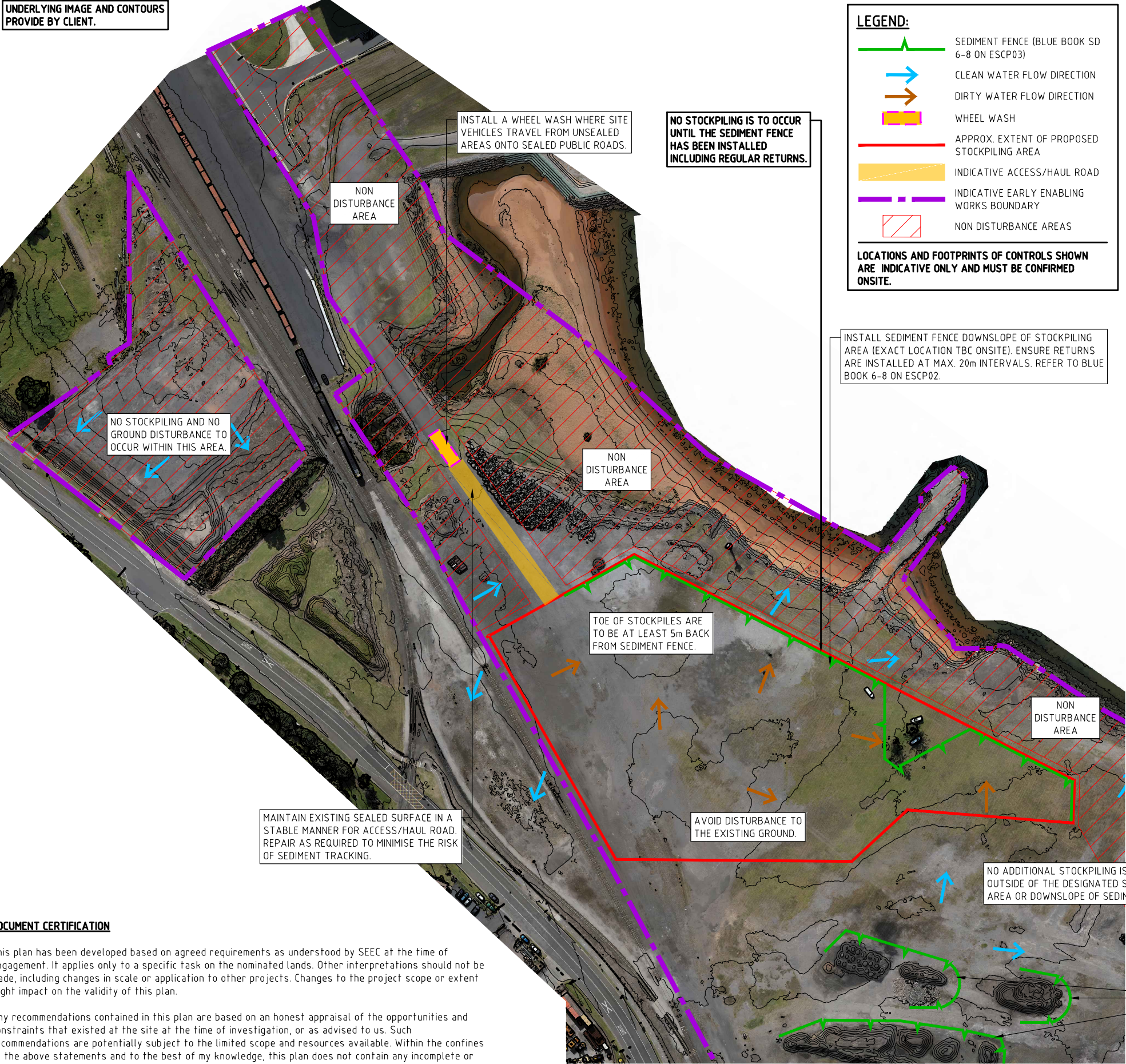


UNDERLYING IMAGE AND CONTOURS  
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**EROSION AND SEDIMENT CONTROL DESIGN**

This Erosion and Sediment Control Plan (ESCP) has been prepared in accordance with Blue Book Volume 1 (Landcom, 2004). This plan is to be updated as required to reflect significant changes to site conditions and to ensure that the risk of pollution is effectively managed.

