A1

BUNNINGS WAREHOUSE FRENCHS FOREST

CIVIL ENGINEERING DESIGN FOR DEVELOPMENT APPLICATION

DRAWING INDEX:

DRAWING No.	DRAWING TITLE
02240_100	COVER SHEET, DRAWING INDEX, GENERAL NOTES, LEGEND & LOCALITY SKETCH
02240_201	GENERAL ARRANGEMENT BASEMENT PLAN
02240_202	GENERAL ARRANGEMENT GROUND FLOOR PLAN
02240_601	STORMWATER DRAINAGE CATCHMENT PLAN
02240_621	OSD TANK & DETAILS
02240_622	OSD TANK SECTIONS
02240_701	SEDIMENT & EROSION CONTROL - PLAN
02240_702	SEDIMENT & EROSION CONTROL - DETAILS

LEGEND

- BOUNDARY
- CONTROL — ROAD CONTROL LINE
- TOP OF BATTER
- BOTTOM OF BATTER
- RETAINING WALL
- 88.4 — FINISHED SURFACE CONTOUR
- DN600 — PROPOSED STORMWATER DRAINAGE LINE
- G.D. — STORMWATER GRATED DRAIN
- STORMWATER GRATED SURFACE INLET PIT WITH ENVIROPOD
- STORMWATER JUNCTION PIT
- RWO — STORMWATER RAINWATER OUTLET
- A / 3 — STORMWATER DRAINAGE LINE LETTER / STORMWATER STRUCTURE NUMBER
- RL91.86 — FINISHED SURFACE LEVEL
- GRL91.86 — FINISHED STORMWATER PIT GRATE LEVEL

GENERAL NOTES:

G1. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL'S CIVIL WORKS SPECIFICATION.
G2. THE CONSTRUCTOR SHALL REVIEW, BE AWARE AND AT ALL TIMES COMPLY WITH THE SPECIFIC REQUIREMENTS FOR THIS DEVELOPMENT AS SET OUT IN NORTHERN BEACHES COUNCIL'S NOTICE OF DETERMINATION.
G3. ANY CHANGES MADE BY THE CONSTRUCTOR TO ANY LEVEL, DIMENSION, LOCATION, POSITION, ALIGNMENT ETC., OF ANY OF THE WORKS SHOWN ON THE DRAWINGS WITHOUT THE WRITTEN CONSENT OF C&M CONSULTING ENGINEERS PTY. LTD. AND OR THE PRINCIPAL CERTIFYING AUTHORITY IS DONE SO AT THE CONSTRUCTORS OWN RISK.
G4. THE CONSTRUCTOR SHALL ALLOW TO LIAISE WITH AND PROVIDE SUFFICIENT NOTICE TO THE PRINCIPAL CERTIFYING AUTHORITY TO ENSURE THAT ALL WORKS ARE INSPECTED TO ENABLE COMPLIANCE CERTIFICATES TO BE ISSUED THROUGHOUT THE CONSTRUCTION PERIOD. THE CONSTRUCTOR SHALL LIAISE WITH THE PRINCIPAL CERTIFYING AUTHORITY PRIOR TO ANY CONSTRUCTION WORKS COMMENCING AND PREPARE AN INSPECTION AND TEST PLAN WITH A MUTUALLY AGREED WITNESS AND HOLD POINTS FOR THE CONSTRUCTION WORKS.
G5. IF THE PRINCIPAL CERTIFYING AUTHORITY IS NOT NORTHERN BEACHES COUNCIL, THEN THE CONSTRUCTOR MUST CONTACT NORTHERN COUNCIL'S WORKS DIVISION TO ENABLE THEIR INSPECTION OF ALL WORKS (INCLUDING EROSION AND SEDIMENT CONTROL MEASURES) WITHIN THE ROAD RESERVE AREA.
G6. THE CONSTRUCTOR SHALL USE A SUITABLY QUALIFIED SURVEYOR TO SET OUT ALL WORKS. THE SURVEYOR SHALL ISSUE A CERTIFICATE TO THE PRINCIPAL CERTIFYING AUTHORITY CERTIFYING THAT THE WORKS HAVE BEEN SET OUT IN ACCORDANCE WITH THE APPROVED DRAWINGS PRIOR TO THE WORKS BEING CONSTRUCTED.
G7. ALL NEW WORKS SHALL MAKE A SMOOTH CONNECTION WITH ANY FORMATIONS, STRUCTURES, ETC.
G8. THE WORKS SHALL BE CONSTRUCTED IN SUCH A MANNER THAT THERE IS MINIMUM DISTURBANCE TO EXISTING TREES AND VEGETATION.
G9. ALL BOUNDARY LOCATIONS, DIMENSIONS, BEARINGS, AREAS, ETC., SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND ARE SUBJECT TO A FINAL SURVEY AND REGISTRATION OF THE FINAL PLAN OF SUBDIVISION WITH LAND AND PROPERTY INFORMATION NSW.
G10. THE PUBLIC FOOTWAY AND ROADWAY FRONTING THE SITE SHALL BE MAINTAINED IN A SAFE AND UNOBSTRUCTED MANNER AT ALL TIMES DURING THE CONSTRUCTION WORKS.
G11. THE CONSTRUCTOR SHALL BE RESPONSIBLE FOR REPAIRING TO THE SATISFACTION OF THE ASSET OWNER, ANY DAMAGE CAUSED TO ANY EXISTING INFRASTRUCTURE WITHIN THE ROAD RESERVE, INCLUDING BUT NOT LIMITED TO KERBS, GUTTERS, FOOTPATHS, VEHICULAR CROSSINGS, STREET SIGNS, SERVICE FITTING COVERS, ETC.
G12. 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.

