Panel Reference	PPSSTH-251
DA Number	DA-2023/228
LGA	Wollongong City
Proposed Development	Remediation works - bank stabilisation and emergency erosion protection works along the southern embankment of Allans Creek
Street Address	Lot 1 Five Islands Road PORT KEMBLA NSW 2505
Applicant/Owner	Bluescope Steel Limited
Date of DA lodgement	22 March 2023
Total number of Submissions Number of Unique Objections	Nil
Recommendation	Approval
Regional Development Criteria (Schedule 6 of the SEPP (Planning Systems) 2021	Clause 8A of Schedule 6 – with the proposal comprising 'certain coastal protection works'
List of all relevant s4.15(1)(a) matters	**s4.15(1)(a)(1) any relevant environmental planning instruments:** State Environmental Planning Policies (SEPPs): • SEPP (Transport & Infrastructure) 2021 • SEPP (Resilience & Hazards) 2021 • SEPP (Planning Systems) 2021 Local Environmental Planning Policies: • Wollongong Local Environmental Plan (WLEP) 2009 Other policies • Wollongong City-Wide Development Contributions Plan (2021) **s4.15(1)(a)(ii) (ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority.** N/A. **s4.15 (1)(a)(iii) Any development control plan** • Wollongong DCP 2009 **s4.15 (1)(a) (iii a) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4.** N/A **s4.15 (1)(a)(iv) the relevant regulations** N/A **s4.15(1)(a)(v) any coastal zone management plan:** • Wollongong Coastal Zone Management Plan 2017
List all documents submitted with this report for the Panel's consideration	1 Aerial photograph 2 Zoning map 3 Full set of plans

	4	Statement of Environmental Effects, Allans Creek Remediation, Reference ACKR-RPT-ENGR-Statement of Environmental Effects-01 dated 9 May 2023
	5	Arboricultural Report for Allans Creek remediation works, prepared by Moore Trees
	6	Allans Creek Remediation Concept Landscape Revegetation Plan, Rev 1, dated 29 August 2023, prepared by Anita Rojas
	7	Draft conditions of consent
Clause 4.6 requests	N/A	
Summary of key issues	Construction management to minimise environmental impacts	
Report prepared by	Theresa Whittaker, Senior Development Project Officer	
Report date	25 October 2023	

Summary of s4.15 matters Have all recommendations in relation to relevant s4.15 matters been summarised in the Executive Summary of the assessment report?	Yes
Legislative clauses requiring consent authority satisfaction Have relevant clauses in all applicable environmental planning instruments where the consent authority must be satisfied about a particular matter been listed, and relevant recommendations summarized, in the Executive Summary of the assessment report? *e.g. Clause 7 of SEPP 55 - Remediation of Land, Clause 4.6(4) of the relevant LEP*	Yes
Clause 4.6 Exceptions to development standards If a written request for a contravention to a development standard (clause 4.6 of the LEP) has been received, has it been attached to the assessment report?	Not applicable
Special Infrastructure Contributions Does the DA require Special Infrastructure Contributions conditions (S7.24)? *Note: Certain DAs in the Western Sydney Growth Areas Special Contributions Area may require specific Special Infrastructure Contributions (SIC) conditions*	Not applicable
Conditions Have draft conditions been provided to the applicant for comment? *Note: in order to reduce delays in determinations, the Panel prefer that draft conditions, notwithstanding Council's recommendation, be provided to the applicant to enable any comments to be considered as part of the assessment report*	Yes

EXECUTIVE SUMMARY

Reason for consideration by Southern Regional Planning Panel

The proposal has been referred to Southern Regional Planning Panel as the works constitute *certain coastal protection works* listed in Clause 8A of Schedule 6 of State Environmental Planning Policy (SEPP) (Planning Systems) 2021.

Proposal

The application seeks consent for the what the applicant has described as 'Remediation works - bank stabilisation and emergency erosion protection works along the southern embankment of Allans Creek'. These works are characterised as *coastal protection works* for the purposes of the applicable planning legislation.

Permissibility

The site is zoned part IN3 Heavy Industry and part SP1 Special Activities pursuant to SEPP (Transport & Infrastructure) 2021 as the land is located within the 'Three Ports' are covered by Chapter 5 of that SEPP. The proposal is categorised as *coastal protection works* which is permissible with consent under Section 2.16 of SEPP (Resilience & Hazards) 2021.

Consultation

The proposal was notified in accordance with the provisions of the Wollongong Community Consultation Plan 2019. There were no submissions received following notification.

Councill's Landscape and Environmental Officers have returned satisfactory referrals including recommended consent conditions.

Council consulted with the NSW Environmental Protection Authority (EPA) as the site is a licensed premises under the POEO Act, 1997. The EPA raised no objection to the proposed development.

The proposal is integrated development, requiring approval under Part 3 of the Water Management Act 2000. The Department of Planning and Environment- Water (DPE-Water) has provided its General Terms of Approval for the development.

Main Issues

- Construction management to minimise environmental impacts.

RECOMMENDATION

It is recommended that DA-2023/228 be approved subject to the conditions outlined in Attachment 7.

1 APPLICATION OVERVIEW

The following planning controls apply to the proposal:

State Environmental Planning Policies:

- SEPP (Resilience and Hazards) 2021
- SEPP (Transport and Infrastructure) 2021
- SEPP (Planning Systems) 2021

Local Environmental Planning Policies:

- Wollongong Local Environmental Plan (WLEP) 2009

(Note: The subject site is shown as an excluded area on the WLEP 2009 Land Application Map and therefore the LEP has no statutory effect)

Development Control Plans:

- Wollongong Development Control Plan 2009

(Note: The subject land is identified on the Land Zoning Map as SEPP – (Major Developments) 2009 – Excluded. As Wollongong DCP 2009 only applies to land to which WLEP 2009 applies, the DCP has no statutory effect. However, this report gives consideration to the provisions of the DCP in relation to Industrial Development for guidance purposes only).

Other policies

- Wollongong City-Wide Development Contributions Plan 2023
- Wollongong Community Participation Plan 2019

1.2 DETAILED DESCRIPTION OF PROPOSAL

The proposed development comprises bank stabilisation and emergency erosion protection works along the southern embankment of Allans Creek, adjoining to Port Kembla's Inner Harbour.

The applicant has advised that tidal action and creek flow velocity have resulted in the lower section of the bank becoming eroded, compromising the stability of the bank and the infrastructure above it. This section of bank supports infrastructure that is utilised by heavy vehicles including a section of Harbour Road and Allans Creek Road, the abutments for Iron Ore Road Bridge, and a Pipe Gantry bridge. If left without remediation, there is an increasing potential for slump failure of the embankment, especially during periods of wet weather or during storm conditions, presenting both safety and environmental risks.

The proposal involves emplacing graded levelling rock on the embankment, followed by geotextile and scour protection.

It is noted that the existing vegetation along the crest of the bank must be removed to carry out the proposed work. The applicant's arborist (Moore Trees) identified approximately 100 River She Oak (*Casuarina cunninghamiana*) trees that will be removed. The applicant has advised that revegetation works / compensatory planting will occur following the completion of the bank remediation works. The design of the stabilisation work includes a 0.5 – 2.0 m width between the mattress and the concrete block and roadway which will be revegetated. The plants selected for revegetation have been chosen to ensure there is no potential to impact the stability of the mattress or the roadway.

1.3 BACKGROUND

There are many applications for the broader Port Kembla Steelworks site listed on Council's register, most of which are not of relevance to the proposed development.

No pre-lodgement meeting was held for the proposal.

Customer service actions

There are no outstanding customer service requests of relevance to the development.

1.4 SITE DESCRIPTION

The area of the proposed works is sited within the Port Kembla Steelworks, as identified on the below map extract provided in the applicant's Statement of Environmental Effects (SEE). The title reference of the site is Lot 1 DP 606434. The land owned and occupied by BlueScope.

The applicant has advised that the stretch of bank requiring repair is approximately 300 metres long running from the Eastern headland of Allans Creek up to the previously remediated section of bank to the south of the Iron Ore Road bridge.

The majority (approximately 6,200sqm) of the project site is zoned IN3 Heavy Industry while a small portion (approximately 600sqm) is zoned SP1 Special Activities under SEPP (Transport & Infrastructure) 2021.

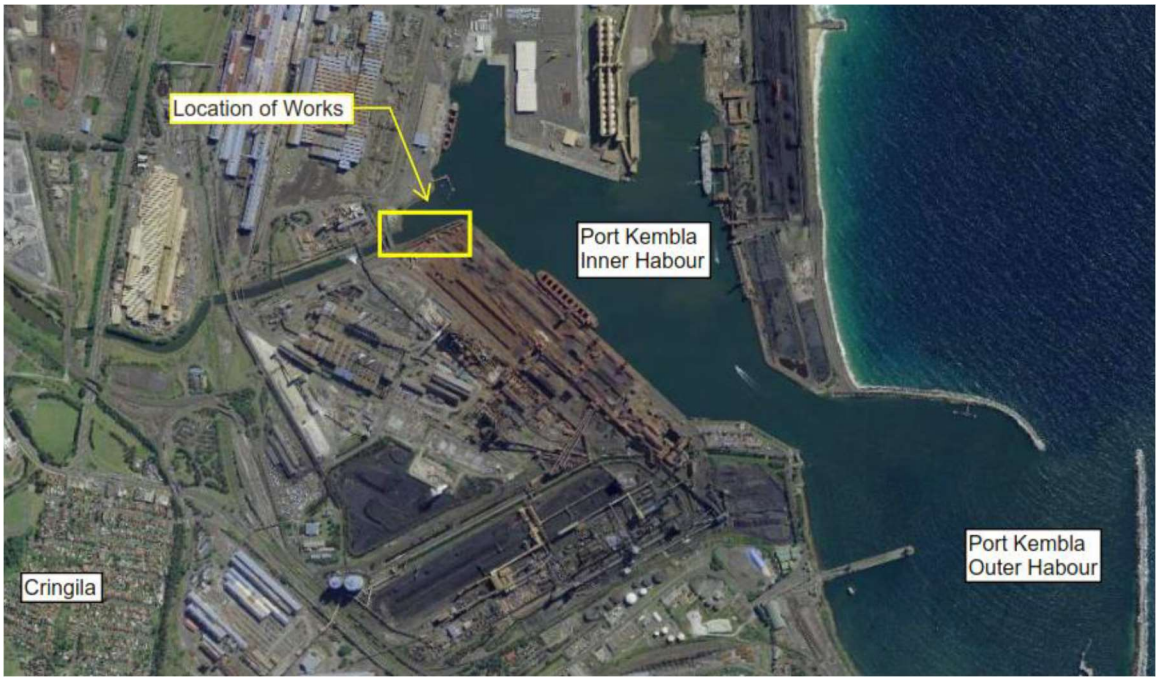


Figure 1: Project Location

Figure 2: Location of Works (Source: applicant's SEE)

Property constraints

Council records identify the land as being impacted by the following constraints:

- *Contamination* – the site is known to be contaminated due to the long term heavy industrial use of the site. Refer to further discussion below with regard to SEPP (Resilience & Hazards) 2021.

- *Acid sulphate soils* - the area of works is mapped as Class 1 Acid Sulfate Soils. The applicant has however advised that geotechnical investigations have been performed with two bore holes on Harbour Road, adjacent to Allans Creek. The findings of these investigations indicate sandy gravel is largely present until approximately 14m below surface. This suggests there is a low likelihood that ASS will be encountered as all work will be conducted above this datum. In the unlikely event that ASS is observed during any excavation, they will be managed in accordance with the National Acid Sulphate Soils Guidance (2018). Conditions of consent have been recommended by Council's Environmental Assessment Officer in this regard.
- *Flooding* - the site is identified as being located within an uncategorised flood risk precinct. The proposed works are not expected to have an impact on the flood characteristics of the site.
- *Coastal zone* - the site is located within the Coastal zone and falls partly within the coastal environment and coastal use zones under the provisions of SEPP (Resilience & Hazards) 2021.

It is noted that there are no restrictions on the title.

1.5 SUBMISSIONS

The application was notified in accordance with Council's Community Participation Plan 2019. There were no submissions received following notification.

1.6 CONSULTATION

1.6.1 INTERNAL CONSULTATION

Landscape Officer

Council's Landscape Officer has reviewed the application and given a satisfactory referral. Recommended conditions of consent were provided.

Environment Officer

Council's Environment Officer raised a number of concerns following an initial assessment of the application. These initial concerns have however been resolved through the submission of additional information and the proposal is now considered satisfactory with consent conditions.

The following specific comments were provided in relation to the proposal:

"Biodiversity Offsets Scheme

The proposal **does not** trigger entry into the Biodiversity Offsets Scheme.

Coastal and Foreshore

Coastal Management Act

- Cl27 of the Coastal Management Act applies and has generally been addressed in the additional information letter dated 12 May 2023.

Resilience and Hazards SEPP 2021

SEPP (Resilience and Hazards) 2021 applies as the works are not within the Lease Area.

Chapter 2 - Part 2.2: Development controls for coastal management areas

- The proposed works will impact on the water quality during construction of the revetment wall. Due to the unknown nature of the potential contaminants on site, this impact may be significant. However, due to the ongoing erosion, not undertaking the works may have a greater impact on the water quality over the long term. The additional information provided states that the site is managed under an Environmental Protection Licence (EPL 6092) and the EPA has oversight.
- Some detail has been provided in relation to sediment and water quality, however more will be required as part of the CEMP.

Vegetation *(Chapter E17 of Wollongong DCP 2009)*

- Some vegetation is proposed to be removed. These are all generally *Casuarina cunninghamiana* trees of varying age and condition that have all generally grown in the last 20 years. They are generally saplings and considered to be in poor condition due to surrounding contamination (*Arboricultural Report for Allans Creek remediation works*, Moore Trees, 20 January 2023).

- The trees at present don't provide my ecological value due to their condition and location. All will need to be removed to allow for the coastal protection works to occur.
- No objection is made to their removal.

Threatened Species *(Chapter E18 of Wollongong DCP 2009)*

The site is mapped as Key Fish Habitat. However, due to the heavy industrial and man-made nature of the site, the site is considered extremely unlikely to provide optimal fish habitat.

- As the proposal will require Controlled Activity Approval under the WM Act, a permit is not then also required under the Fisheries Management Act.

Riparian *(Clause 7.4 Riparian Lands of Wollongong LEP 2009 and Chapter E23 of Wollongong DCP 2009)*

- The waterway in question is not identified on Councils riparian lands map and is a constructed waterway at this location (created when Port Kembla was constructed).
- Despite this, the proposal is a Controlled Activity under the Water Management Act 2000.

Contamination *(SEPP (Resilience and Hazards) 2021 (Chapter 4– Remediation of Land)* and *Chapter E20: Contaminated Land Management of Wollongong DCP 2009)*

- Note that this has been discussed with Councils Environmental Scientist.
- The additional information provided to Council states:

  "The proposed project area is located on land filled with sandy gravel, slag, and coal washery rejects. Slag and coal washery rejects are commonly used for application to land in accordance with Steel Furnace Slag, Blast Furnace Slag, and Coal Washery Rejects Resource Recovery Orders and Exemptions… The Port Kembla Steelworks (PKSW) is listed as a contaminated site by the EPA. As the project area is with the PKSW, it is already listed as a contaminated site and therefore it is BlueScope's view that a separate Detailed Site Investigation is not necessary.

  The EPA has determined that ongoing management of the site under the Contaminated Land Management Act 1997 is no longer warranted and ongoing management of site contamination occurs under EPL 6092".

- This has been confirmed by the EPA (Letter dated 5 May 2023) "*BSL holds Environment Protection Licence 6092. Should WCC grant approval for the proposed development, BSL must ensure that it complies with all licence requirements and the* Protection of the Environment Operations Act 1997".
- Council accepts this, but highlights that any deviation from the Resource Recovery Orders and Exemptions may result in an offence under the PoEO Act.
- Appropriate conditions will apply.

Acid Sulfate Soils *(Clause 7.5 of Wollongong LEP 2009)*

The SEE states:-

> *Geotechnical investigations have been performed with two bore holes on Harbour Road, adjacent to Allans Creek. The findings of these investigations indicate sandy gravel is largely present until approximately 14m below surface. This suggests there is a low likelihood that ASS will be encountered as all work will be conducted above this datum. In the unlikely event that ASS is observed during any excavation, they will be managed in accordance with the National Acid Sulphate Soils Guidance (2018).*

Conditions will be applied.

Waste Management *(Chapter E7 of Wollongong DCP 2009)*

Due to the nature of the site, waste classification will be required for all materials to be disposed of.

Soil Erosion and Sediment Control *(Chapter E22 of Wollongong DCP 2009)*

A detailed plan will be required prior to the commencement of works. This is to include measures to ensure the excavation, filling and construction works don't impact on water quality, including consideration of contamination. This may be included within the CEMP.

Earthworks - Cl 5.20 of the SEPP (T&I)

As the proposed development is not exempt development, it is required to address Cl 5.20 of the SEPP (T&I), specifically items (a), (c), (e), (g), (h), and (j).

- This has been addressed in the additional information letter dated 12 May 2023. A silt screen will be used for the project and a detailed sediment and erosion control plan will be prepared prior to CC."

A number of conditions of consent were recommended for imposition. These are included in the list of recommended conditions at Attachment 7 to this report.

1.6.2 EXTERNAL CONSULTATION

NSW Environmental Protection Authority (EPA)

The proposal was referred for general comment as the broader site is a licensed premises under the Protection of the Environment Operations Act (POEO Act) 1997. After reviewing the information provided, the EPA provided the following comments:

- WCC has outlined the works as Coastal Protection Works
- the proposed works would not appear to require an environment protection licence (EPL) variation.
- the proposed works would not appear to trigger Integrated Development under the provisions of the Protection of the Environment Operations Act 1997.
- WCC has required BSL confirm whether the works require:
    - a Controlled Activity Approval under the Water Management Act 2000 requiring approval from the NSW Natural Resources Access Regulator (NRAR);
    - or a permit under the provisions of the NSW Fisheries Management Act 1994 from the Department of Primary Industries (DPI).
- BSL holds Environment Protection Licence 6092. Should WCC grant approval for the proposed development, BSL must ensure that it complies with all licence requirements and the Protection of the Environment Operations Act 1997."

In relation to the last dot point, it is noted that a consent condition is recommended for imposition.

Department of Planning & Environment - Water

The Department of Planning and Environment-Water has issued its General Terms of Approval for the development. A Controlled Activity Approval will be required to be obtained under the Water Management Act 2000 prior to the commencement of works.

2 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

2.2 SECTION 4.15(1)(A)(1) ANY ENVIRONMENTAL PLANNING INSTRUMENT

COASTAL MANAGEMENT Amendment Act 2021

The *Coastal Management Amendment Act 2021* commenced on 1 November 2021, to give coastal councils until 31 December 2023 to implement their CZMPs. By effect this enables a continuation of the current certified CZMP (20 December 2017) whilst Council undertakes further studies and community consultation for a transition to a new Coastal Management Plan.

1.7 Application of Part 7 of Biodiversity Conservation Act 2016 and Part 7A of Fisheries Management Act 1994

This Act has effect subject to the provisions of Part 7 of the Biodiversity Conservation Act 2016 and Part 7A of the Fisheries Management Act 1994 that relate to the operation of this Act in connection with the terrestrial and aquatic environment.

