

Statement of Environmental Effects	
In Support of a Development Application	
Proposal	6 NEW RESIDENTIAL UNITS IN 3 STAGES OF 2 EACH – 6 New Framed & Clad Residential dwellings in 3 pairs of detached units with 3 Bedrooms in each and incorporated double garages
Subject Land Address	Lot 4 & 5 DP 1112582
	No 62-64 Queen Street, Boorowa 2586
Applicant/Owner	Emma & Peter Cockburn CBN BUILDING PTY LTD
	PO Box 1602, YOUNG 2594 (0428 824 494)
Appn Prepared By	DA Busters – Development Assistance Services Ph: 0466 722 869
LGA	Hilltops Council – former Boorowa Council



View to Northeast over property front boundary

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1 Introduction/Executive Summary

This application is for 6 new multi dwelling units on a presently vacant double block large holding, done in 3 pair stages. The development is intended to be done in 3 phases to achieve steady market sales, self funding later stages toward the final result.

The proposal will see the existing dwelling on a large holding of land (2,898 sq.m) utilised per Hilltops DCP 2022 to provide medium density housing adjacent the Boorowa CBD. This application details the new units and reviews the development against the policy controls in place.

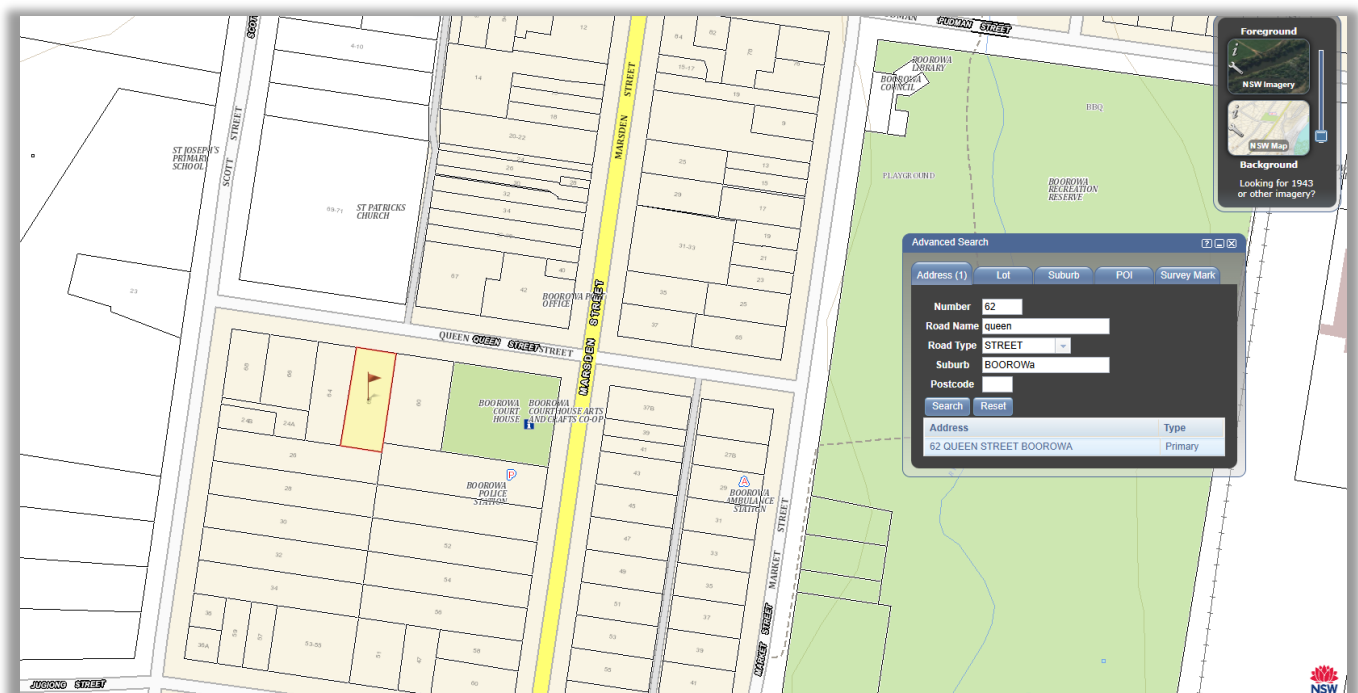
Whilst the proposal maximises the probable density for the site, it does so in a compliant manner and is aided by existing site features requiring design solutions, such as the perpendicular drainage easement, and also inundation pathways thus the need for good stormwater design. The ultimate design that has resulted is commended to Council for adoption as compliant development, much needed in the walking distance to the CBD, for Boorowa.

1.1 History of the Site

The site is currently vacant, however is understood to have been occupied by a past older dwelling house in control of by the Catholic Diocese. The immediate locality was subdivided to the current configuration in 2005 and the former dwelling was probably removed at or around this time. The rear yard of the current land is under utilised and would be more suited to the proposed development/s.

The allotment was created by the division of an approximately 1.5 acre allotment (6,137 sq.m) in 2005 into this block and 4 others from the larger corner Parish owned allotment which housed St Patrick's Presbytery beside the subject land and the Catholic Church existing across the road. Also nearby is the Court House complex on the main Street corner whilst a Dairy over the back is tagged for Heritage also.

Figure 1a – Cadastre & Contour Plan (source NSW SIX Maps)



1.2 Locality

The subject land is approximately 290m from the Central Main Roundabout in Marsden Street Boorowa and is in the established older inner housing and CBD fringe area of the Boorowa Township, on Queen Street which is a perpendicular Street to the main Marsden Street throughfare. The lot is an easy walking distance to most CBD Shops and Services as well as to Schools and Sporting complexes. The Catholic Primary School is less than 50m from this site and it too is tagged a historic.

Figure 1b – Locality Map (source SIX Maps)

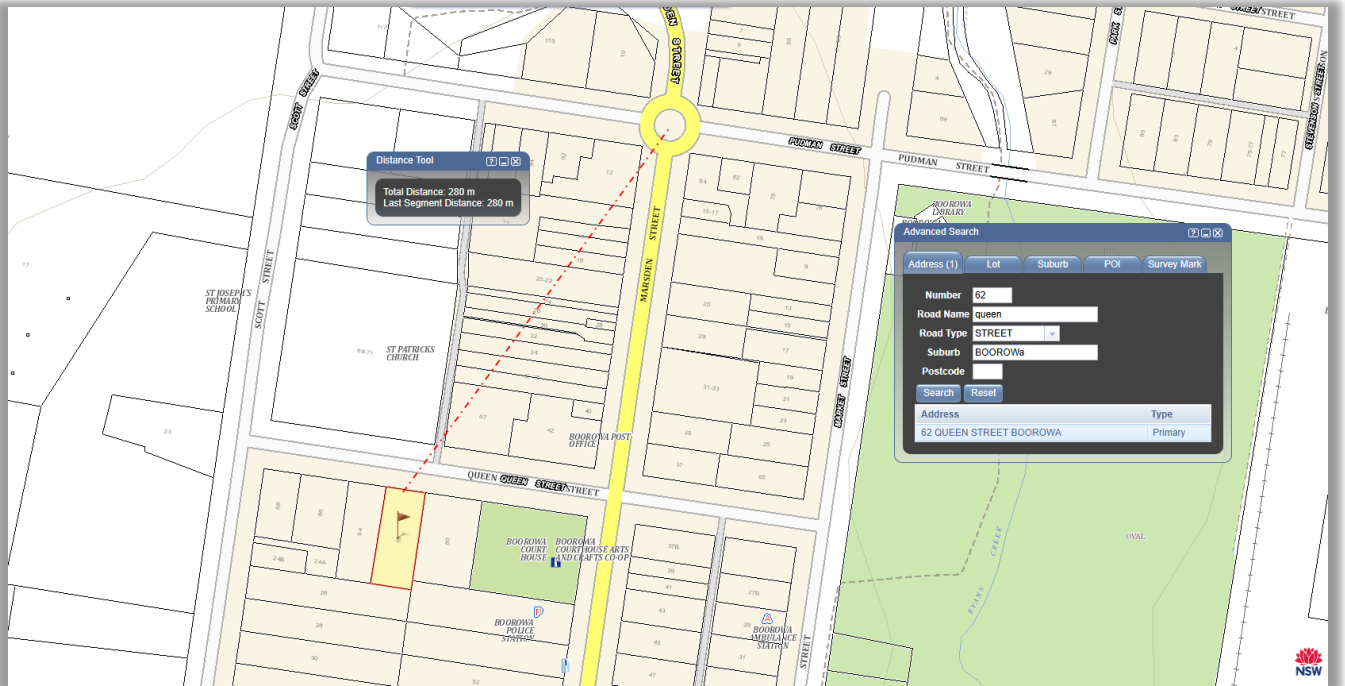


Figure 1c – Aerial of Land (source SIX Maps – 13 year old image)

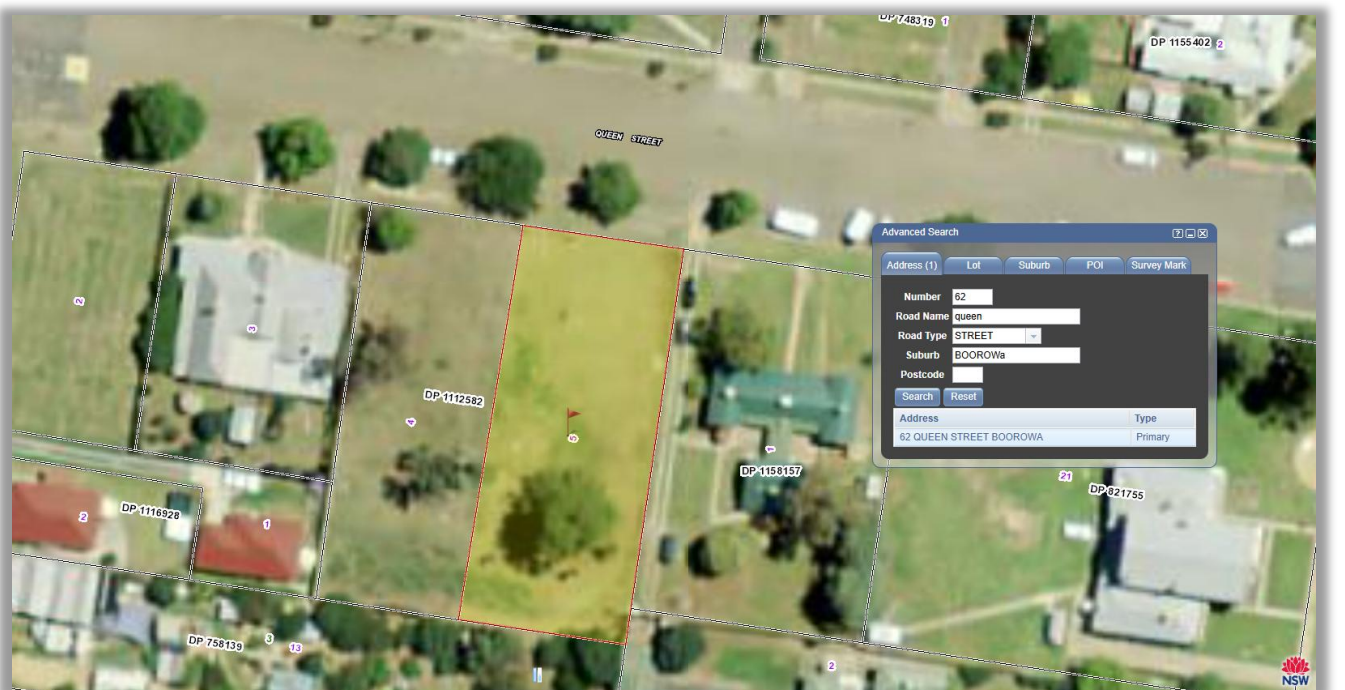


Figure 1d – Wider Aerial of Land inn Town context (source SIX Maps – 13 year old image)



Figure 1e – Aerial of Land (source Google - recent image)



2 Site Analysis

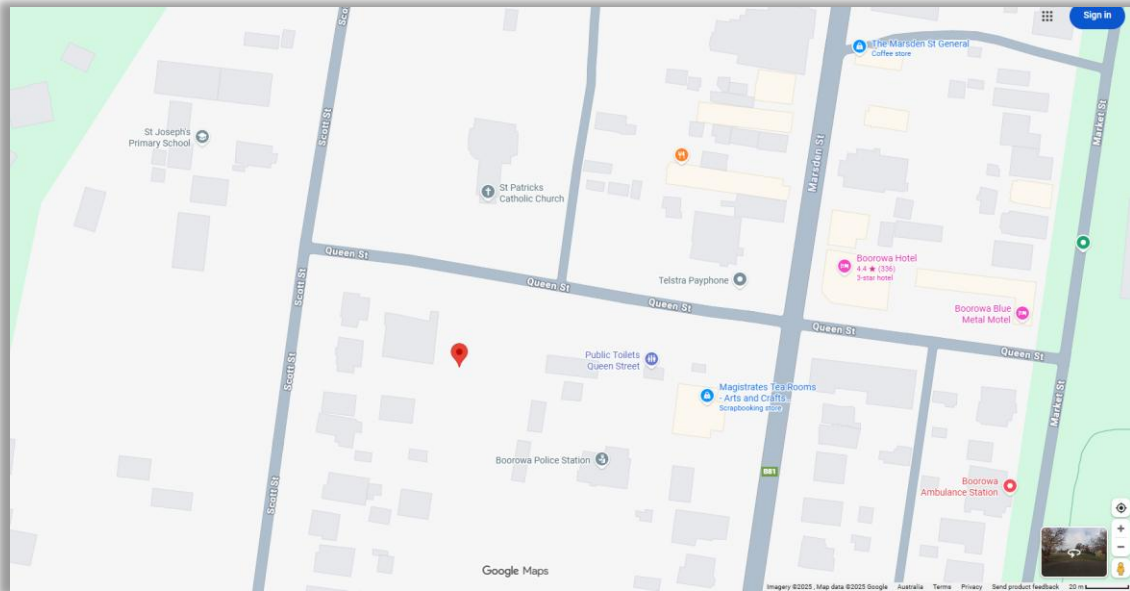
2.1 Site Location and Context

The site is located on the inner western side of the main Street (Marsden) in the CBD of the township of Boorowa. The land is within the originally settled central part of the Township immediately behind the Court House and one other stately home, to the west of the CBD. The land is within a wider sector of residential properties of similar and smaller sizes as that proposed in the current application. The locality is characterised by mixed housing styles of older cottages and occasional more recent urban renewal with no, or little consistency as to dwelling cladding or roofing styles. Dwellings are predominantly single storey

and setback a car length or so to the street. The very stately St Patrick's Presbytery is to the west whilst another period home exists between this holding and Court House to the East.

The allotment is opposite the Catholic Church, near the Catholic Primary School and behind the Court House. The siting and practical location for a unit development, adjacent the CBD and within walking distance, is ideal from a Town development perspective and where medium density should be sited.

Figure 2a – Locality Analysis Plan (source Google Maps and major Business or features tagged)



2.2 Site Description

The site is presently vacant save for two dead trees and a live one (three total) with no other structures upon it. Fencing surrounding the site is a mix of colorbond, post and wire or non-existent.

As stated, the trees comprise of two that are dead and falling down presently, whilst the live tree is structurally compromised with cornucopic growth and experiencing branch loss quite frequently. These need removal and will be replaced with the landscaping concept shown per the DCP at a rate of 2 for 1. An exotic fruit tree also exists in poorly condition yet is exempt from reckoning.

As well, below are some photographs of the site which may demonstrate some of the species or locational issues which exist precluding retention of all.

Figure 2b – Trees on site



Figure 3a, b, c, d – Site Photos



Western front boundary onto site – note street trees – 2022 image



St Patricks former Presbytery and newer cottage to west



Period cottage to East yet new shed at rear



Catholic Church opposite



Tree lined street to Convent at west of site set in School now

The sight distance in each direction is ideal as it is a very wide street (22m wide sealed pavement) and vision around the nearby corner and either Direction on Queen Street is good quality.



Typical proposed unit styling

3 Description of Proposed Development

3.1 Elements of the Proposed Development

PART A – UNITS (3 pairs = 2 units per stage)

Generally, the proposed development involves the erection of single storey, three-bedroom unit dwellings, each with incorporated double garages. More specific details of the development include:



The number of storeys proposed	-	2
The roof type proposed	-	Colorbond (paperbark)
Dwelling wall type proposed	-	Framed & clad – Stria or equiv weatherboard with primrose wall colour
Dwelling roof height above finished ground level	-	4.328 metres at lead roof ridge
Gross floor area (GFA)	-	Unit 1 Site area - 419.7 sq.m Unit 1 Gross Build Area - 132.8 sq.m Unit 2 Site area - 406.2 sq.m Unit 2 Gross Build Area - 154.7 sq.m Unit 3 Site area - 390.7 sq.m Unit 3 Gross Build Area - 159.0 sq.m Unit 4 Site area - 448.1 sq.m Unit 4 Gross Build Area - 164.1 sq.m Unit 5 Site area - 420.1 sq.m Unit 5 Gross Build Area - 161.6 sq.m Unit 6 Site area - 455.3 sq.m Unit 6 Gross Build Area - 132.6 sq.m

Total site occupied by 6 sites = 2540.1 sq.m
Common/entry/utility = 357.9 sq.m
Total site area = 2898 sq.m

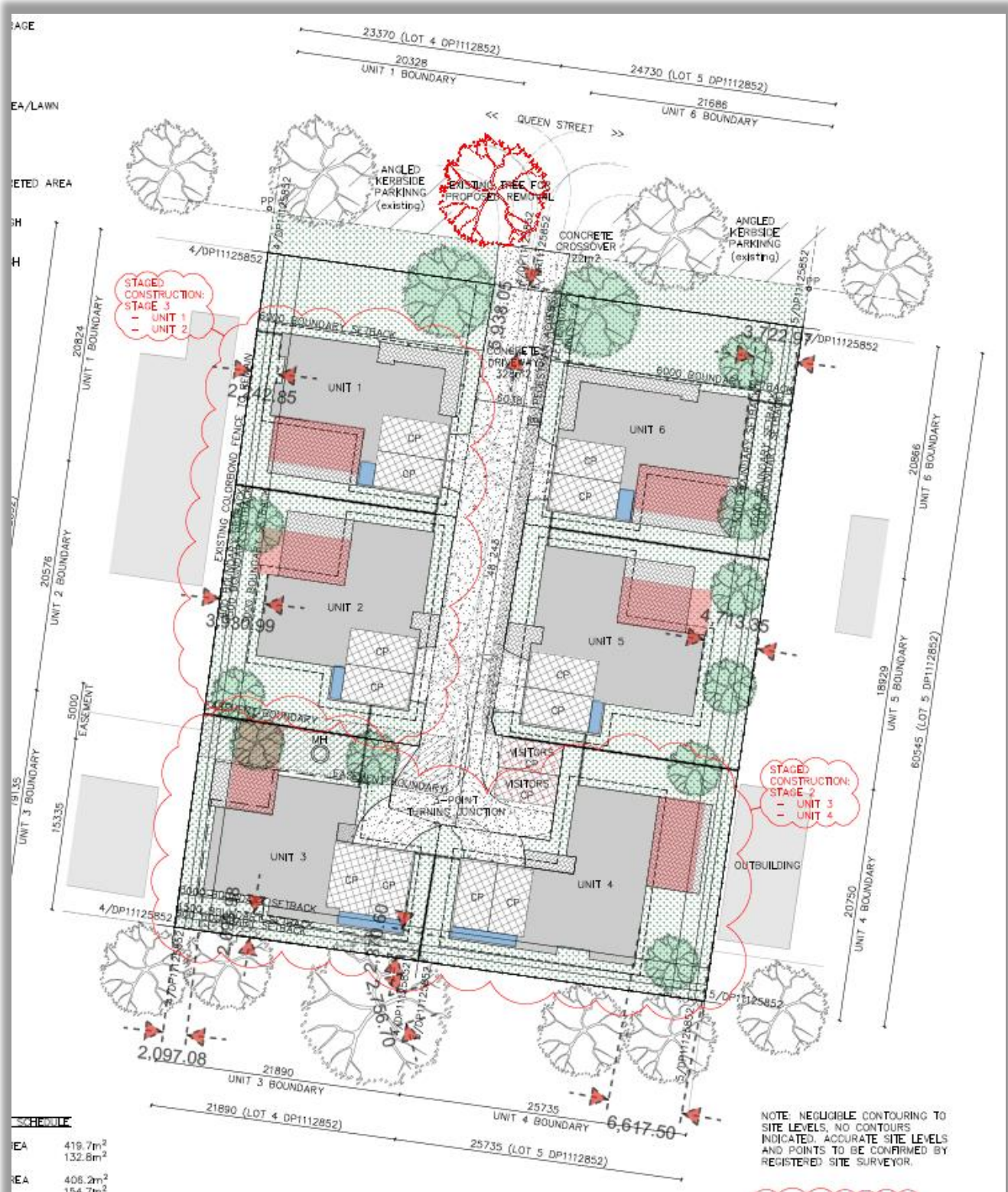
Setbacks from each current site boundary (in brackets proposed setback after subdiv)	-	North (front 1 & 6) - 6.0 metres East (side) (to 6)- 3.7 metres (to 5)- 4.7m (to 4)- 6.6m West (side)(to 1)- 2.2m (to 2)- 3.9m (to 3) 2.1m South (rear)(to 3) - 2.1m (to 4)- 2.4m	compliant to DCP compliant to DCP compliant to DCP compliant to DCP less than 3m compliant to DCP less than 3m less than 3m less than 3m
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See DCP section for discussion

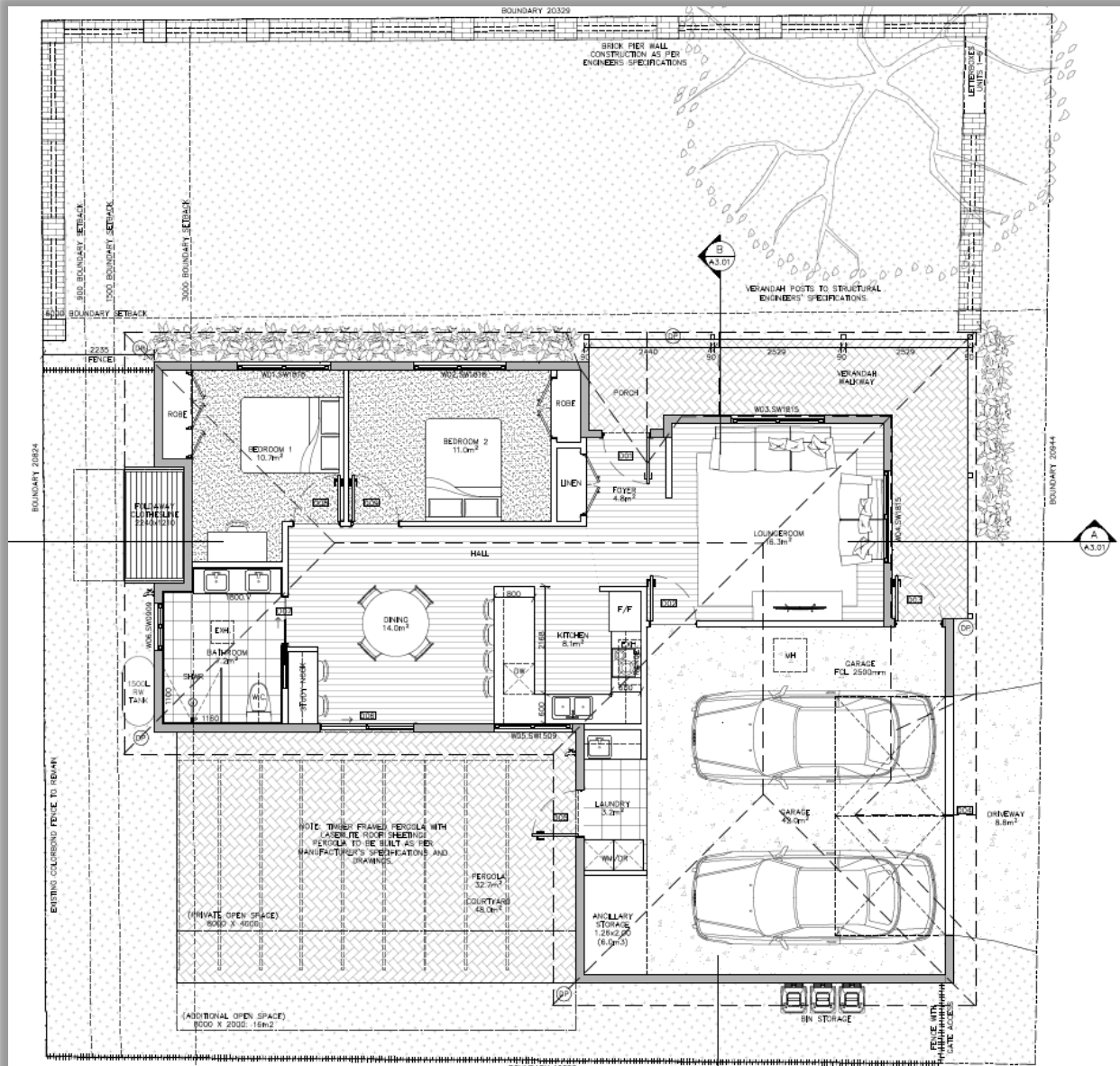
Any landscape work proposed	-	Lawn and garden will be provided to the dwelling curtilage, private open space areas and front setbacks as per the BASIX certificate.
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<i>Private Open Space each</i>	<i>See site to gross building areas above – 48 sq.m per lot comfortably afforded in usable size and layout.</i>
<i>Vehicle, access and parking</i>	<i>- Access to the site will be from Queen Street to the delineated driveways & turning areas plus landscaping tagged on the site plan attached. A blind aisle turning area is provided for also. A sec 138 application will be made as part of the dwelling's works at construction stage.</i>
<i>Utilities</i>	<u>Sewer</u> – effluent disposal will be via connection to Council's sewer. Sewer tie at manhole serviced by easement through to Scott St as shown on Deposited Plan and seen on site. <u>Water</u> – The property is able to be connected to the Boorowa reticulation system available in the Street (hydrant noted in front) and will require a series of further water meters. The BASIX further provided that stormwater from the roof of the units will be collected in individual 2,000 litre rainwater tank, and reticulated back to the units as per the BASIX certificate. <u>Power</u> – The client is proposing to connect to mains available in street.
<i>Is development permissible under another SEPP or EPI ?</i>	<i>- This development is permissible under the provisions of the Hilltops LEP 2022 (see additional discussion below).</i> <i>The provisions of Part 4 of the LEP allow multi dwelling housing on land of this size.</i>
<i>Describe the extent of demolition</i>	<i>- Nil demolition proposed. Existing dwelling to be renovated as Part 2 of this work, to 2 units and be re-clad to match proposed new work.</i>
<i>Trees to be removed</i>	<i>- See section above. Landscaping will incorporate 2 for 1 on replacement of exotics being removed, 6 trees being included for the 3 being removed.</i>
<i>Subdivision proposed</i>	<i>- No</i>

NOTE – Further DCP & LEP assessment to follow – next section



Site Plan Extract



Unit 1 as an example

3.2 Building Materials

As described above, softer cream shades of Stria weatherboard highlighted with trim and roof cladding of paperbark will define this development as chic and modern in look, whilst still fitting within an area with historic elements.

