STORMWATER MANAGEMENT PLANS PROPOSED ALTERATIONS & ADDITIONS Lot 7, 21 MOORE STREET, CLONTARF

DRAINAGE NOTES

PIPE SIZE:

THE MINIMUM PIPE SIZE SHALL BE:

- 90mm 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 7.9 OF AS3500.3-2021

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 AS3725-2007 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 6.2.8 OF AS3500.3-2021

ABOVE GROUND PIPEWORK:

SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 6 OF AS3500.3-2021

|--|

DEPTH (mm)	MINIMUM PIT SIZE (mm)
UP TO 450mm	450 x 450
450mm TO to 600mm	600 x 600
600mm TO 900mm	600 x 900
900mm TO 1500mm	900 x 900 (WITH STEP IRONS)
1500mm TO 2000mm	1200 x 1200 (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.

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 7.5.5.1 OF AS3500.3-2021. PITS DEEPER THAN 1.8m SHALL BE

CONSTRUCTED WITH REINFORCED CONCRETE.

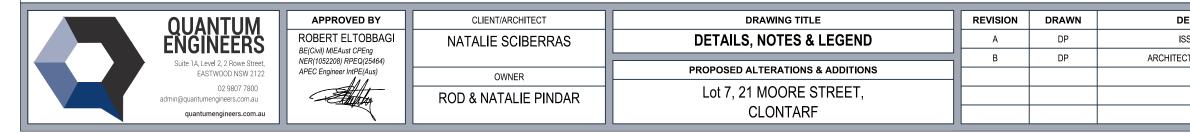
GRATES:

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.

GENERAL NOTES

- 1. FINAL LOCATION OF NEW DOWNPIPES TO BE DETERMINED BY BUILDER/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 WITH AS/NZS 3500.3:2021 STORMWATER DRAINAGE, BCA AND LOCAL COUNCIL POLICY/CONSENT/REQUIREMENTS.
- 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 FINISHED SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED FROM DRAWINGS BY OTHERS.
- 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 LEVEL 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.
- THIS PLAN IS THE PROPERTY OF QUANTUM ENGINEERS AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM QUANTUM ENGINEERS.

SURFACE INLET PIT		LEGEND	GRATED TRENCH DRAIN	()
SURFACE INLET PIT (WITH ENVIROPOD 200 MICRON)			ABSORPTION TRENCH	
ACCESS GRATE		I	PROPOSED ROOF GUTTER FALL	_ >
(WITH ENVIROPOD 200 MICRON)	—	PR	OPOSED DOWNPIPE SPREADER	⊢● SP
ACCESS GRATE (TO HED PIT)		STORMW	TER PIPE 100mm DIA. MIN. UNO	
450 SQUARE INTERVAL	450 X 450		SUBSOIL PIPE	<u> </u>
GRATE LEVEL = 75.50	SL 75.50		EXISTING STORMWATER PIPE	— sw — sw —
INVERT LEVEL = RL 75.20	IL 75.20		INSPECTION RISER	O IR
PROPOSED DOWNPIPE 90mm DIA. PVC	DP 90		RAINWATER HEAD	RWH