NSW BIODIVERSITY CONSERVATION ACT 2016

Section 1.7 of the Environmental Planning and Assessment Act 1979 (EP&A Act) provides that Act has effect subject to the provisions of Part 7 of the Biodiversity Conservation Act 2016 (BC Act).

Part 7 of the BC Act relates to biodiversity assessment and approvals under the EP&A Act where it contains additional requirements with respect to assessments, consents and approvals under this Act.

Council's Environmental Assessment Officer has advised that the proposal **does not** trigger entry into the Biodiversity Offsets Scheme (BOS):

- This property is not identified on the Biodiversity Values Map.
- The area of clearing does not exceed the BOS area thresholds.
- The vegetation within the development footprint is not mapped as containing an endangered ecological community (EEC) listed under the NSW Biodiversity Conservation Act 2016.

2.2.1 STATE ENVIRONMENTAL PLANNING POLICY (RESILIENCE AND HAZARDS) 2021

Chapter 2 Coastal management

The site is mapped as occurring within the coastal use area and within the coastal environment area under the provisions of Chapter 2 of the SEPP. Consideration has been given to the applicable provisions of the SEPP as outlined below:-

Part 2.2 Development controls for coastal management areas

Division 3 Coastal environment area

s2.10 Development on land within the coastal environment area

Section 2.10(1) states that,

Development consent must not be granted to development on land that is within the coastal environment area unless the consent authority has considered whether the proposed development is likely to cause an adverse impact on the following—

(a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment,
(b) coastal environmental values and natural coastal processes,
(c) the water quality of the marine estate (within the meaning of the Marine Estate Management Act 2014), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1,
(d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms,
(e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,
(f) Aboriginal cultural heritage, practices and places,
(g) the use of the surf zone.

Comment: consideration has been given to the above matters. Subject to the implementation of robust environmental controls during the course of construction works, the proposal will not have an adverse impact on the above matters.

Section 2.10(2) provides that development consent must not be granted to development on land to which this section applies unless the consent authority is satisfied that—

(a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subsection (1), or
(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or
(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

Comment: as noted above, subject to the implementation of robust environmental controls during the course of construction works, the proposal will not have an adverse impact on the above items listed in section 2.10 (a) – (g).

Division 4 Coastal use area

s2.11 Development on land within the coastal use area

(1) Development consent must not be granted to development on land that is within the coastal use area unless the consent authority—

(a) has considered whether the proposed development is likely to cause an adverse impact on the following—

(i) existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,
(ii) overshadowing, wind funnelling and the loss of views from public places to foreshores,
(iii) the visual amenity and scenic qualities of the coast, including coastal headlands,
(iv) Aboriginal cultural heritage, practices and places,
(v) cultural and built environment heritage, and

Comment: no concerns are raised in relation to the above matters. The development will not have any impacts on public access to the foreshore, on the amenity of the foreshore or any cultural or built environmental heritage values.

(b) is satisfied that—

(i) the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or
(ii) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or
(iii) if that impact cannot be minimised—the development will be managed to mitigate that impact, and

(c) has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development.

Comment: Council has taken this into account in the assessment of the proposed development and no concerns are raised.

Division 5 General

s2.12 Development in coastal zone generally—development not to increase risk of coastal hazards

Development consent must not be granted to development on land within the coastal zone unless the consent authority is satisfied that the proposed development is not likely to cause increased risk of coastal hazards on that land or other land.

Comment: the proposed works are not expected to result in an increased risk of coastal hazards on that land or other land.

s2.13 Development in coastal zone generally—coastal management programs to be considered

Development consent must not be granted to development on land within the coastal zone unless the consent authority has taken into consideration the relevant provisions of any certified coastal management program that applies to the land.

Comment: consideration has been given to the relevant provisions of the certified coastal management program that applies to the land and no concerns are raised.

Part 2.3 Miscellaneous

s2.16 Coastal protection works

(1) Coastal protection works by person other than public authority

Development for the purpose of coastal protection works may be carried out on land to which this Chapter applies by a person other than a public authority only with development consent.

Comment: the proposed works, being coastal protection works, may be carried out with development consent under the provisions of this clause.

Chapter 4 Remediation of land

Section 4.6 Contamination and remediation to be considered in determining development application.

Whilst the site is mapped as contaminated land, the proposal does not comprise a change of use.

Council's Environmental Scientist has reviewed the application and following consideration of additional information requested from the applicant, has provided a satisfactory referral. A Detailed Site Investigation is not required, nor is a Remediation Action Plan. Documents submitted by the applicant in relation to potential contamination note:-

> *"The proposed project area is located on land filled with sandy gravel, slag, and coal washery rejects. Slag and coal washery rejects are commonly used for application to land in accordance with Steel Furnace Slag, Blast Furnace Slag, and Coal Washery Rejects Resource Recovery Orders and Exemptions… The Port Kembla Steelworks (PKSW) is listed as a contaminated site by the EPA. As the project area is with the PKSW, it is already listed as a contaminated site and therefore it is BlueScope's view that a separate Detailed Site Investigation is not necessary.*
>
> *The EPA has determined that ongoing management of the site under the Contaminated Land Management Act 1997 is no longer warranted and ongoing management of site contamination occurs under EPL 6092".*

This has been confirmed by the EPA (Letter dated 5 May 2023) "*BSL holds Environment Protection Licence 6092. Should WCC grant approval for the proposed development, BSL must ensure that it complies with all licence requirements and the* Protection of the Environment Operations Act 1997".

Appropriate conditions have been included in the list at Attachment 7.

The proposal is considered satisfactory with regard to the matters for consideration in Chapter 4 of the SEPP.

2.2.2 STATE ENVIRONMENTAL PLANNING POLICY (TRANSPORT AND INFRASTRUCTURE) 2021

Chapter 5 Three Ports—Port Botany, Port Kembla and Newcastle

The subject site is located within the Three Ports Port Kembla area under the provisions of the SEPP.

The majority of the project site is zoned IN3 Heavy Industrial under the provisions of the SEPP while a small portion is zoned SP1 Special Activities. The site is situated outside of the nominated Lease Area under the provisions of the SEPP.

Section 5.12- Zone objectives and Land Use Table

The objectives of the IN3 Heavy Industrial zone under the SEPP are:-

- *To provide suitable areas for those industries that need to be separated from other land uses.*
- *To encourage employment opportunities.*
- *To minimise any adverse effect of heavy industry on other land uses.*
- *To provide transport infrastructure and intermodal facilities.*
- *To allow a diversity of activities that will not significantly detract from the operation of existing or proposed industries.*

The proposed works are not contrary to these objectives.

The objectives of the SP1 zone are as follows:

- *To provide for special land uses that are not provided for in other zones.*
- *To provide for sites with special natural characteristics that are not provided for in other zones.*
- *To facilitate development that is in keeping with the special characteristics of the site or its existing or intended special use, and that minimises any adverse impacts on surrounding land.*
- *To maximise the use of waterfront areas to accommodate port facilities and industrial, maritime industrial, freight and bulk storage premises that benefit from being located close to port facilities.*
- *To enable the efficient movement and operation of commercial shipping and to provide for the efficient handling and distribution of freight from port areas through the provision of transport infrastructure.*
- *To provide for port related facilities and development that support the operations of Port Botany, Port Kembla and the Port of Newcastle.*
- *To facilitate development that by its nature or scale requires separation from residential areas and other sensitive land uses.*
- *To encourage* employment opportunities.

The proposed works are not contrary to these objectives.

The proposed works are not permissible in the IN3 zone but are permitted with consent in the SP1 zone. Irrespective of the provisions of the SEPP in this regard, the proposed works are permissible under section 2.16 of SEPP (Resilience & Hazards) 2021.

Section 5.20 Earthworks

Before granting consent to a development application for development for the purposes of earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters —

(a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,

Comment: The intent of the project is to improve the stability of the creek bank. The SEE notes "There is no existing drainage network in the section of the creek bank that is the proposed project area. Drainage outfall pipes from a nearby truck wash and the raw materials handling area are present in the bank. No modifications to these assets are proposed for the project".

(b) the effect of the development on the likely future use or redevelopment of the land,

Comment: the proposed works will not have an adverse effect on the likely use of the land or potential redevelopment opportunities in the future.

(c) the classification of the soil to be excavated,

Comment: Previous waste classification analysis of slag and coal washery rejects has identified the products as general solid waste (non-putrescible). Waste classification analysis on excavated material will be conducted prior to disposal. Conditions of consent are recommended in this regard.

(d) the effect of the development on the existing and likely amenity of adjoining properties,

Comment: N/A.

(e) the destination of any excavated material,

Comment: the applicant has advised that, due to the uneven nature of the erosion of the embankment, some excavation work will be required to level the profile in preparation for the emplacement of the levelling layer material and scour protection. As such the removal of material will be limited, to approximately 400m3 of soil and vegetative matter over the length of the embankment, which will be disposed of in accordance with BlueScope's waste management procedures to an appropriately licenced facility.

(f) the likelihood of disturbing relics,

Comment: the likelihood is minimal given the heavily disturbed nature of the site and the fact that the water bodies are artificial and don't reflect historical watercourses.

(g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,

Comment: the works will occur within the waterway and have the potential to impact on water quality without controls during construction. The SEE identifies mitigation measures to be employed and conditions of consent are recommended in this regard.

(h) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development,

Comment: Measures are proposed in the SEE to avoid, minimise or mitigate the impacts of the proposed work. These include the preparation and implementation of a construction environment management plan and an erosion and sediment control plan, appropriate waste management, and compensatory planting. A waste classification on excavated material will be conducted prior to disposal of excavated material to an appropriately licensed facility.

(i) the potential impact on groundwater and groundwater dependent ecosystems,

Comment: the proposal is not expected to have any impacts on groundwater or groundwater dependent ecosystems.

(j) whether the development is likely to result in water pollution or land pollution,

Comment: the carrying out of the proposed works has the potential to stir up sediment and result in discolouration of the water. Controls will be implemented during construction to minimise such disruption. Conditions of consent are recommended requiring the development and implementation of a detailed erosion and sediment control plan and construction management plan.

The applicant has advised that any plant machinery involved in the works will be fully serviced and pre-checks completed prior to commencement of work to avoid oil leaks. Spill kits will be available to contain and clean up any spills.

The nature of the work is not expected to involve any change to the salinity of Allans Creek.

(k) whether the development can be carried out in a way that will minimise wind-blown or traffic-generated dust emissions.

Comment: dust mitigation measures will be required to be employed during the course of construction activities; conditions of consent are recommended for imposition in this regard.

(4) The consent authority must not grant consent to a development application under this section unless the consent authority is satisfied that fill brought to the site—

(a) contains only virgin excavated natural material, or

(b) is the subject of an excavated natural material exemption in force under the Protection of the Environment Operations (Waste) Regulation 2014, Part 9.

Comment: the applicant has advised that there will be no fill material brought to site.

2.2.3 STATE ENVIRONMENTAL PLANNING POLICY (PLANNING SYSTEMS) 2021

Section 2.19 of the SEPP provides that development specified in Schedule 6 is declared to be regionally significant development for the purposes of the Act. Certain coastal protection works are deemed to be regionally significant development under the provisions of Clause 8A of Schedule 6 of the SEPP.

2.2.4 WOLLONGONG LOCAL ENVIRONMENTAL PLAN 2009

WLEP 2009 is not applicable as the subject site is located within the 'Three Ports' area (Port Kembla) under SEPP (Transport & Infrastructure) 2021.

2.3 SECTION 4.15(1)(A)(II) ANY PROPOSED INSTRUMENT

None applicable.

2.4 SECTION 4.15(1)(A)(III) ANY DEVELOPMENT CONTROL PLAN

2.4.1 WOLLONGONG DEVELOPMENT CONTROL PLAN 2009

Whilst WDCP 2009 does not technically apply to the subject land, this report considers the relevant provisions of the DCP for guidance purposes as outlined below.

Chapter D1: Character Statements

Port Kembla & Spring Hill

The proposal is consistent with the existing and desired future character for the locality.

Chapter E6: Landscaping

Some compensatory revegetation is proposed.

Chapter E7: Waste Management

The SEE identifies that the only material to be disposed of will be approximately 400m3 of soil and vegetative matter over the length of the embankment. The applicant advises that, as the proposed project area is not located in or near a plant processing area, there is a low risk of contamination from other sources and therefore the risk of land contamination as a result of the project is considered unlikely. A waste classification analysis will be conducted on the excavated material prior to disposal. Conditions of consent are recommended in this regard.

Chapter E13: Floodplain Management

The subject area is located within an area which is identified as an uncategorised flood risk. The proposal does not however represent a particular risk with regard to flooding.

Chapter E17: Preservation And Management Of Trees And Vegetation

As noted above, a number of trees are proposed to be removed to facilitate the carrying out of the proposed works. The trees are all generally *Casuarina cunninghamiana* of varying age and condition that have all generally grown in the last 20 years. The arborist identifies the trees are mainly saplings

and considers most to be in poor condition due to surrounding contamination. Council's Environmental Assessment Officer has advised that the trees at present don't provide any ecological value due to their condition and location. All will need to be removed to allow for the coastal protection works to occur, and no objection is made to their removal.

Chapter E18: Native Biodiversity Impact Assessment

The site is identified as potential habitat for Green and Golden Bell Frog (GGBF) on Council's records.

The GGBF is listed as endangered under the Biodiversity Conservation Act 2016 (NSW) and vulnerable under the Environment Protection and Biodiversity Conservation Act 1999. A known population of Green and Golden Bell Frog (*Litoria aurea*) occurs within the greater PKSW site. The presence of the GGBF is managed across the Steelworks site in accordance with site manual Management of Threatened Species, the Green and Golden Bell Frog (MA-ENV-03-03). Mapped known areas of habitat and associated corridors are identified and do not occur within proximity of the area of the proposed works, with the closest known habitat occurring approximately 1.6 kilometres northeast of the project area

On this basis, it is not expected that there will be any impact on the GGBF or its habitat as a result of the proposed works.

It is noted that the site is mapped as Key Fish Habitat. However, due to the heavy industrial and man-made nature of the site, the site is considered extremely unlikely to provide optimal fish habitat. Irrespective of this, controls are to be implemented to ensure that water quality is not unreasonably adversely affected by the proposed works.

Chapter E20: Contaminated Land Management

The site is contaminated from long term heavy industrial use; the whole Port Kembla Steelworks (PKSW) site is listed as a contaminated site by the EPA. The EPA has determined that ongoing management of the site under the Contaminated Land Management Act 1997 is no longer warranted and ongoing management of site contamination occurs under EPL 6092.

No concerns have been raised in relation to contamination by Council's Environmental Scientist subject to appropriate conditions being fulfilled, including those in relation to disposal of any excavated material.

Chapter E22: Soil Erosion And Sediment Control

Conditions of consent are recommended in regard to appropriate sediment and erosion control measures to be in place during works.

2.4.2 WOLLONGONG CITY-WIDE DEVELOPMENT CONTRIBUTIONS PLAN 2023

Wollongong City-Wide Development Plan - City Wide

The Wollongong City-Wide Development Contributions Plan applies to the subject property. This Plan levies a contribution based on the estimated cost of development. The proposed cost of development* is over $200,001 ($684,000) and as such a levy rate of 1% applies.

2.5 SECTION 4.15(1)(A)(IIIA) ANY PLANNING AGREEMENT THAT HAS BEEN ENTERED INTO UNDER SECTION 7.4, OR ANY DRAFT PLANNING AGREEMENT THAT A DEVELOPER HAS OFFERED TO ENTER INTO UNDER SECTION 7.4

There are no planning agreements entered into or any draft agreement offered to enter into under S7.4 which affect the development.

2.6 SECTION 4.15(A)(IV) THE REGULATIONS (TO THE EXTENT THAT THEY PRESCRIBE MATTERS FOR THE PURPOSES OF THIS PARAGRAPH)

Environmental Planning and Assessment Regulation 2021

61 Additional matters that consent authority must consider

N/A.

62 Consideration of fire safety

N/A.

63 Considerations for erection of temporary structures

N/A.

64 Consent authority may require upgrade of buildings

N/A.

2.7 SECTION 4.15(1)(B) THE LIKELY IMPACTS OF DEVELOPMENT

Access, Transport and Traffic:

No concerns are raised with regard to access or traffic matters.

Public Domain:

The proposed works will have no impact on the public domain.

Utilities:

N/A. The proposed works are not expected to have any impact on existing utilities.

Heritage:

No heritage items will be impacted by the proposal. There are no heritage items within the vicinity of the proposed works.

Other land resources:

The proposal is considered to contribute to orderly development of the site and is not expected to impact upon any valuable land resources subject to the implementation of appropriate mitigation measures during the carrying out of works.

Water:

The proposal will involve minimal water consumption. The works are not expected to adversely impact on water quality with the implementation of appropriate water quality measures during the carrying out of works.

Soils: The works are not expected to adversely impact on soil resources with the implementation of appropriate soil & erosion controls during the carrying out of works. Conditions of consent are recommended for imposition in this regard.

Air and Microclimate:

The proposal is not expected to have any negative impact on air or microclimate subject to the implementation of dust mitigation measures during the carrying out of works.

Flora and Fauna:

There are a number *Casuarina cunninghamiana* trees proposed to be removed, which Council's Environmental Assessment Officer has advised don't provide any ecological value due to their condition and location. No objection has been raised to their removal. Revegetation of the bank is proposed following the completion of the revetment works. No other flora or fauna species are expected to be affected by the proposed works.

Waste:

A condition is proposed that any consent granted that an appropriate receptacle be in place for any waste generated during the construction.

Energy:

The proposal is not expected to involve excessive energy consumption.

Noise and vibration:

No nuisance impacts of construction (noise and vibration) are expected given the heavy industrial use of the broader site, which operates 24 hours a day/ 7 days per week. There are no nearby sensitive receivers.

Technological hazards:

None applicable.

Safety, Security and Crime Prevention:

The proposed works are not expected to result in any opportunities for criminal or antisocial behaviour. The area of the proposed works z not publicly accessible.

Social Impact:

No social impacts are envisaged as a result of the proposed development.

Economic Impact:

The proposal is not expected to create any negative economic impacts.

Site Design and Internal Design:

The application does not result in any departures from development standards or Council's development control plans as outlined above.

Construction:

Conditions of consent are recommended in relation to construction impacts such as hours of work, erosion and sedimentation controls, excavation, demolition and use of any crane, hoist, plant or scaffolding; and water quality measures.

Cumulative Impacts:

The proposal is not expected to have any negative cumulative impacts.

2.8 SECTION 4.15(1)(C) THE SUITABILITY OF THE SITE FOR THE DEVELOPMENT

The site is considered to be suitable for the proposed development. The remediation works are required to ensure the stability of the bank and prevent any further damage to site assets/ infrastructure. There will be no impacts on other sites or operations on nearby land or working waterways.

2.9 SECTION 4.15(1)(D) ANY SUBMISSIONS MADE IN ACCORDANCE WITH THIS ACT OR THE REGULATIONS

No submissions received.

2.10 SECTION 4.15(1)(E) THE PUBLIC INTEREST

The application is not expected to have any unreasonable impacts on the environment or the amenity of the locality subject to the implementation of appropriate environmental controls during the course of construction works. The works are permissible under the provisions of SEPP (Resilience & Hazards) 2021.

The proposal is considered to be in the public interest.

