

24-26 RUSSELL AVENUE , LINDFIELD

STORMWATER DRAINAGE PLANS

GENERAL

G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE PROPRIETOR FOR DECISION BEFORE PROCEEDING WITH THE WORK.

G2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THESE DRAWINGS.

G3 SETTING OUT DIMENSIONS SHOWN ON THE
DRAWINGS SHALL BE VERIFIED BY THE BUILDER.

G4 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SAA CODES AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY.

G5 ROOFING SHOULD BE GUTTERLESS OR HAVE LEAFLESS GUTTERING AND VALLEYS ARE TO BE SCREENED WITH NON CORROSIVE MESH TO PREVENT THE BUILD UP OF FLAMMABLE MATERIAL. ANY MATERIALS USED SHALL HAVE A FLAMMABILITY INDEX OF NO LESS THAN 5.

G6 HOUSEHOLD WATER SUPPLY PRESSURE PUMP
LINKED TO RETENTION TANK.

G7 A TESTABLE BACK FLOW PREVENTION DEVICE IS TO BE INSTALLED AT METER.

G8 ALL WORK TO BE IN ACCORDANCE WITH THE LOCAL GOVERNMENT ACT, COUNCIL'S STANDARD SPECIFICATION & CODES & TO THE SATISFACTION OF COUNCIL'S SUPERVISING OFFICER.

G9 INSTALL TEMPORARY SEDIMENT BARRIERS AROUND ALL INLET PITS TO PROTECT UNTIL SURROUNDING AREAS ARE PAVED.

G10 CONTRACTOR IS TO VERIFY THE LOCATION & LEVEL
OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT

OF EXCAVATION FOR DRAINAGE. G11 CONTRACTORS
AND MANAGERS ARE TO BE FAMILIAR WITH COUNCILS
SOIL & WATER MANAGEMENT GUIDELINES.

G12 REFER TO SURVEY DRAWING FOR
EXISTING DEVELOPMENT AND SITE LEVEL

G13 PROVIDE ALL SURFACE DRAINAGE WITHIN
LANDSCAPED AREAS TO SUIT THE LANDSCAPE LAYOUT TO

ARCHITECTS & LANDSCAPE ARCHITECTS REQUIREMENTS
G14 PROVIDE CLEANOUT POINTS TO ALL CHANGES IN
DIRECTION OF DRAINAGE LINES

G15 BUILDER TO ENSURE ALL PIPES ARE FLUSHED CLEAN PRIOR TO HANDOVER.

G16 BUILDER TO ENSURE ALL AREAS REQUIRING STORMWATER HAVE OVERFLOWS, WHETHER SHOWN ON THE DRAWINGS OR NOT.

G17 BUILDER TO PROVIDE ALL DRAINAGE REQUIREMENTS
TO COMPLY WITH A.S.3500

G18 ALL EXCAVATIONS SHALL BE UNDERTAKEN UNDER SUPERVISION OF STRUCTURAL ENGINEER AND ANY EXCESSIVE MOVEMENT OF THE EMBANKMENTS AND EXCAVATION SHALL BE REPORTED IMMEDIATELY TO THE STRUCTURAL ENGINEER AND ADVICE SHALL BE SOUGHT.

DRAINAGE NOTES

D1 ALL LEVELS ARE BASED ON SURVEY INFORMATION
SUPPLIED. STORMWATER DRAWING TO BE READ IN
CONJUNCTION WITH THE SURVEY, STRUCTURAL, AND
ARCHITECTURAL DRAWINGS.

D2 ALL FINISHED PAVEMENT LEVELS SHALL BE AS PER DRAWING.

D3 EXISTING STORMWATER PIPE LOCATIONS AND INVERT LEVELS TO BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

D4 ALL GUTTERS TO BE 125W x 75D RECTANGULAR
GUTTERS U.N.O, COLORBOND QUAD OR EQUAL, REFER TO
ARCHITECTURAL SPECIFICATIONS

D5 PIPES SHALL BE LAID ON A 75mm SAND BED AND TRENCHES TO BE BACKFILLED WITH SAND TO THE TOP OF TRENCH. PARTICULAR CARE SHALL BE TAKEN TO ENSURE THAT THE PIPE IS FULLY AND EVENLY SUPPORTED. RAM AND PACK SAND FILLING AROUND AND UNDER BACK OF PIPES WITH NARROW EDGED RAMMERS OR OTHER SUITABLE TAMPING EQUIPMENT.

D6 WHERE PIPE LINES ENTER PITS, PROVIDE 2MM LENGTH OF STOCKING WRAPPED Ø150 uPVC COIL DRAIN PIPE TO EACH SIDE OF PIT.

D7 ALL SUBSOIL DRAINAGE/STORMWATER LINES SHALL BE Ø100uPVC WITH APPROVED FILTER WRAP LAID IN 300mm WIDE GRANULAR FILTER UNO. PROVIDE CLEANING EYES AT 30m INTERVALS. LAY SUBSOIL LINES TO MATCH FALLS OF LAND.

D8 ALL GRADES SHOWN ARE ABOVE MINIMUM

D9 THE POSITIONS AND LEVELS OF ALL UNDERGROUND SERVICES SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

D10 ALL GRATED SURFACE INLET PITS WITHIN
TRAFFICABLE AREAS TO BE HEAVY DUTY.

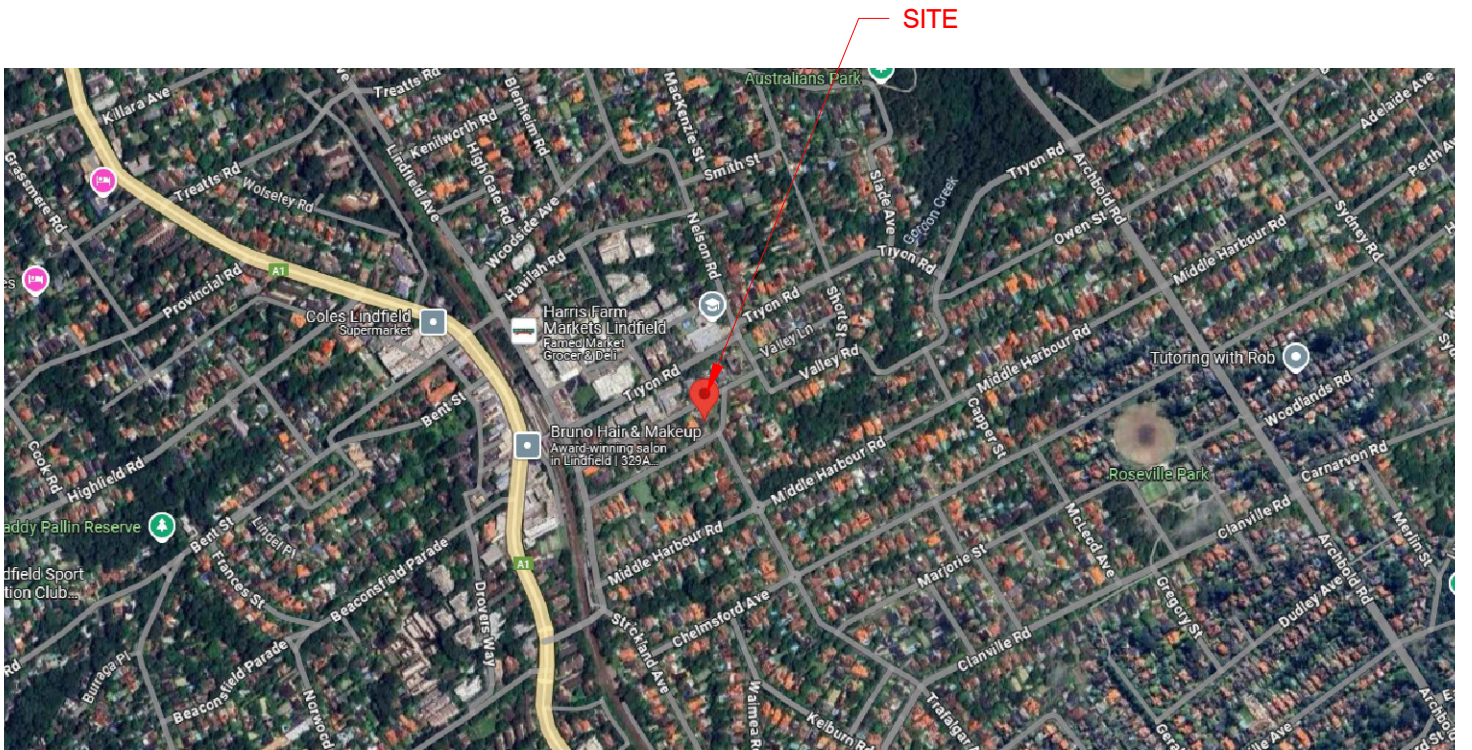
D11 ALL SUBSOILD DRAINAGE/STORMWATER LINES TO BE SET TO 1 IN 100 FALL.

D12 ALL GRATED DRAINS SET TO 1 IN 100 FALL

D13 ALL SEWER PIPES SHALL BE Ø150 uPVC SET TO 1 IN 80 FALL.

D14 ALL DOWNPIPES SHALL BE 100Ø OR EQUIVALENT
RECTANGULAR SECTION. U.N.O.

