

# PROPOSED DRAINAGE PLAN - 150 GLADSTONE ST, MUDGEE - ABERFOYLE HOMES

## GENERAL NOTES:

All interpretation of these plans or provided written advice shall be done in conjunction with other associated professional drawings and specifications. This includes manufacturer and proprietary product specifications. Any discrepancy must be referred to P&R CONSULTING before commencing work. All dimensions must be verified on site.

All Development Consent Conditions must be complied with throughout the entirety of the project.

Millimeters (mm) are used for all dimensions throughout these plans, U.N.O.

The scale of the drawing is denoted in the title block of each page U.N.O at the bottom of specific detail or plan. These plans should not be scaled.

All levels, setouts and fabrications shall be checked and confirmed prior to commencement of work at all applicable stages, by the builder.

The project must be built in a safe manner where no key components are temporarily overloaded to damage and/or compromise the project's structural integrity.

Inspections by Council's Development Control Engineers are to be undertaken at critical stages when directed/required by DCP 41. A minimum 48 hour notice is required for inspections.

The NCC and other required regulatory codes and standards shall be followed. Other reasonable advice from authoritative guidelines should be followed where applicable.

All rubbish, buildings, sheds, undergrowth, and fences are to be removed from the site and road reserves to the satisfaction of Council's Development Control Engineer. These will be clearly marked on site and inspected by Council Staff prior.

All services affected by new work are to be adjusted to suit in the field to the satisfaction of the relevant service authority.

The contractor shall provide traffic control plans that comply with AS1742.3 - 2002. A copy of the plan showing layout of proposed traffic control for the commencement of work and certified.

The contractor shall maintain and/or restore any damage which may have been caused by the construction.

## ROADWORKS:

Final pavement thickness and testing requires are to be conducted in accordance with Council Development Control Plan No. 41.

Fill Areas:-

- All road and fill areas to be cleared of undergrowth, grass and topsoil. These suitable materials will be stockpiled on site for spreading on footpaths, batter areas and other fill areas prior to completion.
- All filling to be controlled and inspected by Nata Registered Laboratory in accordance with Council's specifications, relevant Australian Standards and best accepted practices.
- Conduits for electricity and telecom to be provided and placed as required.

Services Conduits:-

- Places as directed by Integral Energy and required by relevant local council and general authority.
- Backfilled With sharp course sand.
- Extended minimum 300mm behind kerb.
- Laid prior to placement of final surfacing.

Subsoil drains shall be provided as shown and as required by Council's Engineer. Batters and footpath to be top soiled to a minimum depth of 150mm.

## FILLING AND SITE REGRADING:

Dames to be stripped of topsoil. All exposed silt and other unsuitable material shall be removed and disposed of as directed by the engineer.

Stripped area to be compacted to a depth of 200mm to a density not less than 95% standard maximum dry density. Fill material is to be placed in layers not more than 250mm thick loose measurement, following inspection of the stripped area by the Engineer.

Inspection and testing of filled layers shall be carried out by qualified soils personnel.

Fill plans shall be prepared in accordance with DCP 41 and submitted to council in the form of Standard drawing SD 133.

## WATER:

All works are to be carried out to the Public Works Department, NSW and relevant authorities.

All services are to be located by the relevant authorities prior to the commencement of works.

Water mains are to have a minimum depth of cover of 600mm in carriageways and 450mm in footpaths.

Contractor to ensure new main level matches the existing main adjacent to the cut-in point.

Council to undertake main cut-in. Contractor to pay relevant fees and provide all necessary fittings. All fitting are used are to have factory applied corrosion protection and carry relevant Australian Standards.

Contractor to pay relevant fees and submit application forms for council to connect water services to existing mains.

## EROSION AND SEDIMENT CONTROL:

All erosion and sedimentation control measures, including revegetation and storage of soil and topsoil, shall be implemented in consultation with the Soil Conservation Service of NSW during the construction phase.

All disturbed areas shall be revegetated as soon as the relevant works are completed.