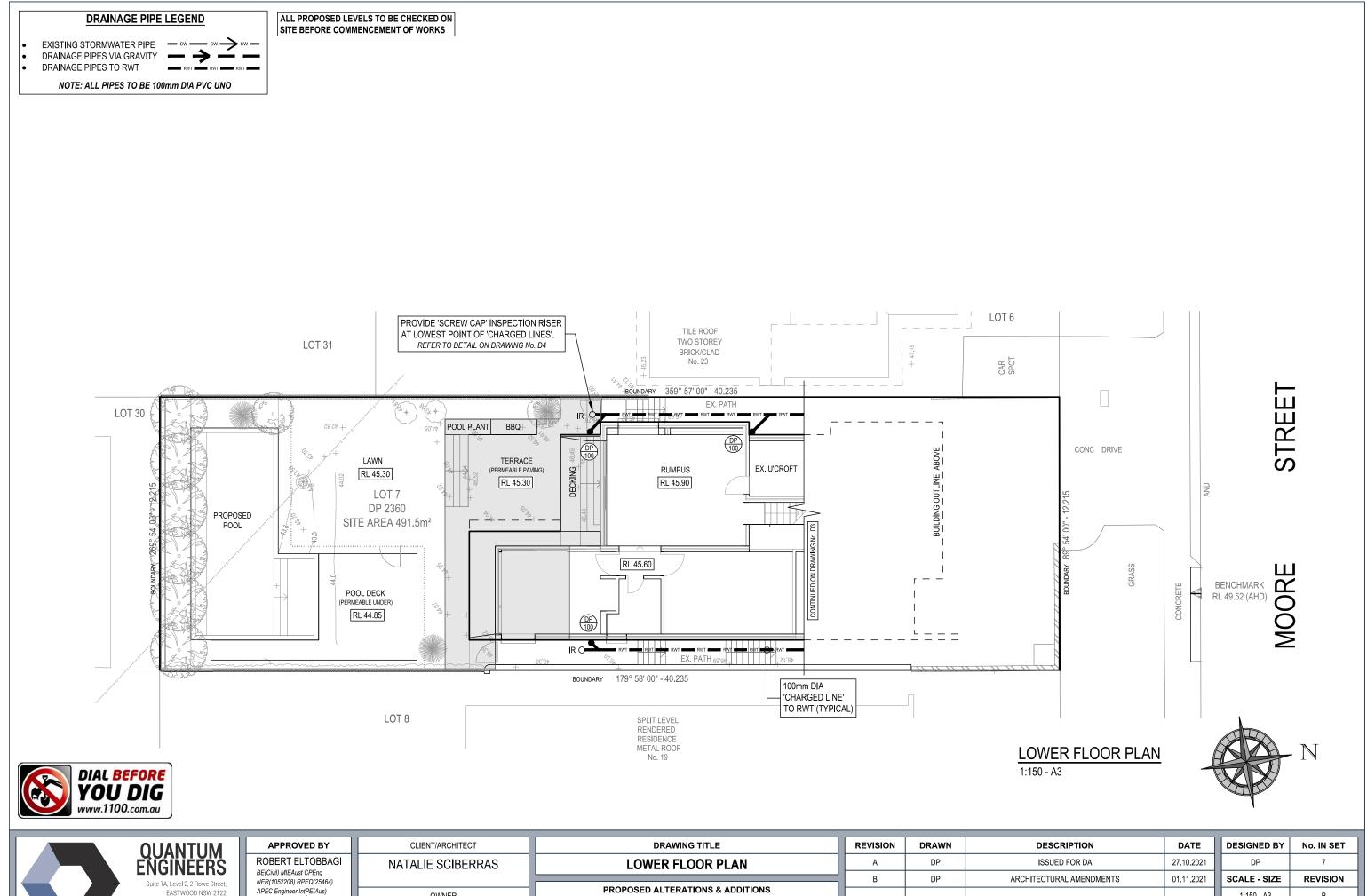


NOT FOR CONSTRUCTION

PLAN NOTES

- 1. ROOF DRAINAGE NOTE: AS 3500 ROOF DRAINAGE REQUIRES EAVES GUTTERS TO BE SIZED FOR 20 YEAR 5 MIN. STORM = 205mm/hr. FOR EAVES GUTTERS, AS 3500.3:2021 THEN HAS THE FOLLOWING REQUIREMENTS:
- FOR TYPICAL STANDARD QUAD GUTTER WITH Ae = 6000mm² AND GUTTER SLOPE 1:500 AND STEEPER, THIS REQUIRES ONE DOWNPIPE PER 30m² ROOF AREA.
 DOWNPIPES TO BE MINIMUM 90mm DIA. OR 100 x 50mm
- FOR GUTTERS SLOPE 1:500 AND STEPPER. 1.3. OVERFLOW METHOD TO FIGURE F.1 OF AS 3500.3:2021
- 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 3500.3:2021 AND SECTIONS 3.5, 3.7.7 AND APPENDIX G OF AS 3500.3:2021
- 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