LOCALITY SKETCH
NOT TO SCALE

NOT FOR CONSTRUCTION

EARTHWORKS NOTES:

E1. ALL TOPSOIL FROM EARTHWORKS AREAS SHOULD BE REMOVED AND STOCKPILED PRIOR TO ANY EARTHWORKS OPERATIONS.
E2. ALL BATTER SLOPES SHALL BE A MAXIMUM OF 4:1 (U.N.O.)
E3. ALL EARTHWORKS OPERATIONS SHALL BE SUPERVISED AND CERTIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER IN ACCORDANCE WITH AS3798 - 2007 SECTION 8.2 LEVEL 1 - INSPECTION AND TESTING.
E4. ALL COMPACTION TEST RESULTS SHALL BE PROVIDED TO THE PRINCIPAL CERTIFYING AUTHORITY AS REQUIRED.
E5. ALL SITE REGRADED AREAS AFTER FORMATION, SHALL BE COVERED WITH A 150mm SELECT TOPSOIL LAYER. TOPSOIL STOCKPILED PRIOR TO EARTHWORKS OPERATIONS CAN BE REUSED FOR THIS PURPOSE PROVIDED ANY DELETERIOUS MATERIAL IS REMOVED PRIOR TO PLACING.
E6. ALL DISTURBED AREAS SHALL BE REVEGETATED AND STABILISED AS SOON AS PRACTICAL AFTER THE COMPLETION OF ANY EARTHWORKS OPERATIONS.
E7. SURPLUS MATERIAL INCLUDING TOPSOIL SHALL BE REMOVED AND DISPOSED OF LAWFULLY OFF SITE.

SEDIMENT & EROSION CONTROL NOTES:

S1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED, PLACED AND MAINTAINED IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL'S GUIDELINES AND THE DEPARTMENT OF HOUSING'S "MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION" MANUAL.
S2. NO CONSTRUCTION WORKS ARE TO COMMENCE ON SITE UNTIL ALL EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND HAVE BEEN INSPECTED AND APPROVED BY THE PRINCIPAL CERTIFYING AUTHORITY.
S3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REGULARLY INSPECTED, IN PARTICULAR AFTER STORMS, AND REPAIRED OR MAINTAINED AS REQUIRED TO ENSURE THE MEASURES CORRECT AND EFFICIENT FUNCTION THROUGHOUT THE DURATION OF THE WORKS, UNTIL SUCH TIME AS THE PRINCIPAL CERTIFYING AUTHORITY AUTHORISES THE REMOVAL OF SUCH MEASURES.
S4. ALL STOCKPILES SHALL BE CLEAR OF ALL TREES AND DRAINAGE LINES (INCLUDING OVERLAND FLOW PATHS) AND PROTECTED FROM EROSION.
S5. DUST CONTROL MEASURES SHALL BE IMPLEMENTED CONTINUOUSLY DURING CONSTRUCTION WORKS.

STORMWATER NOTES:

1. STORMWATER DESIGN CRITERIA:
   MINOR STORM ARI: 10 YEARS
   MAJOR STORM ARI: 100 YEARS
   IFD DATA LOCALITY: FRENCHS FOREST
2. PIPES DN375 AND LARGER TO BE STEEL REINFORCED CONCRETE PIPES CLASS '2' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS U.N.O.
3. PIPES DN300 AND SMALLER SHALL BE GRADE SH (SEWER GRADE) uPVC WITH RUBBER RING JOINTS.
4. EQUIVALENT STRENGTH FIBRE REINFORCED CONCRETE PIPES MAY BE USED UP TO DN450.
5. PIPES FOR SUB-SOIL DRAINS SHALL BE SLOTTED 100MM DIAMETER CLASS 1000 WRAPPED IN GEOFABRIC, U.O.N, COMPLYING WITH THE REQUIREMENTS OF AS 2439.
6. PRECAST PITS, WHERE ALLOWED, AND THE INSITU BASE SHALL COMPLY WITH THE REQUIREMENT OF THE MANUFACTURER.
7. GEOFABRIC FILTER SHALL BE PERMEABLE, NON-WOVEN FABRIC MANUFACTURED FROM A POLYMER SUCH AS POLYPROPYLENE OR POLYESTER OF MASS NOT LESS THAN 135G/M2.
8. ALL PIPES SHALL BE PLACED CENTRALLY WITHIN THE TRENCH WITH EQUAL CLEARANCE EACH SIDE.
9. ALL PIPES SHALL BE BACKFILLED WITH GRANULAR MATERIAL SUCH AS QUARRY FINES OR COARSE RIVER SAND TO A MINIMUM OF 150MM ABOVE THE PIPE. THE GRANULAR MATERIAL SHALL BE PLACED IN 150MM THICK MAXIMUM LAYERS AND COMPACTED TO ACHIEVE A DENSITY INDEX (ID) OF 70%. FREQUENCIES OF COMPACTION TESTS FOR TRENCHES SHALL BE 1 TEST PER 2 LAYERS PER 40 LINEAR METRE.
10. BACKFILL THE REMAINDER OF THE TRENCH ABOVE THE SAND TO SUBGRADE LEVEL WITH TRENCH MATERIAL. PLACE AND COMPACT MATERIALS IN LAYERS NOT EXCEEDING 150MM LOOSE THICKNESS. MATERIAL LOWER THAN 500MM BELOW SUBGRADE LEVEL SHALL BE COMPACTED TO AT LEAST 95% OF STANDARD MAXIMUM DRY DENSITY. THE TOP 500MM BELOW PAVEMENT SUBGRADE LEVELS SHALL BE COMPACTED TO AT LEAST 100% STANDARD MAXIMUM DRY DENSITY.
11. UNLESS OTHERWISE DETAILED OR PERMITTED, THE MINIMUM GRADE OF ALL PIPE WORKS SHALL BE 1.0%, AND HAVE MINIMUM 300mm COVER.

REV.	DES.	DATE	VER.	DESCRIPTION
02	T.T.	27/05/20	A.M.	AMENDED - ISSUE FOR DA
01	T.T.	08/05/20	A.M.	ISSUE FOR DA

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PROJECT VERIFIER'S SIGNATURE: DATE:

CLIENT: BUNNINGS warehouse

C&M CONSULTING ENGINEERS
CIVIL AND HYDRAULIC ENGINEERING DESIGN AND PROJECT MANAGEMENT
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11 - 13 BROOKHOLLOW AVE
NORWEST NSW 2153
PHONE: (02) 9680 3100
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ABN 21 118 134 240