3.3 Operational Details

The development (subdivision is not a business) will not be subject to operational hours as it will be residential land when completed, occupiable by owners or long term rentals.

3.4 Vehicular Access and Parking

The proposed access will be a new driveway to each of the occupancies and having 2 x undercover vehicle parking space, an additional 2 spaces for Visitors on site and 4 on street adjacent spaces will adequately cater for additional vehicles and visitors per the DCP. The client is aware that the residential standard for driveway crossovers is of concrete construction to Council's Engineering Standards for Development & Subdivision.

3.5 Signage

No signage is proposed – A front letterbox and garbage screen wall will indicate extent and numbering of premises.

3.6 Landscaping and Tree Removal

There is specific existing tree removal anticipated as part of the development, primarily being those dead and structurally compromised tree existing on site.

3.7 Demolition

No demolition proposed nor required.

3.8 Stormwater Management

The existing dwelling and the proposed allotment (and proposed units) either currently discharge stormwater to the street or have fall to enable so. An attached design details stormwater management along with flows from the impact of the inundation levels and flows arising from the Boorowa Flood Study. These have been specifically analysed and designed by SRD Land Consultants and is within the Appendices to this report. The primary focus is to use the vehicle accessway and parking area as flow distributor pathways.

3.9 Construction Management

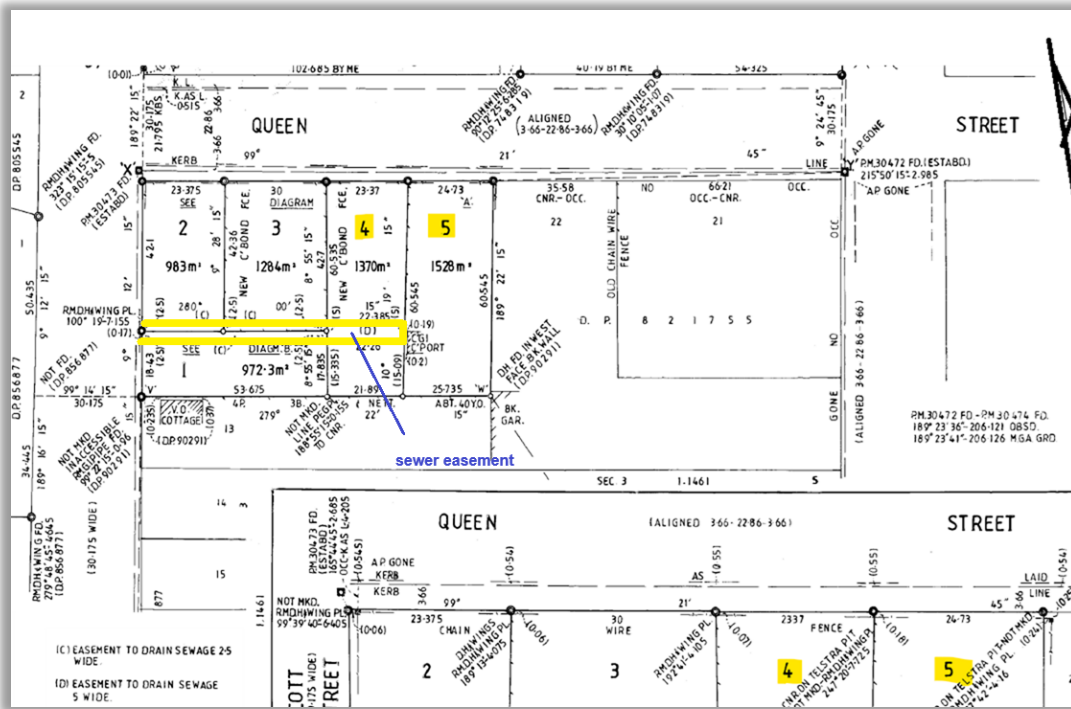
No specific Construction Management Plan or Sediment Erosion Control Plan is to be prepared, due to the relatively straightforward build process, 2 units at a stage. It is expected that at the section 138 application under the Roads Act, adequate sedimentation and erosion control measures will need to be put in place whilst working in and adjacent the Nasmyth Street access.

3.10 Effluent Management

The land is serviced by reticulated sewerage on the west side of the lot & to a manhole in this location with a sewer tie that exists. The Owner is aware that a Headworks charge will apply, along with any connection costs, for the new allotment.



Extract Council Sewer Maps



Sewer easement on title

3.11 Water Services

Reticulated Town Water is available to the allotment and the present dwelling is connected. The Owner is aware that a Council Headworks charge will apply along with any connection costs, for the new work.

With 1 x ET credit for the former existing dwelling (water and sewer) the Water Directorate calculations will be applied by Council at assessment.

Water headworks

6 x 3 bed units	6 x 0.8ET	=	4.8ET
Credit	1 x Water meter=	=	-1 ET
	Owing	=	3.8ET

Council Water Headwork = $3.8 \times \$9,950 = \$37,810$ total
Per stage = $3.8 / 6 \times 2 = 1.9 \times \$9,950 = \$18,905$

Sewer Headworks

6 x 3 bed units	6 x 1.0 ET	=	6.0ET
Credit	1 x prev conn	=	-1 ET
	Owing	=	5.0ET

Council Sewer Headwork = $5.0 \times \$695 = \$3,475$
Per stage = $5.0 / 6 \times 2 = 1.6666 \times \$695 = \$1,158.33$

Review of the above calculations by Council is expected along with the staging of payments as deduced.

3.12 Electricity Network

Power is available via overhead mains in the footpath on the Nasmyth St frontage. The Essential Energy network mapping obtained and below would indicate that the mains do not cause any

interference with the proposal or development. This can be noted also by the streetview image re-included below.



Electricity Infrastructure Mapping



Supply arrangements to east side Queen St

4 Relevant Legislation and Planning Controls

GENERAL REQUIREMENTS OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

4.1 Application of Part 7 of Biodiversity Conservation Act 2016 and Part 7A of Fisheries Management Act 1994

As per these sections of the above Acts, it is not considered that the development is likely to significantly affect threatened species, populations or ecological communities, because:

Biodiversity Conservation Act 2016

- the development will not significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3, as the site is internal of town and already heavily urbanised, there are no threatened ecological communities on the site, the development will not adversely impact the life cycle or habitat of any of the threatened species that may occur in the region, and the development is not a key threatening process. [7.2(1)(a)],
- the development does not exceed the biodiversity offsets scheme thresholds (whilst parts of the surrounding areas are mapped as high biodiversity value on the Biodiversity Values Map, the site of the units and adjacent land are neither mapped nor does the development exceed the clearing threshold) – see attached BVM&T Report [7.2(1)(b)],
- the site has not been declared as an area of outstanding biodiversity value [7.2(1)(c)].

Fisheries Management Act 1994

- as per the seven-part test under section 221ZV of the Act, there are no threatened species, populations or ecological communities, occurring on-site, or are known to be in the area, there is no declared critical habitat in the locality and the development is not a key threatening process.

4.10 Designated development

This development is not a category of designated development, under Schedule 3 of the *Environmental Planning and Assessment Regulation 2000*.

4.14 Consultation and development consent—certain bush fire prone land

The site has not been mapped as bushfire prone land

4.36 Development that is State significant development

The development is not State significant development, as it is not identified in *Part 4A of the Act*.

4.46 Integrated development

The development is not integrated development, with the only relevant consideration being proximity to watercourses. The proposed units is greater than 40/100 metres from any watercourse in the area.

SECTION 4.15 CONSIDERATIONS UNDER THE ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979:

State Environmental Planning Policies (SEPPs)

A number of SEPPs apply to the land, however, only the following have any relevance to the proposed development:

- *State Environmental Planning Policy (Biodiversity and Conservation) 2021: Subject Land (pub. 2-12-2021) **Searches done (see appendix) – no impact identified or thresholds exceeded***
- *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004: Land Application (pub. 25-6-2004) – **Attached BASIX Report/s***
- *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008: Land Application (pub. 12-12-2008) **Not applicable – pathway not chosen or available***
- *State Environmental Planning Policy (Housing) 2021: Land Application (pub. 26-11-2021) **Not inconsistent***
- *State Environmental Planning Policy (Industry and Employment) 2021: Land Application (pub. 2-12-2021) **Not applicable this development***
- *State Environmental Planning Policy (Planning Systems) 2021: Land Application (pub. 2-12-2021) **Not applicable this development***
- *State Environmental Planning Policy (Primary Production) 2021: Land Application (pub. 2-12-2021) **Not applicable this development***
- *State Environmental Planning Policy (Resilience and Hazards) 2021: Land Application (pub. 2-12-2021) **Not applicable this development – no contamination of site or similar matter known***
- *State Environmental Planning Policy (Resources and Energy) 2021: Land Application (pub. 2-12-2021) **Electricity delivered via street power poles away from any new development, no impact on proposed or built development***
- *State Environmental Planning Policy (Transport and Infrastructure) 2021: Land Application (pub. 2-12-2021) **Not applicable this development local road access and subject to local authority policy***

4.1 Local Environmental Plan

4.1.1 Hilltops Local Environmental Plan 2022

Zoning

The site is zoned R1 – General Residential under the Hilltops Local Environmental Plan 2022 (LEP) (refer to Figure 7).

The objectives of this zone are:

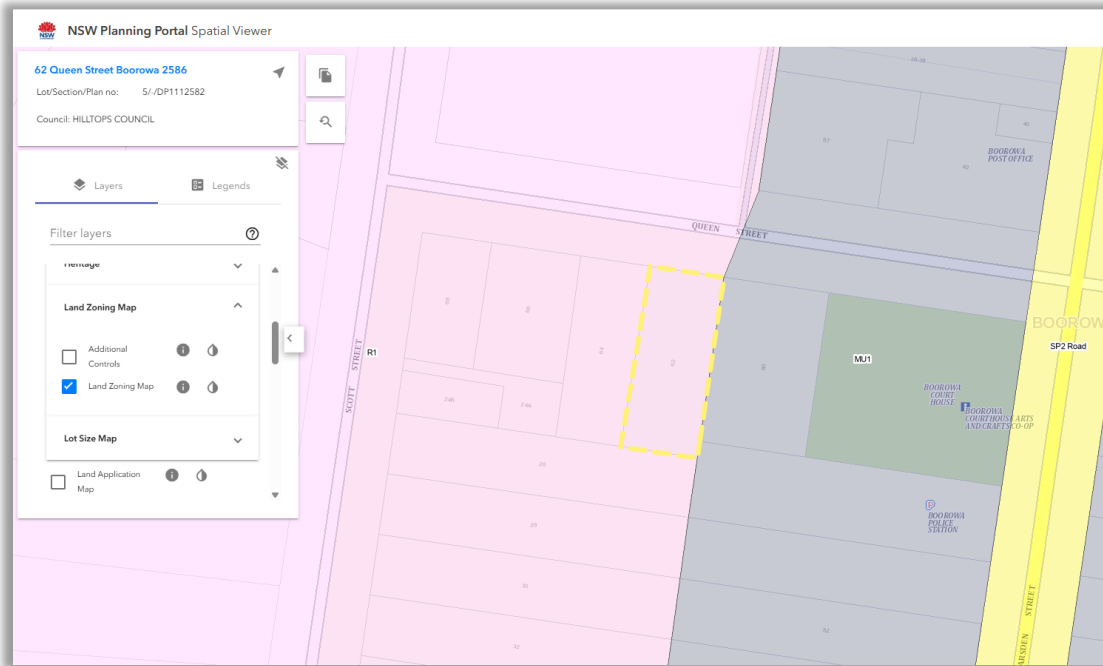
- To provide for the housing needs of the community.
- To provide for a variety of housing types and densities.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To provide and protect a high quality residential amenity that adds value to the existing character and amenity of the town, neighbourhood and street.
- To provide fully serviced residential lots linked to town water and sewer networks.

The proposed use of the site by way of this development is consistent with the first two and latter two zoning objectives and will be not applicable to the third. Plans and Contributions Policies exist to allow orderly and structured user-pays development in the R1 zone.

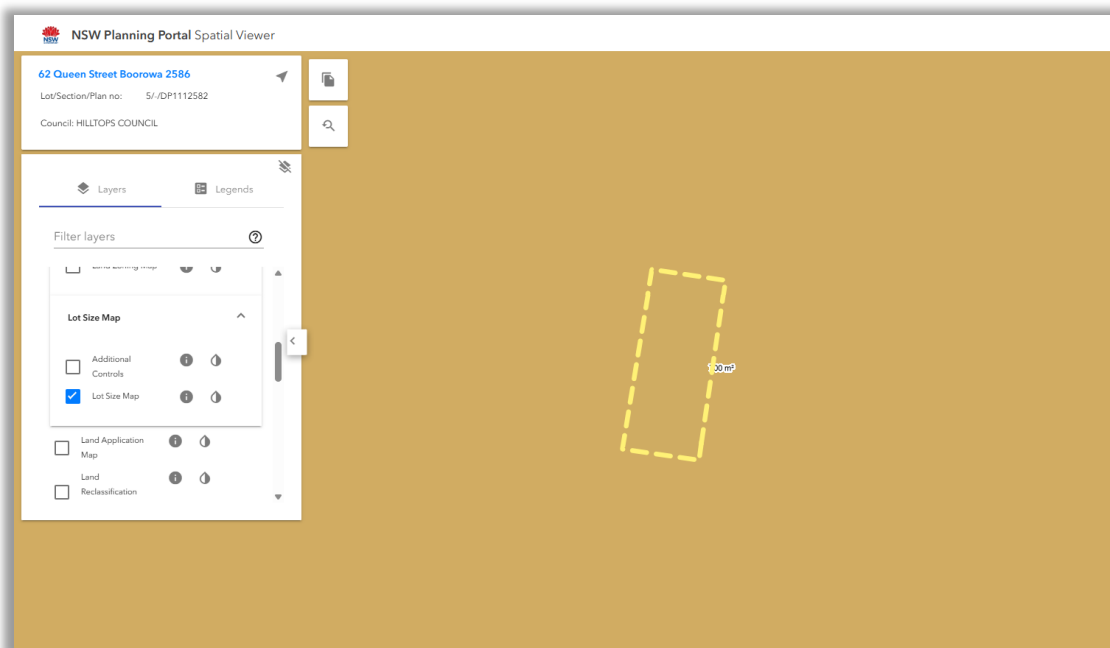
The proposed use as defined in the LEP is a “multi dwelling housing” and is permissible with consent.

The Hilltops DCP 2025 is the Council believed Policy document of reference (despite not being adopted to apply to Hilltops LEP 2022), and this will be analysed further into this report.

Figure 7 – Zoning Map extracts



Zone extract

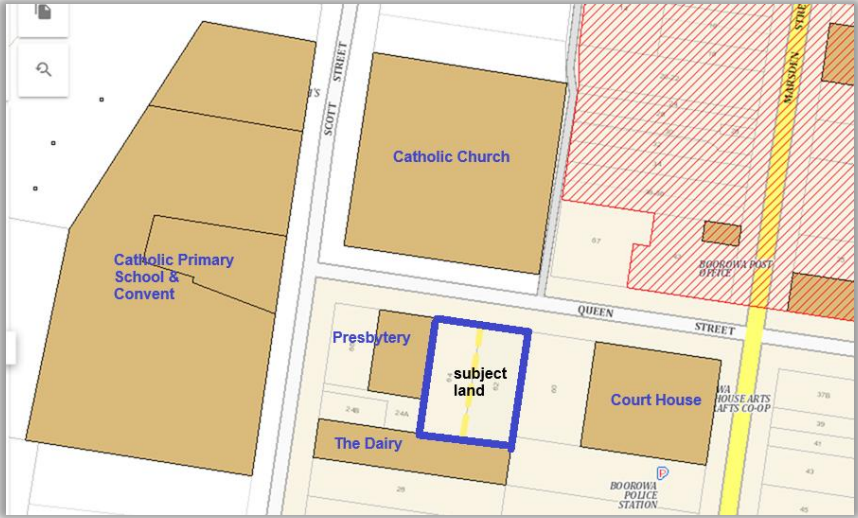


Lot size extract – 700 sq.m min
Further provisions apply at clause 4.1A see commentary below

HILLTOPS LEP 2022

Clause	Complies	Comments
1.2 Aims of plan	Yes	The development is consistent with the following aims of the LEP: (b) to provide for the lifestyles sought by current and future residents of Hilltops, including by providing for the following— (i) the rural lifestyle and liveability of Hilltops communities, (ii) connected, safe and accessible communities, (iii) diverse and affordable housing options, (iv) timely and efficient provision of infrastructure, (v) sustainable building design and energy efficiency,

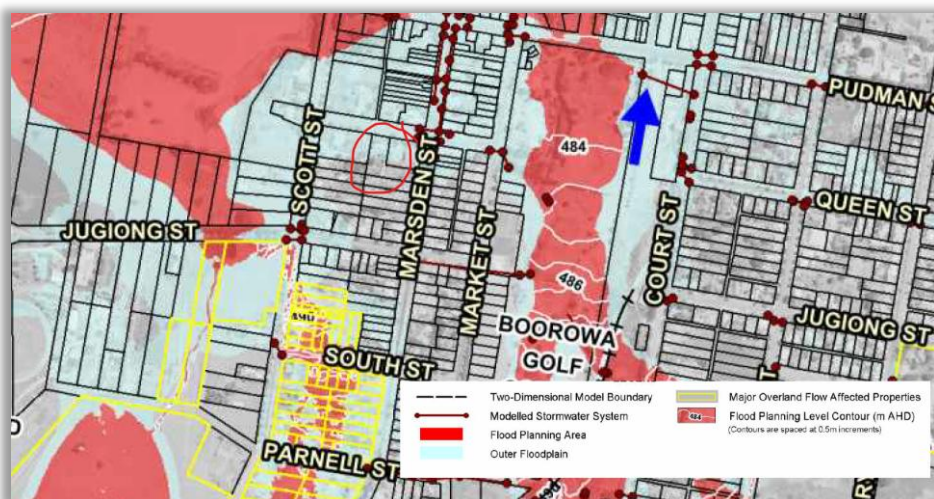
Clause	Complies	Comments
		(c) to build and sustain healthy, diverse and empowered communities that actively participate in planning and managing their future, including by providing for the following— (i) social infrastructure that is appropriately planned and located in response to demand and demographic change, (ii) the protection and enhancement of cultural heritage values, (iii) land management practices that support sustainable outcomes, including water efficiency, (iv) the siting and arrangement of land uses for development in response to climate change, (v) the planning of development to manage emissions, (vi) planning decisions that recognise the basic needs and expectations of diverse community members, (e) to recognise and sustain the diverse natural environment and natural resources that support the liveability and economic productivity of Hilltops, including by providing for the following— (i) the avoidance of further development in areas with a high exposure to natural hazards, (ii) the minimisation of alterations to natural systems, including natural flow regimes and floodplain connectivity, through effective management of riparian environments, (iii) the retention and protection of remnant vegetation, (iv) the revegetation of endemic vegetation to sustain natural resource values, reduce the impact of invasive weeds and increase biodiversity, (v) buffers and setbacks to minimise the impact of conflicting land uses and environmental values, including potential impacts on noise, water, biosecurity and air quality, (vi) the management of water on a sustainable and total water cycle basis to provide sufficient quantity and quality of water for consumption, while protecting biodiversity and the health of ecosystems The remainder of the aims are not relevant to this proposal, or are not impacted by the proposal.
1.4 Definitions	N/A	The proposed development is defined as a multi dwelling housing which means, <i>multi dwelling housing</i> means 3 or more dwellings (whether attached or detached) on one lot of land, each with access at ground level, but does not include a residential flat building. <i>Note - Multi dwelling housing is a type of residential accommodation—see the definition of that term in this Dictionary</i>
1.9A Suspension of covenants, agreements and instruments	Yes	No restrictions as to user / covenants apply to the site.
2.2 Zoning	N/A	The site is zoned R1 – General Residential
2.3 Zone objectives and land use table	Yes	The development is permitted with consent, in accordance with the land use table, and it is consistent with the objectives of the zone as stated above in the text before this table.
2.7 Demolition	N/A	No demolition proposed.
2.8 Temporary use of land	N/A	The application is not for the temporary use of land.
4.1 Min Subdiv Lot Size	N/A	See clause 4.1A below

Clause	Complies	Comments																		
4.1A Dual Occupancy & Multi Dwelling Housing Lot sizes	Complies	Min 1000 sq.m for an R1 multi dwelling housing – current lot is >2,896 sq.m <table border="1"> <thead> <tr> <th>Purpose</th><th>Zone</th><th>Minimum lot size</th></tr> </thead> <tbody> <tr> <td>Dual occupancies</td><td>Zone R1 General Residential</td><td>750m²</td></tr> <tr> <td>Multi dwelling housing</td><td>Zone R1 General Residential</td><td>1,000m²</td></tr> <tr> <td>Residential flat buildings</td><td>Zone R1 General Residential</td><td>2,000m²</td></tr> <tr> <td>Dual occupancies</td><td>Zone R2 Low Density Residential</td><td>750m²</td></tr> <tr> <td>Dual occupancies</td><td>Zone R5 Large Lot Residential</td><td>1.5ha</td></tr> </tbody> </table>	Purpose	Zone	Minimum lot size	Dual occupancies	Zone R1 General Residential	750m ²	Multi dwelling housing	Zone R1 General Residential	1,000m ²	Residential flat buildings	Zone R1 General Residential	2,000m ²	Dual occupancies	Zone R2 Low Density Residential	750m ²	Dual occupancies	Zone R5 Large Lot Residential	1.5ha
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Dual occupancies	Zone R5 Large Lot Residential	1.5ha																		
4.6 Exceptions to development standards	N/A	Development permissible so no variation sought																		
5.10 Heritage Conservation	N/A	Land, is not listed as Heritage nor in a HCA. Several of the lots adjacent are Catholic items with some significance to the town and locality. The land in this precinct was disposed of by the Church and has had varying contemporary developments built nearby already. Adjacent items include;  66 Scott St – St Patrick’s Presbytery (Item 46) 69-71 Queen St – St Patricks Roman Catholic Church (Item 47) 23 Scott St – St Joseph’s Convent (Item 52) 19 Scott St – St Joseph’s School Buildings (Item 51) Cnr Marsden & Queen St – Court House (Item 32) 26 Scott St – The Dairy Dendevilleagh (Item 53) Despite the obvious listed and historic items, there have been approved a contemporary and simple designed duplex at 66 Queen St on the corner between the Presbytery, Convent & School. In addition, a run-down Telstra building is opposite at 59 Queen St. The a tree lined street, the wider street and the non invasive design proposed would provide the proposal as un-intrusive infill development which would in no way detract from the items (listed and otherwise) in the precinct.																		
5.16 Subdivision of, or dwellings on, land in certain rural, residential or environment protection zones	N/A	Not rural nor affected lands																		

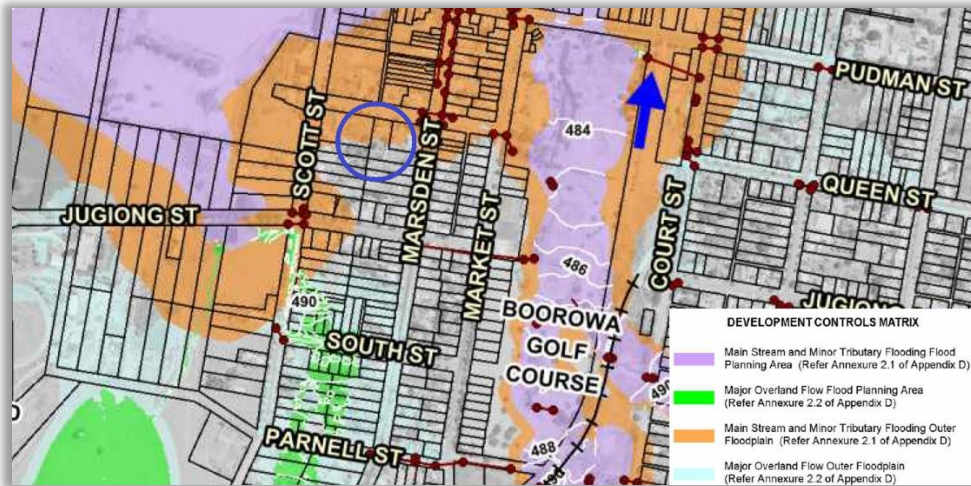
Clause	Complies	Comments
6.1 Earthworks	OK	This clause has minimal affect as the allotment is relatively level and earthworks only entail scalping of vegetation A horizon. Sedimentation and erosion control measures shall be put in place during construction.
6.2 Essential Services	Complies	Development consent must not be granted to development unless the consent authority is satisfied the following services that are essential for the development are available or that adequate arrangements have been made to make them available when required— (a) the supply of water, available at front of site on application (b) the supply of electricity, available at front of site on application (c) the disposal and management of sewage, to be disposed of at manhole serviced by an easement back through to Scott St – see servicing plan & DP (d) stormwater drainage or on-site conservation, available at front of site on design – see appendices for SW design (e) suitable road access Sealed and k&g road at frontage
6.3 Terrestrial Biodiversity	N/A	Not mapped as affected
6.4 Water - Riparian	N/A	Not mapped as affected
6.5 Water – Groundwater Vulnerability	Yes	Is mapped as affected however with an effective stormwater design in hand and connections to a sewer main, there will be no site inputs and therefore Groundwater will have minimal or no inputs from this development.
6.6 Salinity	N/A	Not mapped as affected
6.7 Highly Erodible Soils	N/A	Not mapped as affected
6.8 Drinking Water Catchments	N/A	N/A
6.9 Development along Lachlan & Boorowa Rivers & Lake Wyangla	N/A	N/A
6.10 Development on Carinya Estate	N/A	N/A
6.11 DCP for Urban Release Areas	N/A	Does not exist

Council Flood Risk Management Plan

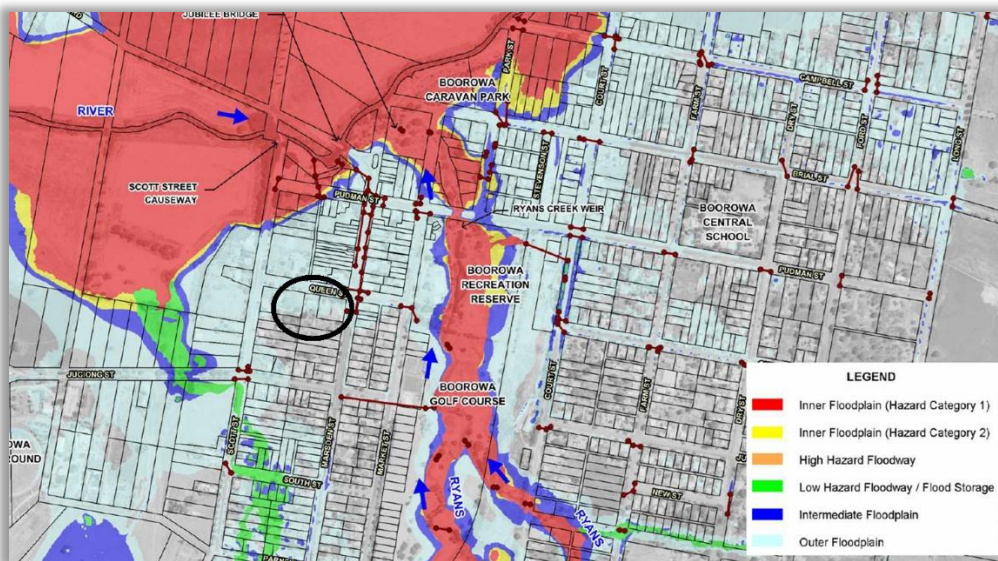
The land was identified as being within the Flood Planning Area yet no apparent controls apply.



