/11/20		
E	LANDSCAPE	03/11/20		
F	DRIVE	18/11/20		
G	LANDSCAPE	26/11/20		
H	DCS	14/12/20		
I	DCS1	17/12/20	DRAWING NO	CHECKED JM
J	REVISED DA ISSUE	30/08/21	DA009.2	J
				30/08/2021 1:38:19 PM

USE WRITTEN DIMENSIONS ONLY - DO NOT SCALE OFF DRAWINGS



LEGEND	
	EXISTING GROUND
	CUT
	FILL
	PREVIOUS ROOFLINE
	BOUNDARY
	FINISHED GROUND
	EXISTING GROUND
	9m HEIGHT LIMIT
	0.8 X CEILING HEIGHT SETBACK
	6m DSZ SETBACK



Proposed Residential Development For Kollaras Developments At 2-8 Highway Avenue West Wollongong Lot 25 DP 237812 and Lot 15 DP24874

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REV	DESCRIPTION	DATE
A	INDUSCO AMENDMENTS	04/08/20
B	UNIT CHANGES W3,5	20/09/20
C	CUT AND FILL	5/11/20
D	CIVIL	18/11/20
E	LANDSCAPE	28/11/20
F	D03	14/12/20
G	D03.1	17/12/20
H	REVISED DA ISSUE	30/08/21

SECTIONS A-C PART 1

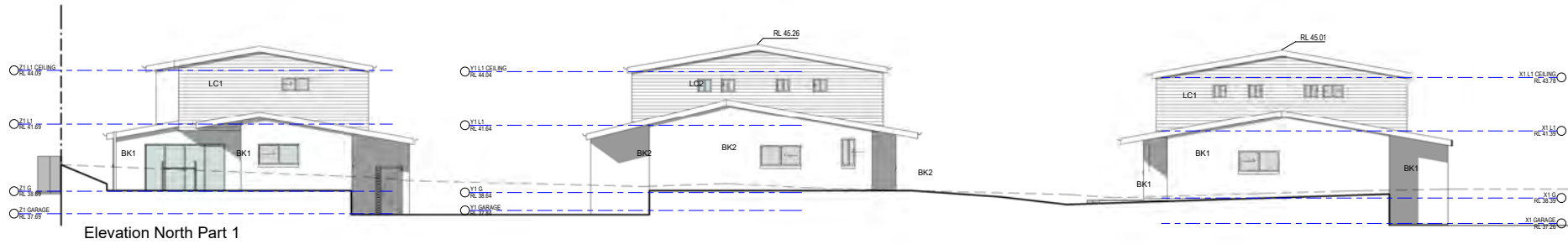
PROJECT # 18-0029 SCALE: 1:100 @ A1 1:200 @ A3	
DATE 30/08/21	CHECKED: ZM
DRAWING NO. DA010.1 H	REVISION
30/08/2021 1:38:22 PM	

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UNIT Z1

UNIT Y1

UNIT X1



LEGEND

BK1	BRICK RED-BROWN MEDIUM
BK2	BRICK RED-BROWN LIGHT
LC1	LINEAR FC CLADDING - GREY
LC2	LINEAR FC CLADDING - WHITE
VCB	VERTICAL FC CLADDING - DARK

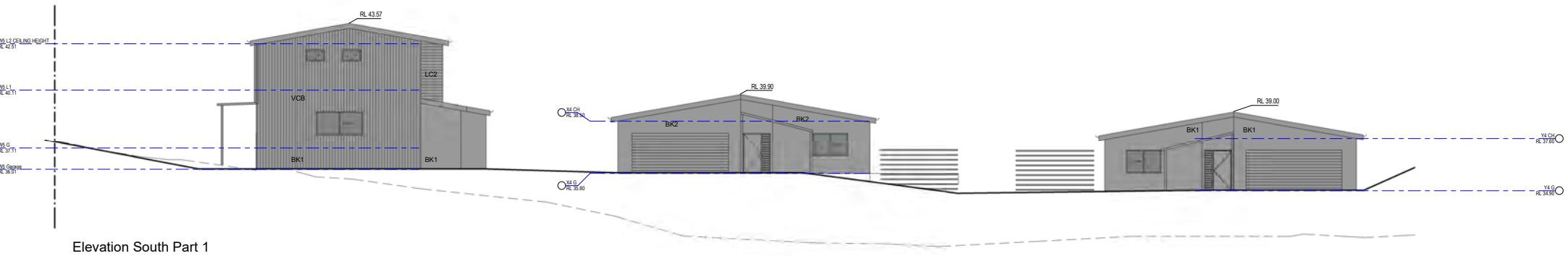
ALL ROOFS METAL MEDIUM COLOUR

--- GROUND EXISTING
 — GROUND FINISHED

UNIT W5

UNIT X4

UNIT Y4



Proposed Residential Development
 For Kollaras Developments
 At 2-8 Highway Avenue West Wollongong
 Lot 25 DP 237812 and Lot 15 DP24874

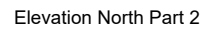
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 BIM 360/118-0029 Kollaras WW/18-0029 KOLLARAS RES DEV WW D03.rvt



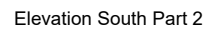
REV	DESCRIPTION	DATE	DRAWING TITLE	PROJECT #	SCALE
A	D03	14/12/20	ELEVATIONS NORTH AND SOUTH PART 1	18-0029	1:150 @ A1
B	D03.1	17/12/20			1:200 @ A3
C	REVISED DA ISSUE	30/08/21			
				DATE	CHECKED: ZM
				DRAWING NO.	REVISION
				DA010.3	C
				30/08/2021 1:38:27 PM	

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UNIT W1

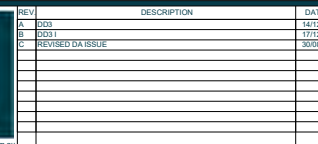


UNIT Z4



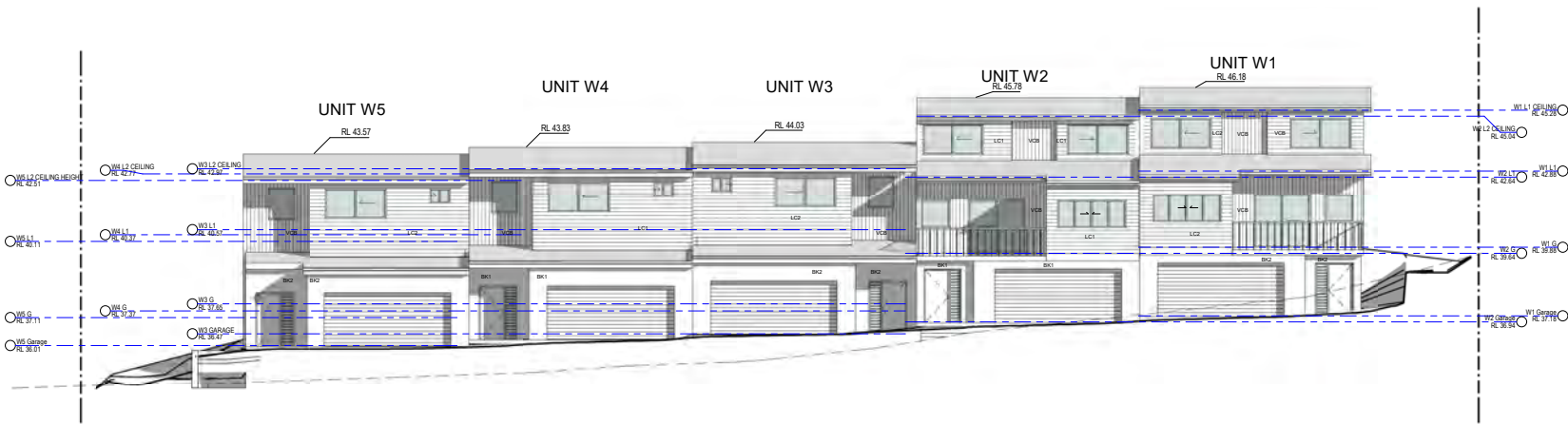
--- GROUND EXISTING
 — GROUND FINISHED

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BIM 360://18-0029 Kollaras WW/18-0029 KOLLARAS RES DEV WW DD3.rvt



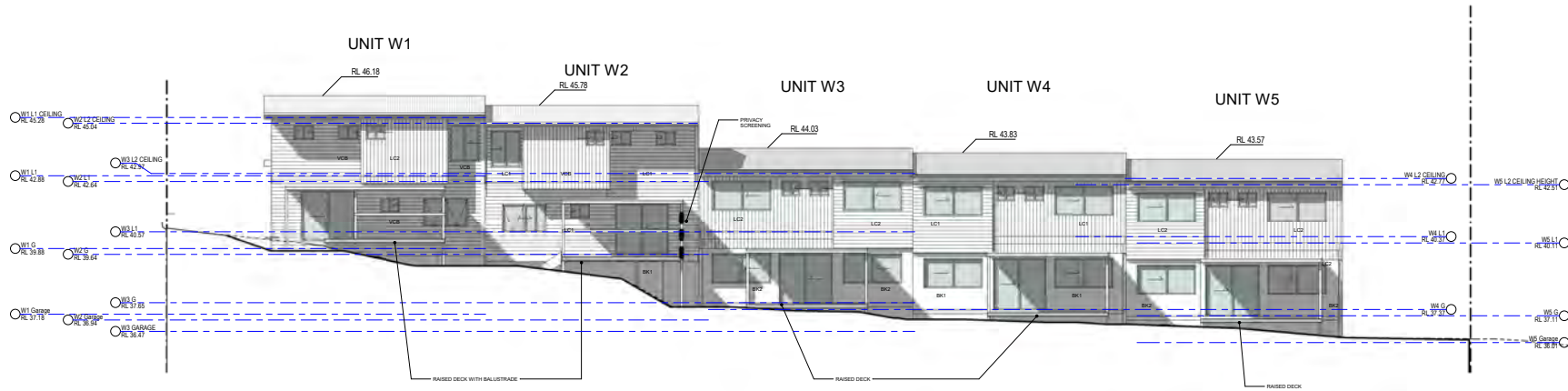
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DRAWING NO.	REVISION
DA010.4	C
30/08/2021 1:38:30 PM	

USE WRITTEN DIMENSIONS ONLY - DO NOT SCALE OFF DRAWINGS



LEGEND	
BK1	BRICK RED-BROWN MEDIUM
BK2	BRICK RED-BROWN LIGHT
LC1	LINEAR FC CLADDING - GREY
LC2	LINEAR FC CLADDING - WHITE
VCB	VERTICAL FC CLADDING - DARK
ALL ROOFS METAL MEDIUM COLOUR	
<div></div> GROUND EXISTING	
<div></div> GROUND FINISHED	

Elevation Row w East



Elevation Row w West

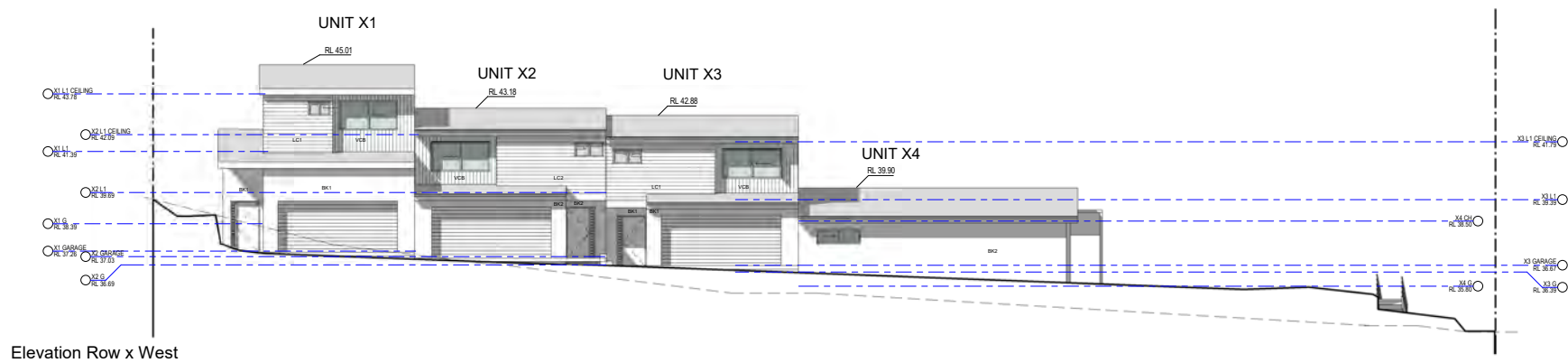
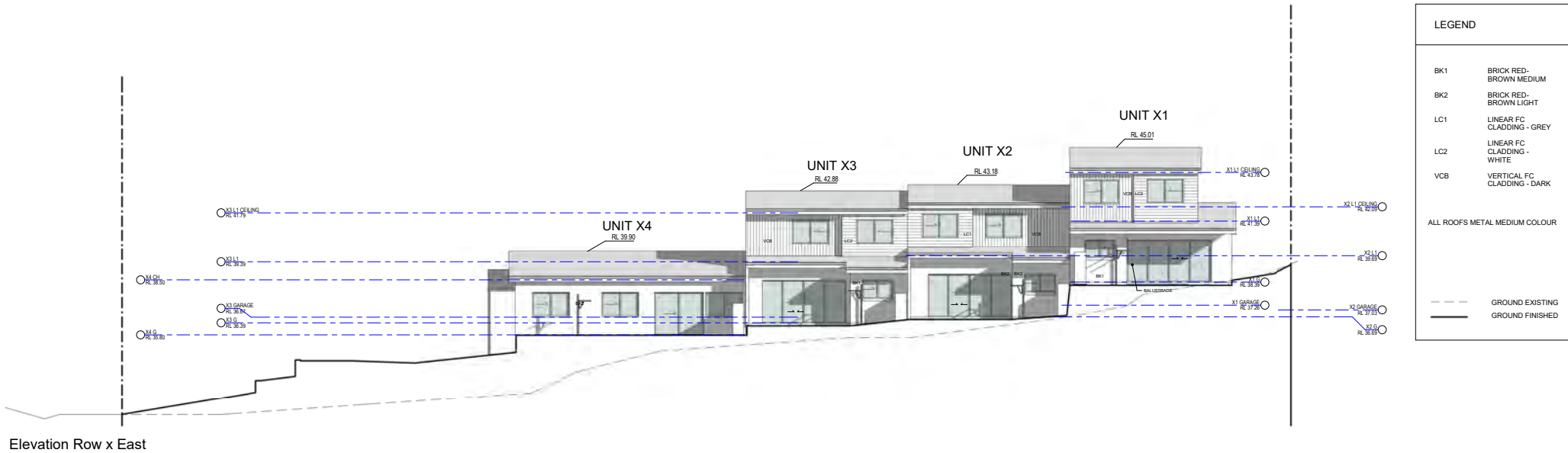
Proposed Residential Development
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At 2-8 Highway Avenue West Wollongong
Lot 25 DP 237812 and Lot 15 DP24874