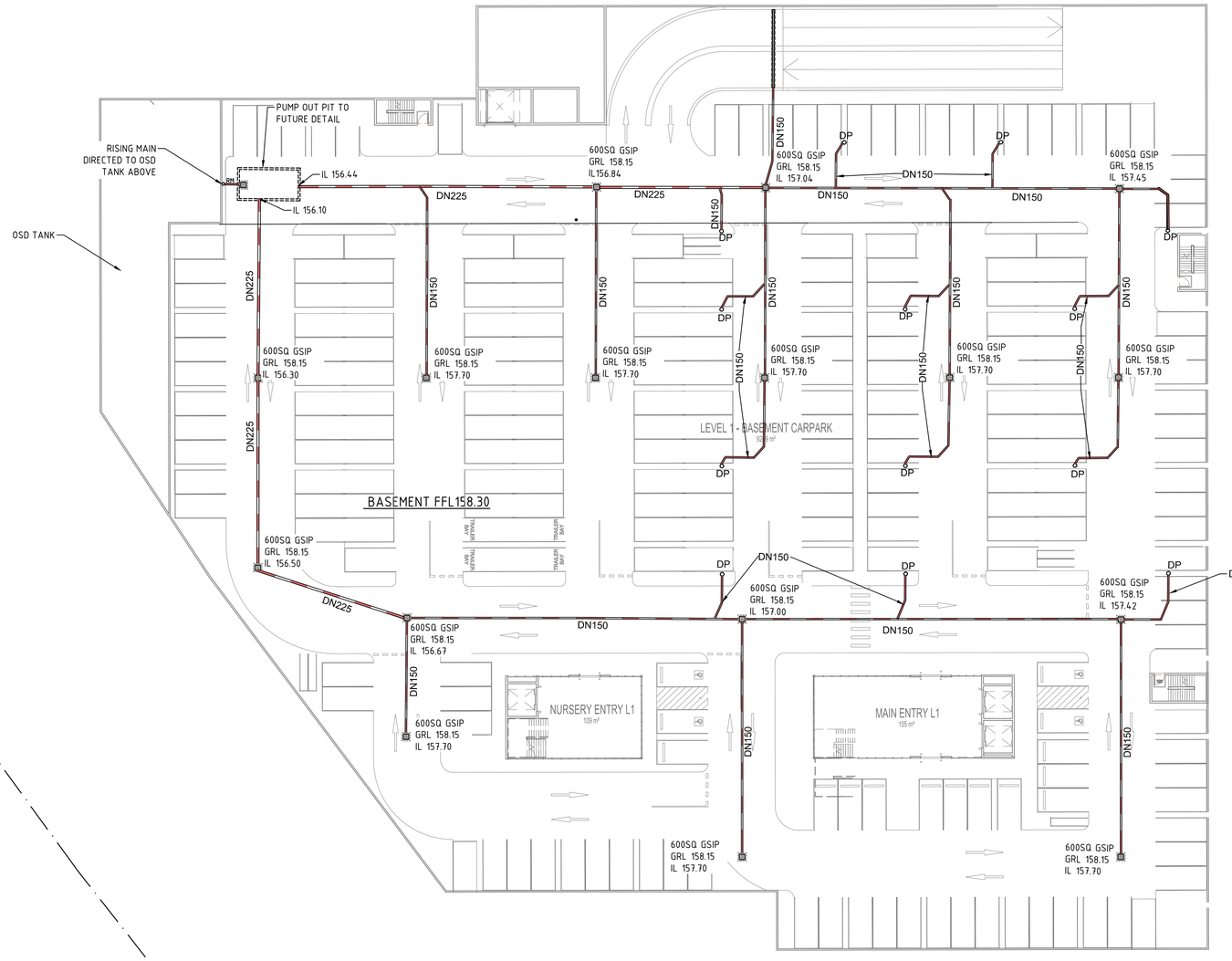
DESIGNER	T.TOMIC
ENGINEER	P.OBRIEN
VERIFIER	A.MANCONE
DATE	JANUARY 2020
LGA	NORTHERN BEACHES
SCALE @ A1	NIL

357-373 WARRINGAH RD, FRENCHS FOREST

COVER SHEET, DRAWING INDEX, GENERAL NOTES, LEGEND & LOCALITY SKETCH

STATUS: DEVELOPMENT APPLICATION | DRAWING No. 02240_100 | REVISION 02

A1



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6 4 2
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NOT FOR CONSTRUCTION

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ENGINEER	P.OBRIEN
VERIFIER	A.MANCONE
DATE	JANUARY 2020
LGA	NORTHERN BEACHES
SCALE @ A1	1:300

357-373 WARRINGAH RD, FRENCHS FOREST

GENERAL ARRANGEMENT BASEMENT PLAN

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	02240_201	02

A1


RETAINING WALL MAX HEIGHT 1.2m
CONNECT SITE DRAINAGE TO EXISTING COUNCIL KERB INLET PIT GRL 157.37 IL 156.05
900SQ GSIP W/ ENVIROPOD GRL 158.40 IL 156.80
OUTLET PIPE LOCATIONS SUBJECT TO ARBORIST ADVICE
900SQ GSIP W/ ENVIROPOD GRL 158.80 IL 157.15
600SQ GSIP W/ ENVIROPOD GRL 160.47 IL 159.77
900SQ GSIP W/ ENVIROPOD GRL 160.74 IL 158.39
900SQ GSIP W/ ENVIROPOD GRL 161.16 IL 158.85
900SQ GSIP W/ ENVIROPOD GRL 161.22 IL 158.92
900SQ GSIP W/ ENVIROPOD GRL 160.88 IL 159.31
600SQ GSIP W/ ENVIROPOD GRL 160.55 IL 159.69
600SQ GSIP W/ ENVIROPOD GRL 160.50 IL 159.78
150mm WIDE GRATED TRENCH DRAIN WITH CLASS - D GRATE AND FRAME
600SQ GSIP W/ ENVIROPOD GRL 160.75 IL 160.25
GOODS INWARDS
900SQ ACCESS HATCH TO DCP ON 2m X 1.2m PAD
OSD & RAINWATER TANK (REFER DWG 621 & 622 FOR DETAILS)
BUILDING MATERIALS & LANDSCAPE YARD
BUNNINGS GROUND FLOOR FFL161.30
TIMBER TRADE SALES
MAKE SMOOTH CONNECTION TO EXISTING GROUND LEVEL ALONG DEMOLISHED KERB
900SQ ACCESS HATCH TO STORMFILTER CHAMBER ON 2m X 1.2m PAD
IL 157.88
RL160.40
900SQ JP GRL 161.39 IL 158.20
30 x 690 PSORB STORMFILTER CARTRIDGES IN THE CHAMBER WITHIN THE OSD TANK REFER DETAIL ON SHEET 622
28kL RAINWATER TANK WITH MINIMUM OF 3000m² OF ROOF AREA DRAINING TO THE TANK
600SQ GSIP W/ ENVIROPOD GRL 160.40 IL 159.85
150mm WIDE GRATED TRENCH DRAIN WITH CLASS - D GRATE AND FRAME
600SQ GSIP W/ ENVIROPOD GRL 160.40 IL 160.05
600SQ GSIP W/ ENVIROPOD GRL 161.05 IL 159.60
900SQ JP GRL 161.30 IL 158.55
NURSERY ENTRY
BUNNINGS GROUND FLOOR FFL161.30
MAIN ENTRY
900SQ GSIP W/ ENVIROPOD GRL 160.85 IL 159.95
900SQ GSIP W/ ENVIROPOD GRL 160.60 IL 158.70
900SQ GSIP W/ ENVIROPOD GRL 161.05 IL 159.30
900SQ GSIP W/ ENVIROPOD GRL 161.40 IL 159.67
150mm WIDE GRATED TRENCH DRAIN WITH CLASS - D GRATE AND FRAME
WARRINGAH ROAD
RODBOROUGH ROAD
SCALE 1:300