Flood Planning Area



Main Stream Minor Tributary – Planning Matrix 2.1



Outer Floodplain

Boorowa Floodplain Risk Management Study and Plan
Appendix D – Draft Flood Policy

ANNEXURE 2.1
DEVELOPMENT CONTROLS MATRIX - MAIN STREAM AND MINOR TRIBUTARY FLOODING

	Outer Floodplain						Intermediate Floodplain						Inner Floodplain (Hazard Category 2)						Inner Floodplain (Hazard Category 1)						
	Essential Community Facilities	Critical Utilities and Uses	Flood Vulnerable Residential	Residential	Business & Commercial/Industrial	Non-Urban and Outbuildings	Residential Sub-Division	Minor Additions (Residential)	Essential Community Facilities	Critical Utilities and Uses	Flood Vulnerable Residential	Residential	Business & Commercial/Industrial	Non-Urban and Outbuildings	Residential Sub-Division	Minor Additions (Residential)	Essential Community Facilities	Critical Utilities and Uses	Flood Vulnerable Residential	Residential	Business & Commercial/Industrial	Non-Urban and Outbuildings	Residential Sub-Division	Minor Additions (Residential)	
Floor Level											1	1		1	1				1	1		1	1		
Building Components											1	1		1	1				1	1		1	1		
Structural Soundness											1	1		1	1				1	1		1	1		
Flood Affection														1	1	1	1								
Evacuation / Access														1	1	1	1								
Management and Design											3		1	5					6	3,6	2,6	1,6	5		

Not Relevant
 Unsuitable Land Use

Main Stream Flooding applies for inundation of land bordering the Boorowa River, Ryans Creek, Ryans Tributary and two other unnamed flow paths, while Minor Tributary Flooding applies to inundation of land along the minor watercourses which drain the relatively steep slopes adjacent to the Boorowa River and its major tributaries (See Section D11).

The Intermediate Floodplain is defined by the area between the two Inner Floodplain zones and the Flood Planning Area (FPA). The Outer Floodplain is the area between the FPA and the Probable Maximum Flood (PMF).

See Notes over page:

BFRMS_V1_AppD_Rev 1.2] doc
March 2016 Rev. 1.2

Page D-16

Lyal & Associates

No relevant controls

4.2 Development Control Plan (Hilltops DCP 2025)

The relevant sections (Multi Dwelling Housing), of the Hilltops DCP are addressed below.

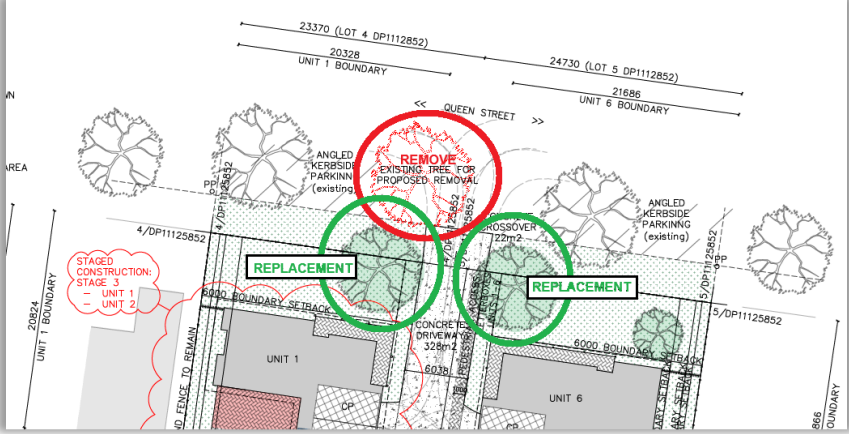
2025 HILLTOPS DCP (as resolved)

SECTION 2.3 - MULTI DWELLING RESIDENTIAL DEVELOPMENT

SECTION/OBJECTIVE	PERFORMANCE REQUIREMENT	COMMENT THIS APPLICATION
<u>BROADER OBJECTIVES</u>		
2.3 Ensure that residential development is of high visual quality and minimise developments amenity impacts on surrounding development.		Complies – see below assessment

MD1 - Site Design

PMD1 The development is to use the slope of the land, its orientation to the sun and other site attributes to achieve an appropriate design for the specific site.	AMD1.1 A Cut for the purposes of development must not exceed a maximum depth, measured from existing ground level, of: Dist from bdy - Max cut depth <1m - 1m 1m-1.5m - 2m 1.5m-3m - 3m	Negligible cut/fill – flat site
	AMD1.1 B Fill must not be higher than: a. 1m when used to construct the house; b. 0.6m in all other instances; c. not limited if contained wholly within the building footprint or a drop edge beam; d. Additionally: Depth fill o/s built footprint - Max area <150mm - unconstrained >150mm - 50% of landscaped area <i>Note: The new ground level as a result of fill cannot be used to measure heights under this code. The existing ground level must be used.</i>	n/a see above
	AMD1.1 C Cut areas should be setback from boundaries a minimum of 0.9 metres, and fill areas are to be setback from boundaries a minimum of 1.5 metres.	n/a see above
	AMD1.1 D A written variation to the maximum cut or fill may be considered if in Council's opinion, supporting information adequately demonstrates that the development will not have adverse impacts on adjoining properties and visual amenity.	n/a see above
	AMD1.1 E Council may require for steep sloping sites exceeding 10% grade, a geotechnical study (prepared by a suitably qualified geotechnical engineer) to accompany and support a written variation.	n/a see above
	AMD1.2 Construction within registered easements or over utilities is avoided.	complies

	AMD1.3 Construction over any natural watercourse/natural drainage lines through the land is prohibited. AMD1.4 The property access is to be located respectful of street trees, structures or fixtures in the road reserve.	n/a Designed to avoid street trees except that slightly centrally located fundamental to the access. Remove this tree and replace with 2 others is proposed – see landscape design inclusive of these parameters.
	 Landscape extract	
PMD2.1 Land for erection of a dwelling is safe and suitable for the purpose. PMD2.2 Minimise the risks to human health and the environment from the development of potentially contaminated land.	AMD2.1 On lands identified as former orchard lands: • Soil testing for pesticide residue is required; and • Such testing is to demonstrate the land is suitable for the intended use. AMD2.2 Development is to be in compliance with Council's Contaminated Lands Policy.	Not former orchard or known contaminant land n/a

MD2 Character of Neighbourhood

PMD3 The development is to provide attractive streetscapes, comprising of trees, gardens, building facades, fences and walls.	AMD 3.1A Fencing or vegetation forward of the front building line it to be either: • an open style, incorporating pickets, vertical stiles, slats or palings; or • vegetative screening/ plantings.	Complies – see rendering below
	AMD 3.1B Fencing or vegetation forward of the front building line is to be no greater than 1.2m in height.	Generally compliant yet replacements for street tree removed, set a defining driveway point and are in character with locality
	AMD 3.2 Dwellings fronting a street is to address that street frontage by: • The primary entrance door to the dwelling facing the street frontage; and • The front elevation incorporating windows to habitable rooms.	Complies
	AMD 3.3 Reflective materials are to be selectively used so that a glare nuisance is not caused to surrounding neighbours or public roads.	Pre-coloured and neutral tones

	ASR 3.4 Residential dwellings avoid fibrous cement and metal cladding of walls.	Complies – Hardies Stria design weatherboard proposed (or equivalent)
	ASR 3.5A Landscaping is provided to the street frontage, which includes canopy trees, shrubs and grass.	See landscaping plan and rendering image below
	AMD 3.5B Driveways to rear dwellings are not fenced forward of the front building setback. Vegetative screening or landscaping are encouraged in this location	Compliant



Rendering of fencing styles

PMD4 Providing each dwelling with clear and distinct access, preferably visible from a public street.	AMD4.1 The development is to be designed with public access to all occupancies readily discernable from the front driveway access.	Complies – evident from head of drivewa								
PMD5 Providing each dwelling with clear and distinct access, preferably visible from a public street.	AMD5.1 Dwellings are set back as per the below table:	compliant								
	<table><tr><th>Zone</th><th>Control</th></tr><tr><td>R1 General Residential Zone and the R2 Low Density Residential zones</td><td>from the primary street frontage: - not less than 6m. from any secondary street frontage: - not less than 3m. </td></tr><tr><td>R5 Large Lot Residential Zone</td><td>from the primary street frontage: - not less than 10m. from any secondary street frontage: - not less than 6m. </td></tr><tr><td>R1, R2 and R5 zones</td><td>if the adjoining dwelling has differing setbacks, - the average of those setbacks </td></tr></table>	Zone	Control	R1 General Residential Zone and the R2 Low Density Residential zones	from the primary street frontage: - not less than 6m. from any secondary street frontage: - not less than 3m.	R5 Large Lot Residential Zone	from the primary street frontage: - not less than 10m. from any secondary street frontage: - not less than 6m.	R1, R2 and R5 zones	if the adjoining dwelling has differing setbacks, the average of those setbacks	
	Zone	Control								
R1 General Residential Zone and the R2 Low Density Residential zones	from the primary street frontage: - not less than 6m. from any secondary street frontage: - not less than 3m.									
R5 Large Lot Residential Zone	from the primary street frontage: - not less than 10m. from any secondary street frontage: - not less than 6m.									
R1, R2 and R5 zones	if the adjoining dwelling has differing setbacks, the average of those setbacks									
	AMD 5.2 Garages in dwellings is to: a) Directly address the street frontage; b) Be recessed behind the front facade of the dwelling; and c) Do not project in front of other parts of the dwelling.	Behind front 2 units internal of site								

PMD6 The dwelling is to be appropriately located on the site with setbacks to adjoining or adjacent properties that ensure privacy, overshadowing and amenity are respected within the neighbourhood.	PMD 6.1 Side and rear setbacks, excluding secondary street frontage, for dwellings in the R1 General Residential Zone and the R2 Low Density Residential zones are setback as follows: a) Single Storey Dwellings • 3m, unless windows are offset to achieve a reasonable expectation of privacy between the new development and the existing adjoining development. b) Two storey dwellings (Figure 7) • have the upper level set back from side or rear boundaries by 3m, plus 0.3m for every metre of height over 3.6 metres up to 6.9 metres, plus 1 metre for every metre of height over 6.9 metres;	Design whilst not numerically per the Acceptable solution for all units is compliant for Units 1, 2, 5 & 6 – Units 3 & 4 are to rear of adjoining properties, have minor variances to the acceptable numbers and are adjacent outbuildings. It is offered that due to rear nature of 2 units not complying, generous adjacent private space and internal design focus, these variances are of little significance or potential impact to adjacent neighbours. It is offered that the site design is in keeping with the Performance Objective relative to adjoining site uses and layouts. No overshadowing to key living spaces or privacy issues will result with good fencing and aspects of units 3 & 4.
	ASR 6.2 Dwellings in the R5 Large Lot Residential Zone are setback not less than 10m from the rear and side boundaries, excluding secondary street frontages.	n/a
	PMD7 Dwellings are to respect and improve upon the quality of development in the neighbourhood, when viewed from the street.	AMD 7.1A Dwelling design is to be drawn from surrounding dwellings including: a) window forms, b) external facade treatments c) roof materials d) roof pitches AMD 7.1B Dwelling design is to compliment the style and character of adjoining houses and gardens including: a) the scale, b) materials, c) roof forms and d) types of trees.
		The dwellings are straightforward and contemporary in design, single storey, non visually intrusive in design or street appeal and neutrally colour schemed so that the real champions in the street are the historic buildings nearby. This is effective infill development. Complies

MD 3 DWELLING BULK, HEIGHT & FORM

PMD8 The dwelling is to minimise building bulk, form and height on or near boundaries to avoid overshadowing and overlooking of neighbours.	AMD 8.1 Dwellings are restricted to the following, whichever is the lesser: a) a maximum of two storeys above natural ground level at any point; or b) 8.5 metres. A height of 8.5 metres is to be measured from natural ground level to the highest structural point of the dwelling, not including antennae, spires etc. As illustrated below:	Single storey design and reasonable
	AMD 8.2 Wall lengths exceeding 8m is to have wall offsets, openings or articulation of some manner.	Complies

PMD 9 The development is to minimise hardstand areas for aesthetics and stormwater and surface water nuisance impacts.	AMD 9.1 Permeable areas are at least 20% of the site.	Site driveways & parking = 431.55 sq.m Buildings (footprints) = 904.8 sq.m Site = 2,898 sq.m Non perm = 46.11% Permeable = 53.89%
	AMD 9.2 A maximum of 30% of the area forward of the front building setback is occupied by paving, access driveways or the like.	Area forward = 307.817 sq.m Hardstand = 39.016 sq.m 12.67% of area = complies
	AMD 9.3 Site coverage, gross building area, does not exceed 60% of the site.	Building footprints = 904.8 sq.m Site = 2,898 sq.m FSR = 31.22%
	AID 9.4 All stormwater from the property is to be disposed of without causing nuisance. This may involve connection to Council's existing stormwater drainage system or other suitable arrangements such as easements.	See SW design lodged
PMD 10 The development is to create usable outdoor living spaces for occupants comfort, health and enjoyment.	AMD 10.1 Private open space is provided for the dwelling by adjoining living rooms or the like within the dwelling.	Complies
	AMD 10.2 Private open space is provided for each dwelling, immediately adjoining that dwelling, at a minimum area of 48m ² per dwelling, which is able to contain a rectangle of 8m x 4m. For the purposes of achieving the required minimum area above, no part of the minimum area is to have a width of less than 3m.	Complies
PMD 11 The scale of a second dwelling is to be smaller than the existing dwelling to assist in the integration of the new building into the neighbourhood.	AMD 11.1 Second dwellings on an allotment with an existing dwelling are no more than 80% of the floor area of the existing dwelling.	n/a

MD 4 ACCESS & PARKING

PMD 12 The development is to provide adequate parking for the development respectful of the configuration of the street, in order to avoid site and street congestion.	AMD 12.1 Car parking is provided in accordance with the following requirements: <u>a) Dual occupancy</u> i. 1 or 2 bedroom dwellings – 1 space undercover, ii. 3 or more bedroom dwellings -2 spaces. At least 1 to be undercover, stack parking is not permitted <u>b) 3 or more dwellings</u> i. 1 bedroom dwellings – 1 space undercover ii. 2 or more bedroom dwellings- 2 spaces, at least 1 to be undercover, stack parking not permitted, <u>c) visitor parking space per 3 dwellings.</u> This may be provided uncovered.	Complies see site plan
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	AMD 12.2 Car parking space dimensions is to comply with the following standards: a) Car parking space, not including a parallel to wall space, is to be a minimum of 2.6m wide by 5.5m long. b) Car parking spaces parallel to a wall is to be a minimum of 2.8m wide by 5.5m long. c) Enclosed car parking spaces is to be a minimum of 3m wide by 6m long.	Complies
	AMD 12.3 For dwellings in cul-de-sacs,	n/a
	AMD 12.4 Visitor parking, where it is required, is easily accessible and clearly designated by line-marking and signage.	Complies
	AMD 12.5 All parking areas and trafficable areas on-site is to be sealed with bitumen, concrete, preferably coloured, and textured or pavers. to Council specifications.	concrete
PMD 13 To ensure sufficient circulation and movement on site is achieved so as to allow vehicles to enter and leave the site in a forward direction without giving rise to congestion.	AMD 13.1 The width of internal accessways, not including turning areas, parking, is to be as follows: a) 3m wide to service 1 or 2 dwellings. b) 6m wide to service 3 or more dwellings. c) Additionally, the development is to be designed to allow for additional width of internal access ways for passing purposes.	complies
PMD 14 Ensuring vehicle access to and from the site is safe.	AMD 14.1 Vehicles accessing dwellings, other than dwellings served directly from the street frontage, as well as visitors to a development must be able to enter and leave the development in the forward direction. The 85th percentile vehicle must be able to turn on-site in no more than a two-point turn.	complies
	AMD 14.2 Access driveways directly serving double garages do not exceed 3.5m in width at the property boundary.	ok
	AMD 14.3 Access driveways is to be concreted, preferably coloured and or textured, sealed or paved and if serving: a) two dwellings, are no more than 3m in width. b) more than 2 dwellings are no more than 5.5m width. c) dwellings within the R5 zone are constructed of an all-weather surface, such as compacted road base material.	complies
	AMD 14.4 Access driveways, from road edge to property boundary, serving dwellings are to be constructed to Council's minimum standard.	Noted

	AMD 14.5 Cross grades for access driveways and parking areas do not exceed 4% grade.	Flat site
PMD 15 Minimising the number and width of access driveways consistent with the traffic function of those driveways.	AMD 15.1 Access is provided through a single consolidated access driveway from a public road.	Complies
	AMD 15.2 No lane access is relied on for site access and egress.	Complies
PMD 16 Access driveways through road reserve, from road edge to property boundary, is to be of a safe and suitable standard.	AMD 16.1 Access driveways directly serving double garages do not exceed 3.5m in width at the property boundary.	ok
	AMD 16.2A Access driveways is to be either concreted, sealed or paved.	complies
	AMD 16.2B Dwellings within the R5 zone are constructed of an all-weather surface, such as compacted road base material.	Not this zone
	AMD 16.3 Access driveways for: a) two dwellings - are no more than 3m in width b) more than 2 dwellings - are no more than 5.5m in width c) Access driveways may exceed the above minimum at the kerb by no more than 0.5m	Complies
	AMD 16.4 Access driveways serving dwellings is to be constructed to the standards set in Council's Engineering Guidelines .	Noted
	AMD 16.5 Cross grades for access driveways and parking areas do not exceed 4% grade.	Level site so compliant
PMD 17 The development is to provide a suitable pedestrian network.	AMD 17.1 A 1.5m footpath is provided to all frontages of the development.	Noted
PMD 18 The development is to provide road infrastructure suitable for the development.	AMD 18.1 If not already provided, roadways directly adjacent to the development is to be provided with kerb and gutter, including, where necessary, shoulder widening and seal to Council's standards. Cost of such works is to be paid by the developer.	Existing and compliant

MD 5 UTILITIES & SERVICES

PMD 19 The dwellings is to be connected to Council's reticulated water and sewer systems where available or obligated to be connected under relevant legislation and Council's Development Servicing Plan	AMD 19.1 Council's reticulated water service is to be connected separately to each dwelling.	Noted - planned
	AMD 19.2 Council's reticulated sewer service is to be connected to the dwellings.	Noted - planned

PMD 20 The dwellings are to have appropriate stormwater drainage connected, where possible, into Council's existing stormwater infrastructure.	AMD 20.1 All stormwater from the property shall be disposed of without causing nuisance. This may involve connection to Council's existing drainage system or other suitable arrangements such as easements or on site detention where no direct discharge to waters is available. Post development flow must not exceed pre-development flows.	Design included
	AMD 20.2 For 3 or more dwellings, all roof and surface water drainage is to be designed to provide for conveyance of these flows per AS3500 per AS3500 and current Australian Rainfall and Runoff Guidelines, including factoring of Climate Change via the Climate Change Rainfall modifier, to the appropriate road, public stormwater drainage system or watercourse where approved to do so.	Design included
PMD 21 The development is to make a contribution towards the provision of services and infrastructure.	AMD 21.1 Payment of any headworks contributions for water and or sewer. Refer to Council's Stormwater development contributions plans and/or Development Servicing Plans that may apply to the development.	To be conditioned
	AMD 21.2 Payment of any Section 7.11 or Section 7.12 development contributions applicable to the development.	To be conditioned
PMD 22 The following facilities is to be designed and located within the development to ensure visual amenity is not detrimentally affected.	AMD 22.1 Letter-boxes are provided for each dwelling in accordance with Australia Post requirements.	Compliant see plan
	AMD 22.2 Letter boxes is to be of the same, similar or complimentary materials to that of the development.	
	AMD 22.3 Letterboxes is to be designed and located so as not to impede the vision of vehicles entering and leaving the site.	
	AMD 22.4 Clothes drying facilities, either an outdoor drying yard or mechanical dryer, are provided for each dwelling with drying yards screened from public areas and common access areas of the development. Drying areas are not to be within the minimum rectangle area defined for private open space. Tilt type clothes lines are preferred for better use of recreational areas.	Swing away lines each unit – see floor plans

	AMD 22.5 Garbage bin storage is to be provided to the dwellings either: a) in a communal, secure and screened area accessible to the street; or b) in an area within the curtilage of each dwelling that is not within the minimum rectangle area defined for private open space without passing through the dwelling.	Stored at each unit – garage side
	AMD 22.6 Space is available to locate an outdoor storage area of 6m ³ for each dwelling. Note: This could include a garden shed or dedicated space within a garage that does not reduce the floor area of that garage below the minimum dimensions.	Complies

MD 7 VEHICLE & OCCUPANT SAFETY

PMD 23 Residential development is to be designed to reflect vehicle and occupant safety principles and ensure safe vehicle and occupant interaction within residential properties.	AMD 23 - PMD23 is satisfied if a means, manual or electronic, is put in place to restrict a dwelling's occupant or visitor from bringing into potential harm an occupant of that dwelling, whilst parking the motor vehicle. This may be done by any or a combination of the means contained in this section. This provision applies to all Class 1, 2 and 10 buildings. 1. Compliance by Separation; 2. Connecting Door – Barrier Installation; 3. Combined Electric Vehicle Door and Passage Door;	Development by proposer of the policy – compliant.
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DESIGN CUES

Residential development involves numerous alternatives. In this respect, full compliance with all controls outlined may not be possible. Where a control is not achieved, the specific alternative made should be described in the Statement of Environmental Effects. Council will consider alternative designs provided the performance outcomes are achieved.		
A good development would also include the following design aspects	- Landscaping provided to the street frontage, which includes canopy trees, shrubs and grass. - Gables over garages facing streets are avoided. However, dutch gables are considered satisfactory. - Opening up living areas directly onto courtyards and gardens, which benefit from good sunlight.	Complies – Plan included, design ok
	Dwellings are provided with indoor living areas which are adjoined by outdoor living areas that have a northerly aspect.	Complies
	Providing good sunlight to living areas and avoiding overshadowing of neighbours and established garden areas.	Complies

	• At least 50% of the minimum required secluded private open space of a development, including within the development and adjoining developments, has sunlight between the hours of 9am and 3pm on 21 June.	Complies
	• Shadow diagrams may be required to illustrate the extent of overshadowing of neighbours for all two storey development, and for single storey development that is both up-slope and in the direction of the sun from existing residential development. • Planning the internal layout of a house to ensure good daylight to living areas. • Vehicular parking should not be on the north side of a dwelling's high occupancy rooms	N/A
	• Locating parking in the shadow of the buildings. • Habitable room windows have at least 2.4m separation from the wall of an adjoining building. • Water storage tanks is to not be located on the north side of that dwelling.	Undercover or visitor
	• High occupancy rooms utilised during daylight hours should have a northern aspect. • Dwellings is to be respective of, or improve on, the quality of development in the neighbourhood, when viewed from the street. • Design cues being drawn from surrounding dwellings, including window forms, external facade treatments and roof materials and pitches that are common within the neighbourhood. • The style and character of adjoining houses and gardens including the scale, materials, roof forms and types of trees.	Compliant designnnnnnn

5 Summary of Assessment of Planning Issues

The following is a summary of the above assessments of the environmental effects of the proposed development as described in the preceding sections of this report. The assessment considers only those matters under Section 79C (1) of the EP&A Act 1979 that are relevant to the proposal.

5.1 Compliance with Planning Instruments and Controls

- The proposal meets traffic and access requirements pursuant to reasonable Council Local Road Standards and DCP Guidelines;
- The proposal is a permissible use, under Parts 4, 5 & 6 of the Hilltops LEP 2022, within the R1 zone; and
- The proposal is reasonable under the heads of consideration under sec 4.15 of the EP & A Act 1979.
- The DCP raises only a minor rear building setback issue to the rear lane yet in this location and design, this appears reasonable
- The Flood risk study will require engineering design support yet with nominal floor levels and the stormwater/flood flow design, the proposal is reasonable

5.2 Traffic, Access and Parking

The proposal is reasonable due to;

- Safe sight distances from proposed access location
- Construction of new driveway crossover, to Council standards
- No impact on primary frontage to quiet local road
- Adequate on-site and off-site parking existing for the proposed design

Parking

Development is designed adequate to accommodate obligations for parking

5.3 Visual Impact

The proposed works will not negatively impact upon the visual amenity and built character of the surrounding area.

5.4 Amenity

The creation of 6 new multi dwelling housing buildings, and remodelling the existing dwelling will not create amenity concerns to the area due to adequate setbacks from other development allowing all parties the ability to enjoy their own properties without impacting on their neighbours. This development is not inconsistent with similar developments adjacent (Carers Lodge to West – Group Home) in nearby locality.

5.4.1 Noise

No untoward noise impacts expected due to adequate lot sizes, planned aspect of development and reasonable opportunities for setbacks for subsequent development.

5.4.2 Privacy

The proposal will not create any privacy concerns to the area or between neighbours due to adequate setbacks from other development (wide streets, verges and laneways) allowing all parties the ability to enjoy their own properties without impacting on their neighbours.

5.4.3 Overshadowing

No overshadowing is expected due to planned layout of development and aspect of lots, keeping in mind standard appurtenant items like fencing etc.

5.5 Water Management

Town water exists to the front of the property. It is expected that connection to the main would be required and applicable headworks paid if not paid already– see earlier comment.

5.6 Sediment and Erosion Control

As stated before, sedimentation and erosion control measures will need to be employed when working adjacent the street K & G drain for the new access/es.

5.7 Social and Economic Impacts

The proposed development on the site is anticipated to have an ongoing positive social and economic impact on the local Boorowa area, and the broader community. This will be as a result of another allotment in a high value area becoming available.

5.8 Heritage Impact/Aboriginal Object

No known Indigenous or European heritage will be affected by this subdivision. Report attached for AHIMs search

5.9 Demolition

No demolition is proposed.

5.10 Utilities and Services

Water & Sewer are available and have been discussed above.

The road network is safe, of a fair standard and kerb and guttered. Approved type access/es will be made to this road network.