LOCALITY PLAN



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22.04.2025	1	HN	FOR DA SUBMISSION	HN
Date	No.	By	Amendments	Chckd

Address: 24-26 RUSSELL AVENUE , LINDFIELD, NSW 2070		Project: STORMWATER DRAINAGE PLANS						
PBD Architects www.pbdarchitects.com.au info@pbdarchitects.com.au 52 Albion Street Surry Hills NSW 2010 Australia	Client: Bobby Chegini CE 7Hills Investment Pty Ltd	 By: URBANSPEC ENGINEERING PTY LTD ABN 96 628 940 983 M: 0411 352 614 Email: hassan@urbanspec.com.au www.urbanspec.com.au	Drawing Title: NOTES AND SPECS		FOR DA SUBMISSION ----	Issue 1		
			Designed: HN	Checked: HN	SCALE:	PAPER:	PROJECT No. 122357	
			Drawn: LR	Approved: HN	1:50	A3	Drawing No. C-001	Sheet No. 1 OF 9

GENERAL NOTES:

1. ALL HYDRAULIC WORKS TO BE IN ACCORDANCE WITH COUNCIL'S STANDARD SPECIFICATIONS AND TO THE SUPERVISING ENGINEER'S SATISFACTION.
2. CONTOUR PLAN SUPPLIED BY OTHERS
3. THESE PLANS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL PLANS.
4. THE PLUMBER/ DRAINER SHALL INSPECT THE SITE AND CONFIRM THE EXISTING SITE STRUCTURES, SERVICES AND CONDITIONS PRIOR TO PROCEEDING. IF ANY DISCREPANCIES FOUND, CONTACT THE ENGINEER FOR DISCUSSION.
5. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS, BUILDING CODE OF AUSTRALIA AND LOCAL GOVERNMENT'S REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE PLUMBER/ DRAINER TO OBTAIN ANY APPROVALS/ PERMITS/ LICENSES ISSUED BY THE AUTHORITIES PRIOR TO PROCEEDING WITH STORMWATER WORKS.
6. UNLESS NOTED AS OTHERWISE, ALL DOWNPIPES TO BE Ø100 ROUND (OR 100X75 RECTANGULAR) AND FULLY SEALED; ALL STORMWATER PIPES TO BE Ø100 SEWER GRADE AND LAID AT 1% MIN. FALL. ALL MATERIALS USED IN THE WORK SHALL BE NEW AND CONFORM WITH RELEVANT AUSTRALIAN STANDARDS AND BEAR THE REQUIRED STANDARDS MARK.
7. LOCATION OF STORMWATER SYSTEMS, INCLUDING DOWNPIPES, PIPES, PITS AND RAINWATER TANK ARE INDICATIVE ONLY. EXACT LOCATION SHALL BE DETERMINED ON SITE TO SUIT SITE CONDITIONS.
8. SUB-SOIL DRAINS FOR RETAINING WALL SHALL BE INSTALLED BY THE BUILDER AND CONNECTED TO STORMWATER LINES. ALL AGG. LINES SHALL BE 100MM DIA., UNLESS NOTED OTHERWISE.
9. NATURAL GROUND LEVELS ALONG ALL BOUNDARIES MUST BE MAINTAINED UNALTERED. ALL RETAINING WALLS TO BE SETBACK FROM BOUNDARIES TO AVOID CONCENTRATION OF STORMWATER FLOWS.
10. LEVELS ARE APPROXIMATE ONLY. THE PLUMBER/ DRAINER SHALL CONFIRM THE LEVELS PRIOR TO PROCEEDING. IF ANY DISCREPANCIES FOUND, CONTACT THE ENGINEER FOR DISCUSSION.
11. INSPECTION AND CERTIFICATION, IF REQUIRED, SHALL BE DONE PRIOR TO BACKFILLING. ALLOW 24 HOUR NOTICE FOR THE ENGINEER TO CARRY OUT INSPECTION.
12. ANY DAMAGE TO SERVICES DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT THE PLUMBER/ DRAINER'S OWN EXPENSE
13. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
14. SYDNEY WATER TO BE ADVISED & CONSULTED WITH ANY CONSTRUCTION OVER/NEAR SEWER MAIN LINES FOR APPROPRIATE DESIGN REQUIREMENTS.
15. ENSURE NO DAMAGE OCCURS TO EXISTING TREE ROOTS WHILE CONSTRUCTING THE STORMWATER SYSTEM.
16. ENSURE NO WATER PONDAGE OCCURS AROUND DWELLING -SLOPE FINISHED GROUND LEVEL TOWARDS YARD SUMPS OR PITS (AS SHOWN).
17. THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENTATION CONTROL MEASURES AS NECESSARY AND TO THE SATISFACTION OF COUNCIL PRIOR TO COMMENCEMENT OF CONSTRUCTION AND DURING CONSTRUCTION.
18. FINAL DRAINAGE LINE OUTLET LEVEL & DATUM TO BE EXPOSED & CONFIRMED BY BUILDER PRIOR TO COMMENCEMENT OF WORKS.
19. ALL GRATES AND LIDS TO BE HINGED TYPE AND FITTED WITH CHILDPROOF LOCKS LIDS WITHIN TRAFFICABLE AREAS TO BE ALSO BIKE SAFE, HEAVY DUTY.

WARNING:

- UNDERGROUND SERVICES HAVE NOT BEEN PLOTTED.
- EXTREME CAUTION SHOULD BE TAKEN BY PERSONS EXCAVATING.
- NO SERVICES CROSSING THE PROPOSED DRAINAGE LINE.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT SERVICES.

TREE CARE

1. EXCAVATION WITHIN THE DRIP LINE OF EXISTING TREES IS TO BE COMMENCED ONLY AFTER INVESTIGATION CONFIRMING LOCATION OF MAJOR TREE ROOTS.
2. IF MAJOR ROOTS REQUIRE REMOVAL, WORK CAN ONLY COMMENCE UPON ACCEPTABILITY OF AN APPROVED ARBORIST.
3. IF ARBORIST DETERMINES THAT REMOVAL OF THE TREE ROOTS WILL AFFECT THE LONG TERM HEALTH OF THE TREE, CONTACT THE SUPERINTENDENT FOR FURTHER ADVICE.
4. ROOTS REQUIRING REMOVAL TO BE CLEAN CUT, USING A CHAINSAW, AND TREATED AS SOON AS POSSIBLE AS DIRECTED BY THE ARBORIST.
5. PROTECT TREES TO BE RETAINED FROM DAMAGE BY GROUND WORKS AND CONSTRUCTION OPERATIONS WITH FENCING AND/OR ARMOUR TO THE SATISFACTION OF THE SUPERINTENDENT.
6. TEMPORARY PROTECTIVE FENCING TO CONSIST OF PLASTIC MESH PARAWEBBING, SUPPORTED ON STAR PICKETS AT MINIMUM 4m SPACING. ENSURE STAR PICKETS DO NOT ENCOUNTER AND DAMAGE TREE ROOTS.
7. FILL LEVELS ARE NOT TO EXCEED 100mm WITHIN THE DRIP LINE OF TREES. BACKFILL EXCAVATIONS AROUND TREES WITH A MIXTURE OF THREE PARTS TOPSOIL AND ONE PART OF WELL ROTTED COMPOST WITH A NEUTRAL PH VALUE. IMMEDIATELY AFTER BACKFILLING, THOROUGHLY WATER THE ROOT ZONE SURROUNDING THE TREE.

PVC ABOVE GROUND INSTALLATION

THESE PLAN AND NOTES TO BE READ IN CONJUNCTION WITH AS/NZS 2032 AND AS/NZS 3500 AND MANUFACTURES SPECIFICATIONS.

GENERAL CONSIDERATIONS

1. IN ABOVE GROUND INSTALLATIONS, PIPES SHOULD BE LAID ON BROAD, SMOOTH BEARING SURFACES WHEREVER POSSIBLE TO MINIMISE STRESS CONCENTRATION AND TO PREVENT PHYSICAL DAMAGE.
2. PVC PIPE SHOULD NOT BE LAID ON STEAM LINES OR IN PROXIMITY TO OTHER HIGH TEMPERATURE SURFACES.
3. THE PIPE MUST BE ADEQUATELY SUPPORTED IN ORDER TO PREVENT SAGGING AND EXCESSIVE DISTORTION. CLAMP, SADDLE, ANGLE, SPRING OR OTHER STANDARD TYPES OF SUPPORTS AND HANGERS MAY BE USED WHERE NECESSARY. PIPE HANGERS SHOULD NOT BE OVER-TIGHTENED. METAL SURFACES SHOULD BE INSULATED FROM THE PIPE BY PLASTIC COATING, WRAPPING OR OTHER MEANS.

BRACKETS AND CLIPS

FOR EITHER FREE OR FIXED PIPELINE SUPPORTS USING BRACKETS OR CLIPS, THE BEARING SURFACE SHOULD PROVIDE CONTINUOUS SUPPORT FOR AT LEAST 120° OF THE CIRCUMFERENCE.