NOT FOR CONSTRUCTION

REV.	DES.	DATE	VER.	DESCRIPTION
04	T.T.	27/05/2020	A.M.	AMENDED - ISSUE FOR DA
03	T.T.	25/05/2020	A.M.	AMENDED - ISSUE FOR DA
02	T.T.	22/05/20	A.M.	AMENDED - ISSUE FOR DA
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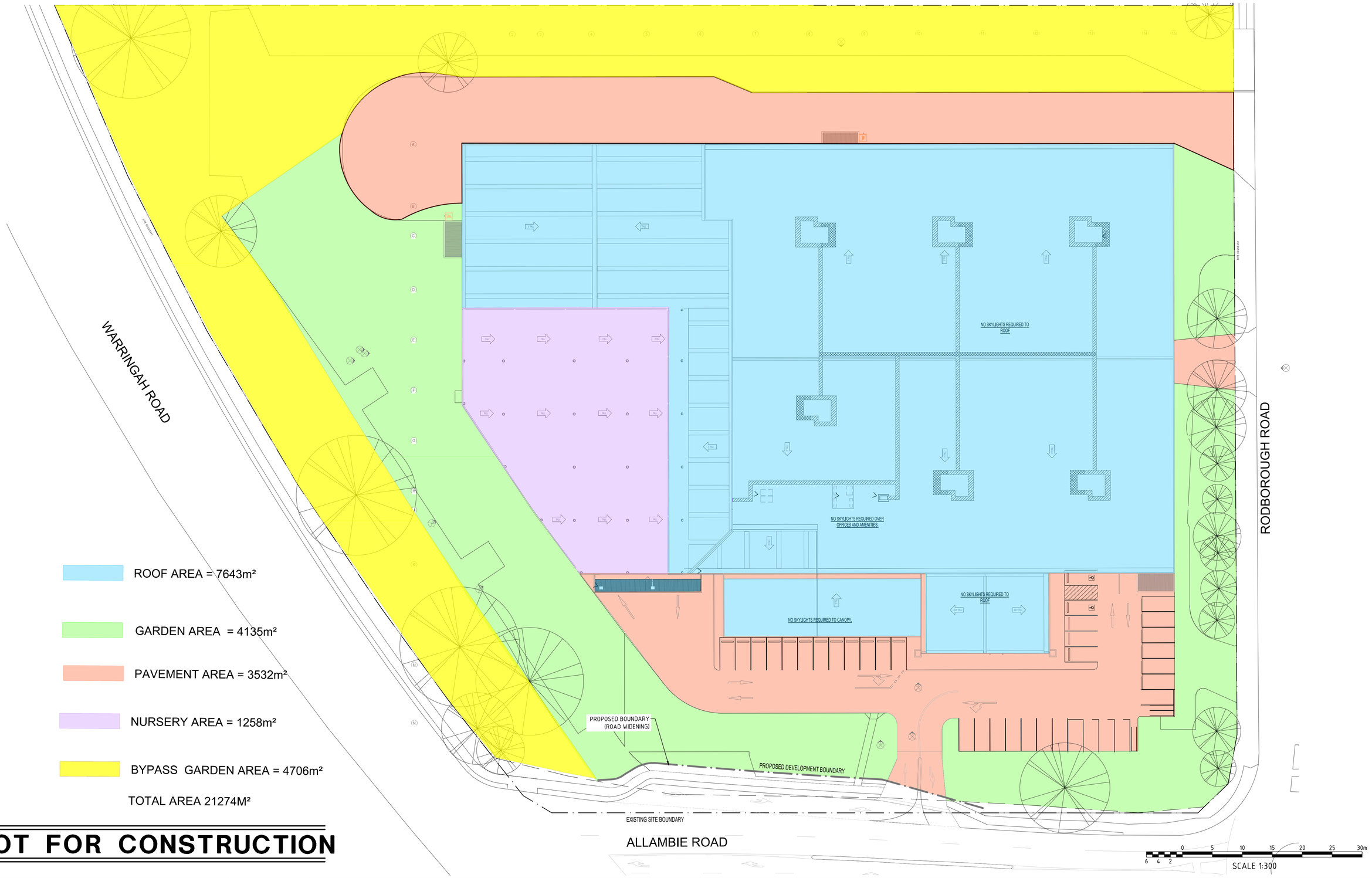
DESIGNER	T.TOMIC	DATE	JANUARY 2020
ENGINEER	P.OBRIEN	LGA	NORTHERN BEACHES
VERIFIER	A.MANCONE	SCALE @ A1	1:300

