

STORMWATER DRAINAGE PLAN

LOT 1 DP 237377

1 NERIDAH AVENUE, BELROSE NSW 2085

DRAINAGE NOTES

PIPE SIZE:

THE MINIMUM PIPE SIZE SHALL BE:

- 100mm DIA WHERE THE LINE ONLY RECEIVES ROOFWATER RUNOFF; OR
- 100mm DIA WHERE THE LINE RECEIVES RUNOFF FROM PAVED OR UNPAVED AREAS ON THE PROPERTY

THE MINIMUM PIPE VELOCITY SHOULD BE 0.6 m/s AND A MAXIMUM PIPE VELOCITY OF 6.0 m/s DURING THE DESIGN STORM.

PIPE GRADE:

THE MINIMUM PIPE GRADE SHALL BE:

- 1.0% FOR PIPES LESS THAN 225mm DIA
- 0.5% FOR ALL LARGER PIPES

PIPES WITH A GRADIENT GREATER THAN 20% WILL REQUIRE ANCHOR BLOCKS AT THE TOP AND BOTTOM OF THE INCLINED SECTION; AND AT INTERVALS NOT EXCEEDING 3.0m

ANCHOR BLOCKS ARE DESIGNED ACCORDING TO CLAUSE 3.5.3 OF AS3500.3-1990

DEPTH OF COVER FOR PVC PIPES:
MINIMUM PIPE COVER SHALL BE AS FOLLOWS:

LOCATION	MINIMUM COVER
NOT SUBJECT TO VEHICLE LOADING	100mm SINGLE RESIDENTIAL 300mm ALL OTHER DEVELOPMENTS
SUBJECT TO VEHICLE LOADING	450mm WHERE NOT IN A ROAD
UNDER A SEALED ROAD	600mm
UNSEALED ROAD	750mm
PAVED DRIVEWAY	100mm PLUS DEPTH OF CONCRETE

SEE AS2032 INSTALLATION OF UPVC PIPES FOR FURTHER INFORMATION.

CONCRETE PIPE COVER SHALL BE IN ACCORDANCE WITH AS3725-1989 LOADS ON BURIED CONCRETE PIPES, HOWEVER A MINIMUM COVER OF 450mm WILL APPLY.

WHERE INSUFFICIENT COVER IS PROVIDED, THE PIPE SHALL BE COVERED AT LEAST 50mm THICK OVERLAY AND SHALL THEN BE PAVED WITH AT LEAST:

- 150mm REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICLE TRAFFIC;
- 75mm THICKNESS OF BRICK OR 100mm OF CONCRETE PAVING WHERE SUBJECT TO LIGHT VEHICLE TRAFFIC; OR
- 50mm THICK BRICK OR CONCRETE PAVING WHERE NOT SUBJECT TO VEHICLE TRAFFIC.

CONNECTIONS TO STORMWATER DRAINS UNDER BUILDINGS:
SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 3.10 OF AS3500.3-1990

ABOVE GROUND PIPEWORK:

SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 6 OF AS3500.3-1990

GENERAL NOTES

1. FINAL LOCATION OF NEW DOWNPIPES TO BE DETERMINED BYBUILDER/ARCHITECT AT TIME OF CONSTRUCTION.

2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS DRAWINGS. ANY DISCREPANCIES TO BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.

3. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE AS/NZS 3500.3:2003 STORMWATER DRAINAGE, BCA AND LOCAL COUNCIL POLICY/CONSENT/REQUIREMENTS.

4. ALL DIMENSIONS AND LEVELS TO BE VERIFIED BY BUILDER ON-SITE PRIOR TO COMMENCEMENT OF WORKS. THESE DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS NOR TO BE USED FOR SETOUT PURPOSES.

5. ALL SURVEY INFORMATION AND PROPOSED BUILDING AND SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED FROM DRAWINGS BY OTHERS.

6. THESE DRAWINGS DEPICT THE DESIGN OF SURFACE STORMWATER RUNOFF DRAINAGE SYSTEMS ONLY AND DO NOT DEPICT ROOF DRAINAGE OR SUBSOIL DRAINAGE SYSTEMS UNLESS NOTED OTHERWISE. THE DESIGN OF ROOF AND SUBSOIL DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF OTHERS.

7. ALL STORMWATER DRAINAGE PIPES ARE TO BE uPVC AT MINIMUM 1% GRADE UNLESS NOTED OTHERWISE.

8. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND ALL EXISTING SERVICES OR OTHER STRUCTURES WHICH MAY AFFECT/BE AFFECTED BY THIS DESIGN PRIOR TO COMMENCEMENT OF WORKS.

9. ALL PITS WITHIN DRIVEWAYS TO BE 150mm THICK CONCRETE OR EQUAL.

10. THIS PLAN IS THE PROPERTY OF THE SNIP CONSULTING ENGINEERS AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION.

PLAN NOTES

1. ROOF DRAINAGE NOTE: AS 3500 ROOF DRAINAGE REQUIRES EAVES GUTTERS TO BE SIZED FOR 20 YEAR 5 MIN. STORM. FOR EAVES GUTTERS, AS 3500.3:2003 THEN HAS THE FOLLOWING REQUIREMENTS:

1.1. FOR TYPICAL STANDARD QUAD GUTTER WITH Ae = 6000mm² AND GUTTER SLOPE 1:500 AND STEEPER, THIS REQUIRES ONE DOWNPIPE PER 35m² ROOF AREA.

1.2. DOWNPIPES TO BE MINIMUM 90mm DIA. OR 100 x 50mm FOR GUTTERS SLOPE 1:500 AND STEPPER.

1.3. OVERFLOW METHOD TO FIGURE G1 OF AS 3500.3:2003 IT IS THE RESPONSIBILITY OF THE PLUMBER AND / OR BUILDER TO COMPLY WITH THIS. THIS DRAWING SHOWS PRELIMINARY LOCATIONS / NUMBERS OF DOWNPIPES ONLY WHICH ARE TO BE VERIFIED BY BUILDER / PLUMBER

2. TREE PRESERVATION: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PRIOR APPROVAL REQUIRED FROM COUNCIL WITH RESPECT TO POTENTIAL IMPACT ON TREES FOR ANY WORKS SHOWN ON THIS DRAWING PRIOR TO THE COMMENCEMENT OF THOSE WORKS

3. ALL ROOF GUTTERS TO HAVE OVERFLOW PROVISION IN ACCORDANCE WITH AS 3500.3:2003 AND SECTIONS 3.5.3, 3.7.5 AND APPENDIX G OF AS 3500.3:2003

4. THIS DRAWING IS NOT TO BE USED FOR SET-OUT PURPOSES - REFER TO ARCHITECTURAL DRAWINGS

5. LOCATION OF SURFACE STORMWATER GRATED INLET PITS MAY BE VARIED OR NEW PITS INSTALLED AT THE CONSTRUCTION STAGE PROVIDED DESIGN INTENT OF THIS DRAWING IS MAINTAINED

6. EXTRA SURFACE DRAINS OR PITS TO BE ADDED ON-SITE BY PLUMBER OR BUILDER TO CATCH STORMWATER IN LOW AND WATER PONDING AREAS AS PER SITE'S FINAL GRADES. SUBSOIL DRAINAGE TO BE ADDED AT THE BASE OF RETAINING WALLS AS PER STRUCTURE ENGINEERS/ STANDARD SPECIFICATIONS. ALL ABOVE EXTRA DRAINAGE TO BE CONNECTED TO THE UNCHARGED SYSTEM ONLY

PIT SIZES AND DESIGN:

DEPTH (mm)	MINIMUM PIT SIZE (mm)
UP TO 450mm	450X450
450mm TO 600mm	600X600
600mm TO 900mm	600X900
900mm TO 1500mm	900X900 (WITH STEP IRONS)
1500mm TO 2000mm	1200X1200 (WITH STEP IRONS)

ALL PIPES SHOULD BE CUT FLUSH WITH THE WALL OF THE PIT.

PITS GREATER THAN 600mm DEEP SHALL HAVE A MINIMUM ACCESS OPENING OF 600 x 600mm

THE GRATED COVERS OF PITS LARGER THAN 600 x 600mm ARE TO BE HINGED TO PREVENT THE GRATE FROM FALLING INTO THE PIT.