3 CONCLUSION

This application has been assessed with regard to the matters for consideration prescribed by Section S4.15(1) of the Environmental Planning and Assessment Act 1979. The proposed works are permissible with consent and are consistent with the applicable provisions of relevant environmental planning instruments including SEPP (Resilience & Hazards) 2021 and SEPP (Transport & Infrastructure) 2021.

The social, economic and environmental impacts of the proposed development have been considered in full. Concerns raised in the initial referrals have been resolved through the submission of additional information. No objection was raised by the EPA or DPE-Water subject to conditions and no public submissions were received following notification.

4 RECOMMENDATION

It is recommended that DA-2023/228 be approved subject to the recommended conditions of consent listed in Attachment 7.

Attachments

1 Aerial photograph

2 Zoning map

3 Full set of plans

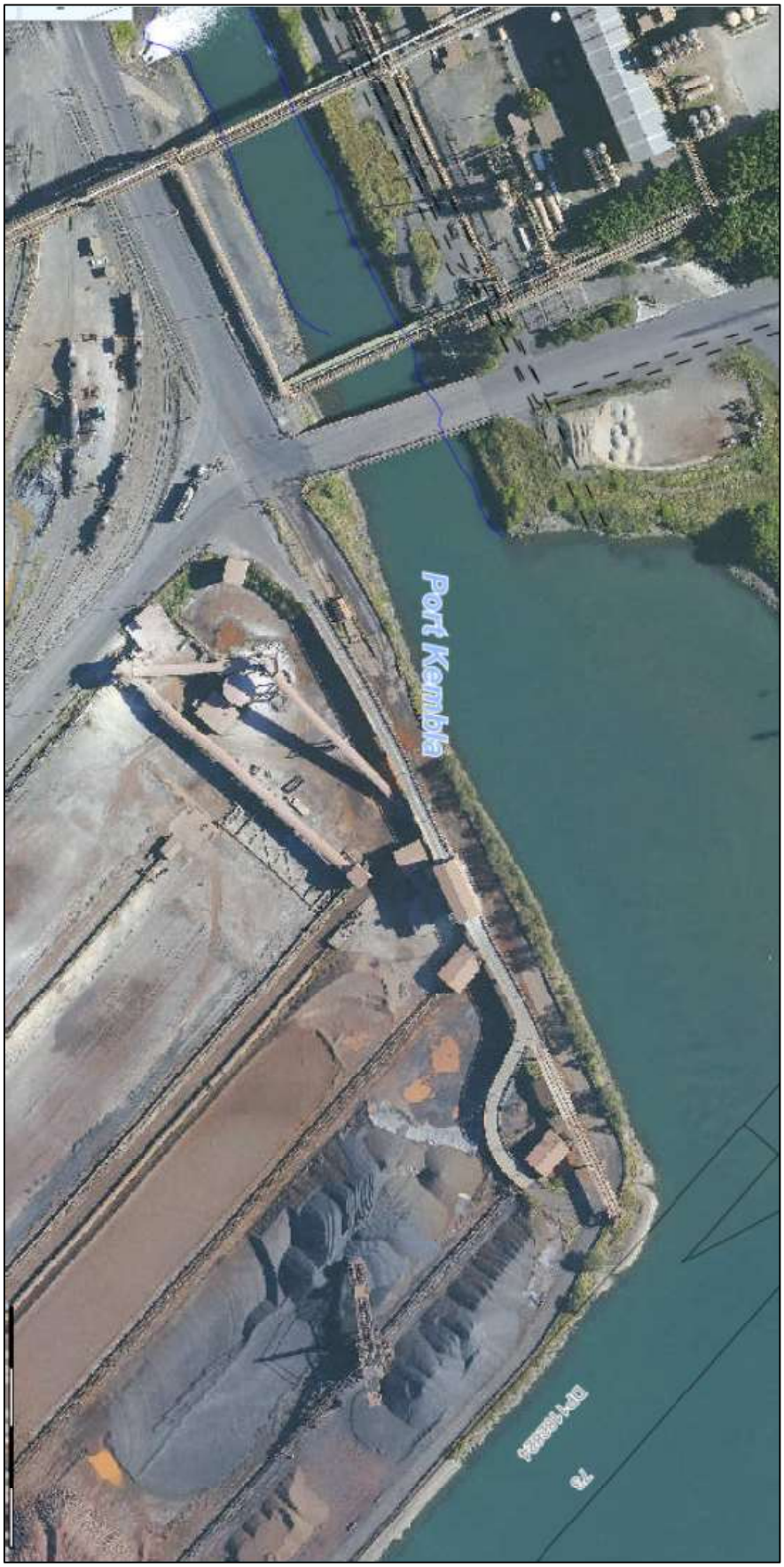
4 Statement of Environmental Effects, Allans Creek Remediation, Reference ACKR-RPT-ENGR-Statement of Environmental Effects-01 dated 9 May 2023

5. Arboricultural Report for Allans Creek remediation works, prepared by Moore Trees

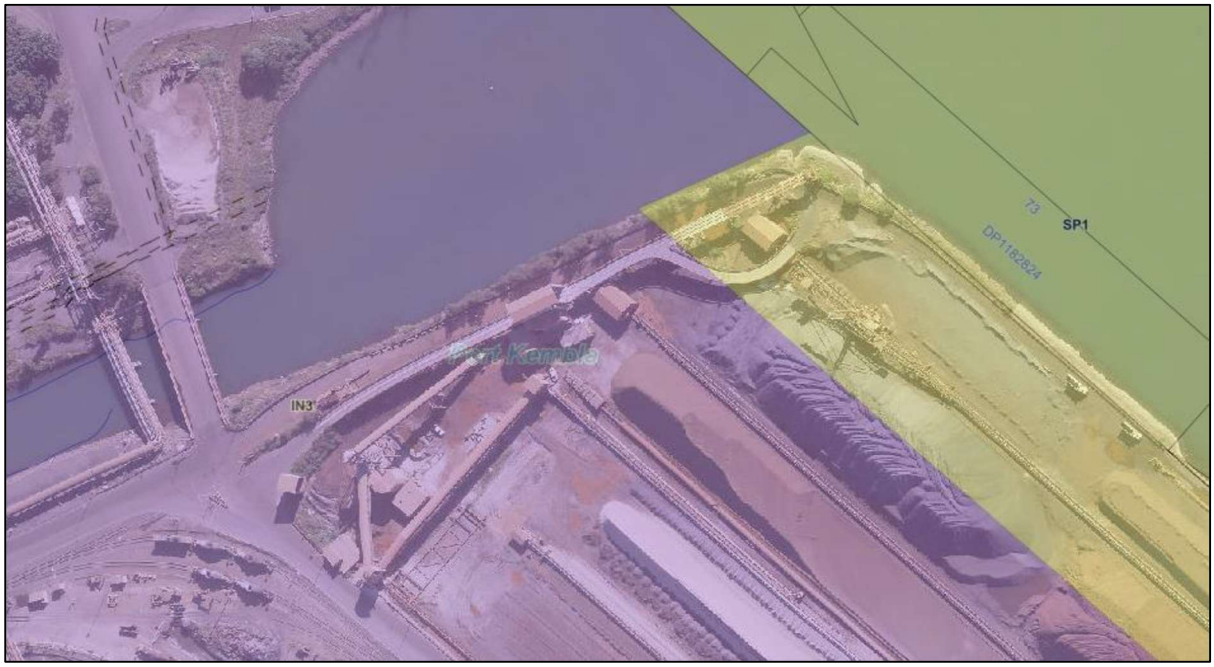
6. Allans Creek Remediation Concept Landscape Revegetation Plan, Rev 1, dated 29 August 2023, prepared by Anita Rojas

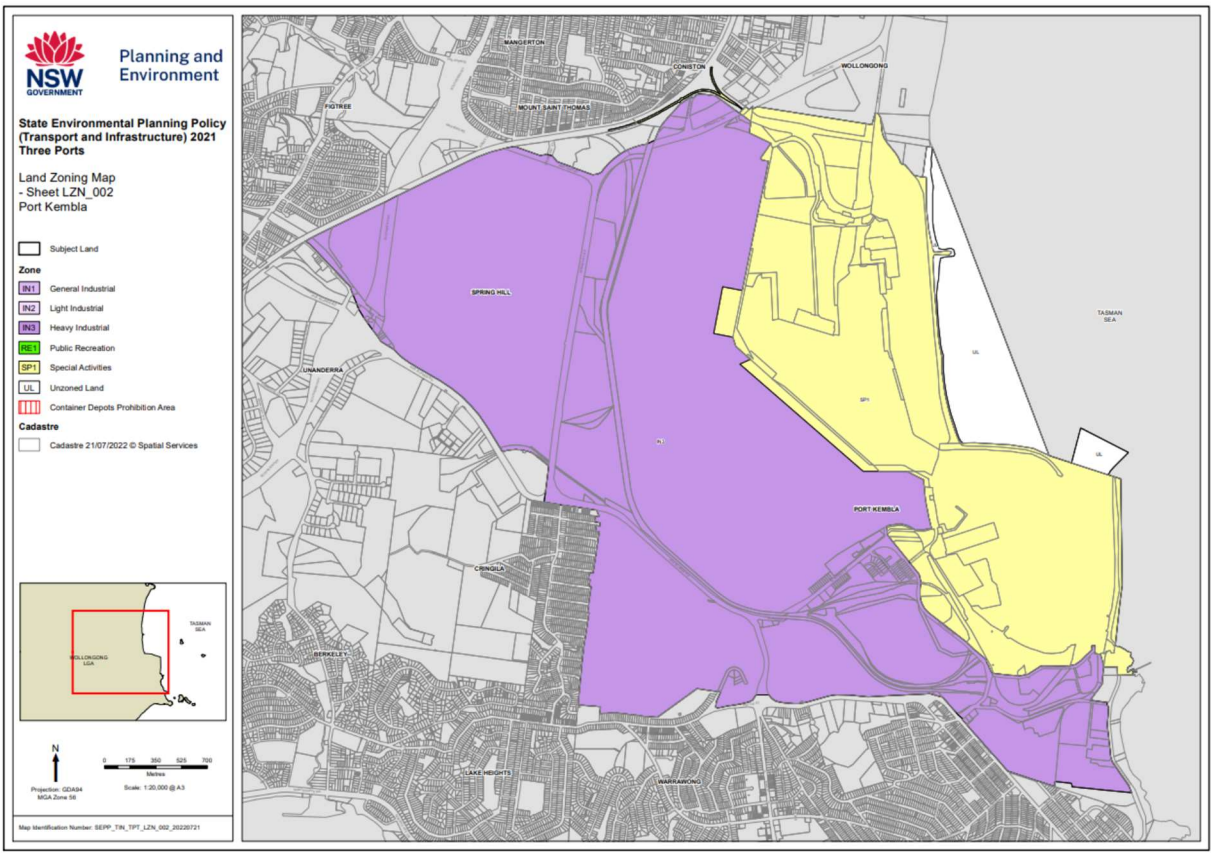
7. Draft conditions of consent

Attachment 1 - Aerial photograph



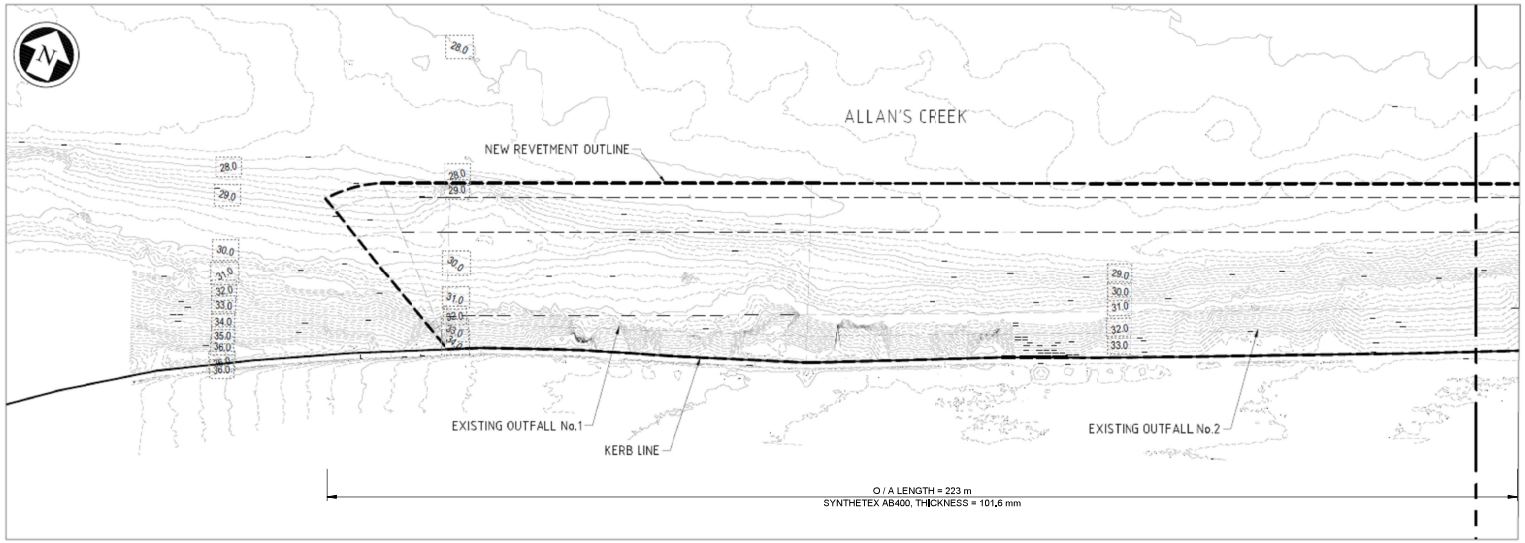
Attachment 2 – Zoning Extract – SEPP (Transport & Infrastructure) 2021





Attachment 3 – Plans

DRAFT



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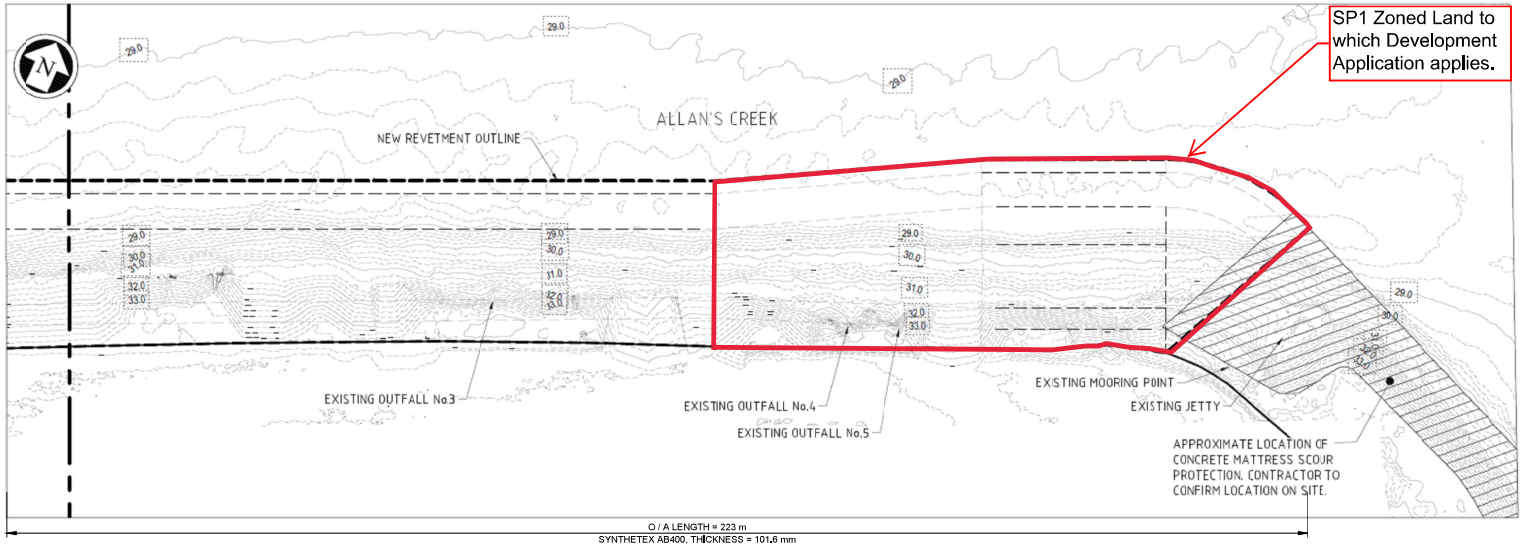


EXISTING CONDITIONS - LAYOUT PLAN 2
SCALE: NTS

ISSUED FOR COMMENT

* DENOTES ORIGINAL SIGNED

AMENDMENTS

REV.	DATE	DESCRIPTION	DESIGNER SIGNED	RPEQ SIGNED	RPEQ NO.	COMPANY NAME
A	25.10.22	ISSUED FOR COMMENT	R.BORZOU	S.NORTHEY	7979	HYCHEM

AS CONSTRUCTED CERTIFICATION FOR DRAWING REVISION ...

I CERTIFY THAT THE AS CONSTRUCTED DETAILS SHOWN ON THIS PLAN ARE A TRUE AND ACCURATE RECORD OF THE WORKS.

SIGNATURE DATE

NAME RPEQ No.

COMPANY NAME

ENGINEERING CERTIFICATION

SIGNATURE	RPEQ No.	DISCIPLINE	DATE
S.NORTHEY	7979	CIVIL	25.10.22
-	-	-	-

DESIGN DRAFTING

DRAFTED BY: R.BORZOU	DATE: 25.10.22
DESIGNED BY: R.BORZOU	DATE: 25.10.22

CIP CODE

FILE REFERENCE

CONTRACT No.

