

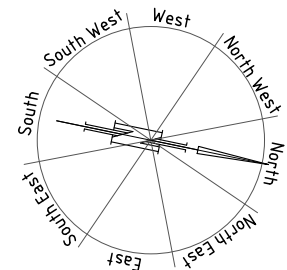
DEVELOPMENT APPLICATION

APPLICATION NUMBER:	PLN-25-160
PROPOSED DEVELOPMENT:	Multiple Dwelling (one existing)
LOCATION:	27 Dowsing Avenue Dowsing Point
APPLICANT:	Taylor and Beeson Building
ADVERTISING START DATE:	05/09/2025
ADVERTISING EXPIRY DATE:	19/09/2025

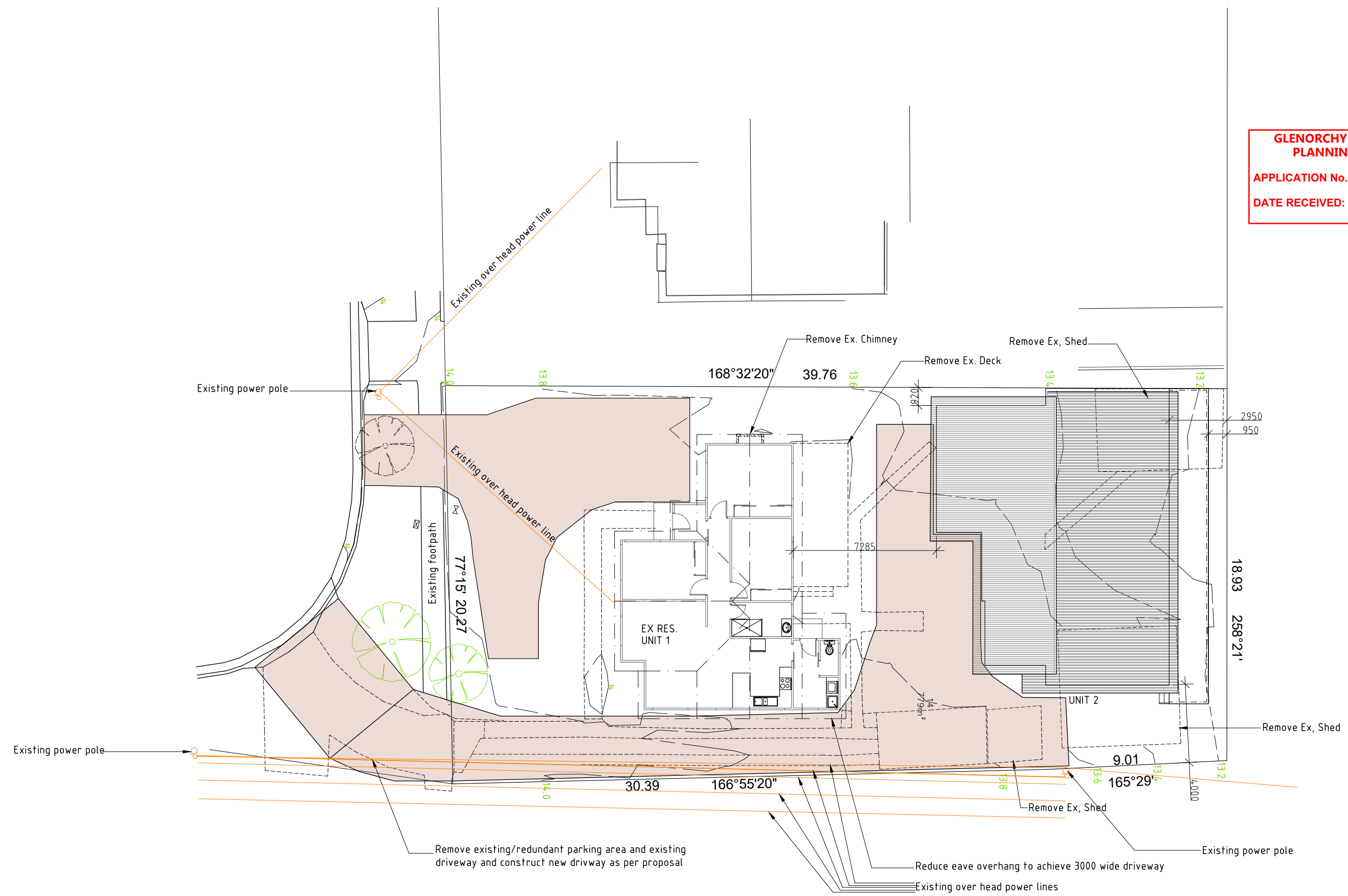
Plans and documentation are available for inspection at Council's Offices, located at 374 Main Road, Glenorchy between 8.30 am and 5.00 pm, Monday to Friday (excluding public holidays) and the plans are available on Glenorchy City Council's website (www.gcc.tas.gov.au) until **19/09/2025**.

During this time, any person may make representations relating to the applications by letter addressed to the Chief Executive Officer, Glenorchy City Council, PO Box 103, Glenorchy 7010 or by email to gccmail@gcc.tas.gov.au.

Representations must be received by no later than 11.59 pm on **19/09/2025**, or for postal and hand delivered representations, by 5.00 pm on **19/09/2025**.



**GLENORCHY CITY COUNCIL
PLANNING SERVICES**
APPLICATION No. : PLN-25-160
DATE RECEIVED: 2/09/2025



Tasmanian Planning Scheme: Code overlays
General residential

**DEVELOPMENT DRAWINGS ONLY
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PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND BEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

SITE PLAN

SCALE 1:200
0 2000 4000

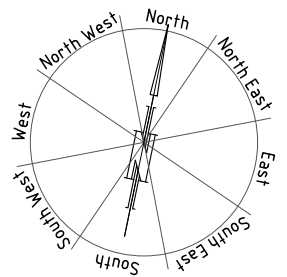
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20/08/2025

DATE
02/09/2025

DRAWING NO.
01 OF 13

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phone ph 0400 671 582

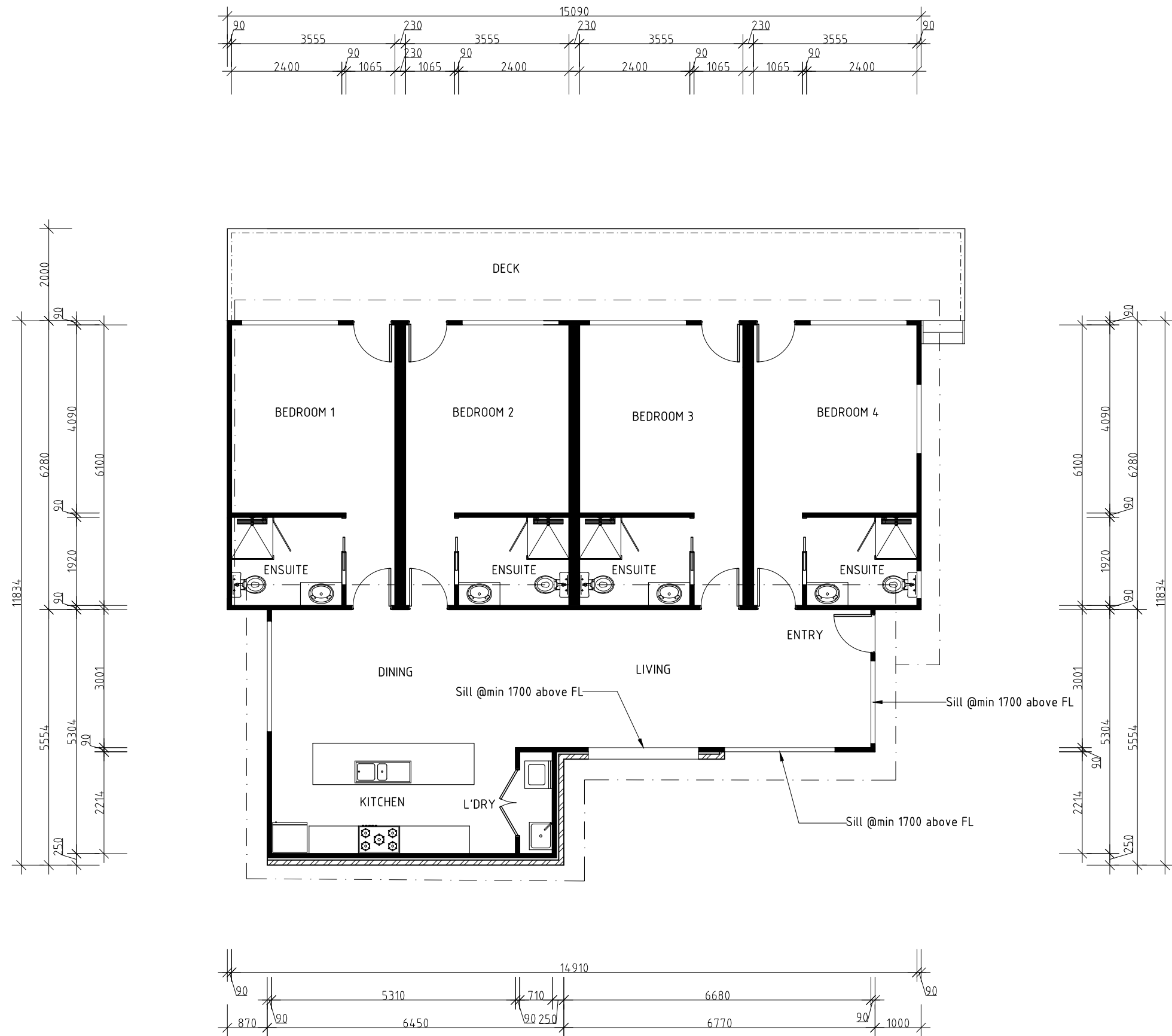
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**GLENORCHY CITY COUNCIL
PLANNING SERVICES**

APPLICATION No. : PLN-25-160

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AREAS	
Proposed Unit	152.06m ²
Proposed Deck	32.08m ²

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PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND BEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

