

PROJECT: RESIDENTIAL DEVELOPMENT

PLANSET: CONCEPT STORMWATER DRAINAGE PLAN

CLIENT: KINGSFORD PROPERTY DEVELOPMENTS PTY LTD

DRAWING LIST		
DWG NO.	REV	DWG TITLE
GENERAL		
PS01-A000	C	COVER SHEET
CONSTRUCTION MANAGEMENT WORKS		
PS01-B300	C	SEDIMENT AND EROSION CONTROL PLAN
PS01-B310	A	SEDIMENT AND EROSION CONTROL DETAILS
DRAINAGE WORKS		
PS01-E100	C	STORMWATER PLAN - GROUND FLOOR
PS01-E110	B	STORMWATER PLAN - BASEMENT
PS01-E200	B	DRAINAGE DETAIL PLAN
PS01-E600	B	DETENTION CATCHMENT PLAN
PS01-E700	B	WATER QUALITY CATCHMENT PLAN



LOCALITY PLAN
NOT TO SCALE

LGA: WOOLLAHRA MUNICIPAL COUNCIL

351-353 NEW SOUTH HEAD RD, DOUBLE BAY, NSW, 2028

DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	CONSULTING ENGINEERS	DRAWING TITLE					
C	MINOR AMENDMENT	19/07/2021	GM	EZ	SL	JF								DISCLAIMER & COPYRIGHT This plan must not be used for construction unless signed as approved by principal certifying authority. All measurements in millimetres unless otherwise specified. This drawing must not be reproduced in whole or part without prior written consent of Martens & Associates Pty Ltd. (C) Copyright Martens & Associates Pty Ltd	PROJECT NAME/PLANSET TITLE RESIDENTIAL DEVELOPMENT CONCEPT STORMWATER DRAINAGE PLAN 351-353 NEW SOUTH HEAD RD, DOUBLE BAY, NSW	martens & Associates Pty Ltd Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: www.martens.com.au	Consulting Engineers Environment Water Geotechnical Civil	COVER SHEET
B	SECTION 68 TO OPERATE ONSITE SYSTEM	16/07/2021	GM	EZ	SL	JF												
A	INITIAL RELEASE	21/05/2019	LL	CG/CL	SZ	JF												
A1 / A3 LANDSCAPE [A1L_C_v02.0.01]																		

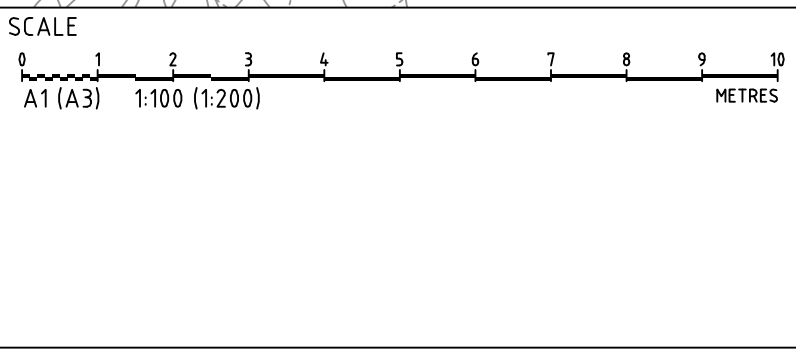
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KEY:

- SITE BOUNDARY
- SEDIMENT FENCE
- EARTH BANK (LOW FLOW) WITH GEOTEXTILE LINING FOR UPSTREAM STORM WATER DIVERSION
- MESH AND GRAVEL/GEOTEXTILE INLET FILTER
- INDICATIVE STOCKPILE
- STABILISED SITE ACCESS WITH SHAKER PAD

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
C	MINOR AMENDMENT	19/07/2021	GM	EZ	SL	JF
B	SECTION 68 TO OPERATE ONSITE SYSTEM	16/07/2021	GM	EZ	SL	JF
A	INITIAL RELEASE	21/05/2019	LL	CG/CL	SZ	JF



GRID
MGA

DATUM
mAHD

PROJECT MANAGER
JF

CLIENT
KINGSFORD PROPERTY DEVELOPMENTS

PROJECT NAME/PLANSET TITLE
RESIDENTIAL DEVELOPMENT
CONCEPT STORMWATER DRAINAGE PLAN
351-353 NEW SOUTH HEAD RD, DOUBLE BAY, NSW

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DEVELOPMENT APPLICATION

DRAWING TITLE
SEDIMENT AND EROSION CONTROL PLAN

PROJECT NO. P1806950	PLANSET NO. PS01	RELEASE NO. R04	DRAWING NO. PS01-B300	REVISION C
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DRAWING ID: P1806950-PS01-R04-B300

