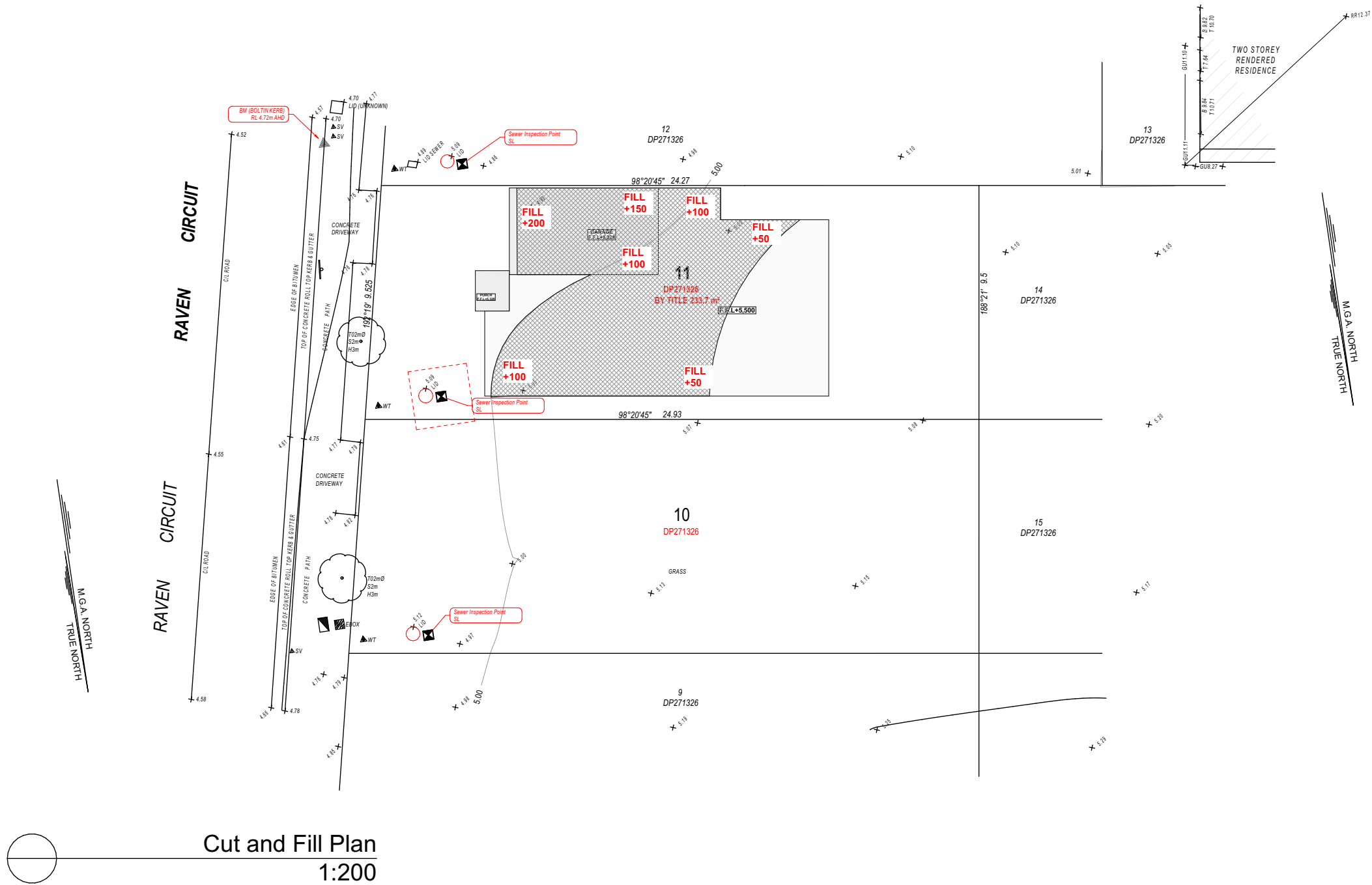
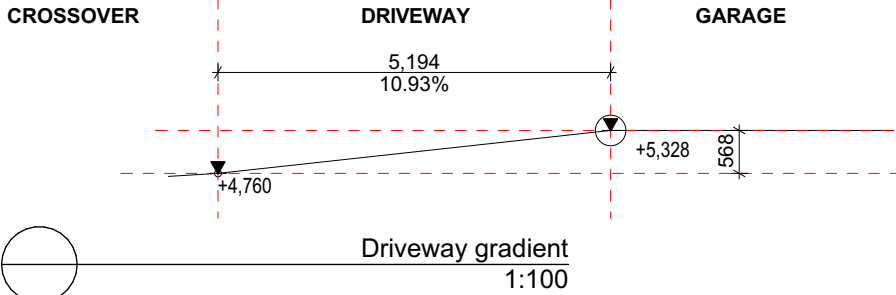


Cut and Fill is only under Slab.
Cut and Fill on the site is minimal, Hence does not
required Retaining wall.



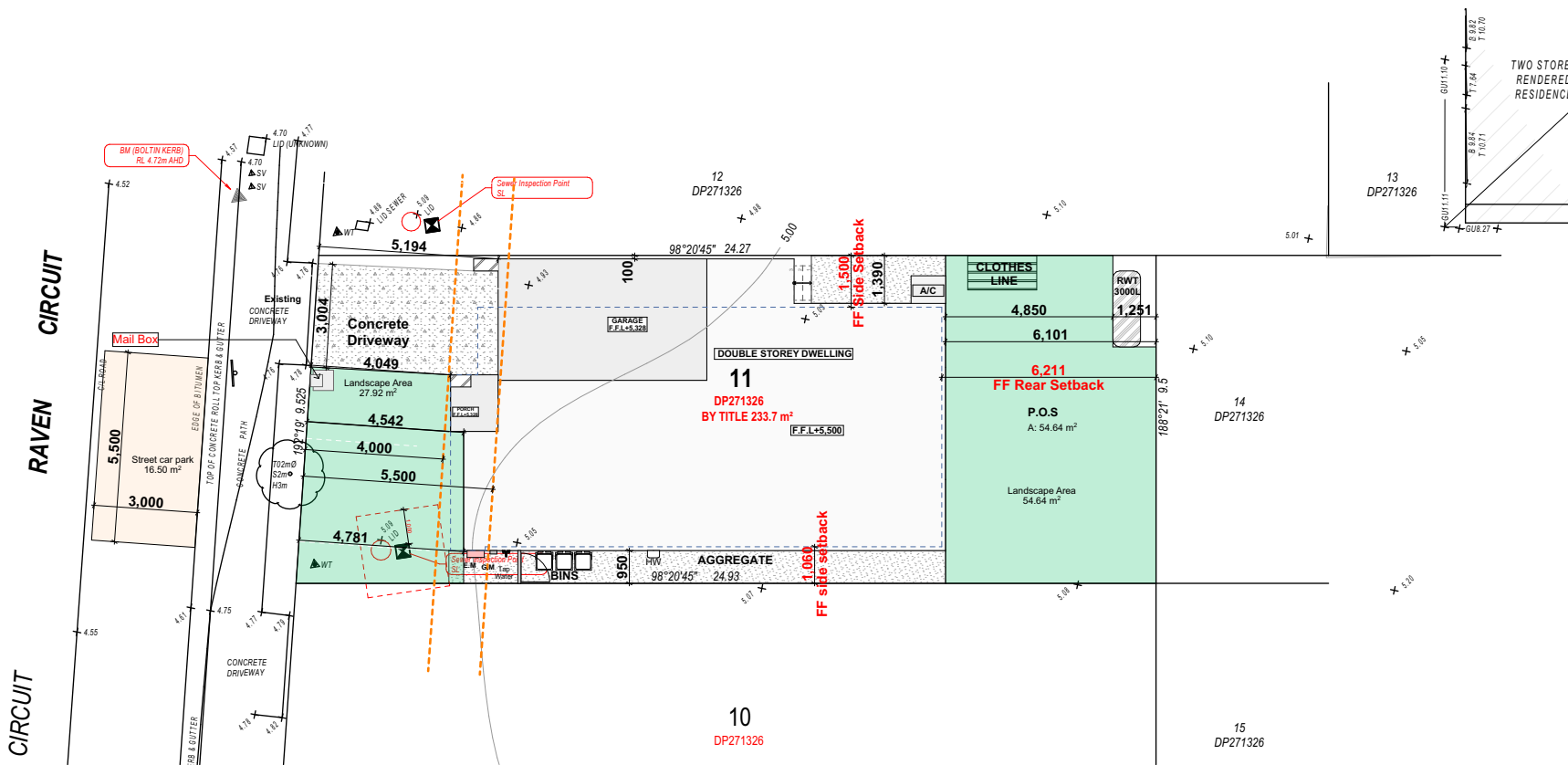
| SITE CALCUALTIONS | | |
|-------------------|----------------|----------|
| No. | Name | Area SQM |
| 01 | Site Area | 233.70 |
| 02 | Landscape Area | 82.56 |



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| SURVEY LEGEND | |
|--------------------|---------------|
| SUBJECT BOUNDARY | — |
| ADJOINING BOUNDARY | — |
| EASEMENT | - - - |
| CONTOUR MAJOR | — |
| CONTOUR MINOR | — |
| BUILDING LINE | — |
| GUTTER LINE | — |
| RIDGE LINE | — |
| FENCE | — / — / — / — |
| TOP KERB | — |
| BOTTOM KERB | — |
| OVERHEAD POWER | — |
| WALL | — |
| TOP OF BANK | — |
| BOTTOM OF BANK | — |
| TOP OF ROCK | — |
| BOTTOM OF ROCK | — |

| LEGEND | |
|---------|-------|
| Ref.img | Mark |
| | S.A |
| | R.W.T |
| | E.M |
| | A/C |
| | HW |
| | P.O.S |
| | FW |
| | MV |
| | ME |

| LEGEND | |
|---------|-------|
| Ref.img | Mark |
| | S.A |
| | R.W.T |
| | E.M |
| | A/C |
| | HW |
| | P.O.S |
| | FW |
| | MV |
| | ME |



Site Plan
1:200

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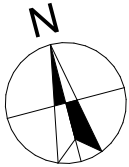
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| | | |
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DRAWING : **Site Plan**

CLIENT : **Skymark Luxury Living Pty Ltd**

PROJECT : **DOUBLE STOREY DWELLING**
#11, Raven circuit, Warriewood
Lot-11 D.P 271326

DRAWN BY: GS
SCALE: 1:200
PAGE SIZE: A3

DATE : 19/05/2025
APPLICATION : DA
PAGE NO: 4

PROJECT NO. 2412 801
ISSUE A

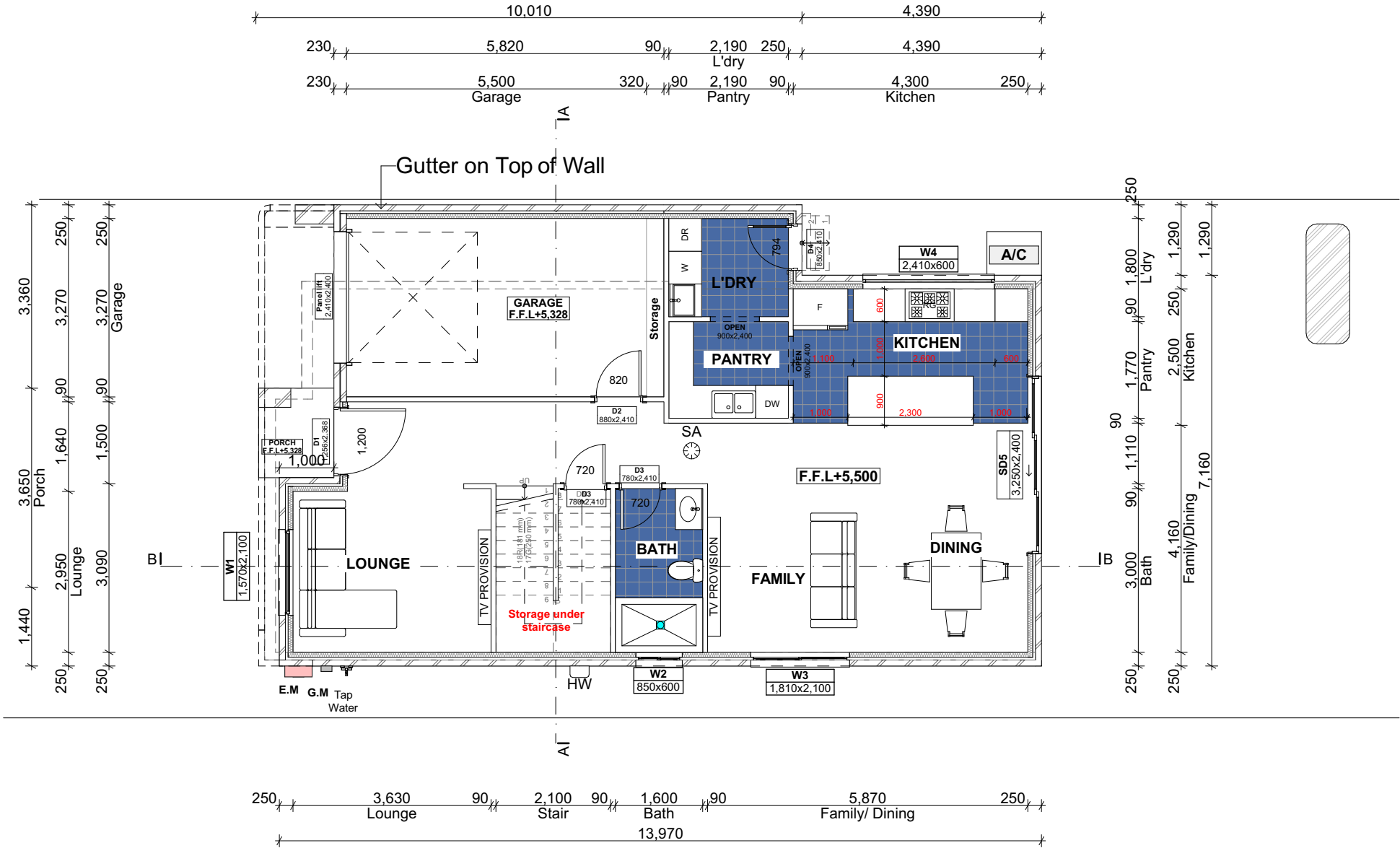
External Walls with vapour permeable membrane as per manufacturer detail.



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0.