Data/Telephone exists in Nasmyth Street and will be available to the lot created.

Electricity is available along the southern boundary/Nasmyth Street footpath.

5.11 Staging

Staging will be in 3 distinct phases so as the project funds itself after original seed capital for the first 2 units and infrastructure.

Stage 1 – Units 5 & 6 (Eastern front) with driveway servicing same

Stage 2 – Units 3 & 4 (Rear Units) with driveway finishing and visitor parking

Stage 3 – Units 1 & 2 (Western front) and finalise development touches

6 Conclusion

Given the merit of the design of the proposal and the absence of any significant adverse environmental impacts or policy variances, the DA is considered to be in the public's interest and worthy of Council's support.

ADVICE NOTE:

Should there be any technical enquiry about this report, please contact the undersigned first to assist my client. An authority for same has been lodged on the Planning Portal signed by the owners.

A handwritten signature in dark ink, appearing to be 'K. Filmer', with a large loop at the top and a horizontal stroke at the bottom.

K Craig Filmer

B. App Sc (Env Health – Building Surveillance Major)
MAAC; MEHA; BPB-A1 Certifier (LG)

Development & Environmental Health Specialist

Appendix 1 – Development Plans

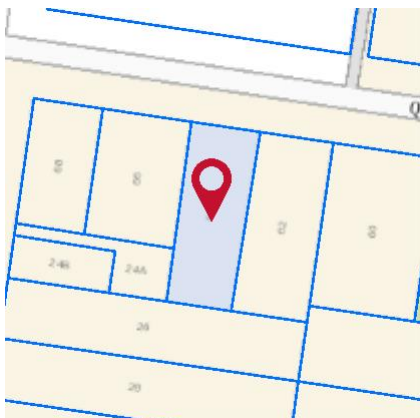
Appendix 2 – NSW Planning Portal Report

eSpatial Report for property



Property Report

64 QUEEN STREET BOOROWA 2586



Property Details

Address: 64 QUEEN STREET BOOROWA 2586
 Lot/Section 4/-/DP1112582
 /Plan No:
 Council: HILLTOPS COUNCIL

Summary of planning controls

Planning controls held within the Planning Database are summarised below. The property may be affected by additional planning controls not outlined in this report. Please contact your council for more information.

Local Environmental Plans	Hilltops Local Environmental Plan 2022 (pub. 23-12-2022)
Land Zoning	R1 - General Residential: (pub. 23-12-2022)
Height Of Building	NA
Floor Space Ratio	NA
Minimum Lot Size	700 m ²
Heritage	NA
Land Reservation Acquisition	NA
Foreshore Building Line	NA
Groundwater Vulnerability	Groundwater Vulnerable

Detailed planning information

State Environmental Planning Policies which apply to this property

State Environmental Planning Policies can specify planning controls for certain areas and/or types of development. They can also identify the development assessment system that applies and the type of environmental assessment that is required.

This report provides general information only and does not replace a Section 10.7 Certificate (formerly Section 149)



Property Report

64 QUEEN STREET BOOROWA 2586

- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Allowable Clearing Area (pub. 21-10-2022)
- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008: Land Application (pub. 12-12-2008)
- State Environmental Planning Policy (Housing) 2021: Land Application (pub. 26-11-2021)
- State Environmental Planning Policy (Industry and Employment) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Planning Systems) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Primary Production) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Resilience and Hazards) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Resources and Energy) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Sustainable Buildings) 2022: Land Application (pub. 29-8-2022)
- State Environmental Planning Policy (Transport and Infrastructure) 2021: Land Application (pub. 2-12-2021)

Other matters affecting the property

Information held in the Planning Database about other matters affecting the property appears below. The property may also be affected by additional planning controls not outlined in this report. Please speak to your council for more information

Land near Electrical Infrastructure	This property may be located near electrical infrastructure and could be subject to requirements listed under Transport and Infrastructure SEPP 2021 Clause 2.48. Please contact Essential Energy for more information.
Local Aboriginal Land Council	ONERWAL
Regional Plan Boundary	South East and Tablelands

This report provides general information only and does not replace a Section 10.7 Certificate (formerly Section 149)

Appendix 3 – Lot attributes

Title – Deposited Plan



FOLIO: 4/1112582

SEARCH DATE	TIME	EDITION NO	DATE
-----	----	-----	----
9/12/2025	7:25 PM	4	27/3/2025

LAND

LOT 4 IN DEPOSITED PLAN 1112582
AT BOOROWA
LOCAL GOVERNMENT AREA HILLTOPS
PARISH OF BOOROWA COUNTY OF KING
TITLE DIAGRAM DP1112582

FIRST SCHEDULE

CBN BUILDING PTY LTD (T AU928532)

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 DP1112582 EASEMENT TO DRAIN SEWAGE 2.5 METRE(S) WIDE
APPURTENANT TO THE LAND ABOVE DESCRIBED
- 3 DP1112582 EASEMENT TO DRAIN SEWAGE 5 METRE(S) WIDE AFFECTING
THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

COCKBURN...

PRINTED ON 9/12/2025



FOLIO: 5/1112582

SEARCH DATE	TIME	EDITION NO	DATE
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9/12/2025	7:26 PM	4	27/3/2025

LAND

LOT 5 IN DEPOSITED PLAN 1112582
AT BOOROWA
LOCAL GOVERNMENT AREA HILLTOPS
PARISH OF BOOROWA COUNTY OF KING
TITLE DIAGRAM DP1112582

FIRST SCHEDULE

CBN BUILDING PTY LTD (T AU928532)

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 DP1112582 EASEMENT TO DRAIN SEWAGE 2.5 METRE(S) WIDE
APPURTENANT TO THE LAND ABOVE DESCRIBED
- 3 DP1112582 EASEMENT TO DRAIN SEWAGE 5 METRE(S) WIDE APPURTENANT
TO THE LAND ABOVE DESCRIBED

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

COCKBURN...

PRINTED ON 9/12/2025

Appendix 4 – BOSET Report

BMAT DUE DILIGENCE SEARCH

Biodiversity Values Map and Threshold Report

This report is generated using the Biodiversity Values Map and Threshold (BMAT) tool. The BMAT tool is used by proponents to supply evidence to your local council to determine whether or not a Biodiversity Development Assessment Report (BDAR) is required under [the Biodiversity Conservation Regulation 2017 \(Cl. 7.2 & 7.3\)](#).

The report provides results for the proposed development footprint area identified by the user and displayed within the blue boundary on the map.

There are two pathways for determining whether a BDAR is required for the proposed development:

1. Is there Biodiversity Values Mapping?
2. Is the 'clearing of native vegetation area threshold' exceeded?

Biodiversity Values Map and Threshold Report

Date of Report Generation		09/12/2025 6:56 PM
1. Biodiversity Values (BV) Map - Results Summary (Biodiversity Conservation Regulation Section 7.3)		
1.1	Does the development Footprint intersect with BV mapping?	no
1.2	Was <u>ALL</u> BV Mapping within the development footprint added in the last 90 days? (dark purple mapping only, no light purple mapping present)	no
1.3	Date of expiry of dark purple 90 day mapping	N/A
1.4	Is the Biodiversity Values Map threshold exceeded?	no
2. Area Clearing Threshold - Results Summary (Biodiversity Conservation Regulation Section 7.2)		
2.1	Size of the development or clearing footprint	1,976.1 sqm
2.2	Native Vegetation Area Clearing Estimate (NVACE) (within development/clearing footprint)	432.0 sqm
2.3	Method for determining Minimum Lot Size	LEP
2.4	Minimum Lot Size (10,000sqm = 1ha)	700 sqm
2.5	Area Clearing Threshold (10,000sqm = 1ha)	2,500 sqm
2.6	Does the estimate exceed the Area Clearing Threshold? (NVACE results are an estimate and can be reviewed using the Guidance)	no
REPORT RESULT: Is the Biodiversity Offset Scheme (BOS) Threshold exceeded for the proposed development footprint area? (Your local council will determine if a BDAR is required)		no

What do I do with this report?

- If the result above indicates the BOS Threshold has been exceeded, your local council may require a Biodiversity Development Assessment Report with your development application. Seek further advice from Council. An accredited assessor can apply the Biodiversity Assessment Method and prepare a BDAR for you. For a list of accredited assessors go to: <https://customer.lmbc.nsw.gov.au/assessment/AccreditedAssessor>.
- If the result above indicates the BOS Threshold has not been exceeded, you may not require a Biodiversity Development Assessment Report. This BMAT report can be provided to Council to support your development application. Council can advise how the area clearing threshold results should be considered. Council will review these results and make a determination if a BDAR is required. Council may ask you to review the area clearing threshold results. You may also be required to assess whether the development is “likely to significantly affect threatened species” as determined under the test in Section 7.3 of the *Biodiversity Conservation Act 2016*.
- If a BDAR is not required by Council, you may still require a permit to clear vegetation from your local council.
- If all Biodiversity Values mapping within your development footprint was less than 90 days old, i.e. areas are displayed as dark purple on the BV map, a BDAR may not be required if your Development Application is submitted within that 90 day period. Any BV mapping less than 90 days old on this report will expire on the date provided in Line item 1.3 above.

For more detailed advice about actions required, refer to the Interpreting the evaluation report section of the [Biodiversity Values Map Threshold Tool User Guide](#) .

Review Options:

- If you believe the Biodiversity Values mapping is incorrect please refer to our [BV Map Review webpage](#) for further information.
- If you or Council disagree with the area clearing threshold estimate results from the NVACE in Line Item 2.6 above (i.e. area of Native Vegetation within the Development footprint proposed to be cleared), review the results using the [Guide for reviewing area clearing threshold results from the BMAT Tool](#).

Acknowledgement

I, as the applicant for this development, submit that I have correctly depicted the area that will be impacted or likely to be impacted as a result of the proposed development.

Signature: _____

(Typing your name in the signature field will be considered as your signature for the purposes of this form)

Date: _____

09/12/2025 06:56 PM

Biodiversity Values Map and Threshold Tool

The Biodiversity Values (BV) Map and Threshold Tool identifies land with high biodiversity value, particularly sensitive to impacts from development and clearing.

The BV map forms part of the Biodiversity Offsets Scheme threshold, which is one of the factors for determining whether the Scheme applies to a clearing or development proposal. You have used the Threshold Tool in the map viewer to generate this BV Threshold Report for your nominated area. This report calculates results for your proposed development footprint and indicates whether Council may require you to engage an accredited assessor to prepare a Biodiversity Development Assessment Report (BDAR) for your development.

This report may be used as evidence for development applications submitted to councils. You may also use this report when considering native vegetation clearing under the State Environmental Planning Policy (Biodiversity and Conservation) 2021 - Chapter 2 vegetation in non-rural areas.

What's new? For more information about the latest updates to the Biodiversity Values Map and Threshold Tool go to the updates section on the [Biodiversity Values Map webpage](#).

Map Review: Landholders can request a review of the BV Map where they consider there is an error in the mapping on their property. For more information about the map review process and an application form for a review go to the [Biodiversity Values Map Review webpage](#).

If you need help using this map tool see our [Biodiversity Values Map and Threshold Tool User Guide](#) or contact the Map Review Team at map.review@environment.nsw.gov.au or on 1800 001 490.

Biodiversity Values Map



123.0 0 61.48 123.0 Metres

WGS_1984_Web_Mercator_Auxiliary_Sphere

Legend

-  Biodiversity Values that have been mapped for more than 90 days
-  Biodiversity Values added within last 90 days
-  Native Vegetation Area Clearing Estimate (NVACE)
-  Development area selected by proponent

09/12/2025 06:56 PM

1: 2,420



This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

Imagery © Airbus DS/Spot Image 2016

© NSW Department of Customer Service, Basemaps 2019

© NSW Department of Planning and Environment

The results provided in this tool are generated using the best available mapping and knowledge of species habitat requirements.

This map is valid as at the date the report was generated. Checking the [Biodiversity Values Map viewer](#) for mapping updates is recommended.

Appendix 5 – AHIMs REPORT

Indigenous Heritage Search

Kenneth Filmer

Date: 09 December 2025

18 Pineview Cct 91 Boorowa Street Young
Young New South Wales 2594

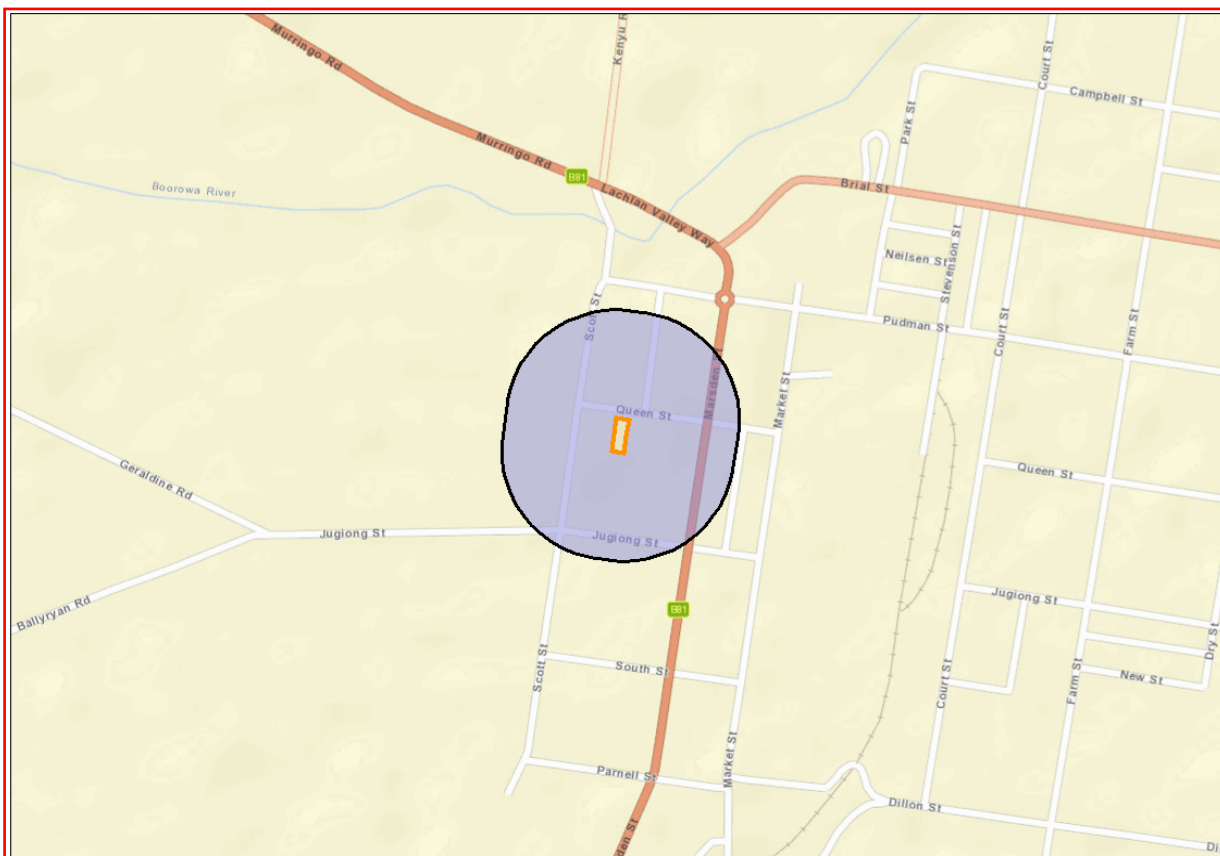
Attention: Kenneth Filmer

Email: craig@dabusters.com

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 4, DP:DP1112582, Section : - with a Buffer of 200 meters, conducted by Kenneth Filmer on 09 December 2025.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

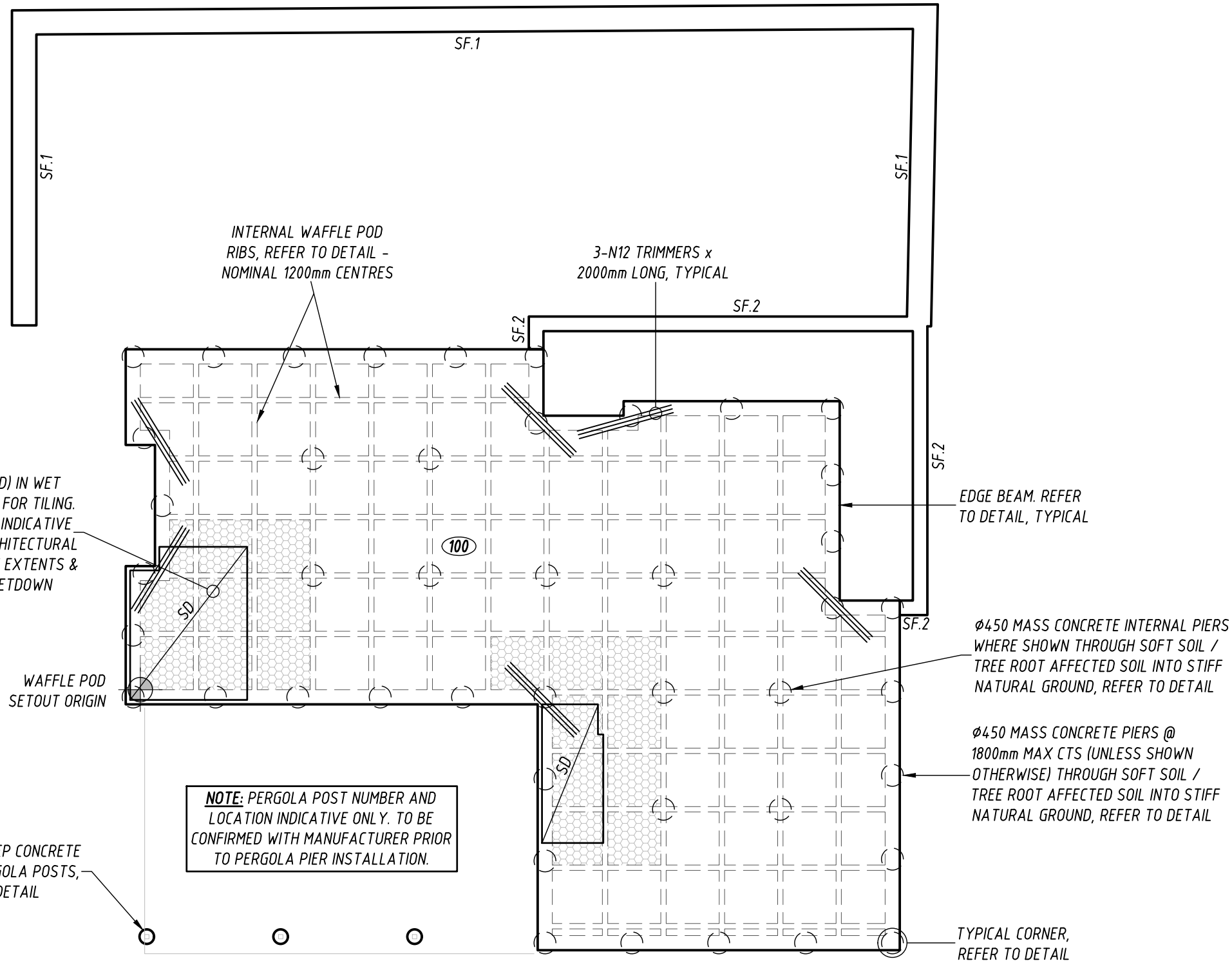
- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(https://www.legislation.nsw.gov.au/gazette\)](https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Appendix 6 – Structural Design

Structural Engineers Design



- NOTES:**
- SEE GENERAL NOTES & DETAILS REGARDING FILL REQUIREMENTS UNDER SLAB.
 - ALL BEAMS SUPPORTING BRICKWORK TO BE DEEPEMED AS NECESSARY TO EXTEND THROUGH ANY FILL MATERIAL.
 - FOOTINGS & SLABS HAVE BEEN DESIGNED FOR A CLASS 'P' SITE IN ACCORDANCE WITH AS 2870:2011. RESIDENTIAL SLABS & FOOTINGS.
 - THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER GENERAL BUILDING PLANS & SPECIFICATIONS. JOB DATED: JUNE 2025
 - ALL DIMENSIONS ARE GIVEN IN MILLIMETRES, U.N.O.
 - DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS. IF IN DOUBT - ASK.

CONCRETE SLABS CAN CRACK. TO MINIMISE THE CHANCE OF CRACK OCCURRENCE WHERE BRITTLE FLOOR COVERINGS ARE TO BE USED IN AN AREA GREATER THAN 16 SQUARE METRES, IT IS RECOMMENDED THAT REINFORCEMENT IS INCREASED TO SL92 MINIMUM. OR ALLOW A MINIMUM PERIOD OF 3 MONTHS DRYING OF CONCRETE BEFORE PLACEMENT OF BRITTLE FLOOR COVERINGS.

DESIGN BASED UPON CLAD FRAME CONSTRUCTION TO AS 2870:2011.

DESIGN BASED UPON CLASS 'P' SOIL CLASSIFICATION AS ADVISED BY BARNSON, REPORTS: 48610-GR01_A & 48610-GR02_A

NOTE: ENSURE ALL SITE EARTHWORKS ARE GRADED AWAY FROM THE BUILDING & SITE LANDSCAPING CONSTRUCTED TO ADEQUATELY DRAIN OVERLAND FLOW & PREVENT ABNORMAL MOISTURE CONDITIONS ADJACENT TO THE FOOTINGS. THIS IMPORTANT THROUGHOUT THE CONSTRUCTION PHASE OF THE BUILDING & BEYOND ONCE THE BUILDING & LANDSCAPING IS COMPLETE. IF STRIP DRAINS ARE TO BE INSTALLED AROUND THE PERIMETER OF THE BUILDING THESE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SITE DRAINAGE NOTES ON DRAWING S.01 & THE REQUIREMENTS OF AS 2870

NOTE: TREES MUST NOT BE LOCATED NEAR THE FOUNDATIONS. THEY MUST BE A DISTANCE EQUAL TO THE MATURE HEIGHT AWAY FROM THE BUILDING. IF THIS IS NOT POSSIBLE, CONTACT COOK&ROE FOR FURTHER ADVICE ON THE DESIGN.

CONCRETE FOOTING & SLAB PLAN - UNIT 1

WAFFLE PODS

SLAB TO BE 100mm MINIMUM THICK REINFORCED WITH SL82 MESH IN TOP THROUGHOUT, U.N.O. 20mm COVER TO INTERNAL SURFACES & 30mm COVER TO EXTERNAL SURFACES.

SLAB TO BE PLACED ON APPROVED VOID FORMERS PLACED ON COMPACTED FILL MATERIAL OVERLAID WITH AN APPROVED WATERPROOF MEMBRANE.

STRIP FOOTING

- FULLY LAP & TIE REINFORCEMENT AT ALL CORNERS & INTERSECTIONS, REFER TO DETAIL.
- STEP STRIP FOOTINGS AS REQUIRED TO FOLLOW NATURAL GROUND, REFER TO DETAIL.

XXX DENOTES SLAB THICKNESS

225mm DEEP VOID FORMERS FOR WET AREA SETDOWN, REFER TO DETAIL

THE TOTAL NUMBER OF REINFORCEMENT BARS IN BEAMS SHALL BE AS FOLLOWS:	
STEM WIDTH	TOP STEEL (ADDITIONAL TO FABRIC)
110 - 150mm	0
151 - 220mm	1
221 - 330mm	2
331 - 440mm	3
BEAM/STEM WIDTH	BOTTOM STEEL (IN TOTAL)
110 - 150mm	1
151 - 220mm	2
221 - 330mm	3
331 - 440mm	4

A	ISSUED FOR APPROVAL	BJK	WGR	28.08.25
Rev	Revision Description	Drawn	Approved	Date



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STRUCTURAL ENGINEERS
P 02 6360 2561 E OFFICE@COOKANDROE.COM.AU
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Project **PROPOSED UNIT DEVELOPMENT**
No. 62-64 QUEEN STREET, BOOROWA

Title **CONCRETE FOOTING & SLAB PLAN - UNIT 1**

Client CBN BUILDING			
Drawn	BJK	Designed	WGR
Scale	1:100	Date	AUGUST 2025
Job No:	250493	Dwg No:	S.02
		Approved	 Wayne Roe BE MIE Aust CPEng NER (2476635)
		This Drawing must not be used for Construction unless signed as Approved	Original Size A3

Ø300x1000mm DEEP CONCRETE
PIER UNDER PERGOLA POSTS,
REFER TO DETAIL

REFER ALSO TO NOTES ON DRAWING NO. S.02.

NOTE: PERGOLA POST NUMBER AND
LOCATION INDICATIVE ONLY. TO BE
CONFIRMED WITH MANUFACTURER PRIOR
TO PERGOLA PIER INSTALLATION.

PROVIDE SET DOWN (S.D) IN WET AREAS
WHERE REQUIRED FOR TILING. LOCATION &
EXTENTS IS INDICATIVE ONLY. REFER TO THE
ARCHITECTURAL DOCUMENTATION FOR THE
EXTENTS & DIMENSIONS OF THE SETDOWN

WAFFLE POD
SETOUT ORIGIN

EDGE BEAM. REFER TO
DETAIL, TYPICAL

3-N12 TRIMMERS x
2000mm LONG, TYPICAL

PROVIDE REBATE FOR
EXTERNAL BRICKWORK
AS REQUIRED

Ø450 MASS CONCRETE INTERNAL PIERS
WHERE SHOWN THROUGH SOFT SOIL /
TREE ROOT AFFECTED SOIL INTO STIFF
NATURAL GROUND, REFER TO DETAIL

Ø450 MASS CONCRETE PIERS @
1800mm MAX CTS (UNLESS SHOWN
OTHERWISE) THROUGH SOFT SOIL /
TREE ROOT AFFECTED SOIL INTO STILL
NATURAL GROUND, REFER TO DETAIL

Ø450 MASS CONCRETE PIERS @
1800mm MAX. CTS, EXTENDING
BEYOND ZONE OF INFLUENCE, REFER
TO EASEMENT PIERING DETAIL.

TYPICAL CORNER,
REFER TO DETAIL

INTERNAL WAFFLE POD
RIBS, REFER TO DETAIL -
NOMINAL 1200mm CENTRES

EASEMENT

CONCRETE FOOTING & SLAB PLAN - UNIT 2

WAFFLE PODS

SLAB TO BE 100mm MINIMUM THICK REINFORCED WITH SL82
MESH IN TOP THROUGHOUT, U.N.O. 20mm COVER TO INTERNAL
SURFACES & 30mm COVER TO EXTERNAL SURFACES.

SLAB TO BE PLACED ON APPROVED VOID FORMERS
PLACED ON COMPACTED FILL MATERIAL OVERLAID
WITH AN APPROVED WATERPROOF MEMBRANE.