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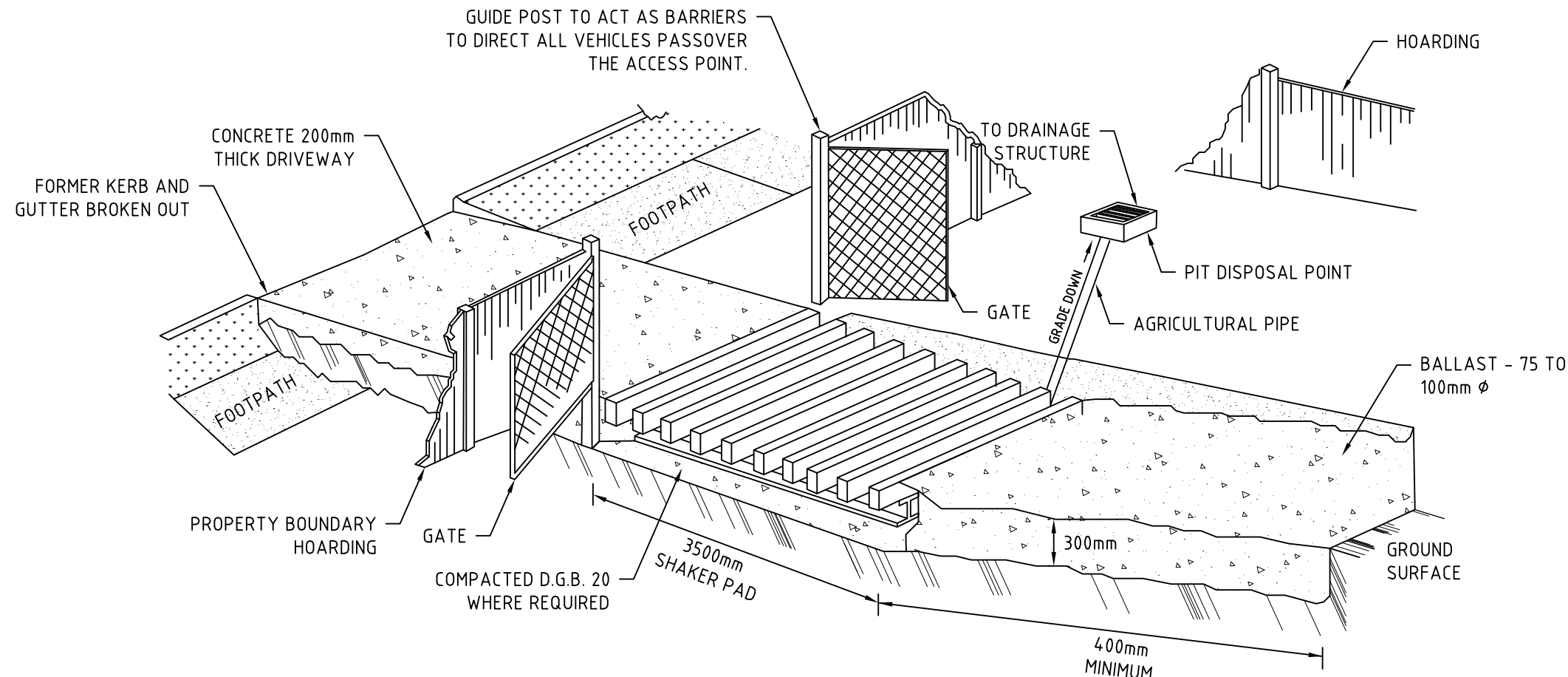
A1 / A3 LANDSCAPE (A1LC_v02.0.01)

STABILISED ACCESS POINT

TYPE II SAP

THE TYPE II SAP DESIGN IS MORE DEFINED IN THAT IT REQUIRES AN AREA OF BALLAST WITHIN THE SITE COMBINED WITH A SHAKER PAD; ADJACENT THE SHAKER PAD AND IN THE PUBLIC WAY IS A TEMPORARY (CONCRETE) VEHICULAR CROSSING. (SEE DIAGRAM)

STABILISED ACCESS POINT - TYPE 2



IN BOTH TYPE I AND TYPE II SAP'S, THE TEMPORARY VEHICULAR CROSSING MUST:

- CONNECT TO AN EXISTING GUTTER LAYBACK (WHERE THE KERB AND GUTTER EXIST) ; IF A GUTTER LAYBACK DOES NOT EXIST THEN THE CONNECTION MUST BE MADE TO THE GUTTER BY REMOVING THE ADJACENT KERB SECTION ONLY.
- CONNECT TO A DISH CROSSING (WHERE KERB AND GUTTER DOES NOT EXIST); IF A DISH CROSSING DOES NOT EXIST, THEN IT MUST BE CONSTRUCTED IN ACCORDANCE WITH DETAILS CONTAINED IN COUNCIL'S ISSUED FOOTPATH CROSSING LEVELS.

IT SHOULD BE NOTED THAT THESE TYPES OF SAPS ARE CONSIDERED TO BE APPLICABLE FOR THE MAJORITY OF ACTIVITIES HOWEVER SOME SITES MAY REQUIRE SPECIAL CONSIDERATION.

SHAKER PAD (CATTLE GRID)