Ground Floor
1:100

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| LEGEND | | |
|---------|-------|--|
| Ref.img | Mark | Name |
| | S.A | Smoke Alarm (AS3786 Hard Wired to Mains) |
| | R.W.T | Rain Water Tank |
| | E.M | Electric Meter |
| | A/C | Air Conditioner |
| | HW | Wall Mounted Hot water System |
| | P.O.S | Private Open Space |
| | FW | Floor Waste |
| | MV | Mechanical Ventilation (All vent to exhaust outside). |
| | ME | Mechanical Ventilation (All vent to exhaust outside). |

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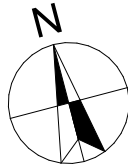
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DRAWING : **Ground Floor Plan**
CLIENT : **Skymark Luxury Living Pty Ltd**
PROJECT : **DOUBLE STOREY DWELLING**
#11, Raven circuit, Warriewood
Lot-11 D.P 271326

DRAWN BY: GS
SCALE: 1:100
PAGE SIZE: A3
DATE : 19/05/2025
APPLICATION : DA
PAGE NO: 5
PROJECT NO. 2412 801
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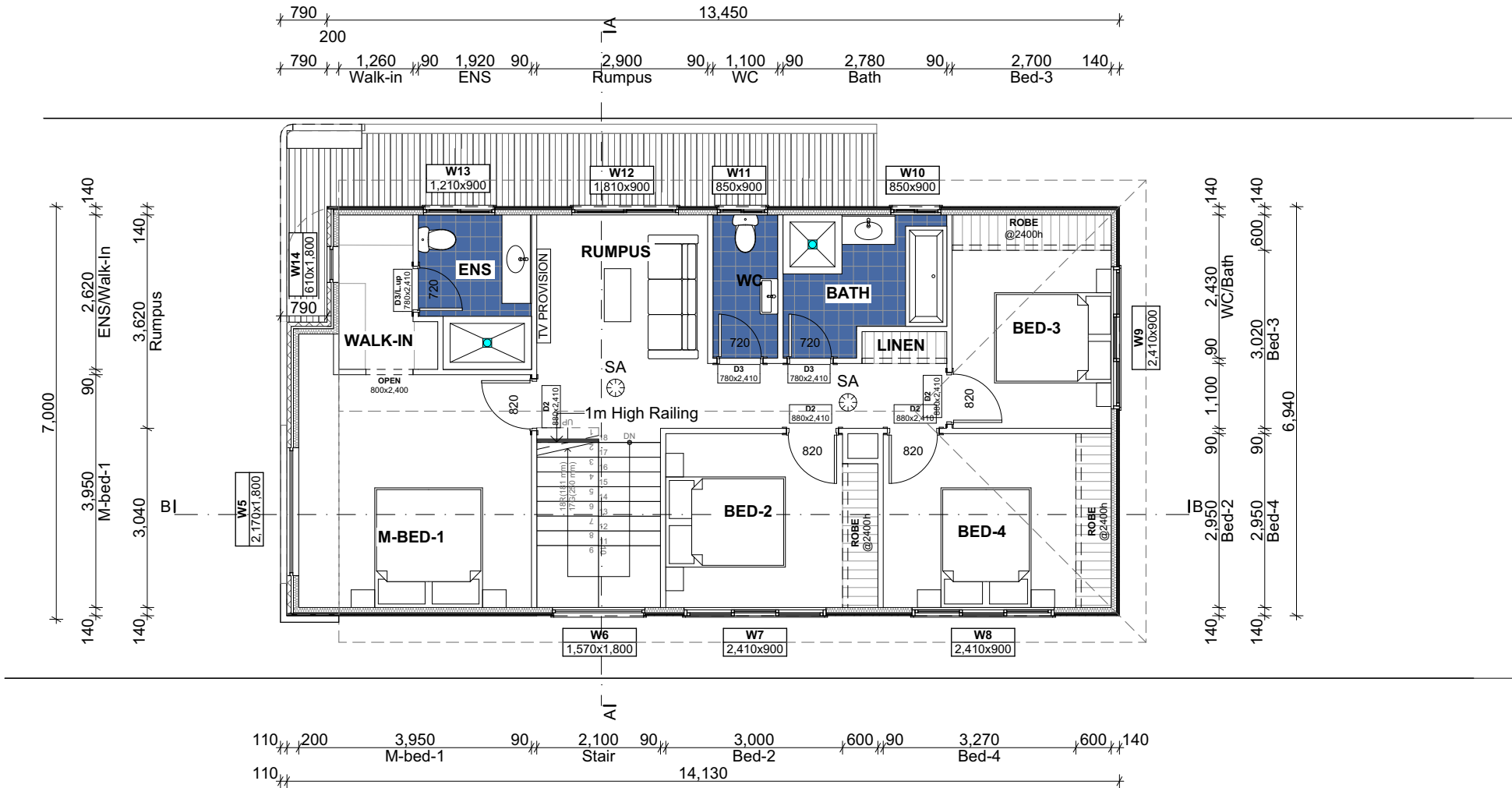
Selected Cladding with vapour permeable membrane as per manufacturer detail.












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| LEGEND | | |
|---|-------|--|
| Ref.img | Mark | Name |
|  | S.A | Smoke Alarm (AS3786 Hard Wired to Mains) |
|  | R.W.T | Rain Water Tank |
|  | E.M | Electric Meter |
|  | A/C | Air Conditioner |
|  | HW | Wall Mounted Hot water System |
|  | P.O.S | Private Open Space |
|  | FW | Floor Waste |
|  | MV | Mechanical Ventilation (All vent to exhaust outside). |
|  | ME | Mechanical Ventilation (All vent to exhaust outside). |



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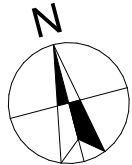
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DRAWING : **First Floor Plan**
CLIENT : **Skymark Luxury Living Pty Ltd**
PROJECT : **DOUBLE STOREY DWELLING**
#11,Raven circuit,Warriewood
Lot-11 D.P 271326

DRAWN BY: GS
SCALE: 1:100
PAGE SIZE: A3
DATE : 19/05/2025
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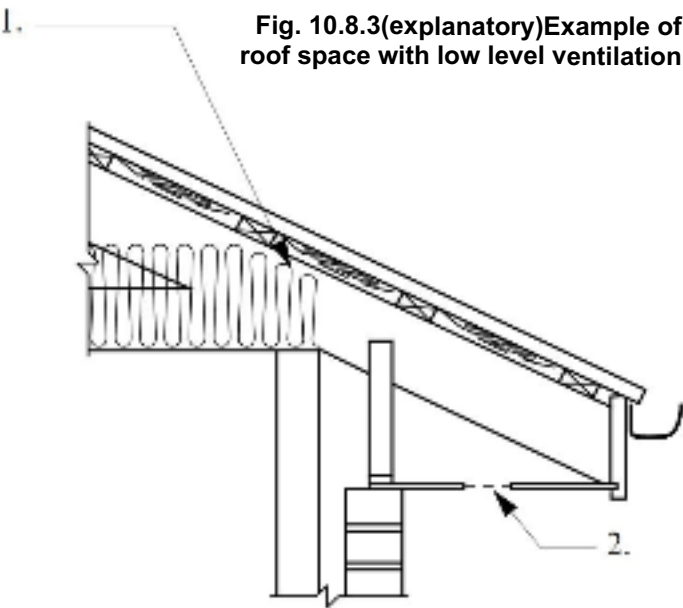
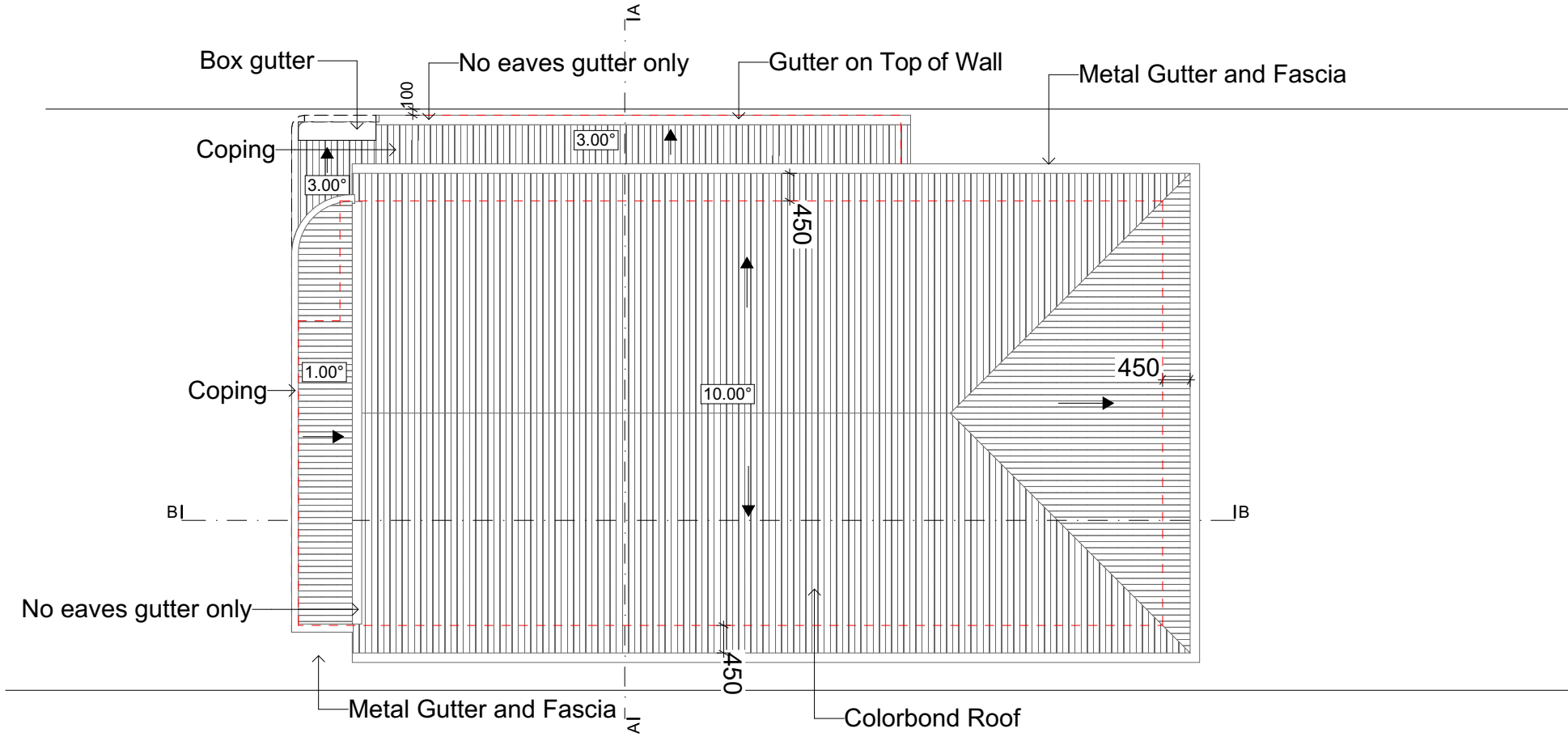


Figure Notes
1. Min 20 mm gap maintained between insulation and sarking
2. Eave ventilation opening in accordance with Table 10.8.3.



3. Roof
1:100

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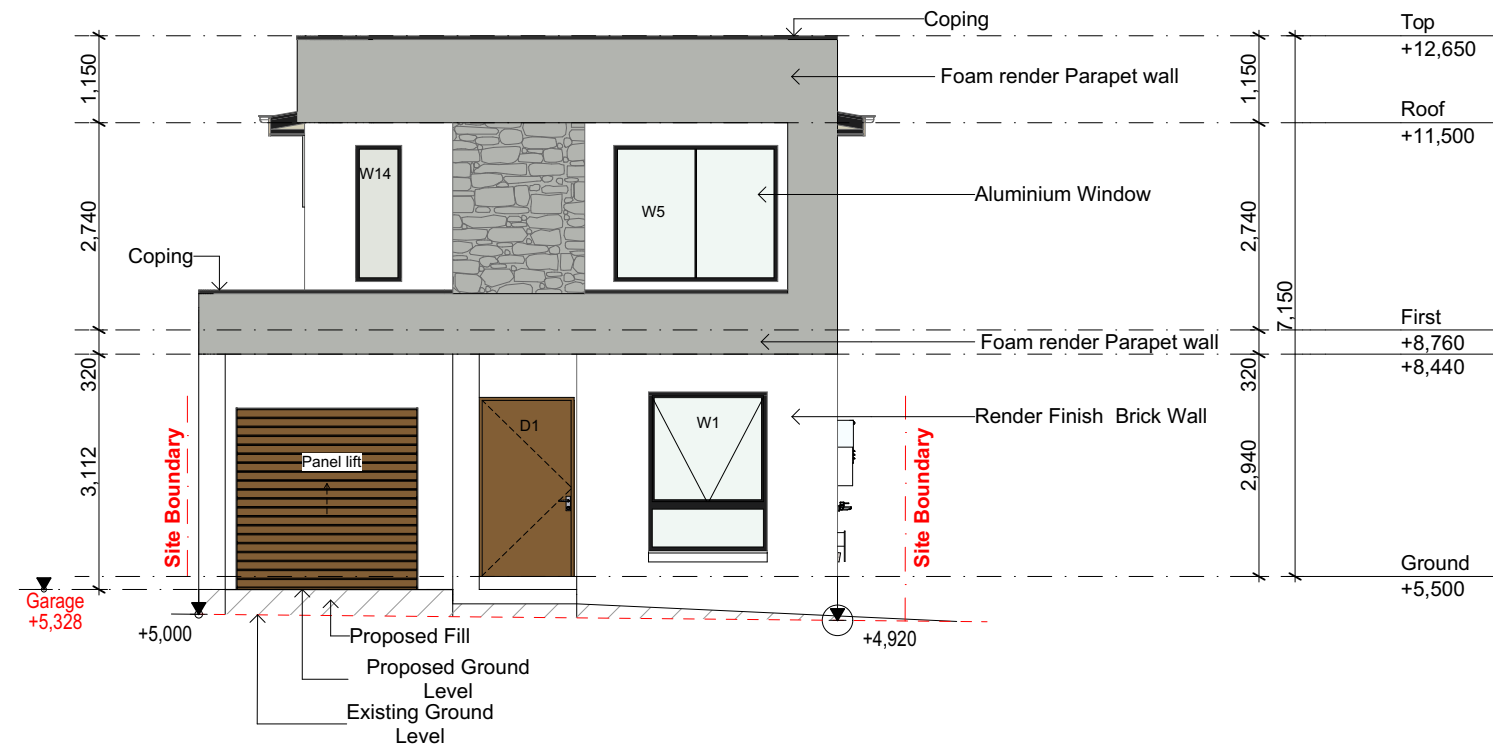


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DRAWING : **Roof Plan**
CLIENT : **Skymark Luxury Living Pty Ltd**
PROJECT : **DOUBLE STOREY DWELLING**
#11,Raven circuit,Warriewood
Lot-11 D.P 271326

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| SCALE: | APPLICATION : | ISSUE |
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| PAGE SIZE | PAGE NO: | |
| A3 | 7 | |



1 West Elevation (Front)
1:100



2 East Elevation (Rear)
1:100

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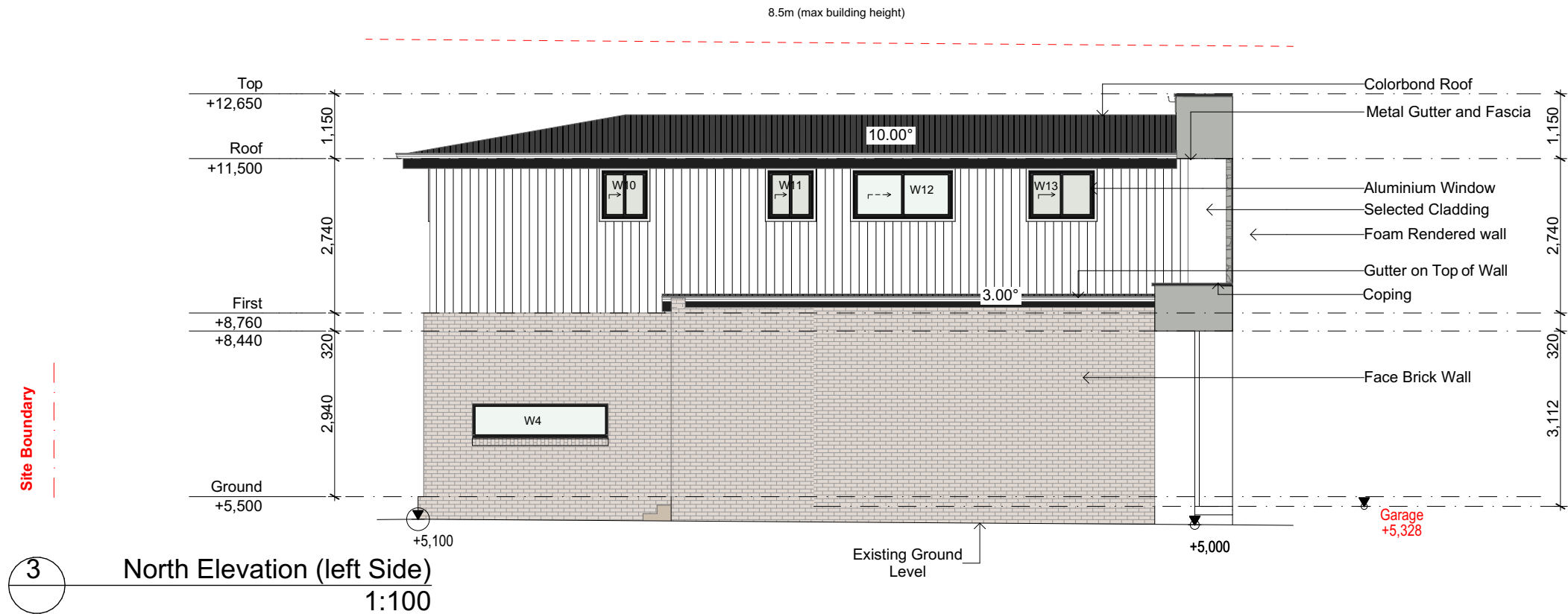
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DRAWING : **Elevations**