PROPOSED PLAN UNIT 2

DATE
02/09/2025

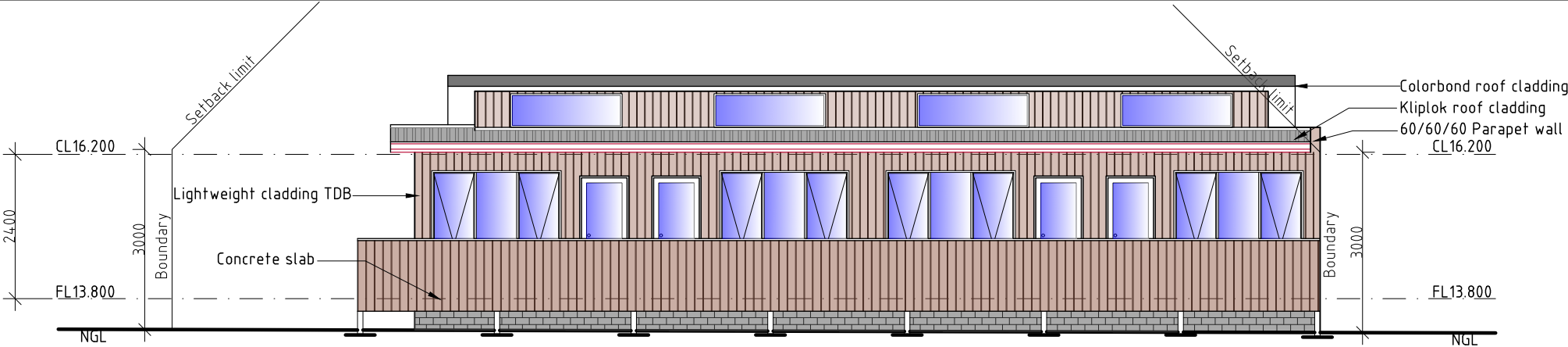
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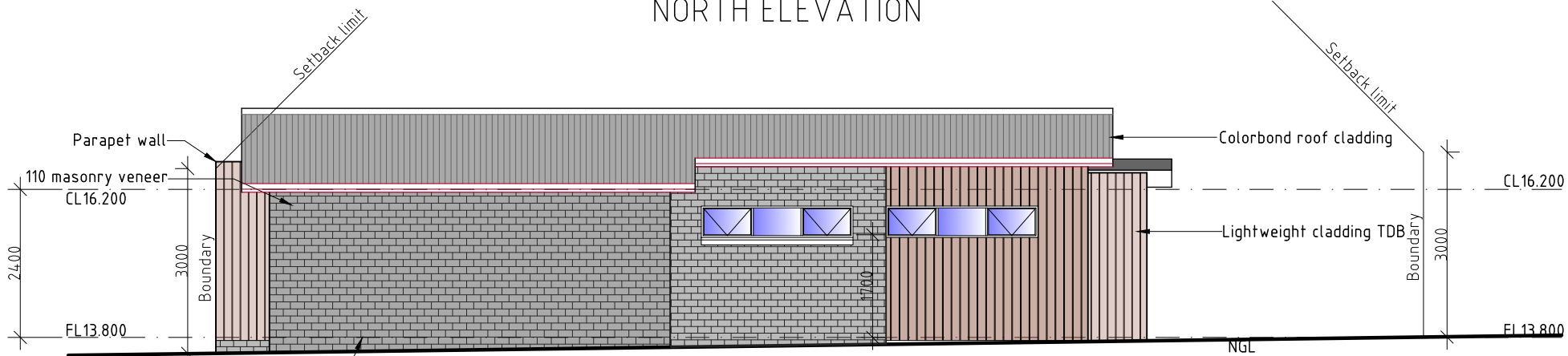
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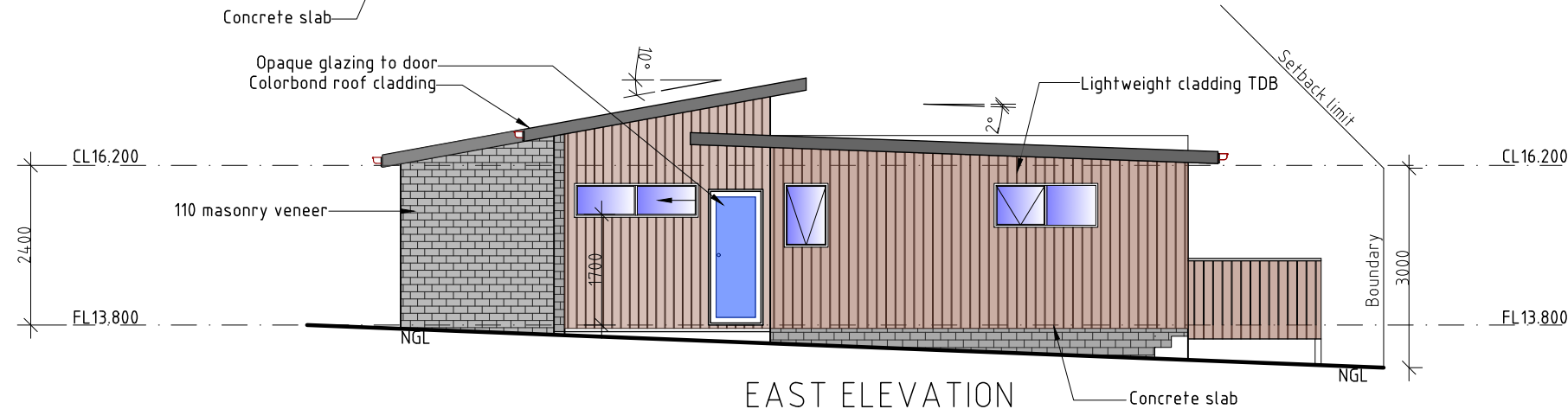
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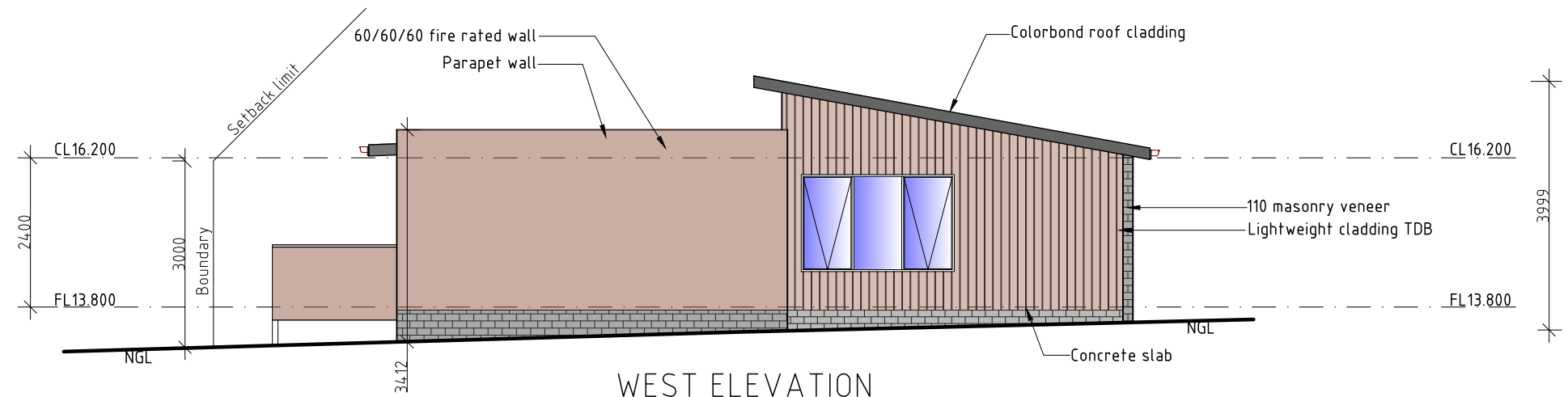
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

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PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND BEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

PROPOSED ELEVATIONS UNIT 2

DATE
02/09/2025

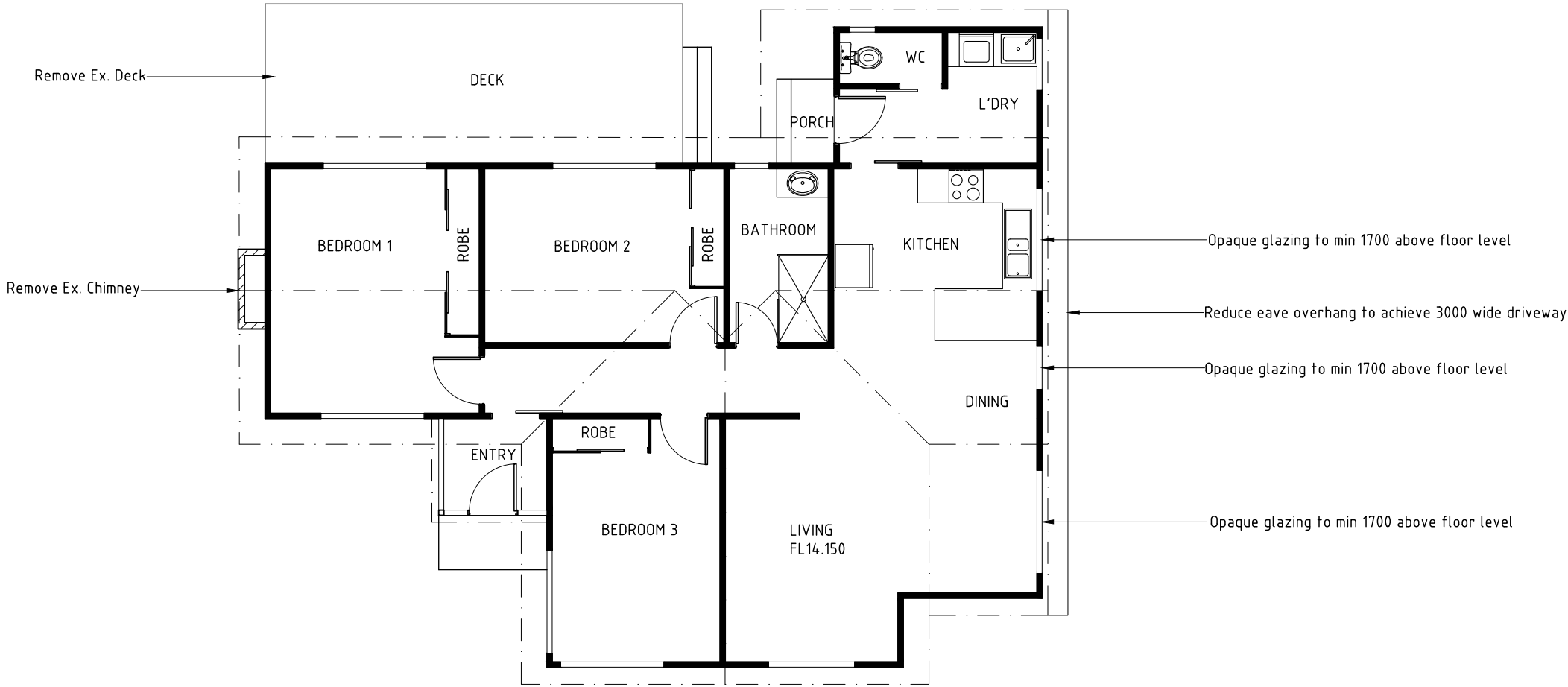
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PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND BEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

EXISTING RESIDENCE PLAN (UNIT 1)