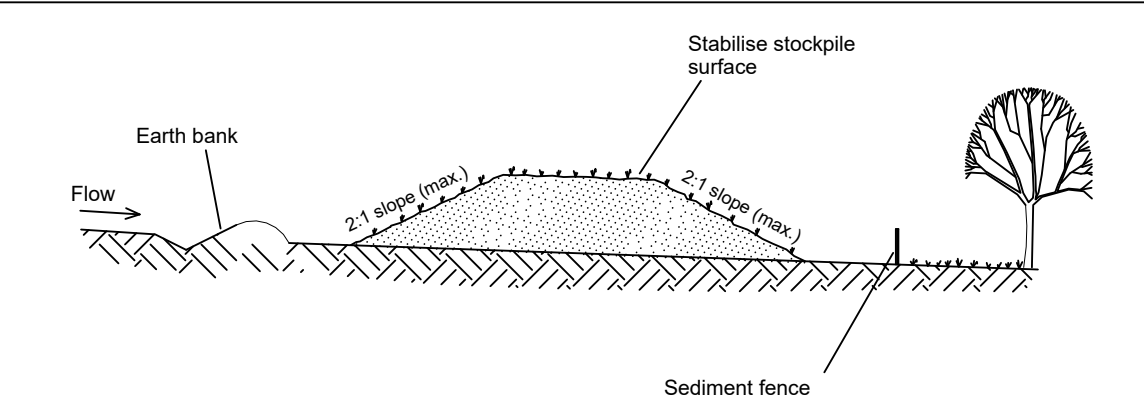
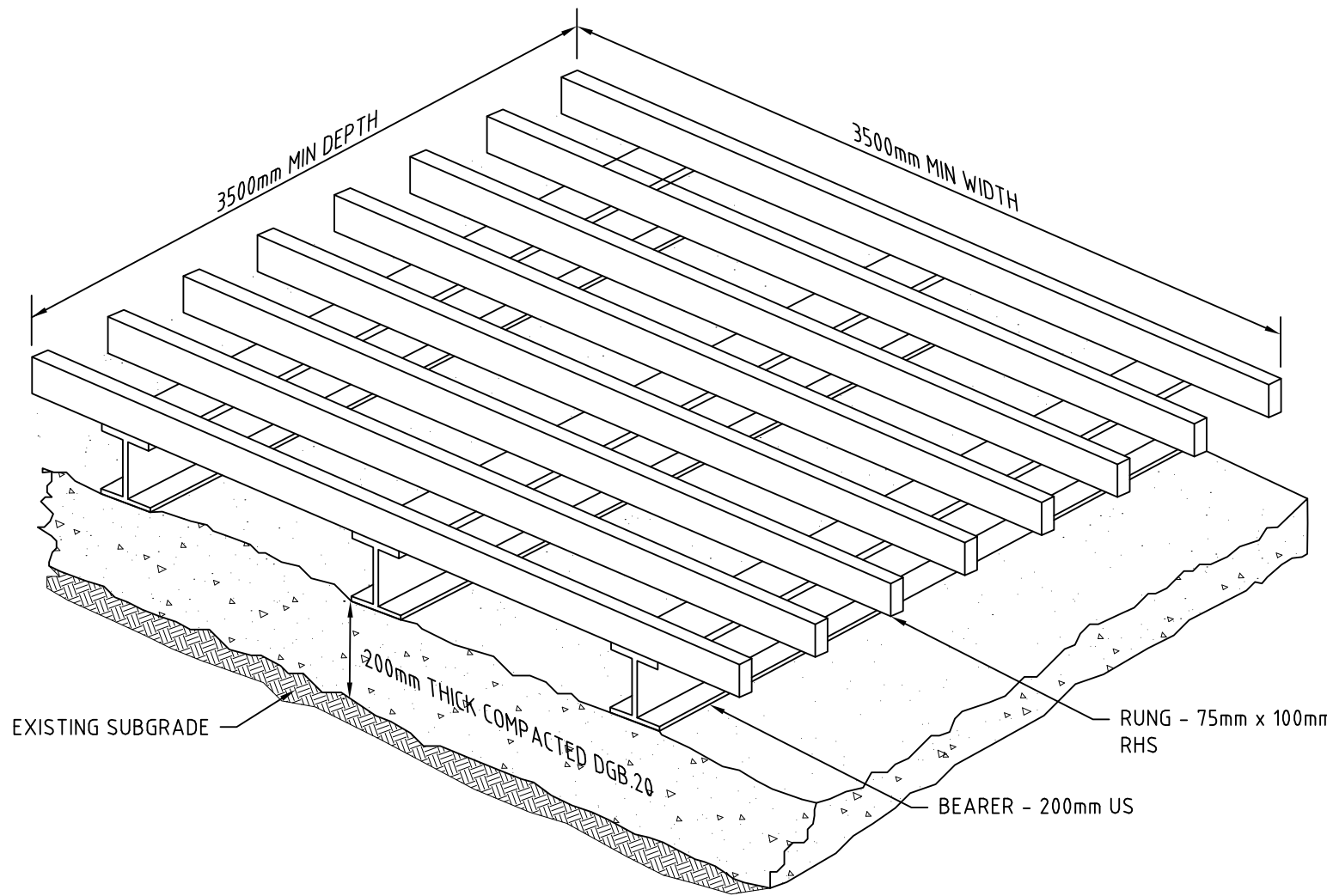
A CORRECTLY DESIGNED AND INSTALLED SHAKER PAD WILL ASSIST IN PREVENTING SEDIMENT TRANSFER FROM A SITE. ANY STABILISED ACCESS POINT (SAP) CAN BE DESIGNED WITH A SHAKER PAD (COMPULSOPRY IN TYPE II SAP'S)

SHAKER PADS CAN BE DESIGNED AND CONSTRUCTED TO ENABLE RE-USE ON FUTURE PROJECTS.

THE SHAKER PAD:

- MUST BE DESIGNED AND CERTIFIED BY A PRACTICING STRUCTURAL ENGINEER. THE CERTIFIED DESIGN SHOULD BE SUBMITTED WITH THE RELEVANT APPLICATION.
- CAN BE CONSTRUCTED FROM ANY SUITABLE MATERIAL.
- MUST BE LOCATED ON A SUITABLY PREPARED AND COMPACTED SUB-GRADE/BASE MATERIAL.
- MUST BE SITUATED SUCH THAT THE RUNGS OF THE SHAKER PAD ARE LEVEL WITH THE ADJOINING NATURAL SURFACE.
- MUST BE A MINIMUM OF 3.5m IN LENGTH.
- MUST BE A MINIMUM OF 3.5m IN WIDTH.
- MUST HAVE CLEAR SPACING BETWEEN RUNGS OF 200 - 250mm.
- RUNGS MUST HAVE A MAXIMUM WIDTH (BEARING AREA) OF 75mm.
- MUST HAVE A MINIMUM CLEAR DEPTH OF 300mm IE FORM THE ROP OF THE RUNG TO THE FINISHED SUB-GRADE/BASE LEVEL.

THE SHAKER PAD MUST BE PROVIDED WITH SUITABLE BARRIERS AT THE SIDES TO ENSURE THAT ALL TYERS OF VEHICLES LEAVING THE SITE TRAVERSE THE DEVICE.

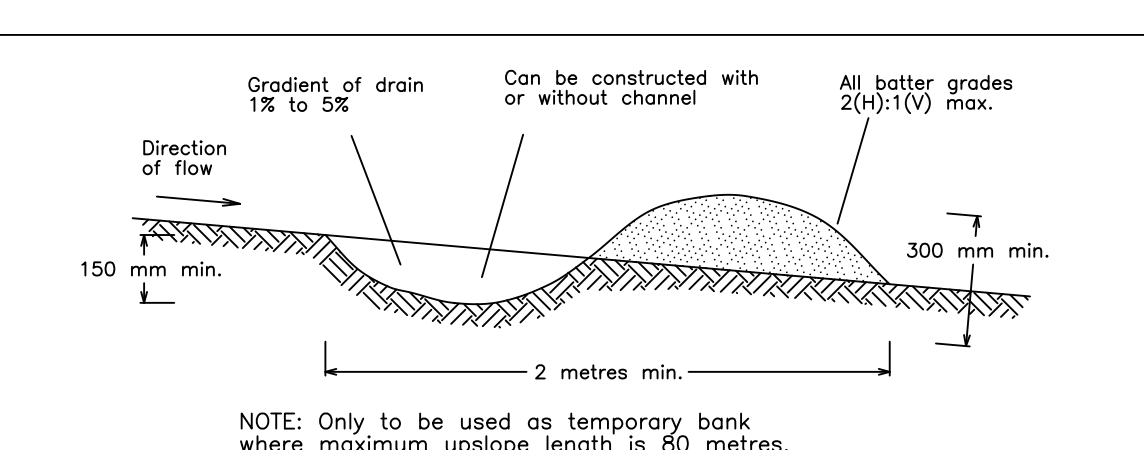


Construction Notes

- Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
- Construct on the contour as low, flat, elongated mounds.
- Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
- Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the C-factor to less than 0.10.
- Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