STRAPS

METAL STRAPS USED AS SUPPORTS SHOULD BE AT LEAST 25 mm WIDE, EITHER PLASTIC-COATED OR WRAPPED IN A PROTECTIVE MATERIAL SUCH AS NYLON OR PE SHEET. IF A STRAP IS FASTENED AROUND A PIPE, IT SHOULD NOT DISTORT THE PIPE IN ANY WAY.

FREE SUPPORTS

A FREE SUPPORT ALLOWS THE PIPE TO MOVE WITHOUT RESTRAINT ALONG ITS AXIS WHILE STILL BEING SUPPORTED. TO PREVENT THE SUPPORT FROM SCUFFING OR DAMAGING THE PIPE AS IT EXPANDS AND CONTRACTS, A 6 mm THICK LAYER OF FELT OR LAGGING MATERIAL IS WRAPPED AROUND THE SUPPORT. ALTERNATIVELY, A SWINGING TYPE OF SUPPORT CAN BE USED AND THE SUPPORT STRAP, PROTECTED WITH FELT OR LAGGING, MUST BE SECURELY FIXED TO THE PIPE.

FIXED SUPPORTS

A FIXED SUPPORT RIGIDLY CONNECTS THE PIPELINE TO A STRUCTURE TOTALLY RESTRICTING MOVEMENT IN AT LEAST TWO PLANES OF DIRECTION. SUCH A SUPPORT CAN BE USED TO ABSORB MOMENTS AND THRUSTS.

PLACEMENT OF SUPPORTS

CAREFUL CONSIDERATION SHOULD BE GIVEN TO THE LAYOUT OF PIPING AND ITS SUPPORT SYSTEM. THE EFFECTS OF THERMAL EXPANSION AND CONTRACTION HAVE TO BE TAKEN INTO ACCOUNT. IN PARTICULAR, THE LAYOUT SHOULD ENSURE THAT THERMAL AND OTHER MOVEMENTS DO NOT INDUCE SIGNIFICANT BENDING MOMENTS AT RIGID CONNECTIONS TO FIXED EQUIPMENT OR AT BENDS OR TEES.

STEEP SITES' CONSIDERATIONS

PIPE SUPPORTS

WHERE THE SLOPE OF THE SITE IS MORE THAN 20%, ANCHOR BLOCKS SHALL BE PROVIDED AS PER AS3500.3 AT:

- BEND AND JUNCTIONS AT THE TOP AND BOTTOM OF THE INCLINED SITE
- STORMWATER drain
- AT INTERVALS NOT EXCEEDING 3m

THE ANCHOR BLOCKS SHALL BE REINFORCED CONCRETE AND BE CONSTRUCTED AS PER AS3500.

SETTING OF PIPES IN CONCRETE

- WHEN PVC PIPES ARE ENCASED IN CONCRETE, CERTAIN PRECAUTIONS SHOULD BE TAKEN:
- WHERE DAMAGE TO THE PIPES COULD OCCUR AS A RESULT OF MOVEMENT RELATIVE TO THE SURROUNDS, PIPES SHOULD BE FULLY WRAPPED WITH A COMPRESSIBLE MATERIAL, SUCH AS FELT, WITH A MINIMUM THICKNESS OF 5% OF THE PIPE DIAMETER, I.E. 5 mm FOR A 100 mm DIAMETER PIPE.
- ALTERNATIVELY, FLEXIBLE (RUBBER RING) JOINTS SHOULD BE PROVIDED AT ENTRY TO AND EXIT FROM THE CONCRETE. THIS PROCEDURE ALSO ALLOWS FOR POSSIBLE DIFFERENTIAL MOVEMENT BETWEEN THE PIPELINE AND CONCRETE STRUCTURE.
- EXPANSION JOINTS COINCIDING WITH CONCRETE EXPANSION JOINTS SHOULD BE PROVIDED TO ACCOMMODATE MOVEMENT DUE TO THERMAL EXPANSION OR CONTRACTION IN THE CONCRETE.

SUPPORT SPACING (NON-PRESSURE PIPES)

THE TABLE BELOW, FROM AS/NZS 2032, SHOWS THE SUPPORT SPACING IN METRES FOR PVC NON-PRESSURE PIPE. THESE SPACING MAY NEED TO BE REDUCED FOR PIPES EXPOSED TO DIRECT SUNLIGHT OR WHERE INCREASED PIPE MATERIAL TEMPERATURE MAY OCCUR. FOR MORE INFORMATION, SEE AS/NZS 2032.

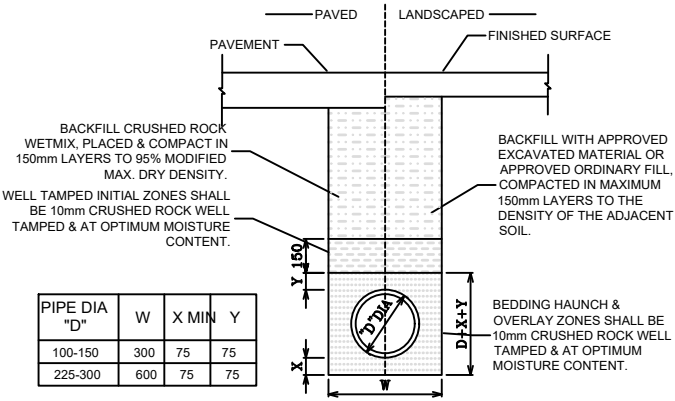
PIPE SIZE	MAXIMUM SUPPORT SPACING	
	HORIZONTAL (M)	VERTICAL (M)
100 - 150	1.2	2.5
>150	1.5	3.0

VERTICAL INSTALLATION

- GENERALLY, VERTICAL RUNS ARE SUPPORTED BY SPRING HANGERS AND GUIDED WITH RINGS OR LONG U-BOLTS WHICH RESTRICT MOVEMENT OF THE RISE TO ONE PLANE. IT IS SOMETIMES HELPFUL TO SUPPORT A LONG RISER WITH A SADDLE AT THE BOTTOM.
- WHERE A PVC PIPELINE IS TO PASS THROUGH OR IS TO BE BUILT INTO A FLOOR OR WALL OF A BUILDING, ALLOWANCE SHOULD BE MADE FOR IT TO MOVE WITHOUT SHEARING AGAINST ANY HARD SURFACES OR WITHOUT CAUSING DAMAGE TO THE PIPE OR FITTINGS.
- AN ANNULAR SPACE OF NOT LESS THAN 6mm SHOULD BE LEFT AROUND THE PIPE OR FITTING. THIS CLEARANCE SHOULD BE MAINTAINED AND SEALED WITH A FLEXIBLE SEALANT SUCH AS LOOSELY PACKED FELT, A RUBBER CONVOLUTE SLEEVE OR OTHER SUITABLE FLEXIBLE SEALING MATERIAL.

PROTECTION FROM SOLAR DEGRADATION

ALTHOUGH PVC PIPE CAN BE INSTALLED IN DIRECT SUNLIGHT, IT WILL BE AFFECTED BY ULTRA-VIOLET LIGHT WHICH TENDS TO DISCOLOUR THE PIPE AND CAN CAUSE A LOSS OF IMPACT STRENGTH. NO OTHER PROPERTIES ARE IMPAIRED. IF THE PIPE IS TO BE INSTALLED IN CONTINUOUS DIRECT SUNLIGHT, IT IS ADVISABLE TO PAINT THE EXTERIOR WITH A WHITE OR LIGHT-COLOURED WATER-BASED PAINT.



UPVC PIPE TRENCH BACKFILL TYP. DETAILS

SCALE 1:20

MINIMUM PIPE COVER (FROM FINISHED SURFACE TO TOP OF PIPE)		
LOCATION	MINIMUM COVER (mm)	
	CAST/DUCTILE IRON GAL STEEL	OTHER AUTHORISED PRODUCTS (-)
1. NOT SUBJECT TO VEHICULAR LOADING: A. WITHOUT PAVEMENT: i. FOR SINGLE DWELLING ii. OTHER THAN SINGLE DWELLING B. WITH PAVEMENT OF BRICK/UNREINFORCED CONCRETE	0 0 0(-)	100 300 50(-)
2. SUBJECT TO VEHICULAR LOADING: A. OTHER THAN ROAD: i. WITHOUT PAVEMENT ii. WITH PAVEMENT OF: - REINFORCED CONC. FOR HEAVY VEHICLE - BRICK/UNREINF. CONC. LIGHT VEHICLE B. ROAD i. SEALED ii. UNSEALED	300 0(-)# 0(-)# 300 300	450 100(-)# 75(-)# 500(#) 500(#)
3. SUBJECT TO CONSTRUCTION VEHICLE OR IN ENBANKMENT CONDITION	300	500(#)

(-) INCLUDES OVERLAY ABOVE THE TOP OF THE PIPE OF NOT LESS THAN 50mm THICK
(-) BELOW THE UNDERSIDE OF THE PAVEMENT
(#) SUBJECT TO COMPLIANCE WITH AS1762, AS2033, AS/NZS2566.1, AS3725 OR AS4060