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REV	DESCRIPTION	DATE	DRAWING TITLE	PROJECT # 18-0029 SCALE: 1:200 @ A3 DATE: 30/08/21 DRAWING NO. CHECKED: ZM		REVISION
A	BASIX	8/12/20	ELEVATIONS ROW W	DA011.1		D
B	D03	14/12/20				
C	D03.1	17/12/20				
D	REVISED DA ISSUE	30/08/21				
			DRAWING NO.		REVISION	
			DA011.1		D	
			30/08/2021 1:38:33 PM			

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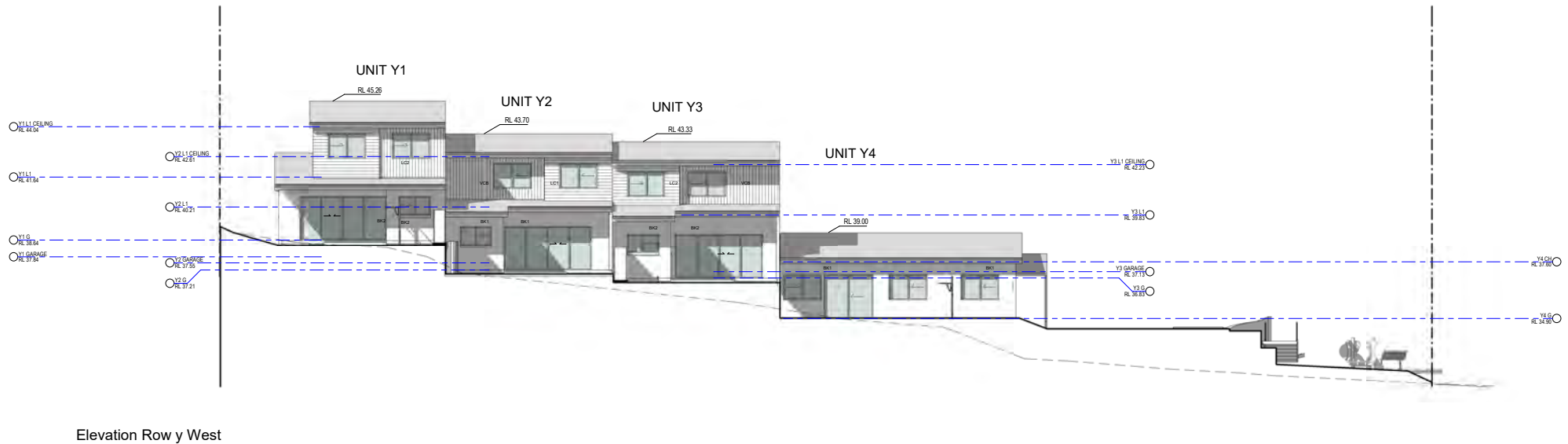
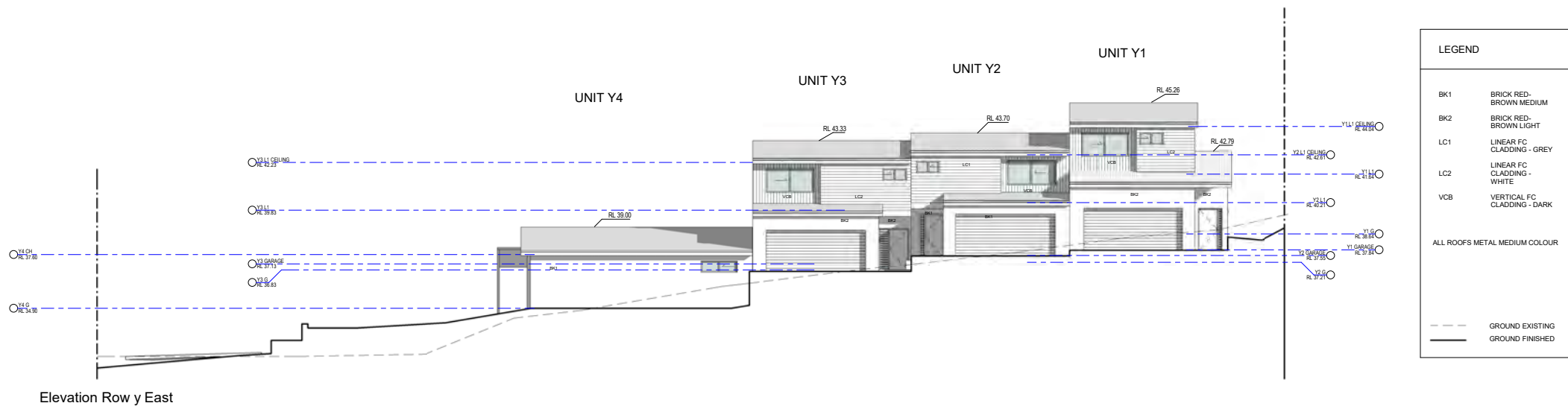
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For Kollaras Developments**
At 2-8 Highway Avenue West Wollongong
Lot 25 DP 237812 and Lot 15 DP24874

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REV	DESCRIPTION	DATE	DRAWING TITLE	PROJECT #	SCALE
A	BASIX	8/12/20	ELEVATIONS ROW X	18-0029	1:100 @ A1
B	D03	14/12/20		1:200 @ A3	
C	D03.1	17/12/20		DATE: 30/08/21	CHECKED: ZM
D	REVISED DA ISSUE	30/08/21		DRAWN BY	
				DRAWING NO.	REVISION
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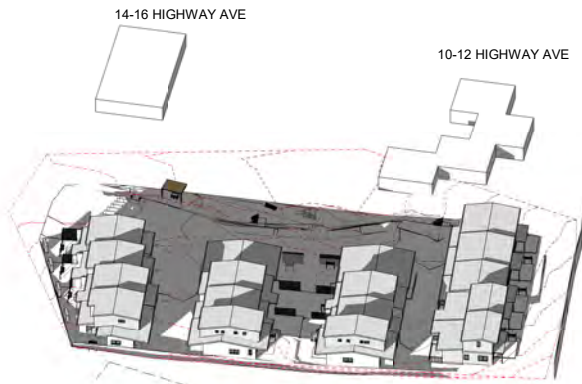
**Proposed Residential Development
For Kollaras Developments**
At 2-8 Highway Avenue West Wollongong
Lot 25 DP 237812 and Lot 15 DP24874

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BIM 360/118-0029 Kollaras WW/18-0029 KOLLARAS RES DEV WW D03.rvt

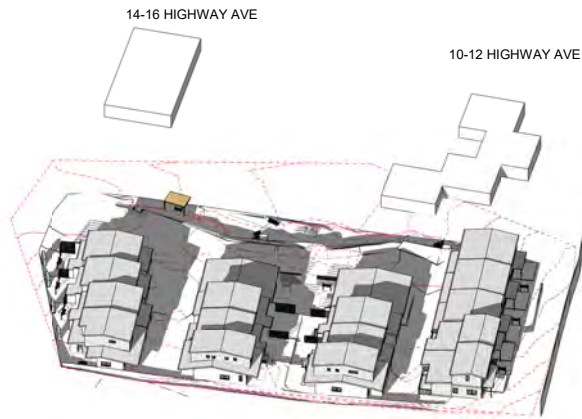


REV	DESCRIPTION	DATE	DRAWING TITLE	PROJECT #	SCALE
A	BASIX	8/12/20	ELEVATIONS ROW Y	18-0029	1 : 100 @ A3
B	DD3	14/12/20		1 : 200 @ A3	
C	DD3 I	17/12/20		DATE: 30/08/21	CHECKED: ZM
D	REVISED DA ISSUE	30/08/21		DRAWN: AJ	
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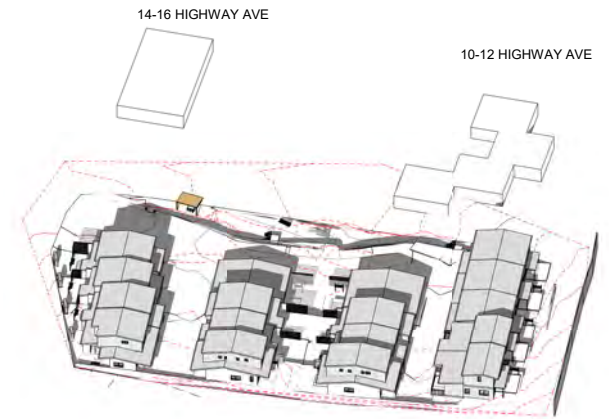
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Neighbours 10am



Neighbours 11am



Neighbours 12pm



Neighbours 1pm



Neighbours 2pm



Neighbours 3pm

SHADOW DIAGRAM SHOWING SHADOWS ON SOUTHERN NEIGHBOURS FOR JUNE 21 BETWEEN 10AM AND 3PM.
THIS SHOWS SOME MINIMAL OF A NEIGHBOURING DWELLING AT 3PM BUT OTHERWISE HAS MINIMAL EFFECT ON NEIGHBOURING SOLAR ACCESS.

Proposed Residential Development For Kollaras Developments

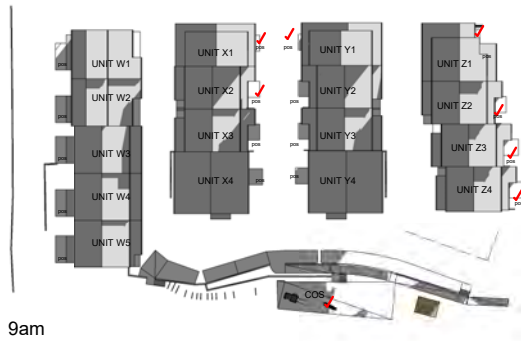
At 2-8 Highway Avenue West Wollongong
Lot 25 DP 237812 and Lot 15 DP24874

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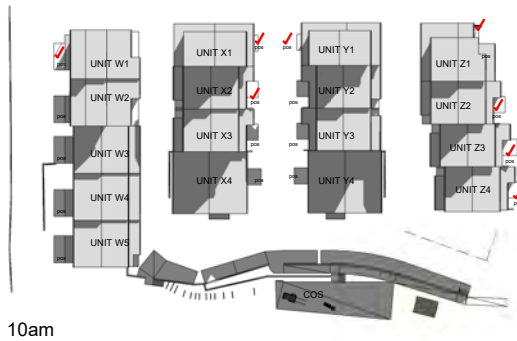


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A	D03	14/12/20	SHADOW DIAGRAMS SOUTHERN NEIGHBOURS	DATE 30/08/21
B	D03.1	17/12/20		CHECKED: ZM
C	REVISED DA ISSUE	30/08/21		DRAWING NO. DA012.1
				REVISION C
				30/08/2021 1:39:06 PM

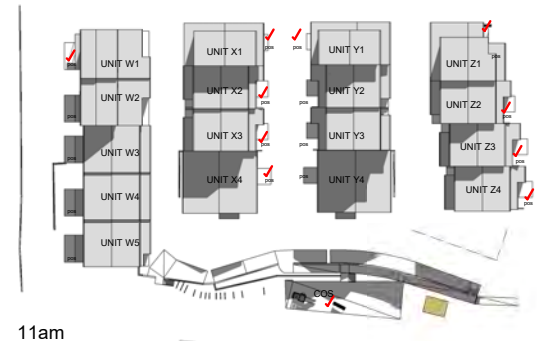
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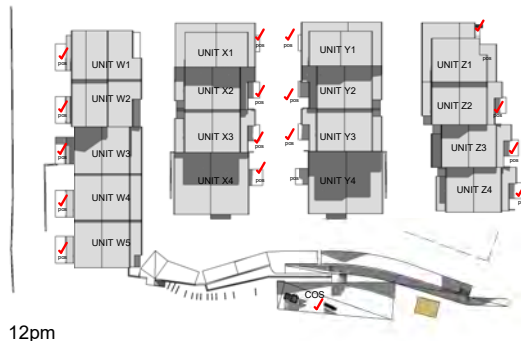
9am