CLIENT : **Skymark Luxury Living Pty Ltd**

PROJECT : **DOUBLE STOREY DWELLING**
#11, Raven circuit, Warriewood
Lot-11 D.P 271326

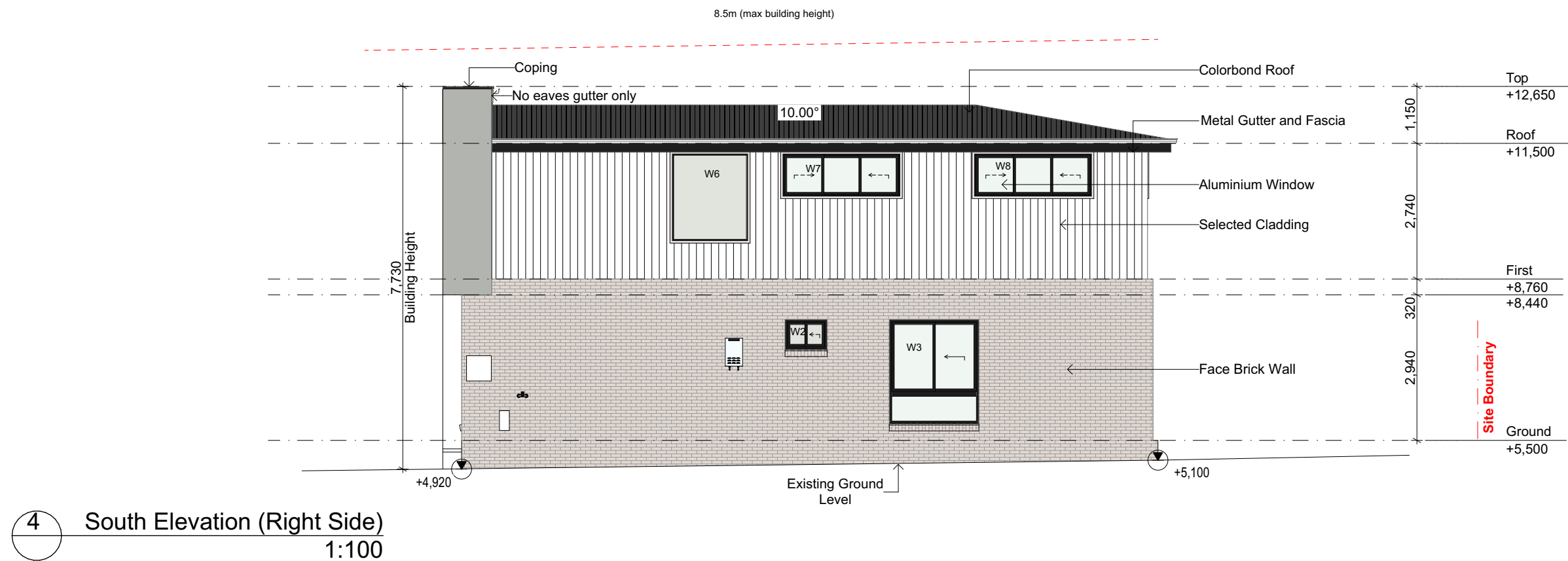
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| SCALE: 1:100 | APPLICATION : DA | ISSUE A |
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DRAWING :Side Elevations

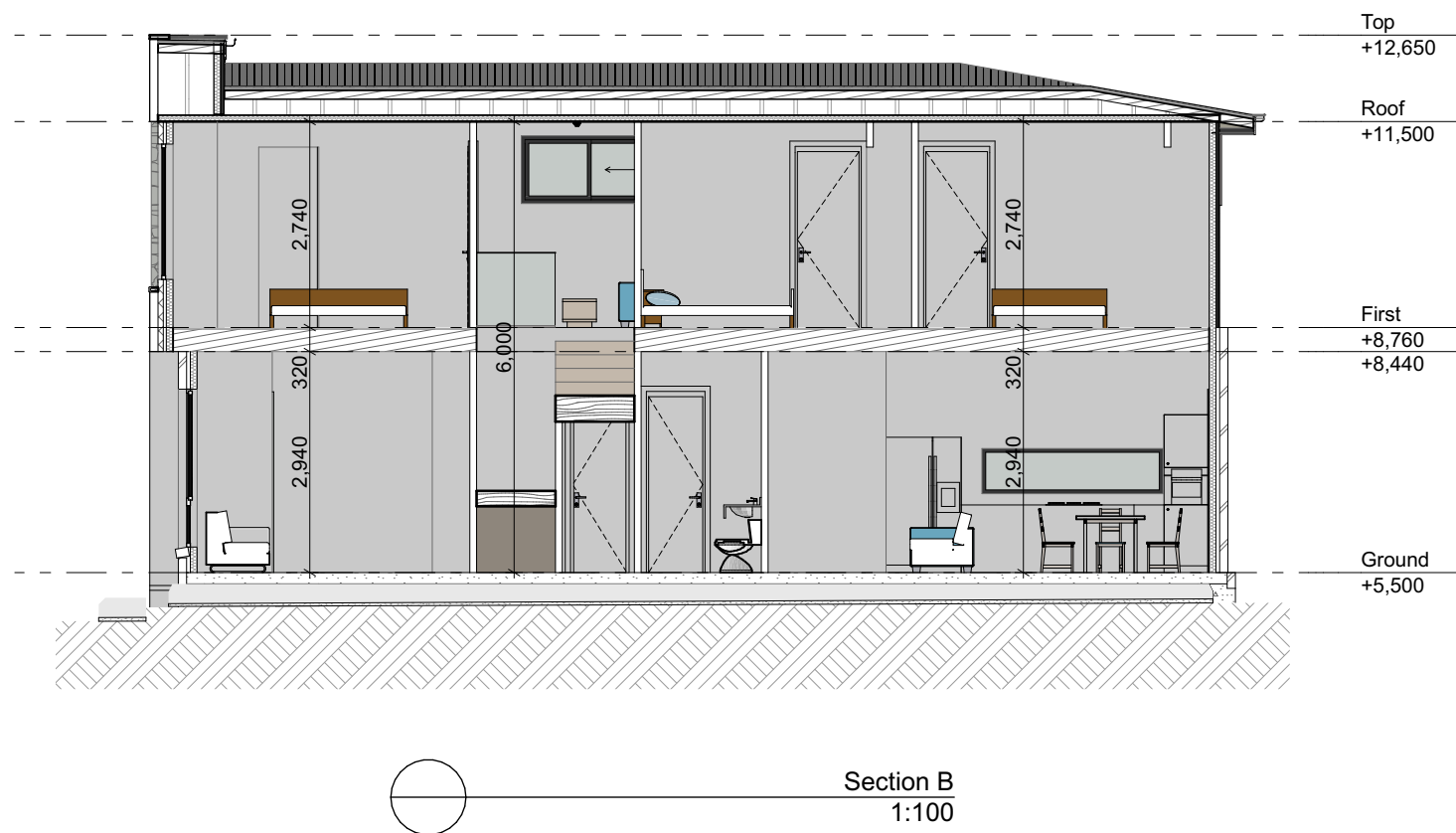
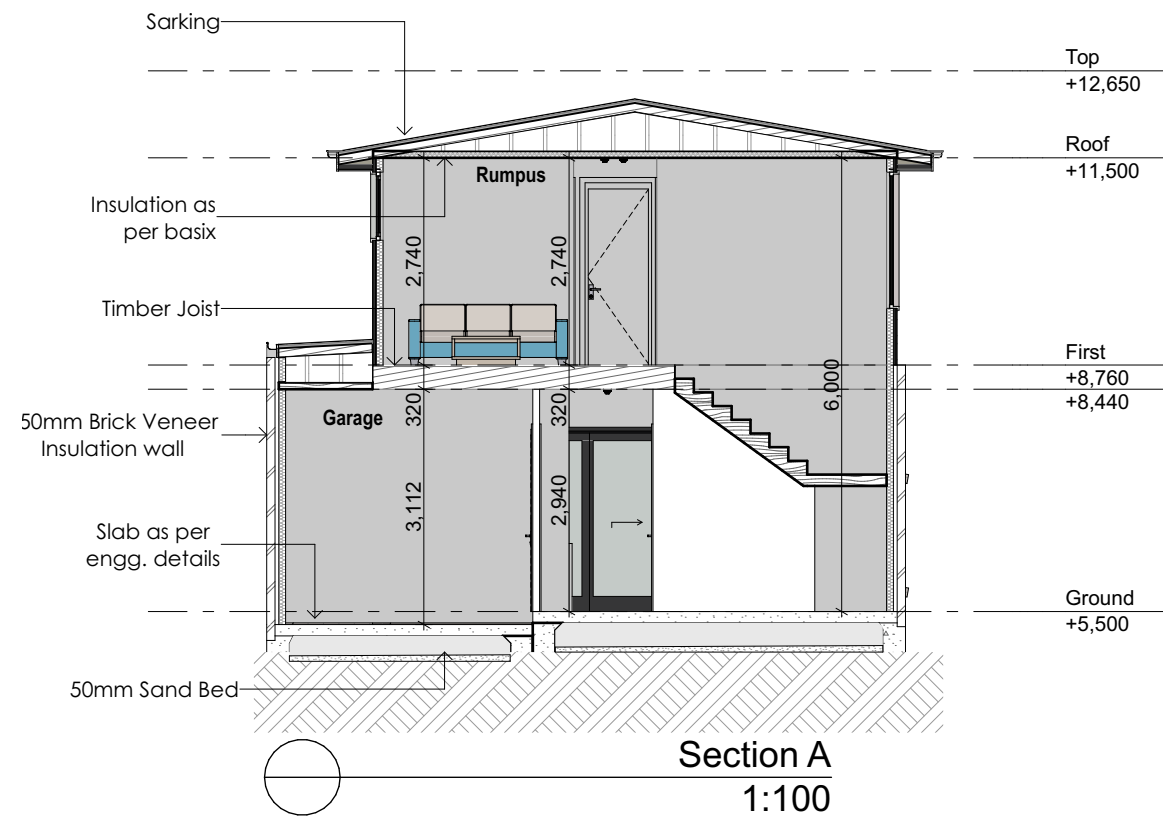
CLIENT : Skymark Luxury Living Pty Ltd

PROJECT : DOUBLE STOREY DWELLING
#11,Raven circuit,Warriewood
Lot-11 D.P 271326

DRAWN BY:
GS
SCALE:
1:100
PAGE SIZE
A3

DATE :
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PAGE NO:
9

PROJECT NO.
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DRAWING :Sections

CLIENT : Skymark Luxury Living Pty Ltd

PROJECT : DOUBLE STOREY DWELLING
#11,Raven circuit,Warriewood
Lot-11 D.P 271326

DRAWN BY: GS

SCALE: 1:100

PAGE SIZE A3

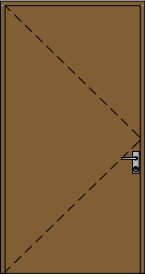
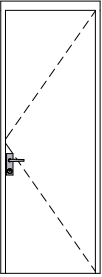
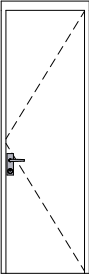
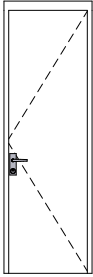


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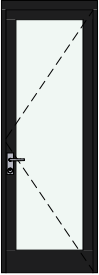
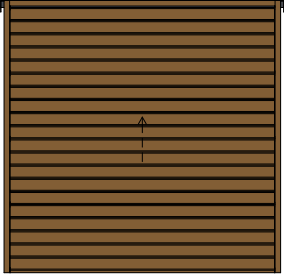
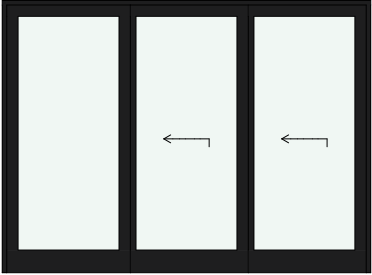
APPLICATION : DA

PAGE NO: 10

PROJECT NO. 2412 801

ISSUE A

| Door Shedule | | | | | | |
|-----------------------------|---|---|---|--|---|---|
| Element ID | D1 | D2 | D3 | D3/L.up | OPEN | OPEN |
| Wallhole Dimensions (W x H) | 1,256×2,368 | 880×2,410 | 780×2,410 | 780×2,410 | 800×2,400 | 900×2,400 |
| Leaf Dimensions | 1,200×2,340 | 820×2,340 | 720×2,340 | 720×2,340 | --- | --- |
| Elevation |  |  |  |  |  |  |
| Quantity | 1 | 5 | 4 | 1 | 1 | 2 |
| Position | Exterior | Interior | Interior | Interior | Interior | Interior |


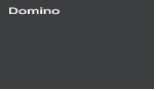

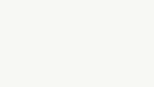


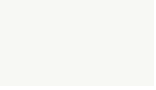


| Aluminium Door Schedule | | | |
|--------------------------|---|---|---|
| ID | D4 | Panel lift | SD5 |
| Frame Dimensions (W X H) | 850×2,410 | 2,410×2,400 | 3,250×2,400 |
| Elevation |  |  |  |
| QTY | 1 | 1 | 1 |
| Position | Exterior | Exterior | Exterior |



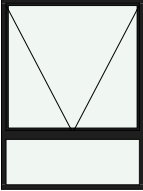

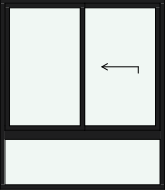

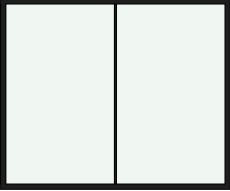
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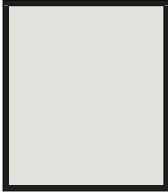

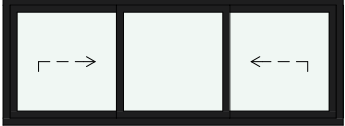


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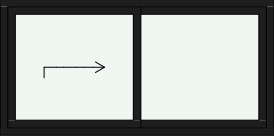


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| SCHEDULE OF FINISHES | | |
|----------------------|---|--|
| ELEMENT | SPECIFICATION | COLOUR |
| Walls |  | PGH Bricks- Botanicals- Sandalwood |
| Feature Wall |  | Dulux-Domino |
| F.F Walls |  | James hardie- Axon cladding 133mm smooth- Vivid white |
| Render Color Facade |  | Dulux-Vivid White |
| Window |  | Monument |
| Roof |  | Colorbond- Monument |
| Gutter |  | Surfmist |
| Fascia |  | Monument |
| Feature Stone |  | Sydney Tile Gallery- Stone Wall Cladding- Portland Grey Wall Cladding |