DATE
02/09/2025

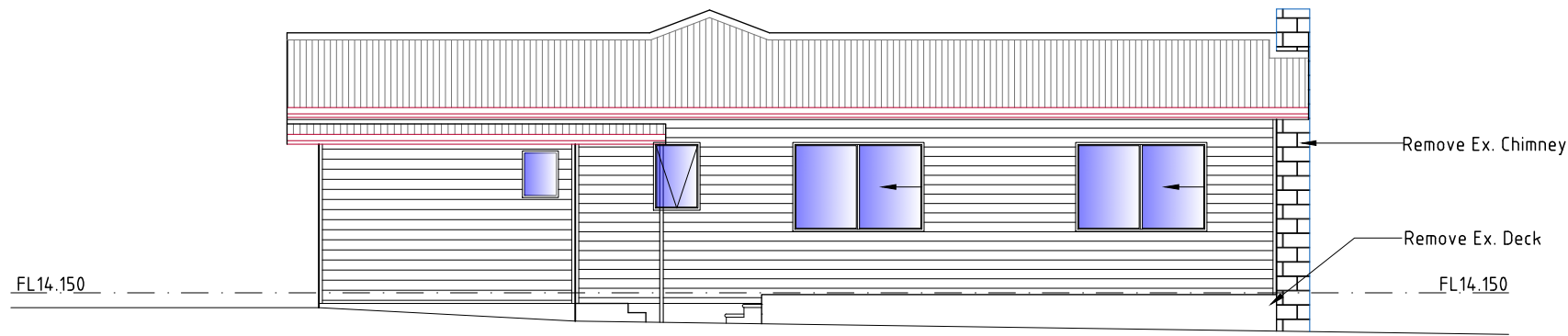
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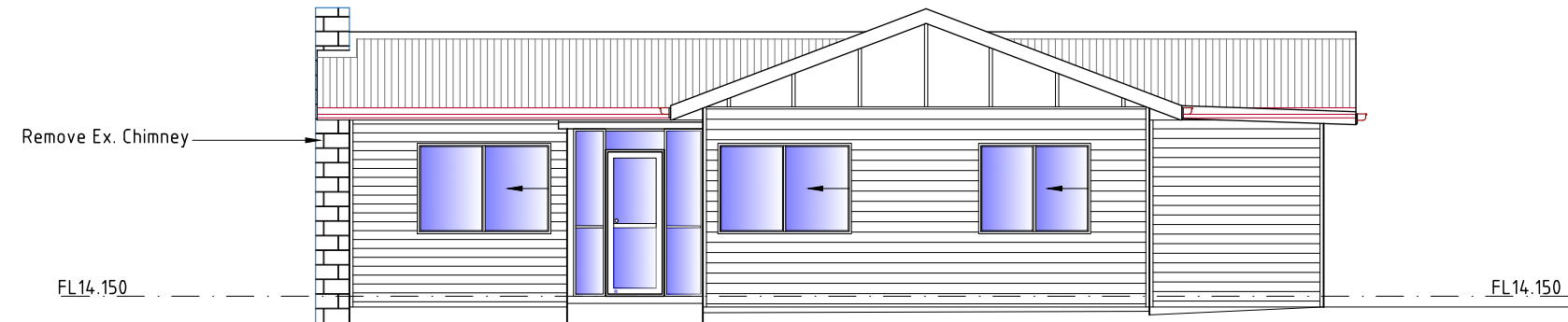
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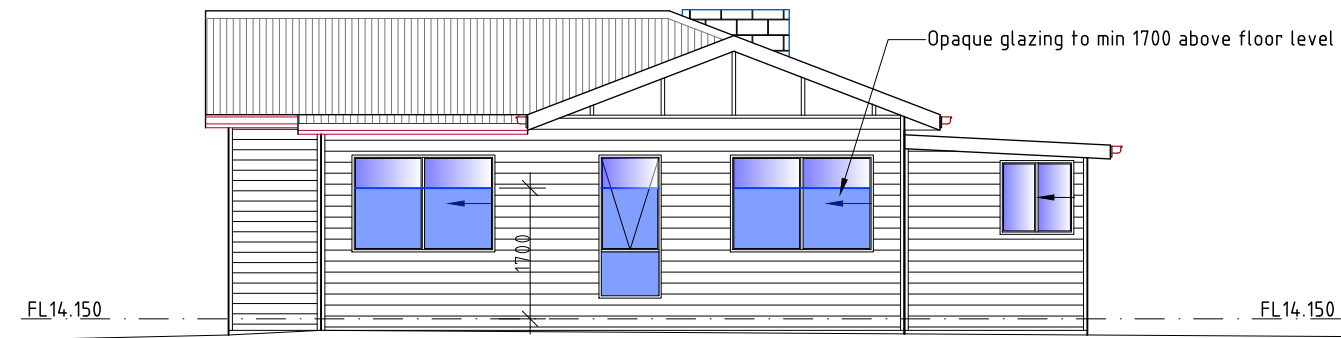
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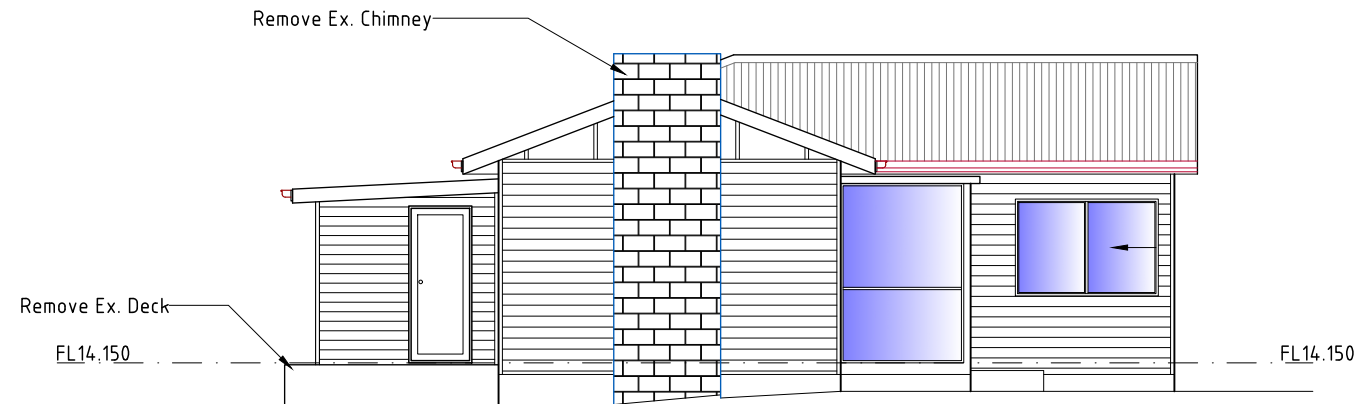
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

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PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND BEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

EXISTING RESIDENCE ELEVATIONS (UNIT 1)

SCALE: VARIABLE
0 1000 2000

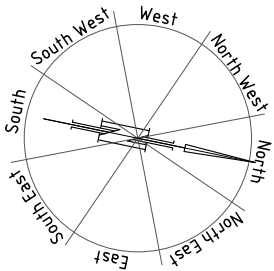
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- CL Freestanding Retractable clothes line
- F1 1800 high paling fence
- F2 1200 high paling fence
- G Gate
- S 750x1500 shed
- WS 15m² impervious area for waste storage
- 1000x1500 concrete pad/paving

NOTE: Plant height stated is matured height apart from the hedge which can be managed to desired height.

Garden bed not to extend against building, refer to CSIRO report for info

6.0m x 4.0m (24.00m²) Private Open Space Max. 1:10 gradient

Lawn

Mulched garden

Decorative pebbles/gravel

Unit 1 Private Open Space	147.61m ²
Unit 2 Private Open Space	86.17m ²
Impervious surface	520.35m ² divide by 779m ² = 66.79%
Pervious surface	258.65m ² divide by 779m ² = 33.21%
Site Coverage	258.82m ² divide by 779m ² =33.22%

DEVELOPMENT DRAWINGS ONLY
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PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND BEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

LANDSCAPE PLAN

DATE

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SCALE 1:200
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20/08/2025

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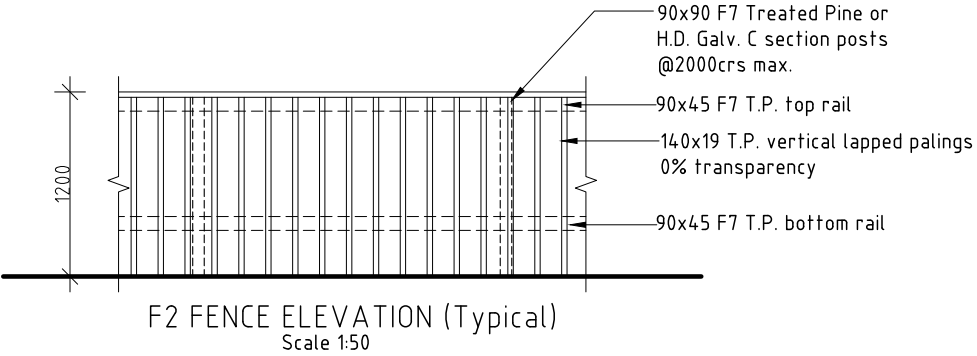
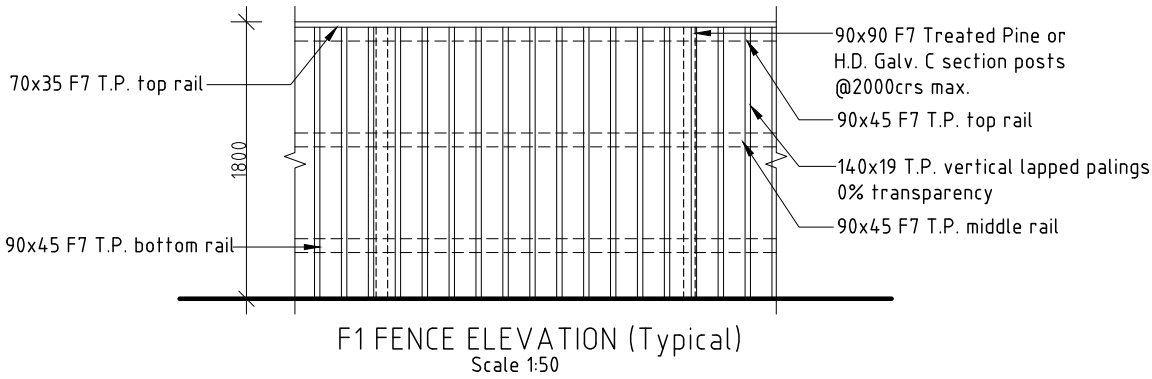
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FEATURE PLANTING

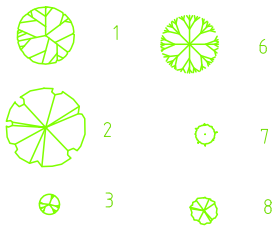
The spacing of plants shown on plan have been derived as a compromise between growth rate, anticipated size, and the ability to provide a good vegetative cover within a reasonable space of time.

SHRUBS AND GROUND COVER

Mass planting to assist in building presentation to the streetscape and to provide visual amenity; Course pine bark mulch to cover ground and minimize moisture loss and to act as a weed suppressant



PROPOSED FEATURE PLANTING	COMMON NAME	POT SIZE	SPACING	HEIGHT(m)	WIDTH(M)
1 Leucadendron	Red Gem	200mm	1.5	2.0	1.5
2 Leucadendron	Safari Sunset	200mm	2.0	2.5	2.0
PROPOSED SHRUBS AND GROUND COVERS	COMMON NAME	POT SIZE	SPACING	HEIGHT(m)	WIDTH(M)
3 Dianella revoluta Revelation	Dianella	200mm	0.4	0.5	0.5
6 Scaevola humilis Purple Fusion	Fairy Fan Flower	140mm	1.2	0.2	1.5
7 Westringia Zena	Dwarf rosemary	200mm	0.9	1	1
8 Buxus sempervirens	Box hedge	50mm	0.45	0.6	0.5



GLENORCHY CITY COUNCIL
PLANNING SERVICES

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NOTE: Plant height stated is matured height apart from the hedge which can be managed to desired height.



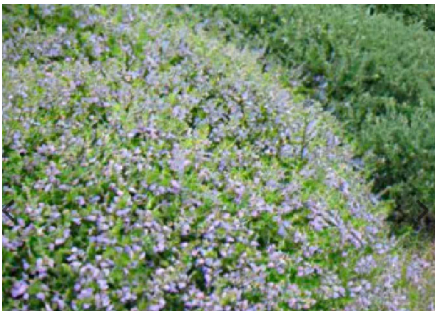
1



2



3



6



7



8

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PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND BEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