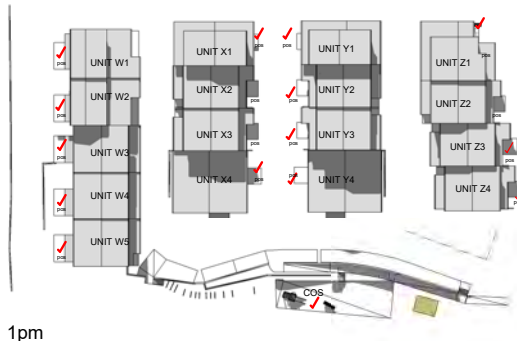
10am



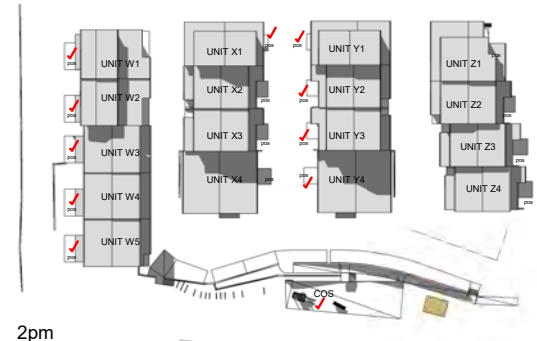
11am



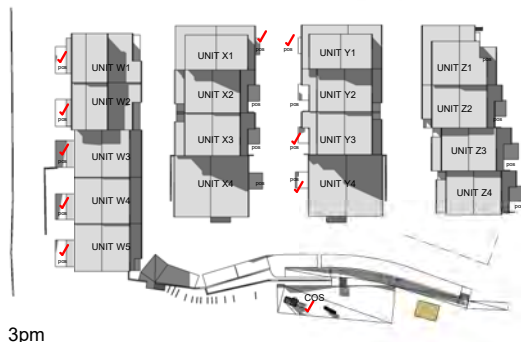
12pm



1pm



2pm



3pm

MINIMUM 50% SOLAR ACCESS AT 21 JUNE ACHIEVED UNIT																		
	W1	W2	W3	W4	W5	X1	X2	X3	X4	Y1	Y2	Y3	Y4	Z1	Z2	Z3	Z4	COS
9AM						✓	✓			✓				✓	✓	✓	✓	✓
10AM	✓					✓	✓			✓				✓	✓	✓	✓	
11AM	✓					✓	✓	✓	✓	✓				✓	✓	✓	✓	✓
12PM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1PM	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓
2PM	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓					✓
3PM	✓	✓	✓	✓	✓	✓						✓	✓					✓
TOTAL CONSECUTIVE HOURS	5	3	3	3	3	6	3	1	2	6	2	3	2	4	3	4	4	4
COMPLYING	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	NO	YES	YES	YES	YES	YES

SHADOW DIAGRAM SHOWING COMPLYING SOLAR ACCESS TO PRIVATE AND COMMUNAL OPEN SPACES ON JUNE 21

- 13 OF 17 (76%) UNIT PRIVATE OPEN SPACES RECEIVE OVER 50% OF WINTER SOLAR ACCESS FOR 3 HOURS, WHICH EXCEEDS THE 70% REQUIRED
- COMMUNITY OPEN SPACE RECEIVES OVER 50% OF WINTER SOLAR ACCESS FOR OVER 4 HOURS

Proposed Residential Development For Kollaras Developments At 2-8 Highway Avenue West Wollongong Lot 25 DP 237812 and Lot 15 DP24874

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REV	DESCRIPTION	DATE	DRAWING TITLE	PROJECT # 18-0029 SCALE 1:1 (A1)	
A	ADDITIONAL INFO	21/10/20	SOLAR ACCESS - PRIVATE OPEN SPACE & COMMUNITY OPEN SPACE	DATE: 30/08/21	CHECKED: ZM
B	COS	19/11/20		DRAWING NO.	REVISION
C	LANDSCAPE	26/11/20		DA012.2	F
D	COS	14/12/20			
E	DO3.1	17/12/20			
F	REVISED DA ISSUE	30/08/21			
			30/08/2021 1:30:21 PM		



PERSPECTIVE - COMMUNAL OPEN SPACE



PERSPECTIVE - PRIVATE OPEN SPACE BETWEEN ROW X AND Y



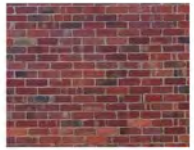
VCB VERTICAL FC CLADDING DARK



LC1 HORIZONTAL FC CLADDING GREY



LC2 HORIZONTAL FC CLADDING WHITE



BK1 BRICK RED-BROWN DARK



BK2 BRICK RED-BROWN LIGHT



ROOF MEDIUM COLOUR

SCHEDULE OF MATERIALS



PERSPECTIVE - HIGHWAY AVE ENTRANCE

Proposed Residential Development For Kollaras Developments At 2-8 Highway Avenue West Wollongong Lot 25 DP 237812 and Lot 15 DP24874

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REV	DESCRIPTION	DATE	DRAWING TITLE	PROJECT #
A	LANDSCAPE	26/11/20	3D PERSPECTIVES AND MATERIALS	18-0029
B	D03.1	17/12/20		SCALE: NTS @ A1
C	REVISED DA ISSUE	30/08/21		DATE: 30/08/21 CHECKED: ZM
				DRAWING NO. DA014 REVISION D
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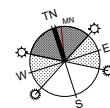
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Attachment 3



Proposed Residential Development For Kollaras Developments At 2-8 Highway Avenue West Wollongong Lot 25 DP 237812 and Lot 15 DP24874

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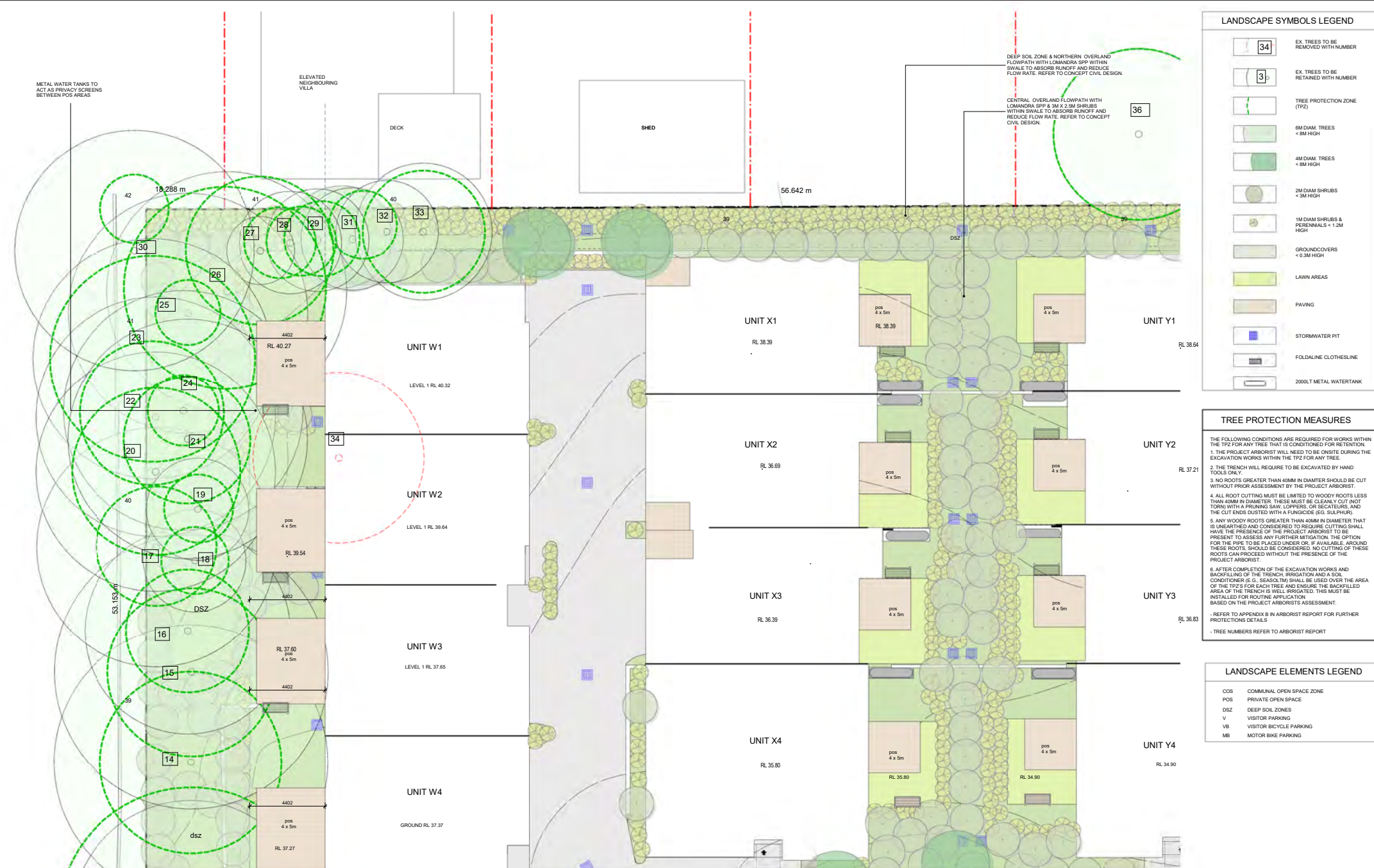


REV	DESCRIPTION	DATE	DRAWING TITLE
A	LANDSCAPE	13/11/20	LANDSCAPE MASTER PLAN
B	TREES NOTED TO BE REMOVED	01/12/20	
C	D03.1	17/12/20	
D	REVISED DA ISSUE	30/08/21	

PROJECT #:	18-0029	CHECKED:	SS
SCALE:	1:250 @ A1 1:400 @ A3		
DATE:	30/08/21	CHECKED:	SS
DRAWN:	HW		
DRAWING NO.	DA015	REVISION	D

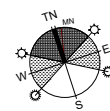
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30/08/2021 1:39:25 PM



Proposed Residential Development
For Kollaras Developments
At 2-8 Highway Avenue West Wollongong
Lot 25 DP 237812 and Lot 15 DP24874

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REV	DESCRIPTION	DATE
A	D03	14/12/20
B	D03.1	17/12/20
C	REVISED DA ISSUE	30/08/21

REVISION	DESCRIPTION	DATE	DRAWING TITLE
1	1:100 @ A1	14/12/20	DETAIL LANDSCAPE PLAN - NORTH WEST
2	1:200 @ A3	17/12/20	
3	30/08/21	30/08/21	
4	CHECKED: SS		
5	REVISION		
6	DA016		
7	C		
8	30/08/2021 1:39:27 PM		

USE WRITTEN DIMENSIONS ONLY - DO NOT SCALE OFF DRAWINGS

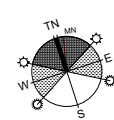


LANDSCAPE SYMBOLS LEGEND		
	34	EX TREES TO BE REMOVED WITH NUMBER
	35	EX TREES TO BE RETAINED WITH NUMBER
		TREE PROTECTION ZONE (TPZ)
		6M DIAM. TREES < 8M HIGH
		4M DIAM. TREES < 8M HIGH
		2M DIAM SHRUBS < 3M HIGH
		1M DIAM SHRUBS & PERENNIALS < 1.2M HIGH
		GROUNDCOVERS < 0.3M HIGH
		LAWN AREAS
		PAVING
		STORMWATER PIT
		FOLDALINE CLOTHESLINE
		2000LT METAL WATERTANK

TREE PROTECTION MEASURES	
THE FOLLOWING CONDITIONS ARE REQUIRED FOR WORKS WITHIN THE TPZ FOR ANY TREE THAT IS CONDITIONED FOR RETENTION.	
1. THE PROJECT ARBORIST WILL NEED TO BE ON SITE DURING THE EXCAVATION WORKS WITHIN THE TPZ FOR ANY TREE.	
2. THE TRENCH WILL REQUIRE TO BE EXCAVATED BY HAND TOOLS ONLY.	
3. NO ROOTS GREATER THAN 40MM IN DIAMETER SHOULD BE CUT WITHOUT PRIOR ASSESSMENT BY THE PROJECT ARBORIST.	
4. ALL ROOT CUTTING MUST BE LIMITED TO WOODY ROOTS LESS THAN 40MM IN DIAMETER. THESE MUST BE CLEANLY CUT (NOT TORN) WITH A PRUNING SAW, LOPPERS, OR SECATORS, AND THE CUT ENDS DUSTED WITH A FUNGICIDE (E.G. SULPHUR).	
5. ANY WOODY ROOTS GREATER THAN 40MM IN DIAMETER THAT IS UNEARTHED AND CONSIDERED TO REQUIRE CUTTING SHALL HAVE THE PRESENCE OF THE PROJECT ARBORIST TO BE PRESENT TO ASSESS ANY FURTHER MITIGATION. THE OPTION FOR THE PIPE TO BE PLACED UNDER OR, IF AVAILABLE, AROUND THESE ROOTS, SHOULD BE CONSIDERED. NO CUTTING OF THESE ROOTS CAN PROCEED WITHOUT THE PRESENCE OF THE PROJECT ARBORIST.	
6. AFTER COMPLETION OF THE EXCAVATION WORKS AND BACKFILLING OF THE TRENCH, IRRIGATION AND A SOIL CONDITIONER (E.G. SEASOL) SHALL BE USED OVER THE AREA OF THE TPZ'S FOR EACH TREE AND ENSURE THE BACKFILLED AREA OF THE TRENCH IS WELL IRRIGATED. THIS MUST BE INSTALLED FOR ROUTINE APPLICATION BASED ON THE PROJECT ARBORIST'S ASSESSMENT.	
- REFER TO APPENDIX B IN ARBORIST REPORT FOR FURTHER PROTECTION DETAILS	
- TREE NUMBERS REFER TO ARBORIST REPORT	