STOCKPILES

SD 4-1

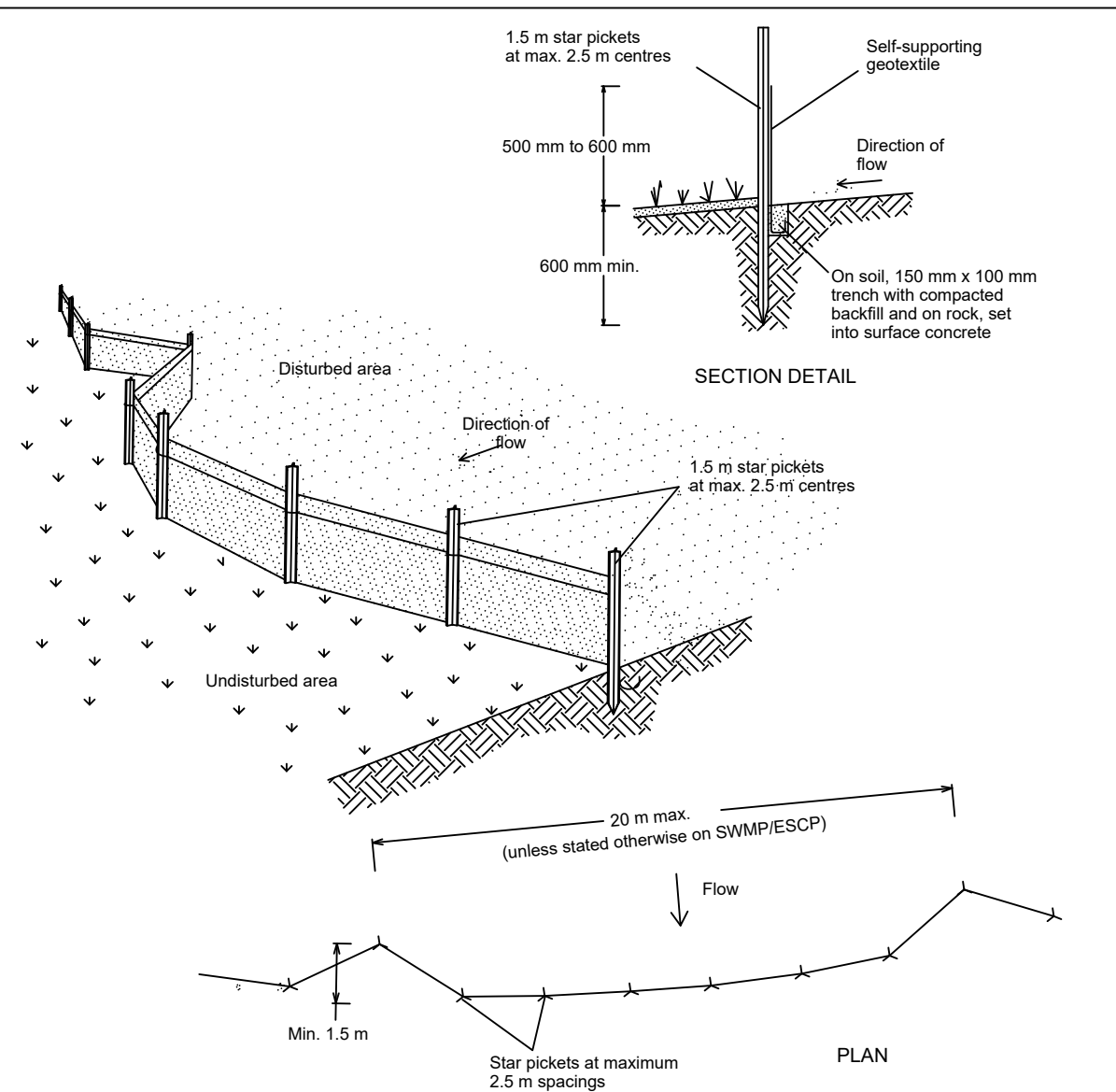


Construction Notes

- Build with gradients between 1 percent and 5 percent.
- Avoid removing trees and shrubs if possible - work around them.
- Ensure the structures are free of projections or other irregularities that could impede water flow.
- Build the drains with circular, parabolic or trapezoidal cross sections, not V shaped.
- Ensure the banks are properly compacted to prevent failure.
- Complete permanent or temporary stabilisation within 10 days of construction.

EARTH BANK (LOW FLOW)