**EROSION HAZARD ASSESSMENT**

$A = R \times K \times LS \times P \times C$

The following has been adopted:

R	: 4,260 (Based on IFD data)
K	: 0.05 (Conservative assumption based on disturbed terrain)
LS	: 0.23 (40m, 1.5%)
P	: 1.3
C	: 1

Based on the above data, the potential soil loss for this site is 65 t/ha/yr (50 m<sup>3</sup>/ha/yr, based on a bulk density of 1.3 for saturated sediment). Therefore, under Blue Book standards a sediment basin is not required as the disturbed catchments are 2.1 ha (footprint of proposed stockpile area) and 1.6 ha (footprint of existing stockpile along Foreshore Drive (ESCP02)), with the potential soil loss for each catchment being <200 t/yr (150 m<sup>3</sup>/yr). (Note stockpile batters were not included in the above assessment as they will be covered with a biodegradable soil polymer prior to forecast rainfall (>50% chance of 5mm or more in 24 hours) and reapplied as required.

**The following erosion and sediment control measures are to be implemented/maintained:**

1. Install perimeter barrier fencing where practicable (or alternative measures) around the site and in any additional locations as required to restrict access and to minimise unnecessary disturbance.
2. Weather conditions will be monitored onsite and daily rainfall will be recorded.
3. Avoid disturbance to the existing ground.
4. Install a wheel wash where site vehicles travel from unsealed areas onto sealed roads.
5. Maintain existing sealed surfaces in a stable manner for access/haul road. Repair as required to minimise the risk of sediment tracking.
6. Install sediment fence downslope of proposed stockpiling area (exact location TBC onsite). Ensure returns are installed at max. 20m intervals. Refer to Blue Book Standard Drawing SD 6-8 on ESCP03.
7. Reinstate/maintain existing sediment fence around the existing sandstone stockpile. Ensure sediment fence is reinstated/maintained in accordance with Blue Book Standard Drawing SD 6-8 on ESCP03.
8. If not already installed, install sediment fence downslope of all existing stockpiles (exact locations TBC onsite). Ensure returns are installed at max. 20m intervals. Refer to to Blue Book Standard Drawing SD 6-8 on ESCP03.
9. Stockpiling is to be carried out in accordance with Blue Book Standard Drawing SD 4-1 on ESCP03.
10. Sediment tracking onto local roads is to be monitored regularly. If sediment tracking occurs install wash down/shaker at site exit and/or sweep local roads as required.
11. Dust suppression and monitoring will be undertaken in accordance with the Construction Air Quality Management Plan, including real time trigger limits.
12. If not already stabilised, all stockpiles (excluding the large sandstone stockpile) are to be sprayed with a biodegradable soil polymer (Vital Stonewall or equivalent) prior to forecast rainfall (>50% or more chance of 5mm or more rainfall in 24 hours) and/or if they are inactive for more than 10 days.
13. Reapply the biodegradable soil polymer as required to maintain at least 60% cover over all stockpiles (excluding the large sandstone stockpile).
14. All erosion and sediment control measures will be monitored and cleaned out or replaced as necessary.
15. All erosion and sediment control measures will be inspected weekly and before, during and after significant rain events (>15mm in 24 hours).
16. Temporary erosion and sediment control measures are to remain in place at all times during stockpiling works
17. Ensure all erosion and sediment control measures are located within the approved boundary.

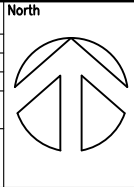
**DOCUMENT CERTIFICATION**

This plan has been developed based on agreed requirements as understood by SEEC at the time of engagement. It applies only to a specific task on the nominated lands. Other interpretations should not be made, including changes in scale or application to other projects. Changes to the project scope or extent might impact on the validity of this plan.