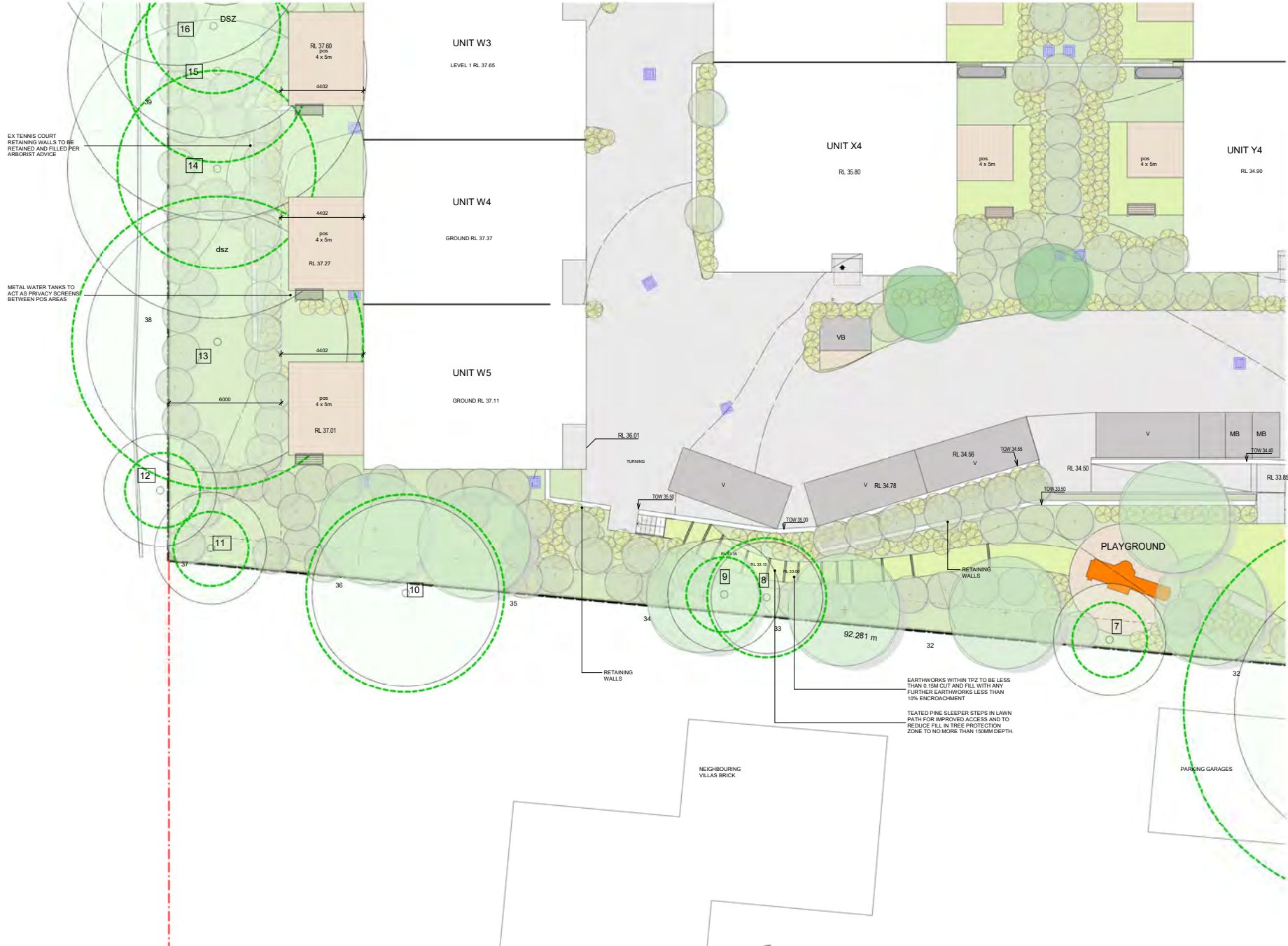
LANDSCAPE ELEMENTS LEGEND	
COS	COMMUNAL OPEN SPACE ZONE
POS	PRIVATE OPEN SPACE
DSZ	DEEP SOIL ZONES
V	VISITOR PARKING
VB	VISITOR BICYCLE PARKING
MB	MOTOR BIKE PARKING

Proposed Residential Development
For Kollaras Developments
At 2-8 Highway Avenue West Wollongong
Lot 25 DP 237812 and Lot 15 DP24874



REV	DESCRIPTION	DATE
1	DOS	14/12/20
2	DOS 1	17/12/20
3	REVISED DA ISSUE	30/08/21

DRAWING TITLE	
DETAIL LANDSCAPE PLAN - NORTH EAST	
PROJECT #: 18-0029	SCALE: 1:100 @ A1
DATE: 30/08/21	CHECKED: SS
DRAWING NO. DA017	REVISION C
30/08/2021 1:39:29 PM	



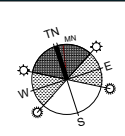
LANDSCAPE SYMBOLS LEGEND		
	34	EX TREES TO BE REMOVED WITH NUMBER
	35	EX TREES TO BE RETAINED WITH NUMBER
		TREE PROTECTION ZONE (TPZ)
		6M DIAM. TREES < 8M HIGH
		4M DIAM. TREES < 8M HIGH
		2M DIAM SHRUBS < 3M HIGH
		1M DIAM SHRUBS & PERENNIALS < 1.2M HIGH
		GROUNDCOVERS < 0.3M HIGH
		LAWN AREAS
		PAVING
		STORMWATER PIT
		FOLDALINE CLOTHESLINE
		2000LT METAL WATERTANK

TREE PROTECTION MEASURES	
THE FOLLOWING CONDITIONS ARE REQUIRED FOR WORKS WITHIN THE TPZ FOR ANY TREE THAT IS CONDITIONED FOR RETENTION.	
1.	THE PROJECT ARBORIST WILL NEED TO BE ONSITE DURING THE EXCAVATION WORKS WITHIN THE TPZ FOR ANY TREE.
2.	THE TRENCH WILL REQUIRE TO BE EXCAVATED BY HAND TOOLS ONLY.
3.	NO ROOTS GREATER THAN 40MM IN DIAMETER SHOULD BE CUT WITHOUT PRIOR ASSESSMENT BY THE PROJECT ARBORIST.
4.	ALL ROOT CUTTING MUST BE LIMITED TO WOODY ROOTS LESS THAN 40MM IN DIAMETER. THESE MUST BE CLEANLY CUT (NOT TORN) WITH A PRUNING SAW, LOPPERS, OR SECATEURS, AND THE CUT ENDS DUSTED WITH A FUNGICIDE (E.G. SULPHUR).
5.	ANY WOODY ROOTS GREATER THAN 40MM IN DIAMETER THAT IS UNEARTHED AND CONSIDERED TO REQUIRE CUTTING SHALL HAVE THE PRESENCE OF THE PROJECT ARBORIST TO BE PRESENT TO ASSESS ANY FURTHER MITIGATION. THE OPTION FOR THE PIPE TO BE PLACED UNDER OR, IF AVAILABLE, AROUND THESE ROOTS, SHOULD BE CONSIDERED. NO CUTTING OF THESE ROOTS CAN PROCEED WITHOUT THE PRESENCE OF THE PROJECT ARBORIST.
6.	AFTER COMPLETION OF THE EXCAVATION WORKS AND BACKFILLING OF THE TRENCH, IRRIGATION AND A SOIL CONDITIONER (E.G. SEASOLTM) SHALL BE USED OVER THE AREA OF THE TPZ FOR EACH TREE AND ENSURE THE BACKFILLED AREA OF THE TRENCH IS WELL IRRIGATED. THIS MUST BE INSTALLED FOR ROUTINE APPLICATION BASED ON THE PROJECT ARBORIST'S ASSESSMENT.
REFER TO APPENDIX B IN ARBORIST REPORT FOR FURTHER PROTECTIONS DETAILS	
TREE NUMBERS REFER TO ARBORIST REPORT	

LANDSCAPE ELEMENTS LEGEND	
COS	COMMUNAL OPEN SPACE ZONE
POS	PRIVATE OPEN SPACE
DSZ	DEEP SOIL ZONES
V	VISITOR PARKING
VB	VISITOR BICYCLE PARKING
MB	MOTOR BIKE PARKING

Proposed Residential Development For Kollaras Developments At 2-8 Highway Avenue West Wollongong Lot 25 DP 237812 and Lot 15 DP24874

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REV	DESCRIPTION	DATE
A	D03	14/12/20
B	D03.1	17/12/20
C	REVISED DA ISSUE	30/08/21

DETAIL LANDSCAPE PLAN - SOUTH WEST	
PROJECT #: 18-0029 SCALE: 1:100 @ A1 1:200 @ A3	DATE: 30/08/21 DRAWN: HW CHECKED: SS
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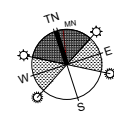
LANDSCAPE SYMBOLS LEGEND	
	EX TREES TO BE REMOVED WITH NUMBER
	EX TREES TO BE RETAINED WITH NUMBER
	TREE PROTECTION ZONE (TPZ)
	6M DIAM TREES < 8M HIGH
	4M DIAM TREES < 8M HIGH
	2M DIAM SHRUBS < 3M HIGH
	1M DIAM SHRUBS & PERENNIALS < 1.2M HIGH
	GROUNDCOVERS < 0.3M HIGH
	LAWN AREAS
	PAVING
	STORMWATER PIT
	FOLDLINE CLOTHESLINE
	2000LT METAL WATERTANK

TREE PROTECTION MEASURES	
THE FOLLOWING CONDITIONS ARE REQUIRED FOR WORKS WITHIN THE TPZ FOR ANY TREE THAT IS CONDITIONED FOR RETENTION.	
1. THE PROJECT ARBORIST WILL NEED TO BE ON SITE DURING THE EXCAVATION WORKS WITHIN THE TPZ FOR ANY TREE.	
2. THE TRENCH WILL REQUIRE TO BE EXCAVATED BY HAND TOOLS ONLY.	
3. NO ROOTS GREATER THAN 40MM IN DIAMETER SHOULD BE CUT WITHOUT PRIOR ASSESSMENT BY THE PROJECT ARBORIST.	
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6. AFTER COMPLETION OF THE EXCAVATION WORKS AND BACKFILLING OF THE TRENCH, IRRIGATION AND A SOIL CONDITIONER (E.G. SEASO-TM) SHALL BE USED OVER THE AREA OF THE TPZ'S FOR EACH TREE AND ENSURE THE BACKFILLED AREA OF THE TRENCH IS WELL IRRIGATED. THIS MUST BE INSTALLED FOR ROUTINE APPLICATION.	
- REFER TO APPENDIX B IN ARBORIST REPORT FOR FURTHER PROTECTION DETAILS	
- TREE NUMBERS REFER TO ARBORIST REPORT	

LANDSCAPE ELEMENTS LEGEND	
COS	COMMUNAL OPEN SPACE ZONE
POS	PRIVATE OPEN SPACE
DSZ	DEEP SOIL ZONES
V	VISITOR PARKING
VB	VISITOR BICYCLE PARKING
MB	MOTOR BIKE PARKING

Proposed Residential Development For Kollaras Developments At 2-8 Highway Avenue West Wollongong Lot 25 DP 237812 and Lot 15 DP24874

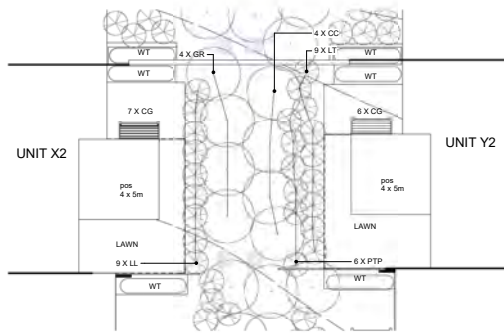
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REV	DESCRIPTION	DATE
A	LANDSCAPE	13/11/20
B	D03	14/12/20
C	D03.1	17/12/20
D	REVISED DA ISSUE	30/08/21

DRAWING TITLE	
DETAIL LANDSCAPE PLAN - SOUTH EAST	
PROJECT #: 18-0029	SCALE: 1:100 @ A1
SCALE: 1:200 @ A3	DATE: 30/08/21
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8 TYPICAL PLANTING PLAN EXAMPLE

1:100

NOTE: TYPICAL SPECIES LOCATIONS SHOWN ON THIS PLAN ONLY FOR REFERENCE. PLEASE SEE PLANTING SCHEDULE BELOW FOR IDENTIFICATION OF SPECIES NOMINATED.