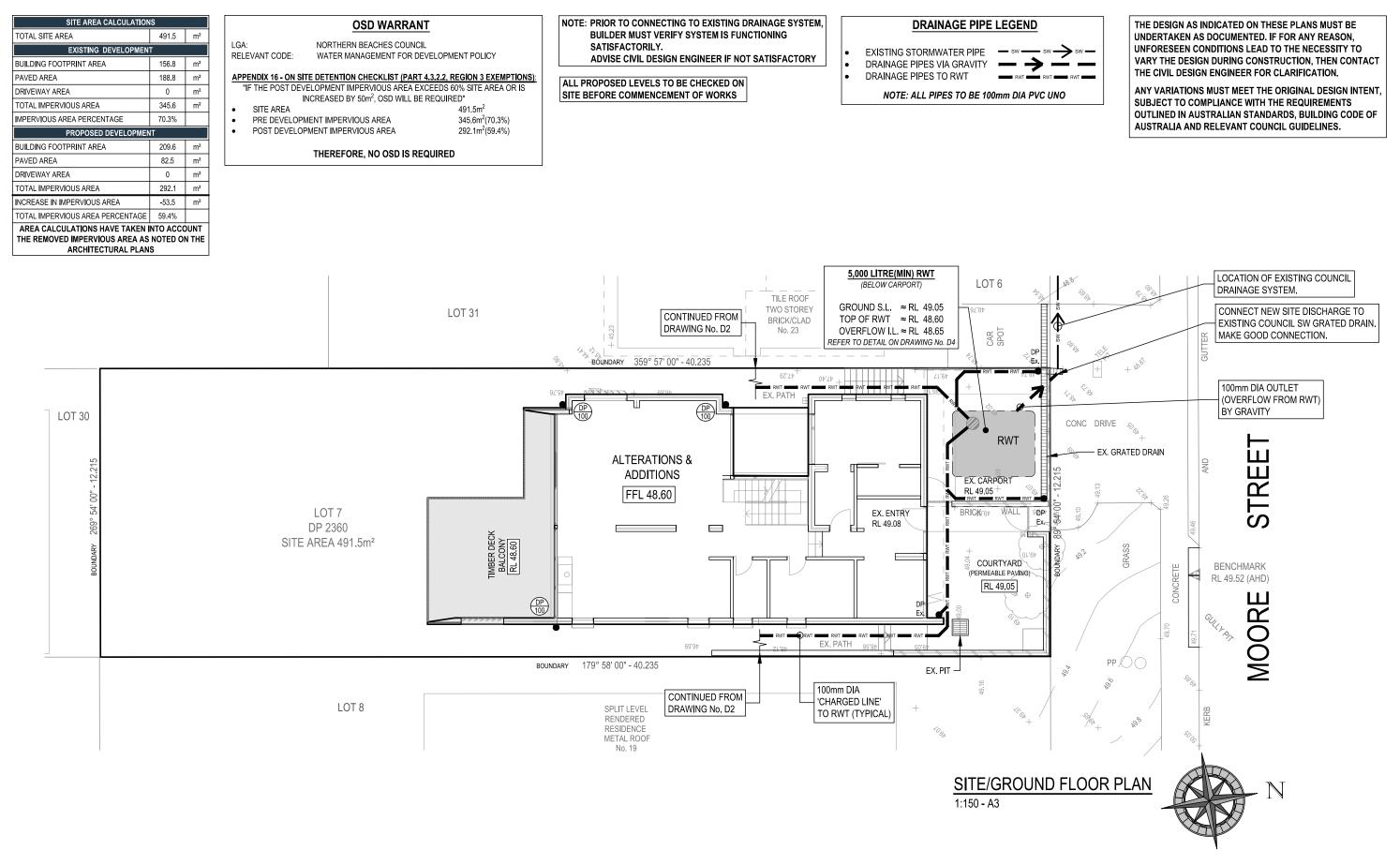
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SUED FOR DA	27.10.2021	DP	7
CTURAL AMENDMENTS	01.11.2021	SCALE - SIZE	REVISION
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		