Any recommendations contained in this plan are based on an honest appraisal of the opportunities and constraints that existed at the site at the time of investigation, or as advised to us. Such recommendations are potentially subject to the limited scope and resources available. Within the confines of the above statements and to the best of my knowledge, this plan does not contain any incomplete or misleading information.

REV	DATE	DES.	DRN.	APP.	REVISION DETAILS
03	01/07/21	L.O.	L.O.	A.M.	FINAL ISSUE – AMENDED TO REFLECT ADDITIONAL EPA COMMENTS
02	22/06/21	L.O.	L.O.	A.M.	FINAL ISSUE – AMENDED TO REFLECT EPA COMMENTS
01	11/06/21	L.O.	L.O.	A.M.	FINAL ISSUE
00	09/06/21	L.O.	L.O.	A.M.	FINAL ISSUE (DRAFT)
A	08/06/21	L.O.	L.O.	A.M.	DRAFT ISSUE – FOR CONSULTATION

DRAWING STATUS	
DESIGN BY	L.O.
DRAWN BY	L.O.
FINAL APPROVAL	A.M.
SCALE:	1:2000
(on A3 Original)	
FINAL	



CLIENT



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PROJECT TITLE

OUTER HARBOUR  
PORT KEMBLA, NSW

DRAWING TITLE

EROSION AND SEDIMENT  
CONTROL PLAN  
SHEET 1 OF 3

PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
21000273	P01	ESCP01	03



all

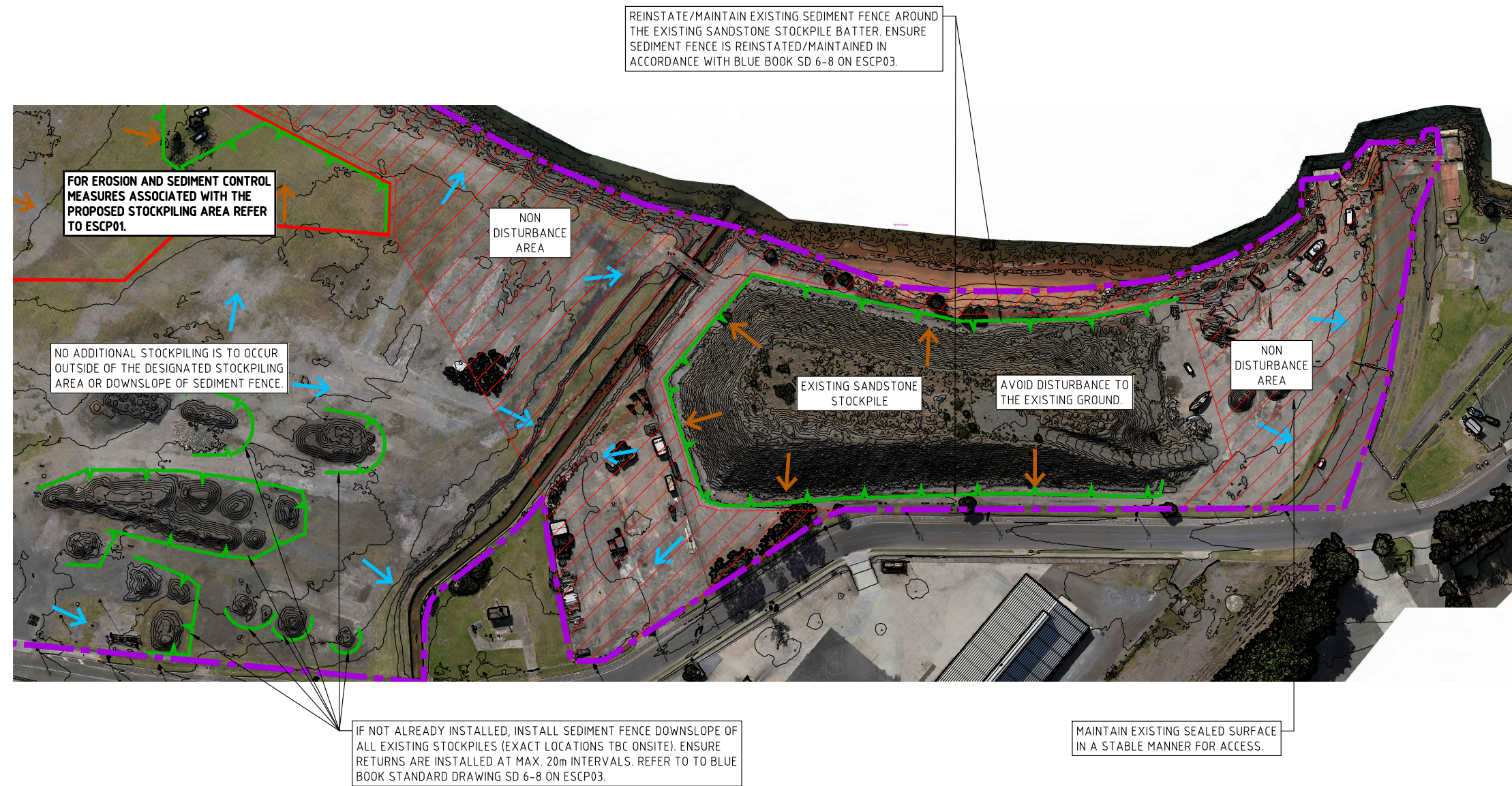
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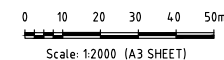
**LEGEND:**