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Address: 24-26 RUSSELL AVENUE , LINDFIELD, NSW 2070		Project: STORMWATER DRAINAGE PLANS				
PBD Architects www.pbdarchitects.com.au info@pbdarchitects.com.au 52 Albion Street Surry Hills NSW 2010 Australia	Client: Bobby Chegini CE 7Hills Investment Pty Ltd	 By: URBANSPEC ENGINEERING PTY LTD ABN 96 628 940 983 M: 0411 352 614 Email: hassan@urbanspec.com.au www.urbanspec.com.au	Drawing Title: SPEC SHEET 2		FOR DA SUBMISSION ----	Issue 1
					PROJECT No. 122357	
			Designed: HN Checked: HN SCALE: PAPER:			
			Drawn: LR Approved: HN 1:50 A3		Drawing No. C-002	



SITE ANALYSIS:
SITE:2104 m²
TOTAL ROOF AREA GRAVITY TO THE OSD: 1338m²
DRIVEWAY DRAINING TO PUMPOUT & ULTIMATELY OSD: 150m²
TOTAL AREA BYPASSING THE OSD : 766 m²
EXTERNAL LANDSCAPING AREA: 868m²
IMPERVIOUS AREAS BYPASSING THE OSD: 0



SITE DRAINAGE CATCHMENT PLAN

PLOTTED BY : HN DATED 22.04.2025 , URBANSPEC ENGINEERING PTY LTD

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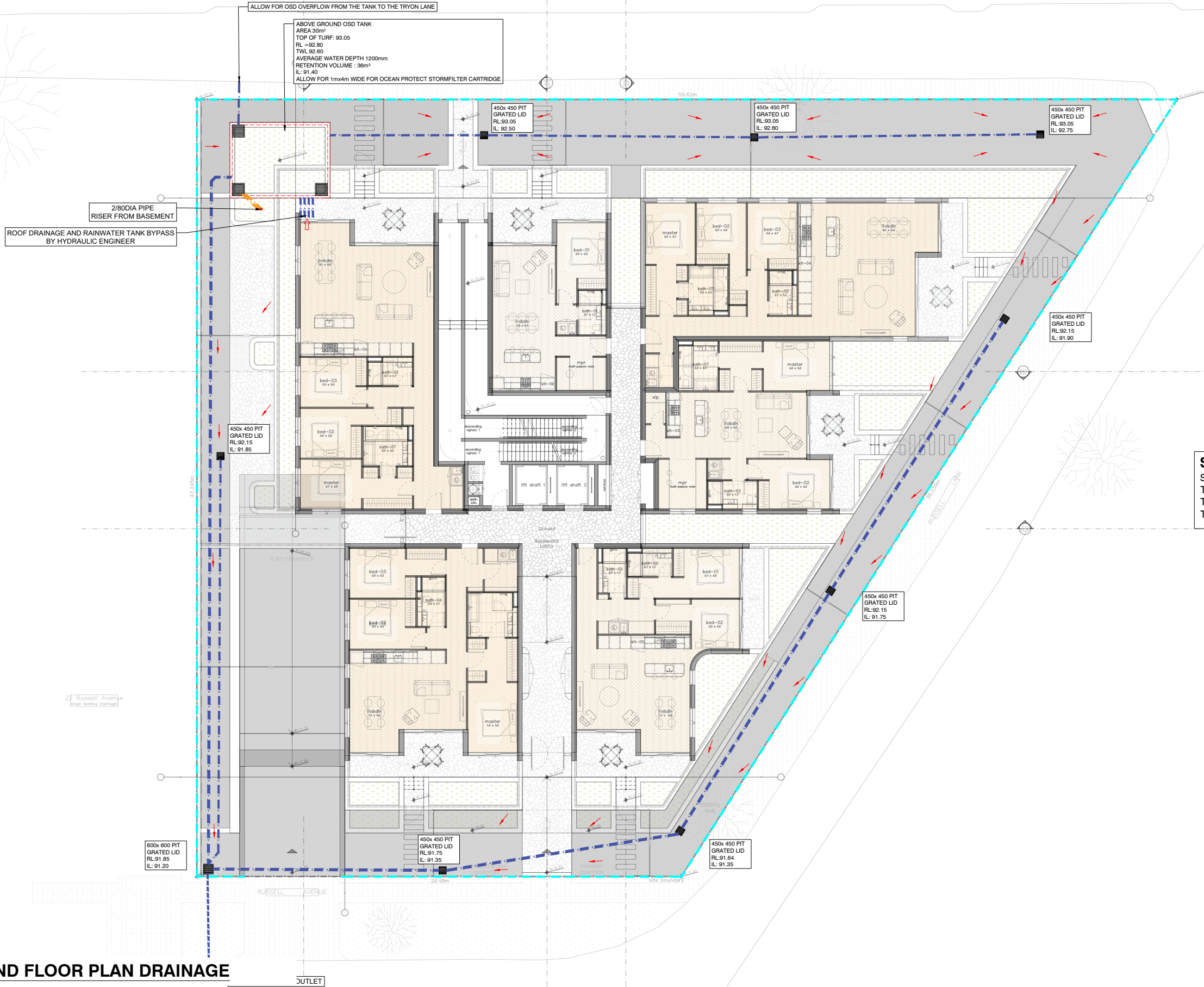
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PBD Architects www.pbdarchitects.com.au info@pbdarchitects.com.au 52 Albion Street Surry Hills NSW 2010 Australia		Client: Bobby Chegini CE 7Hills Investment Pty Ltd		Drawing Title: DRAINAGE CATCHMENT PLAN	
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				PROJECT No. 122357	
 By: URBANSPEC ENGINEERING PTY LTD ABN 96 628 940 983 M: 0411 352 614 Email: hassan@urbanspec.com.au www.urbanspec.com.au				Designed: HN	Checked: HN
				Drawn: LR	Approved: HN
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PLOTTED BY : HN DATED 22.04.2025 _ URBANSPEC ENGINEERING PTY LTD

GROUND FLOOR PLAN DRAINAGE

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SITE ANALYSIS:

SITE:2104 m²
 TOTAL ROOF AREA GRAVITY TO THE OSD BASIN: 2000m²
 TOTAL IMPERVIOUS AREA: 1450 m²
 TOTAL PERVIOUS AREA 654 m²

STORMWATER NOTES

- 1- ALL PIPES CONNECTING DOWN PIPES TO THE RAINWATER TANK MUST BE 150 DIAMETER, INCLUDING THE SURCHARGE FROM RAINWATER TANK TO THE OSD TANK. ALL OTHER PIPES SHALL BE 100mm DIA UPVC UNLESS NOTED.
- 2- ALL DOWN PIPES SIZE AN SLOPES MUST BE IN ACCORDANCE WITH THE PLANS
- 3-ALL PITS ARE 450 x 450 GRATED PITS UNLESS NOTED ON THE PLANS.
- 4- ROOF GUTTER DESIGN IS NOT INCLUDED IN THESE PLANS. REFER HYDRAULIC DRAWINGS FOR ROOF GUTTER DETAILS.

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Project:
 STORMWATER DRAINAGE PLANS