SD 5-5

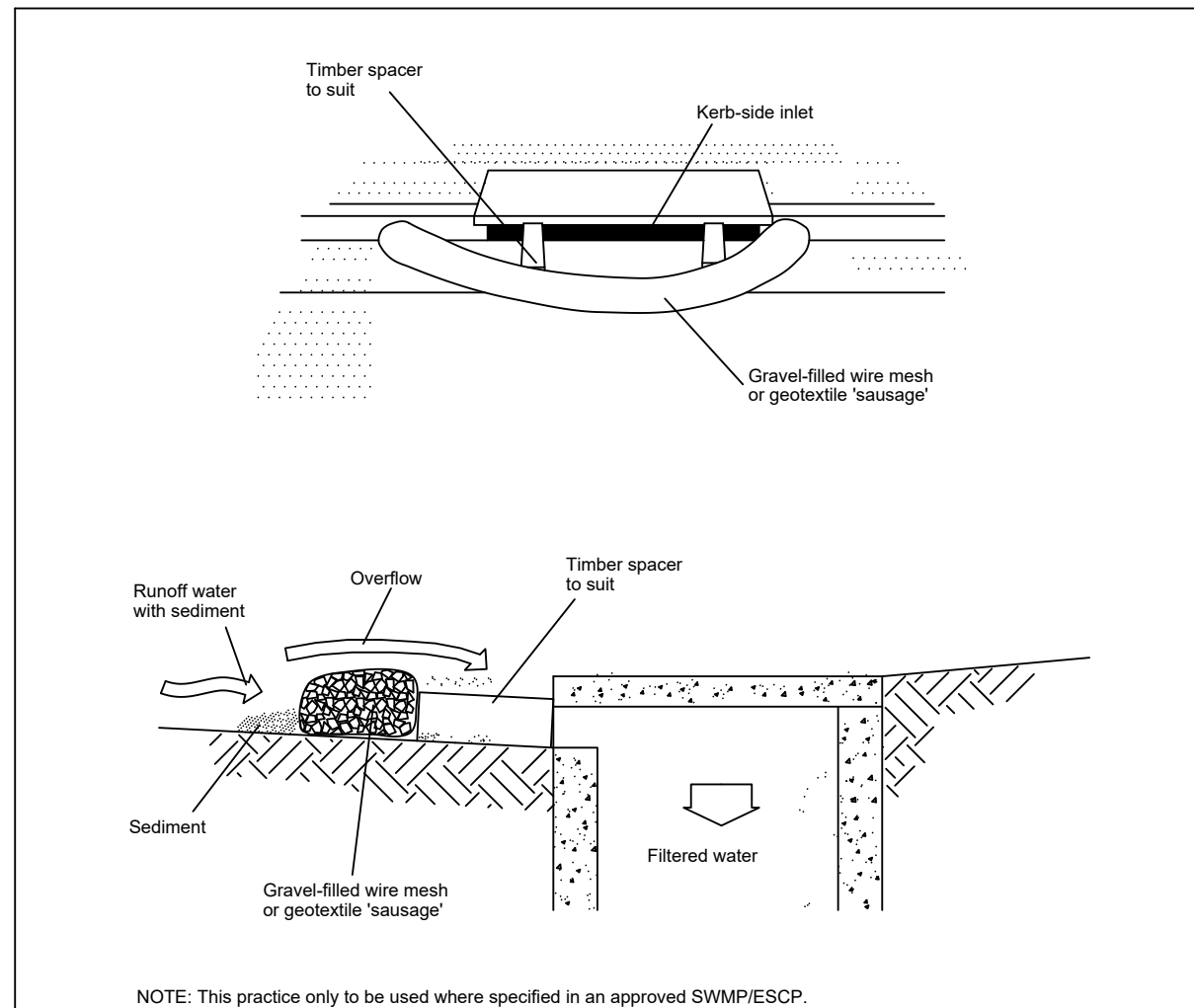


Construction Notes

- 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.
- Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
- Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
- 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.
- Join sections of fabric at a support post with a 150-mm overlap.
- Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SEDIMENT FENCE

SD 6-8



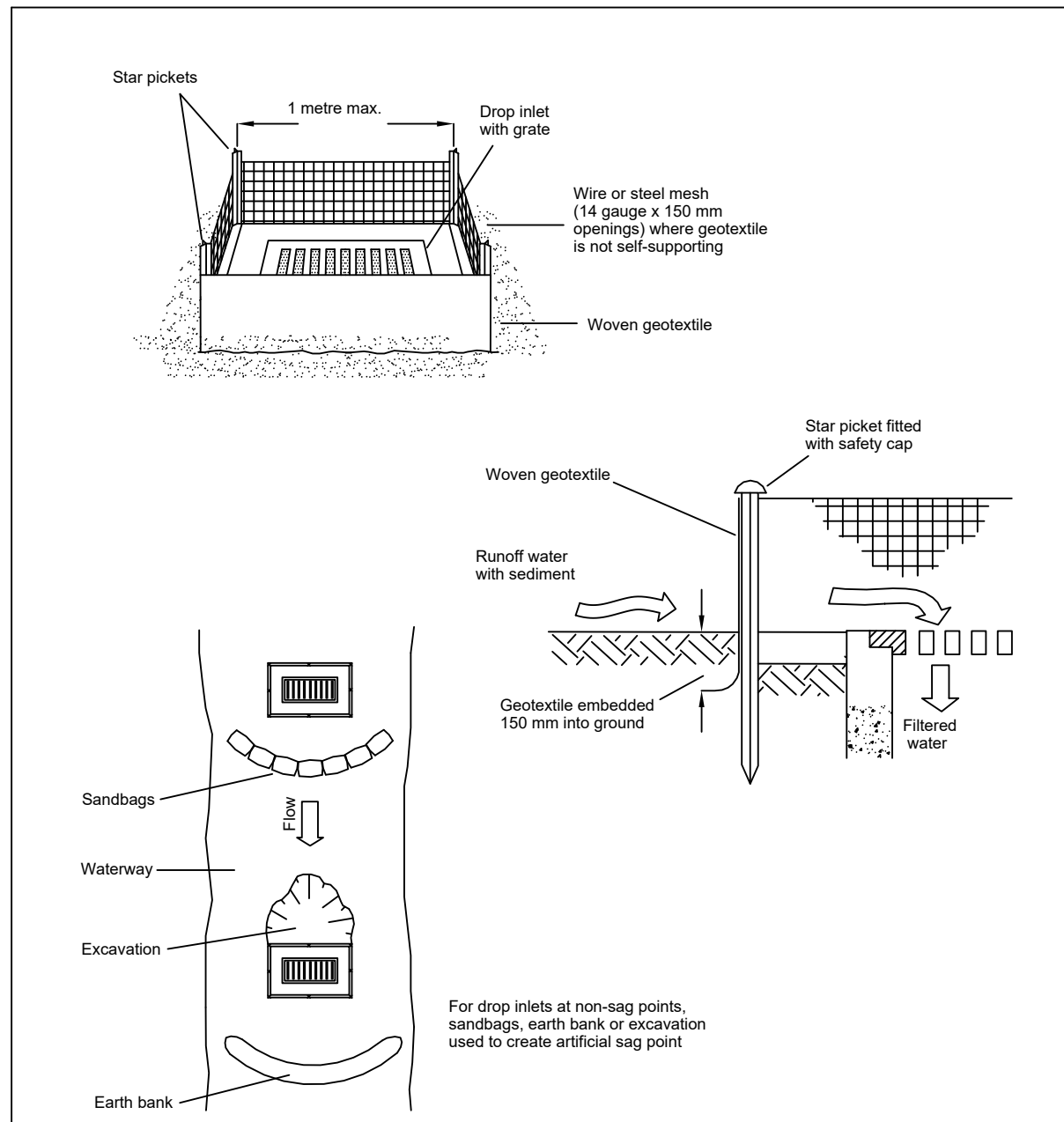
NOTE: This practice only to be used where specified in an approved SWMP/ESCP.