- SEDIMENT FENCE (BLUE BOOK SD 6-8 ON ESCP03)
- CLEAN WATER FLOW DIRECTION
- DIRTY WATER FLOW DIRECTION
- WHEEL WASH
- APPROX. EXTENT OF PROPOSED STOCKPILING AREA
- INDICATIVE ACCESS/HAUL ROAD
- INDICATIVE EARLY ENABLING WORKS BOUNDARY
- NON DISTURBANCE AREAS

**LOCATIONS AND FOOTPRINTS OF CONTROLS SHOWN ARE INDICATIVE ONLY AND MUST BE CONFIRMED ONSITE.**



UNDERLYING IMAGE AND CONTOURS  
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*all*

REV	DATE	DES.	DRN.	APP.	REVISION DETAILS	DRAWING STATUS	North	CLIENT	PROJECT TITLE	DRAWING TITLE	PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
						DESIGN BY DRAWN BY FINAL APPROVAL SCALE: (on A3 Original)				EROSION AND SEDIMENT CONTROL PLAN SHEET 2 OF 3	21000273	P01	ESCP02	03
03	01/07/21	L.O.	L.O.	A.M.	FINAL ISSUE - AMENDED TO REFLECT ADDITIONAL EPA COMMENTS	L.O.								
02	22/06/21	L.O.	L.O.	A.M.	FINAL ISSUE - AMENDED TO REFLECT EPA COMMENTS	L.O.								
01	11/06/21	L.O.	L.O.	A.M.	FINAL ISSUE	A.M.								
00	09/06/21	L.O.	L.O.	A.M.	FINAL ISSUE (DRAFT)									
A	08/06/21	L.O.	L.O.	A.M.	DRAFT ISSUE - FOR CONSULTATION									

**FINAL**

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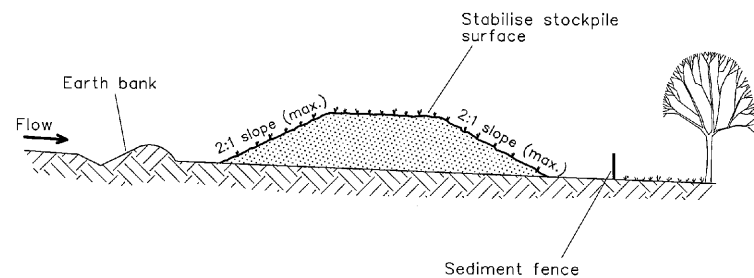
OUTER HARBOUR  
PORT KEMBLA, NSW