JOB NUMBER	DRAWING No.
		210336	D1
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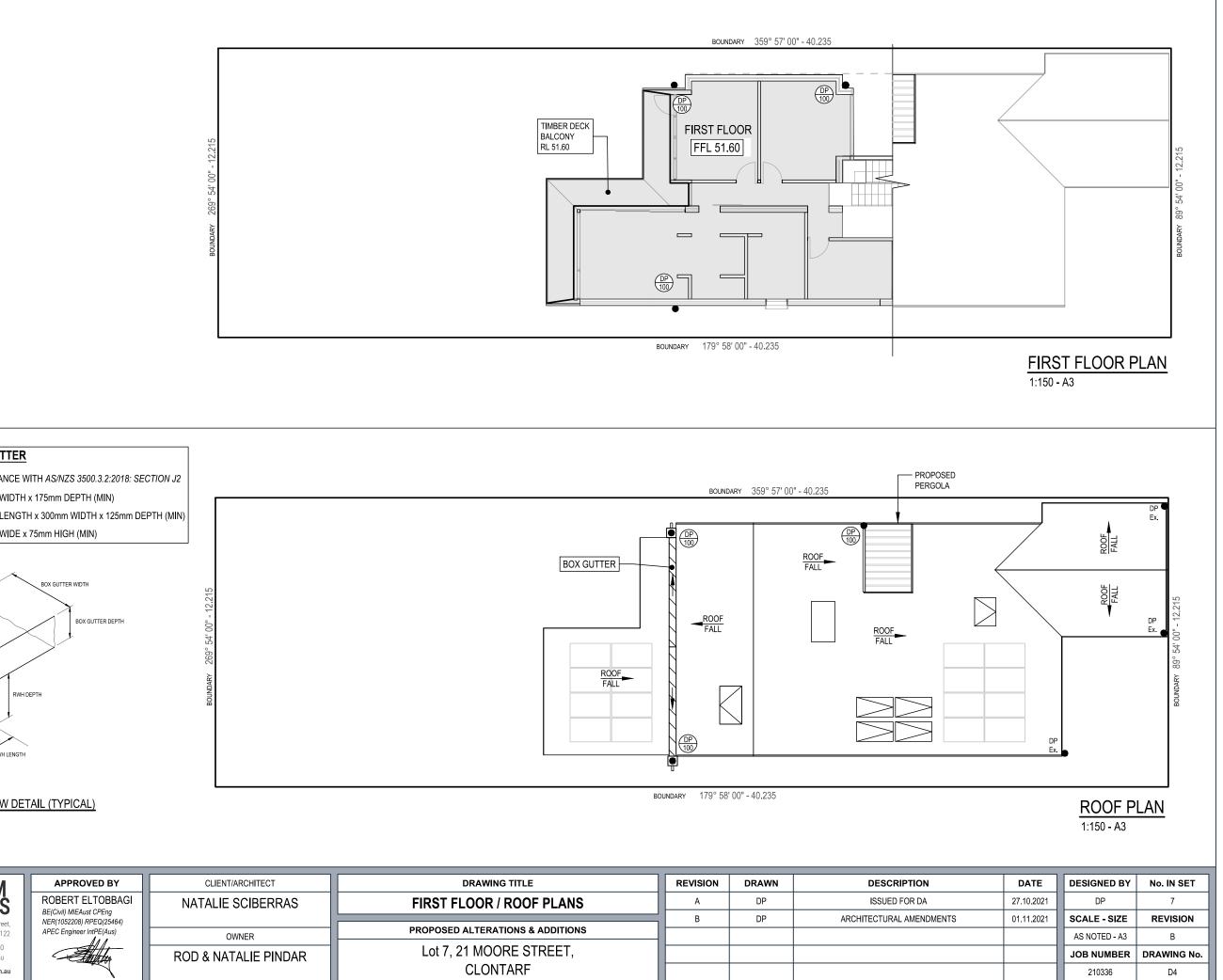
02 9807 7800 admin@quantumengineers.com.au quantumengineers.com.au