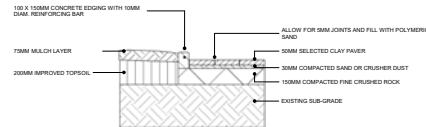
DEEP SOIL ZONE BUSH REGENERATION AREA INDICATIVE PLANTING SCHEDULE

SYMBOL	SCIENTIFIC NAME	COMMON NAME	MATURE HT H X W	POT SIZE	SPACING
AL	ALLOCAURUM LITTORALE	BLACK SHEOAK	0.4 x 0.4 M	100 CS	3M CS
BR	BLAKEALEXANDER RETICULATUS	BLUESBERRY ASH	0.4 x 0.4 M	100 CS	4M CS
AS	ACERIA SMITHII	LILLYWILLY	0.4 x 0.4 M	100 CS	4M CS
PU	PITTOPOREUM UNDEULATUM	SWEET WITTOPOREUM	0.4 x 0.4 M	100 CS	6M CS
BE	BANKSIA ERICIFOLIA	HEATH BANKSIA	3.0 x 2.0 M	200 MM	2M CS
CC	CALLISTEMON VIMINALIS CAPTAIN COOK	CAPTAIN COOK BOTTLEBRUSH	2.0 x 1.5 M	100 CS	1.5M CS
GR	GREVILLEA 'WORTH GORDON'	WORTH GORDON GREVILLEA	1.5 x 1.5 M	100 CS	1.5M CS
GL	GREVILLEA LANGERA	WOOLLY GREVILLEA	1.0 x 1.0 M	100 CS	1M CS
DE	DORYANTHESS EXCELSA	DORVILLEA	1.0 x 0.4 M	100 CS	4M CS
WF	WESTRINGIA FRUTICOSA	COASTAL ROSEMARY	1.2 x 0.4 M	100 CS	4M CS
IA	INDOCHINA AUSTRALIS	AUSTRALIAN INDIGO	2.0 x 0.3 M	100 CS	3M CS
FE	FERNS				
AA	ASPIDIUM AUSTRALICUM	BIRDS NEST FERN	1.0 x 1.0 M	100 CS	1M CS
BC	BLECHNUM CAPITALE	CRISTATE FERN	1.0 x 1.0 M	100 CS	1.5M CS
CO	CYATHEA AUSTRALIS	ROUGH TREE FERN	1.2 x 1.5 M	100 CS	1.5M CS
DA	DICODONIA ANTIPODICA	SOFT TREE FERN	0.4 x 0.4 M	100 CS	5M CS
DA	DICODONIA AUSTRALIS	SOFT TREE FERN	0.4 x 0.4 M	100 CS	5M CS
AF	ADANTUM FORMICOSUM	GIANT MANTLE	0.4 x 0.6 M	100 CS	0.6M CS
GR	GROENKOPIA				
BR	BANKSIA ERICIFOLIA	HEATH BANKSIA	3.0 x 2.0 M	200 MM	2M CS
HS	HIBBERTIA SCANDENS	GOLDEN GUMBA FLOWER	0.3 x 0.3 M	100 CS	2.5M CS
RV	ROSEMARY AUSTRALIS	FALSE SANDPAPER	0.3 x 0.3 M	100 CS	2.5M CS
GC	GEOFFORHIZA AUSTRALIS	SILVER FILL	0.3 x 0.3 M	100 CS	1M CS
DC	DANIELLA CAPRILLA	BLUE FLAX LILY	0.5 x 0.4 M	100 CS	0.4M CS
LT	LOMANERA TANNA	TANNA	0.6 x 0.5 M	100 CS	0.5M CS
LL	LOMANERA LONGICOLA	MAT FLUX	1.0 x 1.2 M	100 CS	1.2M CS
CP	CRINUM PEDUNCULATUM	CRINUM LILY	1.5 x 1.5 M	100 CS	1.5M CS

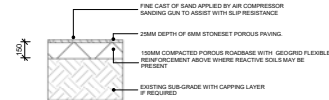
INDICATIVE PLANTING SCHEDULE

SYMBOL	SCIENTIFIC NAME	COMMON NAME	MATURE HT H X W	POT SIZE
HF	HYPENOCYPRIUM FLAVUM	NATIVE FRAGRANCE	0.4 x 0.4 M	45LT
CA	CUPANOPSIS ANACARDIODES	TUCKEROO	0.4 x 0.4 M	45LT
AL	ALLOCAURUM LITTORALE	BLACK SHEOAK	0.4 x 0.4 M	45LT
DR	DRYAS REVOLUTA	SAGO PALM	4.0 x 1.0 M	45LT
BE	BANKSIA ERICIFOLIA	HEATH BANKSIA	3.0 x 2.0 M	200 MM
CC	CALLISTEMON VIMINALIS CAPTAIN COOK	CAPTAIN COOK BOTTLEBRUSH	2.0 x 1.5 M	200 MM
DE	DORYANTHESS EXCELSA	DORVILLEA	1.0 x 0.4 M	200 MM
GR	GREVILLEA 'WORTH GORDON'	WORTH GORDON GREVILLEA	1.5 x 1.5 M	200 MM
GL	GREVILLEA LANGERA	WOOLLY GREVILLEA	1.0 x 1.0 M	200 MM
BR	STREPTOCARPUS	BIRD OF PARADISE	1.2 x 1.2 M	200 MM
WF	WESTRINGIA FRUTICOSA	COASTAL ROSEMARY	1.2 x 0.4 M	200 MM
FE	FERNS			
AA	ASPIDIUM AUSTRALICUM	BIRDS NEST FERN	1.0 x 1.0 M	200 MM
BC	BLECHNUM CAPITALE	CRISTATE FERN	1.0 x 1.0 M	200 MM
CO	CYATHEA AUSTRALIS	ROUGH TREE FERN	1.2 x 1.5 M	200 MM
DA	DICODONIA ANTIPODICA	SOFT TREE FERN	0.4 x 0.4 M	200 MM
DA	DICODONIA AUSTRALIS	SOFT TREE FERN	0.4 x 0.4 M	200 MM
AF	ADANTUM FORMICOSUM	GIANT MANTLE	0.4 x 0.6 M	200 MM
GR	GROENKOPIA			
BR	BANKSIA ERICIFOLIA	HEATH BANKSIA	3.0 x 2.0 M	200 MM
HS	HIBBERTIA SCANDENS	GOLDEN GUMBA FLOWER	0.3 x 0.3 M	200 MM
RV	ROSEMARY AUSTRALIS	FALSE SANDPAPER	0.3 x 0.3 M	200 MM
GC	GEOFFORHIZA AUSTRALIS	SILVER FILL	0.3 x 0.3 M	200 MM
DC	DANIELLA CAPRILLA	BLUE FLAX LILY	0.5 x 0.4 M	200 MM
LT	LOMANERA TANNA	TANNA	0.6 x 0.5 M	200 MM
LL	LOMANERA LONGICOLA	MAT FLUX	1.0 x 1.2 M	200 MM
CP	CRINUM PEDUNCULATUM	CRINUM LILY	1.5 x 1.5 M	200 MM

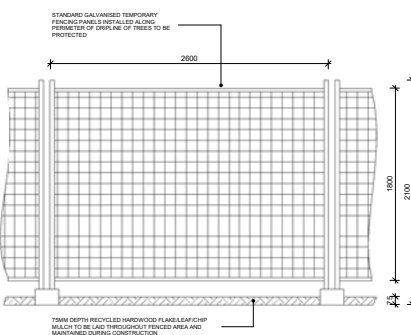
typical paving detail 1 : 25



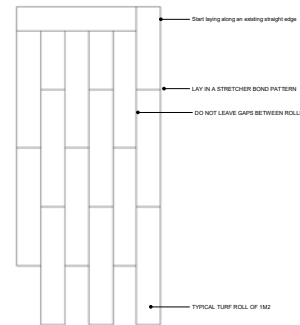
typical concrete bed edge detail 1:25



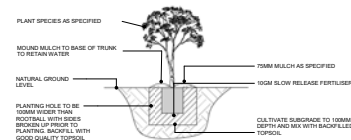
typical permeable paving detail 1 : 25



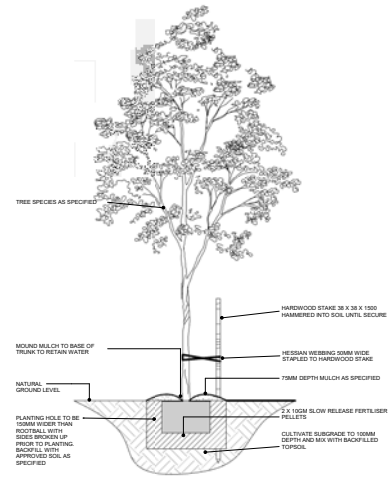
typical protective fencing detail 1 : 25



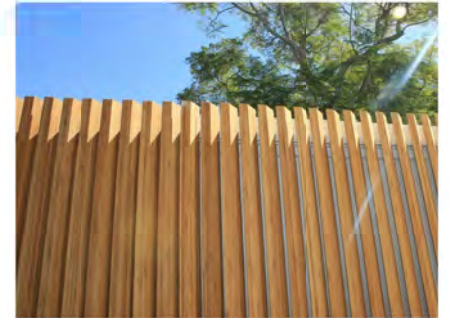
typical turf detail pattern 1:50



typical shrub planting detail nts



typical tree planting detail nts



privacy screen



internal lot fencing

Proposed Residential Development For Kollaras Developments At 2-8 Highway Avenue West Wollongong Lot 25 DP 237812 and Lot 15 DP24874

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REV	DESCRIPTION	DATE
A	D03	14/12/20
B	REVISED DA ISSUE	30/05/21

DATE	DRAWING TITLE
14/12/20	LANDSCAPE TYPICAL DETAILS & PLANTING SCHEDULE

PROJECT #:	18-0029
SCALE:	As indicated @ A1
DATE:	30/05/21
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PLANTING PALETTE



Proposed Residential Development
For Kollaras Developments
At 2-8 Highway Avenue West Wollongong
Lot 25 DP 237812 and Lot 15 DP24874

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REV	DESCRIPTION	DATE
A	D03	14/12/20
B	REVISED DA ISSUE	30/09/21

DRAWING TITLE		PROJECT # 18-0029	
LANDSCAPE PLANTING PALETTE		SCALE @ A1	
		DATE: 30/08/21	CHECKED: SS
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ATTACHMENT 4 WOLLONGONG DCP 2009 COMPLIANCE TABLES

CHAPTER A2 – ECOLOGICALLY SUSTAINABLE DEVELOPMENT

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

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

CHAPTER B1 – RESIDENTIAL DEVELOPMENT

4.0 General Residential controls

<i>Controls/objectives</i>	<i>Comment</i>	<i>Compliance</i>
<u>4.11 Storage Facilities</u>	Storage facilities provided.	Yes
<u>4.12 Site Facilities</u>	The necessary site facilities have been provided and are acceptable in this circumstance.	Yes
<u>4.13 Fire Brigade Servicing</u>	Should the application be approved, a condition is recommended in this regard requiring the provision of a fire hydrant in accordance with AS2419(1994) and to be shown on the Construction Certificate Plans.	Yes
<u>4.14 Services</u>	Water, electricity, sewage and telephone services are available to the site.	Yes
<u>4.16 View Sharing</u>	This proposal is not expected to have adverse impact on other properties in terms of view sharing.	Yes
<u>4. 17 Retaining Walls</u>	Retaining walls required adjacent to the proposed driveway due to the required earthworks. Standard conditions to apply.	Yes

5.0 Attached dwellings and multi -dwelling housing

<i>Controls/objectives</i>	<i>Comment</i>	<i>Compliance</i>
<u>5.1 Minimum Site Width Requirement</u>		
A minimum side width of 18m is required for multi-dwelling development.	The proposal involves multi dwelling housing. The subject site consists of two (2) lots, with a combined width in excess of 18m.	Yes
<u>5.2 Number of Storeys</u>		
The maximum number of storeys for a multi-dwelling house in a R2 – Low Density Residential Zone is two (2) stories high.	All units are one to two storeys in height.	Yes
<u>5.3 Front Setbacks</u>		
<p>A 6m setback requirement applies from the front property boundary to the front façade of the building.</p> <p>On corner allotments a minimum setback of 3m to the secondary street frontage from the dwelling façade must be provided.</p>	6m (minimum provided).	Yes
<u>5.4 Side and Rear Setbacks</u>		
<p>Zone R2 – Low Density Residential, the minimum side and rear setback is 0.8 x the ceiling height.</p> <p>In the case where balconies or windows of living areas face the rear boundary at first floor level or above, the minimum is 1.0 x ceiling height.</p>	<p>Changes to setbacks as part of amended plans.</p> <p>Northern boundary</p> <p>Unit Z1- 2.150m - 2.616m (previous) 2.315m - 2.796m (amended)</p> <p>Eastern boundary</p> <p>Unit Z1- 2.924m - 4.686m (previous) New- 2m-3.8m, 6.312m (amended)</p> <p>Unit Z2 3.827m (previous) 2.9 (amended)</p> <p>Unit Z3 3.774m (previous) 3.241m (amended)</p> <p>Unit Z4 4.578m (previous) 4.578m (amended)</p>	Yes

	Upper floors Z1-5.21m Z2- 6.9m Z3- 7.4m Z4- 8.4m	
5.5 Building Character and Form		
<p>(a) <i>Articulate and fragment building walls that address the street and add visual interest. The appearance of blank walls or walls with only utility windows on the front elevation is not permitted.</i></p> <p>(b) <i>Avoid expanses of any single material.</i></p> <p>(c) <i>Utilise high quality and durable materials and finishes.</i></p> <p>(d) <i>Entrances must be visible at eye level from the street and well lit.</i></p> <p>(e) <i>For those dwellings adjacent to the street frontage, the habitable rooms must face the street.</i></p> <p>(f) <i>Ensure entrances can accommodate the movement of furniture.</i></p> <p>(g) <i>Air conditioning units must not be visible from the street. Space shall be allocated and shown on plans for air conditioning units in order to demonstrate that this can be achieved.</i></p> <p>(h) <i>All residential buildings must be designed with building frontages and entries clearly addressing the street frontage. Dwellings adjacent to the street boundary must have individual entries from the street.</i></p>	<p>The development has been redesigned with a reduction in the number of units originally proposed with previous application. The built form is acceptable from the streetscape with direct entrance from the street. The development is single to double storey in keeping with the character of the street.</p>	Yes
5.6 Access / Driveway Requirements		
<p>Paving should be visually sympathetic to the precinct character in terms of colour texture and material.</p> <p>When practical, the number of access points should be kept to a minimum</p>	<p>Only one access point is to be provided. This is accessed through Highway Avenue cul-de-sac.</p> <p>The access driveway design meets the required Australian Standard. Council's</p>	Yes

accessed through lanes or secondary streets rather than primary.

Curved driveways are more desirable than straight driveways as they less dominate the streetscape.