Plot Date: Thursday, 1 July 2021 5:30:12 PM

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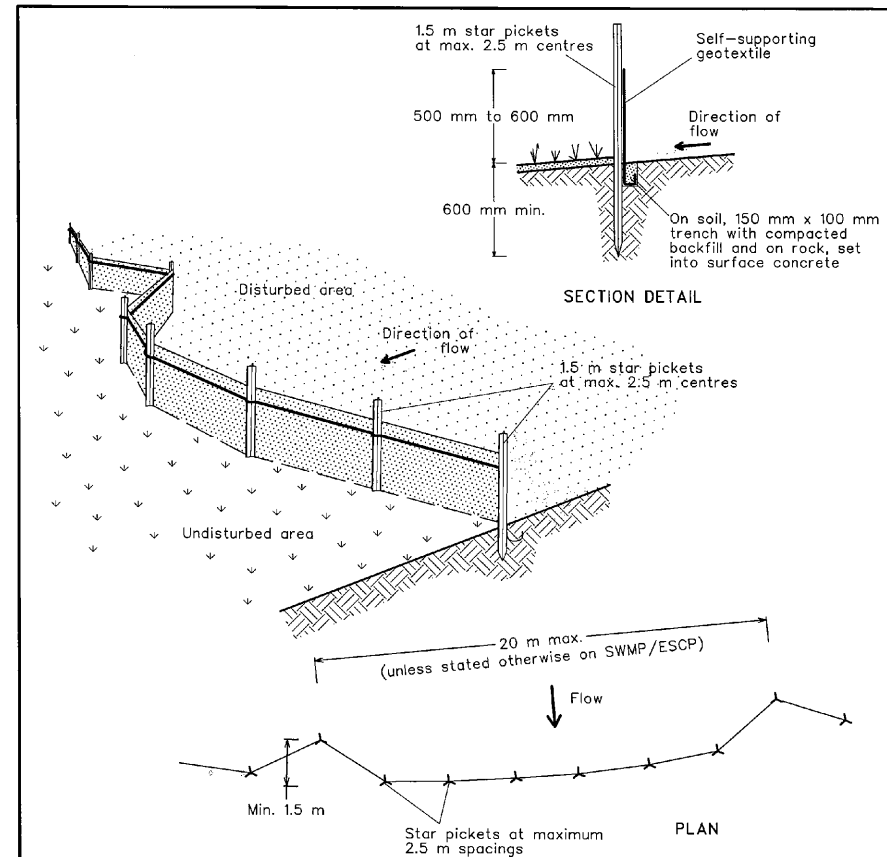


### Construction Notes

1. Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
2. Construct on the contour as low, flat, elongated mounds.
3. Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
4. 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.
5. 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

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 150-mm 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 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**

**SD 6-8**

**STANDARD DRAWINGS SD 4-1 AND 6-8 ARE COPYRIGHT LANDCOM, 2004.**



*all*

REV	DATE	DES.	DRN.	APP.	REVISION DETAILS	DRAWING STATUS	North	CLIENT	PROJECT TITLE	DRAWING TITLE	PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
						DESIGN BY L.O. DRAWN BY L.O. FINAL APPROVAL A.M.				EROSION AND SEDIMENT CONTROL BLUE BOOK STANDARD DRAWINGS DRAWINGS - SHEET 3 OF 3	21000273	P01	ESCP03	03
03	01/07/21	L.O.	L.O.	A.M.	FINAL ISSUE - AMENDED TO REFLECT ADDITIONAL EPA COMMENTS	SCALE: N.T.S. (on A3 Original)								
02	22/06/21	L.O.	L.O.	A.M.	FINAL ISSUE - AMENDED TO REFLECT EPA COMMENTS									
01	11/06/21	L.O.	L.O.	A.M.	FINAL ISSUE									
00	09/06/21	L.O.	L.O.	A.M.	FINAL ISSUE (DRAFT)									
A	08/06/21	L.O.	L.O.	A.M.	DRAFT ISSUE - FOR CONSULTATION	<b>FINAL</b>								

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