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| Window Schedule | | | | | |
|------------------|---|---|--|---|---|
| ID | W1 | W2 | W3 | W4 | W5 |
| Frame Dimensions | 1,570×2,100 | 850×600 | 1,810×2,100 | 2,410×600 | 2,170×1,800 |
| Elevation |  |  |  |  |  |
| Glass | Glass - Clear | Glass - Obscure | Glass - Clear | Glass - Clear | Glass - Clear |
| QTY | 1 | 1 | 1 | 1 | 1 |

| Window Schedule | | | | | |
|------------------|---|---|--|---|---|
| ID | W6 | W7 | W8 | W9 | W10 |
| Frame Dimensions | 1,570×1,800 | 2,410×900 | 2,410×900 | 2,410×900 | 850×900 |
| Elevation |  |  |  |  |  |
| Glass | Glass - Obscure | Glass - Clear | Glass - Clear | Glass - Clear | Glass - Obscure |
| QTY | 1 | 1 | 1 | 1 | 1 |

| Window Schedule | | | | |
|------------------|---|---|--|--|
| ID | W11 | W12 | W13 | W14 |
| Frame Dimensions | 850×900 | 1,810×900 | 1,210×900 | 610×1,800 |
| Elevation |  |  |  |  |
| Glass | Glass - Obscure | Glass - Clear | Glass - Obscure | Glass - Obscure |
| QTY | 1 | 1 | 1 | 1 |

NOTE:
- TO BE CHECKED AND CONFIRMED BY BUILDER ON SITE BEFORE PLACING ORDER.
- FALL PREVENTION FROM WINDOWS
- WINDOWS TO BE MANUFACTURED IN ACCORDANCE WITH REQUIREMENTS OF BCA CLAUSE 3.9.2.5
1- If Opening withing 1700mm above the floor; and climable elements between 150 and 750 mm above the floor, opening must be permanently restricted to 125mm; or fitted with a non-removable robust screen.
2-If opening between 865 and 1700mm above the floor; and no climable elements between 150 and 760mm bove the floor, opening must be restricted to 125mm; or fitted with a removable robust screen.
3- If opening between 865 of the floor; and climable elements between 150 and 760mm above the floor;or fitted with a non-removable robust screen.
4-If no opening within 1700mm of the floor. No restrictions apply.

Part 3.9.2.6 Protection of openable windows - bedrooms
(a) A window opening in a bedroom must be provided with protection, where the floor below the window is 2 m or more above the surface beneath.
(b) Where the lowest level of the window opening covered by (a) is less than 1.7 m above the floor, the window opening must comply with the following:
(i) The openable portion of the window must be protected with-
(A) a device capable of restricting the window opening; or
(B) a screen with secure fittings;
(ii) A device or screen required by (i) must-
(A) not permit a 125 mm sphere to pass through the window opening or screen; and
(B) resist an outward horizontal action of 250 N against the-
(aa) window restrained by a device; or
(bb) screen protecting the opening; and
(C) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.
(c) Where a device or screen provided in accordance with (b)(i) is able to be removed, unlocked or overridden, a barrier with a height not less than 865 mm above the floor is required to the openable window in addition to window protection.
(d) A barrier covered by (c) must not-
(i) permit a 125 mm sphere to pass through it; and
(ii) have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.

3.9.2.7 Protection of openable windows - rooms other than bedrooms
(a) A window opening in a room other than a bedroom must be provided with protection where the floor below the window is 4 m or more above the surface beneath.
(b) The openable part of the window covered by (a) must be protected with a barrier with a height of not less than 865 mm above the floor.
(c) A barrier required by (b) must not-
(i) permit a 125 mm sphere to pass through it; and
(ii) have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.



THIS PLAN IS TO BE READ IN
CONJUNCTION WITH
THE CONDITIONS OF DEVELOPMENT
CONSENT

DA2025/0123

FOR DA APPROVAL ONLY/NOT FOR CONSTRUCTION

NOTE
The Builder shall check all dimensions and levels on site prior to construction. Notify any errors, discrepancies or omissions to the building designer. Refer to written dimensions only. Do not scale drawings. Drawings shall not be used for construction purposes until issued for construction. This drawing reflects a design by Innovative Eco Designs and is to be used only for work when authorised in writing by Innovative Eco Designs.

All boundaries and contours are subject to survey drawing. All levels to Australian Height Data. It is the contractors responsibility to confirm all measurements on site and locations of any services prior to work on site.

All documents here within are subject to Australian Copyright Laws.



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REVESBY, NSW, 2212
design@iedesigns.com.au
www.iedesigns.com.au



| | | |
|---|------------|--------------|
| | | |
| | | |
| | | |
| A | 19/05/2025 | Issue for DA |

DRAWING : **Windows Schedule**

CLIENT : **Skymark Luxury Living Pty Ltd**

PROJECT : **DOUBLE STOREY DWELLING**
#11,Raven circuit,Warriewood
Lot-11 D.P 271326

DRAWN BY:
GS

SCALE:

PAGE SIZE
A3

DATE :
19/05/2025

APPLICATION :
DA

PAGE NO:
12

PROJECT NO.
2412 801

ISSUE
A

LEGEND

Existing trees to be retained

Proposed tree plantings

Proposed shrub plantings

Proposed groundcover plantings

Concrete driveway / path pavement

Non slip tiles pavement

Proposed garden bed

Proposed garden bed in open OSD with no floating mulch

Proposed turf area

Porous decorative pebble surface

Timber garden edge

Unit paver stepping stones

SPECIFICATION NOTES

PLANTING MATERIALS

Planting Mix:
Imported planting mix to planting beds is to comprise an approved soil mix of:

- 60% Soil mix (75% coarse sand and 25% blacksoil)
- 10% Mushroom compost
- 10% Composted sawdust
- 10% Pine bark fines
- 10% Composted manure

Mulch:
Mulch shall mean hardwood (25mm grade), free from material derived from Privet, Willow, Poplar, Coral trees, or other noxious weeds. Any mulch exceeding the 25mm grade shall be rejected / removed from the site. Graded hardwood mulch to be supplied by Australian Native Landscapes Pty Ltd Phone (02) 9450 1444, or approved equivalent.

Plant Material:
All plant material must be true to the species. No substitutes will be allowed. All plants shall be free of fungus and insect damage. All plants shall be healthy, well shaped, not soft or force grown and not root bound.

Plants are available from **Andreasens Green** wholesale nursery, contact Darren (02) 8777 4713, email darren@andreasensgreen.com.au or approved equivalent.

Turfed areas:
All new turf areas are to be selected weed free Soft Leaf Buffalo. Turf shall be laid neatly butted with staggered joins, flush with adjacent surfaces and have even running falls to all drainage points. All new turf area shall have a minimum 150mm depth of weed free top soil, placed and levelled prior to turfing.

PREPARATION AND HARDWORKS

Excavating for Spot Planting
To planting areas, excavate a hole for each plant large enough to provide not less than twice the depth and twice the diameter than the root ball of species to be planted.

Staking
Use durable hardwood, straight, free from knots or twists, pointed at one end. Drive stakes into the ground a minimum one third of their length, avoiding damage to the root system.

- 45 Litre trees in 2 x 38x38x1800mm Hardwood Stake with double Nylon tie

TIES: Provide a 50mm wide Nylon webbing tie per stake, fixed securely to the stakes, one tie at half the height of the main stem and the other as necessary to stabilise the plant.

Loose Nepean River Pebble
MATERIAL: Nepean river pebble gravel to be of uniform size or graded material in the size 20mm grade to nominal 75mm thickness as available from Australian Native Landscapes. Ph: (02) 9450 1444.

Timber Edge
MATERIAL: Timber edging shall consist of:
Edging: 100 x 50mm hardwood
Pegs: 50 x 50 x 400mm hardwood.
Fastenings: to be 75x3.75mm diam. galvanised nails

INSTALLATION: Setout alignment of timber edges on site for approval of Superintendent. Excavate to approved alignment and place edge band within trench to confirm peg locations. Install pegs and affix timber edge in accordance with details. All timber edging to finish flush with adjoining turf.

MAINTENANCE / PLANT ESTABLISHMENT

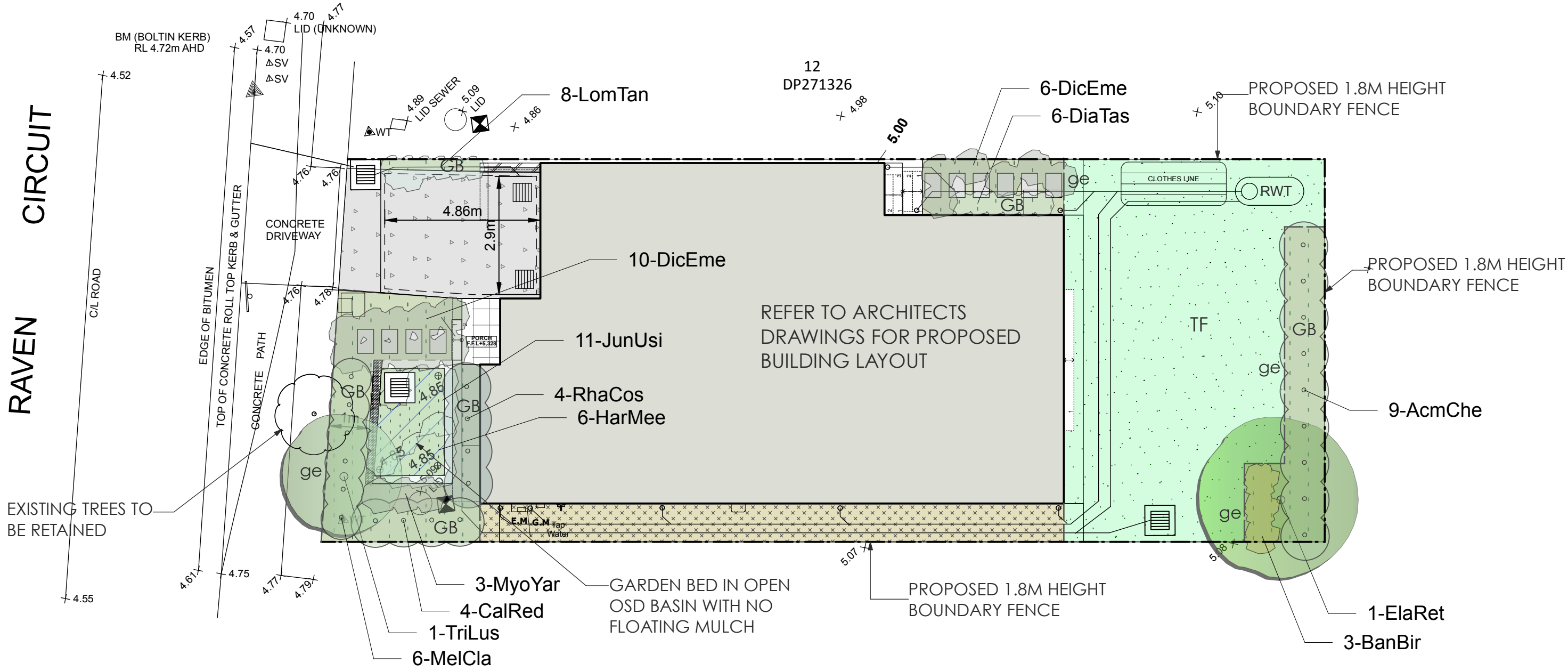
- Landscape Contractors to provide 12 months for maintenance / plant establishment period. Carry out recurrent works of a maintenance nature including, but not limited to, watering, mowing, weeding, rubbish removal, fertilising, pest and disease control, returfing, staking and tying, replanting, cultivating, pruning, hedge clipping, top dressing, and keeping the site neat and tidy.

NOTE:

- All finished levels are to be verified by Contractor on site.
- All landscape works be in strict accordance with Council's landscape code and guidelines
- This plan to be used in conjunction with all other submitted architectural, hydraulics and engineering drawing where applicable.

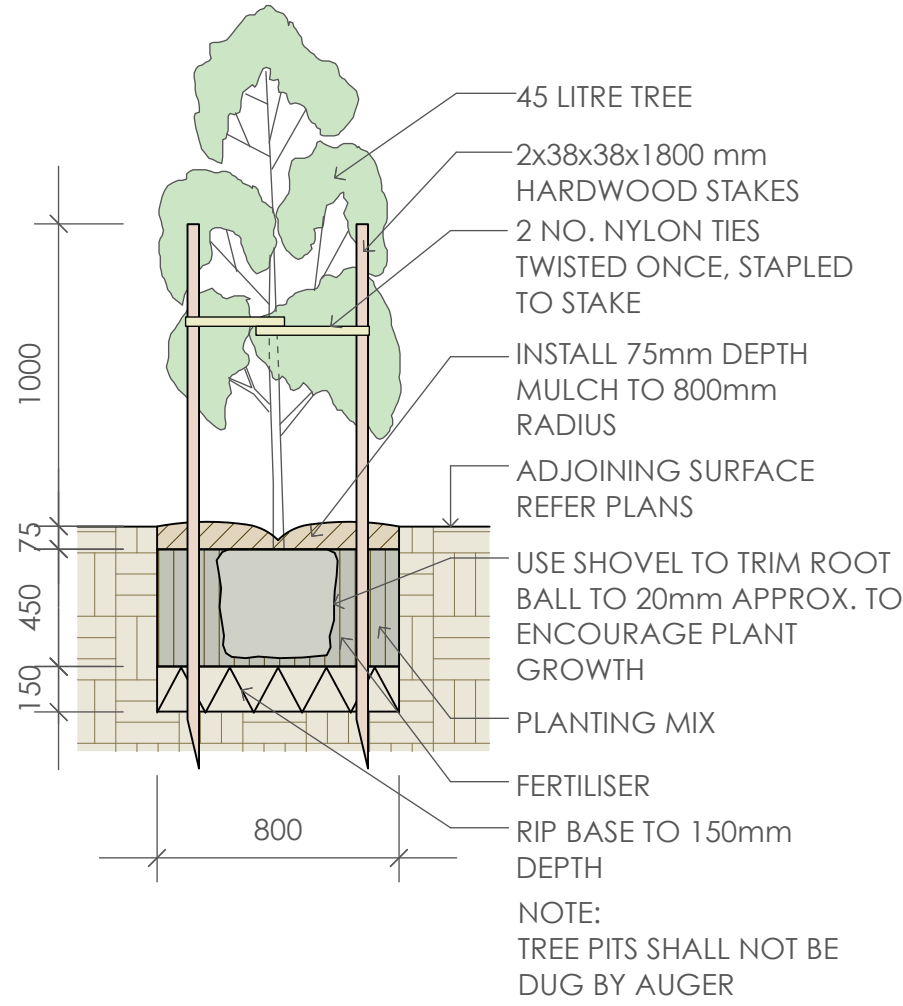
| Plant Schedule | | | | | | | |
|----------------------|-----|---------------------------|-------------------------------------|---------|---------------|---------------|------------|
| ID | Qty | Common Name | Botanical Name | Size | Mature Height | Mature Spread | Native (N) |
| Trees | | | | | | | |
| ElaRet | 1 | Blueberry Ash | Elaeocarpus reticulatus | 45Litre | 8 - 10m | 3 - 4m | N |
| TriLus | 1 | Water Gum | Tristanopsis laurina 'Luscious' | 45Litre | 6 - 8m | 3.5 - 6m | N |
| Shrubs | | | | | | | |
| AcmChe | 9 | Forest Flame | Acmena 'Cherry Surprise' | 200mm | 3.0 - 5.0m | 1.2 - 1.5m | N |
| CalRed | 4 | Red Alert Bottle Brush | Callistemon 'Red Alert' | 200mm | 1.0 - 1.5m | 2.0 - 3.0m | N |
| MelCla | 6 | Claret Tops Honey Myrtle | Melaleuca 'Claret Tops' | 200mm | 0.9 - 1.1m | 0.6 - 1.0m | N |
| RhaCos | 4 | Cosmic White Rhipirolepis | Rhipirolepis indica 'Cosmic White' | 200mm | 1.5 - 2.0m | 1.2 - 1.5m | N |
| Ground Covers | | | | | | | |
| JunUsi | 11 | Tussock Rush | Juncus usitatus | 150mm | 0.5 - 0.7m | 0.8 - 1.0m | N |
| HarMee | 6 | Meema | Hardenbergia violacea 'Meema' | 150mm | 0.4 - 0.6m | 1.5 - 2.0m | N |
| DicEme | 16 | Emerald Falls Dichondra | Dichondra 'Emerald Falls' | 150mm | 0.0 - 0.3m | 0.9 - 1.2m | N |
| DiaTas | 6 | Flax Lily | Dianella tasmanica 'Tasred' | 150mm | 0.4 - 0.5m | 0.4 - 0.5m | N |
| LomTan | 8 | Spiny-headed mat rush | Lomandra longifolia 'Tanika' | 150mm | 0.45 - 0.6m | 0.6 - 0.9m | N |
| MyoYar | 3 | Carpet Spreading Myoporum | Myoporum parvifolium 'Yareena' | 150mm | 0.05 - 0.1m | 0.8 - 1.0m | N |
| BanBir | 3 | Birthday Candle | Banksia spinulosa 'Birthday Candle' | 150mm | 0.45 - 0.6m | 0.9 - 1.2m | N |

| LANDSCAPED AREA CALCULATIONS | |
|---------------------------------|-------------------|
| Total site area | 233.7m2 (approx.) |
| Total building area | 111m2 (approx.) |
| Total paved area | 15m2 (approx.) |
| (including driveway and patios) | |
| Total landscaped area | 85m2 (approx.) |
| (36.4% of site area) | |