Topsoil from all areas to be disturbed shall be stockpiled and later respread to aid revegetation. Topsoil stockpiles are to be no higher than 1.5 metres. The top 50-75mm should be stored separately from underlying soil and respread last. Minimum depth 100-125mm Topsoil is not to be removed from the site without Council's concurrence. Where appropriate, instead of stockpiling topsoil it can be pushed upslope of excavated areas so as to form a bank above disturbed areas. These banks should be directed to discharge water to a stable point. All stockpiles and banks need to be seeded and fertilised with the recommended seed mix.

## GRASS VARIETIES AND QUANTITIES KG/HA:

Karridale Sub Clover 2  
White Clover 3  
Curries Cocksfoot 4  
Victorian Ryegrass 5  
Kangaroo Ryegrass 5  
Japanese Millet (November to March) 8-10  
Cereal Rye (April to October) 10

Bitument and straw mulch or equivalent mulch should be applied on areas with a slope greater than 1V:3H. Straw should be applied at 5,000kg/ha.

- Fertiliser Grower 11, Starter 13 or 18, or equivalent 250-300kg/ha.
- Fertiliser not to be used along in watercourse.

Turf strips to be placed behind all newly constructed kerb and gutter within 7 days of completion of concreting. Minimum width 0.9m. In addition, extensions of turf at an angle of approx 70° to kerb at intervals of 20m perpendicular to the kerb for a distance of 2m on steeper sections of road where there is a potential for water to concentrate along the end of the turf. If there is insufficient rain supplementary water should be undertaken.

All straw bales to be constructed by stretching a filter fabric between posts at 2.0m centres. Fabric to be buried 200mm along its lower edge. Filter fence to be placed as near to the contour as possible.

Wire mesh and gravel inlet filters to be provided at all kerb inlet pits.

The capacity and effectiveness of runoff and sediment control measures shall be maintained at no less than 70% capacity at all times to the satisfaction of relevant authorities.

All controls should be inspected at the end of each day and particularly before weekends and/or when the site is to be left for extended periods.

To minimise soil erosion and sediment movement during construction, the following shall be implemented.

Removal and/or disturbance of vegetation shall be confined to within two metres of the required works.

Stockpiles of construction and landscaping materials, and of site debris shall be located clear of drainage lines and in such a position that they are protected from erosion and do not encroach upon any footpath, nature strip or roadway.

Vehicular access shall be controlled so as to prevent tracking of sediment onto adjoining roadways, particularly during wet weather or when the site is muddy. Sediment deposited on adjoining roadways shall be removed by means other than washing. All material shall be removed as soon as possible and the collected material shall be disposed of in a manner which will prevent its mobilisation.

All erosion and sediment control devices are to remain in position and be maintained until advised by Council's Development Engineer that they may be removed or until the 12 month maintenance period has lapsed.

## REGRASSING:

All disturbed areas to be grassed within 7 days of work being completed in that area.

Channels to be top soiled to a minimum depth of 150mm including application of lime, fertiliser and grass seed.

Turf is to be placed a minimum 900mm wide behind all kerbs and concrete roadways.

## STORMWATER:

All stormwater system elements shall be installed in accordance with A.S. 3500.3, NCC Part 2 and the local Government area Development Control Plan and standard details.

Any variation to the design from P&R CONSULTING engineering plans shall be confirmed with this office prior to installation.

## SURFACE DRAINAGE:

Finished surface levels adjacent to finished floor to fall minimum 1 in 20 for 1m away from slab in accordance with NCC Part 2: 3.13.3

## CHARGED LINE NOTES:

Surface drainage not to be connected to charged line system.

Downpipes to charged line to be fully solvent welded

## SERVICES:

Where existing drainage, sewerage, and water services are to be relocated a plumber's eprmit and approval under section 68 of the Local Government Act is required from Council prior to commencement of work.

Upon completion of work, a 'Work as Executed Plan' is required/

All buried services to existing buildings are to be disconnected and removed.