Drawing Title:
 GROUND FLOOR PLAN DRAINAGE

Designed: HN Checked: HN SCALE: 1:50 PAPER: A3
 Drawn: LR Approved: HN

FOR DA SUBMISSION

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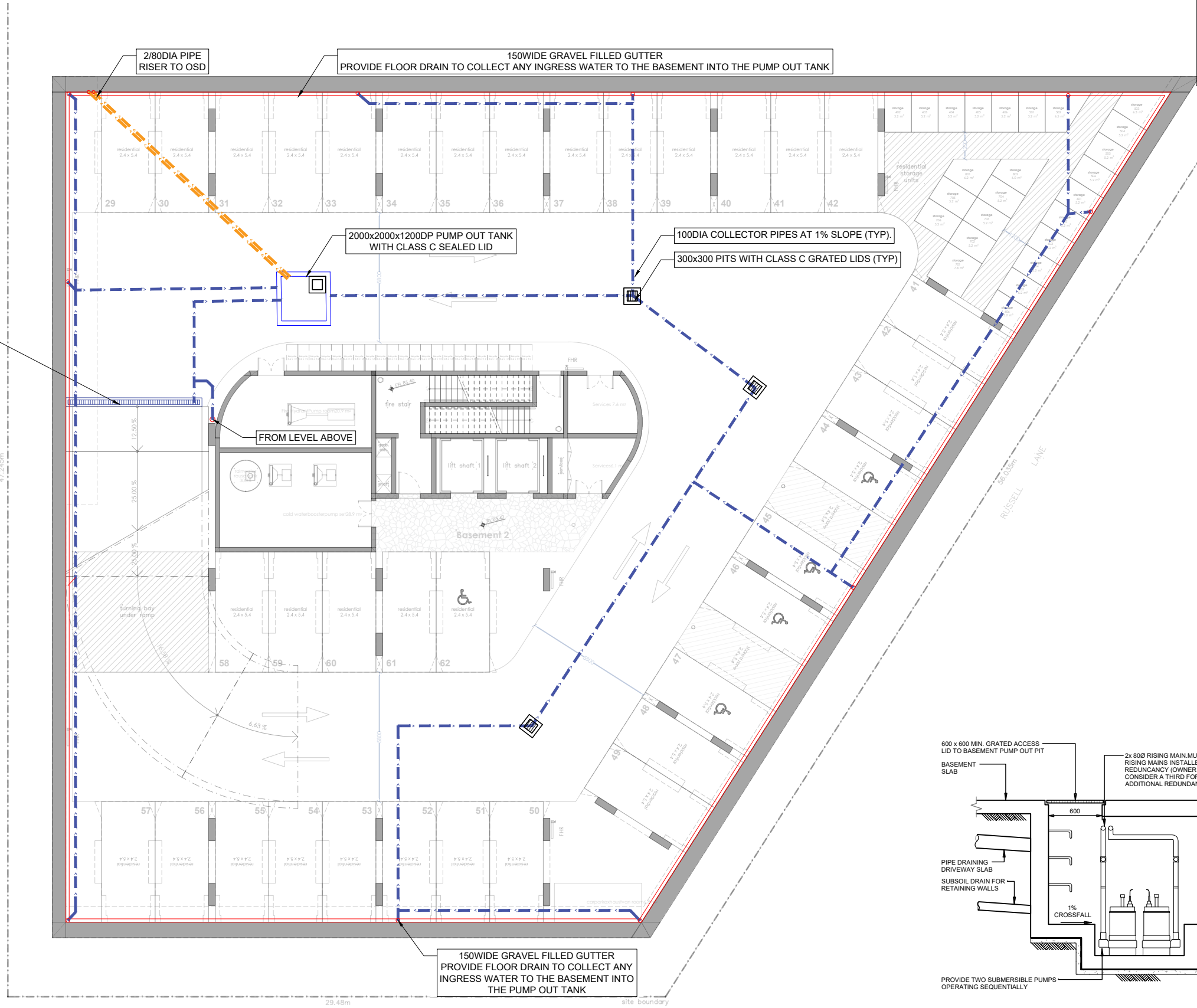
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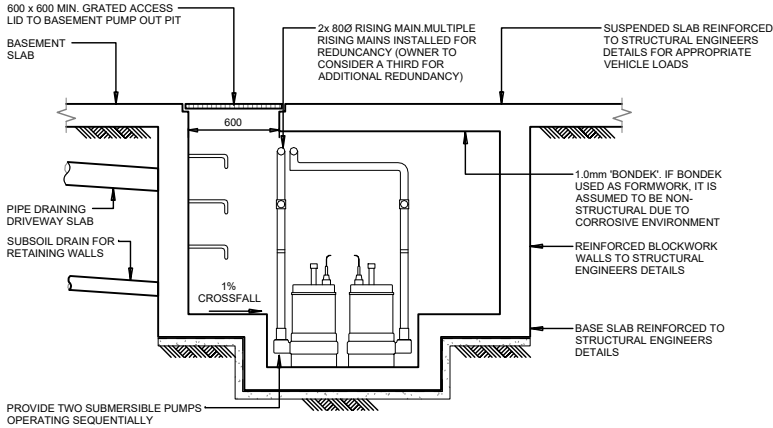
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200 WIDE GRATED DRAIN
CLASS 'C'
CAST INTO SUSPENDED SLAB



- STORMWATER NOTES**
- 1- ALL PIPES SHALL BE UPVC
 - 2- ALL DOWN PIPES SIZE AND SLOPES MUST BE IN ACCORDANCE WITH THE PLANS
 - 3- ALL PITS ARE 450 x 450 GRATED PITS UNLESS NOTED ON THE PLANS.
 - 4- ROOF GUTTER DESIGN IS NOT INCLUDED IN THESE PLANS. REFER HYDRAULIC DRAWINGS FOR ROOF GUTTER DETAILS.
- ALL DOWNPIPES SHALL BE MINIMUM 100x100 OR EQUIVALENT



BASEMENT 2 PLAN

PUMP OUT TANK

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200 WIDE GRATED DRAIN
CLASS 'C'
CAST INTO SUSPENDED SLAB

2/80DIA PIPE
RISER FROM B2 TO OSD

OSD TANK AND STORMFILTER OSD

DOWN PIPE TO LEVEL BELOW

STORMWATER NOTES
1- ALL PIPES SHALL BE UPVC
2- ALL DOWN PIPES SIZE AND SLOPES MUST BE IN ACCORDANCE WITH THE PLANS
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ALL DOWNPIPES SHALL BE MINIMUM 100x100 OR EQUIVALENT

BASEMENT 1 PLAN

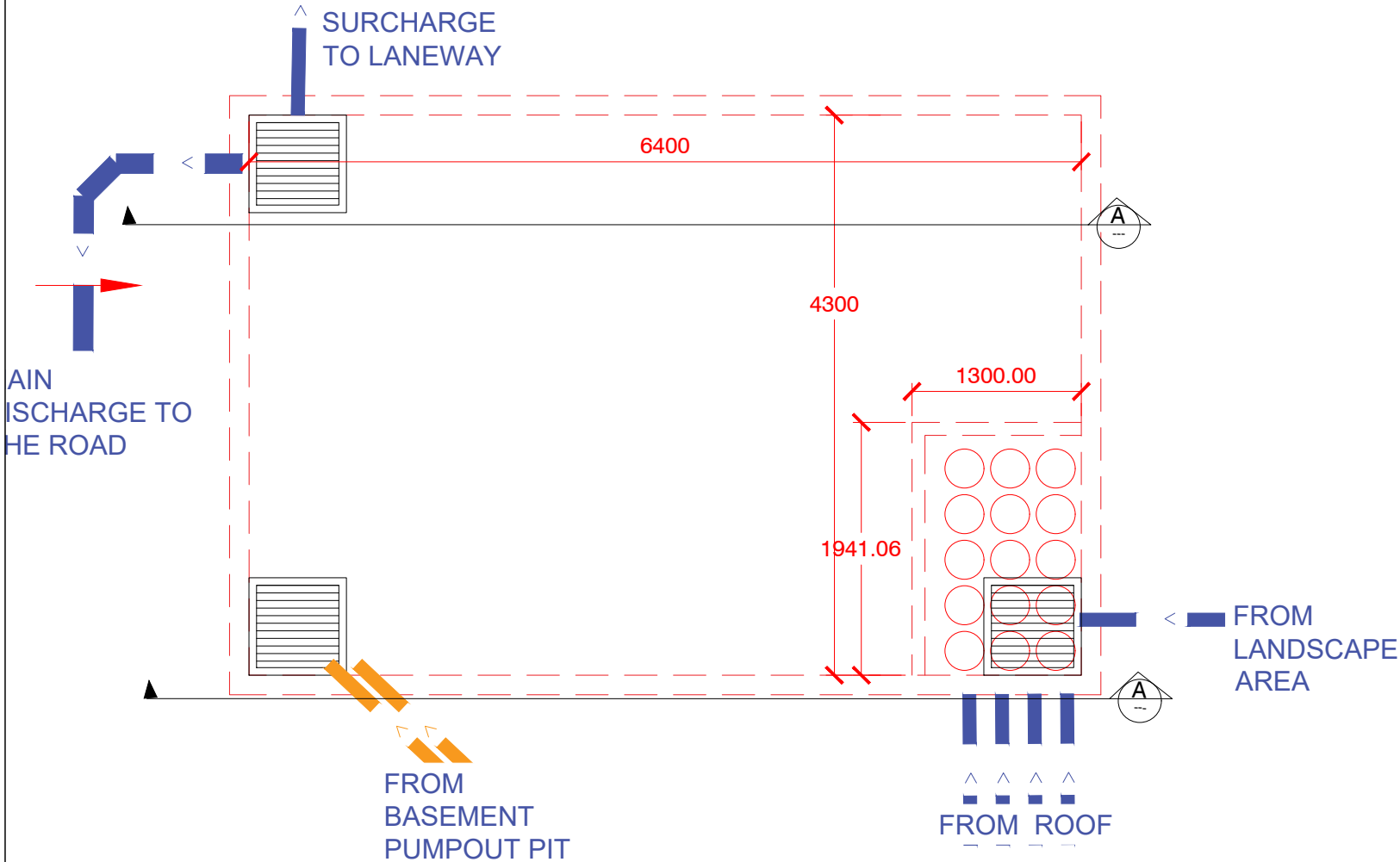
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Date	No.	By	Amendments	Chkd

Address: 24-26 RUSSELL AVENUE , LINDFIELD, NSW 2070		Project: STORMWATER DRAINAGE PLANS			
PBD Architects www.pbdarchitects.com.au info@pbdarchitects.com.au 52 Albion Street Surry Hills NSW 2010 Australia		Client: Bobby Chegini CE 7Hills Investment Pty Ltd		Drawing Title: BASEMENT 1 DRAINAGE PLAN	
				FOR DA SUBMISSION ----	
				PROJECT No. 122357	
 By: URBANSPEC ENGINEERING PTY LTD ABN 96 628 940 983 M: 0411 352 614 Email: hassan@urbanspec.com.au www.urbanspec.com.au		 Designed: HN Checked: HN SCALE: 1:50 PAPER: A3		Drawing No. C-210	
				Sheet No. 6 OF 9	

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NOTE: WARNING SIGN TO BE PLACED IN CLEAR AND VISIBLE LOCATION

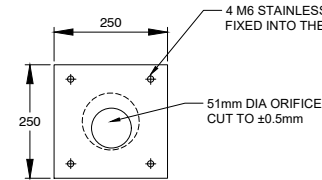
THIS IS AN
**ON-SITE STORMWATER
DETENTION SYSTEM**