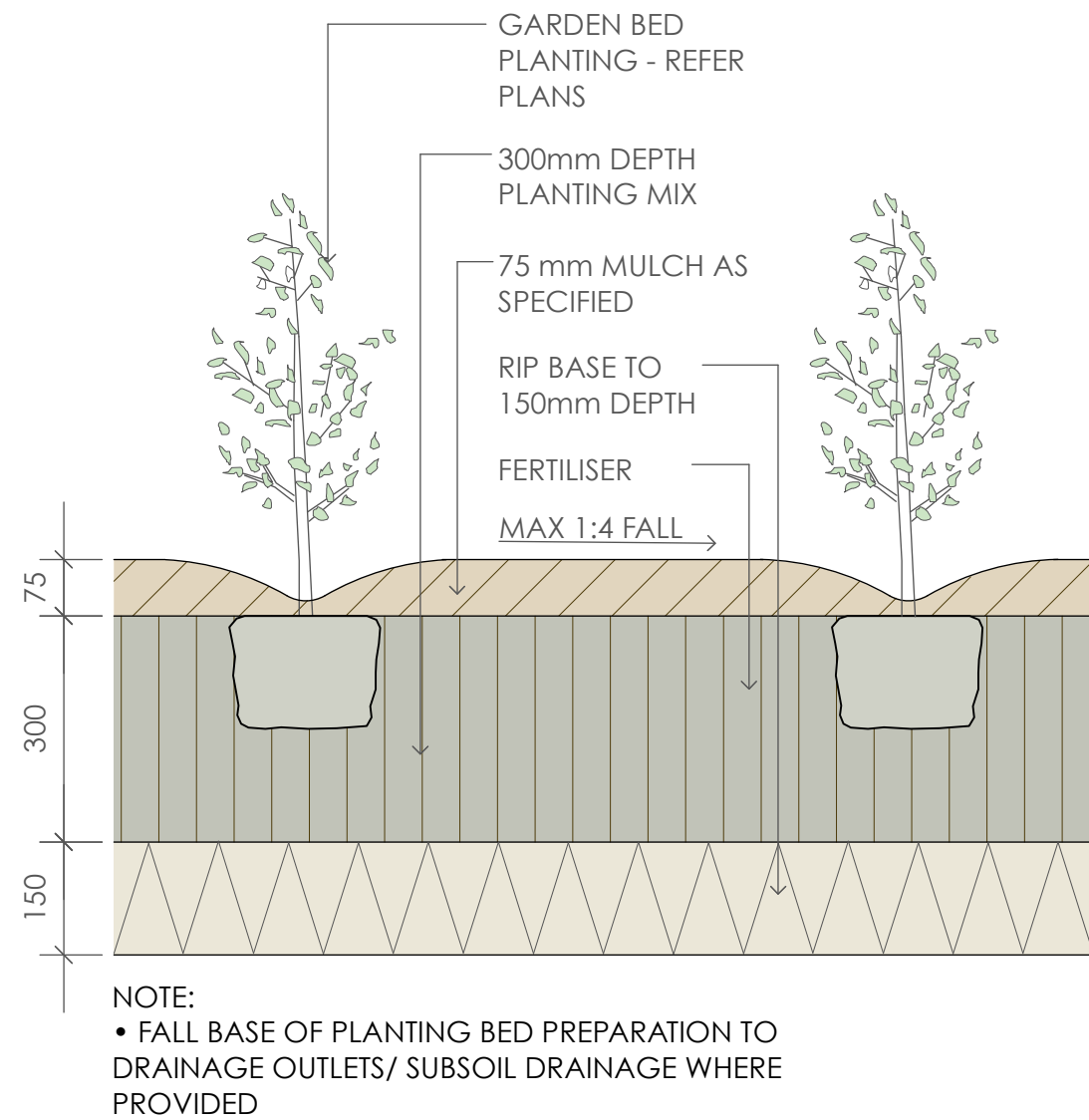


THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DA2025/0123

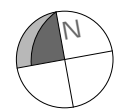


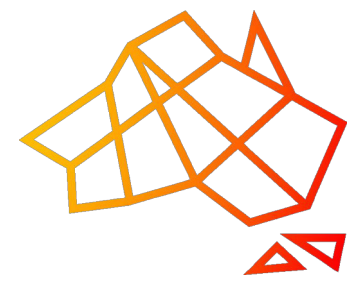
1 45 Litre Tree Planting
scale 1:25



2 Planting Bed Detail
scale 1:10

| | | | | | | | | | | | |
|---|--|--|--|--|-------------------------------------|--|---|---|---|---|---------------------------------------|
| GENERAL NOTES: 1. Do not scale of drawings. Follow written dimensions. If in doubt obtain written advice from the Superintendent. 2. Verify all dimensions on site. 3. Refer to legend for all symbol and code keys. 4. Read in conjunction with the specifications 5. Read in conjunction with all associated drawings | | | | | DESIGNED: GD DRAWN: CL | PREPARED FOR: <i>D PROJECTS PTY LTD</i> | PREPARED BY: Greenland Design Pty Ltd ABN 73 139 152 855 Registered Landsc. Architect: Bao Ly Cecil Hills NSW 2171 T: 0403 164 198 E: gd@greenlanddesign.com.au | PROJECT: PROPOSED RESIDENCE PROJECT ADDRESS: NO. 11 RAVEN CIRCUIT WARRIEWOOD | DRAWING TITLE: Landscape Plan | DATE: MAY 2025 SCALE: 1:200 @ A3 1:100 @ A1 ISSUE: A | DRAWING NO: 2953B.GD.01 |
| ISSUE AMENDMENT | | | | | DRAWN DATE | | | | | | |





AUSTRAX STRUCTURAL CIVIL ENGINEERS

STORMWATER MANAGEMENT PLAN AND DETAIL

11 RAVEN CIRUIT, WARRIEWOOD NSW

LEGEND:

| | |
|--|--|
| | STORMWATER LINE |
| | CHARGED LINE |
| | SUBSOIL LINE |
| | STORMWATER RISING MAIN |
| | OVERFLOW LINE |
| | AUTHORITY STORMWATER LINE |
| | AUTHORITY SEWER LINE |
| | AUTHORITY WATER LINE |
| | EXISTING STORMWATER LINE |
| | AUTHORITY ELECTRICITY LINE |
| | AUTHORITY UNDERGROUND ELECTRICITY LINE |
| | AUTHORITY COMMS LINE |
| | FENCE LINE |
| | GRATED SURFACE INLET PIT |
| | GRATED SURFACE INLET PIT WITH ENVIROPOD INSERT |
| | JUNCTION PIT |
| | KERB INLET PIT |
| | EXISTING GRATED SURFACE INLET PIT |
| | EXISTING JUNCTION PIT |
| | EXISTING KERB INLET PIT |
| | EXISTING TELSTRA PIT |
| | EXISTING HYDRANT |
| | EXISTING STOP VALVE |
| | EXISTING GAS VALVE |
| | EXISTING POWER POLE |
| | EXISTING BOUNDARY TRAP |
| | EXISTING SEWER MANHOLE |

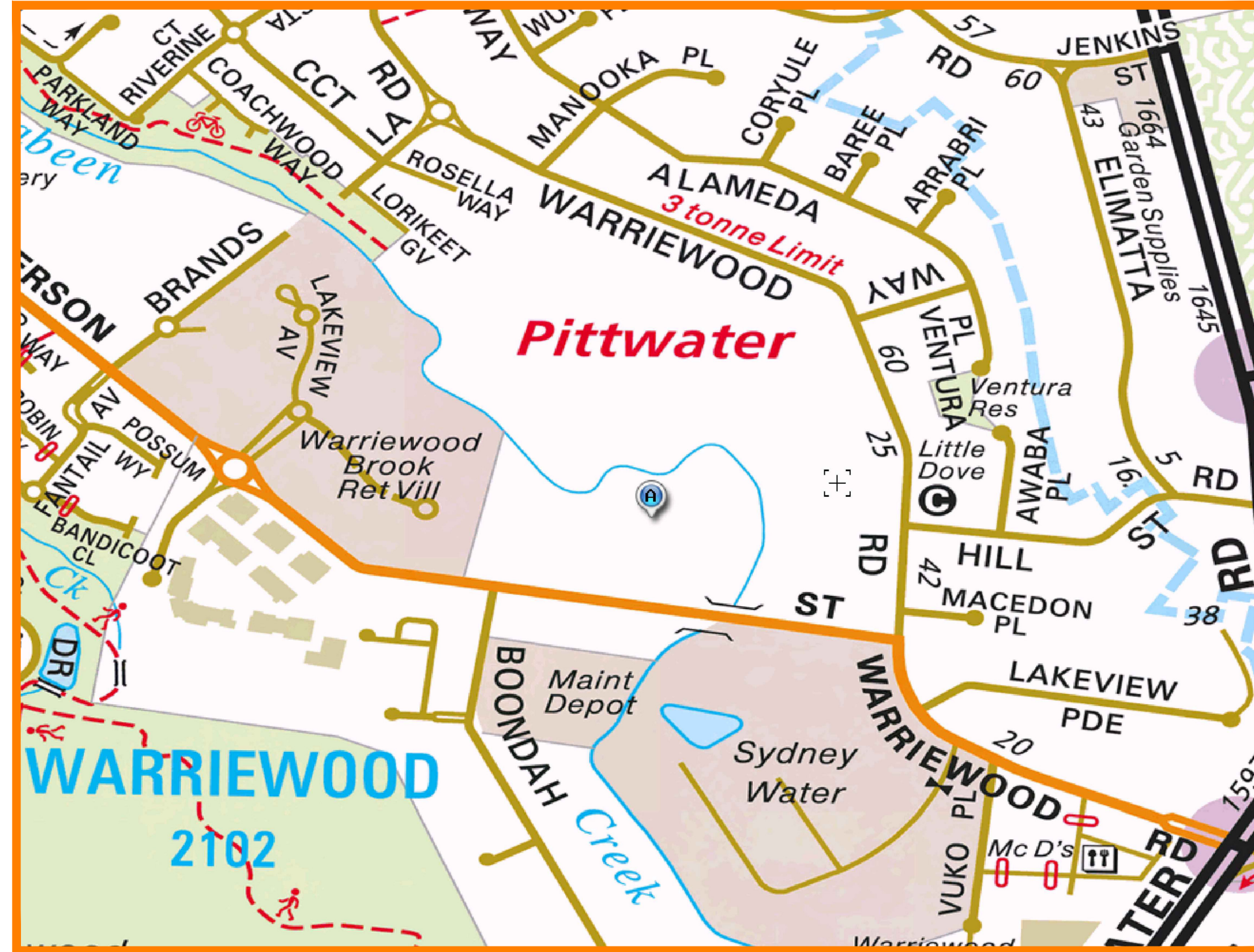
ABBREVIATIONS:

| | |
|----------|----------------------------------|
| Ø or DIA | DIAMETER |
| CL | CENTER LINE |
| CO | CLEAR OUT |
| DGS | DENSE GRADED SUB-BASE |
| DP | DOWNPIPE |
| e | EXISTING |
| FFL | FINISHED FLOOR LEVEL |
| GTD | GRATED TRENCH DRAIN |
| GSIP | GRATED SURFACE INLET PIT |
| IL | INVERT LEVEL |
| K&G | KERB & GUTTER |
| OPF | OVERLAND FLOW PATH |
| OSD | ON-SITE DETENTION |
| R | RADIUS |
| RCP | REINFORCED CONCRETE PIPE |
| RL | REDUCED LEVEL |
| RW | RETAINING WALL |
| RWT | RAINWATER TANK |
| SMH | SEWER MAN HOLE |
| SW | STORMWATER |
| SV | STOP VALVE |
| TOK | TOP OF KERB |
| TOW | TOP OF WALL |
| TWL | TOP WATER LEVEL |
| UPVC | UNPLASTICISED POLYVINYL CHLORIDE |
| UNO | UNLESS NOTED OTHERWISE |
| FF | FIRST FLUSH DEVICE |
| TYP | TYPICAL |
| OPF | OVERLAND FLOW PATH |
| RWO | RAINWATER OUTLET |
| CO | CLEAR OUT POINT |
| FF | FIRST FLUSH |
| DDO | DISH DRAIN OUTLET |
| PD | PLANTER DRAIN |
| FW | FLOOR WASTE |
| J | CAPPING |
| (1.0) | PIT TAG/NUMBER |
| RH | RAINHEAD |
| DP | DOWNPIPE DROP |
| DP | DOWNPIPE |
| NRV | NON RETURN VALVE |
| WP | WALL PENETRATION |
| DP | DOWNPIPE SPREADER |
| RH | RAINHEAD |
| WL | WARNING LIGHT |
| 0.00 | SPOT LEVELS |
| BM | BENCHMARK |

DIAL BEFORE YOU DIG SHOULD BE CONTACTED PRIOR TO ANY EXCAVATION ON SITE

TM: TRADE MARK OF THE ASSOCIATION OF DIAL BEFORE YOU DIG SERVICES LTD. USED UNDER LICENSE.

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.



SITE LOCATION

DRAWING REGISTER

| NUMBER | NAME | REVISION |
|--------|-------------------------------|----------|
| SWDP01 | COVER SHEET | A |
| SWDP02 | EROSION SEDIMENT CONTROL PLAN | A |
| SWDP03 | STORMWATER MANAGEMENT PLAN | A |
| SWDP04 | STORMWATER DRAINAGE DETAILS | A |



THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DA2025/0123

DRAINAGE NOTES:

ALL PIPES TO BE LAID ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED

100mm AND 150mm DIAMETER PIPES TO BE LAID ON MINIMUM 1% GRADE

MINIMUM DEPTH OF COVER FOR PIPES NOT SUBJECT TO VEHICULAR LOADING TO BE 300mm

ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS

BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL

ALL PITS TO HAVE 600x600mm INTERNAL DIMENSIONS (U.N.O.)