## P&R CONSULTING CERTIFICATION NOTE:

It is a condition of certification by P&R CONSULTING that any engineered elements in these plans are inspected prior to the continuation of work by an engineer from P&R CONSULTING.

## LGA DCP DESIGN REFERENCE:

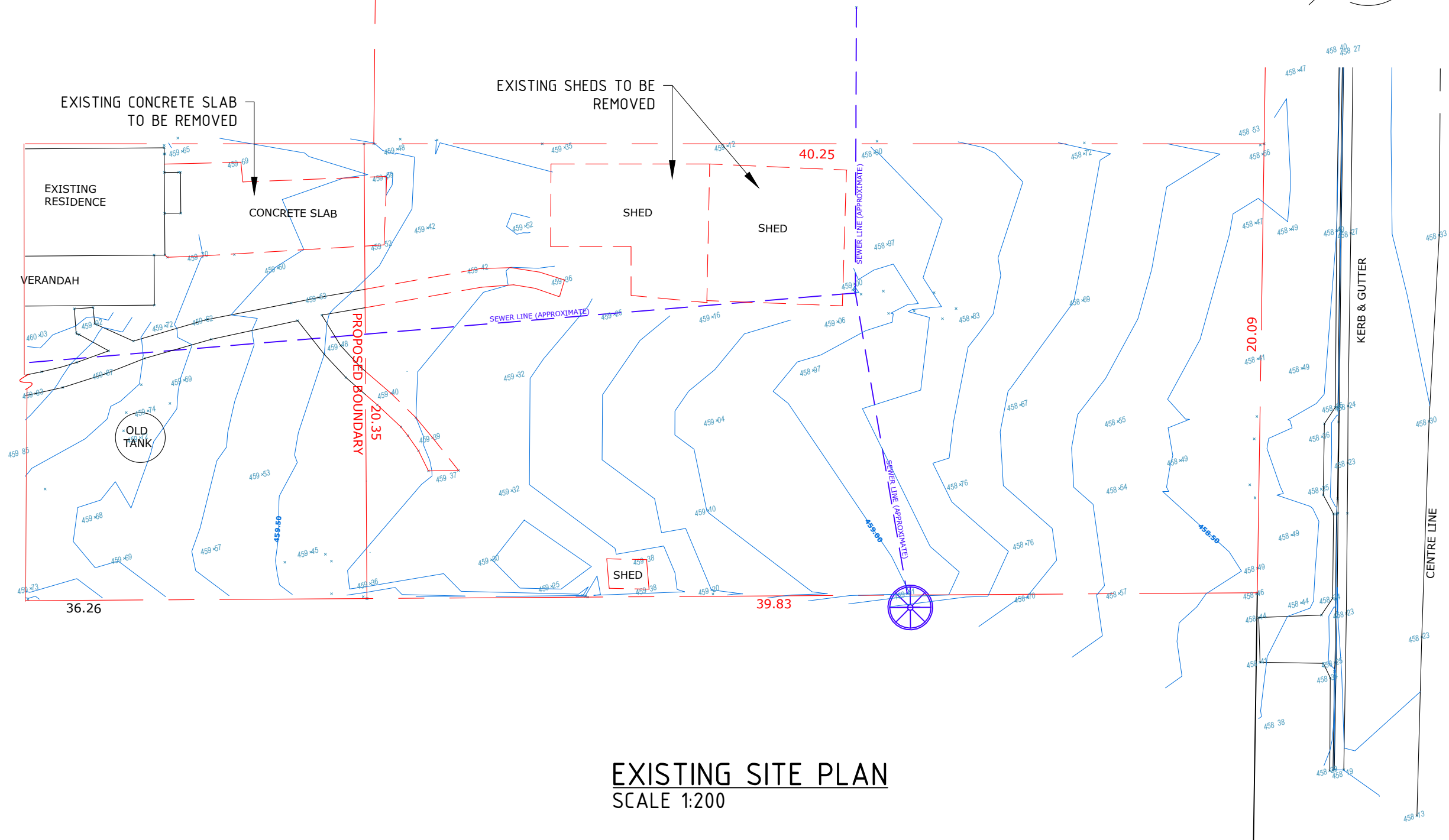
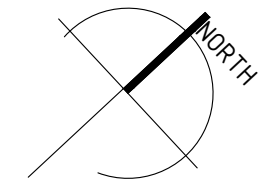
Development Controls  
Design the eave, gutter and downpipe systems to prevent overflows for storms up to the 10% Annual Exceedance Probability (AEP) storm event.