REQUIRED BY KU-RING-GAI COUNCIL

IT IS AN OFFENCE TO REDUCE THE VOLUME OF THE TANK OR BASIN OR TO INTERFERE WITH THE ORIFICE PLATE THAT CONTROLS THE OUTFLOW

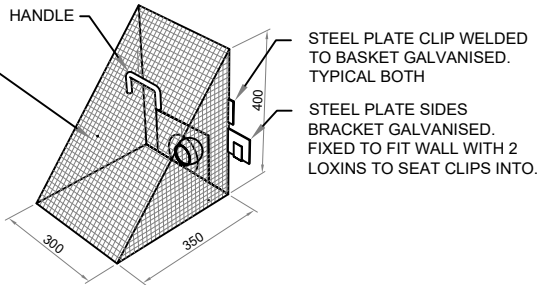
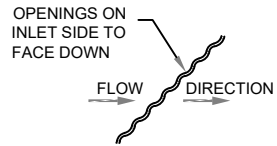
THE BASE OF THE OUTLET CONTROL PIT AND THE DEBRIS SCREEN MUST BE CLEANED OF DEBRIS AND SEDIMENT ON A REGULAR BASIS BY THE OWNER

THIS PLATE MUST NOT BE REMOVED



ORIFICE PLATE DETAIL

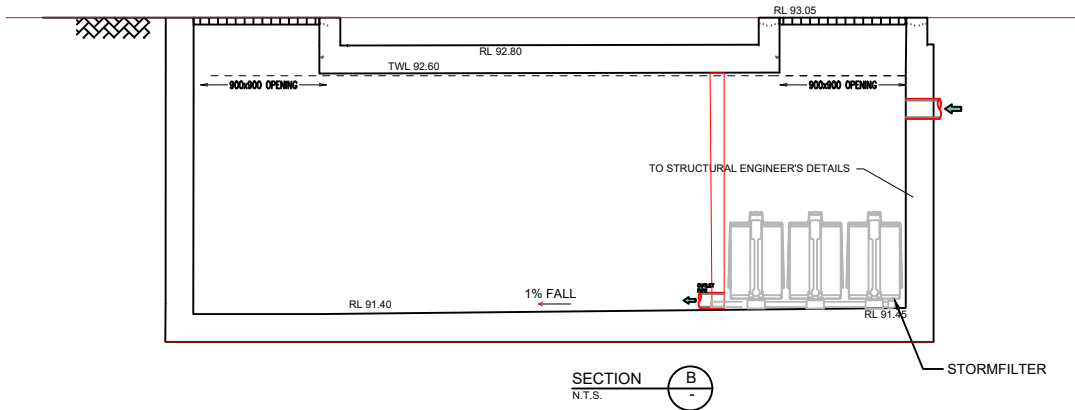
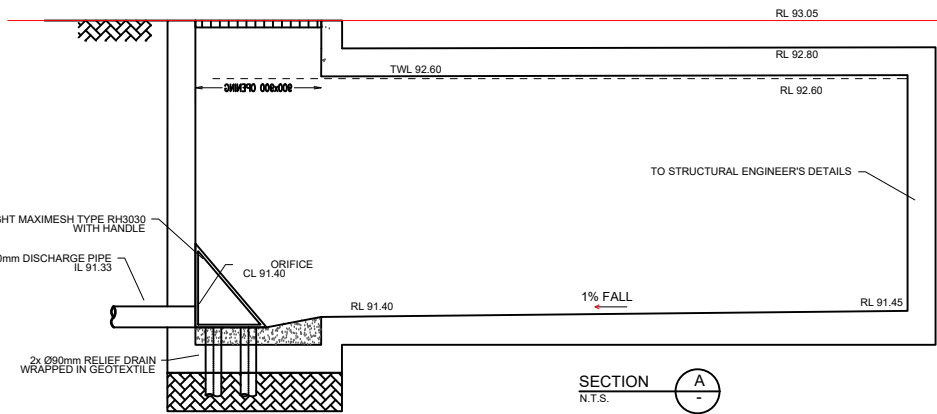
MAXIMESH OR SIMILAR LYSAGHTS RH3030 LONG AXIS OF THE OVAL SHAPED HOLES SHOULD BE PLACED HORIZONTAL, WITH THE PROTRUDING LIP OF EACH HOLE FACING DOWNWARDS AND UPSTREAM.



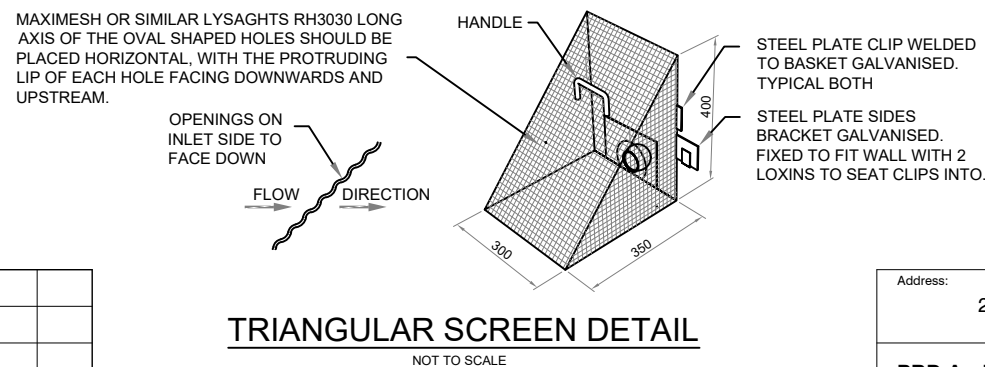
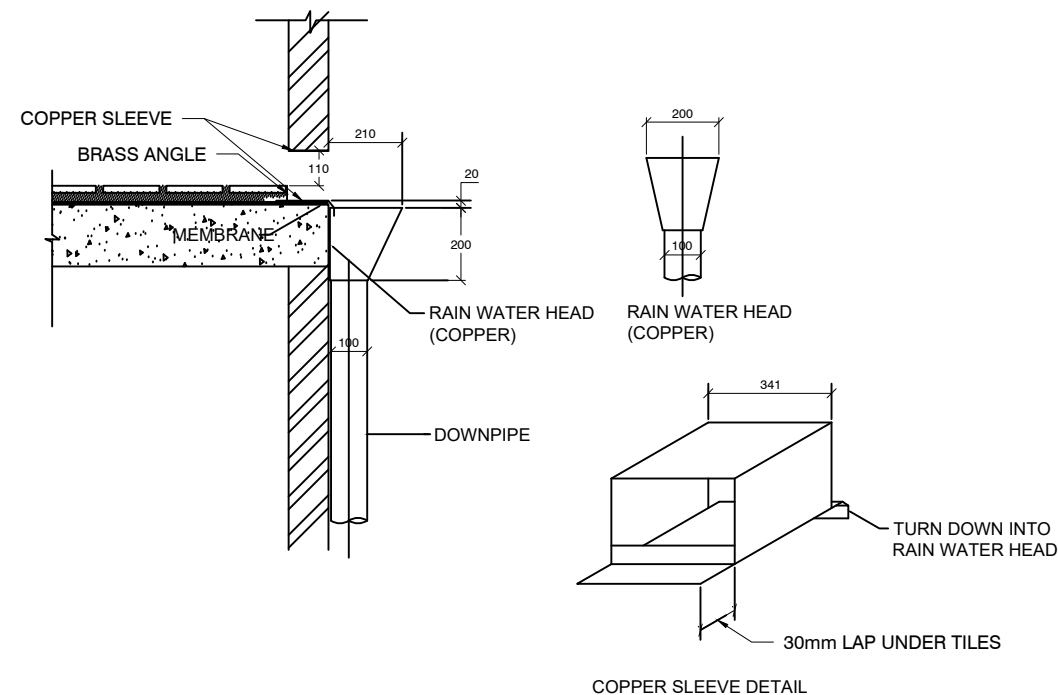
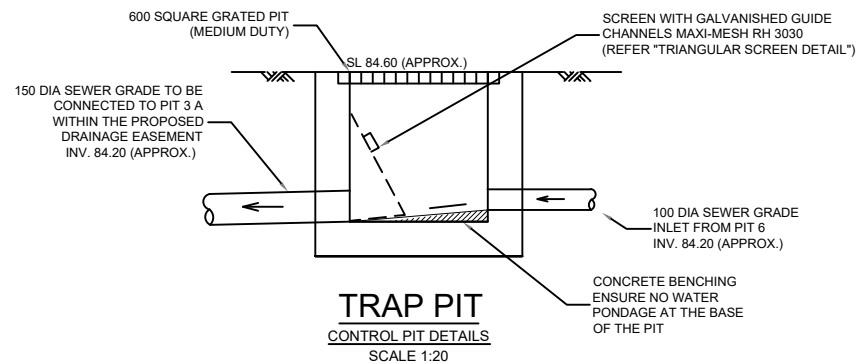
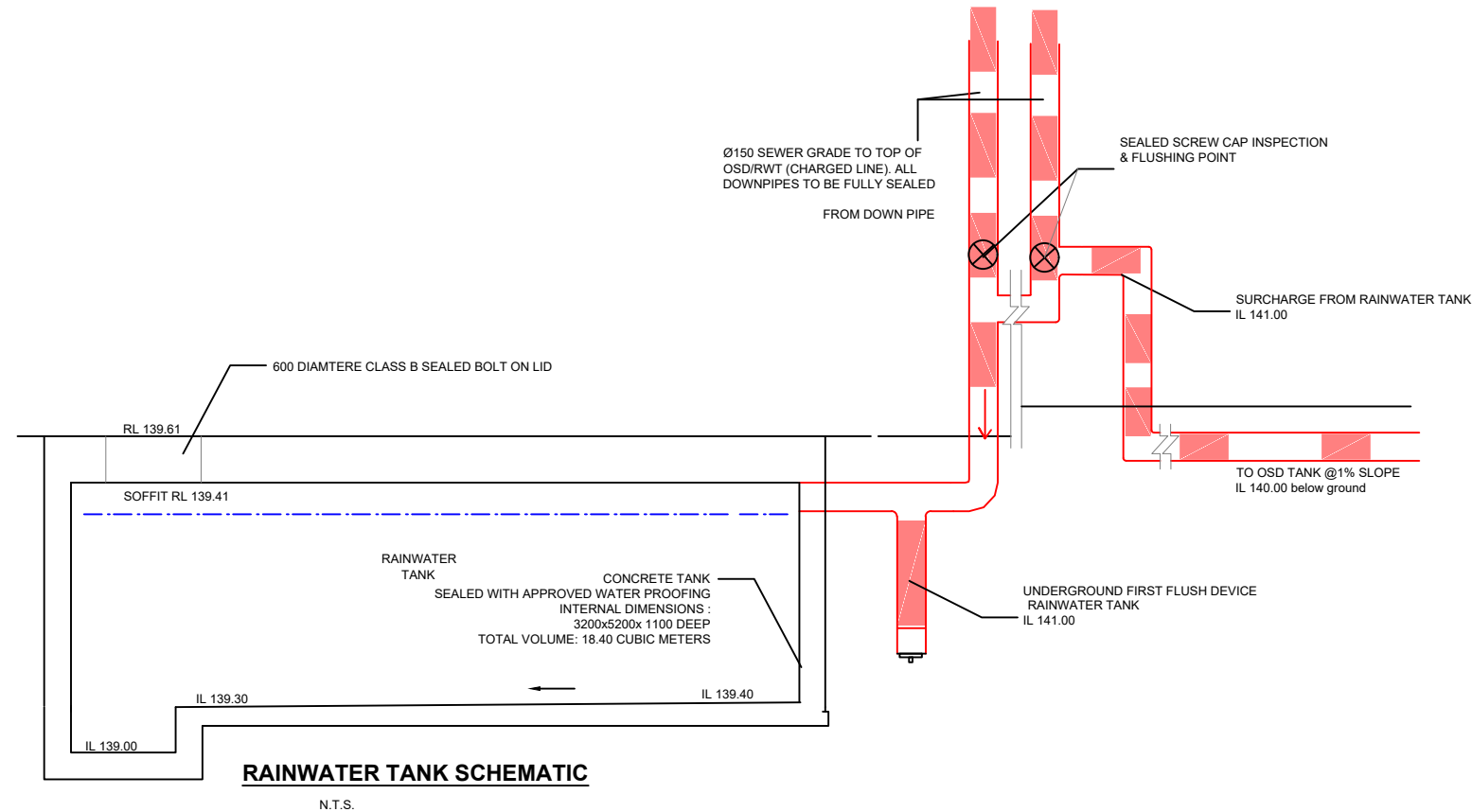
TRIANGULAR SCREEN DETAIL