XXX DENOTES SLAB THICKNESS

DENOTES USE OF 225mm DEEP VOID FORMERS
FOR WET AREA SETDOWN, REFER TO DETAIL

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0 1000 2000 3000mm
SCALE 1:100 AT ORIGINAL SIZE

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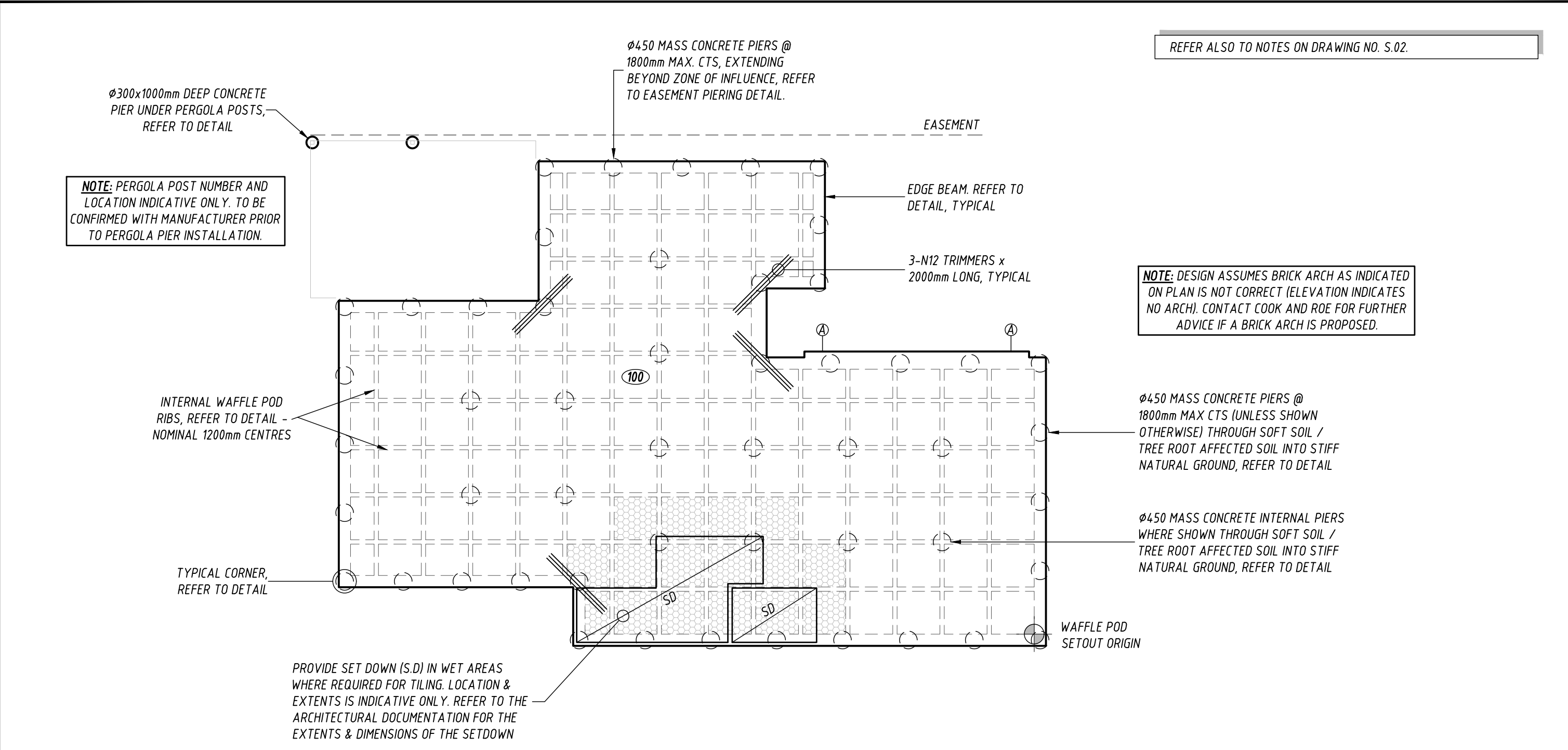
PROPOSED UNIT DEVELOPMENT
No. 62-64 QUEEN STREET, BOOROWA

Title

CONCRETE FOOTING & SLAB PLAN - UNIT 2

Client **CBN BUILDING**

Drawn	BJK	Designed	WGR	Approved	
Scale	1:100	Date	AUGUST 2025	Wayne Roe BE MIE Aust CPEng NER (2476635)	
Job No:	250493	Dwg No:	S.03	This Drawing must not be used for Construction unless signed as Approved	
				Original Size	A3



CONCRETE FOOTING & SLAB PLAN - UNIT 3

WAFFLE PODS

SLAB TO BE 100mm MINIMUM THICK REINFORCED WITH SL82 MESH IN TOP THROUGHOUT, U.N.O. 20mm COVER TO INTERNAL SURFACES & 30mm COVER TO EXTERNAL SURFACES.

SLAB TO BE PLACED ON APPROVED VOID FORMERS PLACED ON COMPACTED FILL MATERIAL OVERLAID WITH AN APPROVED WATERPROOF MEMBRANE.

- XXX DENOTES SLAB THICKNESS
- Denotes use of 225mm DEEP VOID FORMERS FOR WET AREA SETDOWN, REFER TO DETAIL
- A — DENOTES LOCATION OF MASONRY ARTICULATION JOINTS

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Rev	Revision Description	Drawn	Approved	Date



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Project

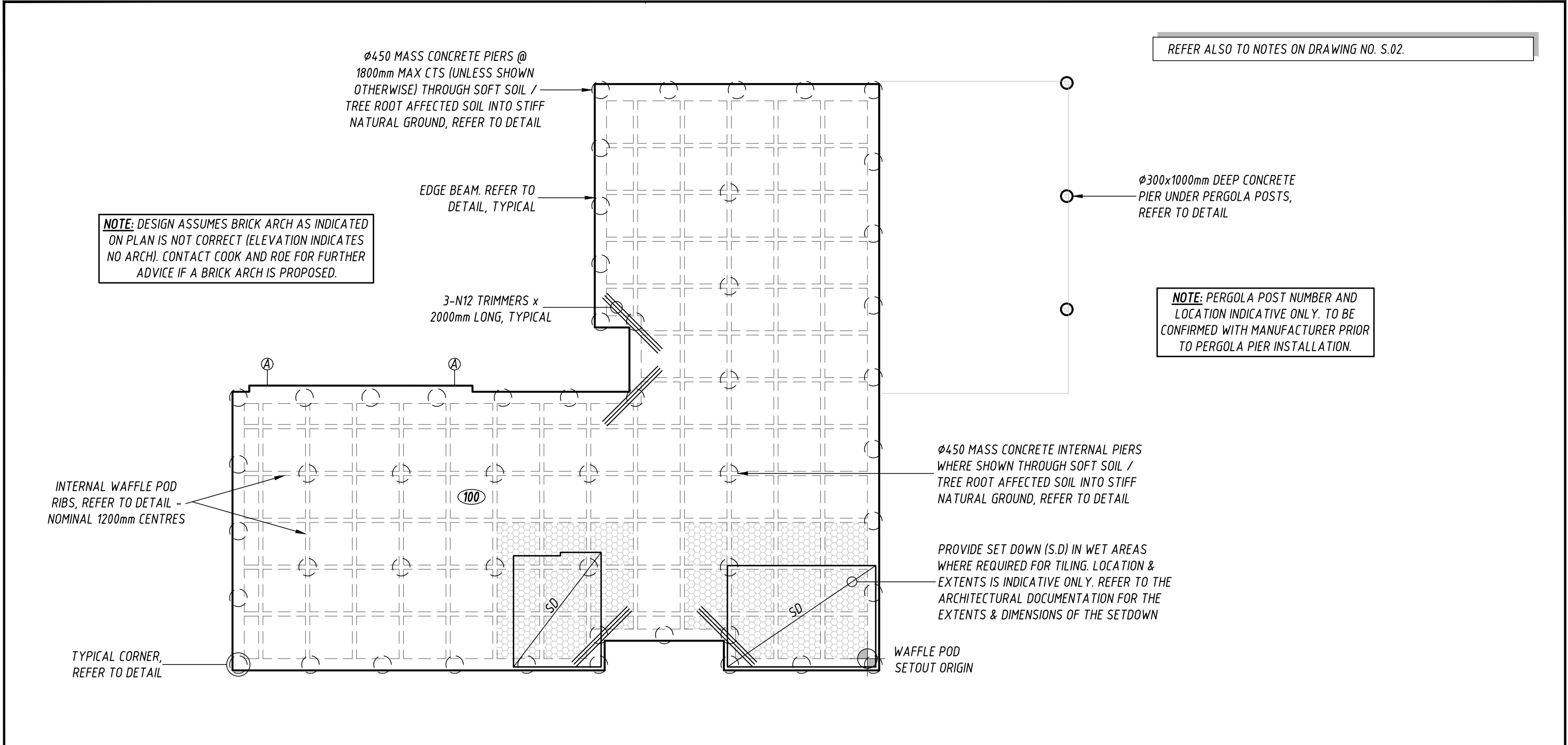
PROPOSED UNIT DEVELOPMENT
No. 62-64 QUEEN STREET, BOOROWA

Title

CONCRETE FOOTING & SLAB PLAN - UNIT 3

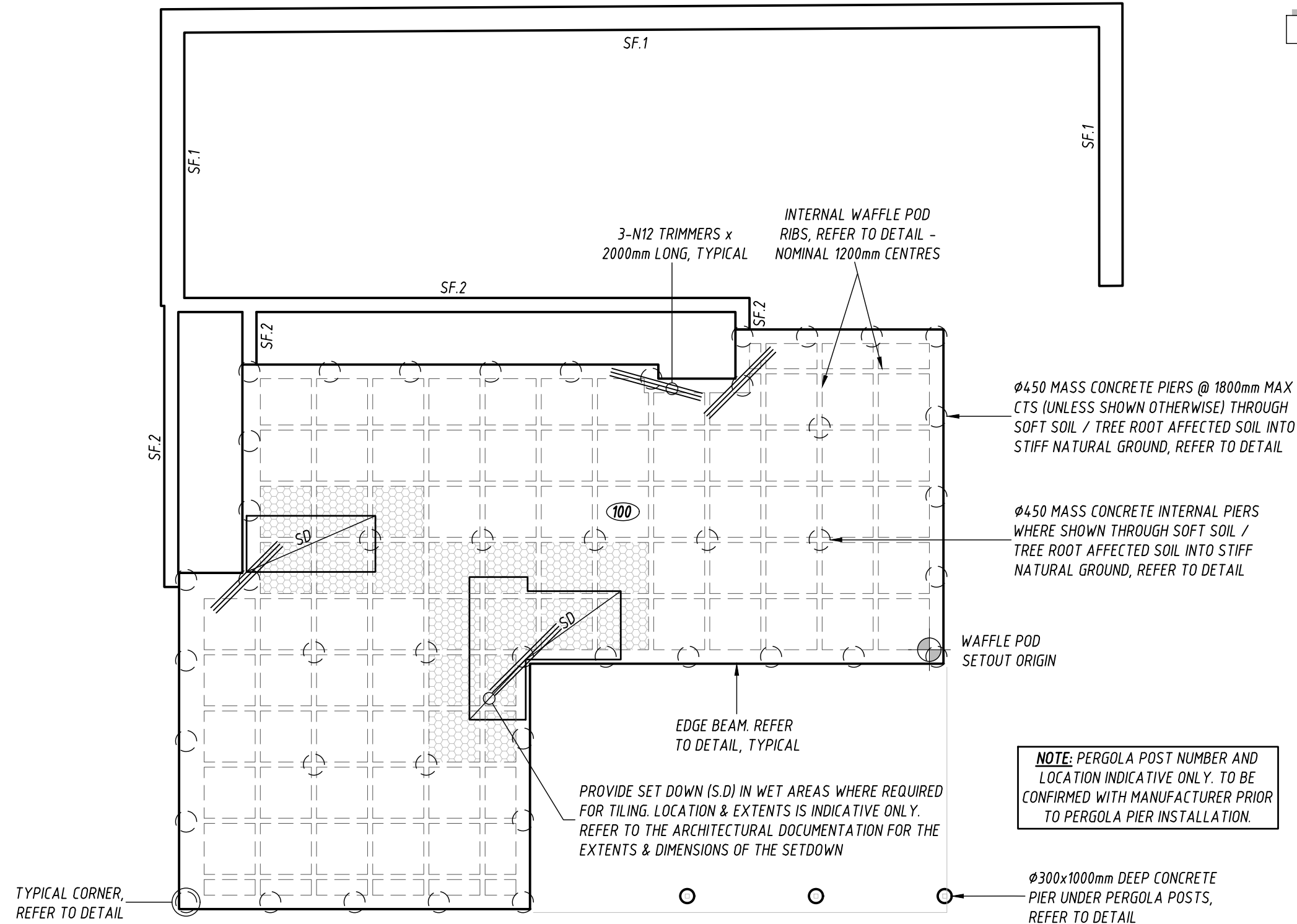
Client CBN BUILDING

Drawn	BJK	Designed	WGR	Approved	
Scale	1:100	Date	AUGUST 2025	Wayne Roe BE MIE Aust CPEng NER (2476635)	
Job No:	250493	Dwg No:	S.04	This Drawing must not be used for Construction unless signed as Approved	
				Original Size	A3



CONCRETE FOOTING & SLAB PLAN - UNIT 4 WAFFLE PODS SLAB TO BE 100mm MINIMUM THICK REINFORCED WITH SL82 MESH IN TOP THROUGHOUT, U.N.O. 20mm COVER TO INTERNAL SURFACES & 30mm COVER TO EXTERNAL SURFACES. SLAB TO BE PLACED ON APPROVED VOID FORMERS PLACED ON COMPACTED FILL MATERIAL OVERLAID WITH AN APPROVED WATERPROOF MEMBRANE. XXX DENOTES SLAB THICKNESS DENOTES USE OF 225mm DEEP VOID FORMERS FOR WET AREA SETDOWN, REFER TO DETAIL A — DENOTES LOCATION OF MASONRY ARTICULATION JOINTS									

REFER ALSO TO NOTES ON DRAWING NO. S.02.



CONCRETE FOOTING & SLAB PLAN - UNIT 6

WAFFLE PODS

SLAB TO BE 100mm MINIMUM THICK REINFORCED WITH SL82 MESH IN TOP THROUGHOUT, U.N.O. 20mm COVER TO INTERNAL SURFACES & 30mm COVER TO EXTERNAL SURFACES.

SLAB TO BE PLACED ON APPROVED VOID FORMERS PLACED ON COMPACTED FILL MATERIAL OVERLAID WITH AN APPROVED WATERPROOF MEMBRANE.

STRIP FOOTING

- FULLY LAP & TIE REINFORCEMENT AT ALL CORNERS & INTERSECTIONS, REFER TO DETAIL.
- STEP STRIP FOOTINGS AS REQUIRED TO FOLLOW NATURAL GROUND, REFER TO DETAIL.

XXX DENOTES SLAB THICKNESS

Denotes use of 225mm deep void formers for wet area setdown, refer to detail

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Rev	Revision Description	Drawn	Approved	Date



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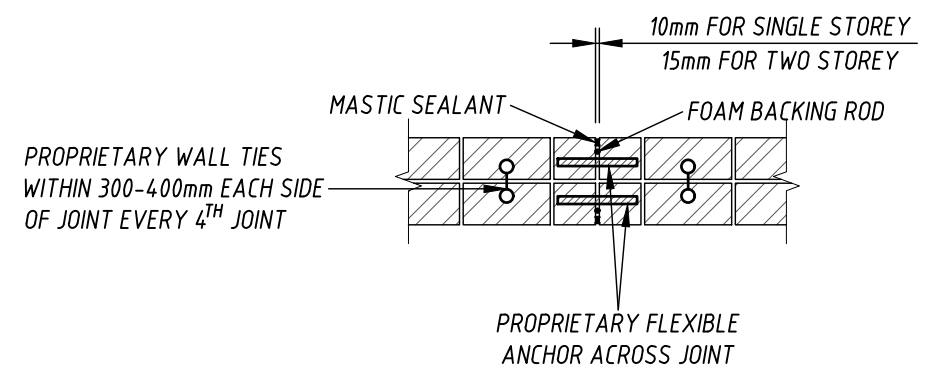
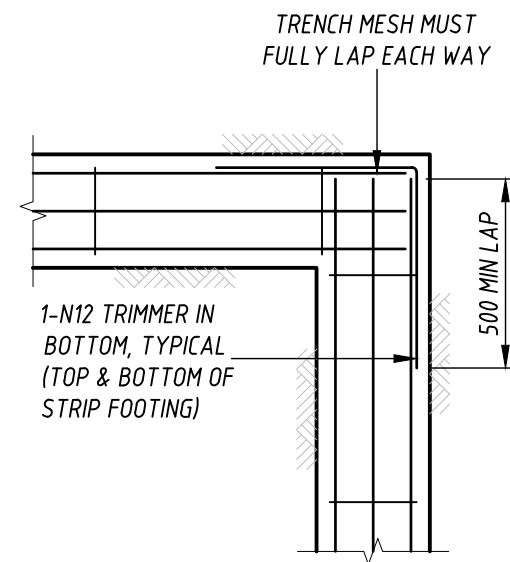
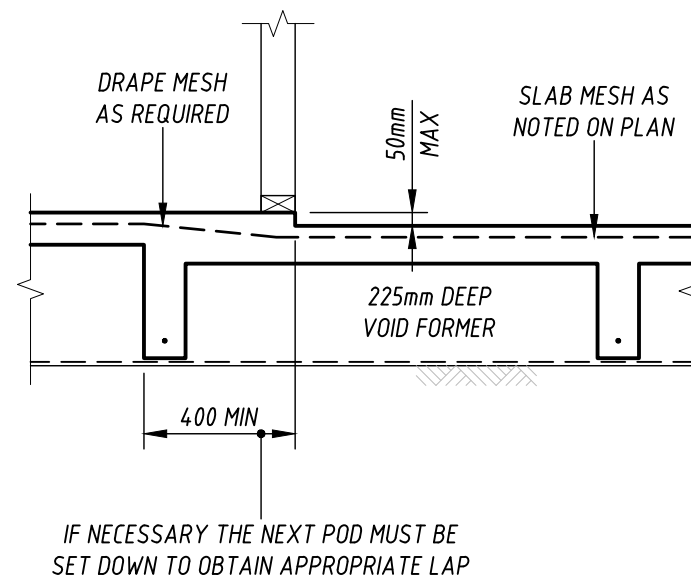
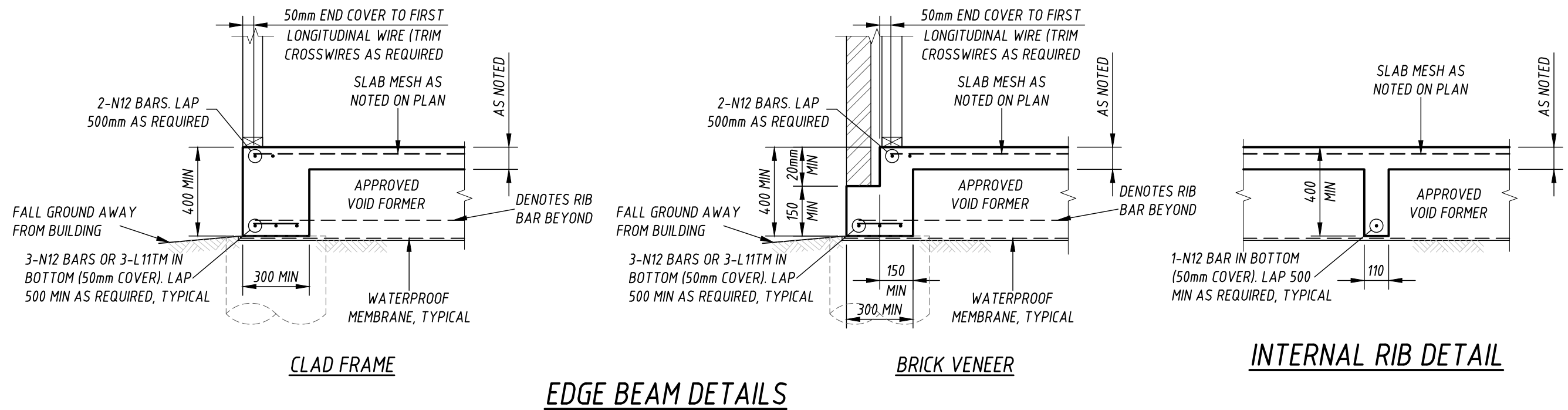
PROPOSED UNIT DEVELOPMENT
No. 62-64 QUEEN STREET, BOOROWA

Title

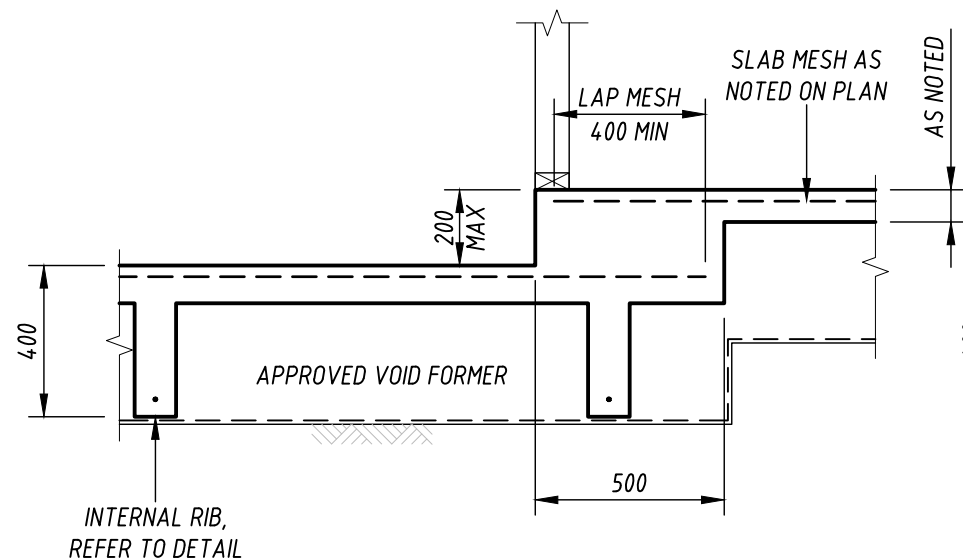
CONCRETE FOOTING & SLAB PLAN - UNIT 6

Client **CBN BUILDING**

Drawn	BJK	Designed	WGR	Approved	
Scale	1:100	Date	AUGUST 2025	Wayne Roe BE MIE Aust CPEng NER (2476635)	
Job No:	250493	Dwg No:	S.07	This Drawing must not be used for Construction unless signed as Approved	
				Original Size	A3

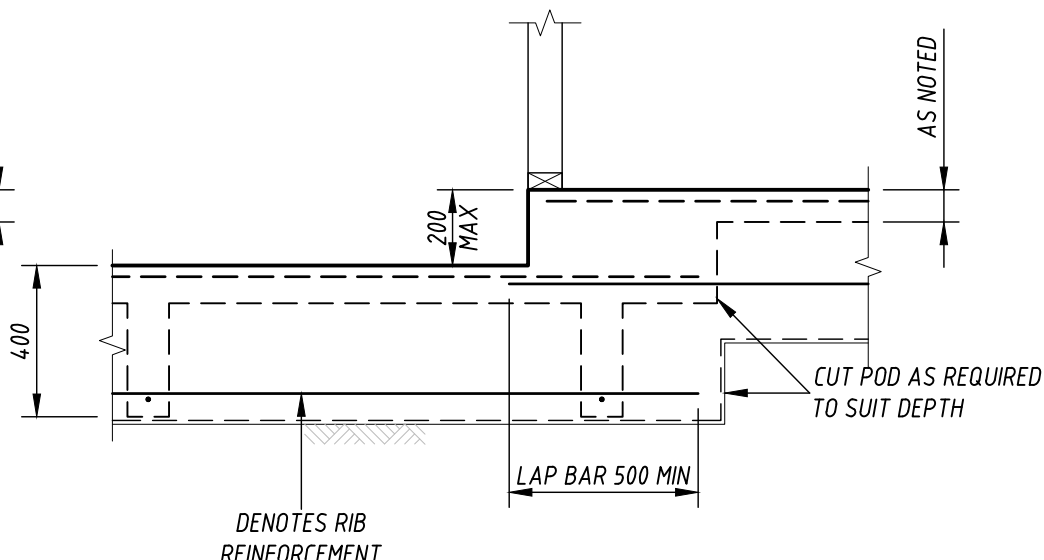


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										Drawn BJK Scale 1:20 Job No: 250493		Designed WGR Date AUGUST 2025 Dwg No: S.08		Approved Wayne Roe BE MIE Aust CPEng NER (2476635)	
A ISSUED FOR APPROVAL Rev Revision Description				BJK WGR 28.08.25 Drawn Approved Date										This Drawing must not be used for Construction unless signed as Approved Original Size A3	



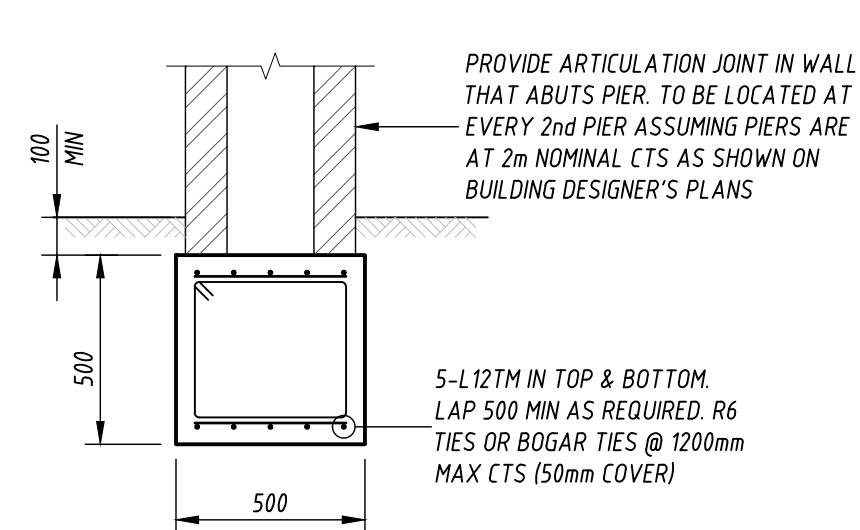
GARAGE AREA SETDOWN DETAIL

NOTE: RIB LOCATIONS SHOWN ARE INDICATIVE ONLY. REFER TO PLAN FOR RIB LOCATIONS.