THE BASE OF THE DRAINAGE PITS SHOULD BE AT THE SAME LEVEL AS THE INVERT OF THE OUTLET PIPE. RAINWATER SHOULD NOT BE PERMITTED TO POND WITHIN THE STORMWATER SYSTEM

· TRENCH DRAINS:
CONTINUOUS TRENCH DRAINS ARE TO BE OF WIDTH NOT LESS THAN 150mm AND DEPTH NOT LESS THAN 100mm. THE BARS OF THE GRATING ARE TO BE PARALLEL TO THE DIRECTION OF SURFACE FLOW.

· STEP IRONS:
PITS BETWEEN 1.2m AND 6m ARE TO HAVE STEP IRONS IN ACCORDANCE WITH AS1657. FOR PITS GREATER THAN 6m OTHER MEANS OF ACCESS MUST BE PROVIDED.

· PVC PITS:
PVC PITS WILL ONLY BE PERMITTED IF THEY ARE NOT A GREATER SIZE THAN 450 x 450mm (MAXIMUM DEPTH 450mm) AND ARE HEAVY DUTY

· IN-SITU PITS:
IN-SITU PITS ARE TO BE CONSTRUCTED ON A CONCRETE BED OF AT LEAST 150mm THICK. THE WALLS ARE TO BE DESIGNED TO MEET THE MINIMUM REQUIREMENTS OF CLAUSE 4.6.3 OF AS3500.4-1990. PITS DEEPER THAN 1.8m SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE.

· GRATES:
GRATES ARE TO BE GALVANISED STEEL GRID TYPE. GRATES ARE TO BE OF HEAVY-DUTY TYPE IN AREAS WHERE THEY MAY BE SUBJECT TO VEHICLE LOADING.

ADDITIONAL NOTE

1. ALL WORKS ARE TO BE IN ACCORDANCE WITH COUNCILS ENGINEERING GUIDE FOR DEVELOPMENT AND CIVIL WORKS AND SPECIFICATION.

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A	ISSUED FOR D.A OR C.C.	M.S.	B.S.	R.K.P.	15.10.25
REV	REVISION	DRAWN	ENG	CHECK	DATE

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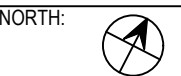
REVIEWED AND CERTIFIED BY

SNIP CONSULTING ENGINEERS PTY LTD
CIVIL CONSULTING ENGINEERS
ROPES CROSSING, NSW 2760

APPROVED:



DATUM: AHD



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DRAWING No: SCE-25-282



SITE ADDRESS:

LOT 1 DP 237377
1 NERIDAH AVENUE, BELROSE NSW 2085

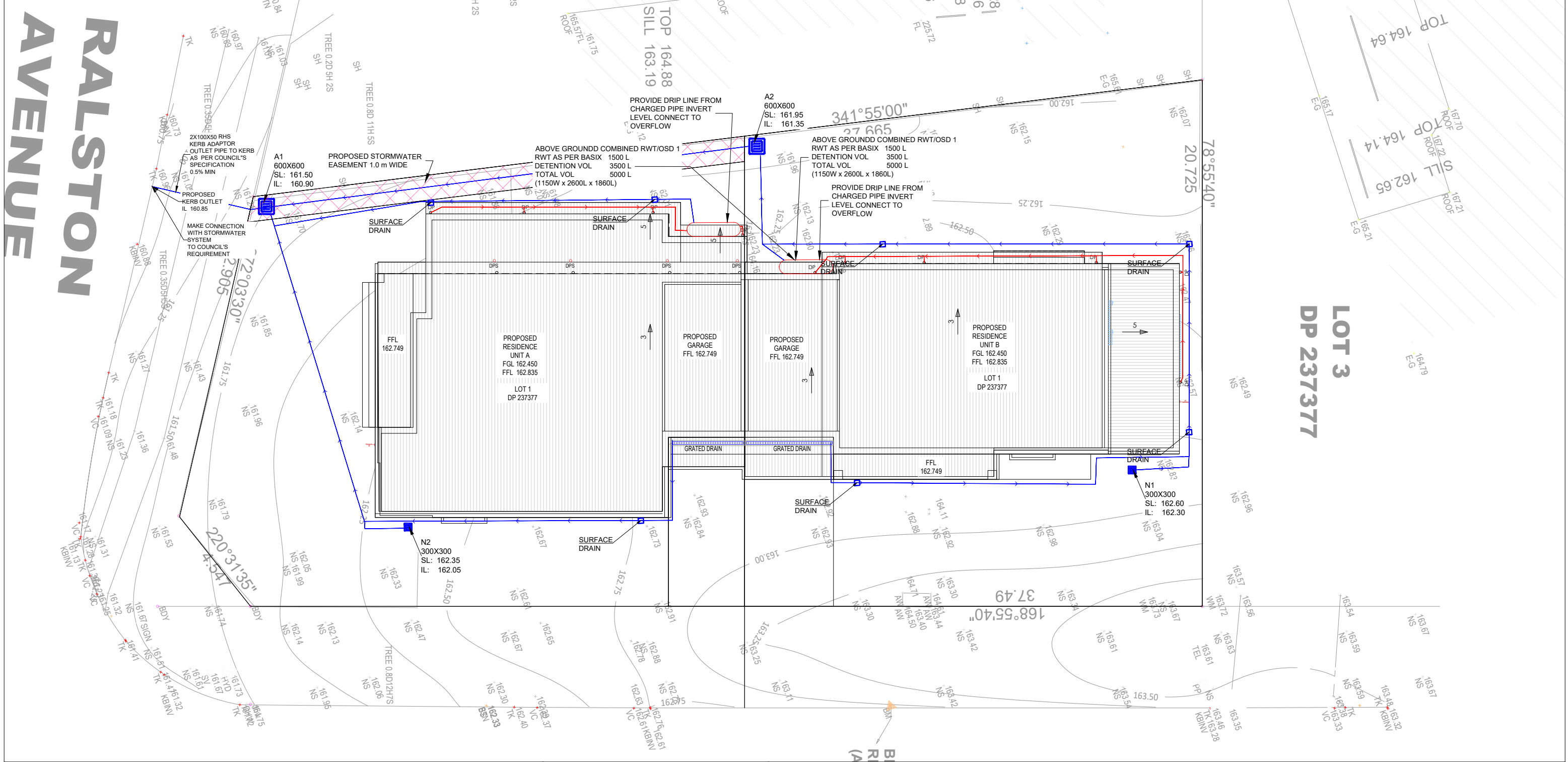
DRAWING TITLE:
STORMWATER DRAINAGE KEYNOTES

STATUS:

ISSUED FOR D.A OR C.C.

SCALE: N/A	DRAWN: M.S.	ENGINEER: B.S.	DATE: 15.10.25
SHEET NO: 01	REVISION: A		

RAINSTON AVENUE



STORMWATER DRAINAGE LAYOUT PLAN:

- NOTES:
- DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTURALS
 - REFER TO ARCHITECTURAL DRAWINGS FOR ALL SETOUT, LEVELS, FALL, ETC.

- ALL SURFACE WATER TO BE DIRECTED TO STREET OR PROVIDE DRAINAGE PIT AND CONNECTED TO OVERFLOW AND EASEMENT /STREET
- CARE TO BE TAKEN WHEN WORKING AROUND EXISTING SEWER, STORMWATER EASEMENT ETC. STRUCTURAL ENGINEERING ADVICE IS REQUIRED FOR SEWER PROTECTION AGAINST ADDITIONAL LOADING FROM NEW WORKS.

STORMWATER LEGEND

EXISTING RETAINING WALL



PROPOSED RETAINING WALL



ELECTRICITY PILLAR



POTABLE WATER METER



COMMUNICATIONS PIT



LIGHT POLE



GRATED SURFACE INLET PIT (GSIP)



GRATE LEVEL = 75.50

S.L.: 75.50

INVERT LEVEL = 75.00

I.L.: 75.00

DOWN PIPE



100mm DIA. OR 100 x 50 RHS



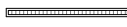
DOWN PIPE SPREADER



DIRECTION OF FLOW FOR FLOOR WASTE



GRATED TRENCH DRAIN



GEOTEXTILE FILTER FABRIC



ROOF GUTTER OR SURFACE FALL



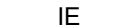
CHARGED STORMWATER PIPE



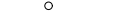
STORMWATER PIPE



UPVC SEWER GRADE



INSPECTION EYE



PROPOSED SUBSOIL DRAINAGE



TOP OF KERB

TK

SLAB FINISHED FLOOR LEVEL

SLAB RL

SLAB EXCAVATION LEVEL

EXCA RL

TOP LEVEL

TP LEVEL

SEWER MANHOLE (EXISTING)

MH

FINISHED GROUND LEVEL

FGL

NATURAL GROUND LEVEL

NGL

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Mr RiyazKhan Pathan
MEMBER OF THE ENGINEERING BOARD
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Registered in the NER in the area of practice of Civil

DATUM: AHD

NORTH:



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DRAWING No: SCE-25-282



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LOT 1 DP 237377
1 NERIDAH AVENUE, BELROSE NSW 2085

STATUS:

ISSUED FOR D.A OR C.C.