SILT ARRESTORS TO HAVE 900x900mm INTERNAL DIMENSIONS

HEAVY DUTY GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS

PIT GRATE TO BE TYPE WELDLK OR APPROVED EQUIVALENT

ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP

ALL PITS SHALL BE MAINTAINED REGULARLY

TOP OF BENCHING SHALL BE TO THE HALF OF THE OUTLET PIPE DIAMETER

MAXIMUM FRONT ENTRY PIPE: -
STRAIGHT ENTRY - Ø750
SKEW ENTRY 45° - Ø525

Ø100 SUBSOIL DRAINAGE PIPE 3000mm LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES

COMPRESSIVE STRENGTH f_c FOR CAST IN SITU CONCRETE TO BE A MINIMUM OF 20MPa AT 28 DAYS

PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS

ISOLATED JOINTS TO BE PROVIDED TO ISOLATE CONCRETE PAVEMENTS FROM PITS

ALL TRENCH GRATES PROVIDED SHALL HAVE A MINIMUM CLEAR WIDTH OF 200mm

STORMWATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL

STORMWATER PIPE BEDDING/PAVING NOTES:

WHERE TRENCH BASE IS ROCK A MINIMUM OF 75mm BEDDING TO BE PROVIDED UNDER PIPE COLLARS.

STORMWATER PIPE BEDDING DETAIL TO BE IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS. BEDDING DETAILS TO BE CONFIRMED UPON EXCAVATION & PRIOR TO INSTALLATION OF PIPEWORK.

FOOTPATH REINSTATEMENT NOTES:

REMOVE ALL SAND FILL WITHIN THE FOOTPATH AREA TO THE EXISTING SUBGRADE.

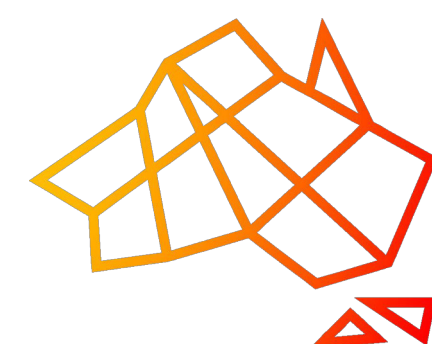
SUPPORT ALL AUTHORITY SERVICES TO STRUCTURAL ENGINEERS DETAILS DURING EXCAVATION.

REINSTATE FOOTPATH SUBGRADE.

THE CONTRACTOR SHALL PROVIDE CERTIFICATION OF COMPACTION FROM A NATA REGISTERED TESTING AUTHORITY. MINIMUM THREE TESTS PER LAYER AS FOLLOWS:

| | |
|---|---------------|
| SELECT FILL | 95% MODIFIED |
| SELECT FILL (LESS THAN 300mm BELOW BASE COURSE) | 98% MODIFIED |
| BASE COURSE | 100% MODIFIED |

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|-----|------------------|------------|------|
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| | | | |
| | | | |
| D | FOR CONSTRUCTION | 15.05.2025 | G.K. |
| C | FOR CONSTRUCTION | 21.04.2025 | G.K. |
| B | FOR CONSTRUCTION | 05.04.2025 | G.K. |
| A | FOR CONSTRUCTION | 11.01.2025 | G.K. |
| REV | DESCRIPTION | DATE | APP |



AUSTRAX STRUCTURAL CIVIL ENGINEERS

PH: 0423095373

2/4 COLONY CLOSE, TUGGERAH NSW
671 HUNTER STREET, NEWCASTLE NSW
38 STATION STREET, BONNELLS BAY NSW

Structural • Civil • Hydraulic • Flooding • Residential • Commercial
Industrial • Land Development

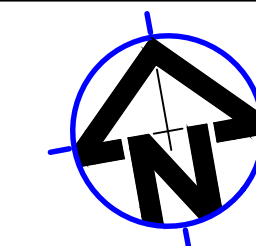
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CLIENT
D PROJECTS

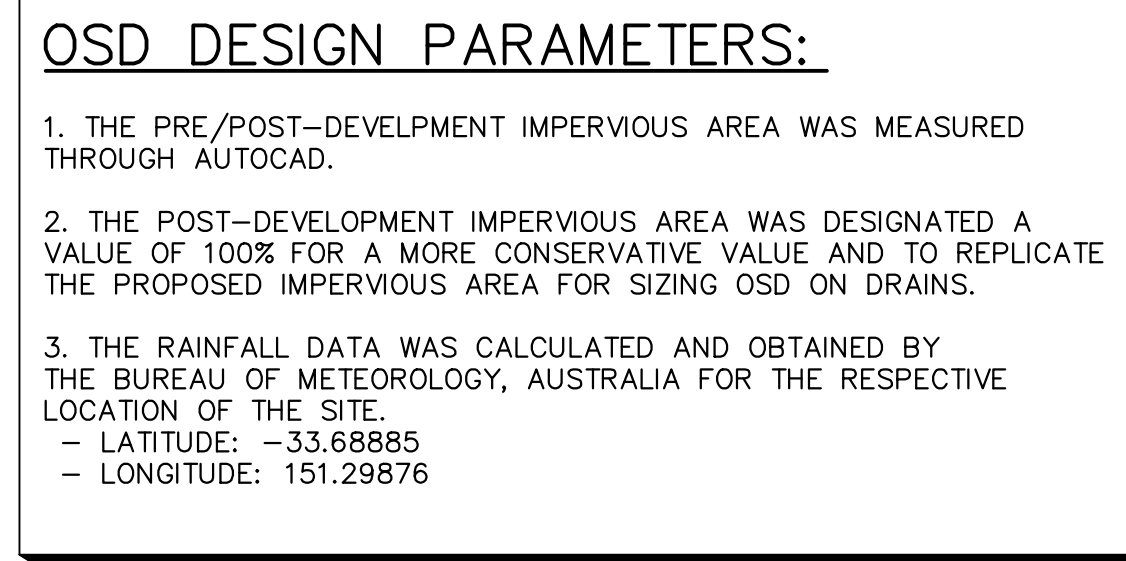
PROJECT
11 RAVEN CIRCUIT
WARRIEWOOD NSW

COUNCIL
NORTHERN
BEACHES
COUNCIL



TITLE
COVER SHEET
DRAWING
FOR APPROVAL

| | | | |
|--------------------|--------------------------|-----------------------|-------------------|
| DATE 15.05.2025 | DESIGNED: G.K | ENGINEER: G.K. | CHECKED: G.K. |
| SCALE 1:200-A3 | PROJECT NO. GCE.25115 | DRAWING NO. SWDP01 | REVISION NO. A |



DESIGN NOTES:

THE SITE IS LOCATED IN NORTHERN BEACHES COUNCIL.

THE OSD STORAGE SYSTEM WILL BE BELOW GROUND.

OSD WAS DESIGNED USING DRAINS. THE RESULTS ARE SHOWN BELOW:

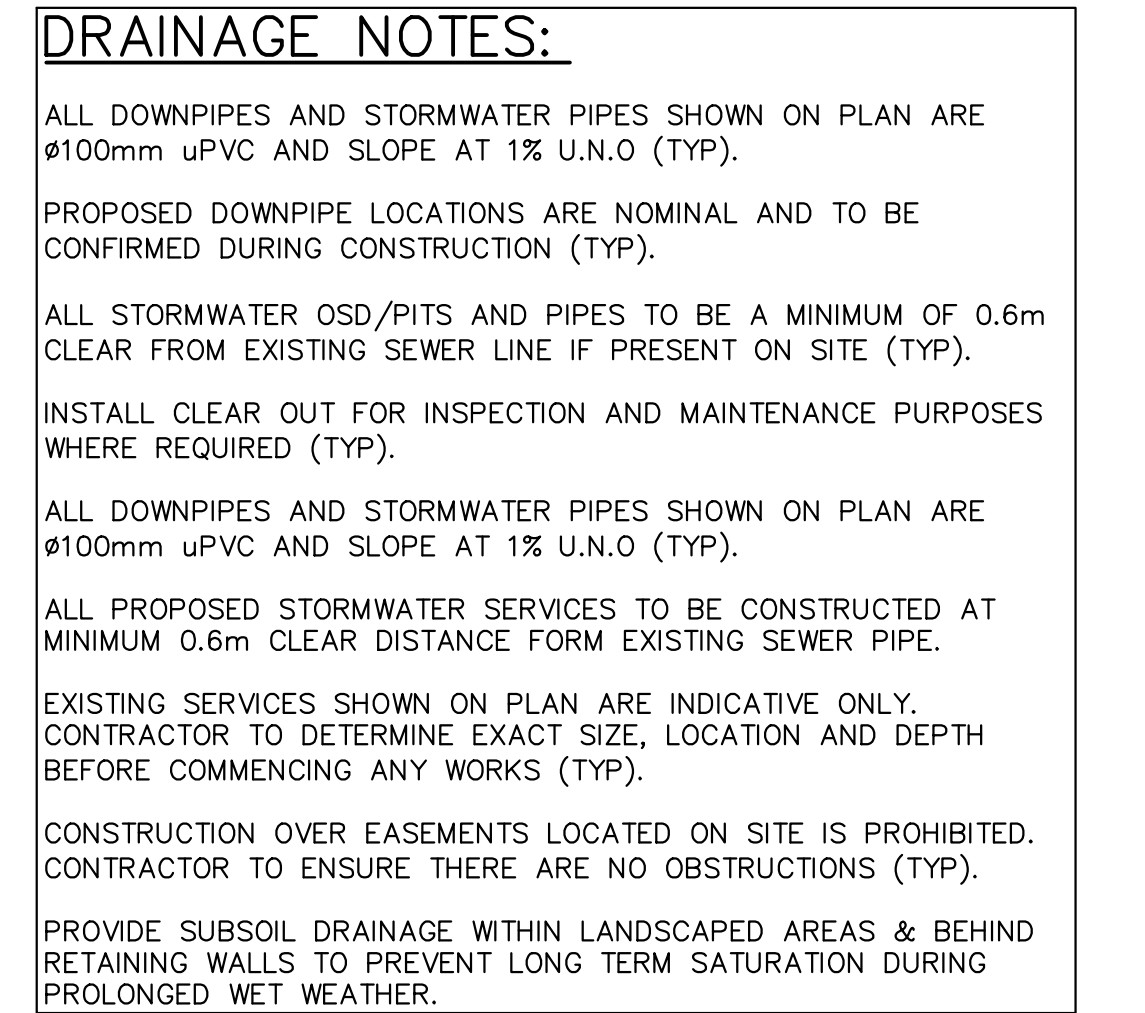
DRAINS MODELLING PARAMETERS:

THE STORAGE CAPACITY AND PERMISSIBLE SITE DISCHARGE OF THE OSD WAS CALCULATED THROUGH A DRAINS MODEL WITH REGARDS TO NORTHERN BEACHES COUNCIL DCP REQUIREMENTS LISTED BELOW;

100YR POST-DEVELOPMENT FLOWS RESTRICTED TO THE 20YR(5%AEP) PRE-DEVELOPMENT FLOWS.

PRE-DEVELOPMENT CATCHMENT = 0% IMPERVIOUS, 100% PERVIOUS.
POST-DEVELOPMENT CATCHMENT = 60% IMPERVIOUS, 40% PERVIOUS.

TIME OF CONCENTRATION = 5min(s)



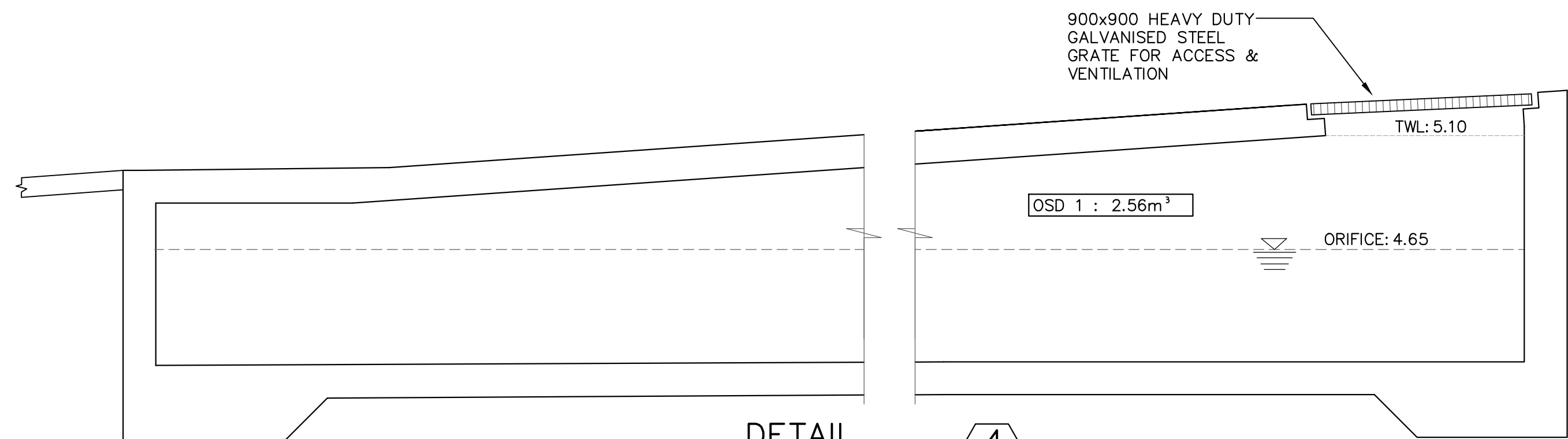
OSD CALCULATIONS SUMMARY:
 SSR = 8.6m³ OR AS CLOSE AS POSSIBLE
 PSD = 3.23L/s
 (VALUES TO BE CONFIRMED BY COUNCIL)
SITE AREA SUMMARY:
 TOTAL SITE AREA = 240m²
 TOTAL INTO OSD = 236.5m²
 TOTAL BYPASS = 3.5m²
 (1.45% OF TOTAL SITE AREA)
VOLUME CALCULATIONS:
 OSD 1 VOLUME PROVIDED = 2.42m³
 OSD 2 VOLUME PROVIDED = 1.32m³
 OSD 3 VOLUME PROVIDED = 1.75m³
 TOTAL VOLUME PROVIDED = 5.49m³