PROJECT TEAM

HYCHEM INFRASTRUCTURE SOLUTIONS

BlueScope

ASSET/PROJECT
ALAN'S CREEK
EMBANKMENT STABILISATION WORKS
SYNTHETEX AB400

DRAWING TITLE — SHEET 1 OF 2
EXISTING CONDITIONS

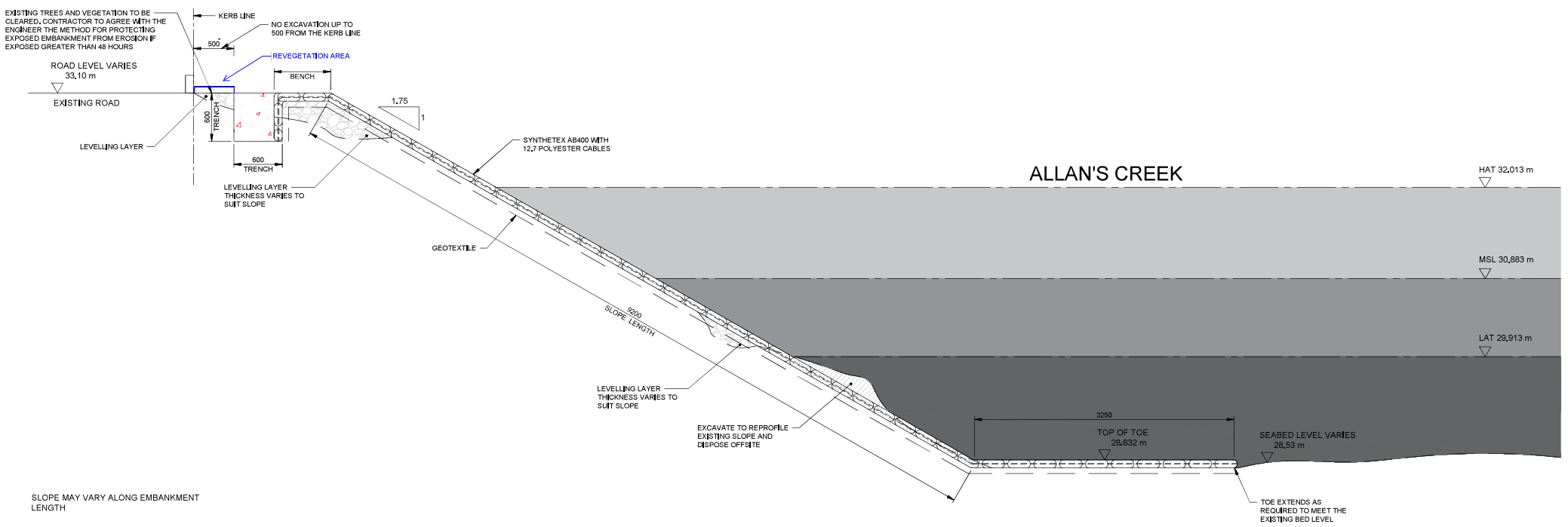
DRAWING STATUS
ISSUED FOR COMMENT

HYCHEM DRAWING No.
1458 - HC - SYN - 01

REV.
A

DRAFT

NOTE:
*WIDTH BETWEEN EXISTING ROAD AND ANCHOR TRENCH VARIES FROM 500 - 2000



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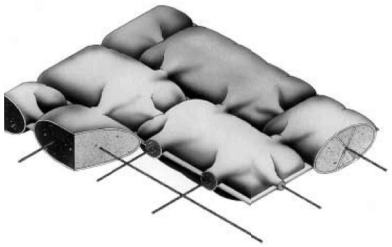

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SCALE (m)

ISSUED FOR COMMENT

* DENOTES ORIGINAL SIGNED

AMENDMENTS						
REV.	DATE	DESCRIPTION	DESIGNER SIGNED	RPEQ SIGNED	RPEQ NO.	COMPANY NAME
A	25.10.22	ISSUED FOR COMMENT	R.BORZOU	S.NORTHEY	7979	HYCHEM

AS CONSTRUCTED CERTIFICATION FOR DRAWING REVISION ...

I CERTIFY THAT THE AS CONSTRUCTED DETAILS SHOWN ON THIS PLAN ARE A TRUE AND ACCURATE RECORD OF THE WORKS.

SIGNATURE DATE
NAME RPEQ No.
COMPANY NAME

ENGINEERING CERTIFICATION

SIGNATURE	RPEQ No.	DISCIPLINE	DATE
S.NORTHEY	7979	CIVIL	25.10.22
-	-	-	-

DESIGN DRAFTING

DRAFTED BY	R.BORZOU 25.10.22
DESIGNED BY	R.BORZOU 25.10.22

CIP CODE
FILE REFERENCE
CONTRACT No.

PROJECT TEAM
HYCHEM INFRASTRUCTURE SOLUTIONS
BlueScope

ASSET/PROJECT
ALAN'S CREEK
EMBANKMENT STABILISATION WORKS
SYNTHETEX AB400

DRAWING TITLE
TYPICAL DETAILS 1

SHEET 2 OF 2

DRAWING STATUS
ISSUED FOR COMMENT

HYCHEM DRAWING No.
1458 - HC - SYN - 02

REV.
A

REV No.	DATE	SHEETS REVISED	DESCRIPTION OF CHANGE	CHANGE APPROVAL No.	RESPONSIBLE ENGINEER	DISCIPLINE ENGINEER	REGISTRATION APPROVAL
A	30.05.2023	-	ISSUED FOR COMMENT	-	NAME: - G.SZLOCH	NAME: - D.ROCHE	NAME: - L.CARDILE
					SIGNATURE	SIGNATURE	SIGNATURE

PRODUCT INFORMATION

PRODUCT: HYDROTEX® AB600.141

MATERIAL: POLYESTER

CABLE: 12.7mm, BOTH DIRECTIONS

FABRIC AREA = 7,869.7 m^2

CIP AREA = 6,255.6 m^2

ZIPPER LENGTH = 1,184.2 m

DRAWING INDEX

PROJECT INFORMATION

SITE:

ALLAN'S CREEK EMBANKMENT STABILISATION

PORT KEMBLA, AUSTRALIA

OWNER:

BLUESCOPE STEEL

FIVE ISLANDS RD, PORT KEMBLA NSW 2505, AUSTRALIA

MANUFACTURER:

SYNTHETEX, LLC

5550 TRIANGLE PARKWAY, SUITE 220

PEACHTREE CORNERS, GA 30092

(800) 225-0023

PROJECT DOCUMENTS:

LIMITS BASED ON: "ACKR-SKT-ENGR-MATTRESS PROFILE SKETCHES-B" AND CUSTOMER PROVIDED INFORMATION

LETTER - AUSTRALIA 03 10 23.PDF

PILARCYZK ASSESSMENT - 2023-L007 03-14-2023.PDF

REFERENCE DRAWINGS:

-	103070	-	371863
-	103071	-	374429
-	103127	-	376687

DRAFT

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES: PK15-G

INDEX CODES: J1-02, J1-11, J1-14, J1-17, J0-04-002

REFERENCE DRAWINGS: -

DRAWING PRODUCED BY: Capital Dev., Engineering & Environ.

CONTRACTOR DETAILS

DE/SPEC: -

SUPERVISOR: -

ORDER No: -

CONTRACTOR REF No: -

Port Kembla Steelworks

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

CHANGE APPR No: -

PROJECT/WBS No: -

DRAWN: RAHMIN BORZOU

CHECKED: SHERARD NORTHEY

DISC. ENGINEER OR SPECIALIST: -

DISC. ENGINEER OR SPECIALIST: -

RESPONSIBLE ENGINEER: -

REGISTRATION APPROVAL: -

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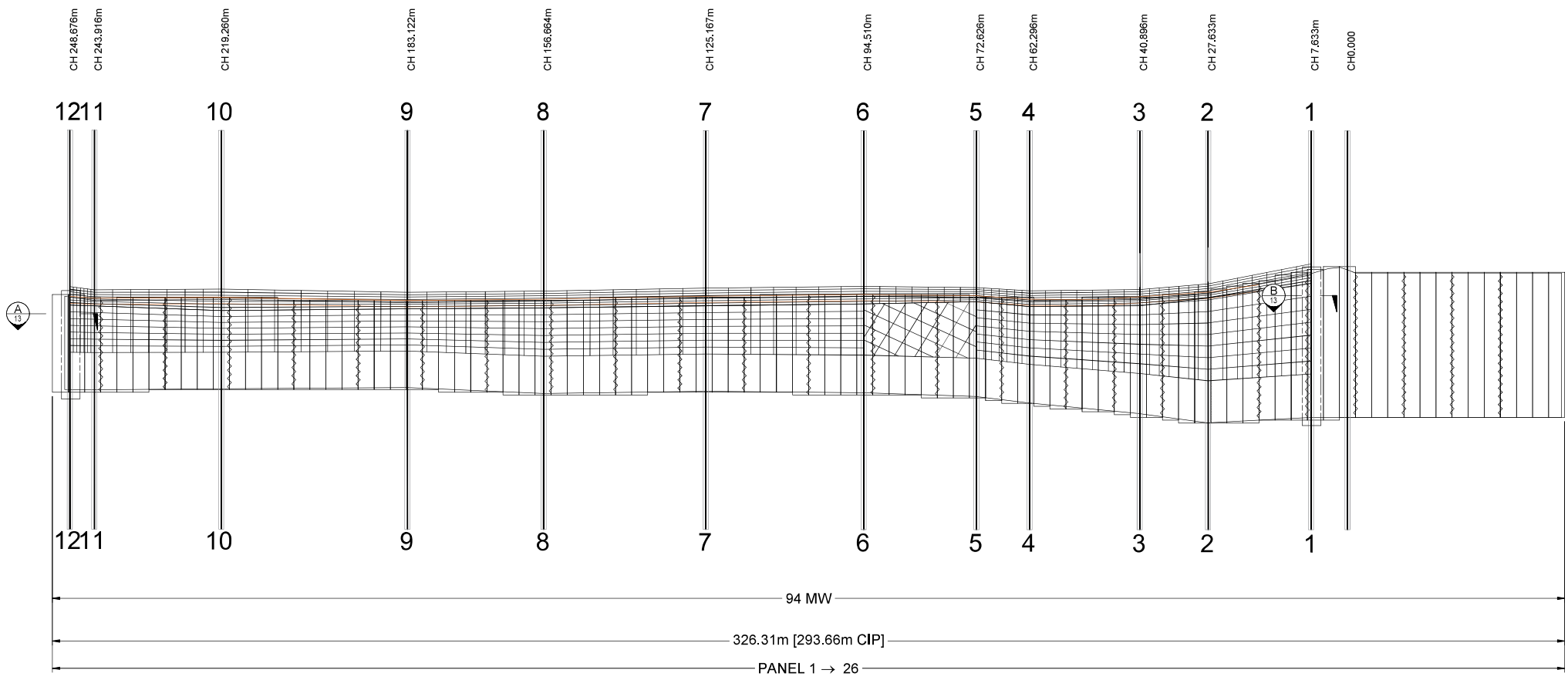

ALLANS CREEK REVETMENT - PLAN VIEW

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DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION

- ISSUED FOR COMMENT

DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY

O/No, CONT. NAME & REF No: -

DC/SPEC: -

RESP ENG: RAHMIN BORZOU (HYCHEM)

REGN APPR: MARIA ZOUROS (BSL)

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G

INDEX CODES
J1-02 J0-04-002
J1-11
J1-14
J1-17

REFERENCE DRAWINGS
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103127 376687

Port Kembla Steelworks

DRAWING PRODUCED BY: Hychem Infrastructure

DISC. ENGINEER OR SPECIALIST: - | SUPERVISOR: -

ORDER No: - | CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

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RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023

CHANGE APPROVAL NUMBER: - | PROJECT/WBS No: -

DRAWN	CHECKED	DISC. ENGINEER OR SPECIALIST
Rahmin Borzou	Sherard Northey	-
DISC. ENGINEER OR SPECIALIST	RESPONSIBLE ENGINEER	REGISTRATION APPROVAL
-	Rahmin Borzou	-

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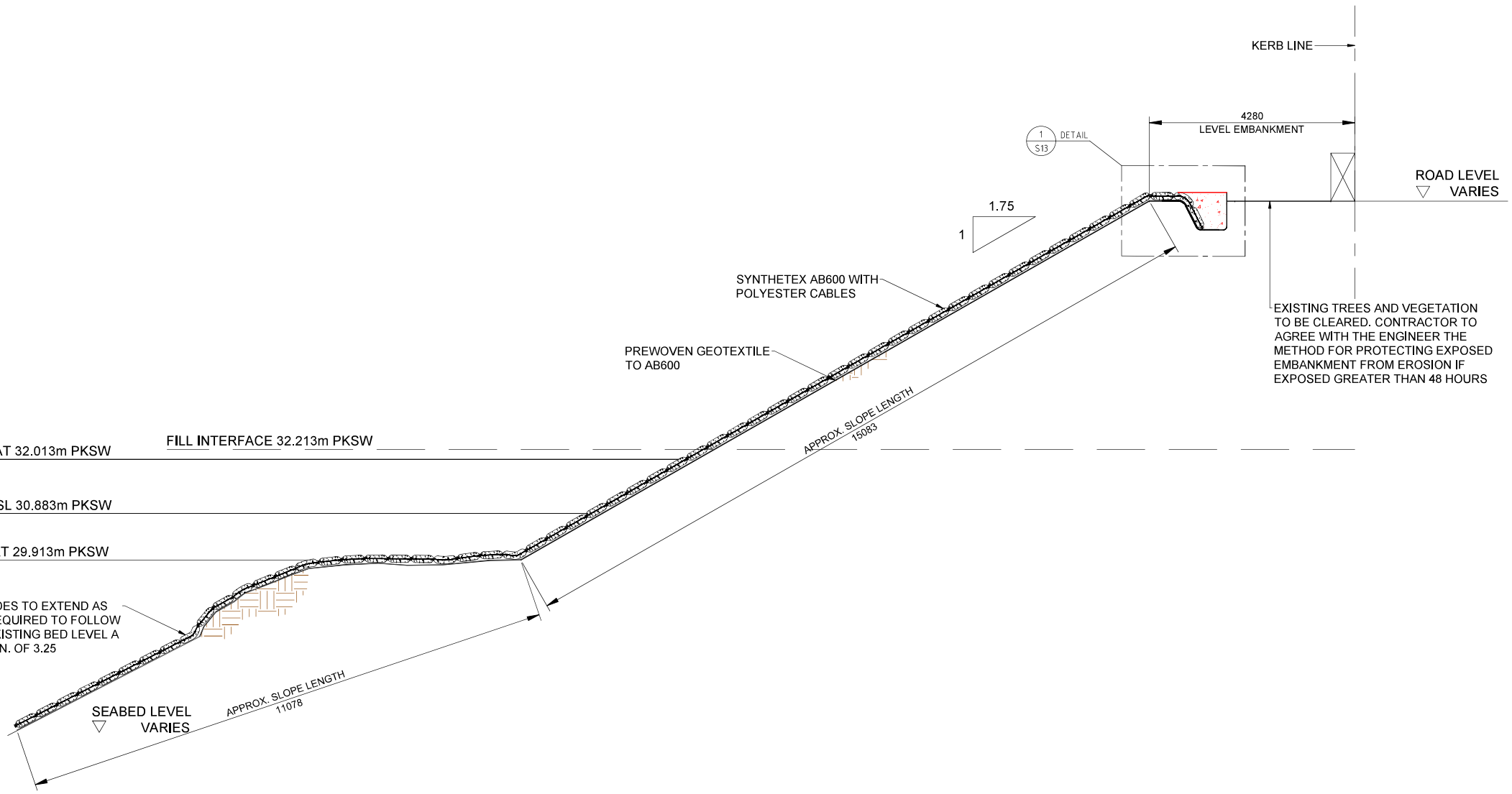

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- ISSUED FOR COMMENT

DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY

O/No, CONT. NAME & REF No: -

DC/SPEC: -

RESP ENG: RAHMIN BORZOU (HYCHEM)

REGN APPR: MARIA ZOUROS (BSL)

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G

INDEX CODES
J1-02
J1-11
J1-14
J1-17

REFERENCE DRAWINGS
103078
103071
103121

Port Kembla Steelworks

DRAWING PRODUCED BY:
Hychem
Infrastructure

DISC. ENGINEER OR SPECIALIST: -
SUPERVISOR: -
ORDER No: -
CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

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GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023

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PROJECT/WBS No: -

DRAWN	CHECKED	DISC. ENGINEER OR SPECIALIST
Rahmin Borzou	Sherard Northey	-
DISC. ENGINEER OR SPECIALIST	RESPONSIBLE ENGINEER	REGISTRATION APPROVAL
-	Rahmin Borzou	-

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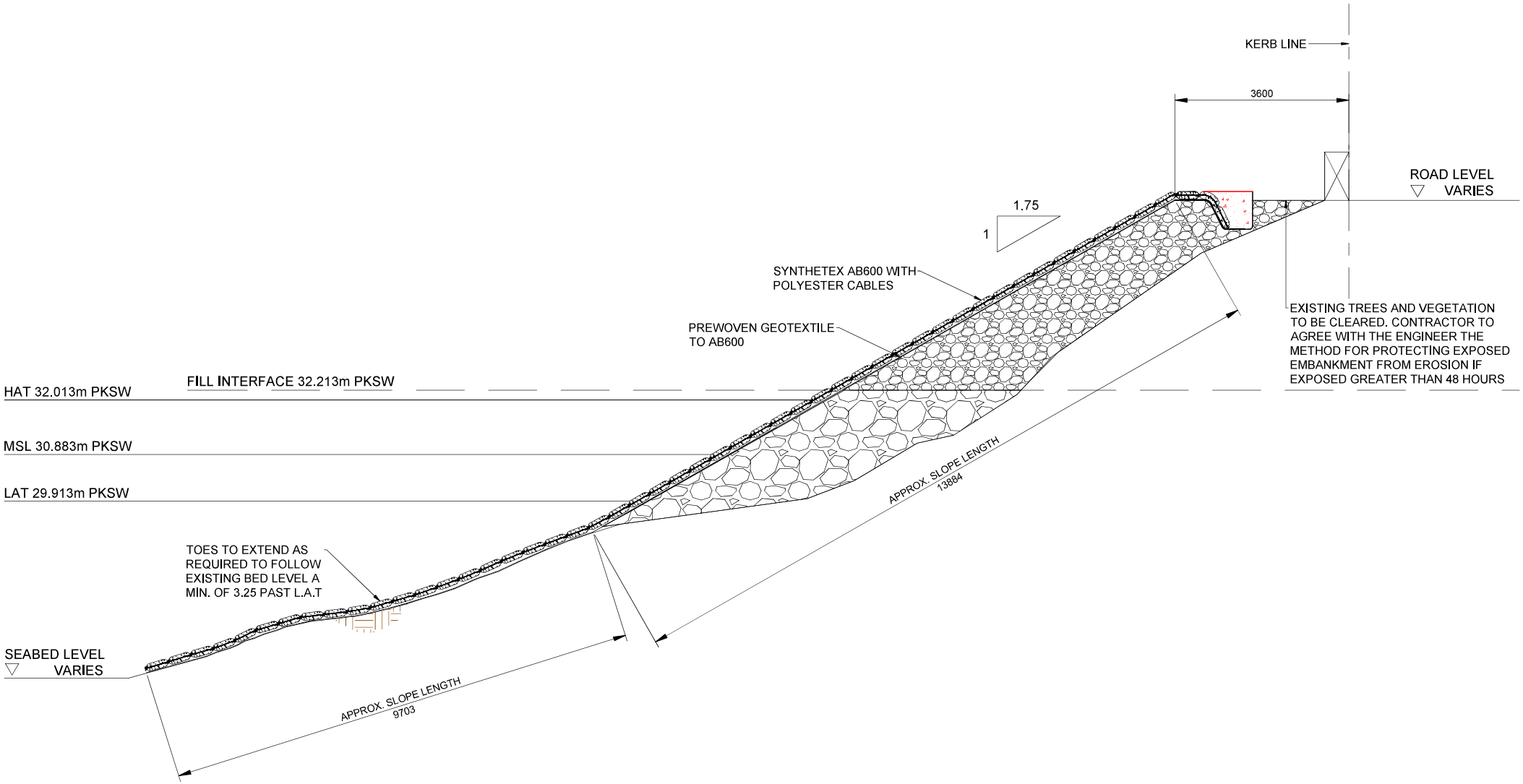

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DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION

- ISSUED FOR COMMENT

DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY

O/No, CONT. NAME & REF No: -

DE/SPEC: -

RESP ENG: RAHMIN BORZOU (HYCHEM)

REGN APPR: MARIA ZOUROS (BSL)

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G

INDEX CODES
J1-02
J1-11
J1-14
J1-17

REFERENCE DRAWINGS
103078
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103121

Port Kembla Steelworks

DRAWING PRODUCED BY:
Hychem
Infrastructure

DISC. ENGINEER OR SPECIALIST: -
SUPERVISOR: -
ORDER No: -
CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

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RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023