ELEVATIONS

SCALE 1:100
0 1000 2000

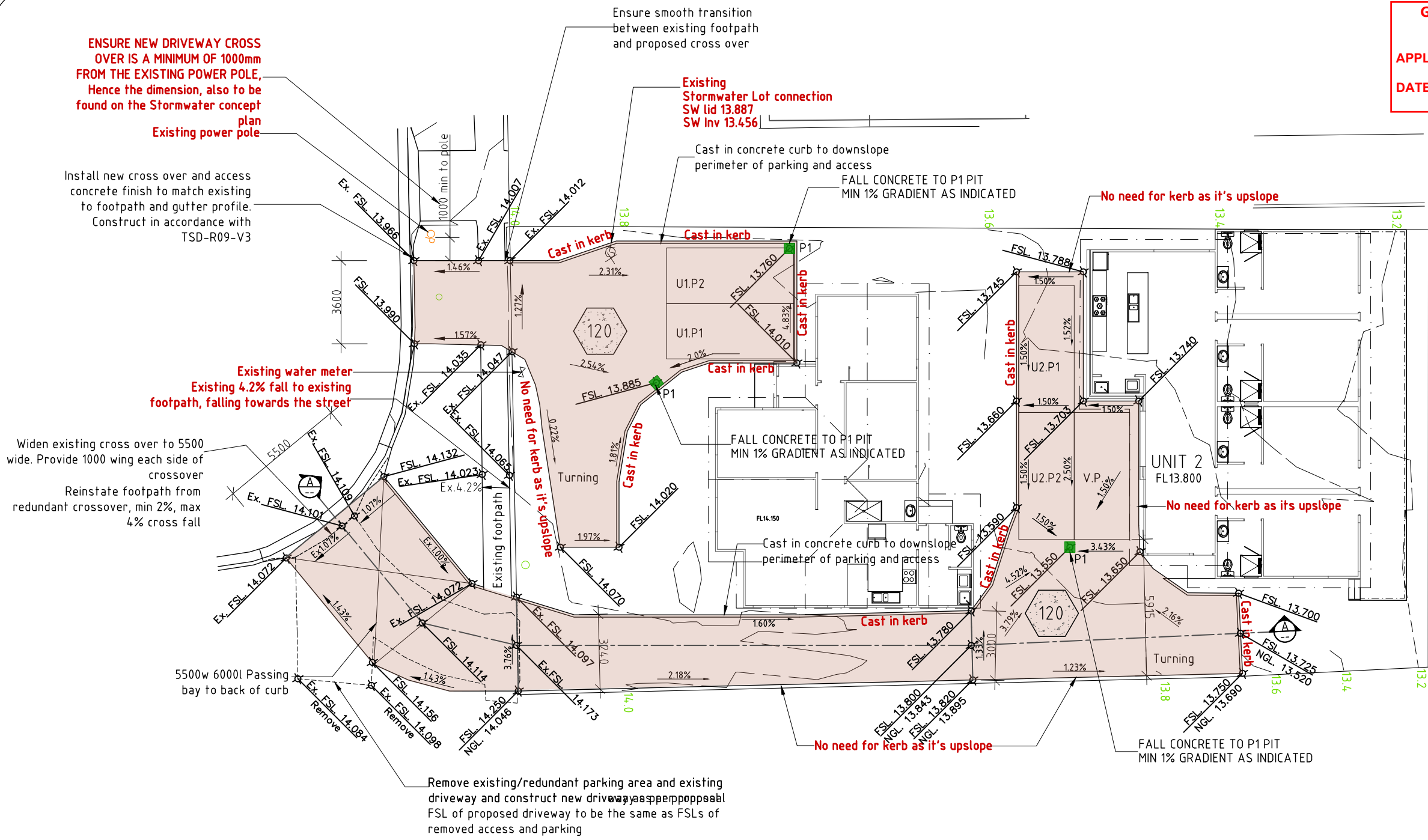
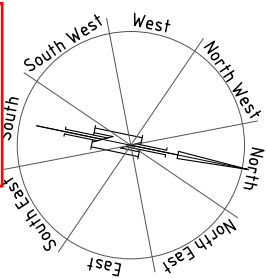
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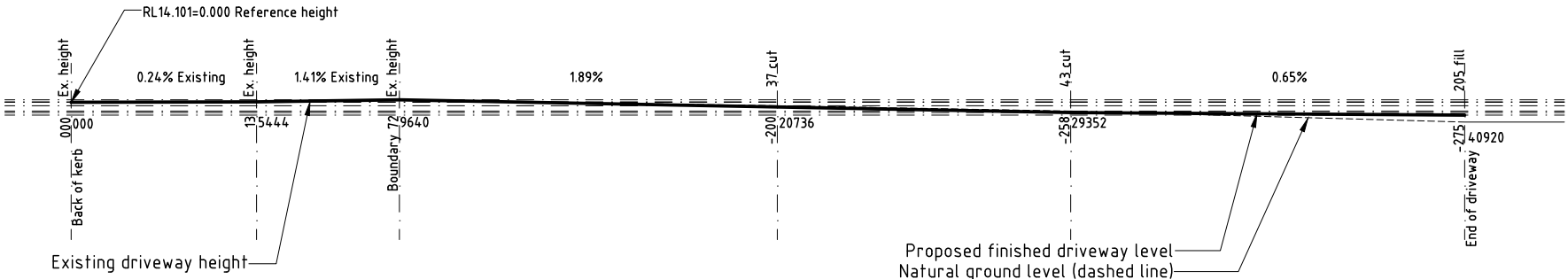
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- Sawcut to 25% of slab thickness as soon as able to cut without dragging out the aggregate
- 120 120mm Slab on grade, N25, 100 slump SL82 Central
- Natural coloured concrete broom finished paving slab to driveway/access & parking
- NOTE: All parking & turning areas to be clearly marked
- NOTE: Max. 5% gradient to vehicle maneuvering areas
- Carparking and vehicle maneuvering to be of sealed construction and comply with AS2890.1-2004
- NO PARKING/KEEP CLEAR signage to be installed for the turning bays so as to remain clear of vehicles at all times.
- Visitor parking signs to be installed at visitor parking bays
- Signage noting residential parking for all units to be installed for Unit parking spaces.
- Parking and vehicle circulation roadways & pedestrian paths to be provided with bollard lighting. Refer to landscape plan for lighting locations.



SECTION A-A DRIVEWAY LONG SECTION
SCALE 1:200

Parking and turning in accordance with AS2890.1-2004

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PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND DEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

DRIVEWAY PLAN

SCALE 1:200
0 2000 4000

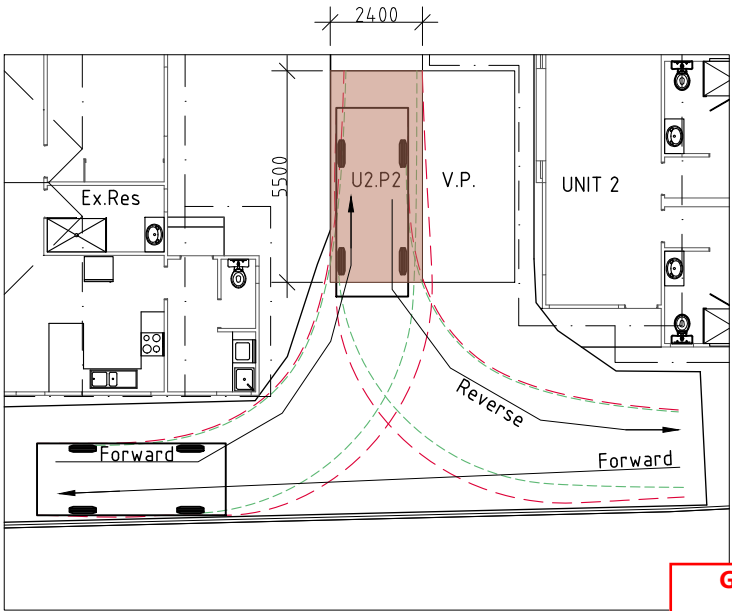
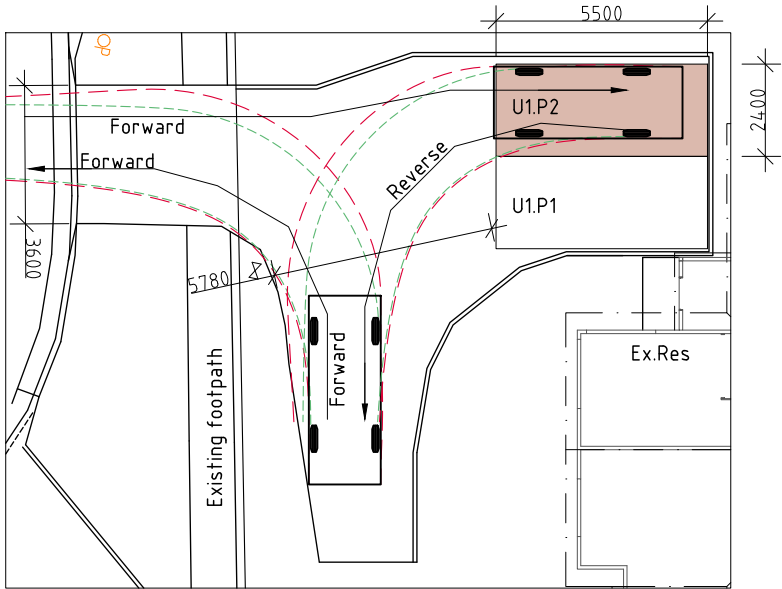
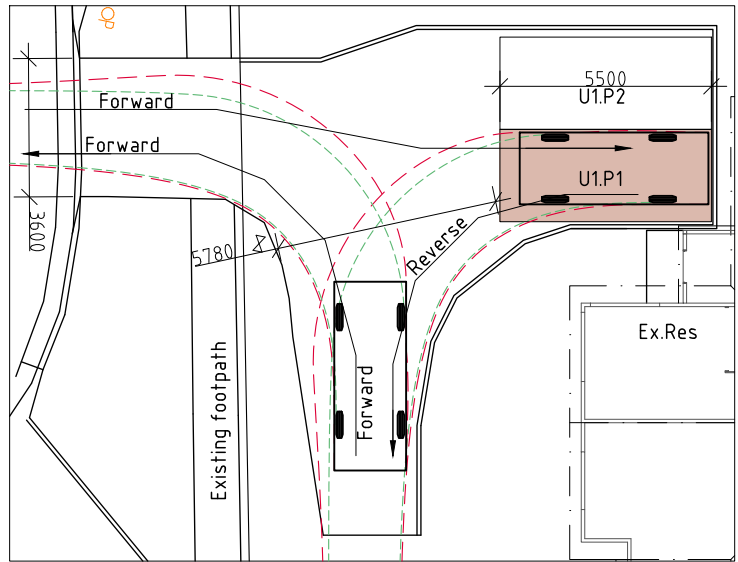
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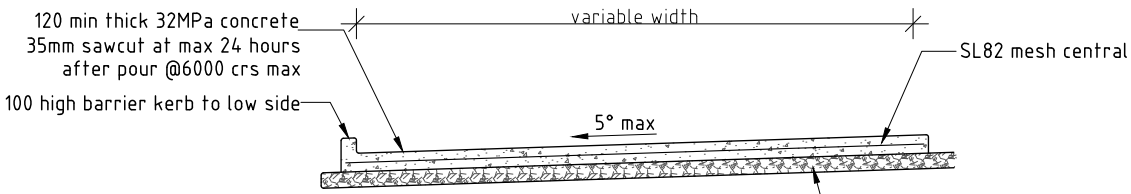
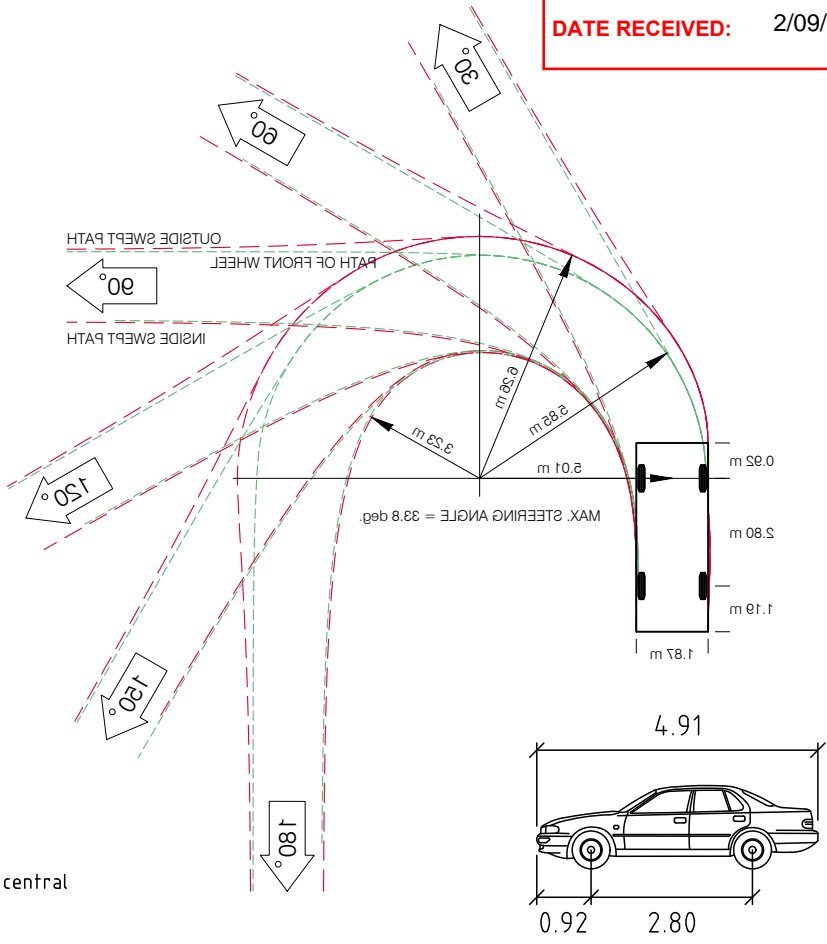
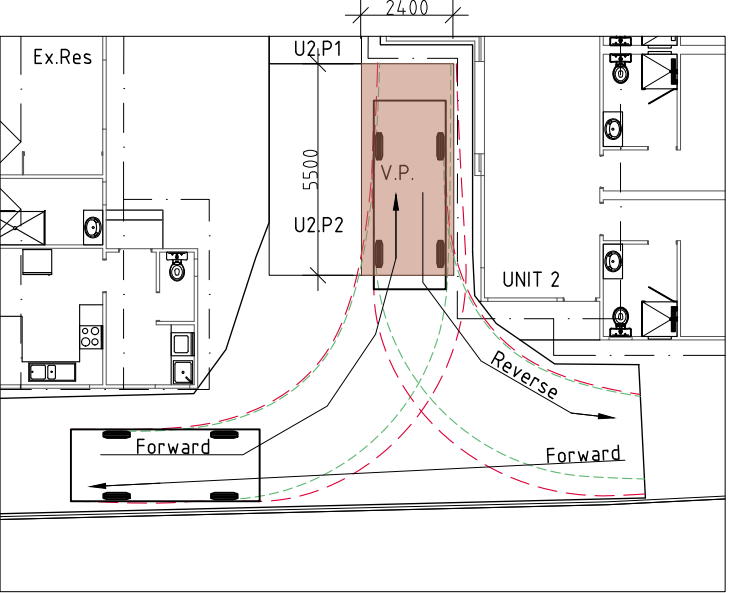
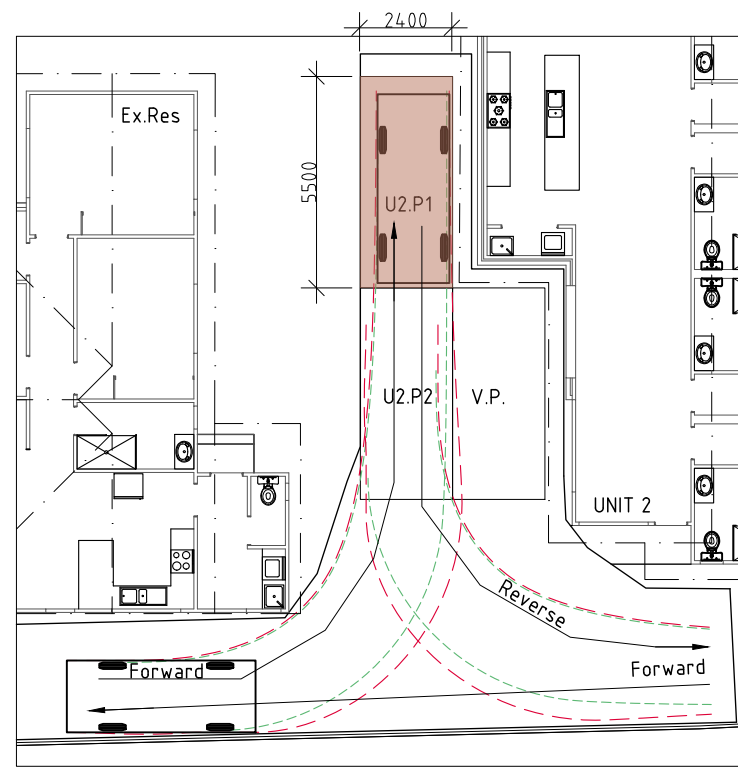