SCALE: 1:150

DRAWN: M.S.

ENGINEER: B.S.

DATE: 15.10.25

SHEET NO: 02

REVISION: A

DRAWING TITLE:

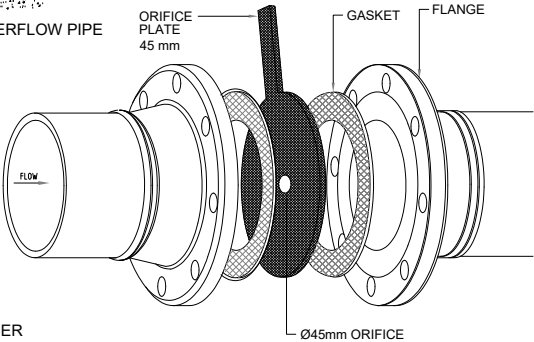
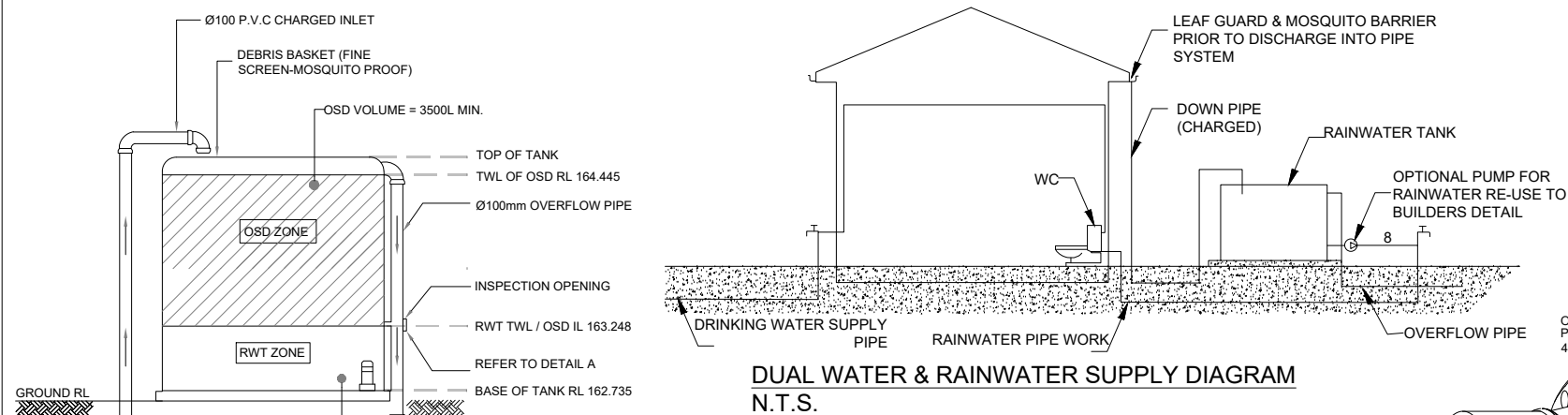
STORMWATER DRAINAGE LAYOUT PLAN

GENERAL INFORMATION:

- GENERAL NOTES:
1. THE DRAWING SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL, LANDSCAPE AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH OTHER SUCH WRITTEN INSTRUCTION AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEERS BEFORE PROCEEDING WITH THE WORK.
 2. ALL DIMENSIONS ARE IN MILLIMETERS & ALL LEVELS ARE IN METERS UNLESS NOTED OTHERWISE.
 3. NO DIMENSION SHALL BE OBTAINED BY SCALING THE DRAWING.
 4. EXISTING SERVICES LOCATIONS SHOWN INDICATIVE ONLY. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF ANY WORKS.
 5. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS. ALL EXTERNAL SLABS TO BE WATERPROOFED.
 6. DURING EXCAVATION WORK, THE STRUCTURE SHALL BE MAINTAINED IN A STABLE AND NO PART SHALL BE OVERSTRESSED.
 7. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS AND SPECIFICATION.
 8. EXISTING SERVICES WHERE SHOWN HAVE BEEN PLOTTED FROM SUPPLIED DATA AND SUCH THEIR ACCURACY CAN NOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LEVEL OF ALL EXISTING SERVICE PRIOR TO THE COMMENCEMENT OF WORK.
 9. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACK FILLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL COUNCIL.
 10. ALL TRENCH BACK FILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
 11. ON COMPLETION OF STORMWATER INSTALLATION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITION, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS UNLESS DIRECTED OTHERWISE.
 12. CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS UNLESS DIRECTED OTHERWISE.
 13. LOCATION OF DOWN PIPES AND FLOOR WASTES ARE INDICATIVE ONLY. DOWN PIPE AND FLOOR WASTE SIZE, LOCATION AND QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARD.
 14. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFEREED TO THE DESIGN ENGINEER FOR RESOLUTION.
 15. ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY. ALL GRATES TO HAVE CHILD PROOF LOCKS.
 16. ALL GUTTERS WILL BE FILLED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWN PIPES.
 17. ENSURE ALL DRAINAGE WORKS ARE AWAY FROM TREE ROOTS.

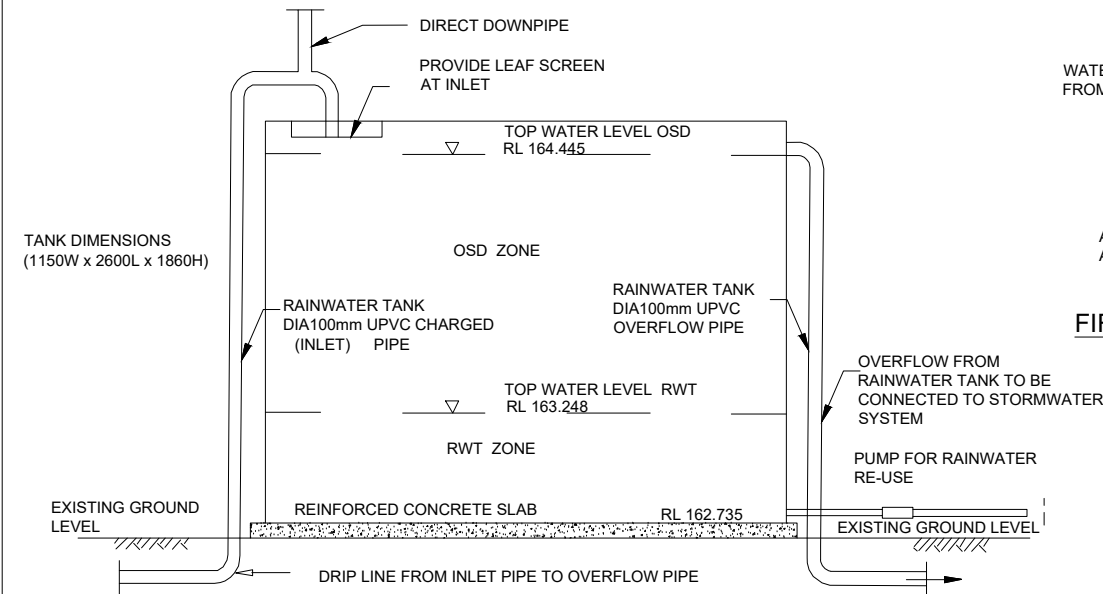
- RAINWATER TANK INFORMATION:
1. RAINWATER TANK TO COLLECT RAIN RUNOFF FROM AT LEAST 255 SQUARE METERS OF ROOF AREA.
 2. PROPOSED RAINWATER TANK SIZE AS PER BASIX.
 3. RAINWATER TANKS SHALL BE CONNECTED TO MAINS WATER SUPPLY AS BACKUP.
 4. PUMPS SHALL PROVIDE MINIMUM 150kpa PRESSURE.
 5. RAINWATER TANK TO BE CONNECTED AS PER BASIX REQUIREMENTS.
 6. A SIGN TO BE INSTALLED STATING 'NOT FOR HUMAN CONSUMPTION'.
 7. TANKS TO BE PLUMBED TO TOP UP FROM THE POTABLE WATER SUPPLY AND AN AIR GAP MAINTAINED ABOVE THE OVERFLOW IN THE TANK.
 8. NO DIRECT CROSS-CONNECTION WITH THE SYDNEY WATER POTABLE SUPPLY AND AN AIR GAP MAINTAINED ABOVE THE OVERFLOW IN THE TANK.
 9. ANY OPENINGS SHALL BE MESHED OR SEALED TO PREVENT MOSQUITOS BREEDING AND ENTRY OF ANIMALS OR FOREIGN MATTER.
 10. RAINWATER TANKS TO BE CLEANED OUT EVERY 6 MONTHS.
 11. ALL DOWN PIPES TO BE SEALED TO UNDERSIDE OF FIRST FLOOR GUTTER AS DRAINAGE SYSTEM IS CHARGED TO FACILITATE PROPOSED ABOVE GROUND REUSE TANK.
 12. THIS SYSTEM TO BE DESIGNED WITH A 'FIRST FLUSH' DIVERSION TO REMOVE ROOF CONTAMINANTS.
 13. REUSE WATER TO BE DIRECTED TO THE FOLLOWING:
 - A. MINIMUM 1 OUTDOOR GARDEN TAP
 - B. ALL CISTERNS (TOILETS)
 - C. COLD WATER SERVICE TO THE CLOTHES WASHER.