357-373 WARRINGAH RD, FRENCHS FOREST

GENERAL ARRANGEMENT GROUND FLOOR PLAN

STATUS: DEVELOPMENT APPLICATION | DRAWING No. 02240_202 | REVISION 04

A1



NOT FOR CONSTRUCTION

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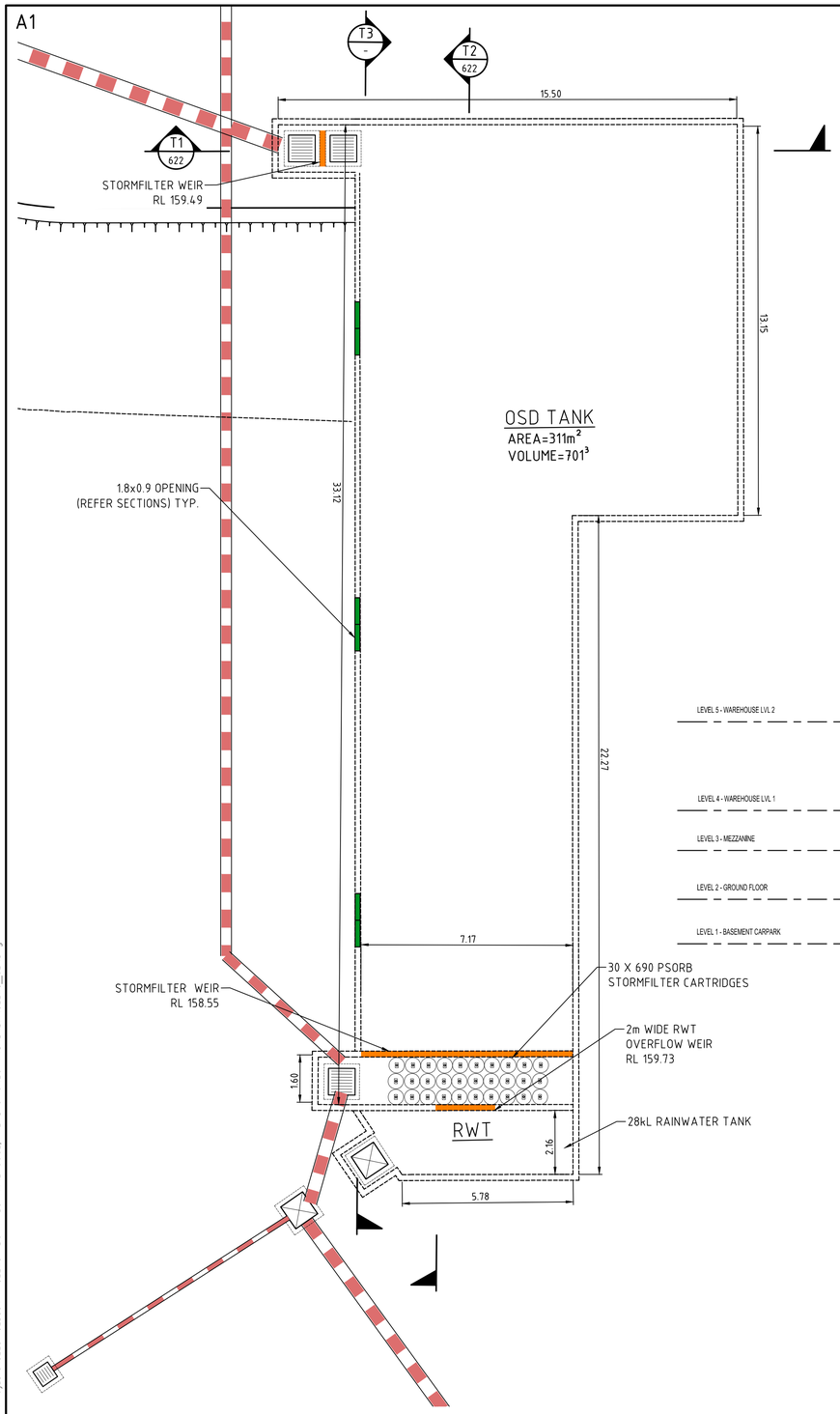
DESIGNER	T.TOMIC	DATE	JANUARY 2020
ENGINEER	P.OBRIEN	LGA	NORTHERN BEACHES
VERIFIER	A.MANCONE	SCALE @ A1	1:300

357-373 WARRINGAH RD, FRENCHS FOREST

STORMWATER DRAINAGE CATCHMENT PLAN

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	02240_601	02

A1



OSD & RWT PLAN

SCALE
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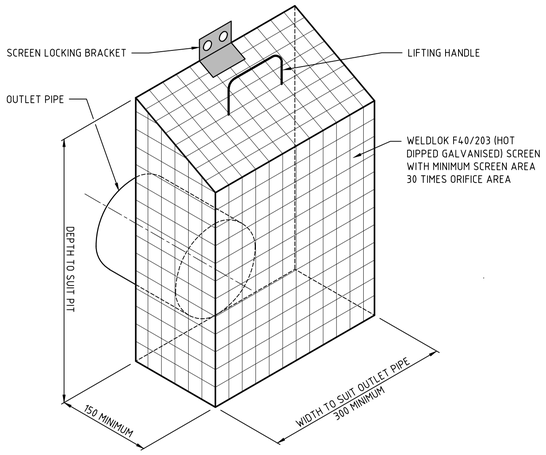
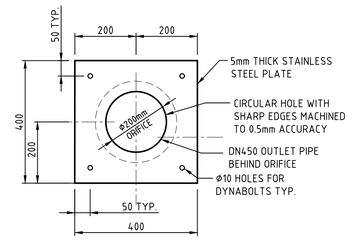


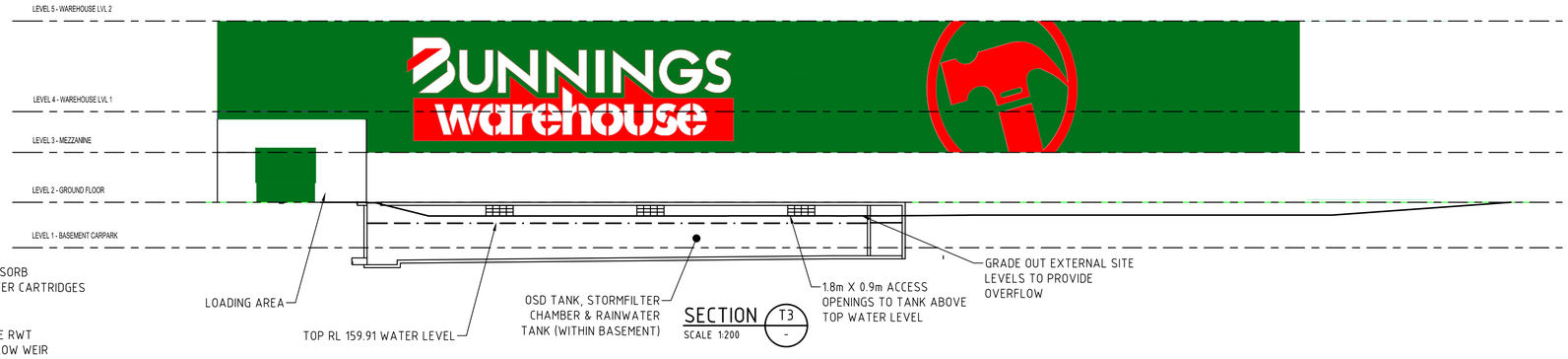
TRASH SCREEN DETAIL (TYPICAL)