**GLENORCHY CITY COUNCIL
PLANNING SERVICES**

APPLICATION No. : PLN-25-160

DATE RECEIVED: 2/09/2025

Forward
Reverse



DRIVEWAY CROSS SECTION (TYPICAL)
SCALE 1:50

B85	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.00
Steering Angle	: 34.00

**DEVELOPMENT DRAWINGS ONLY
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PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND DEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

DETAILS

SCALE 1:20
0 200 400

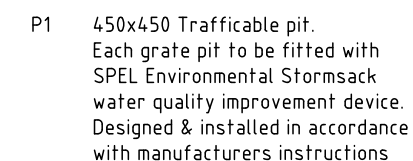
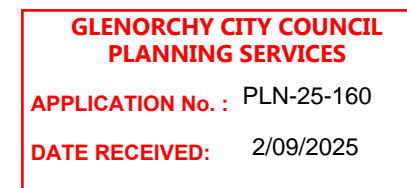
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Agg drains to be installed prior to slab/footings preparation. Evidence of the agg drainage installation to be supplied to the Engineer.

Plumber to confirm the location of existing on-site services prior to commencement of any excavations

S100Ø 100uPVC sewerage
1.67% min. fall

100Ø 100uPVC stormwater
1:100 min. fall

100x100 cast in kerb to downslope
of driveway perimeter
I.O. at each intersection & bend

Water meters for strata developments must be located in common property to allow unfettered access to enable reading, testing, inspection, maintenance and exchange without impediment and must be kept clear of obstructions at all times. Water meters in trafficable areas must be housed in trafficable boxes with a class "B" lid.

DEVELOPMENT DRAWINGS ONLY
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CONCEPT STORMWATER PLAN

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20/08/2025

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WET AREAS TO COMPLY WITH NCC VOL. 2 PART H4D2, ABCB HOUSING PROVISIONS PART 10.2 AND AS 3740

WATERPROOFING OF ENCLOSED & UNENCLOSED SHOWERS:
FLOOR: Waterproof entire floor if no preformed shower base provided
WALLS: Waterproof to not less than 1800mm above the floor substrate
WALL JUNCTIONS AND JOINTS: Waterproof internal and external corners and horizontal joints within a height of 1800mm above the floor level with not less than 40mm width either side of the junction
WALL/FLOOR JUNCTIONS: Waterproof internal and external corners and joints
PENETRATIONS: Waterproof all penetrations

AREAS OUTSIDE THE SHOWER ON CONCRETE SLAB OR FC FLOORING:
FLOORS: Entire floor to be water resistant
WALLS/FLOOR JUNCTIONS: Waterproof all wall/floor junctions and where a flashing is used, the horizontal leg must be not less than 40mm

AREAS OUTSIDE THE SHOWER ON TIMBER FLOOR:
FLOORS: Waterproof entire floor
WALL/FLOOR JUNCTIONS: Waterproof all wall/floor junctions and where a flashing is used, the horizontal leg must be not less than 40mm.

AREAS ADJACENT TO NON-FREESTANDING BATHS AND SPAS (without showers):
FLOOR: Water resistant to entire floor on concrete or FC flooring; or Waterproof to entire floor on timber floor.
WALLS: Water resistant walls to a height of not less than 150mm above the vessels, for the full extent, where the vessel is within 75mm of a wall.
WALL JUNCTIONS AND JOINTS:Water resistant within 150mm above the vessel for the extent of the vessel to a width of 40mm either side of the junction
WALL/FLOOR JUNCTIONS: Waterproof for the extent of the vessel

AREAS ADJACENT TO INSERTED BATHS AND SPAS (without showers):
FLOOR: Water resistant to entire floor on concrete or FC flooring; or Waterproof to entire floor on timber floor.
HORIZONTAL SURFACES: Waterproof shelf adjoining bath or spa and include a waterstop under the vessel lip
WALLS: Waterproof walls to not less than 150mm above the lip of the vessel
WALL JUNCTIONS AND JOINTS: Waterproof junctions within 150mm of vessel to a width of 40mm either side of the junction
WALL/FLOOR JUNCTIONS: Waterproof wall/floor junctions 25mm above finished floor level
PENETRATIONS: Waterproof penetrations where they occur in horizontal surfaces, seal penetrations where they occur in vertical surfaces

OTHER AREAS (LAUNDRIES AND WCs):
FLOOR: Water resistant floor to entire room
WALLS: Water resistant wall to a height of not less than 150mm above the vessel for the extent of the vessel, where the vessel is within 75mm of wall
WALL JUNCTIONS AND JOINTS: Waterproof junctions where a vessel is fixed to a wall
WALL/FLOOR JUNCTIONS: Water resistant wall/floor junctions with horizontal leg not less than 40mm where flashing used
PENETRATIONS: Waterproof penetrations where they occur in surfaces required to be waterproof or water resistant.

WATERPROOFING SYSTEMS:
Waterproofing systems to be in accordance with ABCB Housing Provisions Part 10.2.6.

FALLS TO WET AREA FLOORS:
Where a floor waste is installed the continuous fall of a floor plane to the waste must be no less than 1:80 and no more than 1:50.

STEPDOWN SHOWERS:
Where stepdown showers are used, the shower area must be stepped down a minimum of 25mm below the finished floor level outside the shower. Refer to ABCB Housing Provisions Part 10.2.15 & relevant figures for details.

HOB CONSTRUCTION:
Shower hobs are to be constructed in accordance with ABCB Housing Provisions Part 10.2.16.

ENCLOSED SHOWERS WITH LEVEL THRESHOLD:
Enclosed showers with a level threshold must be provided with a waterstop in accordance with ABCB Housing Provisions Part 10.2.17 & relevant figures.

UNENCLOSED SHOWERS:
Unenclosed showers are to have a waterstop min. 1500mm from the shower rose with the vertical leg finishing flush with the top surface of the floor. Waterproof all all joins and junctions. Waterproof entire bathroom floor where unenclosed showers are installed. Refer to ABCB Housing Provisions Part 10.2.18 & relevant figures for details.

PENETRATIONS:
All penetrations in showers and wet areas must be waterproofed in accordance with ABCB Housing Provisions part 10.2.23.

FLASHINGS/JUNCTIONS:
All flashings and junctions in wet areas to be installed in accordance with ABCB Housing Provisions Part 10.2.24 & relevant figures.

SHOWER SCREENS:
1900H Semi-frameless shower screens to comply with ABCB Housing Provisions Table 8.4.6 & AS 1288:2021. Minimum 6mm toughened safety organic coated glass, labelled to comply with industry standards. Install shower screens in accordance with ABCB Housing Provisions Part 10.2.32.

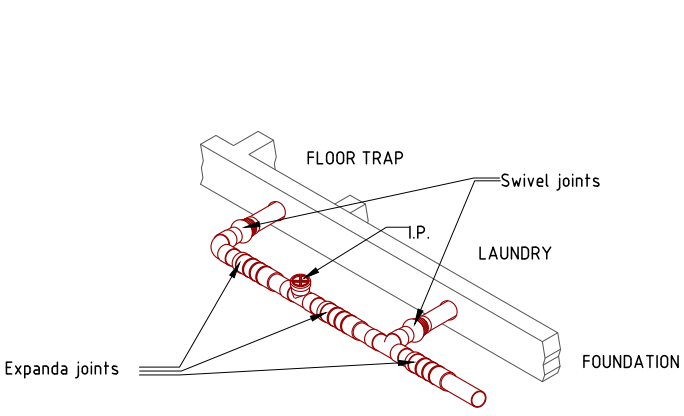
- HYDRAULIC NOTES:
- All plumbing shall be in accordance with the Tasmanian Plumbing Regulations, AS 3500 and to the local authority approval.
 - The location of the existing services where shown are approximate only and shall be confirmed on site where possible. Determine location of existing power, Telstra, water and drainage services prior to commencing new work.
 - Conceal all pipework in ceiling space, ducts, cavities, wall chases, cupboards etc. unless otherwise approved.
 - Refer to designers drawings and fixture and equipment technical specifications for pipework connections.
 - Make good all disturbed surfaces to match existing.
 - Remove all excess soil and surplus materials from site.
 - All plumbing to be installed by a licensed plumber.

Install inspection openings at major bends for stormwater and all low points of downpipes.
All plumbing & drainage to be in accordance with local Council requirements.
Provide surface drain to back of bulk excavation to drain leveled pad prior to commencing footing excavation.
Stormwater line (100mm uPVC)
Sewer line (100mm uPVC)

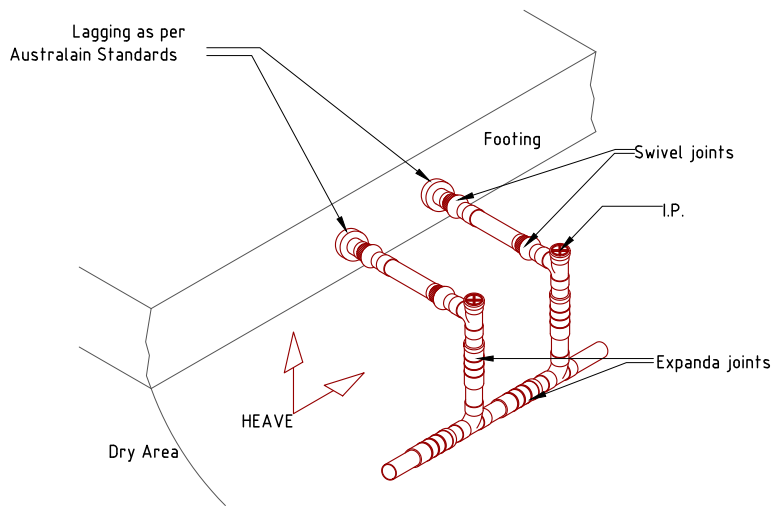
SERVICES
The heated water system must be designed & installed with Part B2 of NCC Vol. 3 – Plumbing Code of Australia
Thermal insulation for heated water piping must:
a) be protected against the effects of weather and sunlight; and
b) be able to withstand the temperatures within the piping; and
c) use thermal insulation in accordance with AS/NZS 4859.1

Heated water piping that is not within a conditioned space must be thermally insulated as follows:

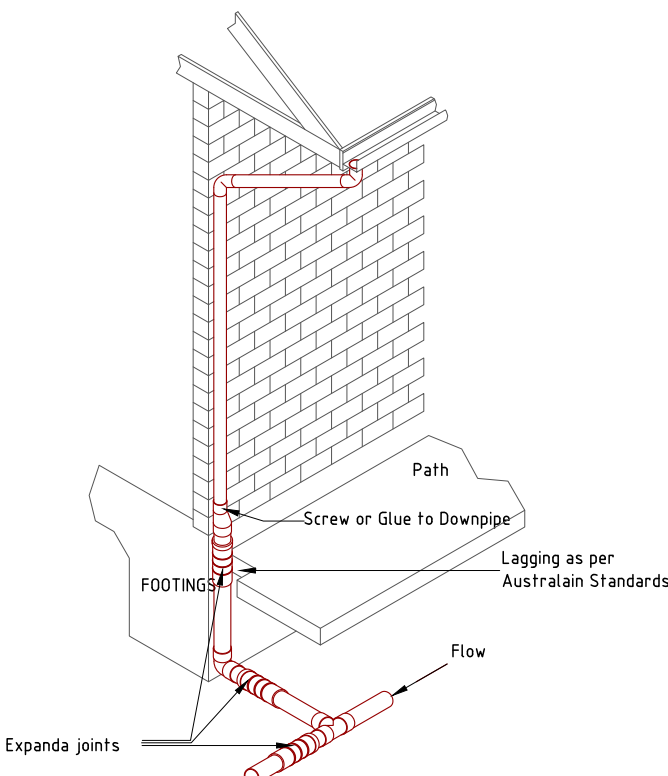
- Internal piping:
 - All flow and return internal piping that is -
 - within an unventilated wall spaces
 - within an internal floor between storeys; or
 - between ceiling and insulation and a ceilingMust have a minimum R-value of 0.2 (ie. 9mm of closed cell polymer insulation)
- Piping located within a ventilated wall space, an enclosed building subfloor or a roof space:
 - All flow and return piping
 - Cold water supply piping and Relief valve piping within 500mm of the connection to central water heating systemMust have a minimum R-value of 0.45 (ie. 19mm of closed cell polymer insulation)
- Piping located outside the building or in an unenclosed building sub-floor or roof space:
 - All flow and return piping.
 - Cold water supply piping and Relief valve piping within 500mm of the connection to central water heating systemMust have a minimum R-value of 0.6 (ie. 25mm of closed cell polymer insulation)
Piping within an insulated timber framed wall, such as that passing through a wall stud, is considered to comply with the above insulation requirements.



GUIDELINES FOR PVC-U DRAINAGE SYSTEM WITH EXPANSION AND SWIVEL JOINT LOCATIONS FOR REACTIVE SOILS



GUIDELINES FOR PVC-U DRAINAGE SYSTEM WITH EXPANSION AND SWIVEL JOINT LOCATIONS FOR REACTIVE SOILS



GUIDELINES FOR PVC-U DRAINAGE SYSTEM WITH EXPANSION AND SWIVEL JOINT LOCATIONS FOR REACTIVE SOILS

**GLENORCHY CITY COUNCIL
PLANNING SERVICES**

APPLICATION No. : PLN-25-160

DATE RECEIVED: 2/09/2025

Hot & Cold Water Nominal Diameters		
Branch off takes	Min. DN20	
Max. off take length 6m	DN18	
Max. off take length 3m	DN15	
Max. off take length 1m	DN10	

Insulation Schedule		
Heated water pipes		
Type	Size Range	Insulation
Circulating Line	32-40	25mm Rockwool with foil wrap
Branch Line Offtake	20-25 18	19mm Bradflex 13mm Bradflex
Cold water pipes exposed		
Type	Size Range	Insulation
All	>20	13mm Bradflex
Other cold watere pipes		
Type	Size Range	Insulation
All	All	Not required

NOTE: Water pipes associated directly with plan equipment shall be insulated in accordance with the manufacturers instructions for a typical installation

Surface drainage to conform with NCC Vol. 2 Part H2D2.
NOTE: 50mm fall required over first 1m from building.

IMPORTANT NOTICE FOR ATTENTION OF OWNER:
The owners attention is drawn to the fact that foundations and associated drainage in all sites requires continuing maintenance to assist footing performance. Advice for foundation maintenance is contained in the CSRIO Building Technology File 18 and it is the owners responsibility to maintain the site in accordance with that document.

DEVELOPMENT DRAWINGS ONLY
NOT FOR CONSTRUCTION

PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND DEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

PLUMBING NOTES

SCALE N/A

AMENDED

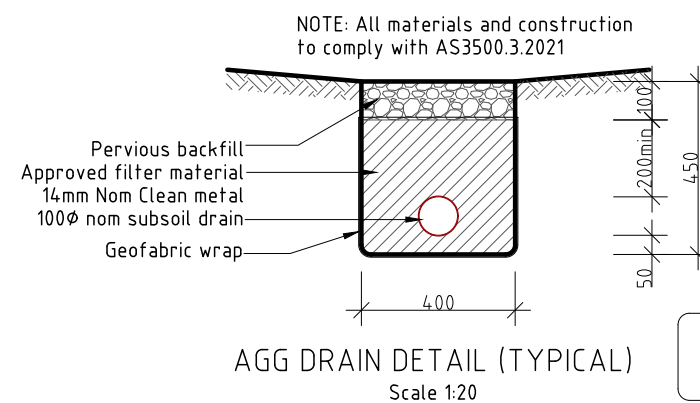
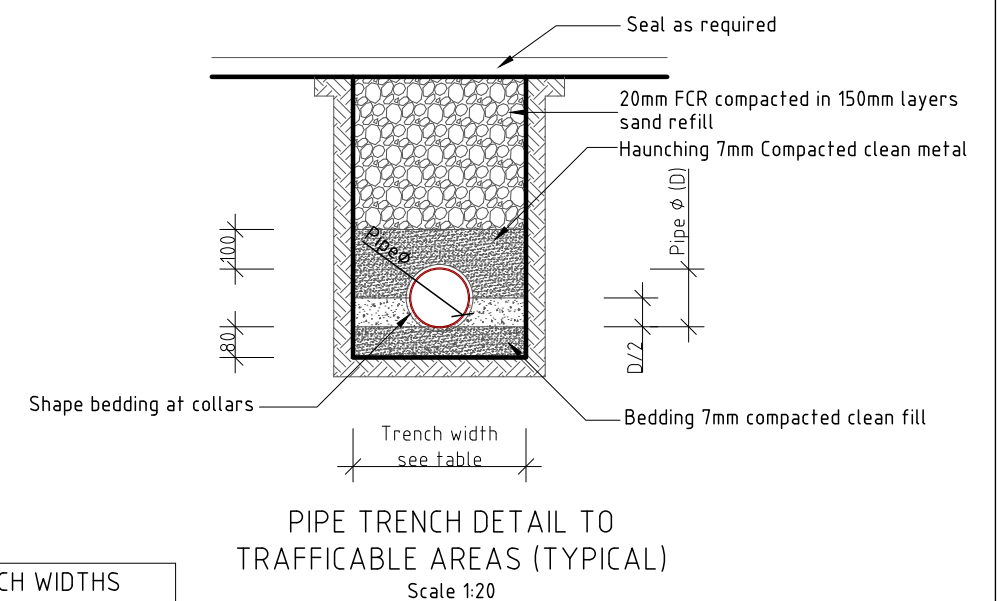
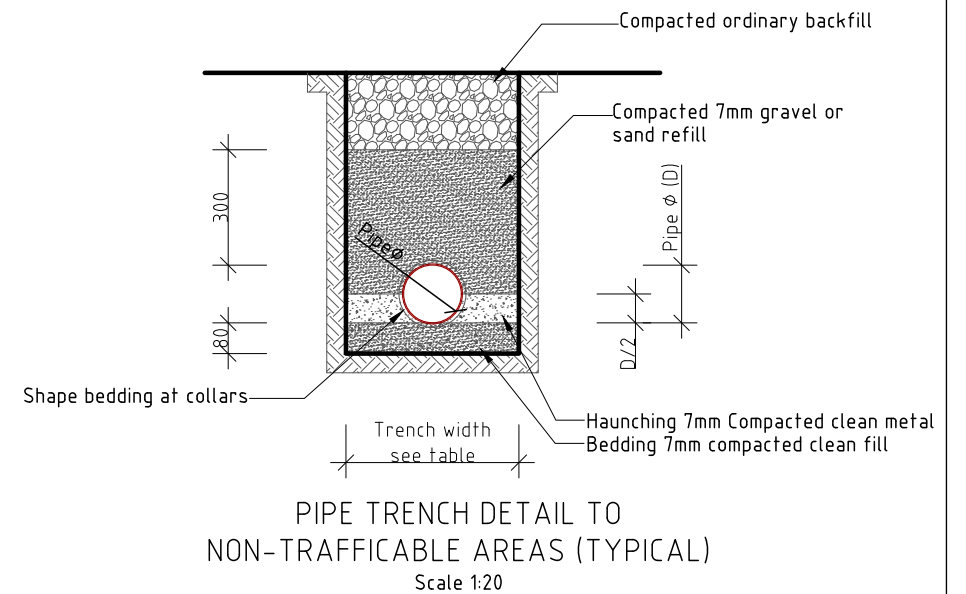
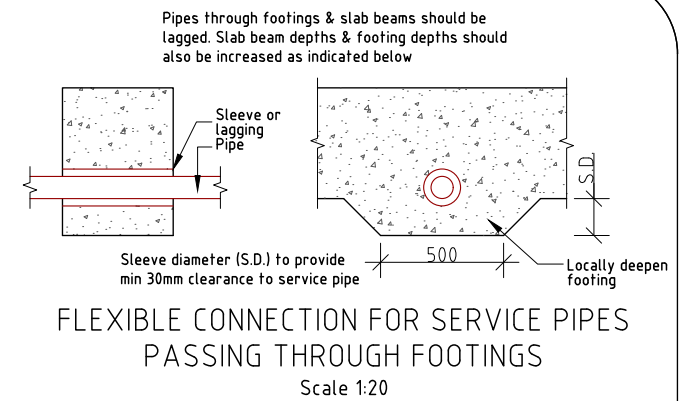
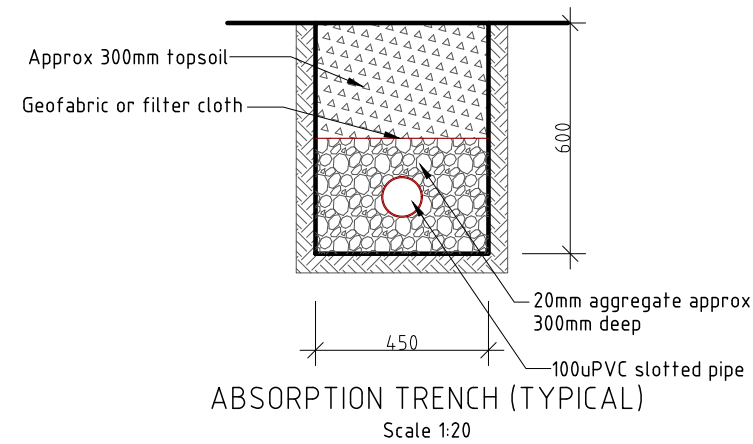
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GLENORCHY CITY COUNCIL
PLANNING SERVICES
APPLICATION No. : PLN-25-160
DATE RECEIVED: 2/09/2025



TRENCH WIDTHS	
Pipe diameter	Min trench width
Less than 50mm	250
75-100mm	450
150-300mm	600
>300mm	ϕ plus 300mm

Surface drainage to conform with NCC Vol. 2 Part H2D2.
NOTE: 50mm fall required over first 1m from building.