CHANGE APPROVAL NUMBER: -
PROJECT/WBS No: -

DRAWN: Rahmin Borzou	CHECKED: Sherard Northey	DISC. ENGINEER OR SPECIALIST: - -
DISC. ENGINEER OR SPECIALIST: - -	RESPONSIBLE ENGINEER: Rahmin Borzou	REGISTRATION APPROVAL: -

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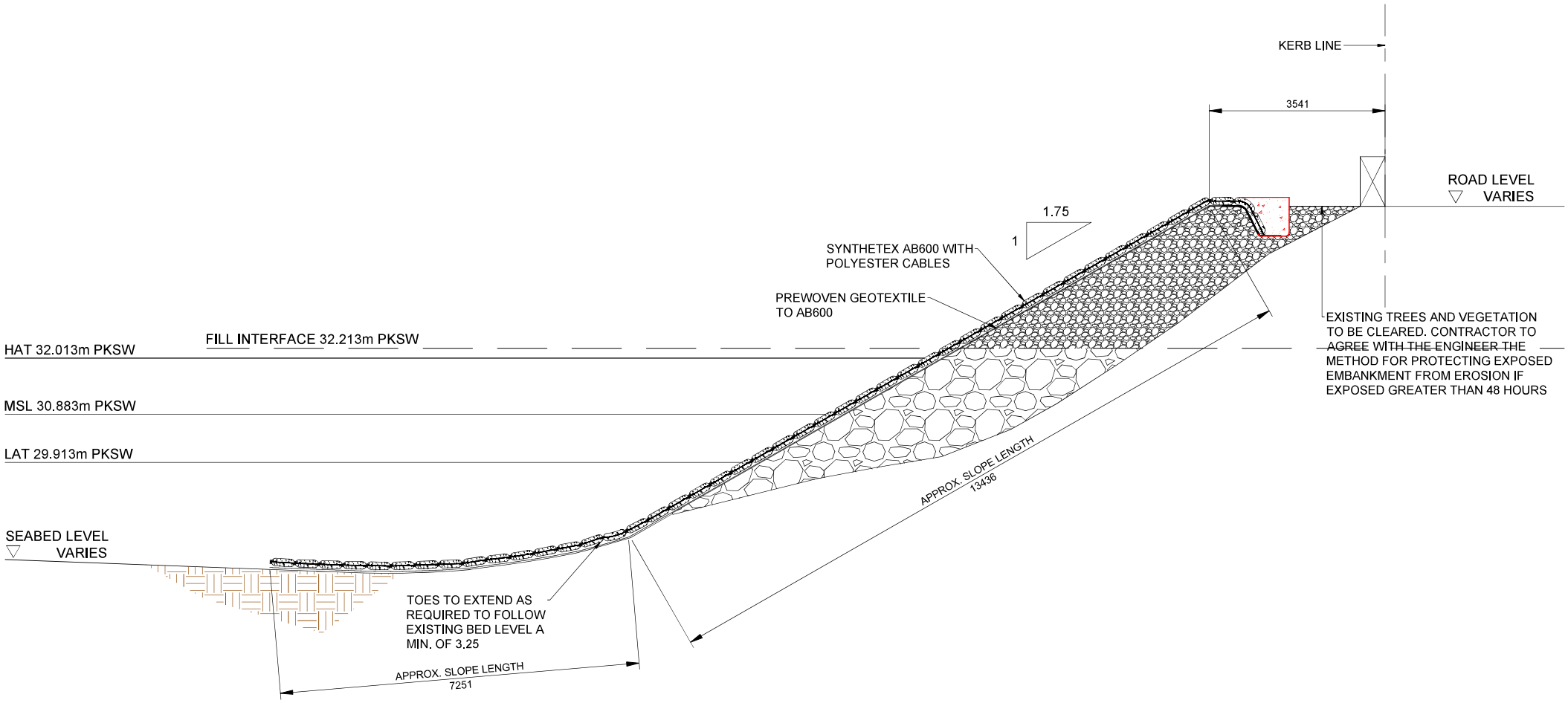

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- ISSUED FOR COMMENT			
DRAWN: RAHMIN BORZOU		CHECKED: SHERARD NORTHEY	
O/No, CONT. NAME & REF No: -			
DE/SPEC: -			
RESP ENG: RAHMIN BORZOU (HYCHEM)			
REGN APPR: MARIA ZOUROS (BSL)			

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES: PK15-G

INDEX CODES: J1-02, J1-11, J1-14, J1-17

REFERENCE DRAWINGS: 103078, 103071, 103121

Port Kembla Steelworks

DRAWING PRODUCED BY: Hychem, Infrastructure

DISC. ENGINEER OR SPECIALIST: - | SUPERVISOR: -

ORDER No: - | CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

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RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023

CHANGE APPROVAL NUMBER: -			PROJECT/WBS No: -
DRAWN: Rahmin Borzou		CHECKED: Sherard Northey	DISC. ENGINEER OR SPECIALIST: -
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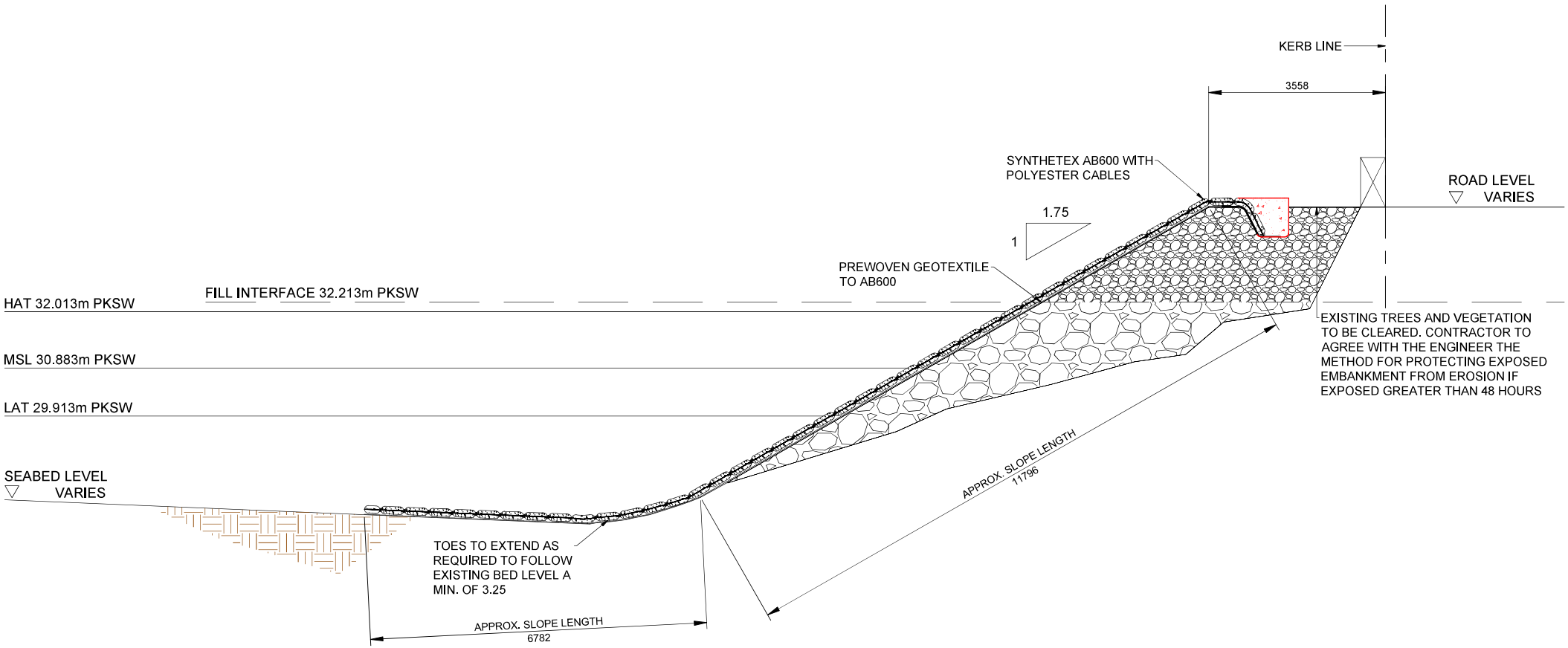

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DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION

- ISSUED FOR COMMENT

DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY

O/No, CONT. NAME & REF No: -

DE/SPEC: -

RESP ENG: RAHMIN BORZOU (HYCHEM)

REGN APPR: MARIA ZOUROS (BSL)

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G

INDEX CODES
J1-02
J1-11
J1-14
J1-17

REFERENCE DRAWINGS
103078
103071
103127

CONTRACTOR DETAILS

Port Kembla Steelworks

DRAWING PRODUCED BY:
Hychem
Infrastructure

DISC. ENGINEER OR SPECIALIST: -
SUPERVISOR: -
ORDER No: -
CONTRACTOR/SUPPLIER REF No: -

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

A1

RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023

CHANGE APPROVAL NUMBER: -
PROJECT/WBS No: -

DRAWN	CHECKED	DISC. ENGINEER OR SPECIALIST
Rahmin Borzou	Sherard Northey	-
DISC. ENGINEER OR SPECIALIST	RESPONSIBLE ENGINEER	REGISTRATION APPROVAL
-	Rahmin Borzou	-

AUTOCAD FILE NAME: ALANSCREEK_REV A.DWG
AUTOCAD PRINT: 30/05/2023 11:19 AM

DATE DRN 19.04.2023
SCALE AS SHOWN
DRAWING No: 542508_0005
DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION
REV No A

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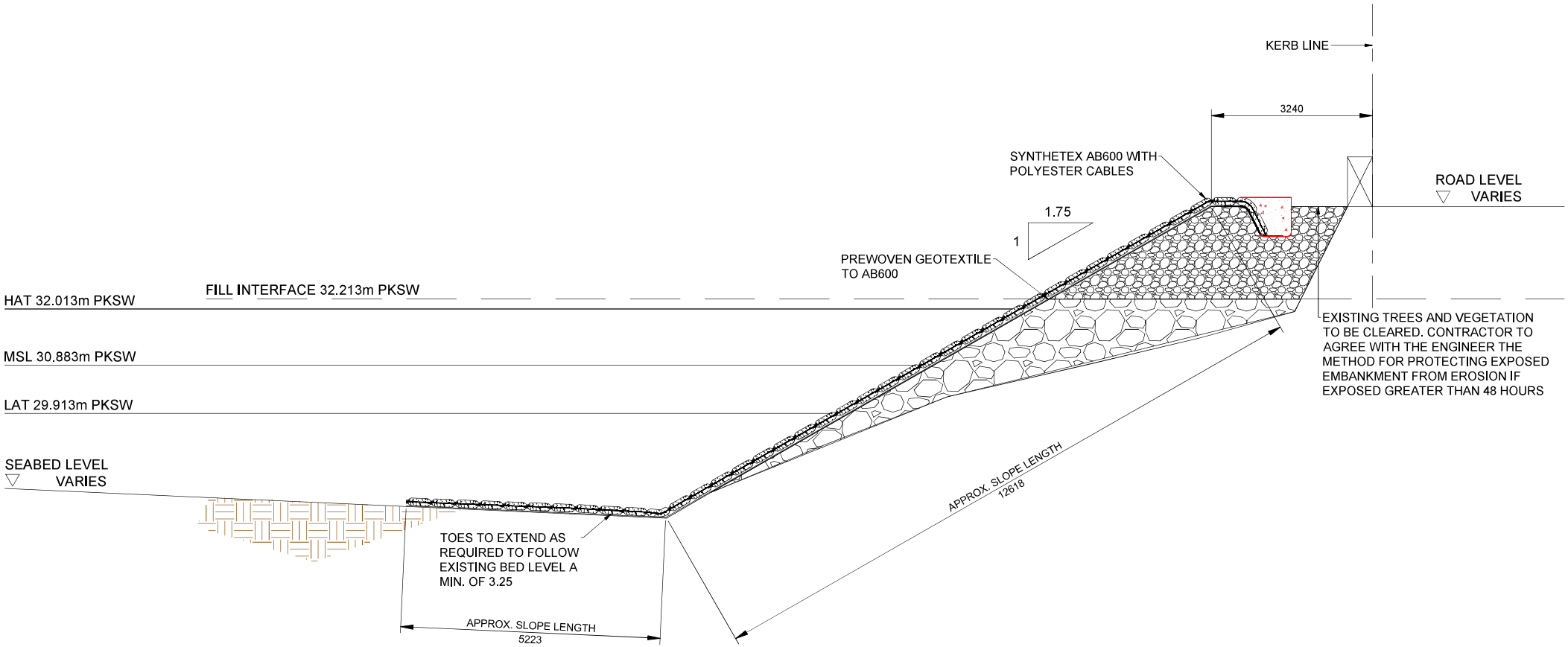

ALLANS CREEK REVETMENT - CS05

SCALE: 1:40 (A1)

DRAFT

A	DATE 30.05.23	PROJECT/WBS No 4403 ACKR	CHANGE APPROVAL No 4879353
DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION			
- ISSUED FOR COMMENT			
DRAWN: RAHMIN BORZOU		CHECKED: SHERARD NORTHEY	
O/No, CONT. NAME & REF No: -			
DC/SPEC: -			
RESP ENG: RAHMIN BORZOU (HYCHEM)			
REGN APPR: MARIA ZOUROS (BSL)			

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES: PK15-G

INDEX CODES: J1-02, J1-11, J1-14, J1-17

REFERENCE DRAWINGS: 103078, 103071, 103121

Port Kembla Steelworks

DRAWING PRODUCED BY: Hychem, Infrastructure

DISC. ENGINEER OR SPECIALIST: -

SUPERVISOR: -

ORDER No: -

CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

A1

RAW MATERIALS HANDLING

GENERAL ARRANGEMENTS

ALLANS CREEK EMBANKMENT STABILISATION 2023

CHANGE APPROVAL NUMBER: -			PROJECT/WBS No: -
DRAWN: Rahmin Borzou	CHECKED: Sherard Northey		DISC. ENGINEER OR SPECIALIST: -
DISC. ENGINEER OR SPECIALIST: -	RESPONSIBLE ENGINEER: Rahmin Borzou		REGISTRATION APPROVAL: -
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DATE DRN: 19.04.2023	DRAWING No: 542508_0006		REV No: A
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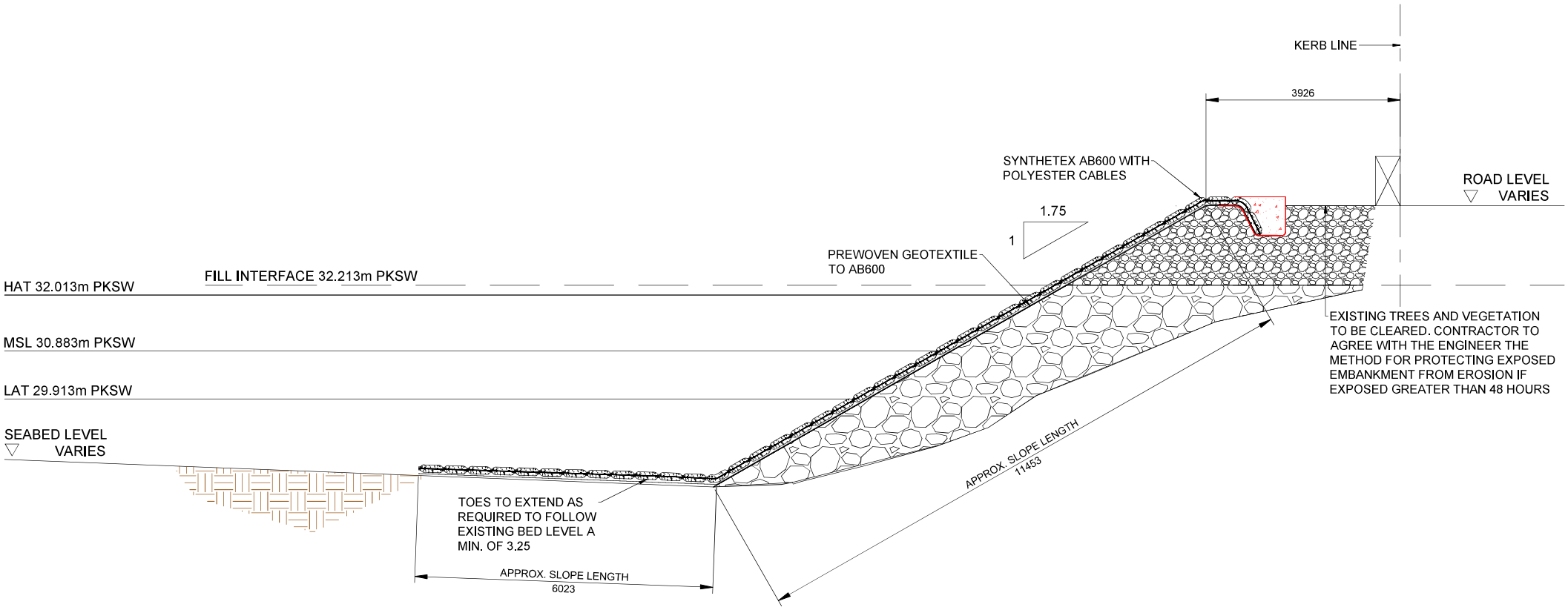

ALLANS CREEK REVETMENT - CS06

SCALE: 1:40 (A1)

DRAFT

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DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION			
- ISSUED FOR COMMENT			
DRAWN: RAHMIN BORZOU		CHECKED: SHERARD NORTHEY	
O/No, CONT. NAME & REF No: -			
DC/SPEC: -			
RESP ENG: RAHMIN BORZOU (HYCHEM)			
REGN APPR: MARIA ZOUROS (BSL)			

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G
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-
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INDEX CODES
J1-02
J1-11
J1-14
J1-17

REFERENCE DRAWINGS
103078
103071
103121

Port Kembla Steelworks

DRAWING PRODUCED BY:
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DISC. ENGINEER OR SPECIALIST: -
SUPERVISOR: -
ORDER No: -
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CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