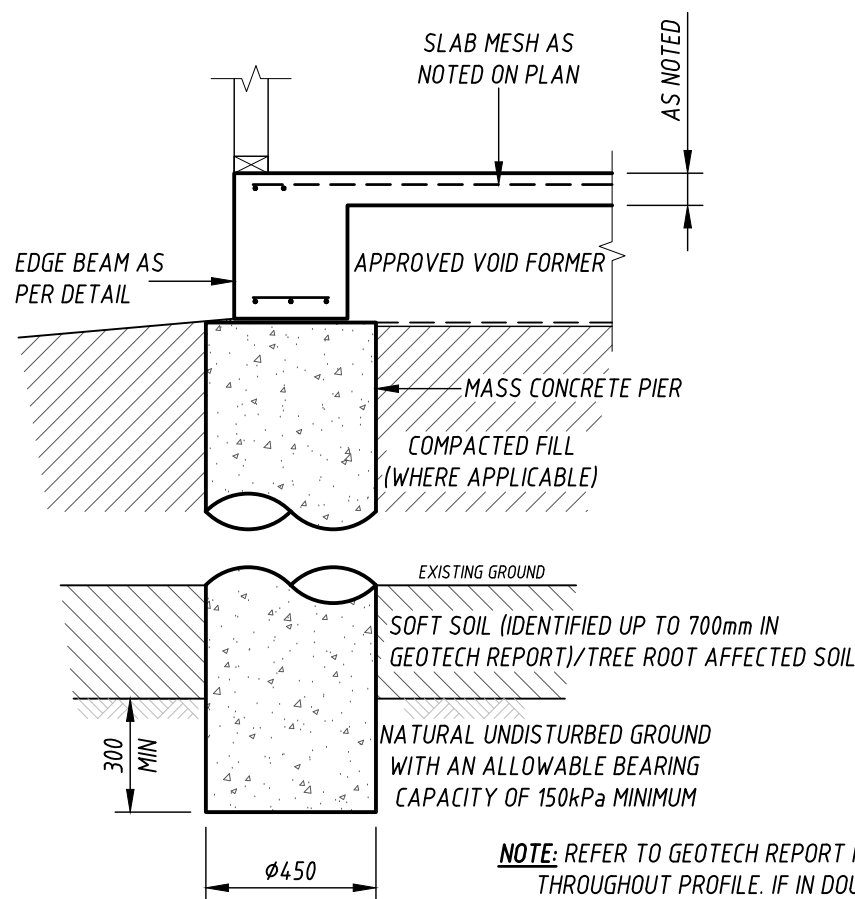


REINFORCEMENT AT STEP IN RIB

NOTE: FOR STEPS OF 85mm OR LESS, THE N12 RIB BAR CAN BE CONTINUOUS & DRAPED IF PREFERRED RATHER THAN LAPPING AS DETAILED ABOVE.

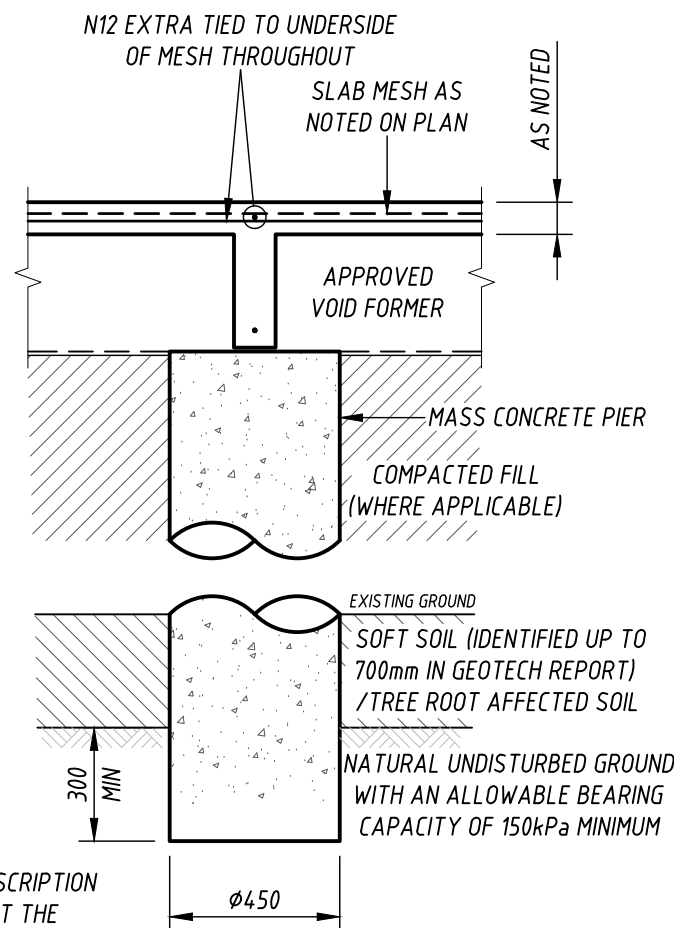


BRICK FENCE STRIP FOOTING (SF.1) DETAIL



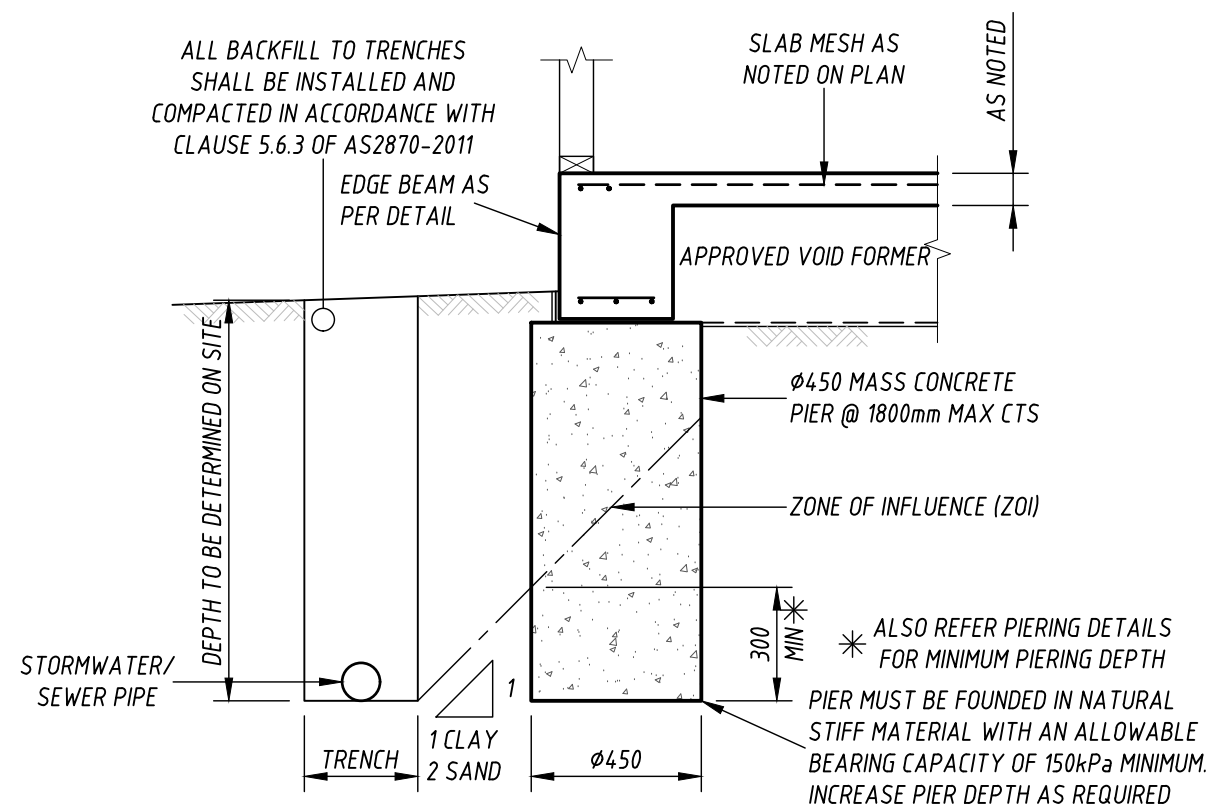
EXTERNAL MASS CONCRETE PIER DETAIL

WHERE REQUIRED



INTERNAL MASS CONCRETE PIER DETAIL

WHERE REQUIRED

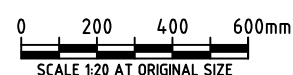


SEWER/STORMWATER PIERING DETAIL

(IF REQUIRED)

NOTE: IT IS THE BUILDERS RESPONSIBILITY TO DETERMINE IF PIERING IS REQUIRED AS THE DEPTH OF THE SERVICES & LOCATION HAS NOT BEEN MADE AVAILABLE TO THIS OFFICE

Rev	ISSUED FOR APPROVAL	BJK	WGR	28.08.25
1	Revision Description	Drawn	Approved	Date



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Project

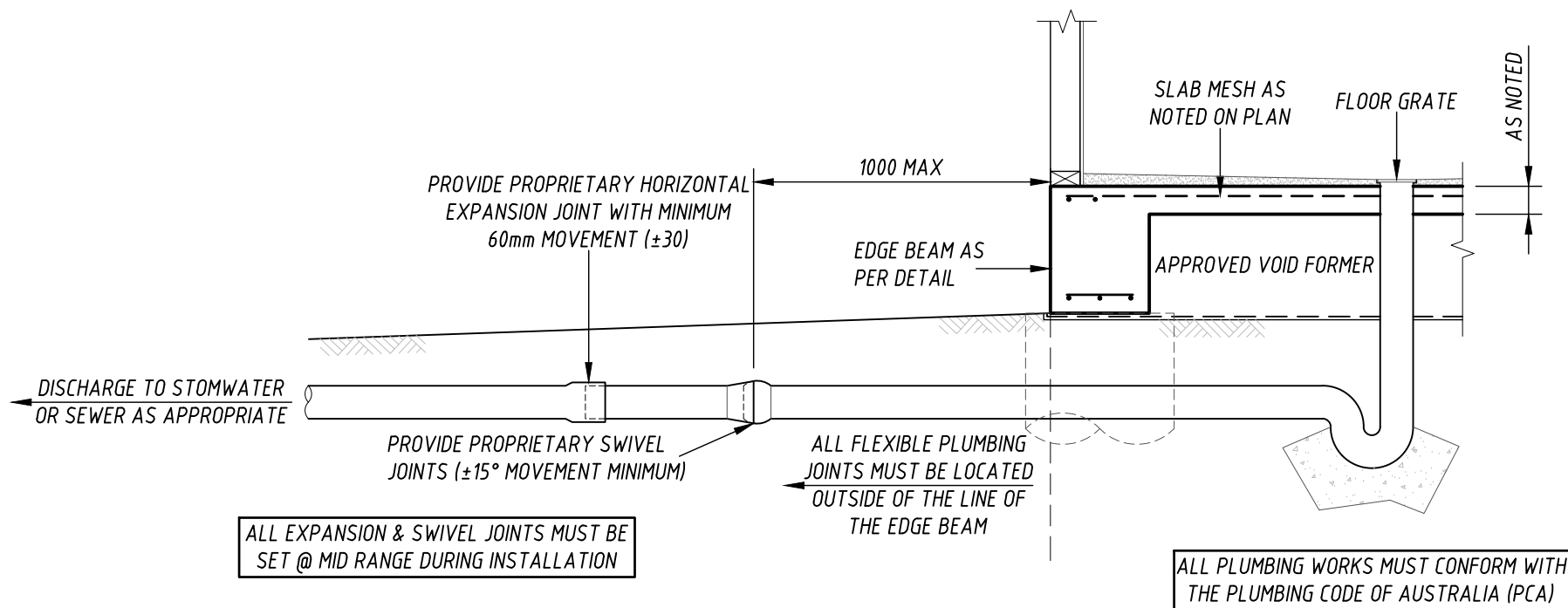
PROPOSED UNIT DEVELOPMENT
No. 62-64 QUEEN STREET, BOOROWA

Title

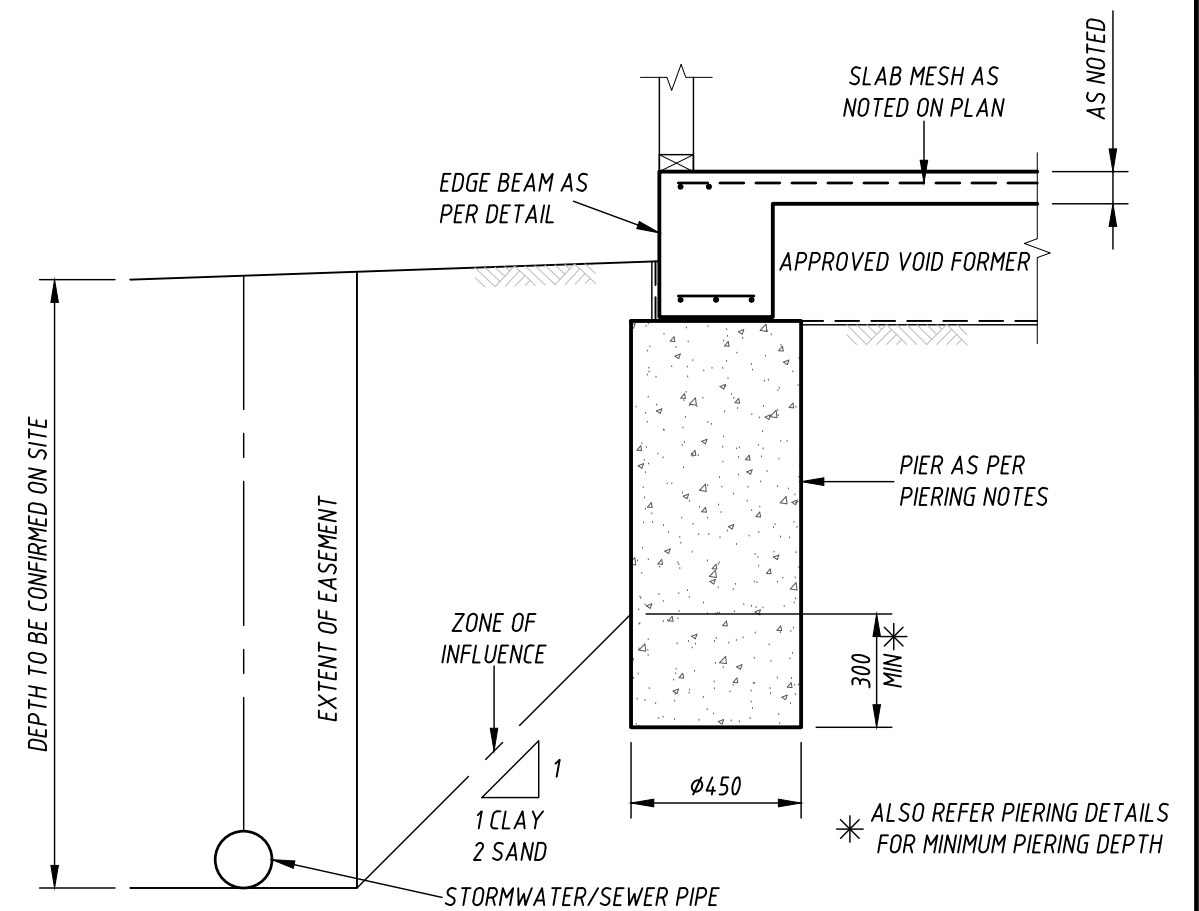
CONCRETE DETAILS '2'

Client **CBN BUILDING**

Drawn	BJK	Designed	WGR	Approved	
Scale	1:20	Date	AUGUST 2025	Wayne Roe BE MIE Aust CPEng NER (2476635)	
Job No:	250493	Dwg No:	S.09	This Drawing must not be used for Construction unless signed as Approved	
				Original Size	A3

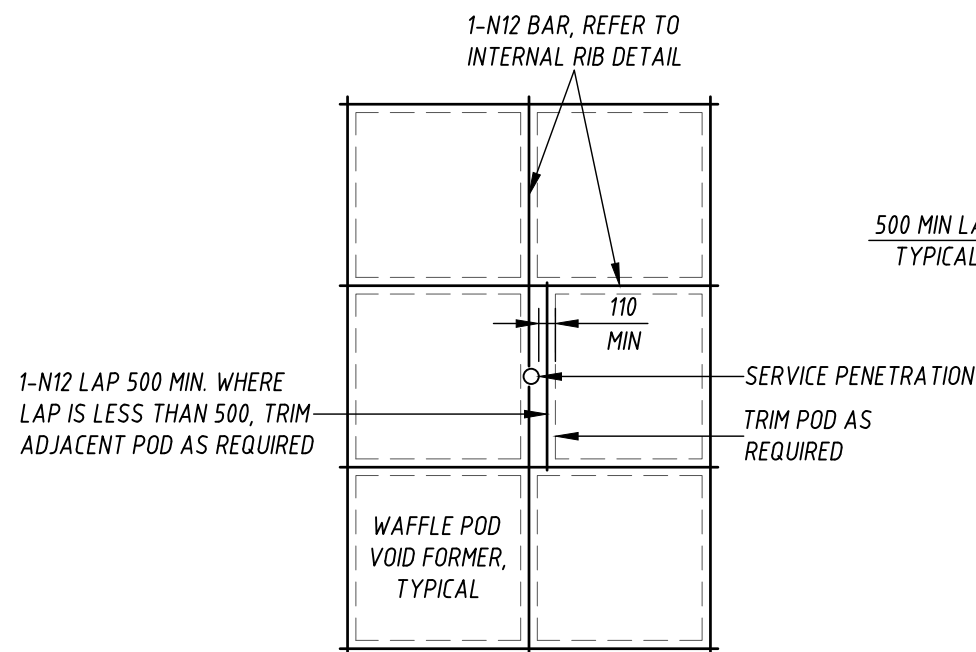


FLEXIBLE PLUMBING REQUIREMENTS



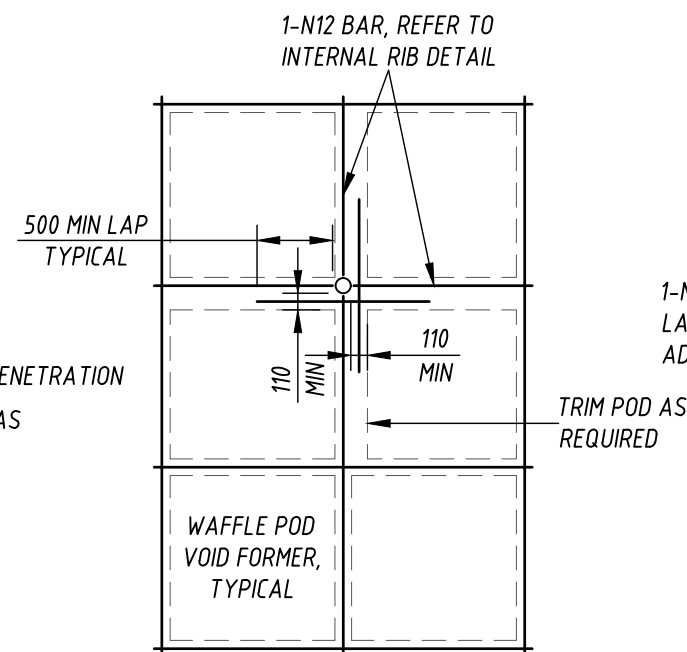
EASEMENT PIERING DETAIL

(IF REQUIRED)



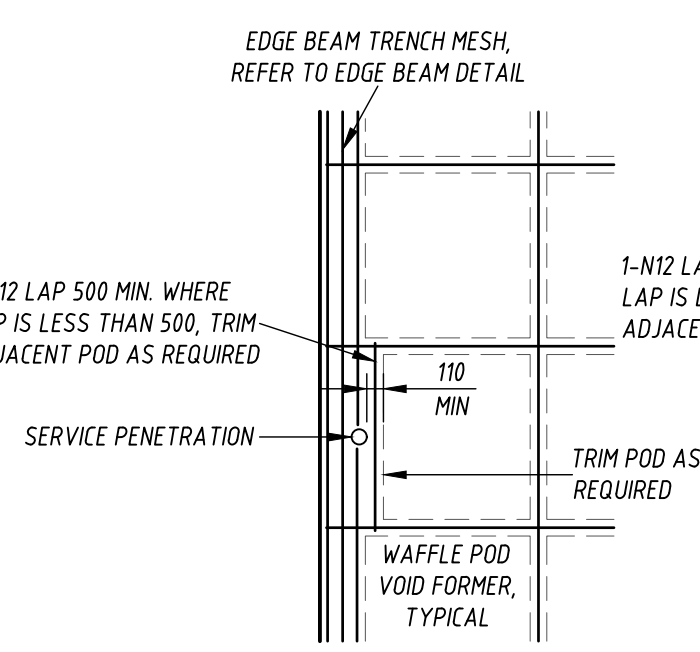
PIPE PENETRATION TO INTERNAL RIB DETAIL

SCALE 1:50



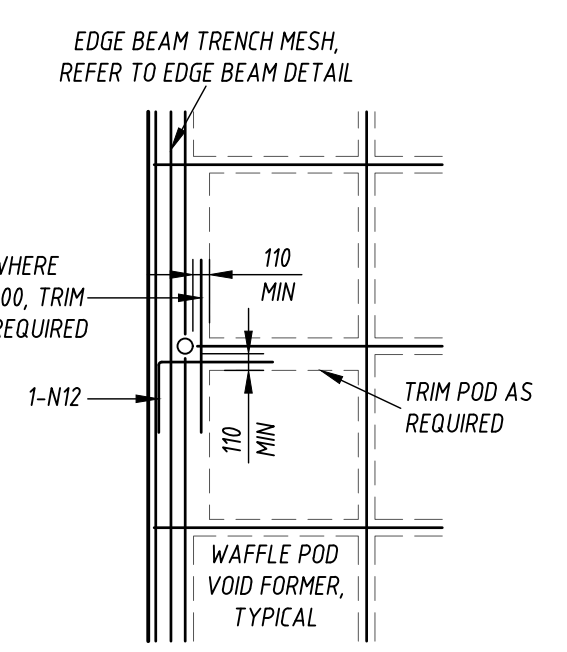
PIPE PENETRATION @ INTERNAL RIB INTERSECTION

SCALE 1:50



PIPE PENETRATION TO EDGE BEAM DETAIL

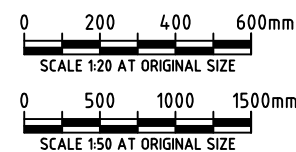
SCALE 1:50



PIPE PENETRATION @ EDGE BEAM & INTERNAL RIB DETAIL

SCALE 1:50

Rev	Revision Description	Drawn	Approved	Date
A	ISSUED FOR APPROVAL	BJK	WGR	28.08.25

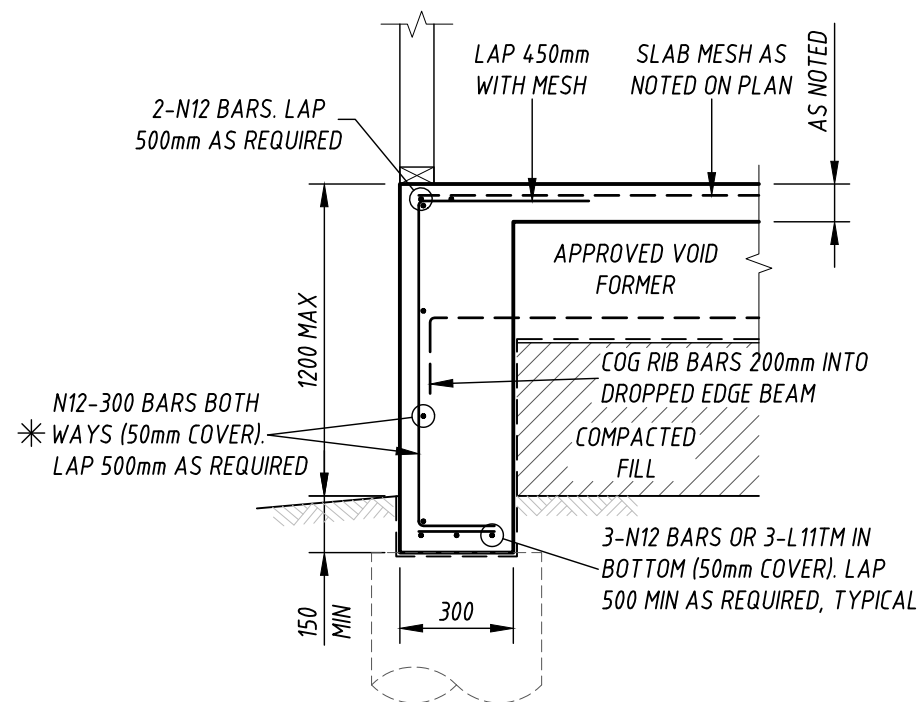


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Project	PROPOSED UNIT DEVELOPMENT No. 62-64 QUEEN STREET, BOOROWA
Title	CONCRETE DETAILS '3'

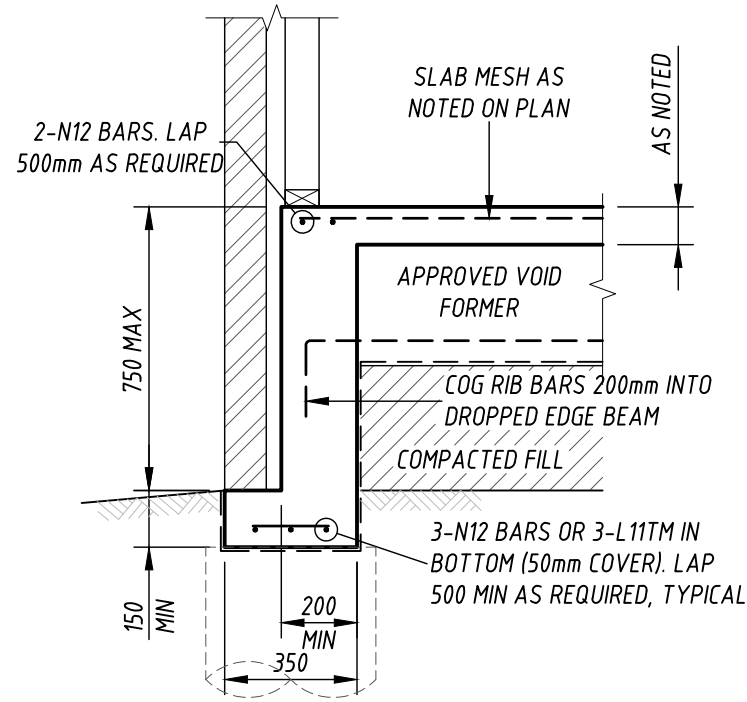
Client CBN BUILDING					
Drawn BJK		Designed WGR		Approved 	
Scale 1:20 U.N.O		Date AUGUST 2025		Wayne Roe BE MIE Aust CPEng NER (2476635)	
Job No: 250493		Dwg No: S.10		This Drawing must not be used for Construction unless signed as Approved	
				Original Size A3	



**CLAD FRAME EXTERNAL
DROPPED EDGE BEAM DETAIL**

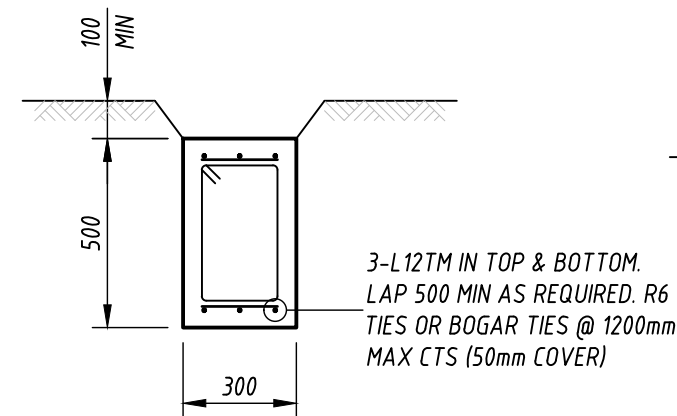
(IF REQUIRED)