## CONTENTS:

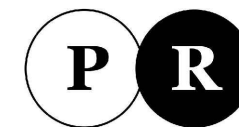
SHEET 1: NOTES  
SHEET 2: EXISTING SITE  
SHEET 3: DRAINAGE CONCEPT PLAN  
SHEET 4: RAINWATER TANK DETAIL  
SHEET 5: DETAIL SHEET  
SHEET 6: STORM EVENTS DISCHARGE TABLE

<b>DWG No</b> <b>24067</b> STORMWATER	<b>P &amp; R CONSULTING P/L</b> ACN 647 817 892 PH 0409 125 133 pnrconsult24@gmail.com pnrconsultingengineers.com.au
<b>DRAWN NV</b> <b>CHECKED DP</b> <b>DATE 27/09/2023</b> <b>SCALE AS SHOWN</b> <b>SHEET 1</b>	<b>PROJECT:- PROPOSED DRAINAGE PLAN</b> <b>CLIENT:- ABERFOYLE HOMES</b> <b>ADDRESS:- 150 GLADSTONE ST, MUDGEE</b>

EXISTING IMPERVIOUS AREA = 370m<sup>2</sup>  
 EXISTING ROOF AREA = 263m<sup>2</sup>



**EXISTING SITE PLAN**  
 SCALE 1:200



**P & R CONSULTING ENGINEERS P/L**  
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PROJECT:- PROPOSED DRAINAGE PLAN