A1

RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023
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CHANGE APPROVAL NUMBER: -			PROJECT/WBS No: -
DRAWN: Rahmin Borzou	CHECKED: Sherard Northey		DISC. ENGINEER OR SPECIALIST: - -
DISC. ENGINEER OR SPECIALIST: - -	RESPONSIBLE ENGINEER: Rahmin Borzou		REGISTRATION APPROVAL: -
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DATE DRN: 19.04.2023	DRAWING No: 542508_0007		REV No: A
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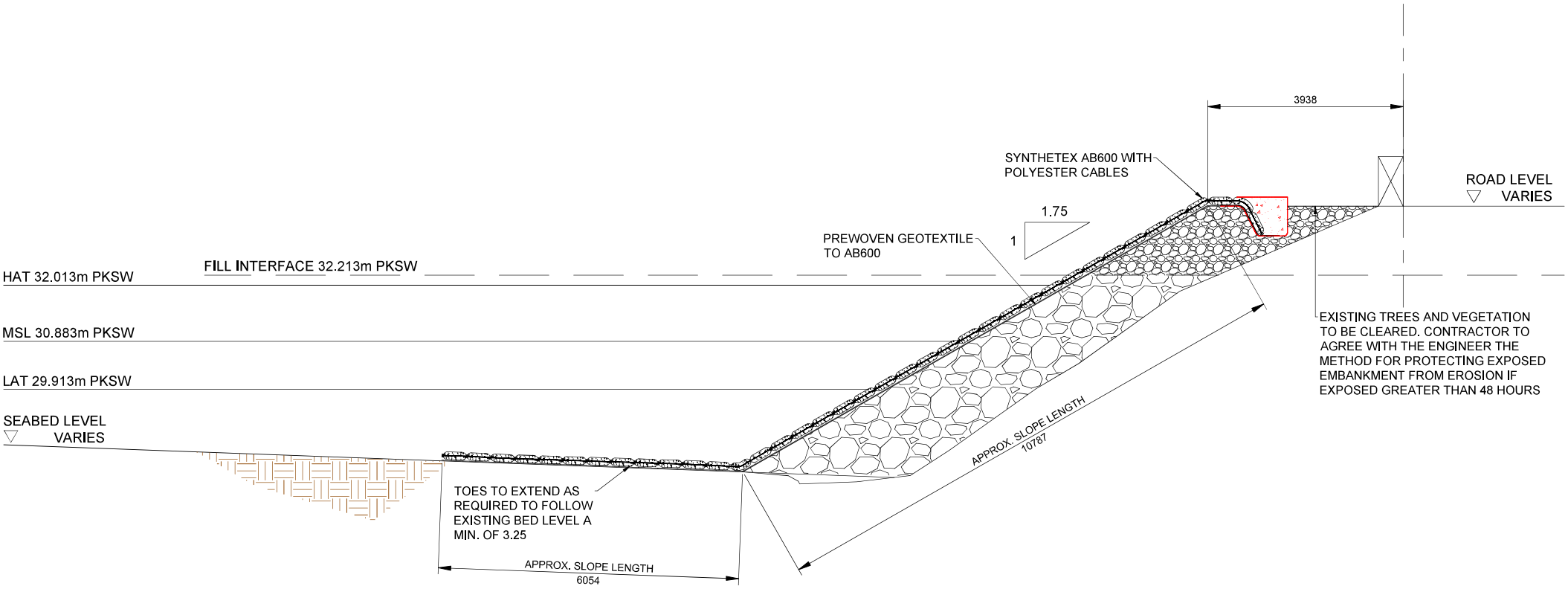

ALLANS CREEK REVETMENT - CS07

SCALE: 1:40 (A1)

DRAFT

A	DATE 30.05.23	PROJECT/WBS No 4403 ACKR	CHANGE APPROVAL No 4879353

DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION

- ISSUED FOR COMMENT

DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY

O/No, CONT. NAME & REF No: -

DC/SPEC: -

RESP ENG: RAHMIN BORZOU (HYCHEM)

REGN APPR: MARIA ZOUROS (BSL)

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G

INDEX CODES
J1-02
J1-11
J1-14
J1-17

REFERENCE DRAWINGS
103078
103071
103121

Port Kembla Steelworks

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SUPERVISOR: -
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CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

A1

RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023

CHANGE APPROVAL NUMBER: -
PROJECT/WBS No: -

DRAWN	CHECKED	DISC. ENGINEER OR SPECIALIST
Rahmin Borzou	Sherard Northey	-
DISC. ENGINEER OR SPECIALIST	RESPONSIBLE ENGINEER	REGISTRATION APPROVAL
-	Rahmin Borzou	-

AUTOCAD FILE NAME: ALANSCREEK_REV A.DWG
AUTOCAD PRINT: 30/05/2023 11:20 AM

DATE DRN	DRAWING No:	REV No
19.04.2023	542508_0008	A
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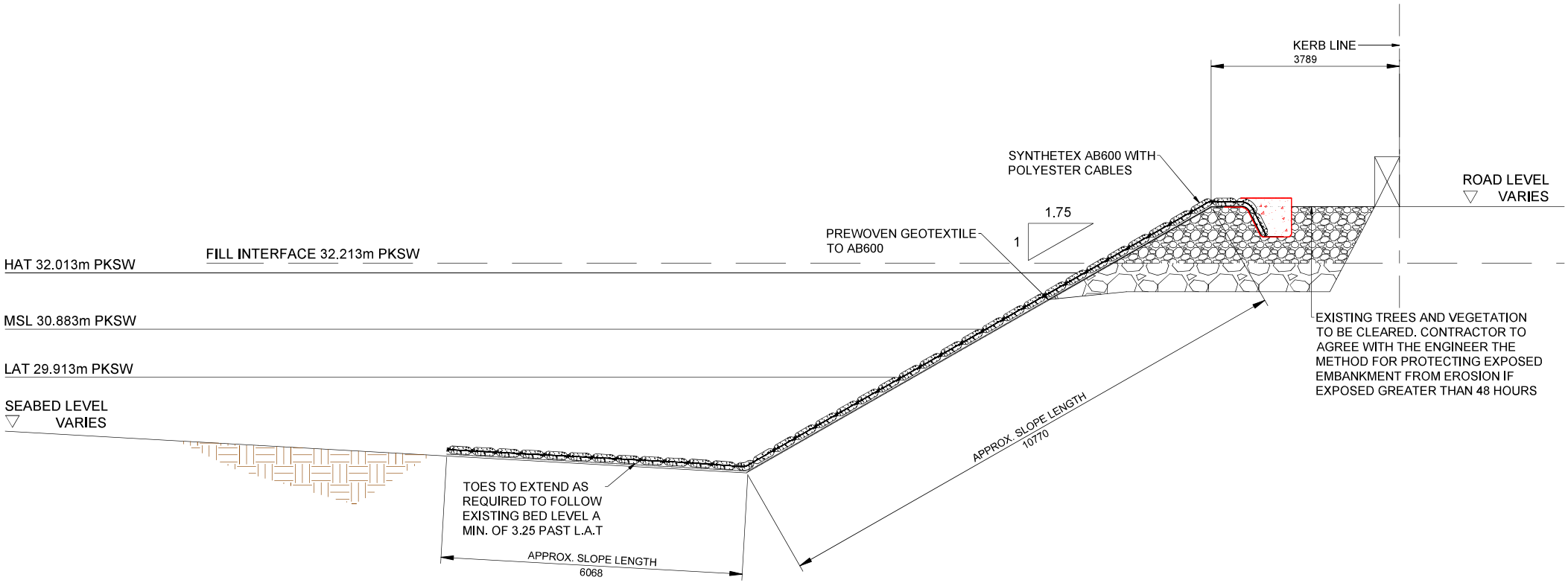

ALLANS CREEK REVETMENT - CS08

SCALE: 1:40 (A1)

DRAFT

A	DATE 30.05.23	PROJECT/WBS No 4403 ACKR	CHANGE APPROVAL No 4879353

DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION

- ISSUED FOR COMMENT

DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY

O/No, CONT. NAME & REF No: -

DC/SPEC: -

RESP. ENG: RAHMIN BORZOU (HYCHEM)

REGN APPR: MARIA ZOUROS (BSL)

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G
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INDEX CODES
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J1-11
J1-14
J1-17

REFERENCE DRAWINGS
103078
103071
103121

Port Kembla Steelworks

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DISC. ENGINEER OR SPECIALIST: -
SUPERVISOR: -
ORDER No: -
CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

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RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023

CHANGE APPROVAL NUMBER: -
PROJECT/WBS No: -

DRAWN	CHECKED	DISC. ENGINEER OR SPECIALIST
Rahmin Borzou	Sherard Northey	-
DISC. ENGINEER OR SPECIALIST	RESPONSIBLE ENGINEER	REGISTRATION APPROVAL
-	Rahmin Borzou	-

AUTOCAD FILE NAME: ALANSCREEK_REV A.DWG
AUTOCAD PRINT: 30/05/2023 11:21 AM

DATE DRN	DRAWING No:	REV No
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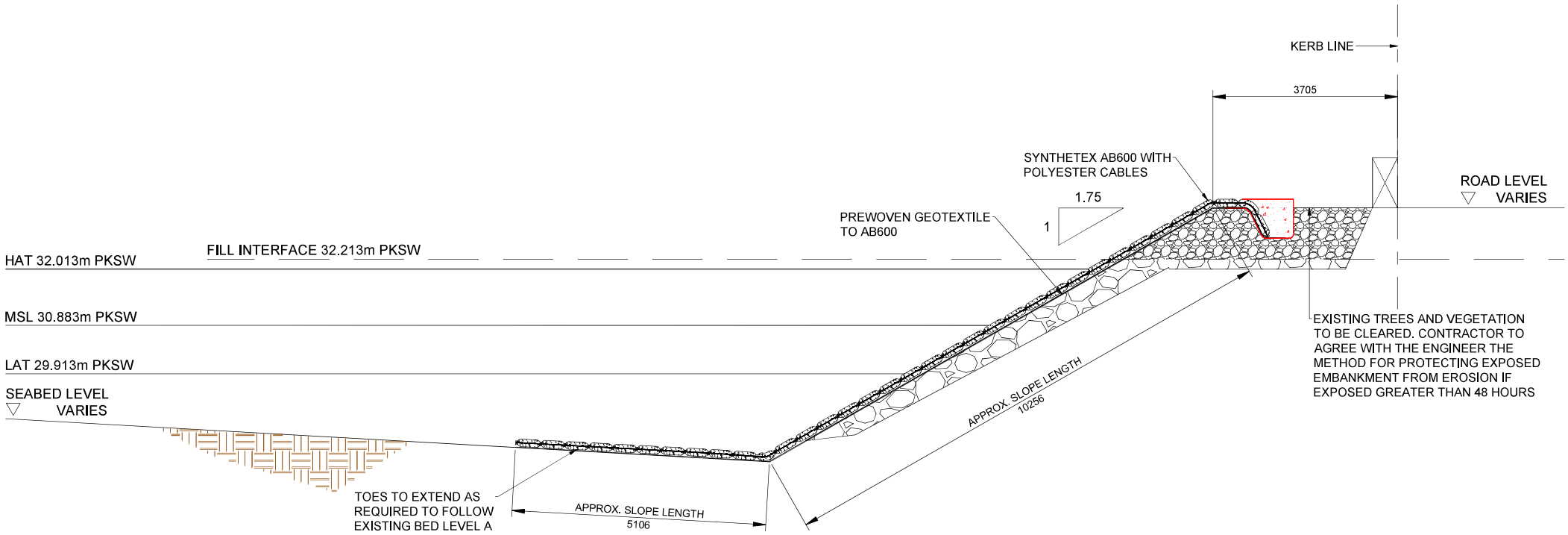

ALLANS CREEK REVETMENT - CS09

SCALE: 1:40 (A1)

DRAFT

A	DATE 30.05.23	PROJECT/WBS No 4403 ACKR	CHANGE APPROVAL No 4879353

DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION

- ISSUED FOR COMMENT

DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY

O/No, CONT. NAME & REF No: -

DE/SPEC: -

RESP ENG: RAHMIN BORZOU (HYCHEM)

REGN APPR: MARIA ZOUROS (BSL)

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G
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-

INDEX CODES
J1-02
J1-11
J1-14
J1-17

REFERENCE DRAWINGS
103078
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103121

Port Kembla Steelworks

DRAWING PRODUCED BY:
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Infrastructure

DISC. ENGINEER OR SPECIALIST: -
SUPERVISOR: -
ORDER No: -
CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

A1

RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023
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CHANGE APPROVAL NUMBER: -
PROJECT/WBS No: -

DRAWN	CHECKED	DISC. ENGINEER OR SPECIALIST
Rahmin Borzou	Sherard Northey	-
DISC. ENGINEER OR SPECIALIST	RESPONSIBLE ENGINEER	REGISTRATION APPROVAL
-	Rahmin Borzou	-

AUTOCAD FILE NAME: ALANSCREEK_REV A.DWG
AUTOCAD PRINT: 30/05/2023 11:21 AM

DATE DRN	DRAWING No:	REV No
19.04.2023	542508_0010	A
SCALE AS SHOWN	DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION	

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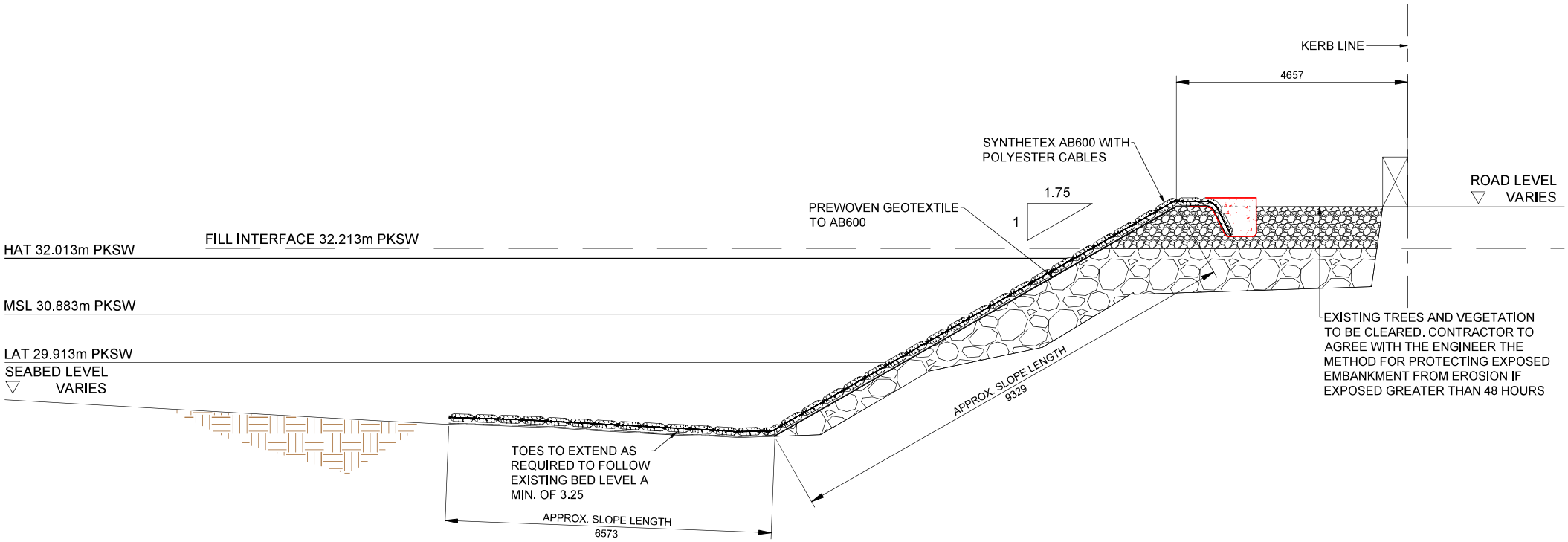

ALLANS CREEK REVETMENT - CS10

SCALE: 1:40 (A1)

DRAFT

A	DATE 30.05.23	PROJECT/WBS No 4403 ACKR	CHANGE APPROVAL No 4879353

DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION

- ISSUED FOR COMMENT

DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY

O/No, CONT. NAME & REF No: -

DC/SPEC: -

RESP ENG: RAHMIN BORZOU (HYCHEM)

REGN APPR: MARIA ZOUROS (BSL)

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G

INDEX CODES
J1-02
J1-11
J1-14
J1-17

REFERENCE DRAWINGS
103078
103071
103121

Port Kembla Steelworks

DRAWING PRODUCED BY:
Hychem
Infrastructure

DISC. ENGINEER OR SPECIALIST: -
SUPERVISOR: -
ORDER No: -
CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

A1

RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023
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CHANGE APPROVAL NUMBER: -
PROJECT/WBS No: -

DRAWN	CHECKED	DISC. ENGINEER OR SPECIALIST
Rahmin Borzou	Sherard Northey	-
DISC. ENGINEER OR SPECIALIST	RESPONSIBLE ENGINEER	REGISTRATION APPROVAL
-	Rahmin Borzou	-

AUTOCAD FILE NAME: ALANSCREEK_REV A.DWG
AUTOCAD PRINT: 30/05/2023 11:22 AM

DATE DRN	DRAWING No:	REV No
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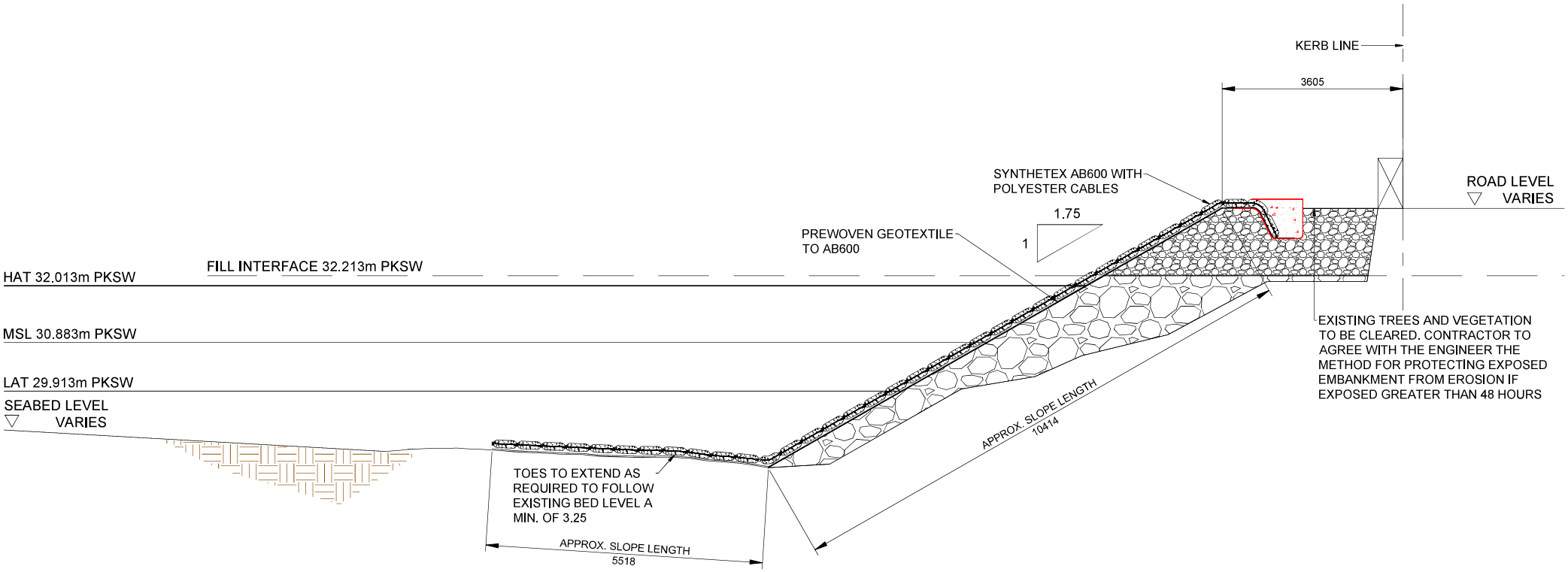

ALLANS CREEK REVETMENT - CS11

SCALE: 1:40 (A1)

DRAFT

DRAWING REVISIONS				
A	DATE 30.05.23	PROJECT/WBS No 4403 ACKR	CHANGE APPROVAL No 4879353	
DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION				
- ISSUED FOR COMMENT				
DRAWN: RAHMIN BORZOU		CHECKED: SHERARD NORTHEY		
O/No, CONT. NAME & REF No: -				
DE/SPEC: -				
RESP. ENG: RAHMIN BORZOU (HYCHEM)				
REGN APPR: MARIA ZOUROS (BSL)				