- DRAINAGE REQUIREMENTS:
1. ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH CURRENT EDITIONS OF AS2870, AS/NZS 2032 INSTALL OF PVC PIPES AND AS/NZS 3500 PLUMBING AND DRAINAGE STANDARD.
 2. PLUMBING TRENCHES SHALL BE SLOPED AWAY FROM THE HOUSE AND SHALL BE BACKFILLED WITH CLAY IN THE 300mm WITHIN 1.5m OF THE HOUSE. THE CLAY USED FOR BACKFILLING SHALL BE COMPACTED WHERE PIPES PASS UNDER THE FOOTING SYSTEM, THE TRENCH SHALL BE BACKFILLED WITH CLAY OR CONCRETE TO RESTRICT THE INGRESS OF WATER BENEATH THE FOOTING SYSTEM.
 3. DRAINAGE SHALL BE CONSTRUCTED TO AVOID WATER PONDING AGAINST OR NEAR THE FOOTING.
 4. EXCAVATION NEAR THE EDGE OF THE FOOTING SYSTEM SHALL BE BACKFILLED IN SUCH A WAY AS TO PREVENT ACCESS OF WATER TO THE FOUNDATION.
 5. WATER RUNOFF SHALL BE COLLECTED AND CHANNELLED AWAY FROM THE HOUSE DURING CONSTRUCTION.
 6. PENETRATIONS OF THE EDGE BEAMS AND FOOTING BEAMS ARE TO BE AVOIDED BUT WHERE NECESSARY SHALL BE SLEEVED TO ALLOW FOR MOVEMENT.
 7. CONNECTION OF STORMWATER DRAINS AND WASTE DRAINS SHALL BE INCLUDED FLEXIBLE CONNECTIONS.

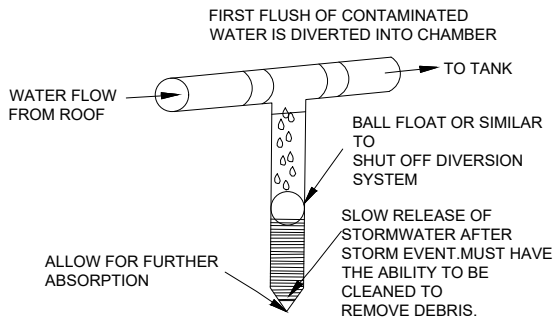


DETAIL
TYPICAL ORIFICE DETAIL
SCALE N.T.S.

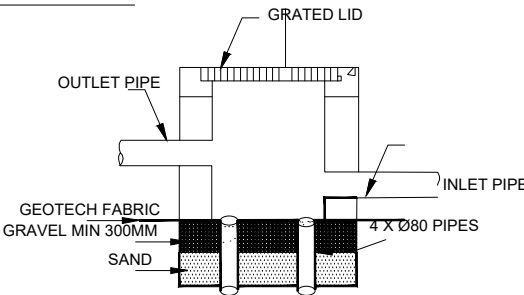
DETAIL
COMBINED OSD/RAINWATER TANK 1
NOT TO SCALE



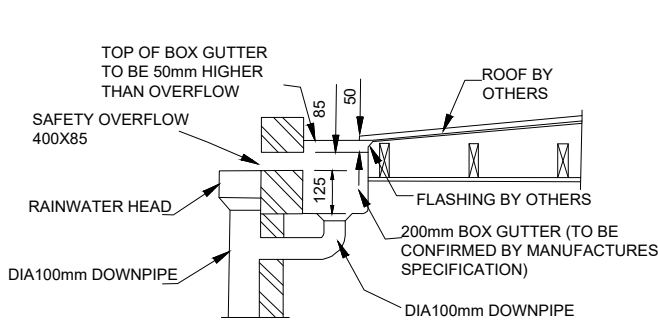
RAINWATER REUSE TANK CONNECTION DETAILS
N.T.S.



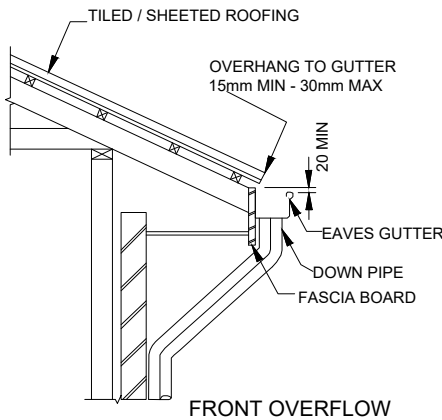
FIRST FLUSH WATER DIVERTER DETAIL



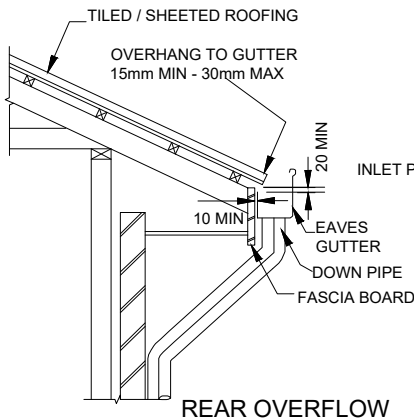
ABSORPTION PIT
TO BE USED IF REQUIRED



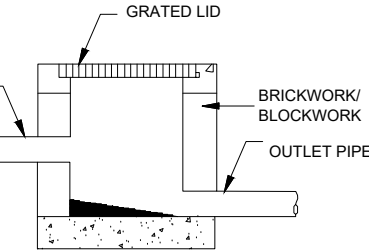
RAINWATER OUTLET WITH BOX GUTTER
TO BE USED IF REQUIRED



FRONT OVERFLOW



REAR OVERFLOW



TYPICAL GRATED PIT
TO BE USED IF REQUIRED

TYPICAL EAVES GUTTER DETAIL

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ROPES CROSSING, NSW 2760

APPROVED:

Mr RiyazKhan Pathan

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Signature

Membership No. 3895292

National Engineering Register

Registered in the NER in the area of practice of Civil

DATUM:

AHD

NORTH:

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DRAWING No:

SCE-25-282

SITE ADDRESS:

LOT 1 DP 237377

1 NERIDAH AVENUE, BELROSE NSW 2085

DRAWING TITLE:

STORMWATER DETAILS

STATUS:

ISSUED FOR D.A OR C.C.

SCALE:

N.T.S.

DRAWN:

M.S.

ENGINEER:

B.S.