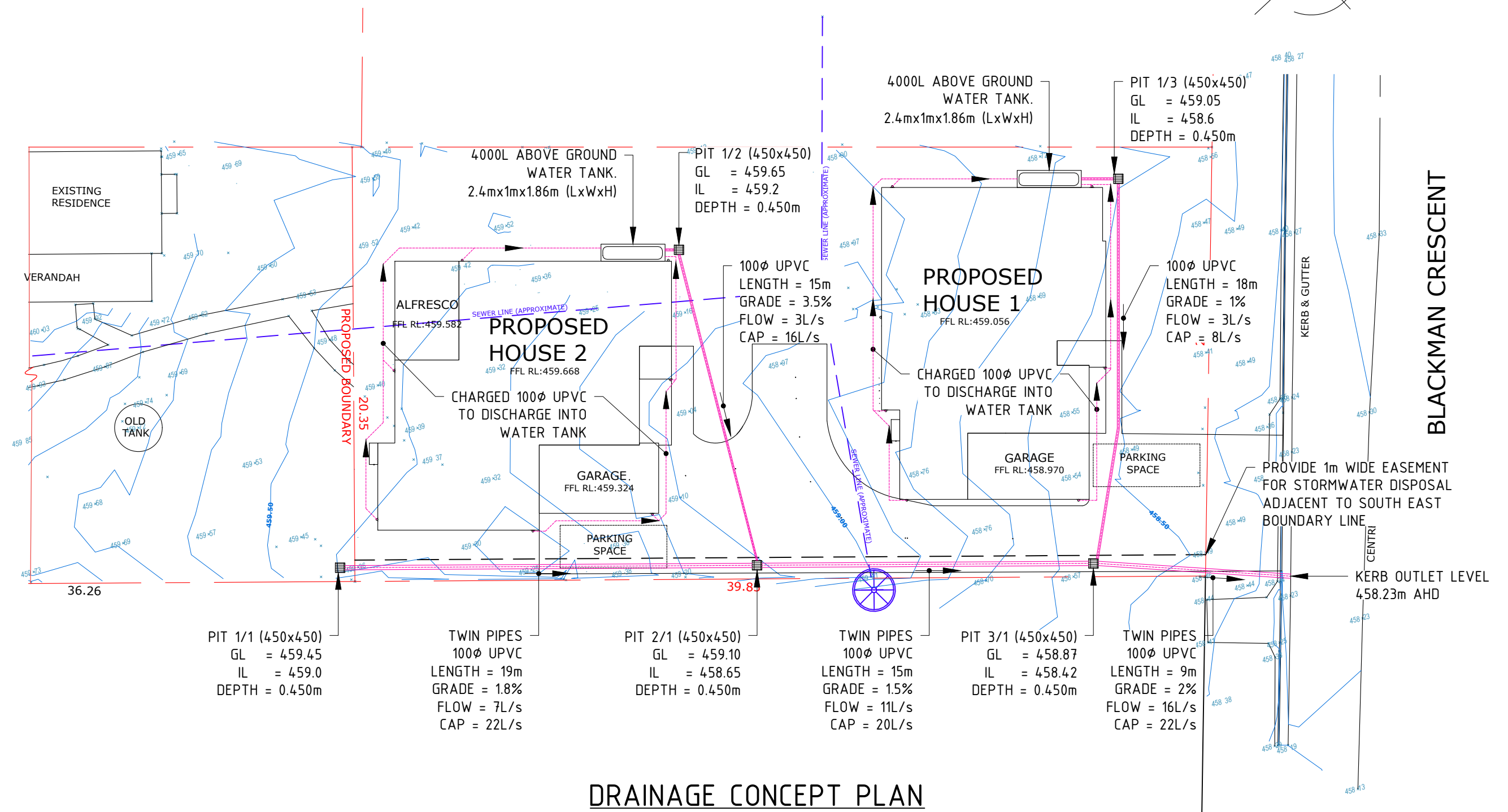
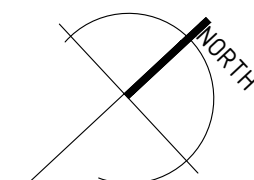
CLIENT:- ABERFOYLE HOMES