PROPOSED ALTERATIONS & ADDITIONS OWNER Lot 7, 21 MOORE STREET, ROD & NATALIE PINDAR En la la CLONTARF

ESCRIPTION	DATE	DESIGNED BY	No. IN SET
SUED FOR DA	27.10.2021	DP	7
CTURAL AMENDMENTS	01.11.2021	SCALE - SIZE	REVISION
		1:150 - A3	В
		JOB NUMBER	DRAWING No.
		210336	D2



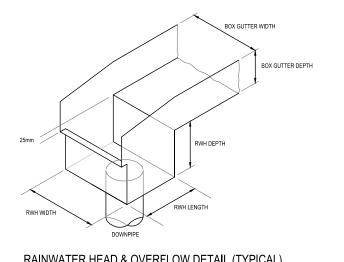
OLIANTIIM	APPROVED BY	CLIENT/ARCHITECT	DRAWING TITLE	REVISION	DRAWN	DESCRIPTION	DATE	DESIGNED BY	No. IN SET
OUANTUM ENGINEERS	ROBERT ELTOBBAGI	NATALIE SCIBERRAS	SITE/GROUND FLOOR PLAN	A	DP	ISSUED FOR DA	27.10.2021	DP	7
Suite 1A, Level 2, 2 Rowe Street,	BE(Civil) MIEAust CPEng NER(1052208) RPEQ(25464)			В	DP	ARCHITECTURAL AMENDMENTS	01.11.2021	SCALE - SIZE	REVISION
EASTWOOD NSW 2122	APEC Engineer IntPE(Aus)	OWNER	PROPOSED ALTERATIONS & ADDITIONS					1:150 - A3	В
02 9807 7800 admin@quantumengineers.com.au		ROD & NATALIE PINDAR	Lot 7, 21 MOORE STREET,					JOB NUMBER	DRAWING No.
quantumengineers.com.au			CLONTARF					210336	D3