SCALE 1:5



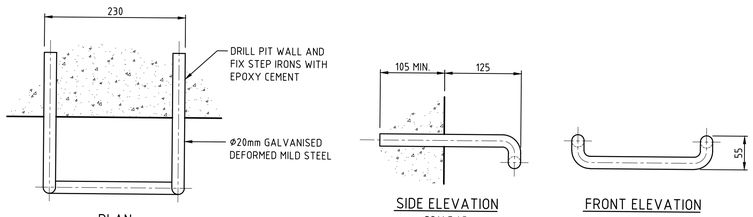
ORIFICE PLATE DETAIL

SCALE 1:10



SECTION T3 -

SCALE 1:200



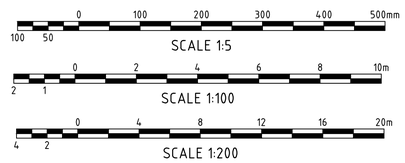
PLAN
SCALE 1:5

SIDE ELEVATION
SCALE 1:5

FRONT ELEVATION
SCALE 1:5

TYPICAL STEP IRON DETAIL

SCALE 1:5



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CLIENT

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DESIGNER	T.TOMIC
ENGINEER	P.OBRIEN
VERIFIER	A.MANCONE
DATE	JANUARY 2020
LGA	NORTHERN BEACHES
SCALE @ A1	AS NOTED

357-373 WARRINGAH RD, FRENCHS FOREST

OSD TANK & DETAILS

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	02240_621	02

A1

NOT FOR CONSTRUCTION

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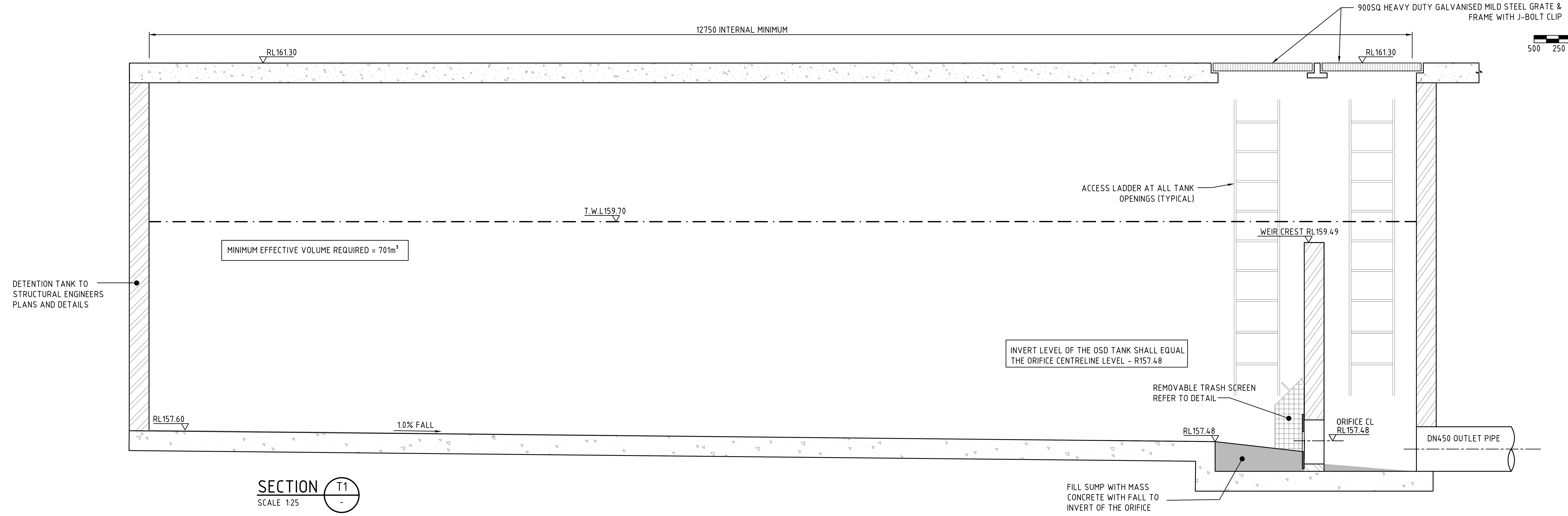

SECTION T1 -
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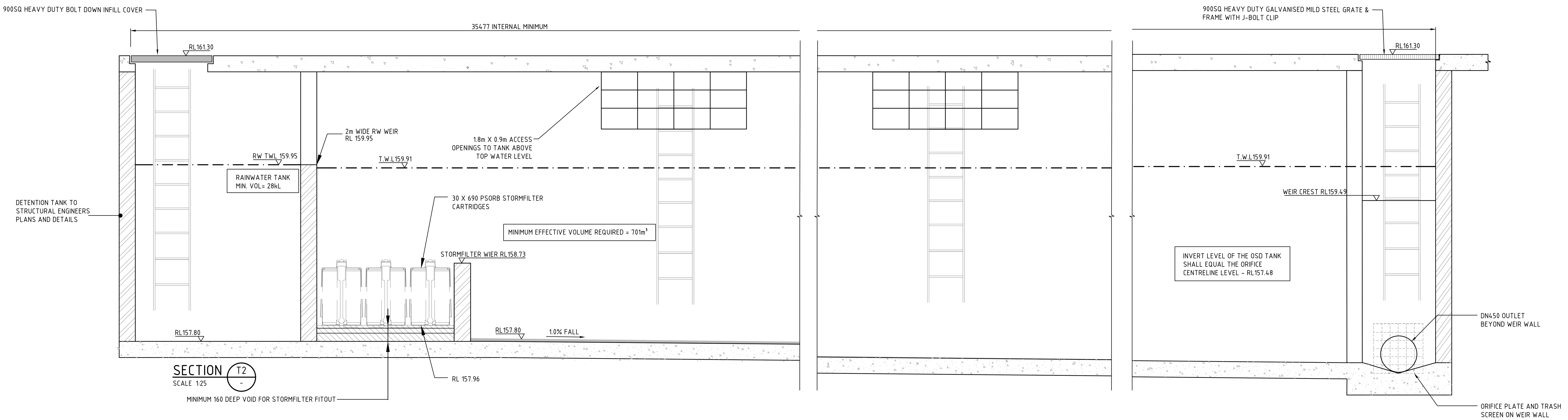