Take into account services within the road reserve such as power poles, drainage inlet pits, and existing street trees.

Driveways must be located at least 6m from the perpendicular of two intersecting roads, and be setback at least 1.5m from any side property boundary.

The design of driveway and crossovers must be in accordance with council's standard vehicle entrance designs whilst driveway grades, vehicular ramp width/grades and passing bays must be in accordance with the relevant Australian Standard, being AS 2890.1.

Ensure that there is enough adequate vehicular manoeuvring space to all dwellings so that vehicles do not require more than one single point turn to forwardly leave the site.

In the case of this driveway width, a minimum of 3m and maximum of 6m must be applied. The crossover width needs to be 4 – 6m combined and within 6m internally of the front property boundary.

Development Engineer has assessed the application in this regard and raised no objections to the proposed design.

Sufficient manoeuvring space is provided for all dwellings. A turning circle plan was provided.

The driveway and crossover width and both 5.5m and are within the requirements.

The driveway is adequately setback from any side property boundaries.

On-site servicing is required.

5.7 Car Parking Requirements

On site car parking should minimise streetscape impacts by locating it behind building setback screened from view with well-designed structures and vegetation.

Car parking areas must be located close to entrances and access ways, be secure and easily accessible, and have clearly defined visitor and disabled parking.

All parking should be in accordance with Traffic, Access, Parking and Servicing Chapter as contained in Part E of this DCP.

A total of 34 resident car parking spaces are proposed along with 8 visitor spaces.

On-site car parking spaces meet Council's minimum requirements. It is secure and easily accessible by residents with minimal impacts to the streetscape.

Yes

5.8 Landscaping Requirements		
<p>A minimum of 30% of the total site area must be provided as landscaped area.</p> <p>At least two semi mature medium-large trees with a 45L minimum pot size must be provided within the landscaped area or deep soil zone. This must be at least 3m away from any dwelling, building or structure.</p> <p>The required landscaped area must include a minimum 1.5 metre wide landscaping bed provided along the side and rear boundaries of the site.</p>	<p>The site has an area of 5432m². As such the required amount of landscaped area is 1629m², which is 30% of the area.</p> <p>The total provided landscaped area is 1740m², which equates to 32% of the site area.</p>	Yes
5.9 Deep Soil Planting		
<p>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.</p> <p>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.</p> <p>Alternatively, the deep soil may extend along the full length of the rear of the site, with a minimum width of 6m. The area of deep soil planting must be continuous to ensure that the deep soil planting area is a singular uniform area and is not fragmented.</p>	<p>DSZ has a minimum width of 6m and extends along the full length of the rear (western) boundary.</p>	Yes
5.10 Communal Open Space		
<ul style="list-style-type: none"> • Required for greater than ten (10) dwellings • 5m² per dwelling • minimum dimension of 5 metres <p>Easily accessible and within a reasonable distance from each dwelling be integrated with site landscaping, allow for casual social interaction, and be capable of accommodating recreational activities.</p>	<p>Communal open space has been relocated to south-western boundary.</p> <p>The location of the COS is considered to be satisfactory from Council's Landscape Division.</p> <p>Improvements have been made to the design of the COS to make it more functional and pleasing to use with a variety of landscape features such as raised boardwalks, mosaic walls and seating and playground areas.</p>	Yes

5.11 Private Open Space		
<p>Private open space must be provided for each dwelling within an attached dwelling development in the form of a balcony, courtyard, terrace and/or roof garden.</p> <p>A minimum dimension of 4m x 5m is required for the courtyards. These must be separated by at least 1.5m from boundaries. These must not encroach upon deep soil zone landscaping areas.</p> <p>The primary private open area of at least 70% of the dwellings must receive at least three hours direct sunlight between 9.00am and 3.00pm on June 21</p>	<p>Each dwelling is provided with private open space provided at ground level.</p> <p>All court yards have 4m x 5m dimensions.</p> <p>In total 13 of 17 (76%) of POS receive 3hrs or more solar access.</p>	Yes
5.12 Solar Access Requirements		
<p>Windows to living rooms of adjoining dwellings must receive 3 hours of sunlight between 9.00am and 3.00pm on 21 June.</p> <p>At least 50% of the private open areas of adjoining residential properties must receive at least 3 hours of sunlight between 9.00am and 3.00pm on June 21.</p> <p>The primary balcony of at least 70% of the dwellings within a multi-dwelling housing development shall receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.</p> <p>Windows to north facing living rooms for each of the subject dwellings in the development must receive at least 3 hours of sunlight between 9.00am and 3.00pm on 21 June.</p> <p>At least 50% of the private open space area for each of the subject dwellings in the development must receive at least 3 hours of sunlight between 9.00am and 3.00pm on 21 June.</p>	<p>Shadow diagrams submitted which demonstrate that the windows and living rooms and 50% of the private open space areas in adjoining development will receive the minimum required 3 hours direct sunlight on June 21.</p> <p>No balconies proposed as part of this application.</p> <p>In total 13 of 17 (76%) of POS receive 3hrs or more solar access.</p> <p>Windows to north facing living rooms are able to receive 3hrs of sunlight.</p> <p>In total 13 of 17 (76%) of POS receive 3hrs or more solar access.</p>	Yes
5.13 Dwelling mix and Layout		
<ul style="list-style-type: none"> Required for greater than ten (10) dwellings. <p>Provide a mix of dwelling sizes and layouts within larger multi-dwelling</p>	<p>The proposed development incorporates a mix of unit types including:</p> <p>2 Storey</p>	Acceptable

developments having ten (10) or more dwellings. This could include both variation in the number of bedrooms and gross floor areas of apartments, variety in the internal design or incorporating one, two and three bedroom dwellings to accommodate various resident requirements.	(X1 X2 X3 Y1 Y2 Y3 Z2 Z3 Z4) 129sqm X 9 2 Storey 3BR (W1 W2 Z1) 142sqm X 3 1 Storey accessible villa (X4 + Y4) 94sqm X 2 2 Storey 3BR (W3 W4 W5) 134sqm X 3	
5.14 Additional Control for Multi Dwelling Housing – Adaptable Housing		
10% of all dwellings (or at least 1 dwelling) must be designed capable of adaptation for disabled or elderly residents as designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes “pre-adaptation” design details to ensure visitability is achieved. The Development Application must be accompanied by certification from a suitably qualified and experienced Access Consultant which confirms that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).	2 units are proposed to be made adaptable- Unit X4 and Unit Y4. Adaptability Review and Requirements Report submitted from the Architect.	Yes
5.15 Additional Control for Multi Dwelling Housing – Crime Prevention through Environmental Design		
Compliance with the requirements of Chapter E2 Crime Prevention through Environmental Design (CPTED) in this DCP.	Chapter E2 summarises this below	Yes

CHAPTER E2: CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

<i>Control/objective</i>	<i>Comment</i>	<i>Compliance</i>
3.1 Lighting	Low level lighting will be installed throughout the COS and adjoining pathways to provide a safe place after dark.	Condition

<u>3.2 Natural surveillance and sightlines</u>	The dwellings have been designed to provide natural surveillance within the site. The design of the development provides for passive surveillance and sightlines to the entries of each unit.	Yes
<u>3.3 Signage</u>	None proposed as part of this application.	Yes
<u>3.4 Building design</u>	The building design is acceptable to allow for casual surveillance.	Yes
<u>3.5 Landscaping</u>	Landscaping proposed around the site generally comprises of lawn area, low shrubs and existing large trees located to the rear of the site.	Yes
<u>3.6 Public open space and parks.</u>	The proposal does not adjoin public open space/park.	N/A
<u>3.7 Community facilities and public amenities</u>	The proposal is for a multi-dwelling development.	N/A
<u>3.8 Bus stops and taxi ranks</u>	The proposal does not relate to a bus stop/taxi rank.	N/A

CHAPTER D1: CHARACTER STATEMENTS

Clause 3.33 West Wollongong

Desired Future Character

West Wollongong is likely to experience some change given its close proximity to Wollongong City Centre. West Wollongong will remain a low to medium density residential area with potential for some additional medium density housing in the form of townhouses in short walking distance to existing bus stops, situated on Crown Street and Mount Keira Road. Any new development should preferably be of a face brick work and pitched roof tile construction. Any new development must also be sympathetic with the prevailing streetscape character of the surrounding locality. West Wollongong will continue to be a base for educational excellence through the existing private and public schools. The suburb is likely to experience the establishment of some new health consulting rooms (eg specialist and general medical health care practices etc), in close proximity to the Wollongong Hospital medical precinct. Any such new health consulting room will only be permitted where, in the opinion of Council, it is compatible with the surrounding residential neighbourhood.

The proposed development site is within close proximity to Wollongong City Centre and associated facilities such as commercial and hospital services. The site is also close to schools and public transport.

This makes the site suitable for a medium density development. The amended plans are suitable for the site location and the desired future character of the area.

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

Parking demand and servicing requirements

	Rate	Calculation	Required	Provided	Compliance
Car parking	1.5 car parking spaces per dwelling (70-110m ²) or 2 car parking spaces per dwelling (>110m ²), plus 0.2 car parking spaces per dwelling for visitors	70-110m ² : 1.5*2= 3 >110m ² : 2*15= 30 Visitor: 0.2*17= 3.4		34 8	Yes
Bicycle parking	1 bicycle space per 3 dwellings (residents) and 1 bicycle space per 12 dwellings (visitors)	8 spaces		8	Yes
Motorbike	1 motorcycle space per 15 car parking spaces	2 space/15		2	Yes

On site waste servicing is proposed and turning templates provided to show the manoeuvrability of the waste vehicle into the out of the site. The vehicle is to enter the site in a forward direction and utilises the proposed turning bay to exit the site. The proposed waste servicing along with the Traffic Assessment has been reviewed by Council's Traffic Engineer and found to be acceptable.

CHAPTER E6: LANDSCAPING

Adequate landscaping is provided around the site with a deep soil zone located to the rear of the site to retain existing large trees. The development has been reviewed by Council's Landscape Officer who considers the location communal open space to be satisfactory. The amended landscaping plan was also referred and a satisfactory referral was provided. The proposed development meets the objectives of this Chapter and conditions relating to landscaping have been imposed on draft consent.

CHAPTER E7: WASTE MANAGEMENT

On- site waste servicing is proposed for the development to be carried out on a weekly basis. Turning paths for waste vehicles have been checked by Council's Traffic Engineer.

Should the development be approved, standard conditions relating to waste management are to be imposed.

CHAPTER E14 STORMWATER MANAGEMENT

Council's Development Engineering officer has assessed the application and is satisfied the proposal meets the requirements of this Chapter. Conditions have been provided for stormwater management.

CHAPTER E17 PRESERVATION AND MANAGEMENT OF TREES AND VEGETATION

Concern was initially raised over the impact of stormwater lines on the street trees. Stormwater plans have been amended to reduce any impacts on street trees. This has been reviewed by Council's Arborist who concludes that trenching for the proposed stormwater service in the road (within the TPZ) is unlikely to result in major root loss due to the low oxygen environment created by road construction methods.

The developer is permitted to remove trees numbered 5, 13 and 34 and as indicated on the Detail Landscape Plans by Edminston Jones Architects Issue B dated 17.12.20 and the Arboricultural Impact Statement by Allied Tree Consultancy dated December 2020. Trees numbered 1 - 4, 6 -12, 14 - 33 and 35 – 38 are to be retained.

CHAPTER E19 EARTHWORKS (LAND RESHAPING WORKS)

The proposal requires earthworks to enable the construction of the dwellings, driveways and drainage infrastructure. The earthworks are not expected to have a detrimental impact on environmental functions and processes, neighbouring uses or heritage items and features surrounding land.

CHAPTER E20 CONTAMINATED LAND MANAGEMENT

Refer to comments under SEPP 55. Two areas of environmental concern with contamination identified during investigation includes historical fill and recent fill areas with crushed building rubble. The submitted DSI and Remediation Action Plan has been reviewed and conditions provided.

CHAPTER E22 SOIL EROSION AND SEDIMENT CONTROL

Should the development be approved, conditions of consent are recommended in regard to appropriate sediment and erosion control measures to be in place during works.

Approved Plans and Specifications

- 1 The development shall be implemented substantially in accordance with the details and specifications set out on Project No 18-0029 Drawing DA001-Q, DA004-C, DA005-B to DA007-B, DA008-C, DA009.1-J, DA009.2-J, DA010.1-H, DA010.2-H, DA010.3-C, DA010.4-C, DA011.1-D to DA011.4-D, DA013-B and DA024-B dated 30 August 2021 prepared by AEJ 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 Existing Easement to Drain Water

The existing easement to drain water one (1) metre wide (within Lot 15 DP 24874) must not be removed from the title of the land until such time as:

- The new (re-aligned) inter-allotment drainage system proposed as part of this development has been fully constructed, extending downstream to the point of connection within Highway Avenue;
- Written certification has been provided from a suitably qualified civil engineer, stating that the new (re-aligned) inter-allotment drainage system has been constructed in accordance with the approved Construction Certificate plans, extending downstream to the point of connection within Highway Avenue;
- A new minimum one (1) metre wide easement to drain water has been created over the new (re-aligned) inter-allotment drainage system for its full extent within the development site, and evidence that the new easement to drain water has been registered with NSW Land Registry Services has been provided to the Principal Certifier (PC). The new easement to drain water must benefit all allotments benefited by the existing easement to drain water one (1) metre wide (within Lot 15 DP 24874); and
- All other requirements have been satisfied for the removal of the easement, as per the requirements of NSW Land Registry Services.

Evidence that the above requirements have been satisfied shall be submitted to the PC prior to the release of the Occupation Certificate.