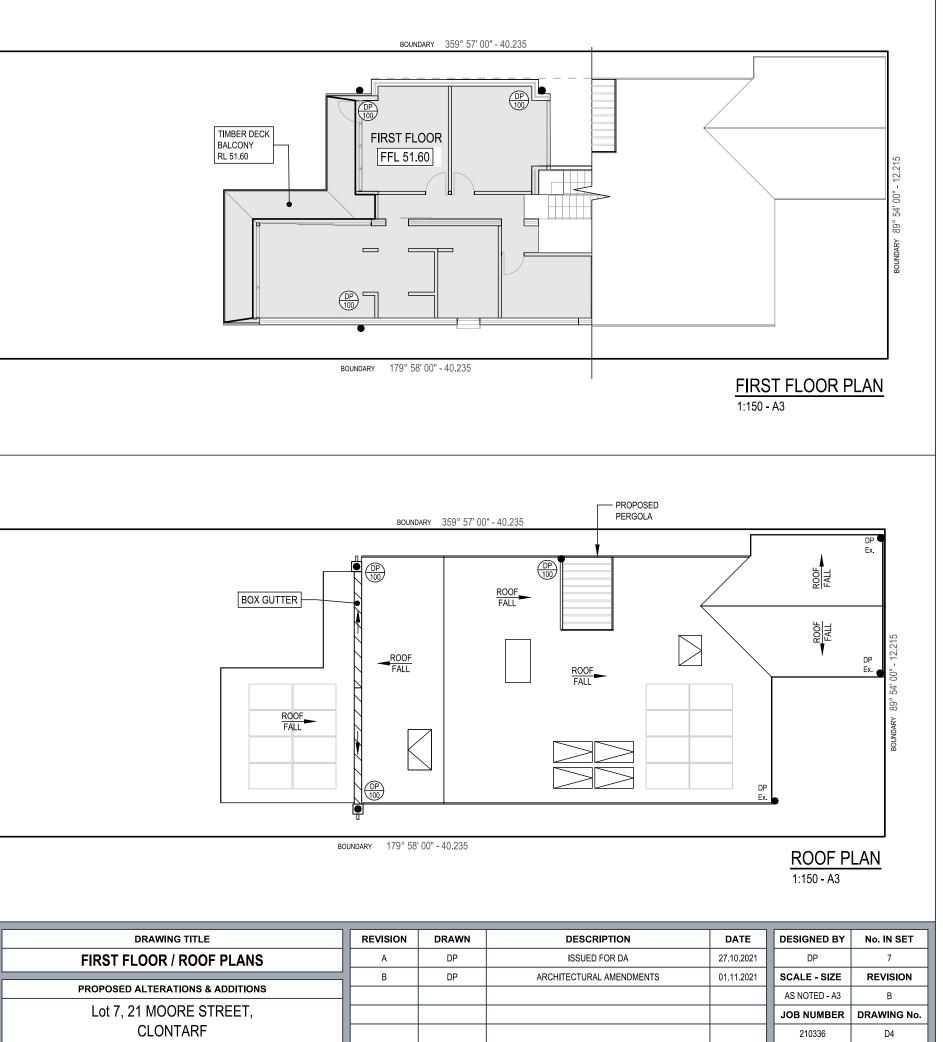
BOX GUTTER

BOX GUTTER TO BE CONSTRUCTED IN ACCORDANCE WITH AS/NZS 3500.3.2:2018: SECTION J2

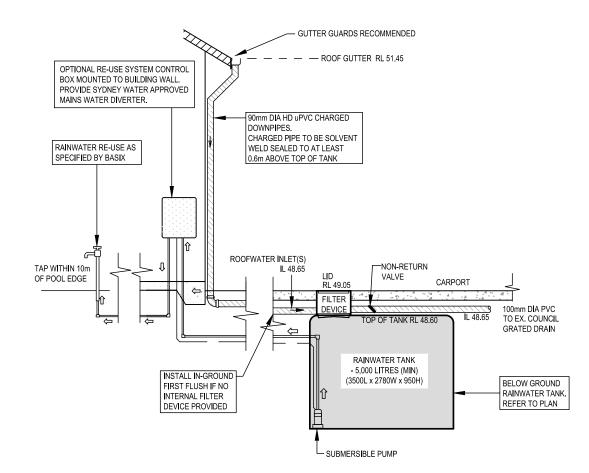
- 300mm WIDTH x 175mm DEPTH (MIN) BOX GUTTER _ _ _ _ _ _ RWH (EXTERNAL) 300mm LENGTH x 300mm WIDTH x 125mm DEPTH (MIN) • -
- RWH OVERFLOW (OF) Π -200mm WIDE x 75mm HIGH (MIN)



RAINWATER HEAD & OVERFLOW DETAIL (TYPICAL)

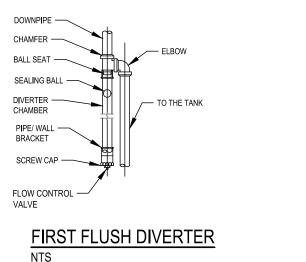


QUANTUM ENGINEERS Suite 1A. Level 2, 2 Rowe Street. EASTWOOD NSW 2122 02 9807 7800 admin@quantumengineers.com.au quantumengineers.com.au