ADDRESS:- 150 GLADSTONE ST, MUDGEE

DRAWN NV  
 CHECKED DP  
 DATE 19/06/2023  
 SCALE 1:200  
 SHEET 2

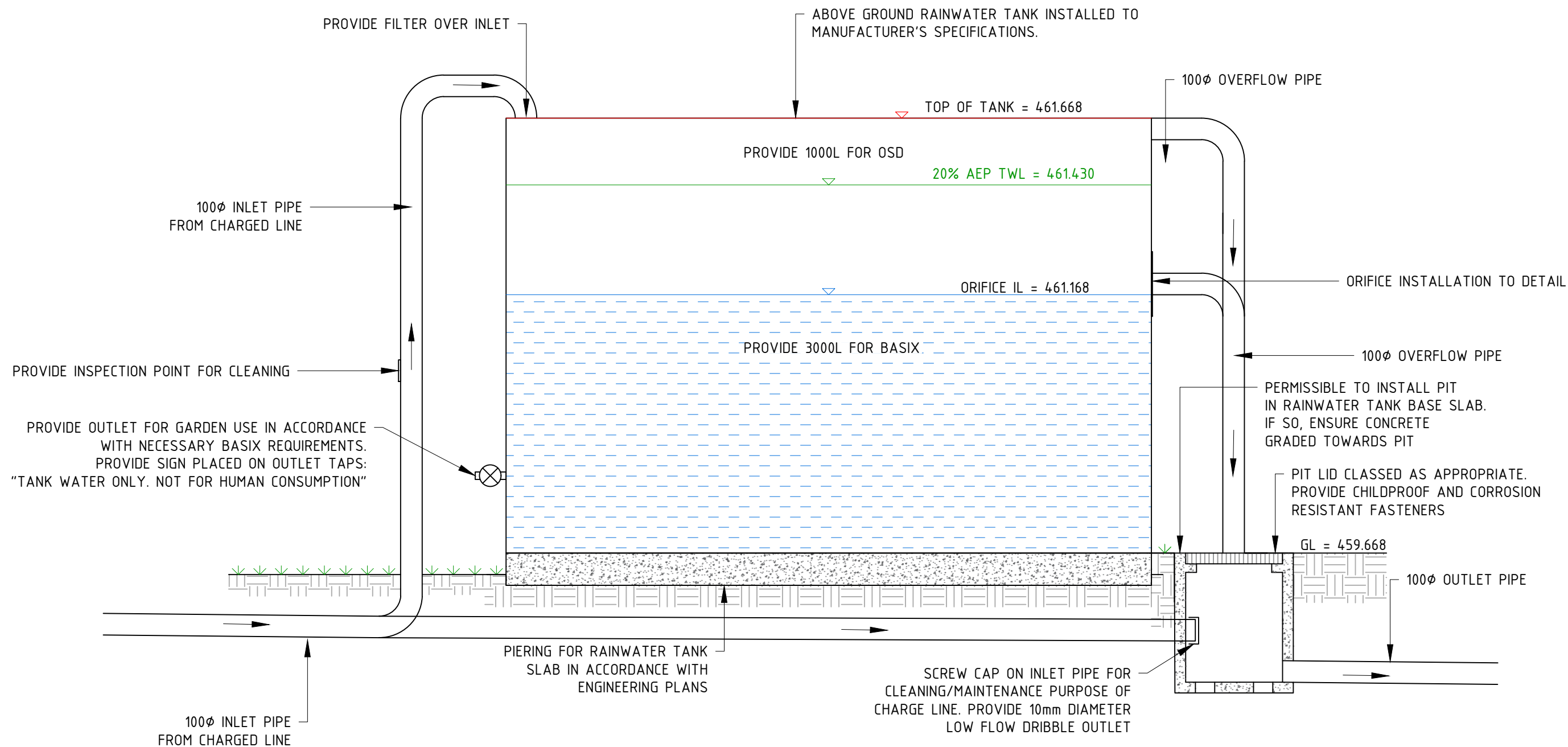
**DWG No**  
**24067**  
 STORMWATER

NEW IMPERVIOUS AREA = 745m<sup>2</sup>  
 NEW ROOF AREA = 563m<sup>2</sup>




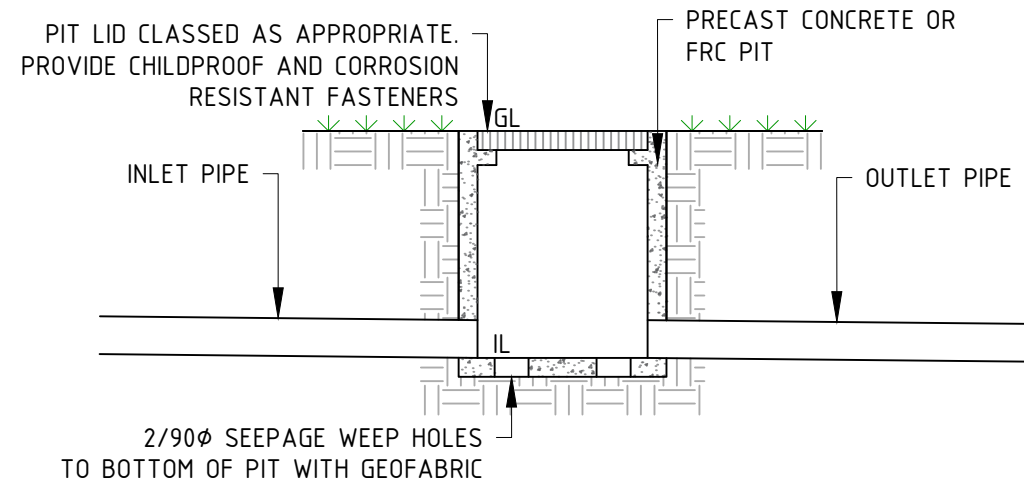
**DRAINAGE CONCEPT PLAN**  
 SCALE 1:200