DATE:

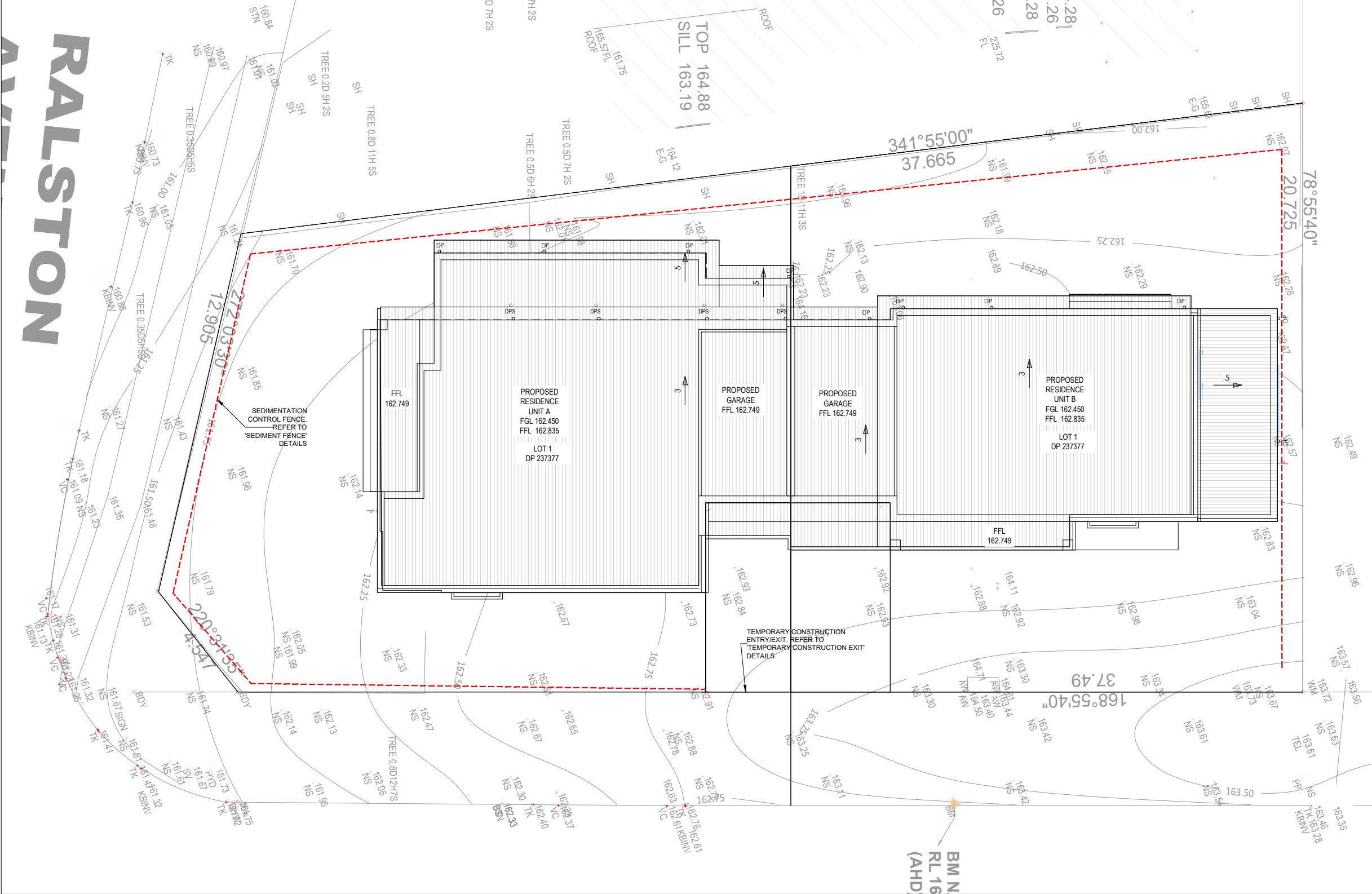
15.10.25

SHEET NO:

03

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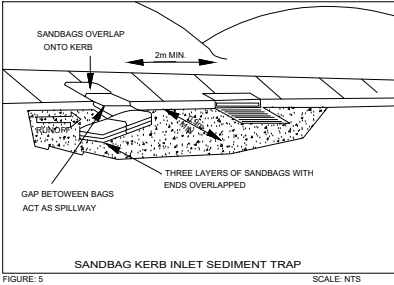
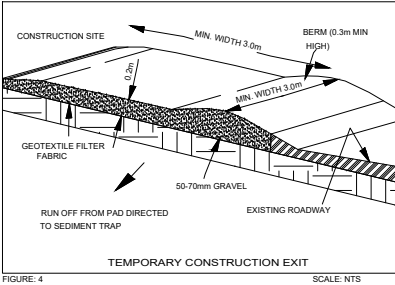
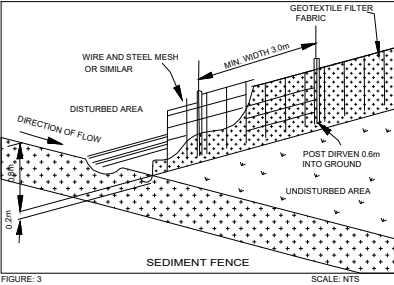
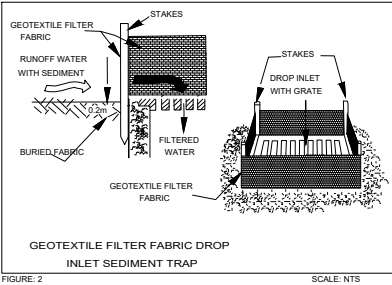
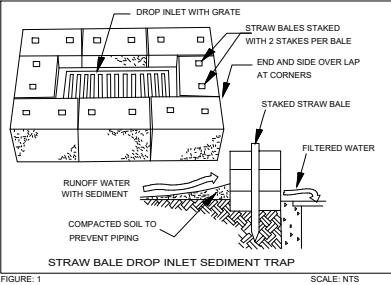


EROSION AND SEDIMENT CONTROL NOTES:

- THESE NOTES ARE TO BE READ IN CONJUNCTION WITH EROSION AND SEDIMENT CONTROL DETAILS IN THIS DRAWING SET.
- THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY AND TO THE SATISFACTION OF THE RELEVANT LOCAL AUTHORITY. NO DISTURBANCE TO THE SITE SHALL BE PERMITTED OTHER THAN IN THE IMMEDIATE AREA OF THE WORKS AND NO MATERIAL SHALL BE REMOVED FROM THE SITE WITHOUT THE LOCAL AUTHORITY APPROVAL. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH STANDARDS OUTLINED IN NSW DEPARTMENT OF HOUSING'S 'MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTIONS'.
- PLACE STRAW BALES LENGTH WISE IN A ROW AS PARALLEL AS POSSIBLE TO THE SITE CONTOURS, UNO. BALE ENDS TO BE TIGHTLY BUTTED. BALES ARE TO BE PLACED SO THAT STRAWS ARE PARALLEL TO THE ROW. BALES ARE TO BE PLACED 1.5m TO 2m DOWN SLOPE FROM THE TOE OF THE DISTURBED BATTER, UNO.
- COUNCIL APPROVED FILTER FABRIC TO BE ENTRENCHED 150mm DEEP UP SLOPE TOWARDS DISTURBED SURFACE. FABRIC TO BE A MINIMUM SF2000 OR BETTER, FIX FABRIC TO POST WITH WIRE TIES OR AS RECOMMENDED WITH MANUFACTURERS SPECIFICATIONS. FABRIC JOINTS TO HAVE A MINIMUM OF 150mm OVERLAP. WIRE TO BE STRUNG BETWEEN POSTS WITH FILTER FABRIC OVERLAP TO PREVENT SAGGING.
- STABILIZED ENTRY/EXIT POINTS TO REMAIN INTACT UNTIL FINISH DRIVEWAY IS COMPLETE. CONSTRUCTION OF THE ENTRY/EXIT POINTS TO BE MAINTAINED AND REPAIRED AS REQUIRED SO THAT ITS FUNCTION IS NOT COMPROMISED. CONSTRUCTION OF ENTRY/EXIT POINTS TO BE IN ACCORDANCE WITH THE DETAILS CONTAINED WITHIN THIS DRAWING SET.
- ALL DRAINAGE PIPES INLETS TO BE CAPPED UNTIL DOWN PIPES CONNECTED AND PITS CONSTRUCTED AND PROTECTED WITH SILT BARRIER.
- PROVIDE AND MAINTAIN SILT TRAPS AROUND ALL SURFACE INLET PITS UNTIL CATCHMENT IS REVEGETATED OR PAVED.
- THE CONTRACTOR SHALL REGULARLY MAINTAINED ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVED ACCUMULATED SILT FROM SUCH DEVICES SUCH THAT MORE THAN 60% OF THEIR CAPACITY IS LOST. ALL THE SILT IS TO BE PLACED OUTSIDE THE LIMIT OF WORKS. THE PERIOD FOR MAINTAINING THESE DEVICES SHALL BE AT LEAST UNTIL ALL DISTURBED AREAS ARE REVEGETATED AND FURTHER AS MAY BE DIRECTED BY THE SUPERINTENDENT OR COUNCIL.
- THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL BY REGULARLY WETTING DOWN (BUT NOT SATURATING) DISTURBED AREA.
- LAY 300 WIDE MINIMUM TURF STRIP ON 100 TOPSOIL BEHIND ALL KERB AND GUTTER WITH 1000 LONG RETURNS EVERY 6000 AND AROUND STRUCTURES IMMEDIATELY AFTER BACKFILLING AS PER THE RELEVANT LOCAL AUTHORITY SPECIFICATION.
- THE CONTRACTOR SHALL GRASS SEED ALL DISTURBED AREAS WITH AN APPROVED MIX AS SOON AS PRACTICABLE AFTER COMPLETION OF EARTH WORKS AND REGRADING.
- REVEGETATE ALL TRENCHES IMMEDIATELY UPON COMPLETION OF BACKFILLING.
- PROVIDE AND MAINTAIN SILT TRAP AROUND ALL SURFACE INLET PITS UNTIL CATCHMENT IS REVEGETATED OR PAVED. TOP SOIL SHALL BE STRIPPED AND STOCK PILED OUTSIDE HAZARD AREAS SUCH AS DRAINAGE LINES. THIS TOP SOIL SHALL BE RESPAID LATER ON AREAS TO BE REVEGETATED AND STABILIZED ONLY, (I.E. ALL FOOTPATHS, BATTERS SITE REGARDING AREAS BASINS AND CATCHDRAINS). TOP SOIL SHALL NOT BE RESPAID ON ANY OTHER AREAS UNLESS SPECIFICALLY INSTRUCTED BY THE SUPERINTENDENT. IF THEY ARE TO REMAIN FOR LONGER THAN ONE MONTH STOCK PILE SHALL BE PROTECTED FROM EROSION BY COVERING THEM WITH A MULCH AND HYDROSEEDING AND IF NECESSARY BY LOCATING BANKS OR DRAINS DOWNSTREAM OF A STOCK PILE TO RETARD SILT LADEN RUNOFF.
- WHEN ANY DEVICES ARE TO BE HANDED OVER TO COUNCIL THEY SHALL BE CLEAN AND STABLE CONDITION.

SEDIMENT AND EROSION CONTROL PLAN :

- NOTES:
- DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTURALS
 - REFER TO ARCHITECTRAL DRAWINGS FOR ALL SETOUT, LEVELS, FALL ETC.



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REV	REVISION	DRAWN	ENG	CHECK	DATE

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CONTRIVE CONSULTANTS

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SUBDIVISION AND UTILITY CONSULTANTS
SUITE 3301, 18-24 ADELPHI STREET ROUSE HILL NSW 2155
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REVIEWED AND CERTIFIED BY

SNIP CONSULTING ENGINEERS PTY LTD
CIVIL CONSULTING ENGINEERS
ROPES CROSSING, NSW 2760

APPROVED:

Mr RiyazKhan Pathan
MEMBER OF THE ENGINEERING COUNCIL OF AUSTRALIA
Signature: [Signature] Membership No. 3895292
Registered in the NER in the area of practice of Civil

DATUM: AHD

NORTH: [North Arrow]

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DRAWING No: SCE-25-282

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www.1100.com.au

SITE ADDRESS:

LOT 1 DP 237377
1 NERIDAH AVENUE, BELROSE NSW 2085

STATUS:

ISSUED FOR D.A OR C.C.

SCALE: 1:150

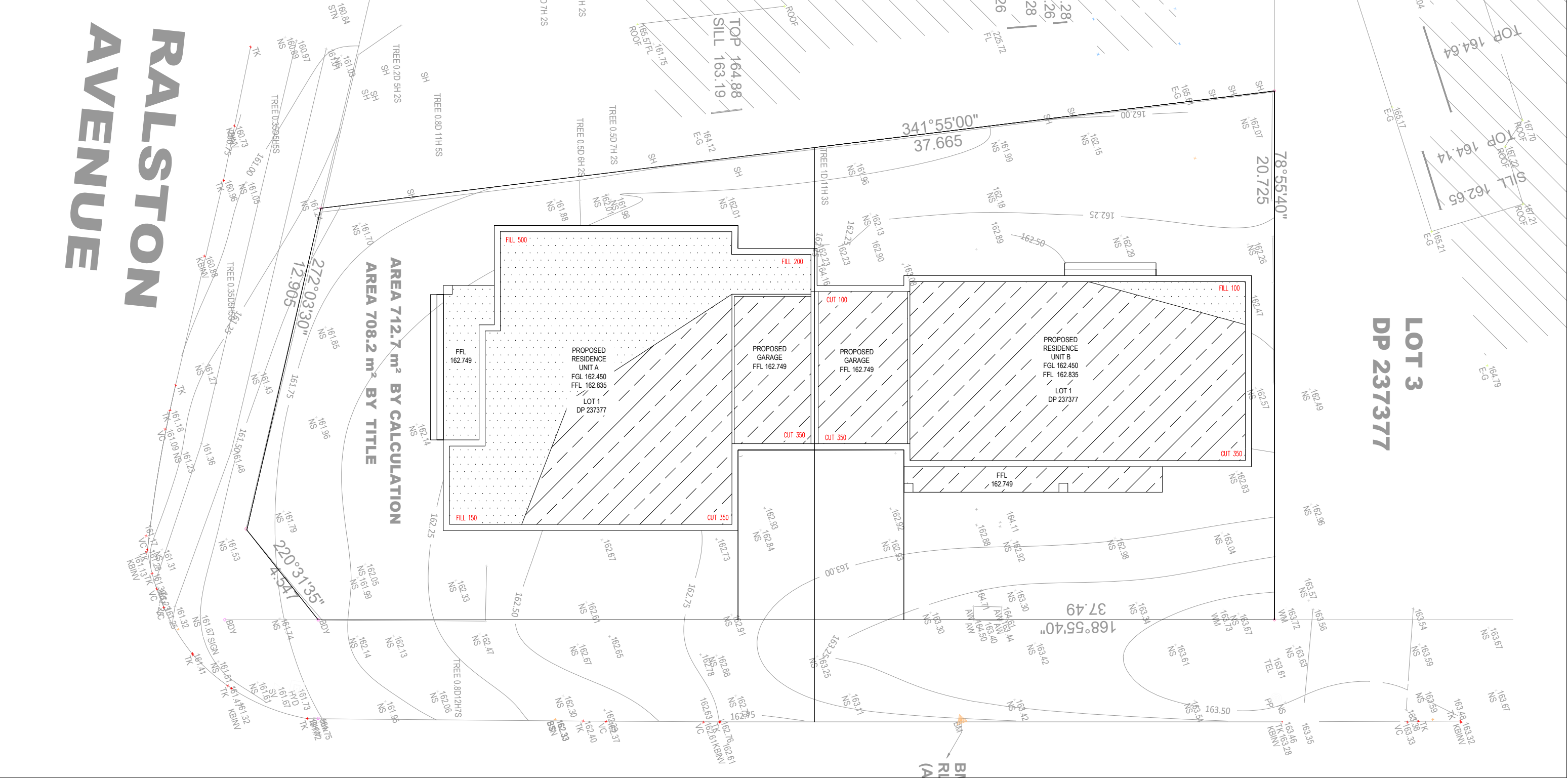
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ENGINEER: B.S.

DATE: 15.10.25

SHEET NO: 04

REVISION: A



CUT AND FILL LAYOUT PLAN:

- NOTES:
- 1. DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTURALS
 - 2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL SETOUT, LEVELS, FALL, ETC.