CONSTRUCTION NOTES

- 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 WITH 25 mm TO 50 mm GRAVEL.
- FORM AN ELIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400 mm WIDE.
- PLACE THE FILTER AT THE OPENING LEAVING AT LEAST 100 mm 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 FILLD 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

SD 6-11



Construction Notes

- Fabricate a sediment barrier made from geotextile or straw bales.
- Follow Standard Drawing 6-7 and Standard Drawing 6-8 for installation procedures for the straw bales or geofabric. Reduce the picket spacing to 1 metre centres.
- 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.

GEOTEXTILE INLET FILTER

SD 6-12

DEVELOPMENT APPLICATION

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A1 / A3 LANDSCAPE (A1LC_v02.0.01)

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE
A	INITIAL RELEASE	21/05/2019	LL	CG/CL	SZ	JF	

GRID	DATUM	PROJECT MANAGER	CLIENT
		JF	KINGSFORD PROPERTY DEVELOPMENTS

PROJECT NAME/PLANSET TITLE
RESIDENTIAL DEVELOPMENT CONCEPT STORMWATER DRAINAGE PLAN
351-353 NEW SOUTH HEAD RD, DOUBLE BAY, NSW

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DRAWING TITLE				
SEDIMENT AND EROSION CONTROL DETAILS				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806950	PS01	R04	PS01-B310	A

DRAWING ID: P1806950-PS01-R04-B310



NOTE:
1. ALL PIT AND PIPE LOCATIONS ARE INDICATIVE ONLY AND SUBJECT TO CHANGES AT CC STAGE.
2. ALL SURFACE AND INVERT LEVELS ARE TO BE CONFIRMED AT CC STAGE.

KEY

SITE BOUNDARY

STORMWATER DRAINAGE LINE

GRATED SURFACE INLET PIT

200 mm WIDE GRATED TRENCH DRAIN

FLOW DIRECTION

PUMP OUT LINE

REV		DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	Consulting Engineers	DRAWING TITLE			
B		SECTION 68 TO OPERATE ONSITE SYSTEM	16/07/2021	GM	EZ	SL	JF							STORMWATER PLAN			
A		INITIAL RELEASE	21/05/2019	LL	CG/CL	SZ	JF	A1 (A3) 1:100 (1:200)	MGA	mAHD	JF	KINGSFORD PROPERTY DEVELOPMENTS	Environment Water Geotechnical Civil	BASEMENT			
														PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.
														P1806950	PS01	R04	PS01-E110
																	REVISION
																	B

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CONCEPT STORMWATER DRAINAGE PLAN

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DRAWING ID: P1806950-PS01-R04-E110

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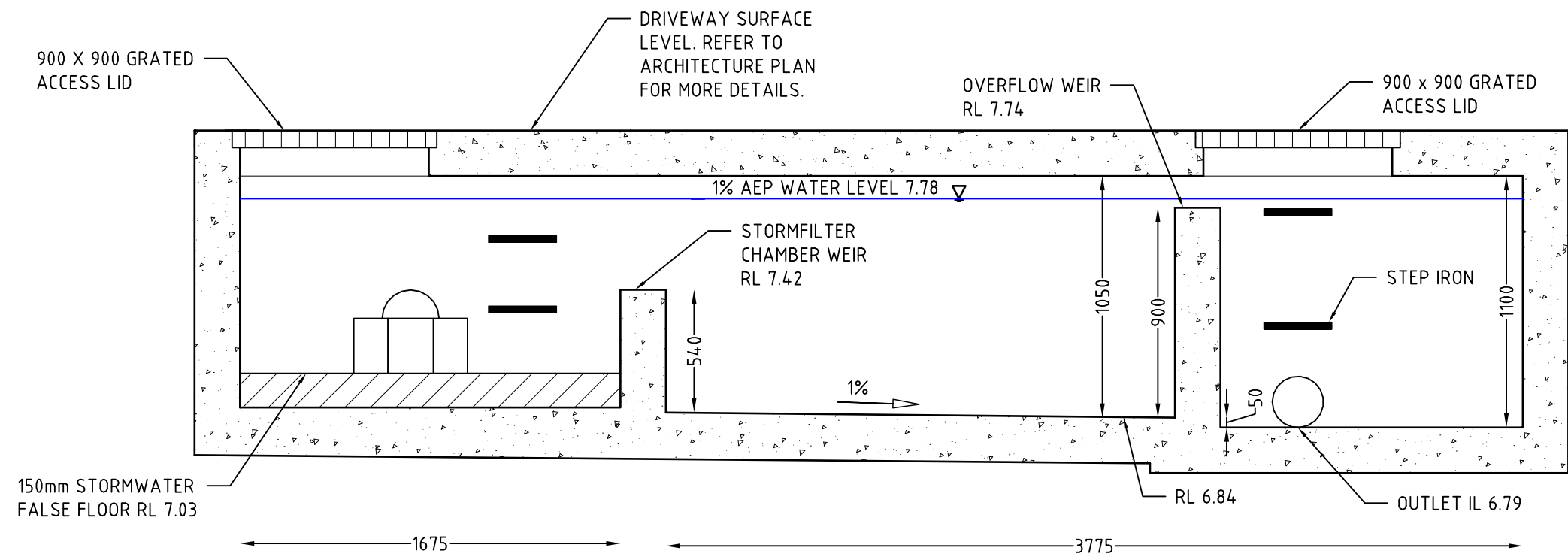
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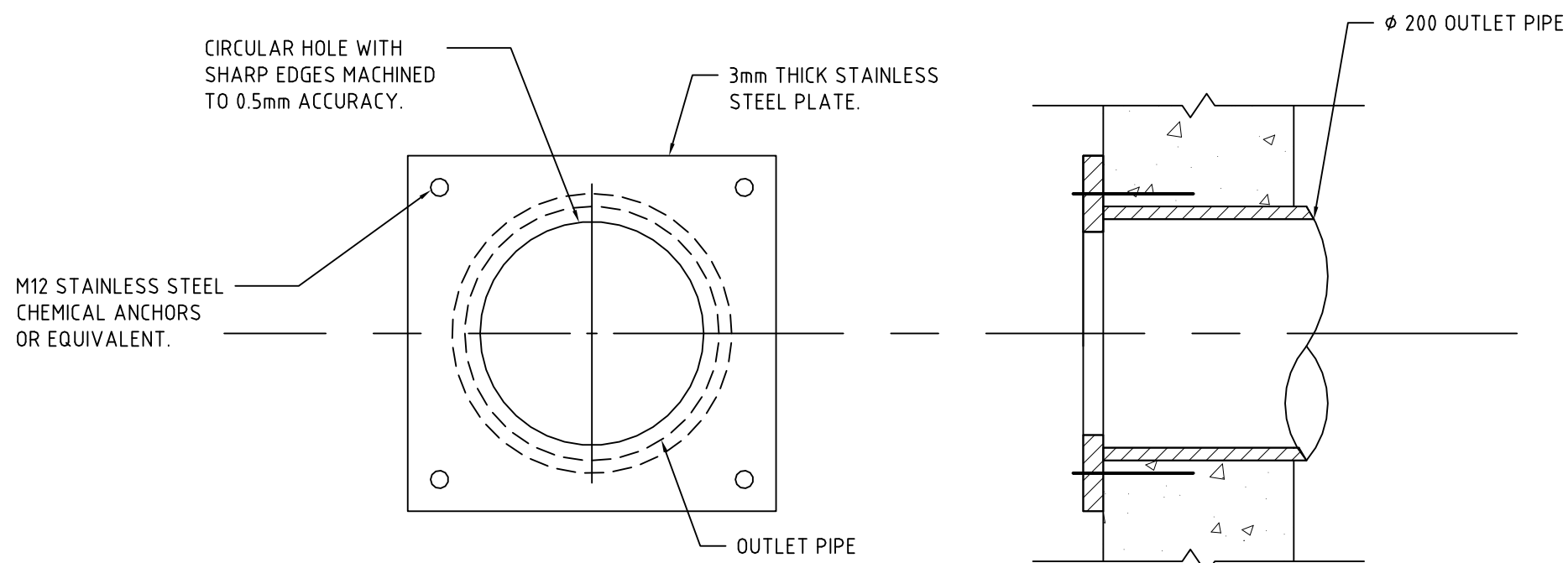
DEVELOPMENT APPLICATION