NOT TO SCALE

Water Management Development Control Plan – DCP 47					
Appendix 3					
On-Site Detention Calculation Sheet					
Address: 122357 _ 24-26 Russell Avenue Lindfield					
Catchment Detail:					
1. Catchment Name	Gordon Creek	QC1			
2. Catchment Discharge Rate	0.0128	lsec/m2	A		
3. Catchment Storage Rate	0.0326	m3/m2	B		
Site Details					
4. Site Area	2104 m²	60% of site area	1029 m²		C
5. Area(s) not draining to the detention system	408 m²				
6. Total impervious area (roofs, driveways, paving, etc.)	1425 m²				D
7. Impervious area bypassing detention system	25 m²				E
Permitted Site Discharge					
8. C [1029 m²] x A [0.0128 lsec/m²] =	13.1712	lsec	Flow 1		
9. Adjustment for any uncontrolled impervious flow E / D =	0.02	(+9.25)	F		
10. Flow 1 [13.17 lsec] x F [0.02] =	0.23	lsec	Flow 2		
11. Flow 1 [13.17] – Flow 2 [0.23] =	3.04	lsec	PSD		
Site Storage Requirement					
12. C [1029 m²] x B [0.033] m³/m² =	33.55	m³	SSR1		
13. If the storage is in a landscaped basin, SSR1 x 1.2 =	40.25	m³	SSR2		
Outlet Control					
14. Height difference between top water surface level and the centre of the orifice	0.30	m	G		
15. Orifice Diameter	21.8 √(PSD/G)	51	mm	OD	
Designers Details					
Signature		Name:	Hassan Narmani		
Qualifications:	BE, ME, CPEng, NEIR, NSW DP/NSW PE	Date:	16/04/2025		
Page A3 - 1 Ku-ring-gai Council Adopted April 2005					



Address: 24-26 RUSSELL AVENUE , LINDFIELD, NSW 2070		Project: STORMWATER DRAINAGE PLANS		FOR DA SUBMISSION		Issue 1
PBD Architects www.pbdarchitects.com.au info@pbdarchitects.com.au 52 Albion Street Surry Hills NSW 2010 Australia		Client: Bobby Chegini CE 7Hills Investment Pty Ltd		By: URBANSPEC ENGINEERING PTY LTD ABN 96 628 940 983 M: 0411 352 614 Email: hassan@urbanspec.com.au www.urbanspec.com.au		PROJECT No. 122357
Drawing Title: OSD TANK DETAILS		Designed: HN	Checked: HN	SCALE: 1:50	PAPER: A3	Drawing No. C-500
Drawn: LR		Approved: HN		Sheet No. 7 OF 9		



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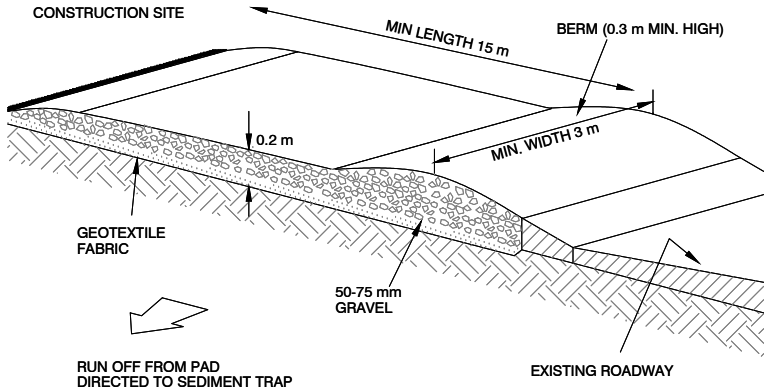
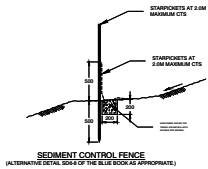
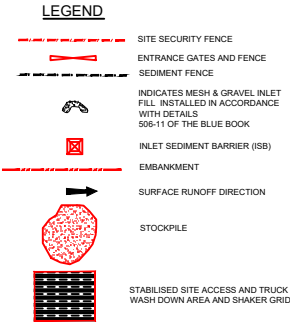
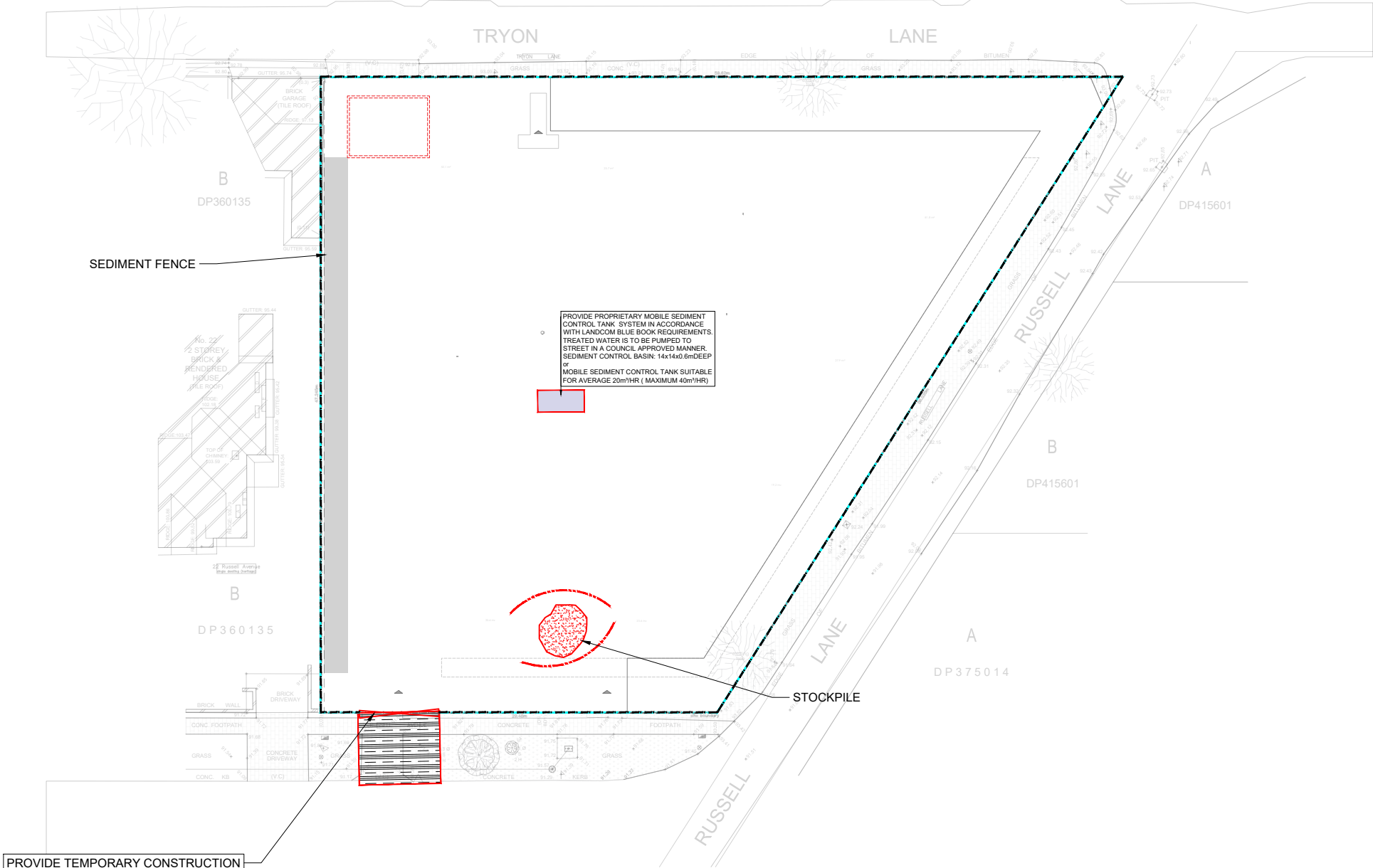
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22.04.2025	1	HN	FOR DA SUBMISSION	HN
Date	No.	By	Amendments	Chkd