LEGEND

SITE CUTTING SITE FILLING

GENERAL NOTES:

- 1. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH COUNCIL WORKS STANDARD AND TO THE SPECIFICATION.
- 2. THE CONSTRUCTION SHALL REVIEW, BE AWARE AND AT ALL TIMES COMPLY WITH THE SPECIFIC REQUIREMENTS FOR THIS DEVELOPMENT AS SET OUT IN THE DEVELOPMENT APPROVAL FOR THE PROJCT.
- 3. ENSURE ALL FILL IS PLACED IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS, GEOTECNICAL ENGINEER AND STRUCTURAL ENGINEER NOTES AND SPECIFICATION.
- 4. THE FILL IS TO BE COMPACTED IN ACCORDANCE WITH AS2870-2011 SECTION6.4.
- 5. CUT/FILL DEPTHS DENOTED ON THIS PLAN ARE APPROXIMATELY ONLY. IF DIFFER CONTACT THIS OFFICE FOR ARRANGEMENT.
- 6. LEVELS SHOWN ARE APPROXIMATE ONLY AND TO BE CONFIRMED ON SITE BY BUILDER/SURVEYOR.
- 7. THE SITE SHALL BE KEPT IN A TIDY CONDITION AT ALL TIMES. LITTER RUBBISH AND BUILDING RUBBLE SHALL BE PLACED IN CONTAINERS OR BINS AND REGULARLY REMOVED FROM SITE AS REQUIRED.
- 8. THE WORK SHALL BE CONSTRUCTED IN SUCH A MANNER THAT THERE IS MINIMUM DISTURBANCE TO EXISTING TREES AND VEGETATION.

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ROPES CROSSING, NSW 2760

APPROVED:

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NSW Aust CPEng No. 3895292
Signature: [Signature] Membership No. 3895292
Registered in the NER in the area of practice of Civil

National Engineering Register

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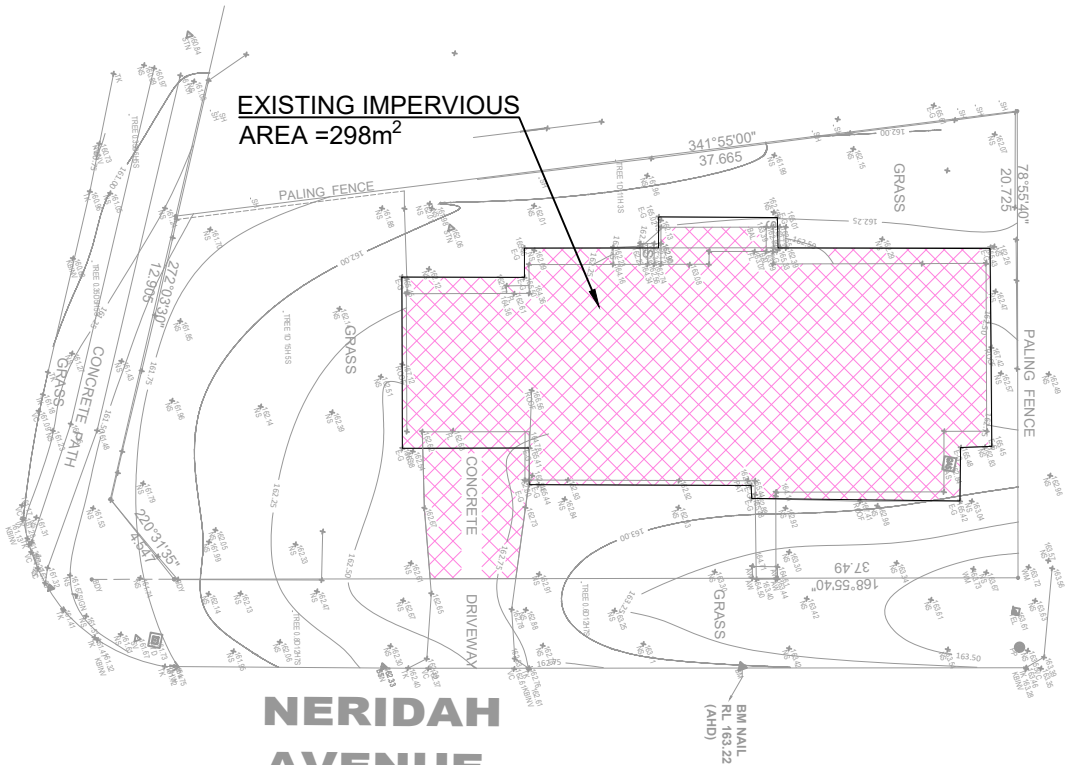
LOT 1 DP 237377
1 NERIDAH AVENUE, BELROSE NSW 2085

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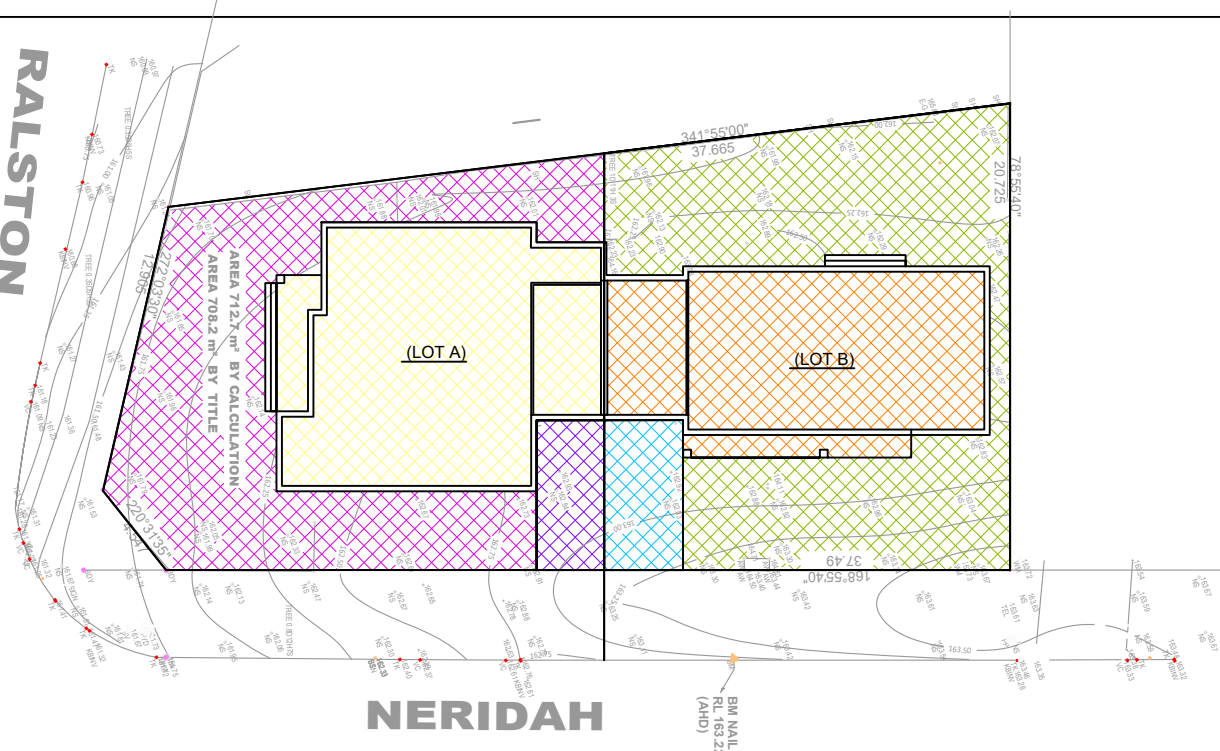
CUT AND FILL LAYOUT PLAN

RALSTON
AVENUE



NERIDAH
AVENUE
EXISTING IMPERVIOUS AREA PLAN

RALSTON
AVENUE



NERIDAH
AVENUE
PROPOSED IMPERVIOUS AREA PLAN

IMPERVIOUS AREA CALCULATION

Parameter	Value	Remarks
Existing Impervious Area	298 m ²	41.8 % of site area
Proposed Impervious Area	347 m ²	48.7 % of site area
Increase in Impervious Area	+49 m ²	Triggers OSD requirement under Region 2 policy