ORIFICE SIZING CALCULATION:
 USING ORIFICE EQUATION

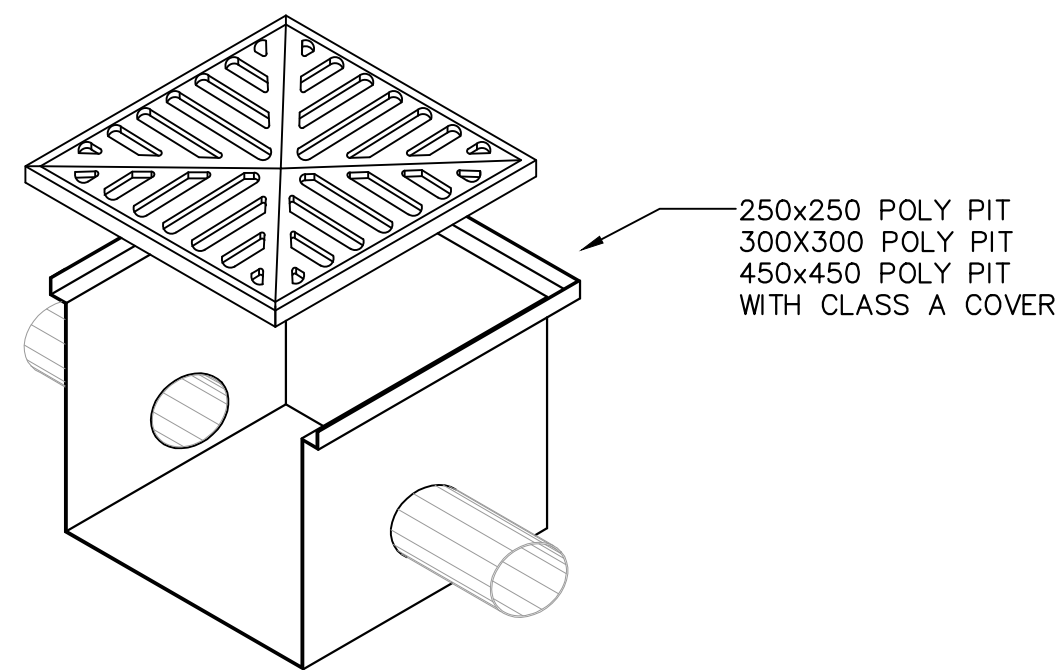
$$\text{ORIFICE } \phi = 21.9 \times (\text{PSD}/(\text{H})^{0.5})^{0.5} = 3.23\text{mm}$$
 WHERE PSD = 3.23L/s, DEPTH TO ORIFICE CL = 0.5 (H),
 THEREFORE PROVIDE 45mm SHARP EDGED OPENING IN
 ORIFICE PLATE

| | | | | | | | | | | |
|-----|------------------|------------|------|---|--|---|--------------------------|-------------|-------------|----------|
| | | | | <div><div><div>AUSTRAX STRUCTURAL</div><div>CIVIL ENGINEERS</div><div>PH: 0423095373</div><div><small>2/4 COLONY CLOSE, TUGGERAH NSW 671 HUNTER STREET, NEWCASTLE NSW 38 STATION STREET, BONNELLS BAY NSW</small></div><div><small>Structural • Civil • Hydraulic • Flooding • Residential • Commercial Industrial • Land Development</small></div><div><small>© This drawing is copyright to Global Consulting Engineers, no part of this drawing shall be used for any other purpose without the prior written consent of Global Consulting Engineers.</small></div></div></div> | Sydney Newcastle Central Coast Hunter Valley New South Wales Victoria Queensland A.B.N. 91 620 485 716 www.globalceng.com.au E: info@globalceng.com.au | CLIENT | TITLE | | | |
| | | | | | D PROJECTS | COUNCIL | STORMWATER DRAINAGE PLAN | | | |
| | | | | | PROJECT |  | DRAWING FOR APPROVAL | | | |
| D | FOR CONSTRUCTION | 15.05.2025 | G.K. | | 11 RAVEN CIRCUIT | | DATE | DESIGNED: | ENGINEER: | CHECKED: |
| C | FOR CONSTRUCTION | 21.04.2025 | G.K. | | WARRIEWOOD NSW | | 15.05.2025 | G.K | G.K. | G.K. |
| B | FOR CONSTRUCTION | 05.04.2025 | G.K. | | | | SCALE | PROJECT NO. | DRAWING NO. | |
| A | FOR CONSTRUCTION | 11.01.2025 | G.K. | | 1:200-A3 | GCE.25115 | SWDP03 | | | |
| REV | DESCRIPTION | DATE | APP | | | | REVISION NO. | | | |
| | | | | | | | D | | | |

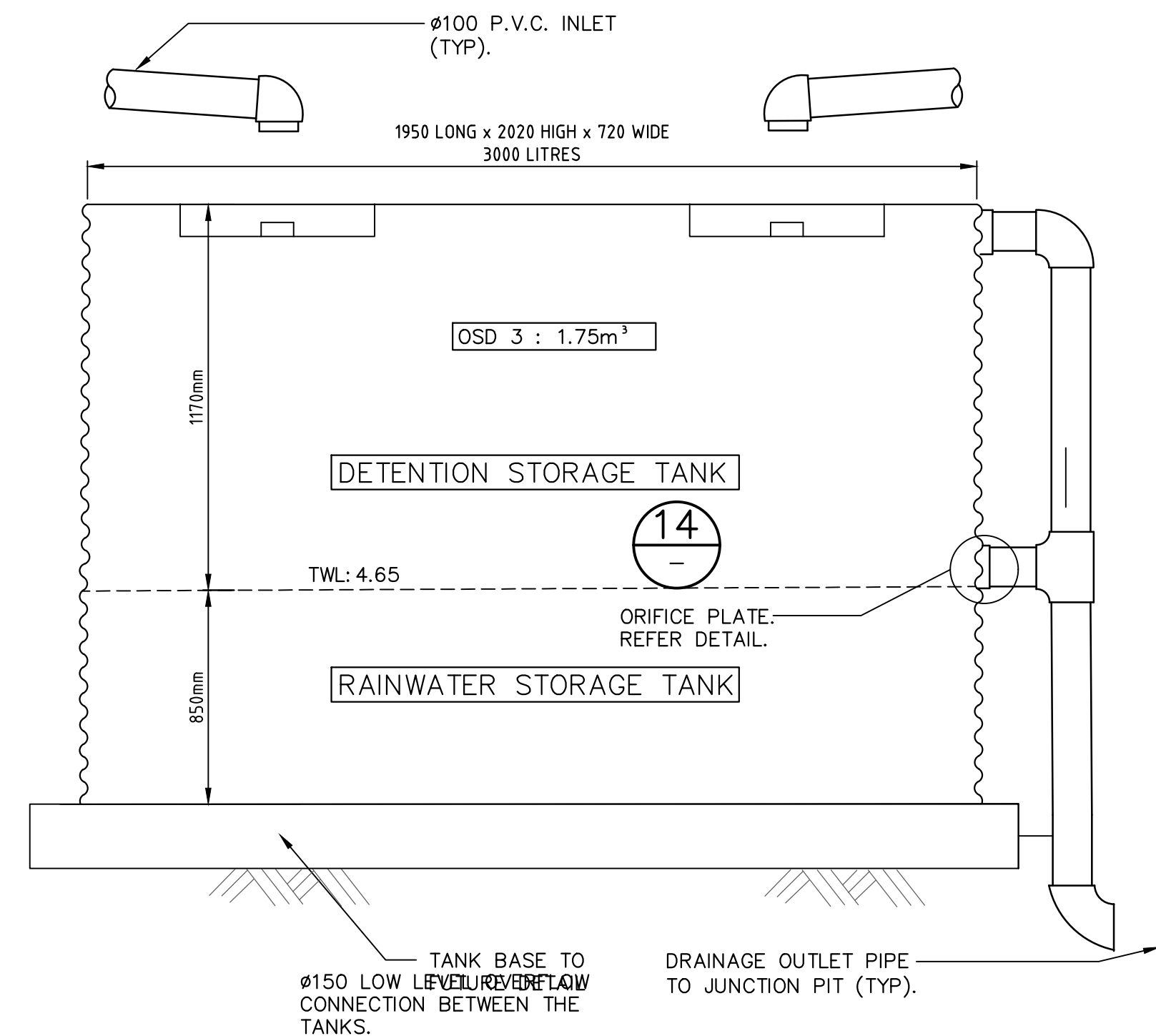




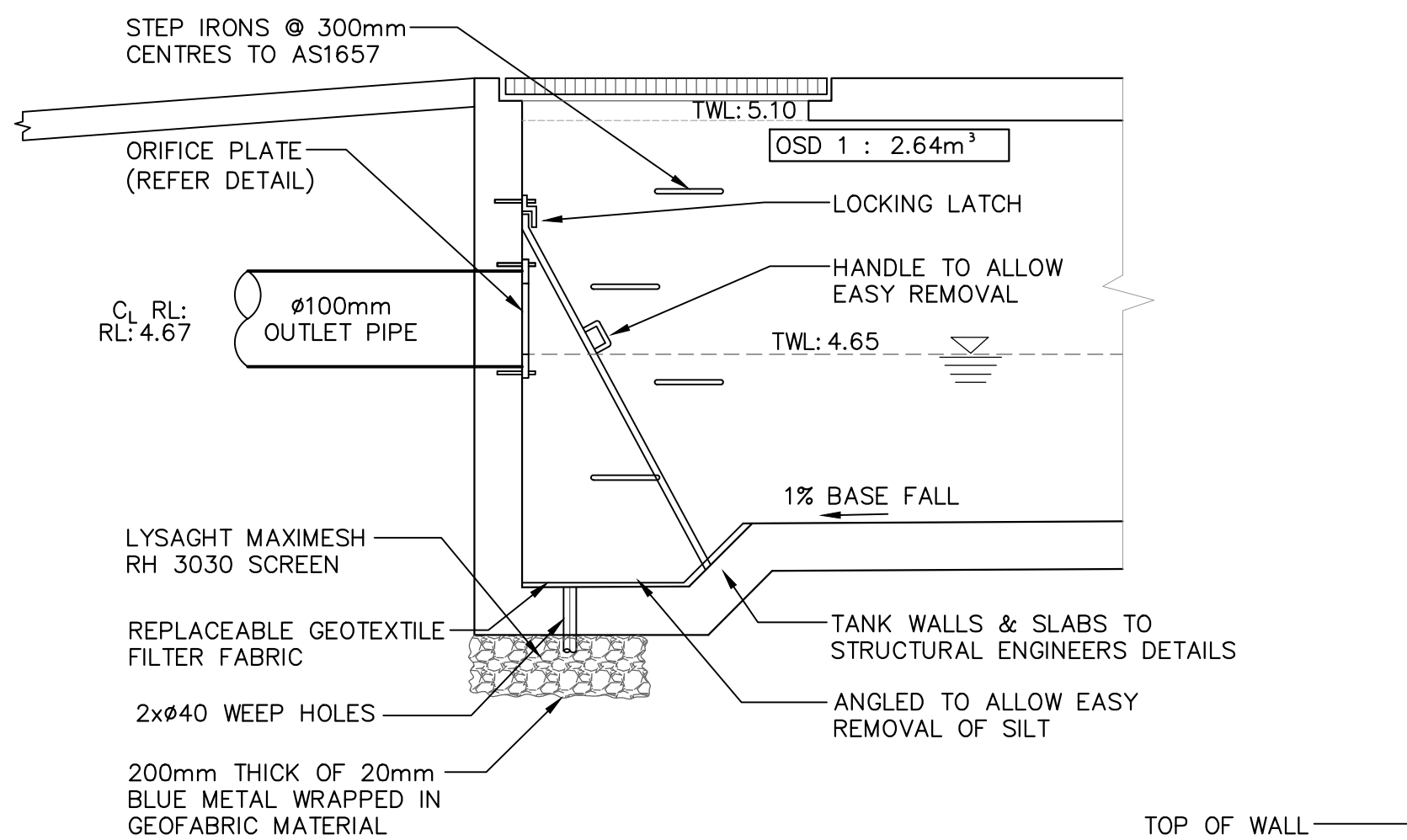
DETAIL
DCP - ONSITE
DETENTION TANK



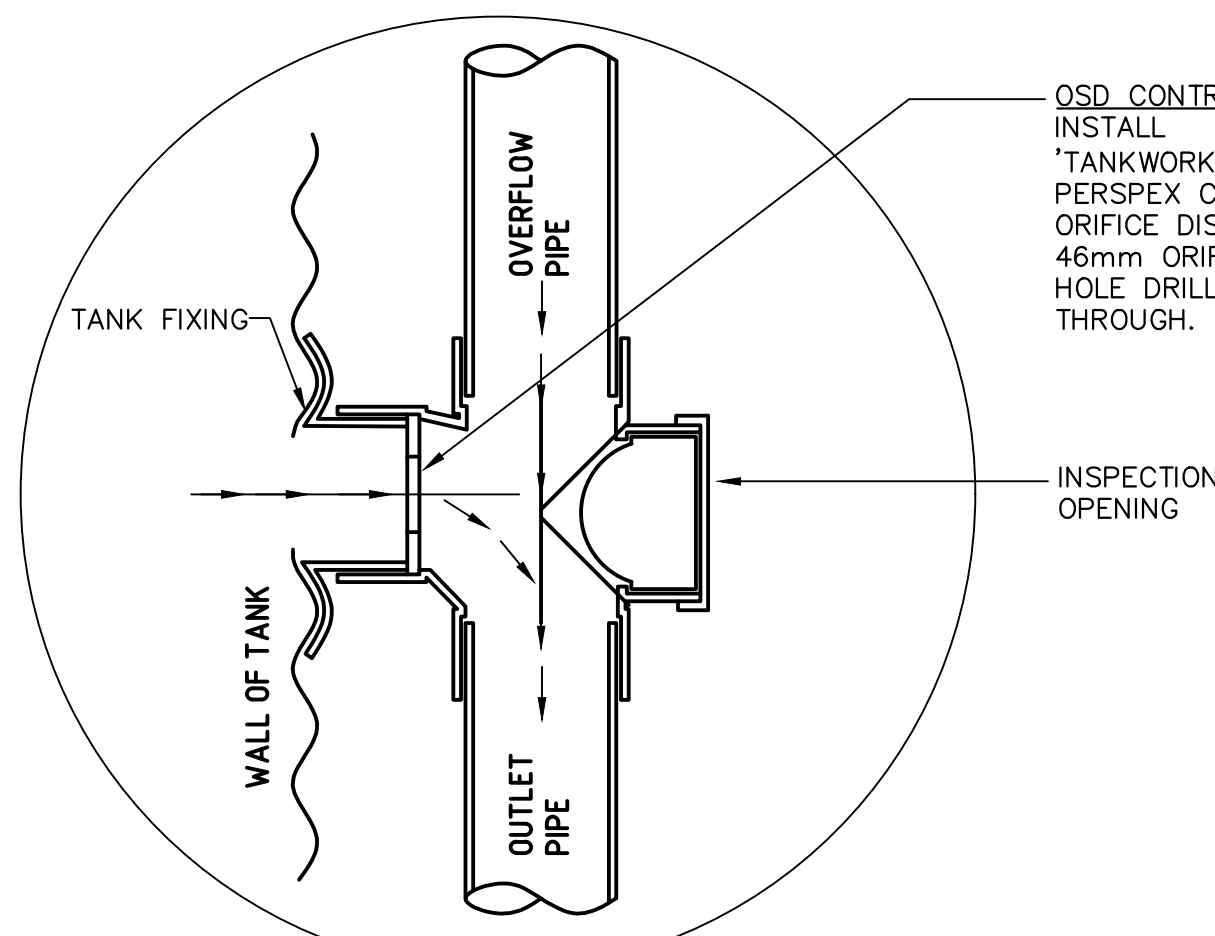
DETAIL
POLY PIT CLASS A
COVER
(FOR LANDSCAPED AND
BACKYARD AREAS ONLY)