Address: 24-26 RUSSELL AVENUE , LINDFIELD, NSW 2070		Project: STORMWATER DRAINAGE PLANS			
PBD Architects www.pbdarchitects.com.au info@pbdarchitects.com.au 52 Albion Street Surry Hills NSW 2010 Australia		Client: Bobby Chagini CE 7Hills Investment Pty Ltd		By: URBANSPEC ENGINEERING PTY LTD ABN 96 628 940 983 M: 0411 352 614 Email: hassan@urbanspec.com.au www.urbanspec.com.au	
		Drawing Title: STORMWATER DRAINAGE DETAILS		FOR DA SUBMISSION Issue 1	
Designed: HN		Checked: HN	SCALE: 1:50	PAPER: A3	PROJECT No. 122357
Drawn: LR		Approved: HN			Drawing No. C-501
					Sheet No. 8 OF 9

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22.04.2025	1	HN	FOR DA SUBMISSION	HN
Date	No.	By	Amendments	Chkd

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TEMPORARY CONSTRUCTION EXIT
SCALE: NTS

SEDIMENT & EROSION CONTROL NOTES

1. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH RELEVANT STANDARDS AND REGULATIONS; IN PARTICULAR THE REQUIREMENTS OF LANDCOMS MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION 'THE BLUE BOOK'.
2. SEDIMENT PROTECTION FILTERS SHALL BE INSTALLED ON ALL NEW AND EXISTING STORMWATER INLET PITS IN ACCORDANCE WITH EITHER THE MESH AND GRAVEL INLET FILTER DETAIL SD6-11 OR THE GEOTEXTILE INLET FILTER DETAIL S06-12 OF THE 'BLUE BOOK'.
3. ESTABLISH ALL REQUIRED SEDIMENT FENCES IN ACCORDANCE WITH DETAIL SD6-B OF THE 'BLUE BOOK'.
4. INSTALL SEDIMENT FENCING AROUND INDIVIDUAL BUILDING ZONES/AREAS AS REQUIRED AND AS DIRECTED BY THE SUPERINTENDENT.
5. ALL TRENCHES INCLUDING ALL SERVICE TRENCHES AND SWALE EXCAVATION SHALL BE SIDE -CAST TO THE HIGH SIDE AND CLOSED AT THE END OF EACH DAYS WORK.
6. THE CONTRACTOR SHALL ENSURE THAT ALL VEGETATION (TREE, SHRUB & GROUND COVER) WHICH IS TO BE RETAINED SHALL BE PROTECTED DURING THE DURATION OF CONSTRUCTION. REFER ARCHITECTS PLANS FOR TREES TO BE KEPT.
7. ALL VEGETATION TO BE REMOVED SHALL BE MULCHED ONSITE AND SPREAD/STOCKPILED AS DIRECTED BY THE SUPERINTENDENT.
8. TOP SOIL SHALL BE STRIPPED IN AREAS DESIGNATED FOR STRIPPING AND STOCKPILED FOR RE-USE AS REQUIRED. ANY SURPLUS MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH EPA GUIDELINES.
9. CONSTRUCT SHALL MAINTAIN ALL MATERIAL STOCKPILES IN ACCORDANCE WITH DETAIL SD4 -1 OF THE 'BLUE BOOK' (INCLUDING CUT-OFF SWALS TO THE HIGH SIDE AND SEDIMENT FENCES TO THE LOW SIDE.
10. STOCKPILES SHALL NOT EXCEED 2.0m HIGH. WIND AND RAIN EROSION PROTECTION SHALL BE PREPARED AND PROVIDED AS REQUIRED IN ACCORDANCE WITH THE 'BLUE BOOK'.
11. PROVIDE WATER TRUCKS OR SPRINKLER DEVICES DURING CONSTRUCTION AS REQUIRED TO SUPPRESS DUST.
12. ONCE CUT /# III OPERATIONS HAVE BEEN FINALIZED ALL DISTURBED AREAS THAT ARE NOT BEING WORKED ON SHALL BE RE-VEGETATED AS SOON AS IS PRACTICAL.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING A DETAILED WRITTEN RECORD OF ALL EROSION & SEDIMENT CONTROLS ON-SITE DURING THE CONSTRUCTION PERIOD. THIS RECORD SHALL BE UPDATED ON A DAILY BASIS & SHALL CONTAIN DETAILS ON THE CONDITION OF CONTROLS AND ANY MAINTENANCE, CLEANING & BREACHES. THIS RECORD SHALL BE KEPT ON-SITE AT ALL TIMES AND SHALL BE MADE AVAILABLE FOR INSPECTION BY THE PRINCIPAL CERTIFYING AUTHORITY AND THE SUPERINTENDENT DURING NORMAL WORKING HOURS. THE CONTRACTOR SHALL ENSURE COUNCIL ASSETS AND THE UTILITIES ARE PROTECTED AT ALL TIMES. ANY AND ALL DAMAGES TO COUNCIL ASSETS AND/OR UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SPECIFICATION OF COUNCIL AND THE UTILITIES AUTHORITY AND AT NO COST TO THE PRINCIPAL OR NORTHROP CONSULTING ENGINEERS

SOIL CONSERVATION NOTES

- A. PRIOR TO ANY CLEARING OR EXCAVATION AT THE PROJECT SITE, A TEMPORARY SEDIMENT TRAP ARRANGEMENT SHALL BE MADE TO ENSURE THE CAPTURE OF ANY WATER BORNE MATERIAL GENERATED FROM THE SITE. PROVIDE SEDIMENT FENCE AS SHOWN ON PLAN. PROVIDE TEMPORARY CONSTRUCTION EXIT PAD TO PREVENT TRANSMISSION OF SOIL FROM TRUCK TYRES TO PUBLIC ROADS AND DRAINAGE.
- B. DURING CONSTRUCTION
 - 1) SILTATION PROTECTION DESCRIBED ABOVE SHALL BE MAINTAINED DURING THE COURSE OF CONSTRUCTION.
 - 2) NEWLY CONSTRUCTED PITS SHALL BE PROTECTED FROM ANY SEDIMENT ENTRY.
 - 3) ONCE IN PLACE, NO SILTATION PROTECTION SHALL BE REMOVED WITHOUT COUNCIL APPROVAL.
 - 4) AFTER EACH STORM, ALL SEDIMENT TRAPS SHALL BE CLEANED AND REPLACED (IF REQUIRED) TO COUNCIL'S SATISFACTION.
 - 5) OTHER METHODS OF SEDIMENT CONTROL AS MAY BE REQUIRED BY THE COUNCIL SHALL BE COMPLIED WITH.

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		Drawing Title: SEDIMENT AND EROSION CONTROL PLAN		FOR DA SUBMISSION PROJECT No. 122357	
Designed: HN		Checked: HN	SCALE: 1:50	PAPER: A3	Drawing No. C-004
Drawn: LR		Approved: HN			Sheet No. 4 OF 9