3 Geotechnical

- All site preparation earthworks including drainage and retaining wall construction is to be subject to geotechnical supervision as defined in Australian Standard AS 3798 Guidelines for Earthworks for Commercial and Residential Developments. Where necessary amendments are to be made to the designs during construction based on supplementary geotechnical advice given during the supervision to ensure that the completed works accommodates all encountered geotechnical constraints.
- At the completion of the earthworks, the geotechnical consultant is to prepare a works-as-executed report detailing encountered geotechnical conditions and how the works addressed these conditions so that the residual geotechnical constraints can be accommodated within the structural designs for the dwellings. These structural designs are to be confirmed or amended by the structural engineer based on the works-as-executed geotechnical report.

4 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.

5 Construction Certificate

A Construction Certificate must be obtained from Council or a Registered Certifier prior to work commencing.

A Construction Certificate certifies that the provisions of Clauses 139-147 of the Environmental Planning and Assessment Regulation 2000 have been satisfied, including compliance with all relevant conditions of Development Consent and the Building Code of Australia.

Note: The Certifier 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.

6 **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.

7 **Occupation Certificate**

An Occupation Certificate must be issued by the PC prior to occupation or use of the development. In issuing an Occupation Certificate, the PC 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.

8 **Tree Retention/Removal**

The developer shall retain the existing trees indicated on the AEJ Pty Ltd, Issue D, dated 30 August 2021 and the Aboricultural Impact Statement by Allied Tree Consultancy dated December 2020 consisting of trees numbered 1 - 4, 6 -12, 14 - 33 and 35 - 38.

Any branch pruning, which has been given approval, must be carried out by a qualified arborist in accordance with Australian Standard AS 4373:2007.

All tree protection measures are to be installed in accordance with Australian standard AS 4970:2009 Protection of Trees on development Sites.

All recommendations in the Aboricultural Impact Assessment by Allied Tree Consultancy dated December 2020, and the Aboricultural Impact Addendum by Allied Tree Consultancy dated 6 April, 2021 are to be implemented including and not restricted to: remedial tree pruning, dead wood removal, 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 5, 13 and 34 and as indicated on the AEJ Pty Ltd, Issue D, dated 30 August 2021 and the Aboricultural Impact Statement by Allied Tree Consultancy dated December 2020. No other trees shall be removed without prior written approval of Council.

Prior to the Issue of the Construction Certificate

9 **Flows from Adjoining Properties**

Flows from adjoining properties shall be accepted and catered for within the site. Finished ground and top of retaining wall levels on the boundary shall be no higher than the existing upslope adjacent ground levels. The above requirements must be clearly shown on Construction Certificate plans prior to the release of the Construction Certificate.

10 **Transport for NSW (TfNSW)**

The Applicant is required to demonstrate to Council the development will comply with Clause 102 of the Infrastructure SEPP.

Notes:

- *The average annual daily traffic (AADT) for the Princes Motorway is 77,966, therefore Clause 102 of the Infrastructure SEPP applies.*
- *The relevant guideline is the NSW Government's Development Near Rail Corridors and Busy Roads – Interim Guideline, 2008.*

11 **Site Remediation Work**

Civil work for 17 dwellings shall not be commenced and the Construction Certificate shall not be issued until site is remediated as per the remediation action plan prepared by ENRS Consulting (July 2021) works are completed, validated and the final submission of SAS and SAR under CLM Act 1997.

As described in RAP majority of excavated material will be subjected to waste classification and disposed offsite. The site auditor must review the final RAP prior to undertaking of site remediation work.

12 **Site Auditor's Report and Site Auditor's Statement**

Prior to issue of a Construction Certificate, the submission of SAS and SAR is required from a NSW EPA accredited site auditor pursuant to the provisions of Part 4 of the Contaminated Land Management Act 1997 confirming that the site is suitable for the proposed development prior to the issue of the Occupation/Subdivision Certificate.

The site auditor's report shall verify that:

- a the site is not affected by soil and/or groundwater contamination, above the NSW EPA threshold limit criteria; and
- b the site is suitable for the proposed development.
- c a separate site containment cell management plan with appropriate s10.7 on the lots must be included in auditor's comments.

These two documents (SAS and SAR) are to be issued by the Auditor direct to Council. No third party submissions will be accepted.

13 **Acoustic Recommendations**

The plans are to be amended to incorporate all the recommendation in Section 6.0 Acoustic Report prepared by Day Design Pty Ltd November 2020 into civil drawing (walls, roof and floor plans) to comply with the SEPP Infrastructure Cl 102 guidelines for internal noise.

14 **Construction Environmental Management Plan (CEMP)**

A CEMP must be prepared and implemented prior to the commencement of construction on the site. The CEMP must address how the proponent will manage any foreseeable environmental risk during the construction phase. This includes but is not limited to documenting measures to ensure there is no pollution to waters, and dust and noise are minimised as far as practicable.

15 **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 \$59,410.00 (subject to indexation) must be paid to Council towards the provision of public amenities and services, prior to the release of any associated Construction Certificate.

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

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

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

Where:

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

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

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

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

The following payment methods are available:

METHOD	HOW	PAYMENT TYPE
Online	http://www.wollongong.nsw.gov.au/applicationpayments Your Payment Reference: 1299937	<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

16 **Section 73 Compliance Certificate**

A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water Corporation. Application must be made through an authorised Water Servicing Coordinator. Please refer to the “Builders and Developers” section of the web site www.sydneywater.com.au then search to “Find a Water Servicing Coordinator”. Alternatively, telephone 13 20 92 for assistance.

Following application, a “Notice of Requirements” will advise of water and sewer infrastructure to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer infrastructure can be time consuming and may impact on other services and building, driveway or landscape design.

The Notice of Requirements must be submitted to the PC prior to issue of the Construction Certificate.

17 **Endeavour Energy Requirements**

The submission of documentary evidence from Endeavour Energy to the PC 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.

18 **Telecommunications**

The submission of documentary evidence from an approved telecommunications carrier to the PC confirming that underground telecommunication services are available for this development is required prior to the issue of the Construction Certificate.

19 **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.

20 **Car Parking and Access**

The development shall make provision for a total of 40 car parking spaces (including 4 visitor car parking spaces), 2 motorcycle parking spaces, a minimum of 6 secure (Class B) residential bicycle spaces and a minimum of 2 visitor bicycle spaces (Class C). 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.

21 **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 AS 2890.1, except where amended by other conditions of this consent. Details of such compliance are to be reflected on the Construction Certificate plans.**

22 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.

23 **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 PC, prior to the release of the Construction Certificate.

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

- a the fence along the common boundary to the public walkway shall be visually permeable for passive surveillance and to minimize vandalism. Suitable types of fencing being metal horizontal slat fences or vertical timber slat screening, or palisade style fencing;
- b the location of all proposed and existing overhead and underground service lines. The location of such service lines shall be clear of the dripline of existing and proposed trees.

Details of the fencing shall be included in the Construction Certificate documentation. The completion of the landscaping works as per the final approved Landscape Plan is required, prior to the issue of Occupation Certificate.

25 The submission of certification from a suitably qualified and experienced landscape designer and drainage consultant to the PC prior to the release of the Construction Certificate, confirming that the landscape plan and the drainage plan are compatible.

26 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 PC prior to release of the Construction Certificate.

27 **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:

- a Installation of Tree Protection Fencing - Protective fencing shall be 1.8 metre cyclone chainmesh fence, with posts and portable concrete footings. Details and location of protective fencing must be indicated on the architectural and engineering plans to be submitted to the PC prior to release of the Construction Certificate.
- b 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 PC prior to release of the Construction Certificate.
- c 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.
- d Irrigate: Areas within the Tree Protection Zone are to be regularly watered in accordance with the arborist's recommendations.

28 **Engineering Plans and Specifications - Retaining Wall Structures Greater than One (1) Metre**

The submission of engineering plans and supporting documentation of all proposed retaining walls greater than one (1) metre to the PC 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:

- a A plan of the wall showing location and proximity to property boundaries;
- b 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;
- c Details of fencing or handrails to be erected on top of the wall;
- d Sections of the wall showing wall and footing design, property boundaries, subsoil drainage 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, subsoil drainage and footing structure must be contained wholly within the subject property;
- e The proposed method of subsurface and surface drainage, including water disposal. This is to include subsoil drainage connections to an inter-allotment drainage line or junction pit that discharges to the appropriate receiving system;
- f The assumed loading used by the engineer for the wall design.
- g 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.

29 **Dust Suppression Measures**

The submission of details of the proposed dust suppression measures for the demolition, excavation and construction phases of the development to the PC, prior to issue of the Construction Certificate.

- 30 Bicycle parking facilities must have adequate weather protection and provide the appropriate level of security as required by the current relevant Australian Standard AS 2890.3 - Bicycle Parking Facilities. This requirement shall be reflected on the Construction Certificate plans.

31 **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.

32 **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

33 **Stormwater Drainage Design**

A detailed drainage design for the development must be submitted to and approved by the PC 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/s lodged for development approval, prepared by Indesco, Project No. ISC00200-10, Drawing No.'s C110 (Amendment 5 dated 23 August 2021), C121 (Amendment 5 dated 23/08/2021), and C140 (Amendment 6 dated 23 August 2021).
- 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.
- e Include details of the proposed level weir downstream of the proposed On-site Stormwater Detention (OSD) facility, adjacent to the southern property boundary. These details must ensure that any surcharge/overflow discharges from the proposed OSD and drainage system will exit the site in a way that replicates existing surface flow conditions to the downstream land, ensuring no concentration, diversion, and/or increase in surface flows to the adjoining land when compared with pre-development flows.

34

OSD Design

The developer must provide 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 PC prior to the release of the Construction Certificate. The OSD design and details must satisfy the following requirements:

- a Must be prepared by a suitable qualified engineer in accordance with Chapter E14 of the Wollongong DCP 2009.
- b Must include details of the Site Storage Requirement (SSR) and Permissible Site Discharge (PSD) values for the site. The SSR and PSD values must be designed to ensure the following outcomes:
 - i Stormwater flow rates discharging from the site to Council's existing drainage system will not exceed pre-development discharge rates;
 - ii There will be no discharge of surface water flows from the proposed drainage system in storm events up to and including a 10 year ARI storm; and
 - iii Surface water flow discharges occurring to the adjoining land in storm events exceeding a 10 year ARI storm event will not exceed the pre-development flow rates.

Details of the detention facility, SSR/PSD values, existing and proposed catchment areas and discharge rates, and certification that the stormwater design achieves the above outcomes, must be submitted with the Construction Certificate application.

- c The OSD facility must be designed to withstand the maximum loadings occurring from any combination of traffic (with consideration to residential and heavy vehicles), hydrostatic, earth, and buoyancy forces. Details must be provided demonstrating these requirements have been achieved.
- d The OSD facility shall incorporate a minimum 900mm x 900mm square lockable grate for access and maintenance purposes, provision for safety, debris control screen, and a suitably graded invert to the outlet to prevent ponding.
- e Must include discharge control calculations (i.e. orifice/weir calculations) generally in accordance with Section 10.2.6 and 10.4.4 of Chapter E14 of the Wollongong DCP 2009.
- f Details of the orifice plate including diameter of orifice and method of fixing shall be provided.
- g Must include details of a corrosion resistant identification plaque for location on or close to the OSD facility. The plaque shall include the following information and shall be installed prior to the issue of the Occupation Certificate:

- The structure is an OSD facility, being part of the stormwater drainage network, and is not to be tampered with.
 - Identification number [DA-2021/69];
 - Any specialist maintenance requirements.
- h Must include a maintenance schedule for the OSD system, generally in accordance with Chapter E14 of the Wollongong DCP 2009.

35 **Designated Overland Flow Paths**

Details of each overland flow path located on the site shall be provided with the detailed drainage design. Each overland flow path shall be capable of catering for the 1 in 100 year storm event flows from the contributing catchment area, and where required, direct these flows to the on-site stormwater detention facility. The overland flow path shall be free of any vegetation and/or structures that are likely to impede natural overland flow, or make provision for such obstructions, so there will be no adverse stormwater impacts upon the subject land and adjoining properties. Full Manning's calculations shall be provided on the capacity of each overland flow path. These requirements shall be reflected on the Construction Certificate plans and supporting documentation.

36 **Council Footpath Reserve Works – Driveways and Crossings**

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 restored 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. Any redundant linemarking such as 'marked parking bays' are adjusted/removed at the developer's expense by a Council recognised contractor with the relevant insurances. Details and locations are to be shown on the Construction Certificate Plans.

37 **Drainage Works within Council Road Reserve**

A detailed design for the proposed drainage works within Council's road reserve and/or Council Land, including pit and pipeline connecting the proposed drainage system to Council's existing underground drainage system in Highway Avenue, shall be prepared by a suitably qualified civil engineer in accordance with the relevant Council engineering standards. The design plans shall be generally in accordance with the concept stormwater plan/s lodged for development approval, prepared by Indesco, Project No. ISC00200-10, Drawing No. C110 (Amendment 5 dated 23 August 2021), and shall include the following:

- a Levels and details of all existing and proposed infrastructure/services such as kerb and gutter, public utility, pits, poles, fencing, stormwater drainage, adjacent road carriageway and footpath levels, and shall extend a minimum of 5 metres beyond the limit of works.
- b Engineering details of the proposed pit and pipe stormwater drainage system within Council's road reserve, including a hydraulic grade line analysis and longitudinal section of the proposed system showing calculated flows, velocity, pits, pipe size/class, grade, inverts and ground levels. Each proposed pit must be constructed generally in accordance with Wollongong City Council's Engineering Standard Drawings.
- c Proposed pit 1/K shall be amended to a kerb inlet pit located over the alignment of Council's existing kerb and gutter adjacent to the proposed driveway.
- d All new drainage pits shall be in accordance with the current version of Wollongong City Council's Engineering Standard Drawings. The proposed pit in Council's road reserve must not conflict with any existing or proposed vehicular accessway.
- e Where any adjustments to public utilities are proposed the applicant shall submit documentary evidence that they have the consent of the owner of the public utility authority.