<p><b>P &amp; R CONSULTING ENGINEERS P/L</b>          ACN 647 817 892          180 MACQUARIE GROVE RD KIRKHAM NSW          PH 0409 125 133          pnrconsult234@gmail.com          pnrconsultingengineers.com.au</p>	PROJECT:- PROPOSED DRAINAGE PLAN	
	CLIENT:- ABERFOYLE HOMES	
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DRAWN NV CHECKED DP DATE 19/06/2023 SCALE 1:200 SHEET 3	<b>DWG No</b> <b>24067</b> STORMWATER	

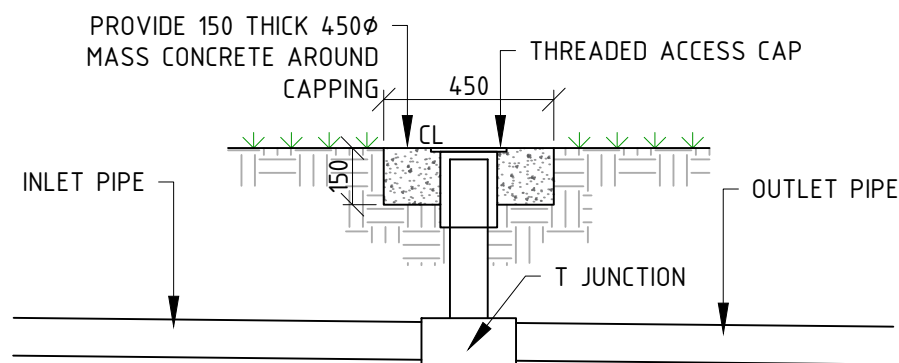


**TYPICAL ABOVE GROUND RAINWATER TANK DETAIL**  
SCALE 1:20

 <b>P &amp; R CONSULTING ENGINEERS P/L</b> ACN 647 817 892 180 MACQUARIE GROVE RD KIRKHAM NSW PH 0409 125 133 pnrconsult234@gmail.com pnrconsultingengineers.com.au	PROJECT:- PROPOSED DRAINAGE PLAN	
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DRAWN NV CHECKED DP DATE 19/06/2023 SCALE 1:20 SHEET 4	<b>DWG No</b> <b>24067</b> STORMWATER	