RAINWATER RE-USE TANK - BELOW GROUND

NTS



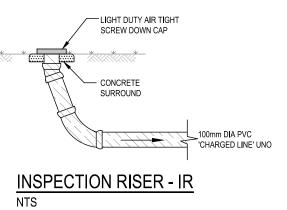
WARNING NOT FOR DRINKING

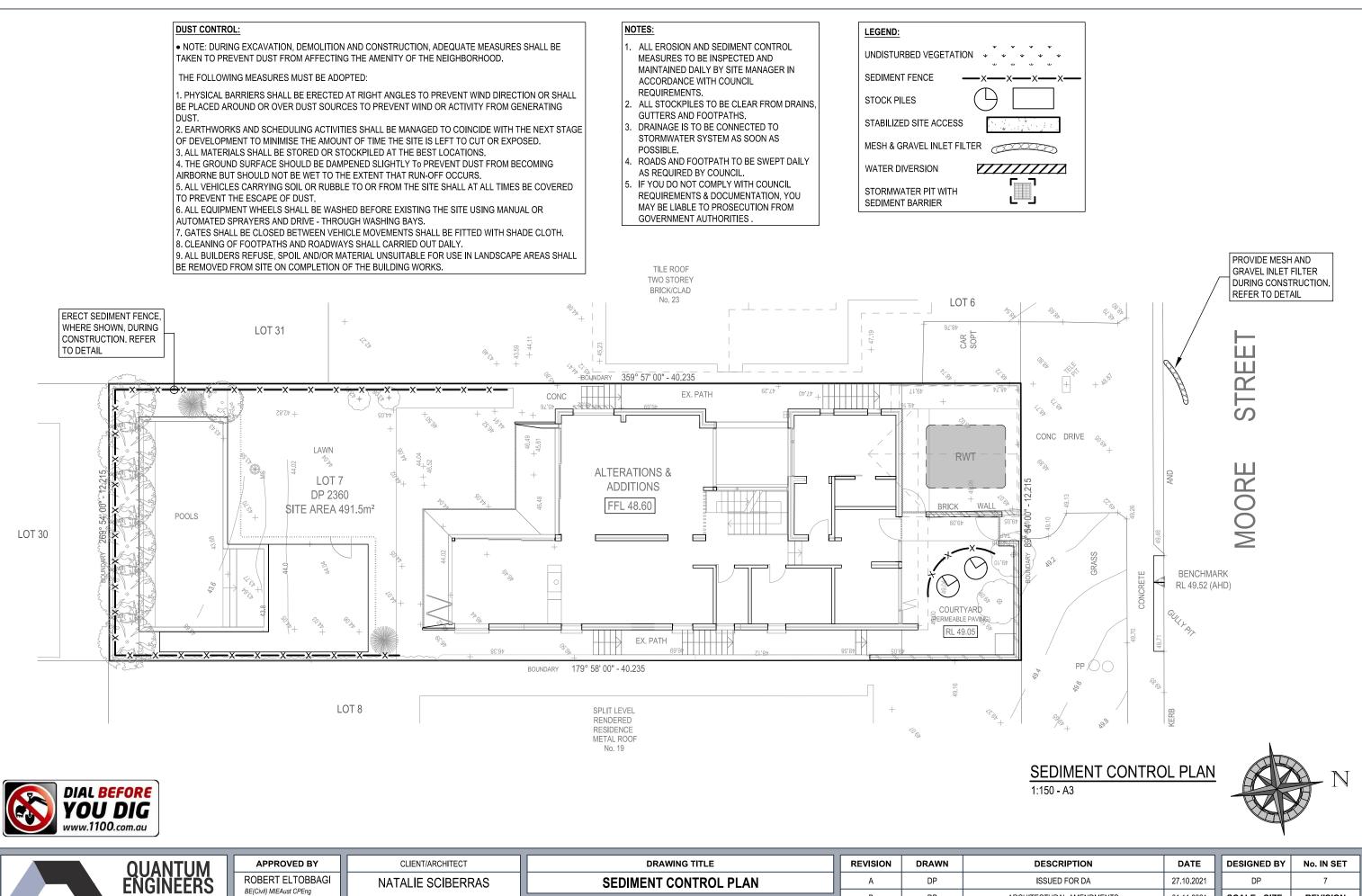
TYPICAL WARNING SIGN

NTS EVERY EXTERNAL SUPPLY OUTLET FROM RAINWATER RE-USE TANK TO BE LABELED WITH METALLIC WARNING SIGN

ΟΠΑΝΤΙΜ	APPROVED BY	CLIENT/ARCHITECT	DRAWING TITLE	REVISION	DRAWN	DESCRIPTION	DATE	DESIGNED BY	No. IN SET
QUANTUM ENGINEERS	ROBERT ELTOBBAGI	NATALIE SCIBERRAS	STORMWATER DETAILS	A	DP	ISSUED FOR DA	27.10.2021	DP	7
Suite 1A, Level 2, 2 Rowe Street,	BE(Civil) MIEAust CPEng NER(1052208) RPEQ(25464)			В	DP	ARCHITECTURAL AMENDMENTS	01.11.2021	SCALE - SIZE	REVISION
EASTWOOD NSW 2122	APEC Engineer IntPE(Aus)	OWNER	PROPOSED ALTERATIONS & ADDITIONS					AS NOTED - A3	В
02 9807 7800 admin@quantumengineers.com.au	- Antos	ROD & NATALIE PINDAR	Lot 7, 21 MOORE STREET,					JOB NUMBER	DRAWING No.
quantumengineers.com.au			CLONTARF					210336	D5







PROPOSED ALTERATIONS & ADDITIONS

Lot 7, 21 MOORE STREET,

CLONTARF

NER(1052208) RPEQ(25464)

Anthelas

OWNER

ROD & NATALIE PINDAR

APEC Engineer IntPE(Aus)