* WHERE DROPPED EDGE IS LESS THAN 450mm ABOVE GROUND, N12-300 BARS EACH WAY MAY BE OMITTED

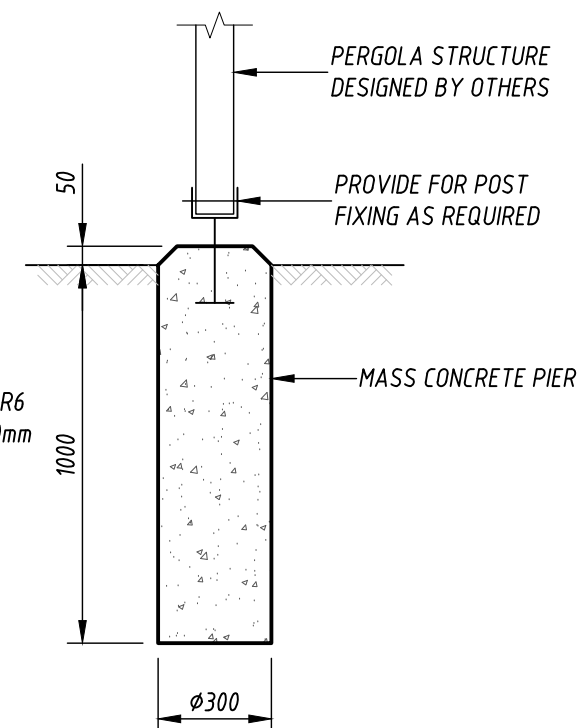


**MASONRY VENEER EXTERNAL
DROPPED EDGE BEAM DETAIL**

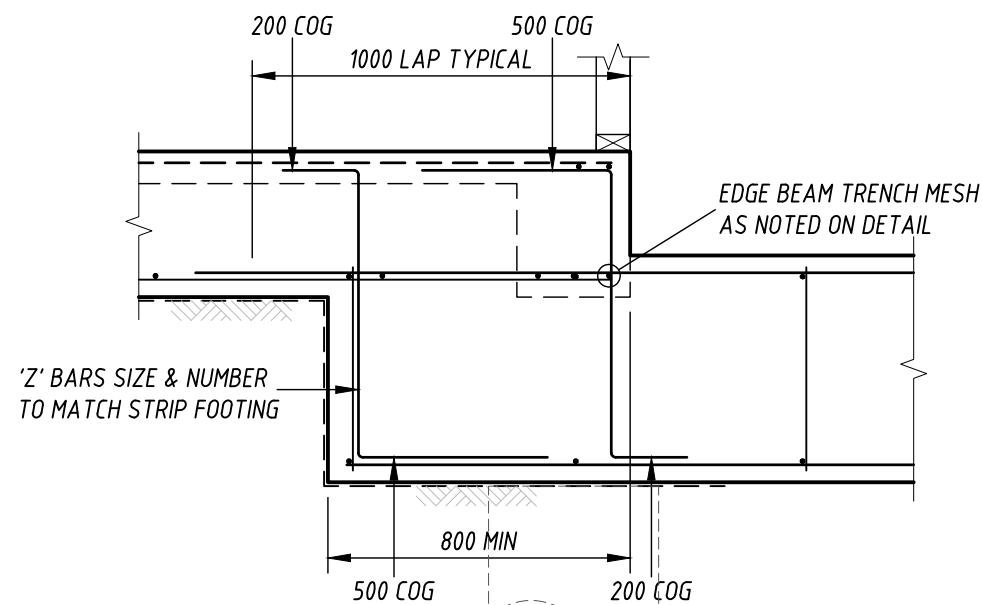
(IF REQUIRED)



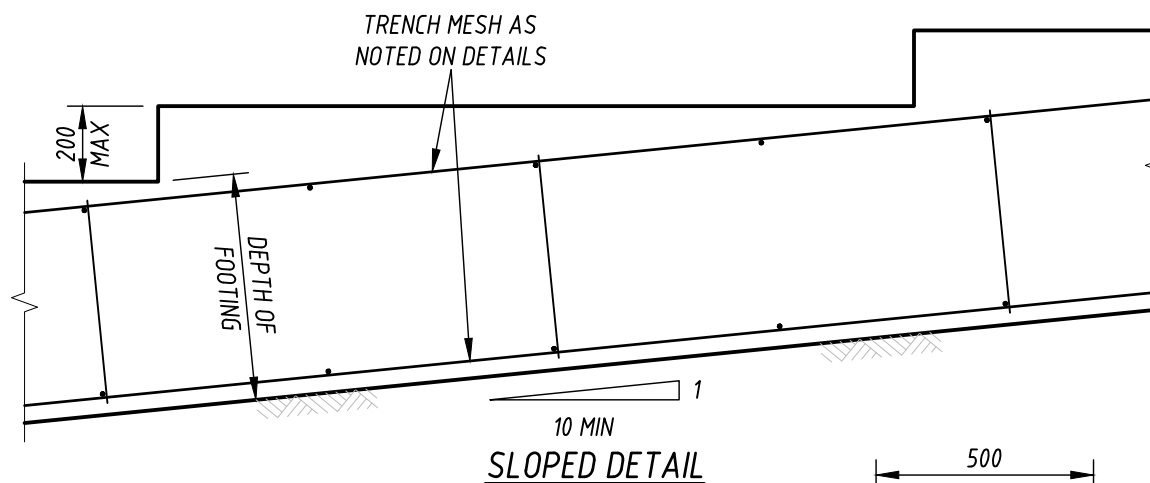
STRIP FOOTING (SF.2) DETAIL



PERGOLA POST PIER DETAIL

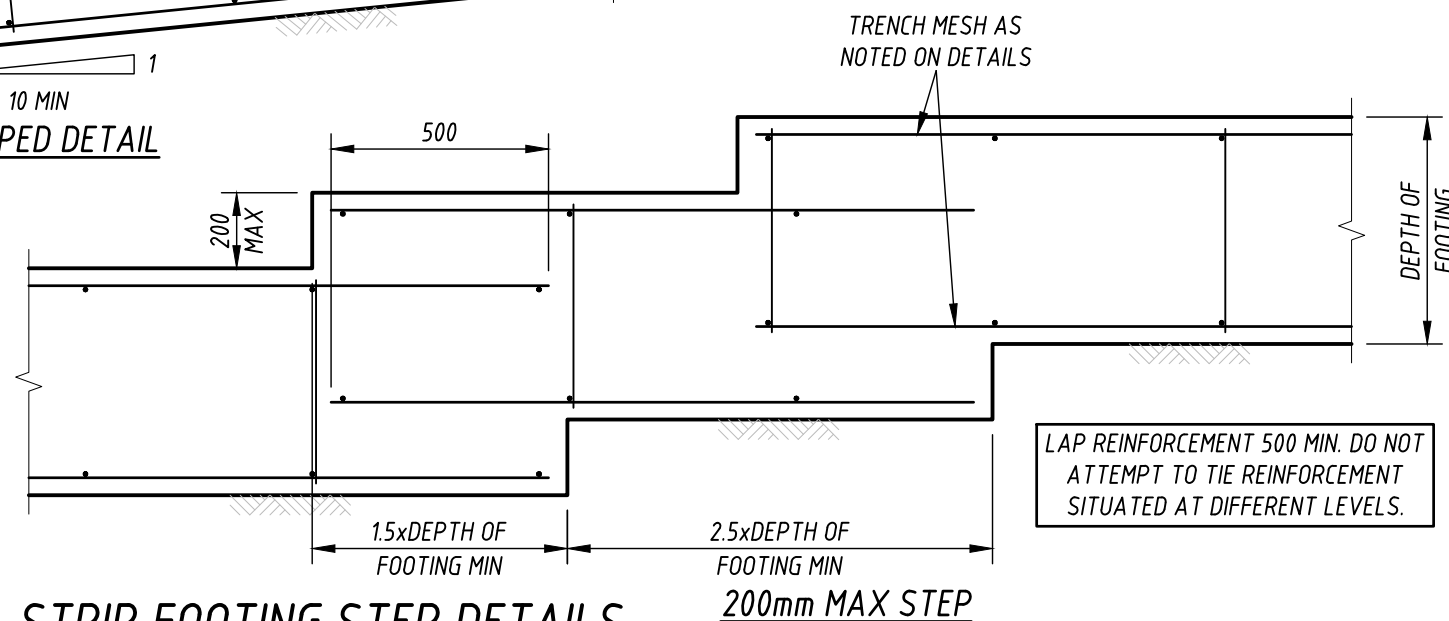


STRIP FOOTING TO EDGE BEAM DETAIL



TYPICAL STRIP FOOTING STEP DETAILS

(IF REQUIRED)



A	ISSUED FOR APPROVAL	BJK	WGR	28.08.25
Rev	Revision Description	Drawn	Approved	Date

0 200 400 600mm
SCALE 1:20 AT ORIGINAL SIZE

DO NOT SCALE

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Project

**PROPOSED UNIT DEVELOPMENT
No. 62-64 QUEEN STREET, BOOROWA**

Title

CONCRETE DETAILS '4'

Client **CBN BUILDING**

Drawn	BJK	Designed	WGR	Approved	<i>Wayne Roe</i>
Scale	1:20	Date	AUGUST 2025	Wayne Roe BE MIE Aust CPEng NER (2476635)	
Job No:	250493	Dwg No:	S.11	This Drawing must not be used for Construction unless signed as Approved	
				Original Size	A3

Appendix 7 – BASIX

BASIX REPORT/S

BASIX™ Certificate

Building Sustainability Index

www.planningportal.nsw.gov.au/development-and-assessment/basix

Multi Dwelling

Certificate number: 1810021M_02

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at www.planningportal.nsw.gov.au/definitions

Secretary

Date of issue: Wednesday, 05 November 2025

To be valid, this certificate must be submitted with a development application or lodged with a complying development certificate application within 3 months of the date of issue.



When submitting this BASIX certificate with a development application or complying development certificate application, it must be accompanied by NatHERS certificate 111111111111111.

Project summary

Project name	Queen Street Units_02
Street address	62-64 QUEEN STREET BOOROWA 2586
Local Government Area	HILLTOPS
Plan type and plan number	Deposited Plan DP1112582
Lot no.	4&5
Section no.	-
No. of residential flat buildings	0
Residential flat buildings: no. of dwellings	0
Multi-dwelling housing: no. of dwellings	6
No. of single dwelling houses	0

Project score

Water	✓ 47	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 61	Target 61
Materials	✓ -100	Target n/a

Certificate Prepared by

Name / Company Name: ANTHERA CRACK

ABN (if applicable): 40139422086

Description of project

Project address	
Project name	Queen Street Units_02
Street address	62-64 QUEEN STREET BOOROWA 2586
Local Government Area	HILLTOPS
Plan type and plan number	Deposited Plan DP1112582
Lot no.	4&5
Section no.	-
Project type	
No. of residential flat buildings	0
Residential flat buildings: no. of dwellings	0
Multi-dwelling housing: no. of dwellings	6
No. of single dwelling houses	0
Site details	
Site area (m²)	2898
Roof area (m²)	1100
Non-residential floor area (m²)	0
Residential car spaces	12
Non-residential car spaces	2

Common area landscape		
Common area lawn (m²)	0	
Common area garden (m²)	0	
Area of indigenous or low water use species (m²)	0	
Assessor details and thermal loads		
Assessor number	10197	
Certificate number	11111111111111	
Climate zone	65	
Project score		
Water	✔ 47	Target 40
Thermal Performance	✔ Pass	Target Pass
Energy	✔ 61	Target 61
Materials	✔ -100	Target n/a

Description of project

The tables below describe the dwellings and common areas within the project

Multi-dwelling houses

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
1	2	74.7	10.5	80	15
5	3	101.5	11.5	80	15

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
2	3	94.6	11.4	80	15
6	2	74.5	10	80	15

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
3	3	94.4	8.8	80	15

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
4	3	102.5	9.8	80	15

No common areas specified.

Schedule of BASIX commitments

1. Commitments for multi-dwelling housing

(a) Dwellings

- (i) Water
- (ii) Energy
- (iii) Thermal Performance and Materials

2. Commitments for single dwelling houses

(a) Dwellings

- (i) Water
- (ii) Energy
- (iii) Thermal Performance and Materials

3. Commitments for common areas and central systems/facilities for the development (non-building specific)

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

1. Commitments for multi-dwelling housing

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install: (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓ ✓	✓ ✓
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	
(g) The pool or spa must be located as specified in the table.	✓	✓	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	4 star (> 4.5 but ≤ 6 L/min)	4 star	4 star	4 star	-	-	-	-	-	-	-	-	-	-

	Alternative water source							
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
All dwellings	Individual water tank (No. 1)	Tank size (min) 1500 liters	To collect run-off from at least: 200 square metres of roof area;	yes	yes	yes	no	no

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓ ✓ ✓	✓
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	
(j) The applicant must install the photovoltaic system specified for the dwelling under the "Photovoltaic system" heading of the "Alternative energy" column of the table below, and connect the system to that dwelling's electrical system.	✓	✓	✓

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	gas instantaneous - 5 star	individual fan, ducted to façade or roof	manual on / timer off	individual fan, ducted to façade or roof	manual switch on/off	natural ventilation only, or no laundry	-

	Cooling		Heating		Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
All dwellings	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1	yes

	Individual pool			Individual spa		Appliances other efficiency measures				
Dwelling no.	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	-	induction cooktop & electric oven	-	-	no	yes

	Alternative energy		
Dwelling no.	Photovoltaic system (min rated electrical output in peak kW)	Photovoltaic collector installation	Orientation inputs
All dwellings	-	-	-

(iii) Thermal Performance and Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.			
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.	✓		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.		✓	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
(g) Where there is an in-slab heating or cooling system, the applicant must:	✓	✓	✓
(aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or			

(iii) Thermal Performance and Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.			
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✓	✓	✓
(i) The applicant must show on The plans accompanying The development application for The proposed development, The locations of ceiling fans set out in The Assessor Certificate.	✓		
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		✓	

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
1	129.1	6.5	135.600
2	143.2	12.2	155.400
3	120.9	8.3	129.200
4	123.8	9.8	133.600
5	118.9	5.4	124.300
All other dwellings	126.3	4.7	131.000

	Construction of floors and walls				
Dwelling no.	Concrete slab on ground (m ²)	Suspended floor with open subfloor (m ²)	Suspended floor with enclosed subfloor (m ²)	Suspended floor above garage (m ²)	Primarily rammed earth or mudbrick walls
1	85.2	-	-	-	no
2	106	-	-	-	no
3	103.1	-	-	-	no
4	112.3	-	-	-	no
5	113.1	-	-	-	no
All other dwellings	84.4	-	-	-	no

	Floor types									
	Concrete slab on ground				Suspended floor above enclosed subfloor			Suspended floor above open subfloor		
Dwelling no.	Area (m²)	Insulation	Low emissions option	Dematerialisation	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation
1	85.2	-	-	waffle pod slab	-	-	-	-	-	-
2	106	-	-	waffle pod slab	-	-	-	-	-	-
3	103.1	-	-	waffle pod slab	-	-	-	-	-	-
4	112.3	-	-	waffle pod slab	-	-	-	-	-	-
5	113.1	-	-	waffle pod slab	-	-	-	-	-	-
All other dwellings	84.4	-	-	waffle pod slab	-	-	-	-	-	-

	Floor types										
	First floor above habitable rooms or mezzanine			Suspended floor above garage			Garage floor				
Dwelling no.	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation	Low emissions option	Dematerialisation
1	-	-	-	-	-	-	concrete slab on ground	44.4	-	-	waffle pod slab
2	-	-	-	-	-	-	concrete slab on ground	45	-	-	waffle pod slab
3	-	-	-	-	-	-	concrete slab on ground	51.2	-	-	waffle pod slab
4	-	-	-	-	-	-	concrete slab on ground	48.6	-	-	waffle pod slab
5	-	-	-	-	-	-	concrete slab on ground	44.8	-	-	waffle pod slab
All other dwellings	-	-	-	-	-	-	concrete slab on ground	47	-	-	waffle pod slab

	External walls							
	External wall type 1				External wall type 2			
Dwelling no.	Wall type	Area (m²)	Insulation	Low emissions option	Wall type	Area (m²)	Insulation	Low emissions option
1	framed (fibre cement sheet or boards), frame : timber - H2 treated softwood	91.9	fibreglass batts or roll	-	-	-	-	-
2	framed (fibre cement sheet or boards), frame : timber - H2 treated softwood	104.1	fibreglass batts or roll	none	brick veneer, frame : timber - H2 treated softwood	2.3	fibreglass batts or roll	none
3	framed (fibre cement sheet or boards), frame : timber - H2 treated softwood	100.4	fibreglass batts or roll	-	-	-	-	-
4	framed (fibre cement sheet or boards), frame : timber - H2 treated softwood	110.6	fibreglass batts or roll	-	-	-	-	-
5	framed (fibre cement sheet or boards), frame : timber - H2 treated softwood	108.7	fibreglass batts or roll	none	brick veneer, frame : timber - H2 treated softwood	2.3	fibreglass batts or roll	none
All other dwellings	framed (fibre cement sheet or boards), frame : timber - H2 treated softwood	89.8	fibreglass batts or roll	-	-	-	-	-

	External walls							
	External wall type 3				External wall type 4			
Dwelling no.	Wall type	Area (m²)	Insulation	Low emissions option	Wall type	Area (m²)	Insulation	Low emissions option
All dwellings	-	-	-	-	-	-	-	-

	Internal walls								
	Internal walls shared with garage			Internal wall type 1			Internal wall type 2		
Dwelling no.	Wall type	Area (m²)	Insulation	Wall type	Area (m²)	Insulation	Wall type	Area (m²)	Insulation
1	plasterboard, frame: timber - H2 treated softwood	23.6	fibreglass batts or roll	plasterboard, frame: timber - H2 treated softwood	23.6	-	-	-	-
3	plasterboard, frame: timber - H2 treated softwood	55.5	fibreglass batts or roll	plasterboard, frame: timber - H2 treated softwood	17.1	-	-	-	-
4	plasterboard, frame: timber - H2 treated softwood	64.2	fibreglass batts or roll	plasterboard, frame: timber - H2 treated softwood	24.7	-	-	-	-
5	plasterboard, frame: timber - H2 treated softwood	68.1	fibreglass batts or roll	plasterboard, frame: timber - H2 treated softwood	23.1	-	-	-	-
All other dwellings	plasterboard, frame: timber - H2 treated softwood	68.4	fibreglass batts or roll	plasterboard, frame: timber - H2 treated softwood	23.2	-	-	-	-

	Ceiling and roof								
	Flat ceiling / pitched roof			Raked ceiling / pitched or skillion roof			Flat ceiling / flat roof		
Dwelling no.	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation
1	framed - metal roof,	198	Ceiling: fibreglass batts or	-	-	Ceiling:,Roof:	-	-	Ceiling:,Roof:

	Ceiling and roof								
	Flat ceiling / pitched roof			Raked ceiling / pitched or skillion roof			Flat ceiling / flat roof		
Dwelling no.	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation
	frame: timber - H2 treated softwood		roll, Roof: foil backed blanket						
2	framed - metal roof, frame: timber - H2 treated softwood	213	Ceiling: fibreglass batts or roll, Roof: foil backed blanket	-	-	Ceiling:, Roof:	-	-	Ceiling:, Roof:
3	framed - metal roof, frame: timber - H2 treated softwood	202	Ceiling: fibreglass batts or roll, Roof: foil backed blanket	-	-	Ceiling:, Roof:	-	-	Ceiling:, Roof:
4	framed - metal roof, frame: timber - H2 treated softwood	226	Ceiling: fibreglass batts or roll, Roof: foil backed blanket	-	-	Ceiling:, Roof:	-	-	Ceiling:, Roof:
5	framed - metal roof, frame: timber - H2 treated softwood	222	Ceiling: fibreglass batts or roll, Roof: foil backed blanket	-	-	Ceiling:, Roof:	-	-	Ceiling:, Roof:
All other dwellings	framed - metal roof, frame: timber - H2 treated softwood	197	Ceiling: fibreglass batts or roll, Roof: foil backed blanket	-	-	Ceiling:, Roof:	-	-	Ceiling:, Roof:

	Glazing type			Frame types				
Dwelling no.	Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)
1	17.8	-	-	17.8	-	-	-	-
2	21.7	-	-	21.7	-	-	-	-
3	23.5	-	-	23.5	-	-	-	-

	Glazing type			Frame types				
Dwelling no.	Single glazing (m ²)	Double glazing (m ²)	Triple glazing (m ²)	Aluminium frames (m ²)	Timber frames (m ²)	uPVC frames (m ²)	Steel frames (m ²)	Composite frames (m ²)
4	20.2	-	-	20.2	-	-	-	-
5	19.6	-	-	19.6	-	-	-	-
All other dwellings	17.2	-	-	17.2	-	-	-	-

2. Commitments for single dwelling houses

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install: (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓ ✓	✓ ✓
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	
(g) The pool or spa must be located as specified in the table.	✓	✓	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓
(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓ ✓ ✓	✓
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	
(j) The applicant must install the photovoltaic system specified for the dwelling under the "Photovoltaic system" heading of the "Alternative energy" column of the table below, and connect the system to that dwelling's electrical system.	✓	✓	✓
(iii) Thermal Performance and Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.			

(iii) Thermal Performance and Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.	✓		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.		✓	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
(g) Where there is an in-slab heating or cooling system, the applicant must: (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.	✓	✓	✓
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✓	✓	✓
(i) The applicant must show on The plans accompanying The development application for The proposed development, The locations of ceiling fans set out in The Assessor Certificate.	✓		
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		✓	

3. Commitments for common areas and central systems/facilities for the development (non-building specific)

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✓	✓

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	no common laundry facility

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✓	✓
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✓	✓	✓

Central energy systems	Type	Specification
Other	-	-

Notes

1. In these commitments, "applicant" means the person carrying out the development.
2. The applicant must identify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and specifications accompanying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or reference as is given to that dwelling, building or common area in this certificate.
3. This note applies if the proposed development involves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both residential and non-residential purposes). Commitments in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of the building or development to be used for residential purposes.
4. If this certificate lists a central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that system need only be installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating is specified in a commitment, this is a minimum rating.
6. All alternative water systems to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: NSW Health does not recommend that stormwater, recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for human consumption in areas with potable water supply.

Legend

1. Commitments identified with a "✔" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
2. Commitments identified with a "✔" in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
3. Commitments identified with a "✔" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).

Nationwide House Energy Rating Scheme® Class 1 Summary

NatHERS® Certificate No. #HR-NGTPE2-01

Generated on 25 Aug 2025 using Hero 4.1

Property

Address 62-64 Queen Street, Boorowa, NSW, 2586
Lot/DP Lots 4&5/DP1112582
NatHERS climate zone 65 - Orange AP



Accredited assessor

Name Anthea Crack
Business name True North Consulting
Email anthea@truenorthconsult.com.au
Phone +61 447259470
Accreditation No. 10197
Assessor Accrediting Organisation HERA

Verification

To verify this certificate, scan the QR code or visit <http://www.hero-software.com.au/pdf/HR-NGTPE2-01>.
When using either link, ensure you are visiting <http://www.hero-software.com.au>



National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

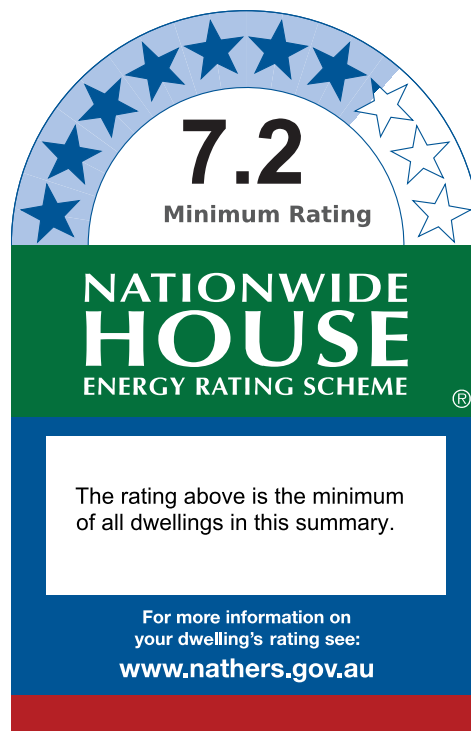
The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
HR-R7SUZA-01	Unit 01	120.1 (150)	6.9 (18)	127.0	7.7	n/a
HR-M51LG0-01	Unit 02	134.2 (150)	12.5 (18)	146.6	7.2	n/a
HR-B87ILR-01	Unit 03	111.8 (150)	8.1 (18)	119.9	7.8	n/a
HR-ERIL63-01	Unit 04	116.3 (150)	10.0 (18)	126.4	7.7	n/a
HR-BLBYH7-01	Unit 05	110.3 (150)	5.3 (18)	115.6	7.9	n/a

Thermal performance Star rating



Whole of Home performance rating

No Whole of Home performance rating generated for this certificate or not completed for all dwellings.



Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
HR-03H55O-01	Unit 06	117.9 (150)	4.9 (18)	122.8	7.8	n/a

Explanatory notes

About the ratings

This is a summary of NCC Class 1 dwellings in a development. For more details of each dwelling refer to the individual dwelling's certificate using the certificate number in summary of all dwellings table.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the energy loads and societal cost. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy production and storage to estimate the homes societal cost.

For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

Accredited Assessors

For high quality NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Licensed assessors in the Australian Capital Territory (ACT) can produce assessments for regulatory purposes only, using endorsed software, as listed on the ACT licensing register.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in certificates is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy use, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Appendix 8 – STORMWATER CONTROLS

SEWER & STORMWATER FLOWS DESIGN



SRD LAND CONSULTING

Surveying - Town Planning - Engineering

ACN: 668 441 254

Our Ref: 40737

Hilltops Council
189 Boorowa St
Young NSW 2594

RE: Stormwater Design 62-64 Queen St, Boorowa

1. from the architectural plans, sub-catchments were determined including effective impervious areas (roofs, driveways, paved or sealed areas) and pervious areas (gardens, grassed etc).
2. From the site plan, flow lengths and grades were determined.
3. From the above plans, a drainage network to the nearest council stormwater infrastructure was fixed. Queen Street is a kerb and gutter sealed road discharging westerly to the pit at the Intersection of Scott Street, and discharging easterly from the driveway entry just east of the subject land.
4. Using current (2025) version of Landmark engineering software, and current BOM 2025 rainfall coefficients and Rational Method, an initial design providing pipe sizes, pit sizes, discharge and velocity rates was calculated.
5. From an export to DRAINS (Watercom, 2025), the network was analysed using 20%AEP for the minor flood and 1%AEP for the major flood. Safe depths, volumes and velocities of bypass flows for the appropriate shapes and routes of bypass flows were applied, including the gutter flow along Queen Street and results provided based on the initial network, with required adjustments from DRAINS being applied to the design and long sections. Initial loss Continuous loss (IL-CL) hydrology model for Boorowa from ARR Data Hub was adopted.
6. The results, and long sections have been shown on the design plans.