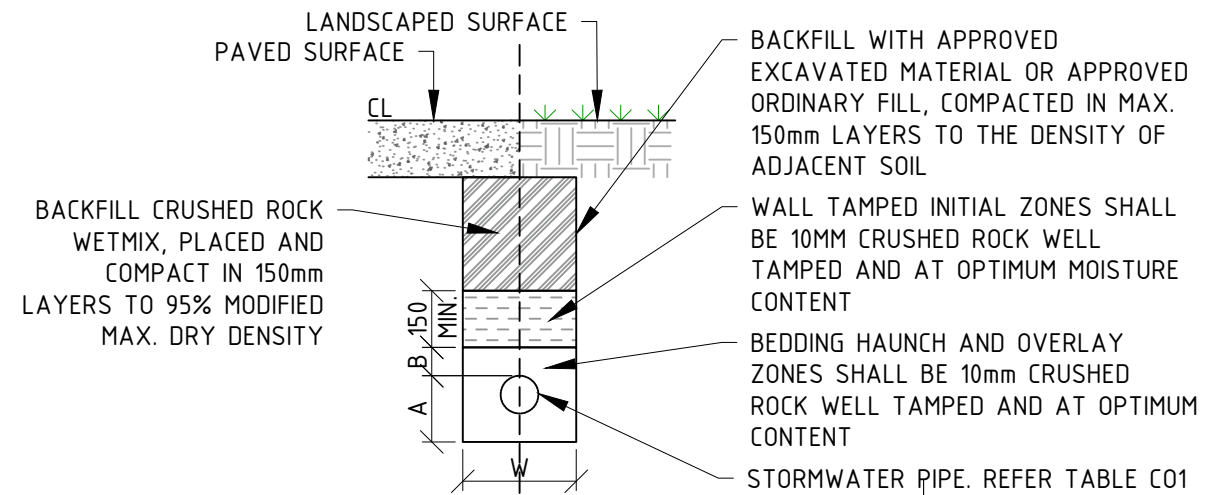


**ON-GRADE SURFACE INLET PIT**  
**1/1, 2/1, 3/1, 1/2, 1/3 DETAIL**  
 SCALE 1:20



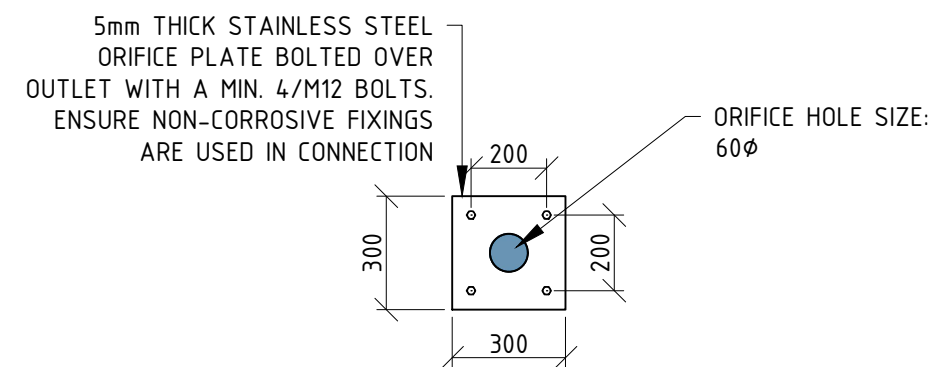
**CLEANING EYE DETAIL**  
 SCALE 1:20

CLEANING EYE NOTE:  
 CLEANING EYE TO BE PROVIDED AT  
 START OF CHARGED LINES AND AT  
 CRITICAL JUNCTIONS TO BUILDERS  
 DETAIL

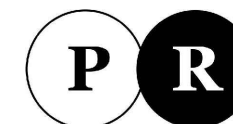


PIPE $\phi$ (mm)	W (mm)	A (mm)	B (mm)
100 - 150	300	75	75
225 - 300	600	100	100

**PIPE LAYING DETAIL**  
 SCALE 1:20



**ORIFICE PLATE DETAIL**  
 SCALE 1:20



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 SCALE 1:20  
 SHEET 5

**DWG No**  
**24067**  
 STORMWATER

	STORM EVENTS DISCHARGE				
	5 YR FLOW RATE 20% AEP (L/s)	10 YR FLOW RATE 10% AEP (L/s)	20 YR FLOW RATE 5% AEP (L/s)	50 YR FLOW RATE 2% AEP (L/s)	100 YR FLOW RATE 1% AEP (L/s)
PRE DEVELOPMENT	34	42	48	58	71
POST DEVELOPMENT	35	43	49	59	72
POST DEVELOPMENT (WITH OSD)	33	40	46	55	65
POST DEVELOPMENT PEAK DISCHARGE REDUCTION (%)	-3%	-5%	-4%	-5%	-8%

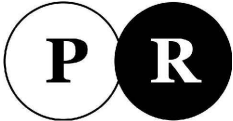
POST DEV. PEAK DISCHARGE REDUCTION = (POST DEV. - PRE DEV.) / PRE DEV

PRE DEVELOPMENT AREAS PERCENTAGES

EFFECTIVE IMPERVIOUS AREA = 24%, REMAINING IMPERVIOUS AREA = 0%, PERVIOUS AREAS = 76%

POST DEVELOPMENT AREAS

EFFECTIVE IMPERVIOUS AREA = 36%, REMAINING IMPERVIOUS AREA = 12%, PERVIOUS AREAS = 52%

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	DRAWN NV CHECKED DP DATE 19/06/2023 SCALE 1:20 SHEET 6	<b>DWG No</b> <b>24067</b> STORMWATER