te 1A Level 2, 2 Bowe Street

quantumengineers.com.au

admin@quantumengineers.com.au

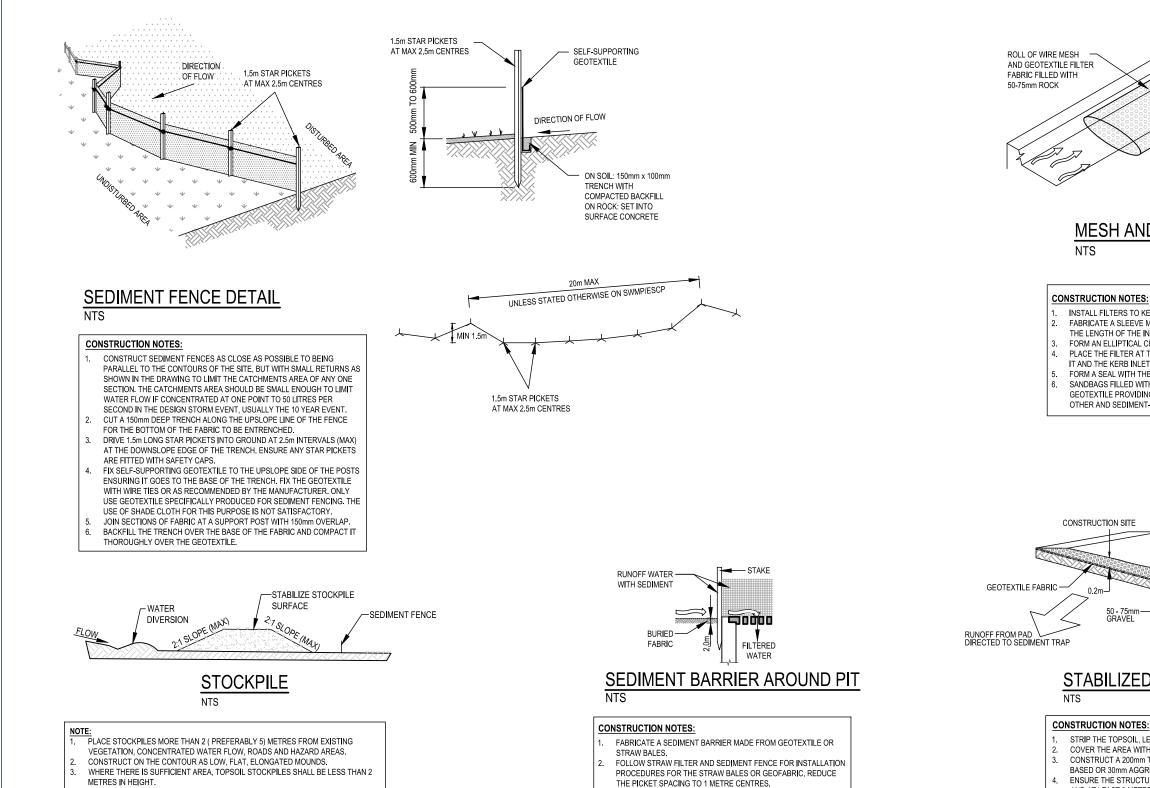
EASTWOOD NSW 2122

02 9807 7800

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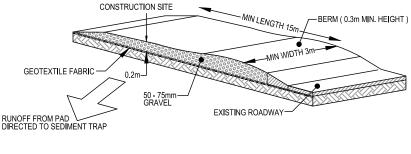
DP

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		1:150 - A3	В
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		210336	D6



- METRES IN HEIGHT. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILIZE FOLLOWING
- THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10. CONSTRUCT EARTH BANKS (LOW FLOW) ON THE UPSLOPE SIDE TO DIVERT WATER
- AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES ON THE DOWNSLOPE.

- IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
- DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.



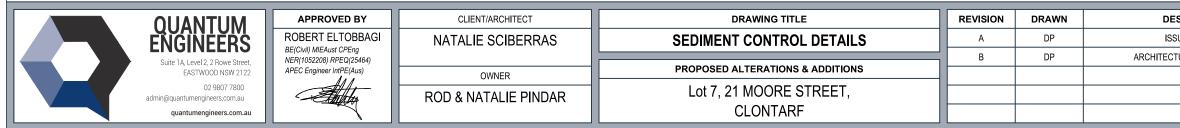
NTS

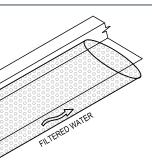
NTS

CONSTRUCTION NOTES:

- BASED OR 30mm AGGREGATE

- THE SEDIMENT FENCE





MESH AND GRAVEL FILTER

INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm(h) x 400mm(w). PLACE THE FILTER AT THE OPENING LEAVING AT LEAST 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

STABILIZED SITE ACCESS

STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD

ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILD ALIGNMENT AND AT LEAST 3 METRES WIDE.

WHERE A SEDIMENT FENCE JOINS ONTO THE STABILIZED ACCESS, CONSTRUCT A HUMP IN THE STABILIZED ACCESS TO DIVERT WATER TO

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		210336	D7