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A1 / A3 LANDSCAPE (A1LC_v02.0.01)



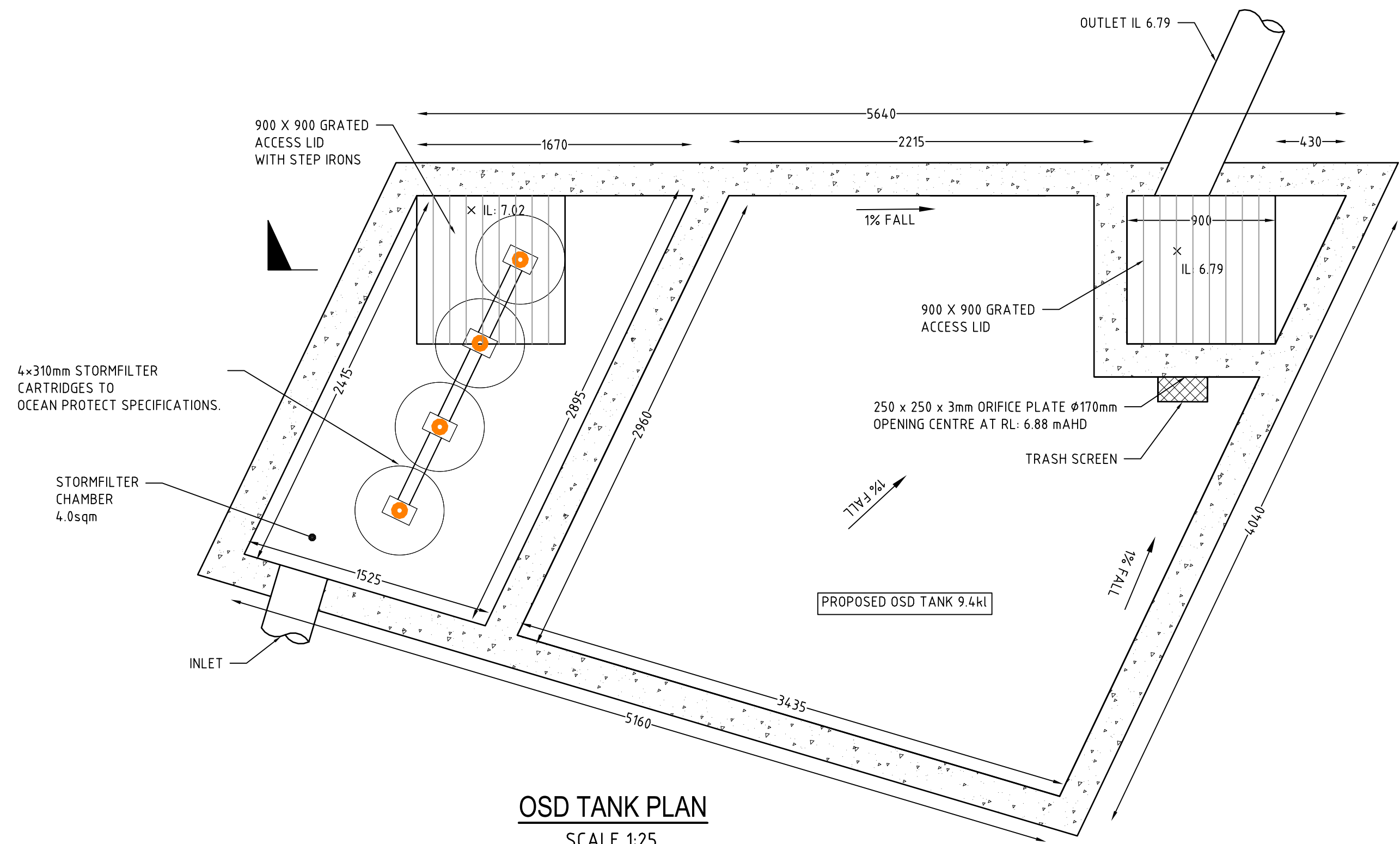
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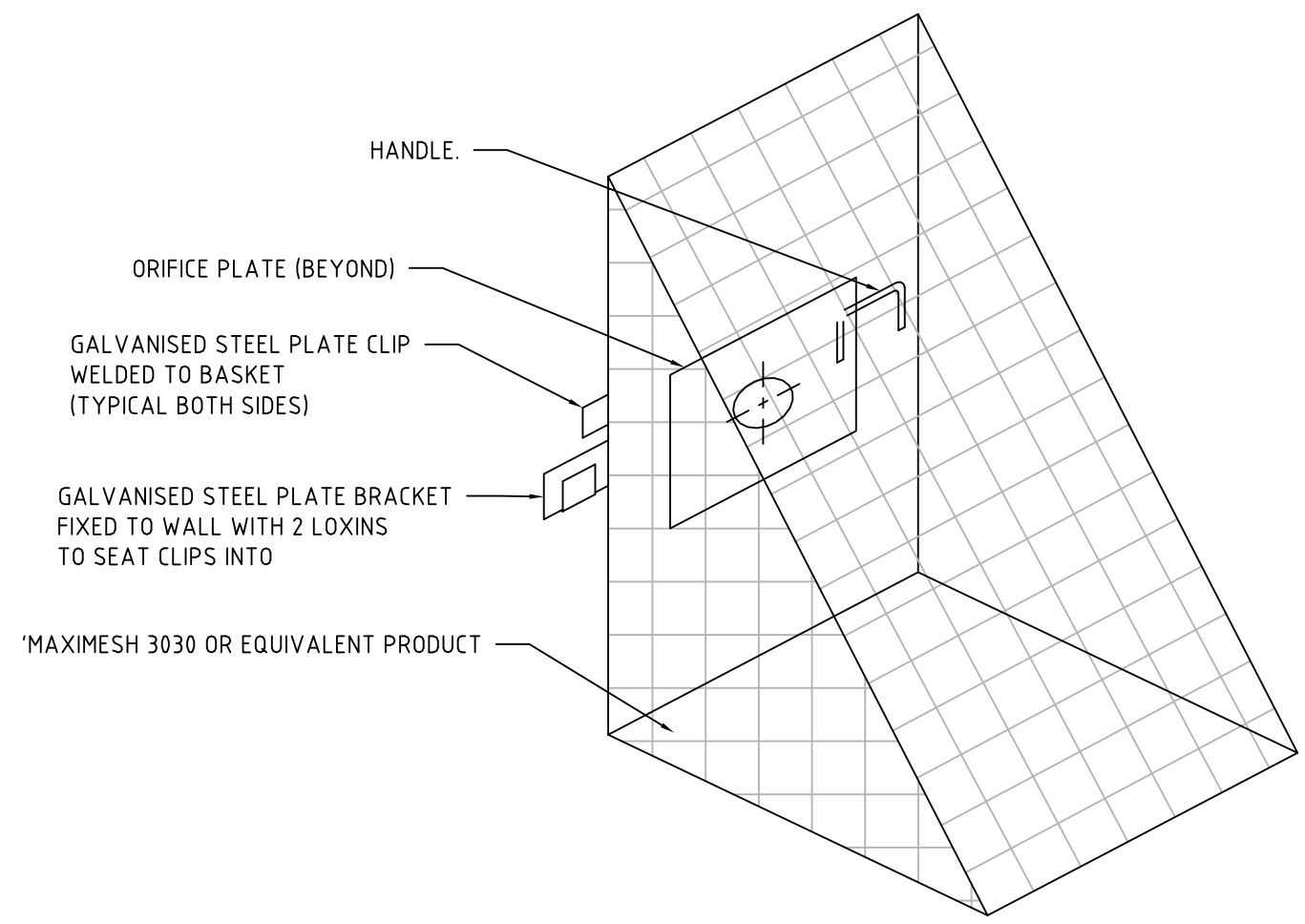
ORIFICE PLATE DETAIL
NOT TO SCALE