IMPORTANT NOTICE FOR ATTENTION OF OWNER:
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DEVELOPMENT DRAWINGS ONLY
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PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND BEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

PLUMBING DETAILS

DATE
02/09/2025

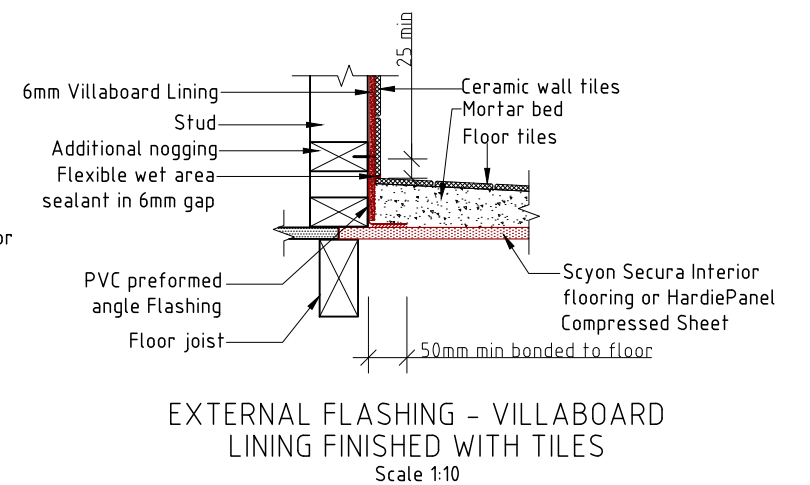
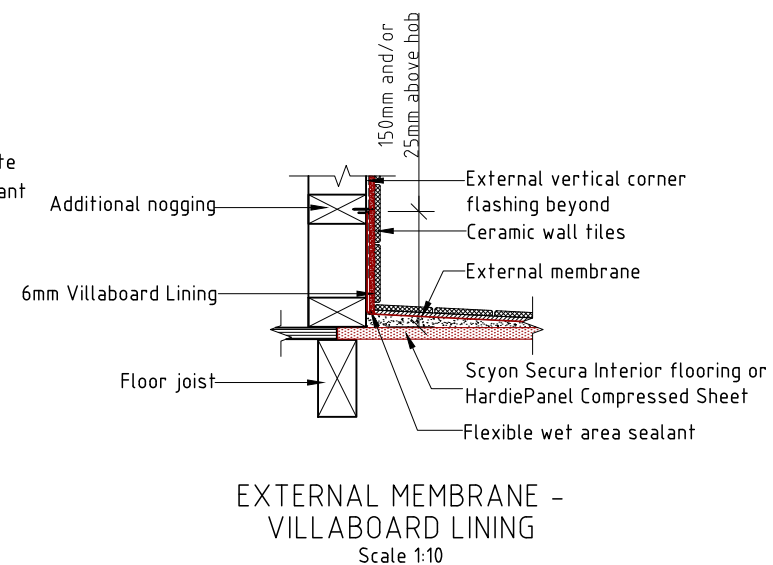
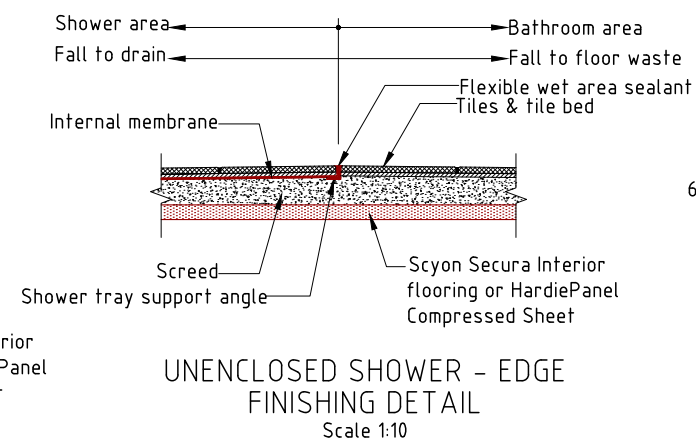
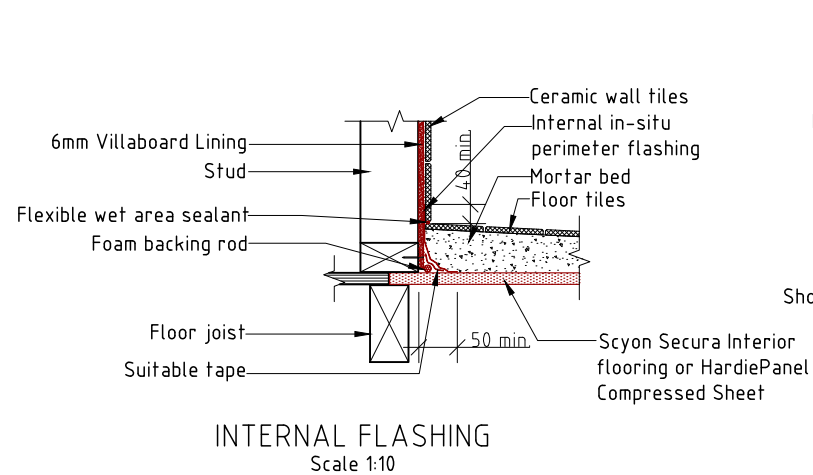
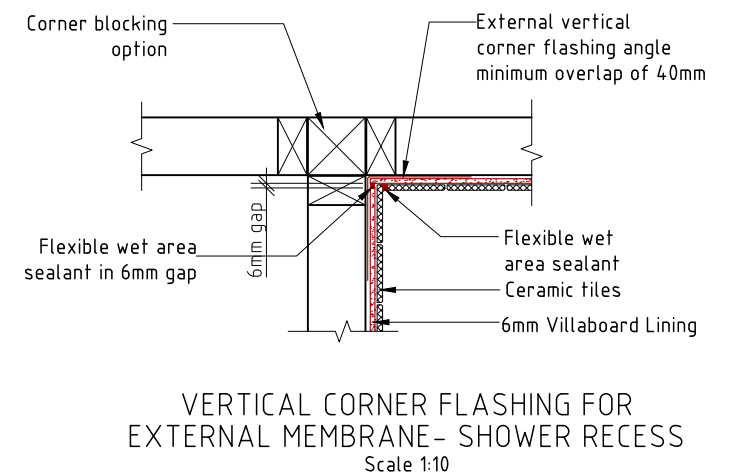
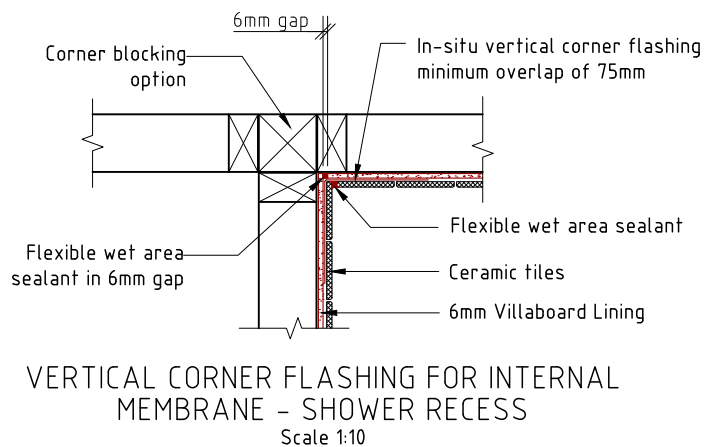
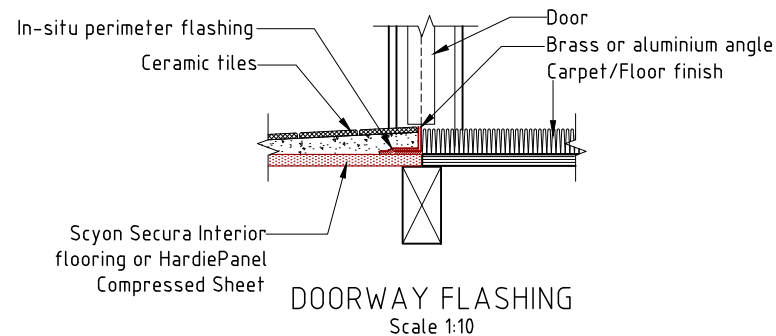
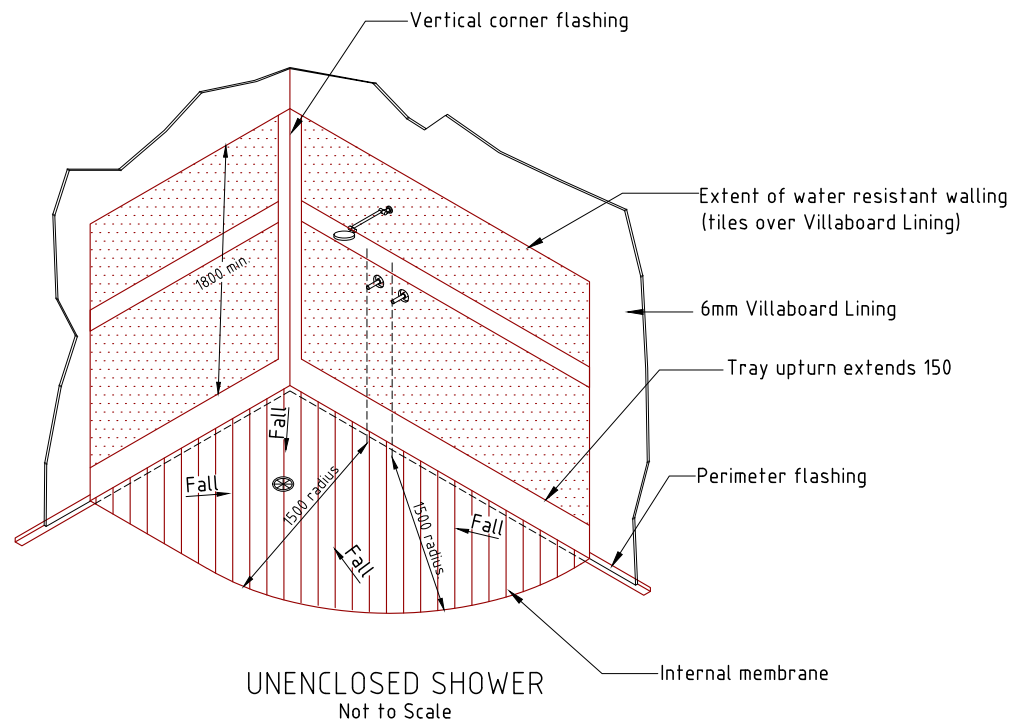
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**GLENORCHY CITY COUNCIL
PLANNING SERVICES**

APPLICATION No. : PLN-25-160

DATE RECEIVED: 2/09/2025

PROPOSED 2 UNIT DEVELOPMENT (1 EXISTING) FOR
TAYLOR AND DEESON BUILDING PTY LTD AT
27 DOWSING AVENUE DOWSING POINT

PLUMBING DETAILS

SCALE 1:10
0 100 200

AMENDED

DATE
02/09/2025

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09 OF 13

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STORMWATER REPORT

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PROJECT INFORMATION

DOCUMENT TITLE	Stormwater Report - 25 E 11 - 3 Rev A
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CLIENT REFERENCE	Dowsing Avenue
CLIENT CONTACT/S	Taylor and Beeson Building
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DOCUMENT CONTROL

REVISION	DATE	REVISION DETAILS	PREPARED	VERIFIED	APPROVED
A	31/07/2025	Development Approval	LG	DE	DG

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1. INTRODUCTION

Aldanmark have been engaged to provide a stormwater report for the proposed development at 27 Dowsing Avenue, Dowsing Point.

This report aims to demonstrate that the development at 27 Dowsing Avenue, Dowsing Point complies with the stormwater quality and quantity requirements of the Glenorchy City Council Stormwater Management Policy.

2. SITE OVERVIEW

The site contains one existing dwelling and an existing concrete driveway area. The existing site stormwater system discharges through the stormwater lot connection to a DN225 Concrete GCC Public stormwater main (ID: 245159).

One new residential unit is proposed to be constructed on the subject site, as well as new concrete driveway and parking areas. The increase in impervious area within the site is expected to increase the quantity of site stormwater runoff.

3. STORMWATER QUANTITY MODEL

3.1 MODIFIED RATIONAL METHOD

The modified rational method was applied within the software Autodesk Storm and Sanitary Analysis (SSA) to determine the increase in runoff between the pre-development and post-development conditions. The SSA model was then used to determine the volume and configuration of on-site detention required to reduce the site runoff below the pre-development condition for the 5% AEP storm.

3.2 DESIGN RAINFALL DEPTHS

Rainfall depths for the model were retrieved from the Bureau of Meteorology website (<http://www.bom.gov.au/water/designRainfalls/revised-iff/>). Multiple durations of the 5% AEP storm were analysed to determine the critical storm duration.