- f All construction must be in accordance with the requirements of Council's Subdivision Code.

Evidence that the above requirements have been met must be detailed on the engineering drawings. The detailed design and supporting documentation shall be submitted to and approved by Wollongong City Council's Development Engineering Manager prior to the issue of the Construction Certificate.

38 **Dilapidation Survey**

A dilapidation survey and report shall be submitted to the PC.

The dilapidation survey and report shall accurately reflect the condition of existing public and private infrastructure in the adjacent street(s) fronting the lots.

The report shall outline measures for the protection of existing public and private infrastructure during the works.

Any damage to infrastructure items and relics which is caused by the developer shall be repaired to the satisfaction of the PC prior to the issue of a Certificate of Practical Completion for Subdivision works.

39 **Fire Hydrants**

All lots must be adequately serviced by a fire hydrant. The fire hydrant must be provided in accordance with the *Fire Hydrants for Minor Residential Development, Version 2 dated 1 September 2016 produced by NSW Fire & Rescue*. Fire Hydrant and in accordance with AS 2419:1994. The fire hydrant(s) must be shown on the Construction Certificate plans.

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

The design of the development shall ensure there are no adverse effects to adjoining properties or upon the land as a result of flood or stormwater run-off.

41 **Site Management, Pedestrian and Traffic Management Plan (Where Works are Proposed in a Public Road Reserve)**

The submission of a Site Management, Pedestrian and Traffic Management Plan to the PC and Council (in the event that Council is not the PC) for approval of both the PC and Council is required, prior to the issue of the Construction Certificate. This plan shall address what measures will be implemented for the protection of adjoining properties, pedestrian safety and traffic management and shall be in compliance with the requirements of the latest versions of Australian Standard AS 1742 - Traffic Control Devices for Works on Roads and the RMS Traffic Control at Worksites Manual.

This plan is required to maintain public safety, minimise disruption to pedestrian and vehicular traffic within this locality and to protect services, during demolition, excavation and construction phases of the development. This plan shall include the following aspects:

- a proposed ingress and egress points for vehicles to/from the construction site;
- b proposed protection of pedestrians, adjacent to the construction site;
- c proposed pedestrian management whilst vehicles are entering/exiting the construction site;
- d proposed measures to be implemented for the protection of all roads and footpath areas surrounding the construction site from building activities, crossings by heavy equipment, plant and materials delivery and static load from cranes, concrete pumps and the like;
- e proposed method of loading and unloading excavation machines, building materials formwork and the erection of any part of the structure within the site;
- f proposed areas within the site to be used for the storage of excavated material, construction materials and waste containers during the construction period;
- g proposed traffic control measures such as advanced warning signs, barricades, warning lights, after hours contact numbers etc are required to be displayed where works are in progress in any road reserve and shall be in accordance the latest versions of the NSW Roads and Maritime Service's Specification - "Traffic Control at Work Sites Manual" and the Australian Standard AS1742. - "Manual of Uniform Traffic Control Devices" and accompanying field handbooks (SAA HB81);

- h proposed method of support of any excavation, adjacent to adjoining buildings or the road reserve. The proposed method of support is to be certified by an accredited certifier in Civil Engineering; and
- i proposed measures to be implemented, in order to ensure that no soil/excavated material is transported on wheels or tracks of vehicles or plant and deposited on the roadway.

The approved plan shall be implemented, prior to the commencement of any works upon the construction site.

Note: Any proposed works or placement of plant and equipment and/or materials within any road reserve will require the separate approval of Council, prior to the commencement of such works, pursuant to the provisions of the Roads Act 1993.

Prior to the Commencement of Works

42 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 PC 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.

43 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.

44 Enclosure of the Site

The site must be enclosed with a suitable security fence to prohibit unauthorised access, to be approved by the PC. No building work is to commence until the fence is erected.

45 Survey Report – Siting of Development within Property Boundaries

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

46 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.

47 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 PC 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.

48 **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, five (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.

49 **Erosion and Sediment Control Measures**

Erosion and sedimentation control measures are to be established in accordance with the requirements of the Erosion and Sediment Control Plan.

50 **Protection of Public Infrastructure**

Council must be notified in the event of any existing damage to any of its infrastructure such as the road, kerb and gutter, road shoulder, footpath, drainage structures and street trees fronting the development site, prior to commencement of any work.

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

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

51 **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

52 **Compliance with Construction Traffic Management Plan (CTMP)**

All the recommendations from the CTMP prepared by Maker Engineering (August 2021) shall be carried out during the course of the construction period.

53 **Maintenance of Inter-allotment Drainage**

The developer shall ensure that the condition, function, integrity, and maintenance access to, the existing inter-allotment drainage system within the easement to drain water 1.0 wide (within Lot 15 DP 24874), is not impacted until such time as the existing easement to drain water one (1) metre wide has been removed from the title of the land.

- 54 **Acoustic Glazing to Comply with the SEPP Infrastructure 2007**
Implement all the structural attenuation recommendations of acoustic report prepared by Day Design dated November 2020 for dwellings to compliance the following LAeq levels are not exceeded:
- in any bedroom in the building: 35dB(A) at any time between 10pm and 7am.
 - anywhere else in the building (other than a garage, kitchen, bathroom or hallway): 40dB(A) at any time between 10pm and 7am.
- 55 **Supervision of Engineering Works**
All engineering works associated with the development are to be carried out under the supervision of a practicing engineer.
- 56 **Piping of Stormwater to Existing Stormwater Drainage System**
Stormwater for the land must be piped to Council's existing stormwater drainage system.
- 57 **No Adverse Run-off Impacts on Adjoining Properties**
The design and 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.
- 58 **Copy of Consent to be in Possession of Person carrying out Tree Removal**
The Developer/Applicant must ensure that any person carrying out tree removal is in possession of this development consent and/or the approved landscape plan, in respect to the tree(s) which has/have been given approval to be removed in accordance with this consent.
- 59 **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 PC and Council. No work is permitted on public holidays or Sundays.

Allowable construction activity noise levels must be within the limits identified in the NSW EPA Interim Construction Noise Guidelines (ICNG) July 2009. ICNG are also applied for blasting, rock hammer and drilling, external plant and equipment.

<https://www.environment.nsw.gov.au/resources/noise/09265cng.pdf>

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.
- 60 **Dust Suppression Measures**
Activities occurring during the construction phase of the development must be carried out in a manner that will minimise the generation of dust.
- 61 **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>).

62 **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 PC, and a copy submitted to Council (in the event that Council is not the PC), prior to commencement of the construction works.

63 **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.

64 **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
- if a replacement BASIX Certificate accompanies any subsequent application for a Construction Certificate, the replacement BASIX Certificate; and
- BASIX Certificate has the meaning given to that term in the Environmental Planning & Assessment Regulation 2000.”

65 **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.

66 **Screen Planting**

To mitigate impact to adjoining dwelling a continuous hedge is to be established along boundaries of the site for the length of property boundary.

Recommended species:

- i. *Murraya paniculata*, *Photinia* "Red Robin",
- ii. *Viburnum tinus*, *Syzygium australe* "Aussie Southern",
- iii. *Syzygium australe* "Aussie Compact",
- iv. *Syzygium luebmannii* x *S.wilsonii* "Cascade",
- v. *Westringia fruticosa*.

Minimum spacing 900mm.

Minimum pot size 5 lt.

A further list of suitable suggested species may be found in Wollongong Development Control Plan 2009 – Chapter E6: Landscaping.

67 **Pipe Connections**

All pipe connections to existing stormwater drainage systems within the road reserve shall be constructed flush with the pit wall in accordance with good engineering practice. The developer shall ensure that the condition of the existing stormwater drainage system is not compromised and that the service life of the existing stormwater drainage system is not reduced as a result of the connection.

Prior to the Issue of the Occupation Certificate

68 Fencing

Any fencing which has been damaged during demolition works or requires upgrading, is to be carried out at the full expense of the developer.

69 Registration of Easement to Drain Water

A minimum one (1) metre wide easement to drain water shall be created over the new (re-aligned) inter-allotment drainage system within the development site. The easement must benefit all allotments benefited by the existing easement to drain water 1.0 wide (within Lot 15 DP 24874). The location of the easement shall be determined based on work-as-executed survey for the constructed drainage infrastructure. All costs associated with the creation of the easement and ongoing maintenance shall be borne by the developer. Evidence that the easement has been registered with the NSW Land Registry Services must be provided to the PC prior to the issue of the Occupation Certificate.

70 Execute a right of way arrangement by way of a Section 88B Instrument under the Conveyancing Act, 1919 to benefit and burden the relevant lots.

71 Acoustic to Comply with the SEPP Infrastructure 2007

Prior to Occupation Certificate submit an acoustic compliance report to PC prepared by a consultant who is a member of the Australian Acoustic Society (AAS) or the Associated of Australian Acoustic Consultants (AAAC). The report shall state that the dwellings internal noise levels are complying with the SEPP Inf 2007 noise guidelines for development adjacent to road (Clause 102).

72 Lighting to Communal Open Space

The developer is required to provide low level lighting to the communal open space area ensuring that no light spillage occurs to neighbouring properties.

73 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 DCP 2009. This information must be submitted to the PC prior to the issue of the final Occupation Certificate.

74 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 PC for endorsement prior to the issue of the Occupation Certificate and the use of the development.

75 Retaining Wall Certification

The submission of a certificate from a suitably qualified and experienced structural engineer or civil engineer to the PC 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 PC.

76 **BASIX**

An Occupation Certificate must not be issued unless accompanied by the BASIX Certificate applicable to the development. The PC 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.

77 **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 OSD System and Maintenance Schedule (application number to be referenced).

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

78 **OSD – Structural Certification**

The submission of a certificate from a suitably qualified practising civil and/or structural engineer to the PC is required prior to the issue of the Occupation Certificate. This certification is required to verify the structural adequacy of the OSD facility and that the facility has been constructed in accordance with the approved Construction Certificate plans.

79 **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.

80 **Works-As-Executed (WAE) Plans - Works within Council Land or Road Reserve**

The submission of a WAE plan for approved works in Council land and or road reserve must be submitted to and approved by Council's Development Engineering Manager, prior to the release of the Occupation Certificate. The WAE plans shall be certified by a registered surveyor indicating that the survey is a true and accurate record of the works that have been constructed. The WAE dimensions and levels must also be shown in red on a copy of the approved Construction Certificate plans. The WAE plans must include:

- a Final locations and levels for all works associated with the development within Council land.
- b The plan(s) must include, but not be limited to, the requirements stated in Chapter E14 of the Wollongong DCP 2009.

81 **CCTV of Works in Existing Road**

All stormwater pipes within road reserves intended to be dedicated to Council must be inspected by CCTV. A copy of the CCTV inspection must be submitted to Council's Development Engineering Manager for assessment prior to the issue of the Occupation Certificate. Below standard work must either be replaced or repaired to Council's satisfaction prior to the issuing of the Occupation Certificate.

82 **Completion of Engineering Works**

The completion of all engineering works within Council's road reserve or other Council owned or controlled land in accordance with the conditions of this consent and any necessary work to make the construction effective must be to the satisfaction of Council's Manager Development Engineering. The total cost of all engineering works shall be fully borne by the applicant/developer and any damage to Council's assets shall be restored in a satisfactory manner, prior to the issue of the Occupation Certificate.

Prior to the Issue of the Subdivision Certificate

83 Occupation Certificate Prior to Subdivision Certificate

An Occupation Certificate for the dwelling/s must be issued prior to the release of the Subdivision Certificate for the Torrens title subdivision. A copy of the Occupation Certificate shall be lodged to Council with the Subdivision Certificate application.

84 Fire Hydrant

A fire hydrant must be provided to the subdivision in accordance with. with AS 2419:1994.

85 Final Documentation Required Prior to Issue of Subdivision Certificate

The submission of the following information/documentation to the PC, prior to the issue of a Subdivision Certificate:

- a Completed Subdivision Certificate application form and fees in accordance with Council's fees and charges;
- b Certificate of Practical completion from Wollongong City Council or a PC (if applicable);
- c Administration sheet prepared by a registered surveyor;
- d Section 88B Instrument covering all necessary easements and restrictions on the use of any lot within the subdivision;
- e Final plan of Subdivision prepared by a registered surveyor plus one (1) equivalent size paper copies of the plan;
- f Original Subdivider/Developer Compliance Certificate pursuant to Section 73 of the Water Board (Corporatisation) Act 1994 from Sydney Water;
- g Original Notification of Arrangement (for Torrens subdivision) or Original Supply Offer (for Strata subdivision) from an Endeavour Energy regarding the supply of electricity to the proposed allotments;
- h Original Compliance Certificate from Telstra or another Telecommunications Service Provider which confirms that the developer has consulted with the Provider regarding the provision of telecommunication services for the development.
- i Payment of section 94 fees (Pro rata) (if applicable).

Reasons

The reasons for the imposition of the conditions are:

- 1 To minimise any likely adverse environmental impact of the proposed development.
- 2 To ensure the protection of the amenity and character of land adjoining and in the locality.
- 3 To ensure the proposed development complies with the provisions of Environmental Planning Instruments and Council's Codes and Policies.
- 4 To ensure the development does not conflict with the public interest.