CONFINED SPACE WARNING SIGN
NOT TO SCALE



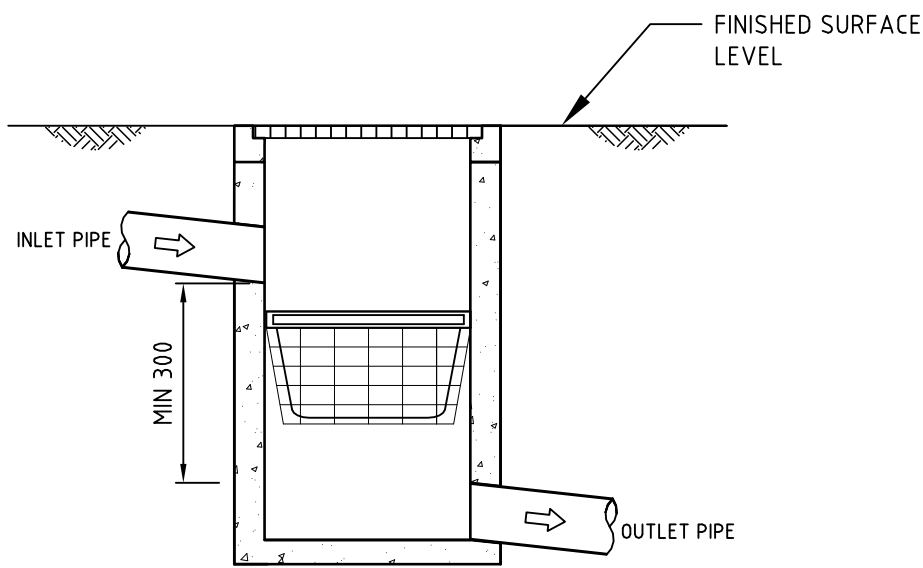
OSD TANK PLAN
SCALE 1:25



TRASH SCREEN DETAIL
NOT TO SCALE



OSD WARNING SIGN
NOT TO SCALE



OCEANGUARD CONFIGURATION

DEVELOPMENT APPLICATION

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B	SECTION 68 TO OPERATE ONSITE SYSTEM	16/07/2021	GM	EZ	SL	JF
A	INITIAL RELEASE	21/05/2019	LL	CG/CL	SZ	JF

SCALE
0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50
A1 (A3) 1:25 (1:50) METRES

GRID	DATUM	PROJECT MANAGER
		JF
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DRAWING TITLE				
DRAINAGE DETAIL PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806950	PS01	R04	PS01-E200	B