FUNCTIONAL LOCATION CODES: PK15-G

INDEX CODES: J1-02, J1-11, J1-14, J1-17

REFERENCE DRAWINGS: 103078, 103071, 103121

Port Kembla Steelworks

DRAWING PRODUCED BY: Hychem, Infrastructure

DISC. ENGINEER OR SPECIALIST: -

SUPERVISOR: -

ORDER No: -

CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

A1

RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023

CHANGE APPROVAL NUMBER: -

PROJECT/WBS No: -

DRAWN	CHECKED	DISC. ENGINEER OR SPECIALIST
Rahmin Borzou	Sherard Northey	-
DISC. ENGINEER OR SPECIALIST	RESPONSIBLE ENGINEER	REGISTRATION APPROVAL
-	Rahmin Borzou	-

AUTOCAD FILE NAME: ALANSCREEK_REV A.DWG

AUTOCAD PRINT: 30/05/2023 11:22 AM

DATE DRN	DRAWING No:	REV No
19.04.2023	542508_0012	A
SCALE: AS SHOWN	DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION	

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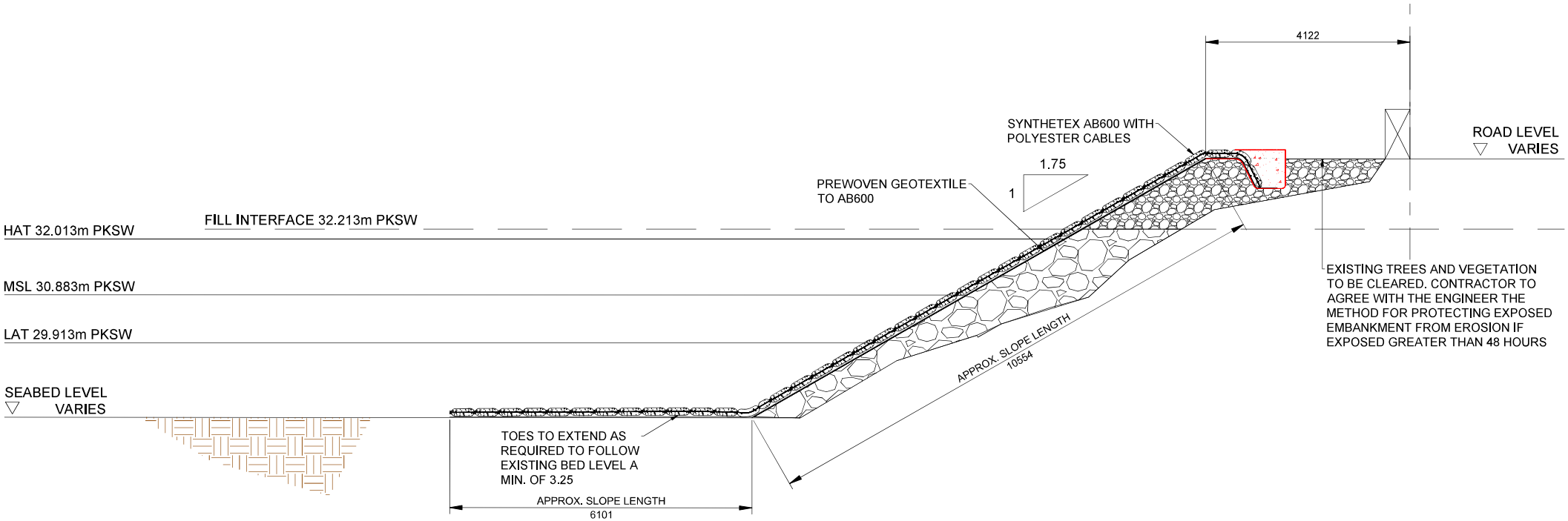

ALLANS CREEK REVETMENT - CS12

SCALE: 1:40 (A1)

DRAFT

DRAWING REVISIONS			
A	DATE 30.05.23	PROJECT/WBS No 4403 ACKR	CHANGE APPROVAL No 4879353
DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION			
- ISSUED FOR COMMENT			
DRAWN: RAHMIN BORZOU		CHECKED: SHERARD NORTHEY	
O/No, CONT. NAME & REF No: -			
DE/SPEC: -			
RESP ENG: RAHMIN BORZOU (HYCHEM)			
REGN APPR: MARIA ZOUROS (BSL)			

FUNCTIONAL LOCATION CODES
PK15-G
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-
-

INDEX CODES
J1-02
J1-11
J1-14
J1-17

REFERENCE DRAWINGS
103078
103071
103121

Port Kembla Steelworks

DRAWING PRODUCED BY:
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DISC. ENGINEER OR SPECIALIST: -
SUPERVISOR: -
ORDER No: -
CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

A1

RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023
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CHANGE APPROVAL NUMBER: -			PROJECT/WBS No: -
DRAWN: Rahmin Borzou	CHECKED: Sherard Northey		DISC. ENGINEER OR SPECIALIST: - -
DISC. ENGINEER OR SPECIALIST: - -	RESPONSIBLE ENGINEER: Rahmin Borzou		REGISTRATION APPROVAL: -
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DATE DRN: 19.04.2023	DRAWING No: 542508_0013		REV No: A
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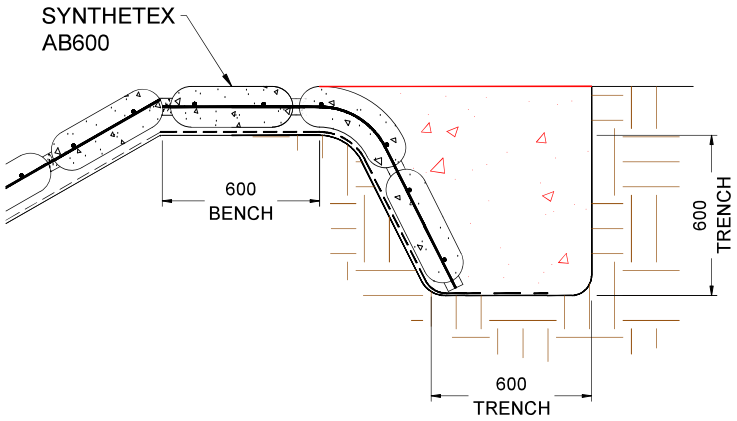
FULL SIZE 0 50 100 150 200 250 300



DETAIL 1/02
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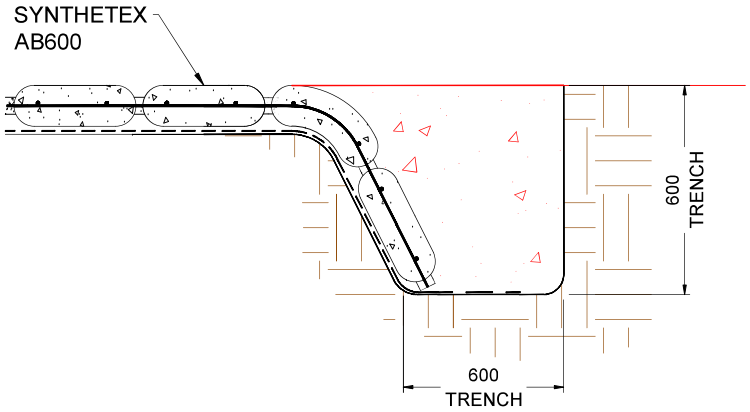

SECTION B/02
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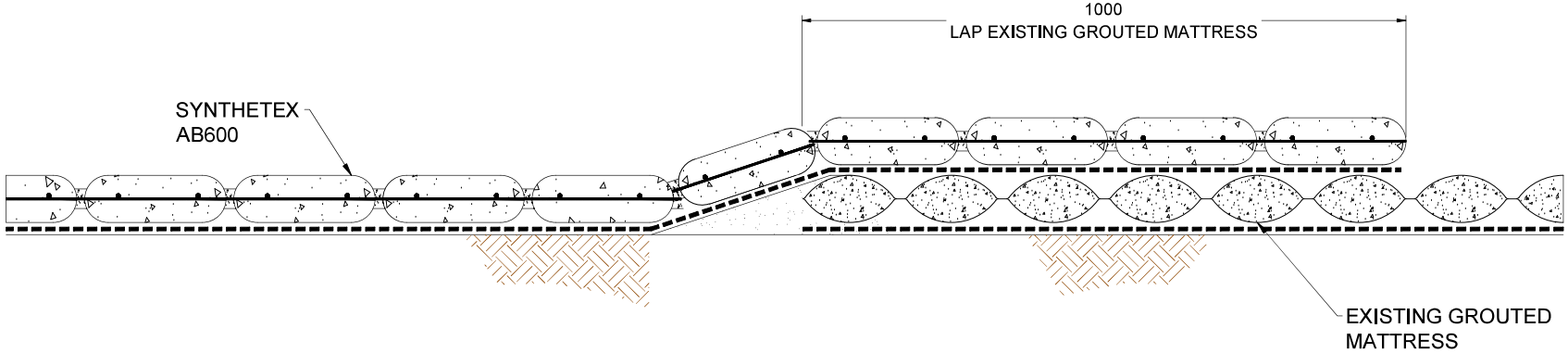

SECTION A/02
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DRAFT

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DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION
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DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY
O/No, CONT. NAME & REF No: -
DE/SPEC: -
RESP. ENG: RAHMIN BORZOU (HYCHEM)
REGN APPR: MARIA ZOUROS (BSL)

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G
-
-
-

INDEX CODES
J1-02
J1-11
J1-14
J1-17

REFERENCE DRAWINGS
103078
103071
103121

Port Kembla Steelworks

DRAWING PRODUCED BY:
Hychem
Infrastructure

DISC. ENGINEER OR SPECIALIST: -
SUPERVISOR: -
ORDER No: -
CONTRACTOR/SUPPLIER REF No: -

CONTRACTOR DETAILS

TITLE BLOCK TO COMPLY WITH SP-ENG-DES-196, VERSION CURRENT AT "DATE DRN"

A1

RAW MATERIALS HANDLING
GENERAL ARRANGEMENTS
ALLANS CREEK EMBANKMENT STABILISATION 2023
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CHANGE APPROVAL NUMBER: -			PROJECT/WBS No: -
DRAWN: Rahmin Borzou	CHECKED: Sherard Northey		DISC. ENGINEER OR SPECIALIST: - -
DISC. ENGINEER OR SPECIALIST: - -	RESPONSIBLE ENGINEER: Rahmin Borzou		REGISTRATION APPROVAL: -
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DATE DRN: 19.04.2023	DRAWING No: 542508_0014		REV No: A
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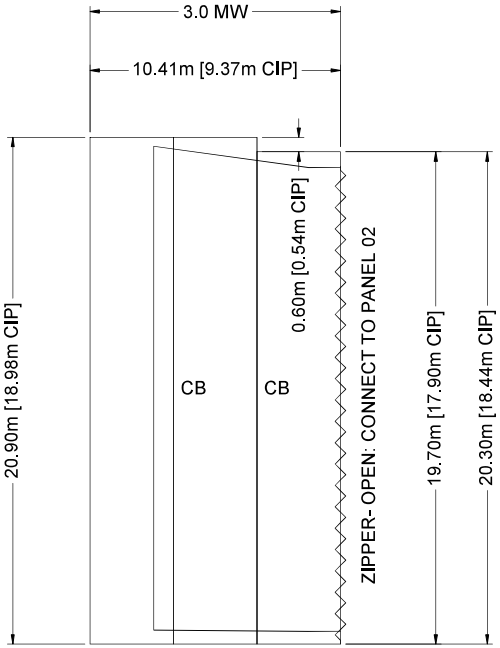
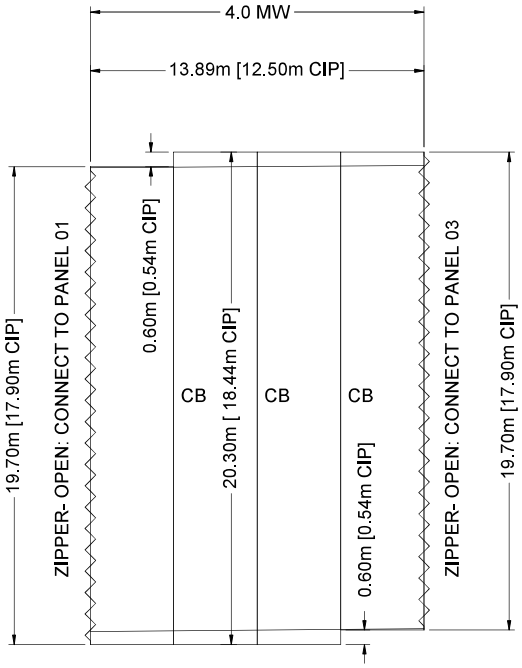
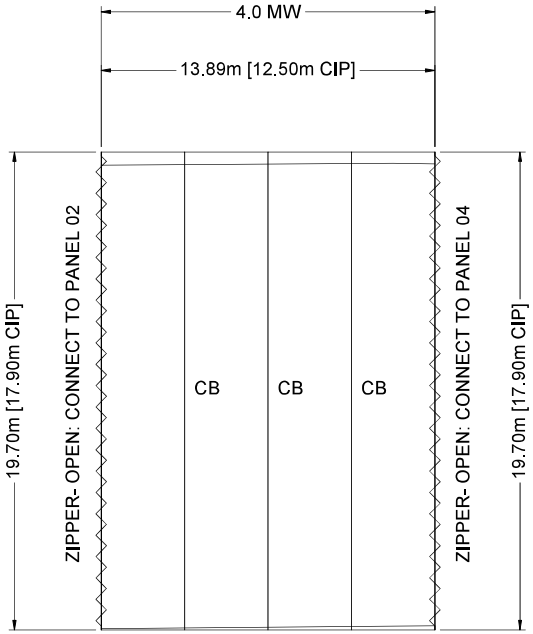


PANEL 1 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 221.7 m^2
CIP AREA = 176.2 m^2
ZIPPER LENGTH = 19.7 m



PANEL 2 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 285.7 m^2
CIP AREA = 227.1 m^2
ZIPPER LENGTH = 39.4 m



PANEL 3 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 281.4 m^2
CIP AREA = 223.7 m^2
ZIPPER LENGTH = 39.4 m

CB = CONCRETE BAFFLE
MW = MILL WIDTHS
CIP = CAST IN PLACE

DRAFT

A	DATE 30.05.23	PROJECT/WBS No 4403 ACKR	CHANGE APPROVAL No 4879353

DRAWING STATUS: PRELIMINARY - NOT FOR CONSTRUCTION
- ISSUED FOR COMMENT
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-
DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY
O/No, CONT. NAME & REF No: -
DC/SPEC: -
RESP ENG: RAHMIN BORZOU (HYCHEM)
REGN APPR: MARIA ZOUROS (BSL)

DRAWING REVISIONS

FUNCTIONAL LOCATION CODES
PK15-G
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-

INDEX CODES
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J1-17

REFERENCE DRAWINGS
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103071
103121

Port Kembla Steelworks

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ALLANS CREEK EMBANKMENT STABILISATION 2023
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DISC. ENGINEER OR SPECIALIST: - -	RESPONSIBLE ENGINEER: Rahmin Borzou		REGISTRATION APPROVAL: -
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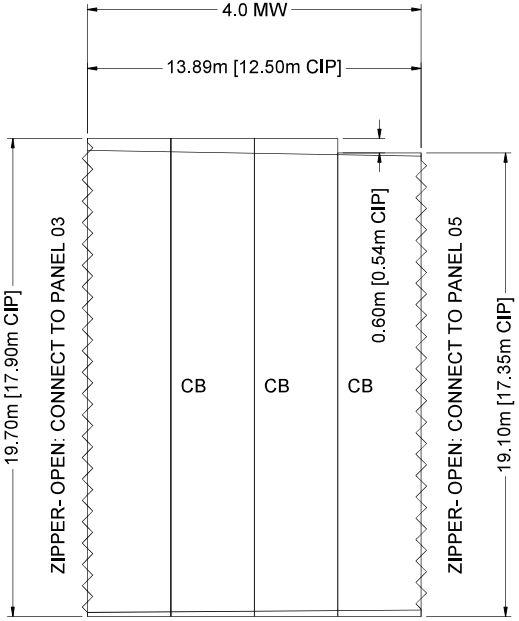

PANEL 4 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
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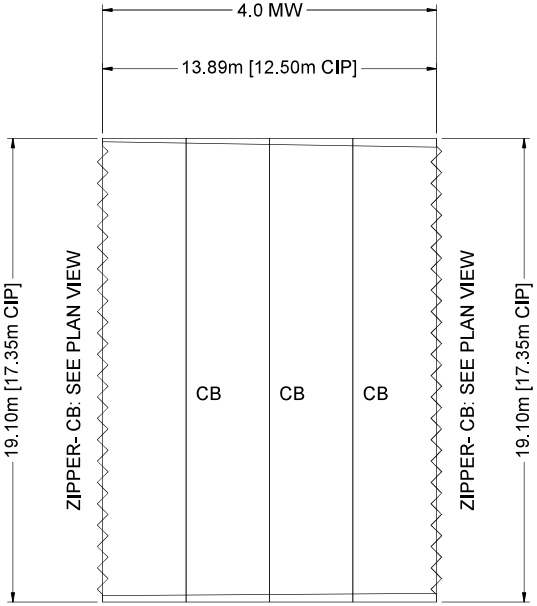
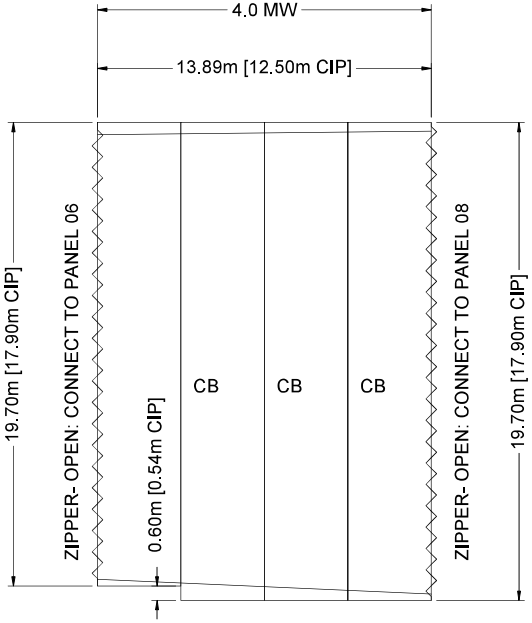
CIP AREA = 222.0 m^2
ZIPPER LENGTH = 38.8 m



PANEL 5 & 6 - QTY: 2 EA - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 272.9 m^2
CIP AREA = 216.9 m^2
ZIPPER LENGTH = 38.2 m



PANEL 7 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 279.3 m^2
CIP AREA = 222.0 m^2
ZIPPER LENGTH = 38.8 m

CB = CONCRETE BAFFLE
MW = MILL WIDTHS
CIP = CAST IN PLACE

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	DATE	PROJECT/WBS No	CHANGE APPROVAL No
A	30.05.23	4403 ACKR	4879353

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O/No, CONT. NAME & REF No: -
DE/SPEC: -
RESP ENG: RAHMIN BORZOU (HYCHEM)
REGN APPR: MARIA ZOUROS (BSL)