RWT & OSD PARTITION CALCULATION

Parameter	Symbol	Value
Total tank height	H	1860 mm
Freeboard (air gap)	F	150 mm
Usable water height (150 air gap)	H _u = H – F	1710 mm
Volume factor	k	2.924 L/mm
Tank capacity (nominal)	V	≈ 5000 L

Compartment	Volume (L)	Height (mm)	Check
BASIX reuse	1500	1500 ÷ 2.924 = 513 mm	✓
OSD detention	3500	3500 ÷ 2.924 = 1197 mm	✓
Total usable height	1500 + 3500 = 5000 L	513 + 1197 = 1710 mm	✓

DESIGN CALCULATIONS FOR OSD STORAGE

Parameter	Symbol	Value	Source / Notes
Site Area	A	712.7 m ² = 0.07127	Survey
Impervious Area	A _i	347 m ²	Proposed plan
Impervious Fraction	I = A _i / A	0.487	48.7 % coverage
Region 2 Factors (clause 9.3.2.6)		SSR _o = 200 m ³ / ha	Council Policy
Site Storage Requirement	SSR = 200 × I × A	6.9 m ³	Required OSD volume
Provided Storage	2XRWT = 3.5 m ³	7.0 m ³	Complies

CATCHMENT LEGEND (LOT A)

- ROOF AREA DRAINING TO OSD TANK AREA =163.3m²
- IMPERVIOUS BYPASS (DRIVEWAY)=20m²
- PERVIOUS BYPASS (LANDSCAPE) =175.8m²

CATCHMENT LEGEND (LOT B)

- ROOF AREA DRAINING TO OSD TANK AREA =141.4m²
- IMPERVIOUS BYPASS (DRIVEWAY) =23.5m²
- PERVIOUS BYPASS (LANDSCAPE) =188.1m²

Storm Event (AEP)	Predevelopment Flows l/s	Unit A OSD (L/s)	Unit B OSD (L/s)	Unit A Bypass (L/s)	Unit B Bypass (L/s)	Total Discharge (L/s)	Check
20 % AEP	14.5	2	2	4	4	12	✓
5 % AEP	22.8	3	3	7	7	20	✓
1 % AEP	27.7	3	3	9	9	24	✓

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MEASUR CPEng NER
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DRAWING No: SCE-25-282



SITE ADDRESS:

LOT 1 DP 237377
1 NERIDAH AVENUE, BELROSE NSW 2085

STATUS:

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SCALE:

N.T.S.

DRAWN:

M.S.

ENGINEER:

B.S.

DATE:

15.10.25

SHEET NO:

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REVISION:

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DRAWING TITLE:

IMPERVIOUS AREA PLAN

Appendix 16 – On-site Detention Checklist

This checklist is to be used to determine the on-site stormwater disposal requirement for developments and must be completed and included with the submission of any development application for these works. Please read this form carefully for its notes, guidelines, definition and relevant policies.

For assistance and support, please contact Council's Development Engineering and Certification team on 1300 434 434.

Part 1 Location of the Property 1 NERIDAH AVENUE, BELROSE NSW 2085			
House Humber		Legal Property Description	
Street		Lot 1	
Suburb		Section	
Postcode		DP 237377	

Part 2 Site Details			
Northern Beaches Stormwater Regions (refer to Map 2 of Northern Beaches Council's Water Management for Development policy)		Total Site Area	712m2
Pre-Development Impervious Area	298m2	Post-Development Impervious Area	347m2
Is the site of the development located within an established Flood Prone Land as referred to Council's Local Environmental Plans?			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If yes, On-site stormwater Detention system (OSD) is not required and please proceed to part 5 of this checklist. If no, please proceed to part 3 of this checklist.			

Part 3: Northern Beaches Stormwater Regions (refer to Map 2 of Northern Beaches Council's Water Management for Development policy)
If the site of the development located within Region 1, please proceed to the part 4.1 of this checklist
If the site of the development located within Region 2, please proceed to the part 4.2 of this checklist
If the site of the development located within Region 3, please proceed to the part 4.3 of this checklist
If the site of the development located within Region 4, please refer to Council's Warriewood Valley Water Management Specification.

Part 4 Determination of OSD Requirements**Part 4.1 Northern Beaches Stormwater Region 1**

Is the additional impervious area of the development more than 50 m² on a cumulative basis since February 1996? Yes ☐ No ☐

If yes, OSD is required and please refer to section 9.3.1 of Council's Water Management for Development Policy.
If no, OSD is not required and please proceed to the part 5 of this checklist

Part 4.2 Northern Beaches Stormwater Region 2**Part 4.2.1 Description of Work**

Residential flat building, commercial, industrial, multiple occupancy development and subdivisions resulting in the creation of three lots or more, will require OSD in all case. Please provide a design in accordance with the section 9.3.2 of Council's Water Management for Development Policy.
Any single residential building development, please proceed to part 4.2.2 of this checklist.

Part 4.2.2 Exemption

Is the site area less than 450m²? Yes ☐ No ☒

Does the site of the development drain directly to the ocean without the need to pass through a drainage control structure such as pipe, bridge, culvert, kerb and gutter or natural drainage system? Yes ☐ No ☒

Is it an alternation and addition development to the existing dwellings? Yes ☐ No ☒

If yes to any of the above questions, OSD is not required.
If no to all the above questions, proceed to part 4.2.3

Part 4.2.3 Determination of OSD Requirements

Calculation	a) Site area m² x 0.40 (40%) =284.8m2..... m² b) Post- development impervious area = ..347m2..... m²
OSD will not be required when (a) is greater than (b) Is OSD required for this development (tick one only) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
If yes, provide a design in accordance with the section 9.3.2 of Council's Water Management for Development Policy. If no, OSD is not required and please proceed to part 5 of this checklist.	

Part 4.3 Northern Beaches Stormwater Region 3**Part 4.3.1 Stormwater Zone**

In the region, the method of stormwater control to be applied shall depend on the location of the site. Please refer to Map 3 of Northern Beaches Council's Water Management for Development policy.

If the site of the development located within stormwater zone 1, please proceed to the part 4.3.2 of this checklist

If the site of the development located within stormwater zone 2, please provide a design in accordance with the section 9.3.3.3 of Council's Water Management for Development Policy.

If the site of the development located within stormwater zone 3, please provide a design in accordance with the section 9.3.3.4 of Council's Water Management for Development Policy.

If the site of the development located within stormwater zone 4, please provide a design in accordance with the section 9.3.3.5 of Council's Water Management for Development Policy.

Part 4.3.2 Determination of OSD requirements in Stormwater Zone 1**Part 4.3.2.1 For A New Building**

1) Exemption a) Is the site area less than 400? Yes ☐ No ☐
b) Is the post-development impervious area less than 190 m²? Yes ☐ No ☐
If yes to both questions, OSD is not required.
If no to any of the above questions, please proceed to calculation

2) Calculation a) Site area _____m² x 0.35 = _____m² + 50 = _____m²
b) Post- development impervious area _____m²
OSD will not be required when (b) is less than 250 m² and (a) is greater than (b)
Is OSD required for this development? Yes ☐ No ☒
If yes, provide a design in accordance with the section 9.3.3.2 of Council's Water Management for Development Policy.
If no, OSD is not required and please proceed to part 5.

Part 4.3.2.2 For Alterations and Additions

If the current impervious area of the site is more than 60% of the site area, OSD will be required. Alternatively please proceed to the next calculation section.

1) Calculation Is the post development impervious area increased by less than 50 m²? Yes ☐ No ☐
Is the post development impervious area less than 60% of the site area? Yes ☐ No ☐
If yes to both questions, OSD is not required.
If no to any of the above questions, provide a design in accordance with section 9.3.3.2 of Council's Water Management for Development Policy

Part 5 Disposal of Stormwater

Does the site fall naturally towards the street? Yes ☒ No ☐

If yes, provide a design in accordance with section 5.1 of Council's Water Management for Development Policy.
If no, provide a design in accordance with section 5.5 of Council's Water Management for Development Policy.

Definitions

Designed to help you fill out this application	Site area: This refers to the area of the land bounded by its existing or proposed boundaries. Impervious area: This refers to driveways, parking spaces, pathways, paved areas, hardstand areas, roofed areas, garages and outbuildings. Pre Development impervious area: This refers all impervious areas of the site before the development. Post Development impervious areas: This refers all the impervious areas within the site after the development is completed.
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