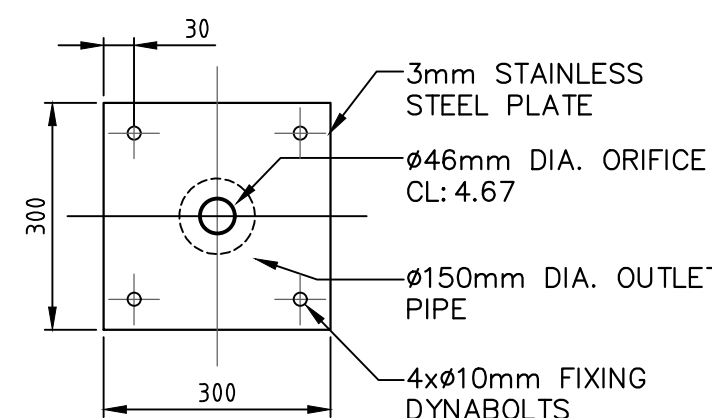
DETAIL
RAINWATER SIGN



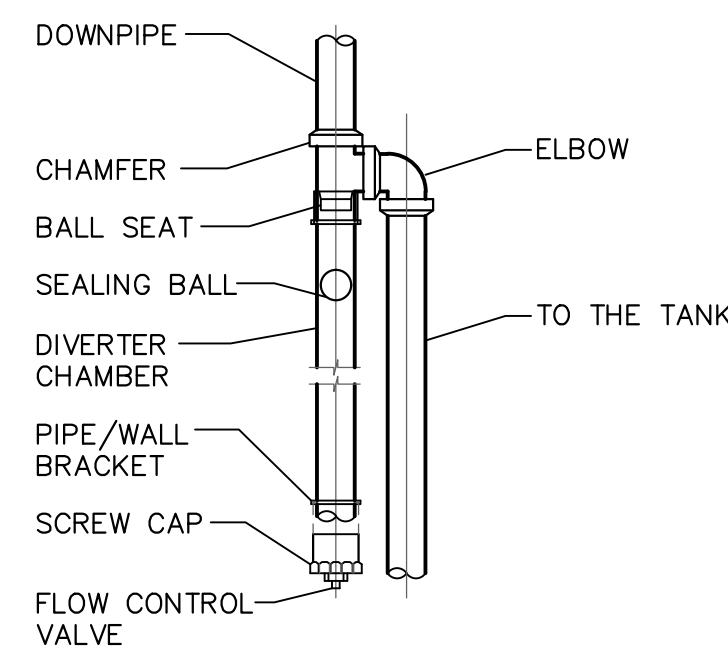
DETAIL
DCP - ONSITE
DETENTION TANK



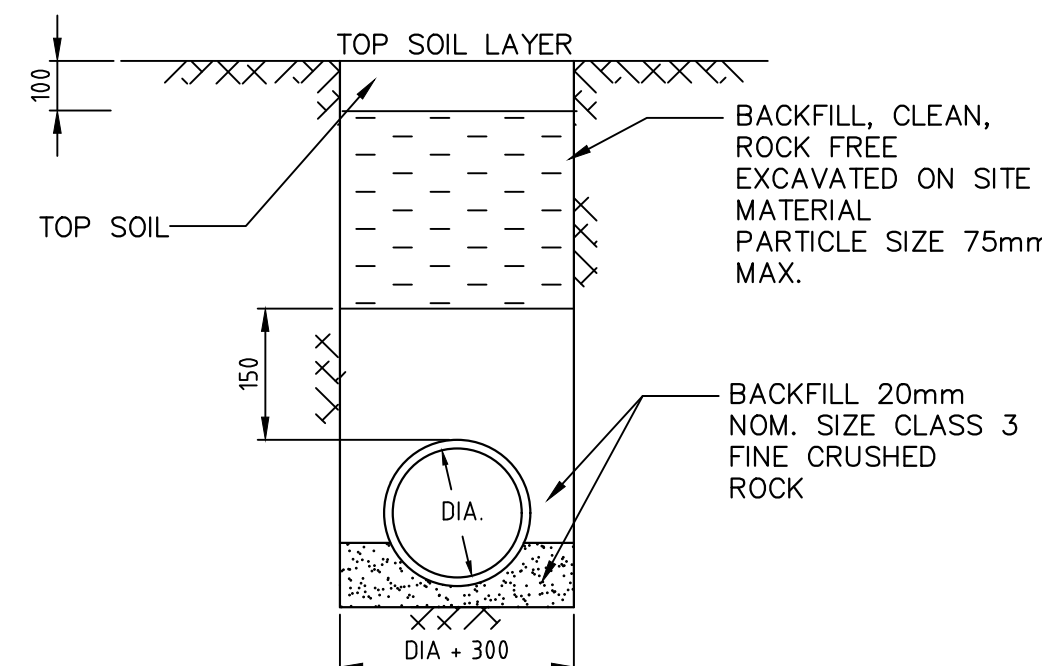
DETAIL
CLEANING EYE



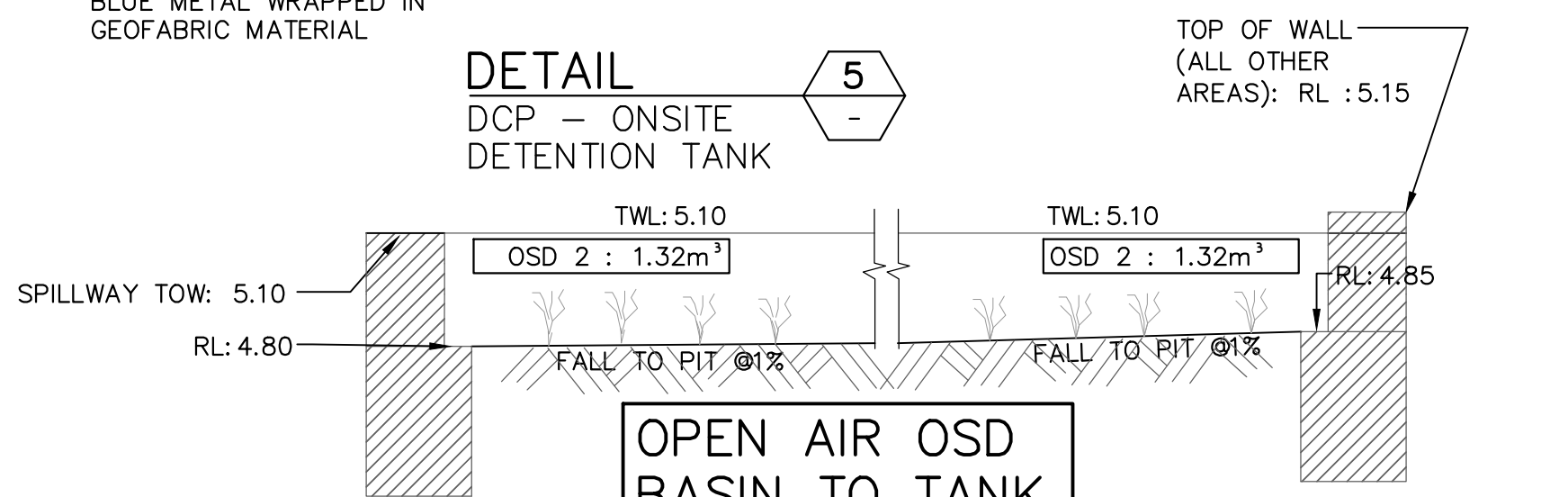
DETAIL
ORIFICE PLATE



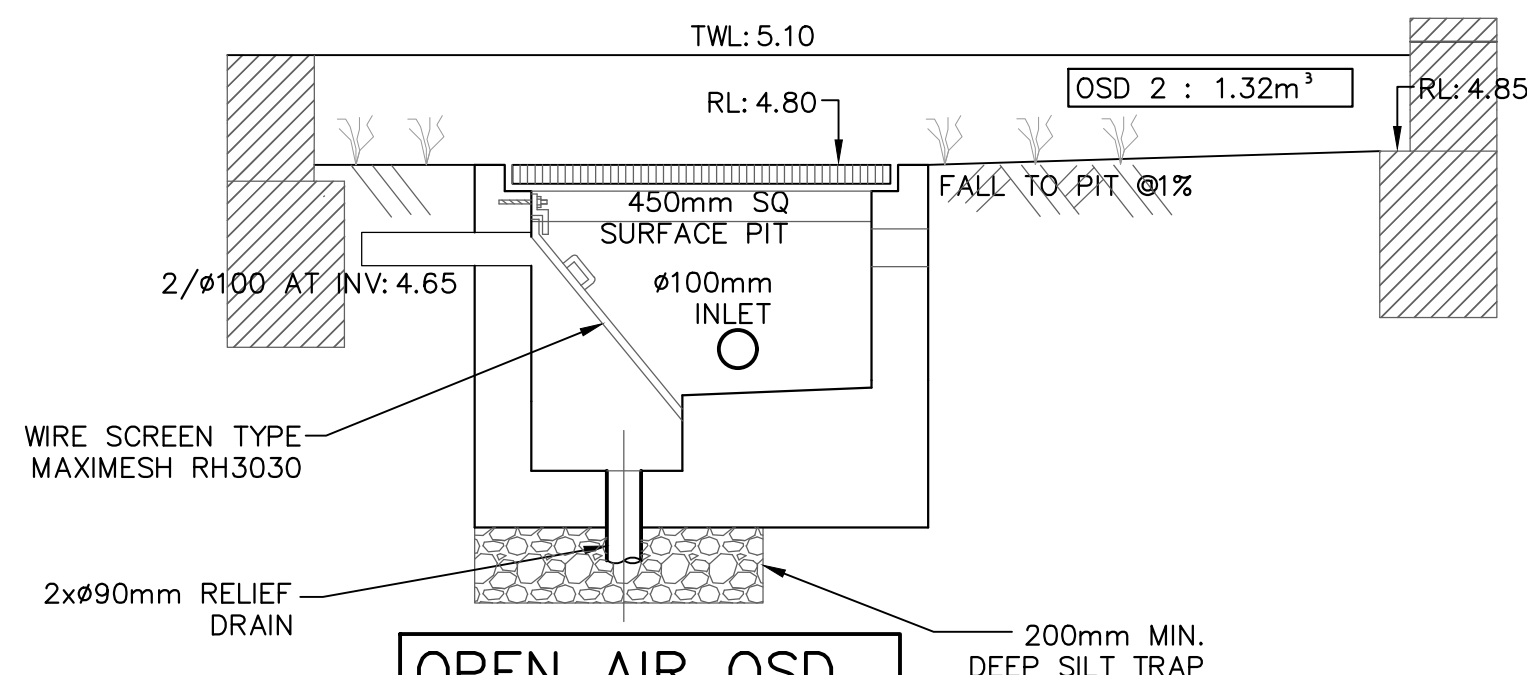
DETAIL
RAINWATER
STORAGE TANK



DETAIL
TRENCH FOR
PIPING
NOT UNDER
PAVEMENT



SECTION
A
SCALE 1:20

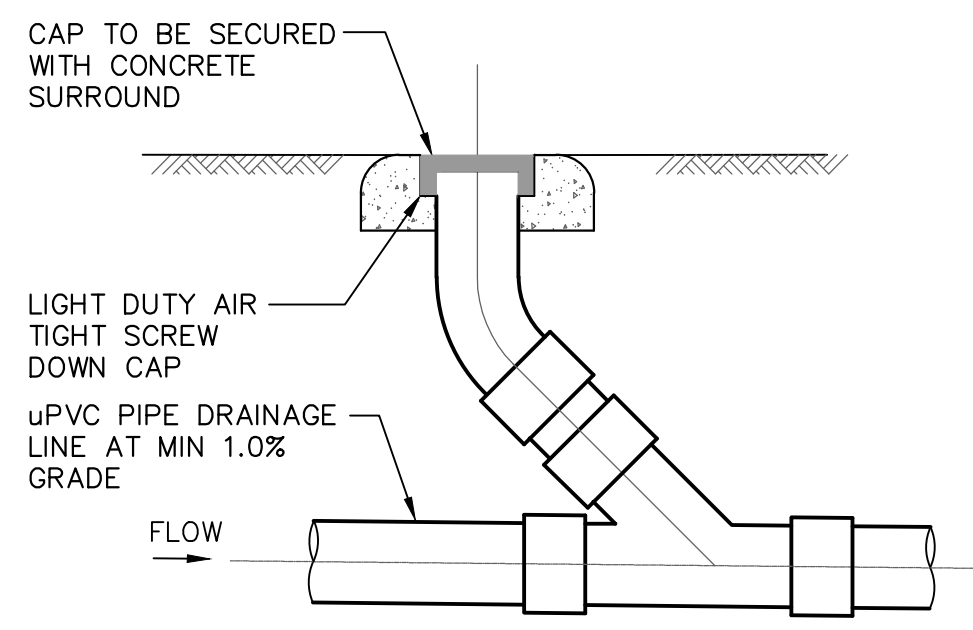


SECTION
B
SCALE 1:20

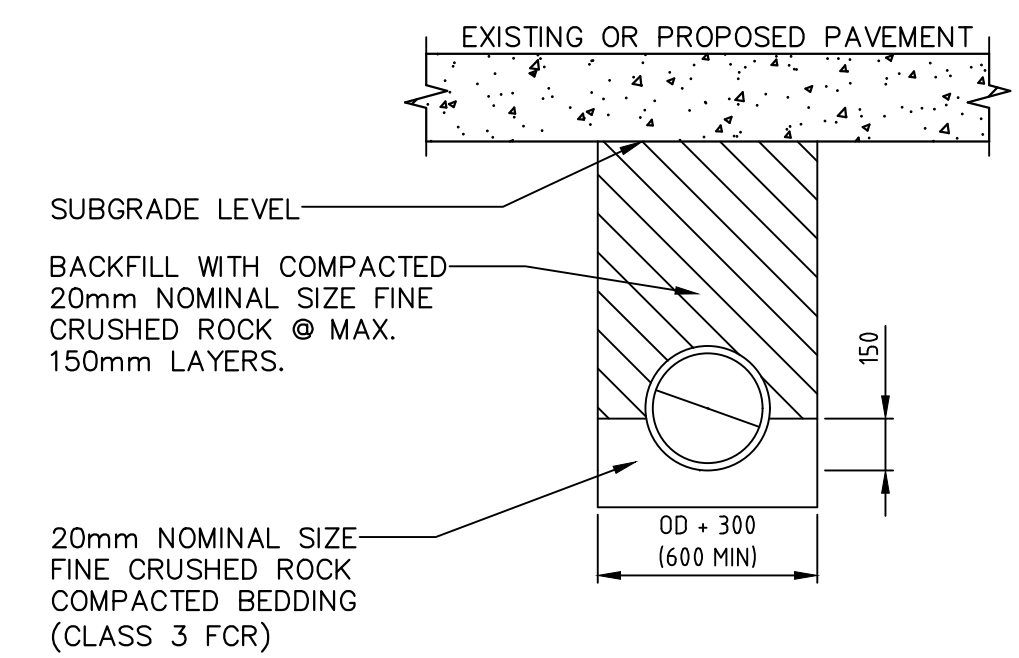
**THIS PLAN IS TO BE READ IN
CONJUNCTION WITH
THE CONDITIONS OF DEVELOPMENT
CONSENT**
DA2025/0123

THIS IS AN
ON-SITE STORMWATER
DETENTION SYSTEM
IT IS AN OFFENSE TO TAMPER
WITH THIS DEVICE WITHOUT THE
WRITTEN CONSENT OF
NORTHERN BEACHES COUNCIL
THIS PLATE MUST NOT BE
REMOVED

DETAIL
OSD SIGN



DETAIL
CLEANING EYE



DETAIL
TRENCH FOR
PIPING UNDER
PAVEMENT

| REV | DESCRIPTION | DATE | APP |
|-----|------------------|------------|------|
| D | FOR CONSTRUCTION | 15.05.2025 | G.K. |
| C | FOR CONSTRUCTION | 21.04.2025 | G.K. |
| B | FOR CONSTRUCTION | 05.04.2025 | G.K. |
| A | FOR CONSTRUCTION | 11.01.2025 | G.K. |

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CLIENT
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PROJECT
**11 RAVEN CIRCUIT
WARRIWOOD NSW**

COUNCIL
**NORTHERN
BEACHES
COUNCIL**

TITLE
DRAINAGE DETAILS
DRAWING
FOR APPROVAL

| | | | |
|---------------------------|---------------------------------|------------------------------|--------------------------|
| DATE 15.05.2025 | DESIGNED: G.K | ENGINEER: G.K. | CHECKED: G.K. |
| SCALE 1:200-A3 | PROJECT NO. GCE.25115 | DRAWING NO. SWDP04 | REVISION NO. D |