SECTION T2 -
SCALE 1:25

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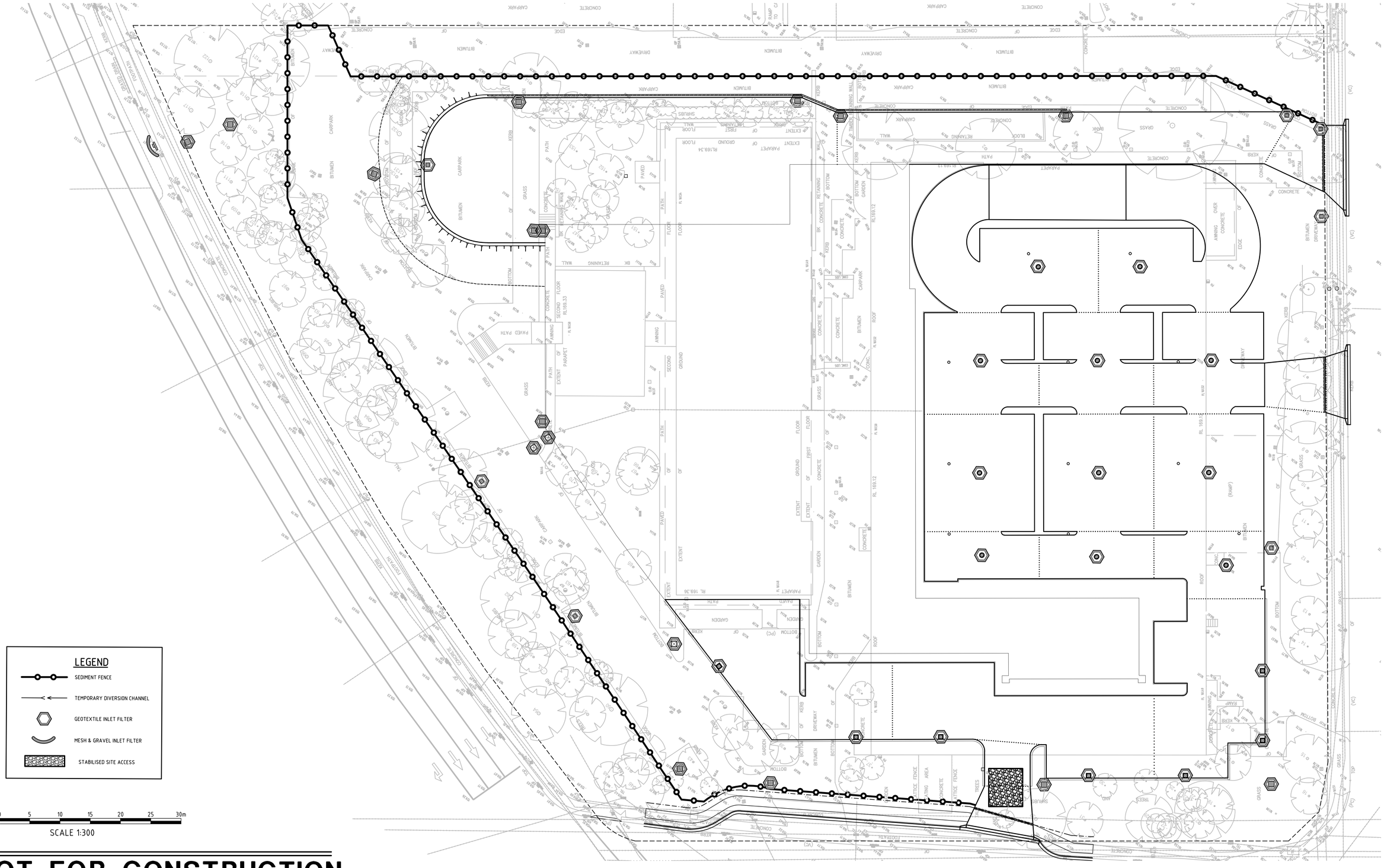
DESIGNER	T.TOMIC	DATE	JANUARY 2020
ENGINEER	P.OBRIEN	LGA	NORTHERN BEACHES
VERIFIER	A.MANCONE	SCALE @ A1	1:25

357-373 WARRINGAH RD, FRENCHS FOREST

OSD SECTIONS

STATUS DEVELOPMENT APPLICATION | DRAWING No. 02240_622 | REVISION 02

A1



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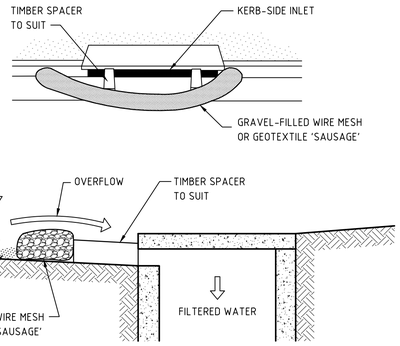
DESIGNER	T.TOMIC	DATE	JANUARY 2020
ENGINEER	P.OBRIEN	LGA	NORTHERN BEACHES
VERIFIER	A.MANCONE	SCALE @ A1	1:300

357-373 WARRINGAH RD, FRENCHS FOREST

SEDIMENT & EROSION CONTROL - PLAN

STATUS: DEVELOPMENT APPLICATION | DRAWING No. 02240_701 | REVISION 02

A1

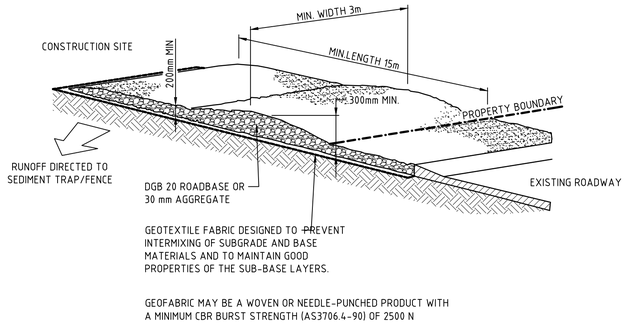


CONSTRUCTION NOTES:

1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. 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.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. 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.