Regards
James McMahon
Registered Surveyor

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YOUNG OFFICE
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YOUNG NSW 2594
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DRAINS results prepared from Version 2025.01.9147.24925

PIT / NODE DETAILS				Version 8	
Name	Max HGL	Max Pond HGL	Max Surface Flow Arrive Volume (cum/s)	Max Pond Freeboard (m)	Constraint
PitA-1	488.3		0.009	0.69	0.003 Inlet Capacity
PitA-2	488.21		0.018	0.49	0.008 Inlet Capacity
PitA-3	488.01		0.031	0.45	0.015 Inlet Capacity
PitA-4	487.93		0.03	0.36	0.015 Inlet Capacity
PitA-5	487.83		0.025	0.39	0.011 Inlet Capacity
PitA-6	487.67		0.014	0.34	0.011 Inlet Capacity
PitA-7	486.89		0.014		
PitC-1	488.09		0.005	0.51	0.002 Inlet Capacity
PitB-1	487.84		0.005	0.46	0.002 Inlet Capacity
PitD-1	488.32		0.004	0.51	0.001 Inlet Capacity
PitE-1	488.37		0.005	0.49	0.002 Inlet Capacity
PitF-1	488.13		0.006	0.59	0.002 Inlet Capacity
PitG-1	487.85		0.005	0.53	0.001 Inlet Capacity

SUB-CATCHMENT DETAILS						
Name	Max Flow Q (cu.m/s)	EIA Max Q (cu.m/s)	Remaining EIA Max Q (cu.m/s)	RIA Tc (min)	PA Tc (min)	Due to Storm
CaA-1	0.008	0.007	0.001	6.53	0	18.68 1% AEP, 10 min burst, Storm 1
CaA-2	0.01	0.01	0.001	6.39	0	13.8 1% AEP, 10 min burst, Storm 1
CaA-3	0.017	0.016	0.001	6.57	0	14.23 1% AEP, 10 min burst, Storm 5
CaA-4	0.013	0.013	0.001	6.34	0	12.35 1% AEP, 10 min burst, Storm 5
CaA-5	0.004	0.001	0.004	5.94	0	19.55 1% AEP, 30 min burst, Storm 6
CaC-1	0.004	0.003	0.002	6.63	0	18.9 1% AEP, 30 min burst, Storm 6
CaB-1	0.004	0.004	0.001	6.29	0	18.68 1% AEP, 10 min burst, Storm 1
CaD-1	0.004	0.003	0.001	6.29	0	16.5 1% AEP, 10 min burst, Storm 10
CaE-1	0.004	0.003	0.002	6.63	0	16.72 1% AEP, 30 min burst, Storm 6
CaF-1	0.005	0.002	0.002	6.76	0	18.41 1% AEP, 20 min burst, Storm 2
CaG-1	0.004	0.003	0.001	6.53	0	19.23 1% AEP, 10 min burst, Storm 10

PIPE DETAILS				
Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)
PipeA1-A2	0.004	0.5	488.296	488.211 1% AEP, 10 min burst, Storm 1
PipeA2-A3	0.016	0.94	488.161	1% AEP, 10 min burst, Storm 10
PipeA3-A4	0.032	0.84	487.978	1% AEP, 10 min burst, Storm 10
PipeA4-A5	0.043	0.94	487.862	1% AEP, 10 min burst, Storm 10

PipeA5-A6	0.058	1.45	487.717	487.672 1% AEP, 10 min burst, Storm 10
PipeA6-A7	0.057	1.45	487.643	486.893 1% AEP, 10 min burst, Storm 10
PipeC1-A3	0.003	0.44	488.091	488.01 1% AEP, 30 min burst, Storm 6
PipeB1-A5	0.003	0.33	487.845	487.834 1% AEP, 10 min burst, Storm 2
PipeD1-A2	0.002	0.43	488.32	488.211 1% AEP, 20 min burst, Storm 2
PipeE1-A2	0.003	0.44	488.367	488.211 1% AEP, 30 min burst, Storm 6
PipeF1-A3	0.003	0.44	488.127	488.01 1% AEP, 20 min burst, Storm 2
PipeG1-A5	0.002	0.43	487.85	487.834 1% AEP, 10 min burst, Storm 9

CHANNEL DETAILS		
Name	Max Q (cu.m/s)	Max V (m/s)
Due to Storm		

OVERFLOW ROUTE DETAILS						
Name	Max Q U/S	Max Q D/S	Sate Q	Max D	Max Dv	Max Width
OFA1	0.003	0.003	1.462	0.014	0	1.43
OFA2	0.008	0.008	1.469	0.022	0.01	4
OFA3	0.015	0.015	1.477	0.026	0.01	4
OFA4	0.015	0.015	1.465	0.025	0.01	4
OFA5	0.011	0.011	1.401	0.018	0.01	1.82
OFA6	0.011	0.011	2.471	0.052	0.03	0.88
OFB1	0.002	0.002	1.488	0.013	0	1.33
OFB1	0.002	0.002	1.47	0.012	0	1.23
OFD1	0.001	0.001	1.491	0.012	0	1.23
OFF1	0.002	0.002	1.493	0.013	0	1.33
OFF1	0.002	0.002	1.47	0.012	0	1.23
OFF1	0.001	0.001	1.489	0.012	0	1.23

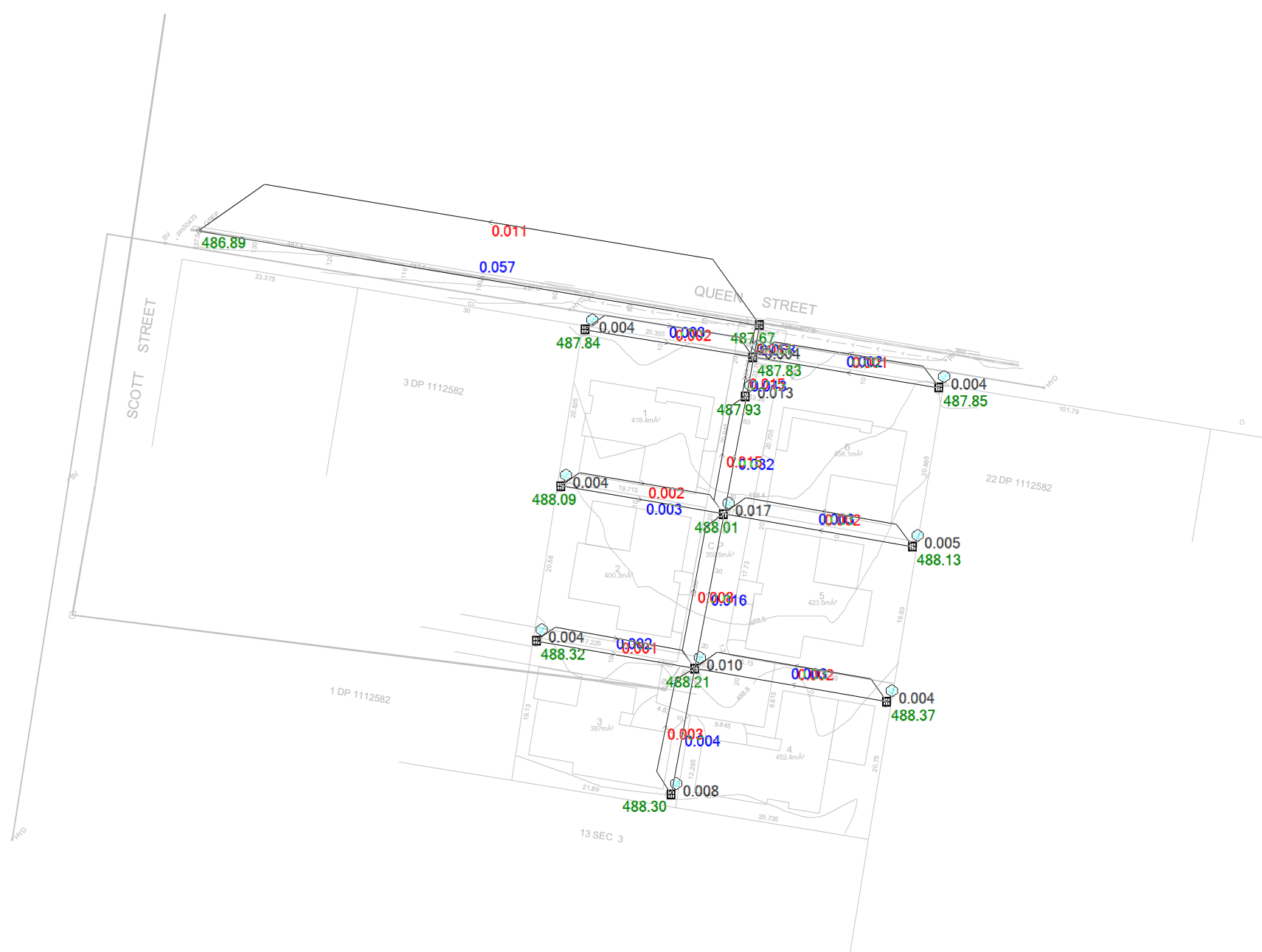
DETENTION BASIN DETAILS				
Name	Max WL	Max Vol	Max Q Total	Max Q Low Level
High Level				

Run Log for DRAINS v2025.01.9147.24925 - 40737 02-10-2025
Run Log for DRAINS v2025.01.9147.24925 - 40737 02-10-2025 dnn run at 18:39:26 on 27/10/2025.

No water upwelling from any pit.
Freeboard was adequate at all pits.
Flows were safe in all overflow routes.



		NAME:		DATE		CHECKED		SRD LAND CONSULTING GOULBURN: 4823 5100 YOUNG: 6382 1501 THE LAND CONSULTANT SPECIALISTS www.srdland.com.au	SHEET SUBJECT			PROJECT			SHEET		
		SIGNATURE:		2nd Oct, 2025		AC			DRAINS PITS/PIPES/RESULTS/DIAGRAM			PROPOSED 6 UNIT DEVELOPMENT			62-64 QUEEN STREET, BOOROWA		
		CAPACITY:		DRAWN		APPROVED			LOTS 4 AND 5 DP 1112582			CLIENT			ISSUE		
		DATE:		W/C		SCALE			WATSON TOYOTA, 225 BOOROWA ST			PROJECT NO.			SHEET NO.		
A	PRELIMINARY DRAINAGE DESIGN	2nd Oct, 2025		DESIGNED		1:250			A1			A			40737		
ISSUE	AMENDMENT	DATE		W/C		A1			A1			A			3 of 3		



PIT / NODE DETAILS

Version 15

Name	Type	Family	Size	Ponding Volume (cu.m)	Pressure Change Coeff. Ku	Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor
PitA-1	OnGrade	Grated Pit	600x600		1.5	488.988		0	0
PitA-2	OnGrade	Grated Pit	600x600		1.5	488.698		0	0
PitA-3	OnGrade	Grated Pit	600x600		1.5	488.456		0	0
PitA-4	OnGrade	Grated Pit	600x600		1.5	488.292		0	0
PitA-5	OnGrade	Strip Drain	600x600		1.5	488.223		0	0
PitA-6	OnGrade	Junction Pit	Junction Pit or Manhole		1.5	488.008		0	0
A-7	Node					486.66		0	
PitC-1	OnGrade	Grated Pit	600x600		1.5	488.596		0	0
PitB-1	OnGrade	Grated Pit	600x600		1.5	488.3		0	0
PitD-1	OnGrade	Grated Pit	600x600		1.5	488.83		0	0
PitE-1	OnGrade	Grated Pit	600x600		1.5	488.855		0	0
PitF-1	OnGrade	Grated Pit	600x600		1.5	488.715		0	0
PitG-1	OnGrade	Grated Pit	600x600		1.5	488.382		0	0

DETENTION BASIN DETAILS

Name	Elev	Surf. Area	Not Used	Outlet Type	K	Dia(mm)	Centre RL	Pit Family	Pit Type
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SUB-CATCHMENT DETAILS

Name	Pit or Node	Total Area (ha)	EIA %	Perv Area %	RIA %	EIA Time (min)	Perv Time (min)	RIA Time (min)	EIA Length (m)
CatA-1	PitA-1	0.03	63	37	0	5	14.2644	0	20
CatA-2	PitA-2	0.031	80	20	0	5	11.0236	0	17
CatA-3	PitA-3	0.049	88	12	0	5	11.3217	0	21
CatA-4	PitA-4	0.038	87	13	0	5	10.0156	0	16
CatA-5	PitA-5	0.024	17	83	0	5	14.0791	0	6
CatC-1	PitC-1	0.022	41	59	0	5	13.6932	0	15
CatB-1	PitB-1	0.019	58	42	0	5	14.2644	0	15
CatD-1	PitD-1	0.015	60	40	0	5	12.8484	0	15
CatE-1	PitE-1	0.02	45	55	0	5	12.3807	0	15
CatF-1	PitF-1	0.024	38	62	0	5	13.6932	0	20
CatG-1	PitG-1	0.019	48	52	0	5	14.6212	0	20

PIPE DETAILS

Name	From	To	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Type	Dia (mm)	I.D. (mm)
PipeA1-A2	PitA-1	PitA-2	16.858	488.226	488.057		1 uPVC, not u	150	154
PipeA2-A3	PitA-2	PitA-3	20.675	488.027	487.82		1 uPVC, not u	150	154
PipeA3-A4	PitA-3	PitA-4	15.726	487.79	487.633		1 uPVC, not u	225	242
PipeA4-A5	PitA-4	PitA-5	5.251	487.603	487.55	1.01	uPVC, not u	225	242

PipeA5-A6	PitA-5	PitA-6	4.314	487.52	487.477	1 uPVC, not t	225	242
PipeA6-A7	PitA-6	A-7	74.691	487.447	486.7	1 uPVC, not t	225	242
PipeC1-A3	PitC-1	PitA-3	21.713	488.037	487.82	1 uPVC, not t	150	154
PipeB1-A5	PitB-1	PitA-5	22.34	487.773	487.55	1 uPVC, not t	150	154
PipeD1-A2	PitD-1	PitA-2	21.097	488.268	488.057	1 uPVC, not t	150	154
PipeE1-A2	PitE-1	PitA-2	25.677	488.314	488.057	1 uPVC, not t	150	154
PipeF1-A3	PitF-1	PitA-3	25.222	488.072	487.82	1 uPVC, not t	150	154
PipeG1-A5	PitG-1	PitA-5	24.758	487.798	487.55	1 uPVC, not t	150	154

DETAILS of SERVICES CROSSING PIPES

Pipe	Chg (m)	Bottom Elev (m)	Height of S (m)	Chg (m)	Bottom Elev (m)	Height of S (m)	Chg (m)	Bottom Elev (m)	Height of S (m)
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CHANNEL DETAILS

Name	From	To	Type	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Base Width (m)	L.B. Slope (1:?)
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OVERFLOW ROUTE DETAILS

Name	From	To	Travel Time (min)	Spill Level (m)	Crest Length (m)	Weir Coeff. C	Cross Section	Safe Depth Major Storr (m)	SafeDepth Minor Storr (m)
OFA1	PitA-1	PitA-2		0.1			4 m wide pa	0.3	0.15
OFA2	PitA-2	PitA-3		0.2			4 m wide pa	0.3	0.15
OFA3	PitA-3	PitA-4		0.1			4 m wide pa	0.3	0.15
OFA4	PitA-4	PitA-5		0.1			4 m wide pa	0.3	0.15
OFA5	PitA-5	PitA-6		0.1			4 m wide pa	0.3	0.15
OFA6	PitA-6	PitA-7		0.7			10 m roadv	0.3	0.15
OFC1	PitC-1	PitA-3		0.2			4 m wide pa	0.3	0.15
OFB1	PitB-1	PitA-5		0.2			4 m wide pa	0.3	0.15
OFD1	PitD-1	PitA-2		0.2			4 m wide pa	0.3	0.15
OFE1	PitE-1	PitA-2		0.2			4 m wide pa	0.3	0.15
OFF1	PitF-1	PitA-3		0.2			4 m wide pa	0.3	0.15
OFG1	PitG-1	PitA-5		0.2			4 m wide pa	0.3	0.15

PIPE COVER DETAILS

Name	Type	Dia (mm)	Safe Cover	Cover (m)
PipeA1-A2	uPVC, not t	154	0.3	0.48
PipeA2-A3	uPVC, not t	154	0.3	0.48
PipeA3-A4	uPVC, not t	242	0.3	0.39
PipeA4-A5	uPVC, not t	242	0.3	0.43
PipeA5-A6	uPVC, not t	242	0.3	0.28 Unsafe
PipeA6-A7	uPVC, not t	242	0.3	-0.29 Unsafe
PipeC1-A3	uPVC, not t	154	0.3	0.4

PipeB1-A5 uPVC, not t	154	0.3	0.37
PipeD1-A2 uPVC, not t	154	0.3	0.4
PipeE1-A2 uPVC, not t	154	0.3	0.38
PipeF1-A3 uPVC, not t	154	0.3	0.48
PipeG1-A5 uPVC, not t	154	0.3	0.43

This model has no pipes with non-return valves

x	y	Bolt-down id lid	Part Full Shock Loss	Inflow Hydrograph	Pit is	Internal Width (mm)	Inflow is Misaligned	Minor Safe Pond Deptl (m)
657536	6187826	No	7 1 x Ku	No	New			
657539.1	6187843	No	6 1 x Ku	No	New			
657542.9	6187863	No	5 1 x Ku	No	New			
657545.8	6187879	No	4 1 x Ku	No	New			
657546.8	6187884	No	30 1 x Ku	No	New			
657547.6	6187888	No	2 1 x Ku	No	New			
657473.9	6187901		32	No				
657521.5	6187867	No	10 1 x Ku	No	New			
657524.8	6187888	No	12 1 x Ku	No	New			
657518.3	6187847	No	35 1 x Ku	No	New			
657564.4	6187839	No	36 1 x Ku	No	New			
657567.8	6187859	No	37 1 x Ku	No	New			
657571.2	6187880	No	38 1 x Ku	No	New			

x	y	HED	Crest RL	Crest Leng	id
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Perv Length (m)	RIA Length (m)	EIA Slope(%) %	Perv Slope %	RIA Slope %	EIA Rough	Perv Rough	RIA Rough	Rainfall Multiplier
26	-1	1	1	1	-1	0.01	0.045	-1 1
12	-1	1	1	1	-1	0.01	0.045	-1 1
13	-1	1	1	1	-1	0.01	0.045	-1 1
9	-1	1	1	1	-1	0.01	0.045	-1 1
25	-1	1	1	1	-1	0.01	0.045	-1 1
23	-1	1	1	1	-1	0.01	0.045	-1 1
26	-1	1	1	1	-1	0.01	0.045	-1 1
19	-1	1	1	1	-1	0.01	0.045	-1 1
17	-1	1	1	1	-1	0.01	0.045	-1 1
23	-1	1	1	1	-1	0.01	0.045	-1 1
28	-1	1	1	1	-1	0.01	0.045	-1 1

Rough	Pipe Is	No. Pipes	Chg From	At Chg	Chg (m)	RL (m)	Chg (m)	RL (m)	etc (m)
0.012	New		1 PitA-1		0				
0.012	New		1 PitA-2		0				
0.012	New		1 PitA-3		0	2.469	488.407	12.469	488.314
0.012	New		1 PitA-4		0				

0.012 New	1 PitA-5	0	1.493	488.153		
0.012 New	1 PitA-6	0				
0.012 New	1 PitC-1	0	10	488.496	20	488.458
0.012 New	1 PitB-1	0				
0.012 New	1 PitD-1	0				
0.012 New	1 PitE-1	0				
0.012 New	1 PitF-1	0				
0.012 New	1 PitG-1	0				

etc

etc

R.B. Slope (1:?)	Manning n	Depth (m)	Roofed
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Safe DxV (sq.m/sec)	Bed Slope (%)	D/S Area Contributing %	id	U/S IL	D/S IL	Length (m)
0.4	1.72	0	186	488.988	488.698	16.9
0.4	1.17	0	63	488.698	488.456	20.7
0.4	1.04	0	64	488.456	488.292	15.7
0.4	1.3	0	65	488.292	488.223	5.3
0.4	5	0	66	488.223	488.008	4.3
0.6	1.01	0	67	488.008	487.25	74.7
0.4	0.65	0	69	488.596	488.456	21.7
0.4	1.31	0	68	488.3	488.008	22.3
0.4	0.63	0	70	488.83	488.698	21.1
0.4	0.61	0	71	488.855	488.698	25.7
0.4	1.03	0	72	488.715	488.456	25.2
0.4	0.64	0	73	488.382	488.223	24.8

PIT / NODE DETAILS

Version 8

Name	Max HGL	Max Pond HGL	Max Surf Flow	Max Pond Volume	Min Freeboard	Overflow (cu.m/s)	Constraint
			(cu.m/s)	(cu.m)	(m)		
PitA-1	488.3		0.009		0.69	0.003	Inlet Capacity
PitA-2	488.21		0.018		0.49	0.008	Inlet Capacity
PitA-3	488.01		0.031		0.45	0.015	Inlet Capacity
PitA-4	487.93		0.03		0.36	0.015	Inlet Capacity
PitA-5	487.83		0.025		0.39	0.011	Inlet Capacity
PitA-6	487.67		0.014		0.34	0.011	Inlet Capacity
PitA-7	486.89		0.014				
PitC-1	488.09		0.005		0.51	0.002	Inlet Capacity
PitB-1	487.84		0.005		0.46	0.002	Inlet Capacity
PitD-1	488.32		0.004		0.51	0.001	Inlet Capacity
PitE-1	488.37		0.005		0.49	0.002	Inlet Capacity
PitF-1	488.13		0.006		0.59	0.002	Inlet Capacity
PitG-1	487.85		0.005		0.53	0.001	Inlet Capacity

SUB-CATCHMENT DETAILS

Name	Max Flow Q	EIA Max Q	Remaining Max Q	EIA Tc	RIA Tc	PA Tc	Due to Storm
	(cu.m/s)	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)
CatA-1	0.008	0.007	0.001	6.53	0	18.68	1% AEP, 10 min burst, Storm 1
CatA-2	0.01	0.01	0.001	6.39	0	13.8	1% AEP, 10 min burst, Storm 1
CatA-3	0.017	0.016	0.001	6.57	0	14.23	1% AEP, 10 min burst, Storm 5
CatA-4	0.013	0.013	0.001	6.34	0	12.35	1% AEP, 10 min burst, Storm 5
CatA-5	0.004	0.001	0.004	5.94	0	19.55	1% AEP, 30 min burst, Storm 6
CatC-1	0.004	0.003	0.002	6.63	0	18.9	1% AEP, 30 min burst, Storm 6
CatB-1	0.004	0.004	0.001	6.29	0	18.68	1% AEP, 10 min burst, Storm 1
CatD-1	0.004	0.003	0.001	6.29	0	16.5	1% AEP, 10 min burst, Storm 10
CatE-1	0.004	0.003	0.002	6.63	0	16.72	1% AEP, 30 min burst, Storm 6
CatF-1	0.005	0.002	0.002	6.76	0	18.41	1% AEP, 20 min burst, Storm 2
CatG-1	0.004	0.003	0.001	6.53	0	19.23	1% AEP, 10 min burst, Storm 10

PIPE DETAILS

Name	Max Q	Max V	Max U/S	Max D/S	Due to Storm
	(cu.m/s)	(m/s)	HGL (m)	HGL (m)	
PipeA1-A2	0.004	0.5	488.296	488.211	1% AEP, 10 min burst, Storm 1
PipeA2-A3	0.016	0.94	488.161	488.01	1% AEP, 10 min burst, Storm 10
PipeA3-A4	0.032	0.84	487.978	487.93	1% AEP, 10 min burst, Storm 10
PipeA4-A5	0.043	0.94	487.862	487.834	1% AEP, 10 min burst, Storm 10

PipeA5-A6	0.058	1.45	487.717	487.672	1% AEP, 10 min burst, Storm 10
PipeA6-A7	0.057	1.45	487.643	486.893	1% AEP, 10 min burst, Storm 10
PipeC1-A3	0.003	0.44	488.091	488.01	1% AEP, 30 min burst, Storm 6
PipeB1-A5	0.003	0.33	487.845	487.834	1% AEP, 10 min burst, Storm 2
PipeD1-A2	0.002	0.43	488.32	488.211	1% AEP, 20 min burst, Storm 2
PipeE1-A2	0.003	0.44	488.367	488.211	1% AEP, 30 min burst, Storm 6
PipeF1-A3	0.003	0.44	488.127	488.01	1% AEP, 20 min burst, Storm 2
PipeG1-A5	0.002	0.43	487.85	487.834	1% AEP, 10 min burst, Storm 9

CHANNEL DETAILS

Name	Max Q	Max V	Due to Storm
	(cu.m/s)	(m/s)	

OVERFLOW ROUTE DETAILS

Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
OFA1	0.003	0.003	1.462	0.014	0	1.43	0.33	1% AEP, 10 min burst, Storm 10
OFA2	0.008	0.008	1.469	0.022	0.01	4	0.28	1% AEP, 10 min burst, Storm 10
OFA3	0.015	0.015	1.477	0.026	0.01	4	0.33	1% AEP, 10 min burst, Storm 10
OFA4	0.015	0.015	1.465	0.025	0.01	4	0.37	1% AEP, 10 min burst, Storm 10
OFA5	0.011	0.011	1.401	0.018	0.01	1.82	0.64	1% AEP, 10 min burst, Storm 10
OFA6	0.011	0.011	2.471	0.052	0.03	0.88	0.61	1% AEP, 10 min burst, Storm 10
OFC1	0.002	0.002	1.488	0.013	0	1.33	0.18	1% AEP, 30 min burst, Storm 6
OFB1	0.002	0.002	1.47	0.012	0	1.23	0.23	1% AEP, 10 min burst, Storm 2
OFD1	0.001	0.001	1.491	0.012	0	1.23	0.18	1% AEP, 10 min burst, Storm 2
OFE1	0.002	0.002	1.493	0.013	0	1.33	0.18	1% AEP, 30 min burst, Storm 6
OFF1	0.002	0.002	1.47	0.012	0	1.23	0.24	1% AEP, 20 min burst, Storm 2
OFG1	0.001	0.001	1.489	0.012	0	1.23	0.2	1% AEP, 10 min burst, Storm 9

DETENTION BASIN DETAILS

Name	Max WL	MaxVol	Max Q	Max Q	Max Q
			Total	Low Level	High Level

Run Log for DRAINS v2025.01.9147.24925 - 40737 02-10-2025

Run Log for DRAINS v2025.01.9147.24925 - 40737 02-10-2025.drn run at 18:39:26 on 2/10/2025.

No water upwelling from any pit.

Freeboard was adequate at all pits.

Flows were safe in all overflow routes.