TABLE 1: IFD DESIGN RAINFALL DEPTHS

DESIGN RAINFALL EVENT	DESIGN RAINFALL (mm/hr)
5% AEP 5 minute	84.2
5% AEP 10 minute	63.3
5% AEP 30 minute	34.5
5% AEP 60 minute	22.5

3.3 SITE CATCHMENTS

The site catchment areas assumed for the modified rational method calculations were determined from the architectural site plan prepared by Building Designers Australia dated June 2025 as shown in Figure 1.

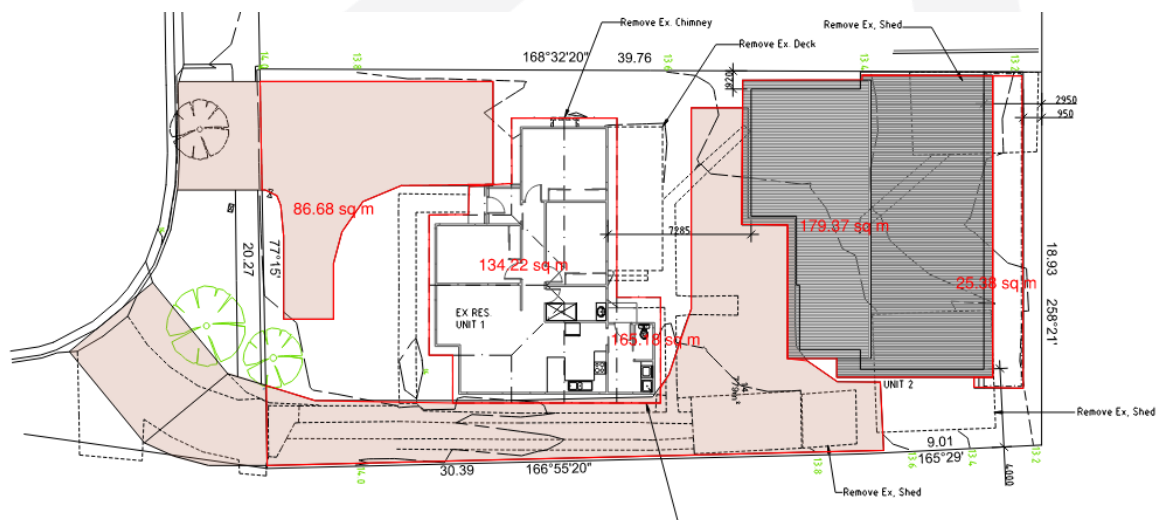


FIGURE 1: PROPOSED SITE CATCHMENTS

The runoff coefficients were adopted for each catchment area as per Glenorchy City Council Stormwater Management Policy (2024) and are detailed in Table 2 and Table 3:

TABLE 2: PRE-DEVELOPMENT SITE CATCHMENTS

CATCHMENT	AREA (m ²)	RUNOFF COEFFICIENT C
Total site area	803	0.55

TABLE 3: POST DEVELOPMENT SITE CATCHMENTS

CATCHMENT	AREA (m ²)	RUNOFF COEFFICIENT C
Roof (existing dwelling)	134	1.00
Roof (proposed unit)	179	1.00
Pavement areas	252	1.00
Deck (proposed unit)	25	0.25
Pervious areas	213	0.40

3.4 TIMING OF FLOWS

The flow travel times that were used within the Storm and Sanitary Analysis model are shown in Table 4. The travel times were determined using methods outlined in the Queensland Urban Drainage Manual (ref IPWEAQ 2016), Section 4.2 and rounded to the nearest minute.

TABLE 4: FLOW TRAVLE TIMES

CATCHMENT	TRAVEL TIME (MINS)	COMMENT
Pre-development total site area	30	GCC recommendation
Post-development impervious roofed areas	5	Recommended roof drainage
Post-development impervious driveway areas	5	Standard inlet times

3.5 DETENTION MODEL RESULTS

The results of the Stormwater and Sanitary Analysis model showed that the post-development site runoff is increased by 5.00 L/s over pre-existing runoff quantities, as shown in Table 4.

To reduce the post-development site outflow below pre-development quantities, an on-site detention system comprising the following tanks was simulated in Autodesk SSA:

- 1 x 2,049 L TankTec AquaPlate slimline detention tanks (2.02m H x 1.8 m L x 0.6m W) fitted with a 25mm orifice and connected to the roof area of the **existing dwelling**.
- 1 x 2,049 L TankTec AquaPlate slimline detention tanks (2.02m H x 1.8 m L x 0.6m W) fitted with a 25mm orifice and connected to the roof area of the **proposed unit**.

The model results showed that these tanks can reduce the post-development critical peak flow to 9.62 L/s in a 5-minute duration, 5% AEP event.

TABLE 4: PEAK FLOW RATE SUMMARY

SCENARIO	SITE RUNOFF (L/s)	CRITICAL DURATION
Pre-development	4.20	30-minute
Post-development unmitigated	15.24	5-minute
Post-development with OSD	9.62	5-minute

Although this peak flow rate is higher than the pre-development discharge, Aldanmark believes the detention volume supplied is adequate and the most practical for the proposed development. A check was carried out in accordance with Section 6 (f) of the Glenorchy City Council Stormwater Management Policy to ensure that the total provided 4,098 L of storage was adequate to cater for the difference between the Permissible Site Discharge and the peak post-development discharge over the period of the design storm. The calculation for this check is captured below in Table 5 and Table 6.

TABLE 5: PERMISSABLE SITE DISCHARGE PARAMETERS

PARAMETER	VALUE
Pre-development Runoff Coefficient	0.55
Catchment Time of Concentration (mins)	30
Catchment 20-year ARI (mm/hr)	34.5
Permissible Site Discharge (PSD) (L/s)	4.20

TABLE 6: PERMISSABLE SITE DISCHARGE PARAMETERS

PARAMETER	STORM DURATION (MINS)					
	5	10	15	20	30	60
Catchment 5% AEP Rainfall intensity (mm/hr)	84.20	63.30	51.50	43.90	34.50	22.50
Post-development Peak Flow (L/s)	15.33	11.46	9.16	7.81	6.24	4.07
Total Post-development Runoff Volume (m ³)	4.60	6.88	8.24	9.37	11.23	14.65
Stored Volume (m ³)	1.53	0.73	-0.97	-2.92	-7.20	-22.21
Site Storage Requirement (SSR) (m ³)	1.53					

As shown above the provided 4,098 L (4.098m³) of storage exceeds the required SSR of 1.53m³. The peak storage volume is 1,000 L, as captured in Table 7, shows that there is significant additional storage volume available in the case of an event exceeding 5% AEP. Table 8 summarises the detention solution and the outflow produced by each catchment. Full specifications for the required on-site detention system are given in **Error! Reference source not found.**

TABLE 7: DETENTION TANK MAXIMUM VOLUMES

STORM AEP AND DURATION	EXISTING DWELLING TANK VOLUME (L)	PROPOSED DWELLING TANK VOLUME (L)
5% AEP 5-min	594	842
5% AEP 10-min.	691	1,000
5% AEP 30-min	529	821
5% AEP 60-min	324	529

TABLE 8: DETENTION MODEL

CATCHMENT	DETENTION SOLUTION	OUTFLOW PRODUCED (5 MIN. EVENT)	TOTAL OUTFLOW
Roof (Existing dwelling)	2,049L Slimline Tank (25mm Orifice)	0.98 L/s	9.62 L/s
Roof (Proposed unit)	2,049L Slimline Tank (25mm Orifice)	1.17 L/s	
Pavement	None	5.84 L/s	
Deck	None	0.15 L/s	
Remaining Landscape	None	1.98 L/s	

Note: Autodesk SSA accounts for small frictional losses within the system which is why there is a small discrepancy between the total outflow in Table 4 and Table 8.

TABLE 9: DETENTION TANK PARAMETERS

TANK ID	RW Tank
DESCRIPTION	2,049 L Slimline Rainwater tank
BASE AREA (m²)	1.08
TANK HEIGHT (m)	2.02
INLET HEIGHT (m)	1.75
DETENTION CAPACITY (L)	1,890 L
ORIFICE DIAMETER (mm)	25
OVERFLOW PIPE DIAMETER (mm)	100
PEAK DISCHARGE RATE (L/s)	0.98
MAX. VOLUME 5% AEP (L)	1000
EMPTYING TIME (mins)	40
CONTRIBUTING ROOF AREA (m²)	180

Figure 2 below shows the site outflow hydrograph for the pre-development condition compared to the post-development condition mitigated by on-site detention.

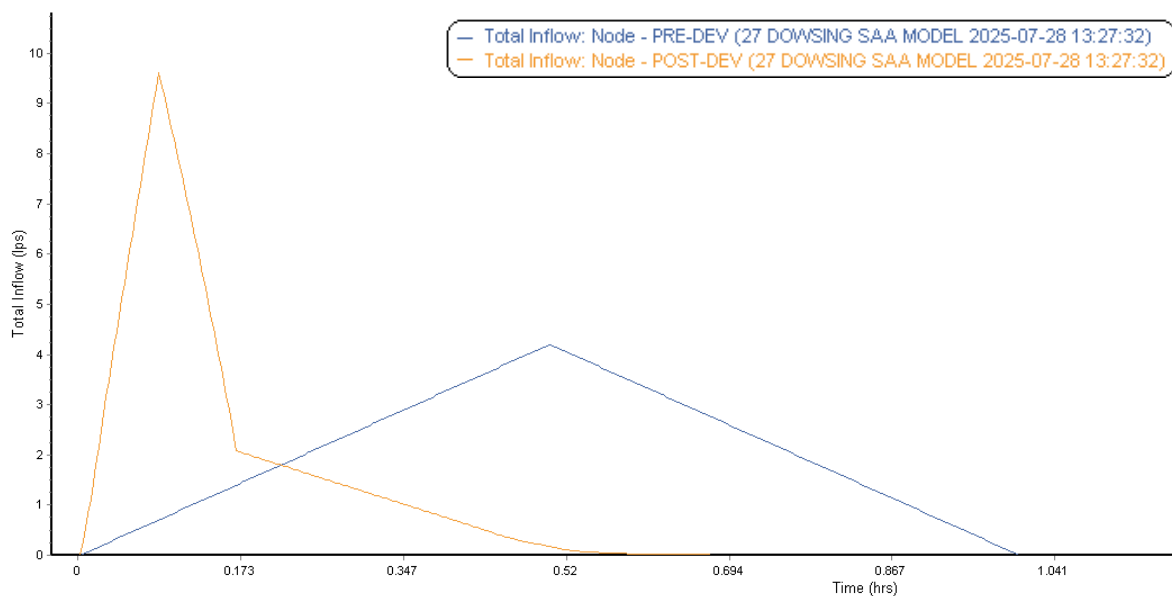


FIGURE 2: SITE RUNOFF HYDROGRAPHS

4. STORMWATER QUALITY MODEL

The proposed development does not involve the creation of new impervious area greater than 500m². As per clause 5 (a) (ii) in the Glenorchy City Council Stormwater Management Policy (2021), the site is exempt from the policy's Stormwater Quality Management Requirements.

5. MAINTENANCE

The recommended maintenance schedule for the on-site detention tanks specified in this report are outlined in Table 10.

The manufacturer's maintenance requirements for the stormwater detention tanks that are installed will form part of the project's Plumbing Maintenance Schedule.

TABLE 10: MAINTENANCE PLAN FOR RAINWATER TANKS

ACTIVITY	FREQUENCY
Visual inspection of rainwater detention tank for sediment accumulation, sludge, and algae growth, and clogging at outlet orifice.	Every 6 months
Vacuum truck sediment removal/desludging of rainwater detention tank	Approximately every 2-3 years or if sediment/'sludge' is evident upon inspection
Inspection and cleaning of gutters	Every 6 months

6. CONCLUSION

This report has demonstrated that the proposed development at 27 Dowsing Avenue, Dowsing Point complies with the stormwater quantity and quality requirements of Glenorchy City Council's Stormwater Management Policy.

Note:

- No assessment has been undertaken of Council's stormwater infrastructure and its capacity.
- This report assumes the Council stormwater main has capacity for the pre-development peak discharge.
- It is the responsibility of Council to assess their infrastructure and determine the impact (if any) of altered inflows into their stormwater network.

Please contact me at lgadomski@aldanmark.com.au if you require any additional information.

Yours faithfully,



Lachlan Gadomski BEng Civil (Hons), Dip. Project Management
Civil Engineer

APPENDIX A – DETENTION TANK CROSS-SECTION