MESH AND GRAVEL INLET FILTER DETAIL

NOT TO SCALE

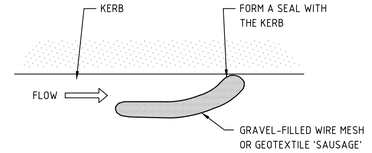


CONSTRUCTION NOTES:

1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

STABILISED SITE ACCESS DETAIL

NOT TO SCALE

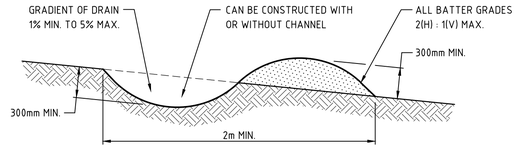


CONSTRUCTION NOTES:

1. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH APPROXIMATELY 1.0m IN LENGTH AND FILL IT WITH 25mm TO 50mm GRAVEL.
2. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
3. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE KERB.
4. 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.

MESH AND GRAVEL KERB FILTER DETAIL

NOT TO SCALE



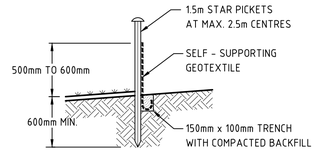
NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE UPSLOPE LENGTH IS 80 METRES.

CONSTRUCTION NOTES:

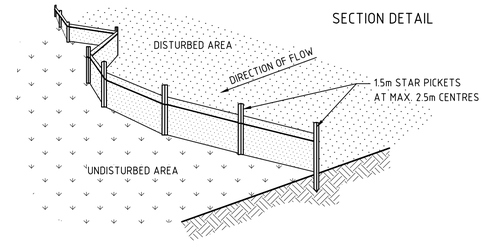
1. BUILD WITH GRADIENTS BETWEEN 1% AND 5%.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED.
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

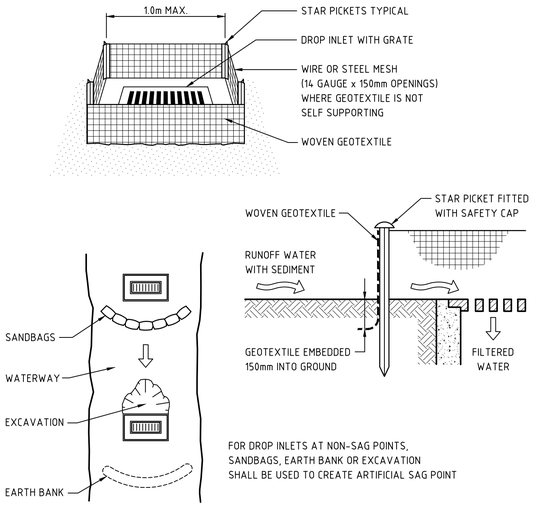
TEMPORARY DIVERSION CHANNEL (LOW FLOW)

NOT TO SCALE



SECTION DETAIL





FOR DROP INLETS AT NON-SAG POINTS, SANDBAGS, EARTH BANK OR EXCAVATION SHALL BE USED TO CREATE ARTIFICIAL SAG POINT

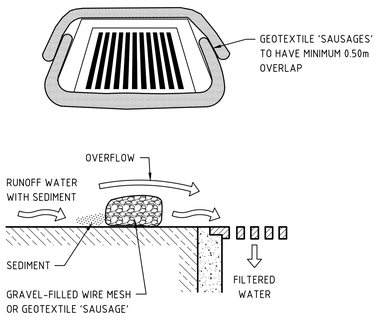
CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
3. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER DETAIL

FOR PITS WITHIN LANDSCAPED AREAS

NOT TO SCALE



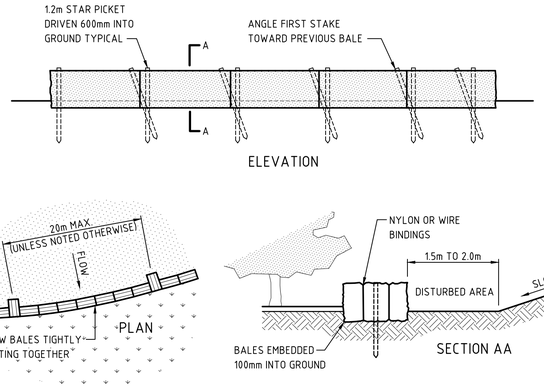
CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER DETAIL

FOR PITS WITHIN PAVEMENT AREAS

NOT TO SCALE

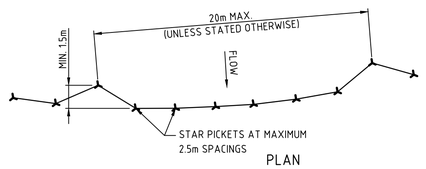


CONSTRUCTION NOTES:

1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
3. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2m STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
5. WHERE STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1.0m TO 2.0m DOWNSLOPE FROM THE TOE.
6. ESTABLISH A MAINTENANCE PROGRAMME THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.

STRAW BALE FILTER DETAIL

NOT TO SCALE



CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO THE GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150-mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION

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REV.	DES.	DATE	VER.	DESCRIPTION
02	T.T.	27/05/20	A.M.	AMENDED - ISSUE FOR DA
01	T.T.	08/05/20	A.M.	ISSUE FOR DA

THIS DRAWING IS NOT TO BE USED FOR TENDER/CONSTRUCTION UNLESS ENDORSED BELOW

PROJECT VERIFIER'S SIGNATURE: DATE:

CLIENT: BUNNINGS warehouse

C&M CONSULTING ENGINEERS

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DATE	JANUARY 2020
LGA	NORTHERN BEACHES
SCALE @ A1	NIL

357-373 WARRINGAH RD, FRENCHS FOREST

SEDIMENT & EROSION CONTROL- DETAILS

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	02240_702	02