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J1-14
J1-17

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PROJECT/WBS No: -

DRAWN	CHECKED	DISC. ENGINEER OR SPECIALIST
Rahmin Borzou	Sherard Northey	-
		-

DISC. ENGINEER OR SPECIALIST	RESPONSIBLE ENGINEER	REGISTRATION APPROVAL
-	Rahmin Borzou	-
-		

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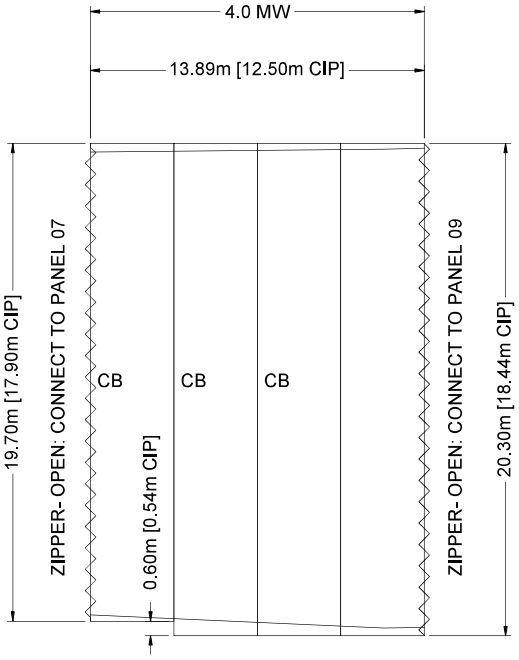
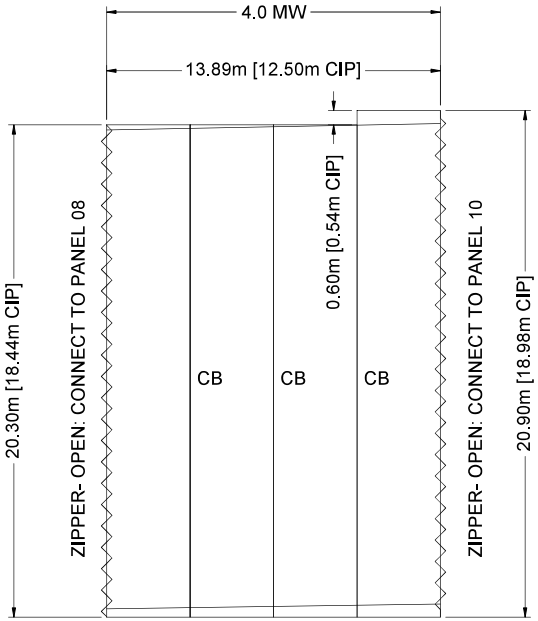
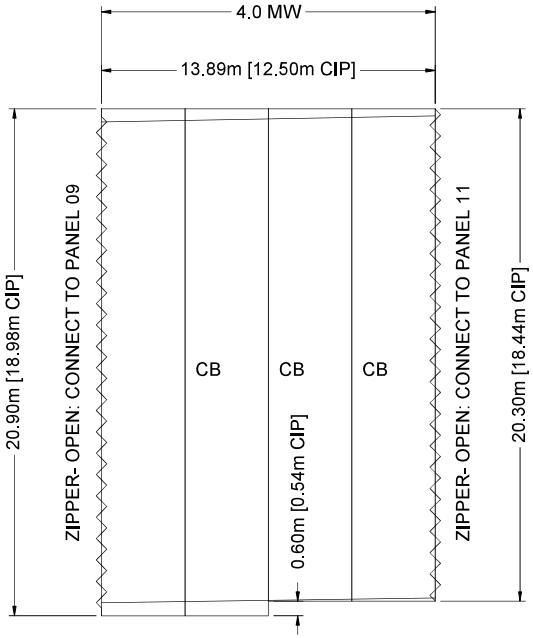


PANEL 8 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 287.8 m^2
CIP AREA = 228.8 m^2
ZIPPER LENGTH = 40.0 m



PANEL 9 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 292.1 m^2
CIP AREA = 232.2 m^2
ZIPPER LENGTH = 41.2 m



PANEL 10 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 294.2 m^2
CIP AREA = 233.9 m^2
ZIPPER LENGTH = 41.2 m

CB = CONCRETE BAFFLE
MW = MILL WIDTHS
CIP = CAST IN PLACE

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A	DATE 30.05.23	PROJECT/WBS No 4403 ACKR	CHANGE APPROVAL No 4879353

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DRAWN: RAHMIN BORZOU | CHECKED: SHERARD NORTHEY
O/No, CONT. NAME & REF No: -
DC/SPEC: -
RESP ENG: RAHMIN BORZOU (HYCHEM)
REGN APPR: MARIA ZOUROS (BSL)

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DISC. ENGINEER OR SPECIALIST: -	RESPONSIBLE ENGINEER: Rahmin Borzou		REGISTRATION APPROVAL: -
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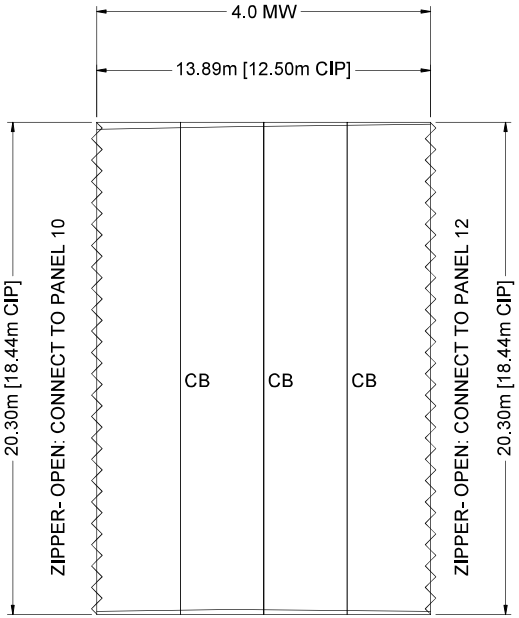
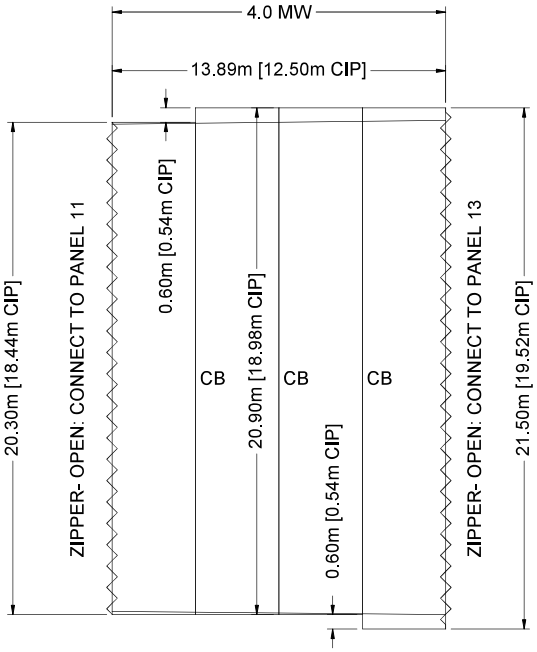


PANEL 11 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 290.0 m²
CIP AREA = 230.5 m²
ZIPPER LENGTH = 40.6 m



PANEL 12 - PLAN VIEW
SCALE: 1:100 (A1)
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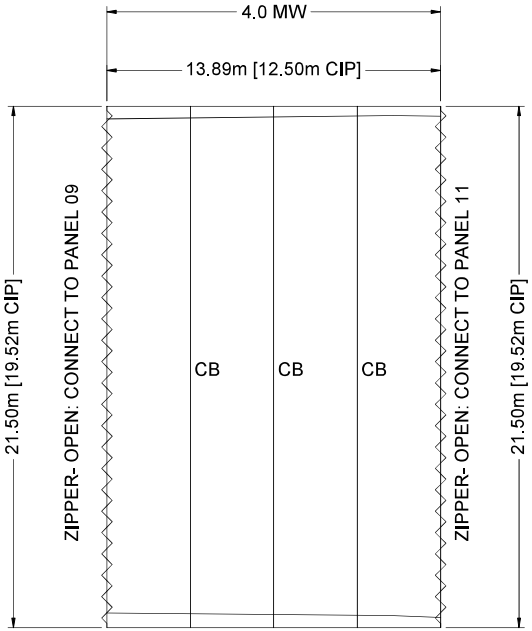
FABRIC AREA = 298.5 m²
CIP AREA = 237.3 m²
ZIPPER LENGTH = 41.8 m



PANEL 13 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 307.0 m²
CIP AREA = 244.0 m²
ZIPPER LENGTH = 43.0 m

CB = CONCRETE BAFFLE
MW = MILL WIDTHS
CIP = CAST IN PLACE

DRAFT

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DRAWN: RAHMIN BORZOU		CHECKED: SHERARD NORTHEY	
O/No, CONT. NAME & REF No: -			
DE/SPEC: -			
RESP ENG: RAHMIN BORZOU (HYCHEM)			
REGN APPR: MARIA ZOUROS (BSL)			

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DISC. ENGINEER OR SPECIALIST: - -	RESPONSIBLE ENGINEER: Rahmin Borzou		REGISTRATION APPROVAL: -
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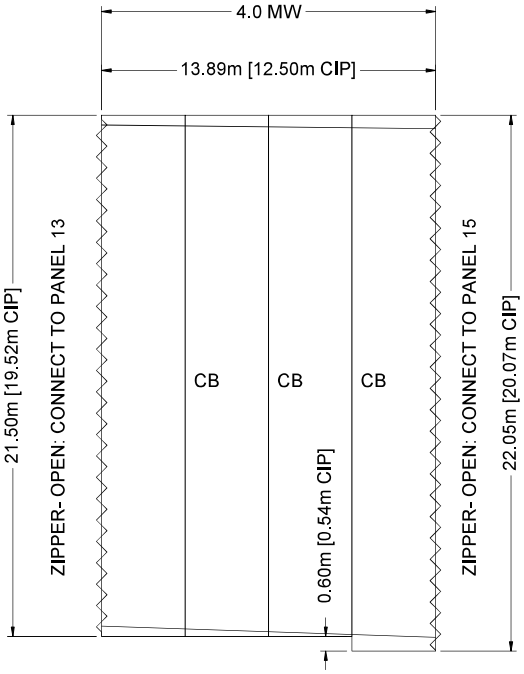
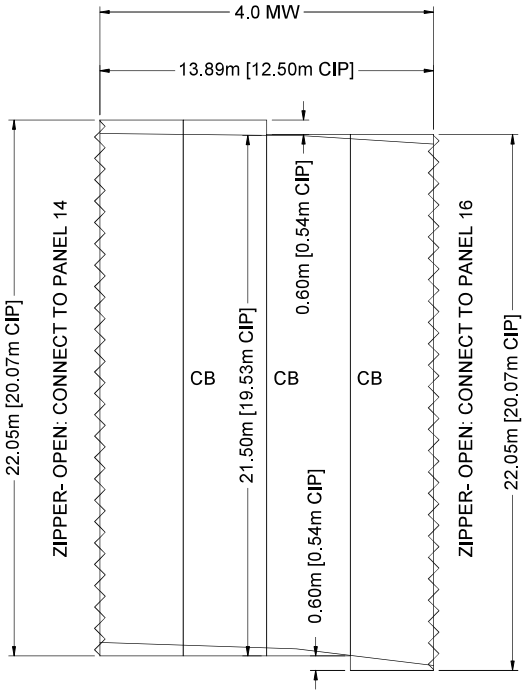
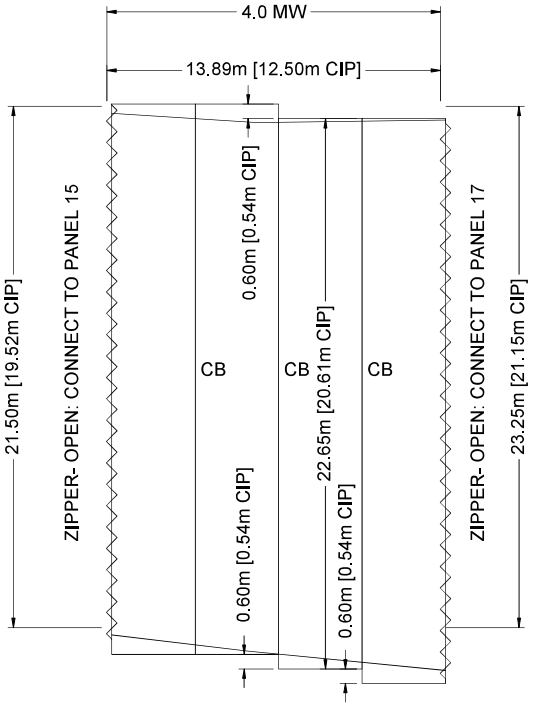


PANEL 14 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 309.1 m^2
CIP AREA = 245.7 m^2
ZIPPER LENGTH = 43.6 m



PANEL 15 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 313.4 m^2
CIP AREA = 249.1 m^2
ZIPPER LENGTH = 44.2 m



PANEL 16 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 326.2 m^2
CIP AREA = 259.3 m^2
ZIPPER LENGTH = 45.4 m

CB = CONCRETE BAFFLE
MW = MILL WIDTHS
CIP = CAST IN PLACE

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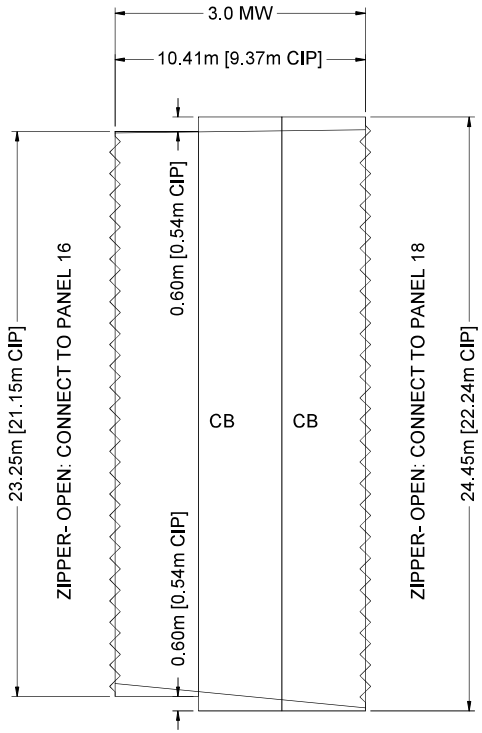

PANEL 17 - PLAN VIEW
SCALE: 1:100 (A1)
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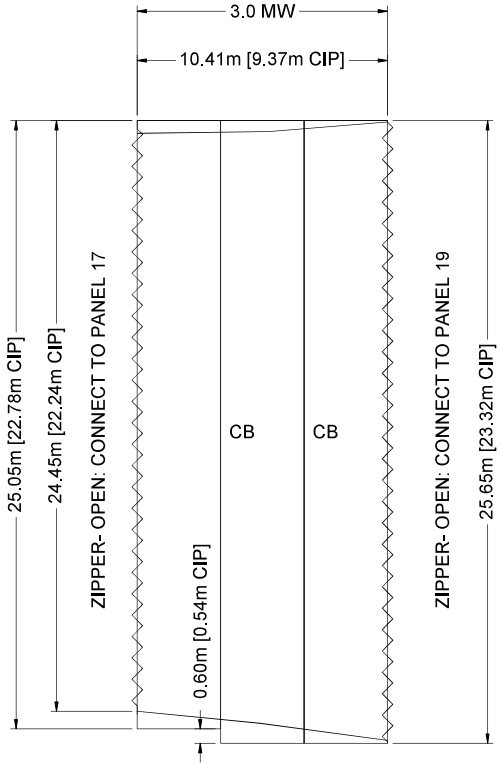
CIP AREA = 205.1 m^2
ZIPPER LENGTH = 47.8 m



PANEL 18 - PLAN VIEW
SCALE: 1:100 (A1)
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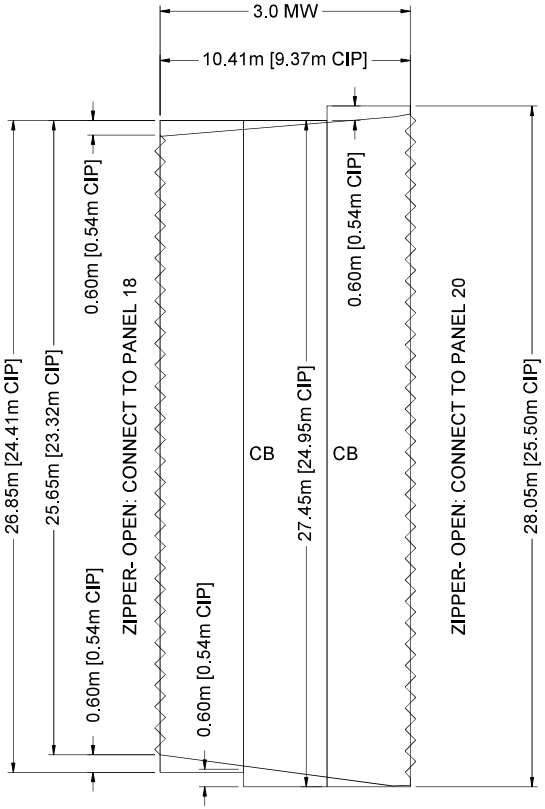
FABRIC AREA = 273.0 m^2
CIP AREA = 217.0 m^2
ZIPPER LENGTH = 50.2 m



PANEL 19 - PLAN VIEW
SCALE: 1:100 (A1)
HYDROTEX AB600.141LL PET PANEL LAYOUT
FABRIC AREA = 294.2 m^2
CIP AREA = 233.9 m^2
ZIPPER LENGTH = 53.8 m

CB = CONCRETE BAFFLE
MW = MILL WIDTHS
CIP = CAST IN PLACE

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REGN APPR: MARIA ZOUROS (BSL)			

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Attachment 4 – Statement of Environmental Effects

Berth and Commodity Handling Projects

Statement of Environmental Effects

Allans Creek Remediation

To support the Development Application for proposed environmental remediation works on SP1 zoned land and an application for vegetation removal on IN3 zoned land adjacent to Allans Creek.

ACKR-RPT-ENGR-Statement of Environmental Effects-01

13 July 2023

DOCUMENT INFORMATION	
DOCUMENT TYPE	Report
DOCUMENT NO	ACKR-RPT-ENGR-Statement of Environmental Effects-01
TITLE	**Statement of Environmental Effects – Allans Creek Remediation**
GENERAL DESCRIPTION	This report outlines the details involved in executing remediation works adjacent to Allans Creek within the Port Kembla Steelworks, to support a Development Application for the works within land zoned SP1 and an application for vegetation removal on land zoned IN3.
REFERENCED DOCUMENTS	

Approvals	Name	Position	Signed	Date
Originator	A. Rojas	Senior Environmental Advisor	DocuSigned by: F423C3951D6644B...	13 July 2023 | 10:01 AEST
Checked	M. Dobbins	BACH - Project Manager	DocuSigned by: Mark Dobbins 3E649D853B2E423...	13 July 2023 | 11:06 AEST
Approved	M. Dobbins	BACH - Project Manager	DocuSigned by: Mark Dobbins 3E649D853B2E423...	13 July 2023 | 11:06 AEST

REVISIONS					
REV NO	**DATE**	**DESCRIPTION**	**BY**	**CHKD**	**APPROVED**
1	10/03/2023	Approved	LK	GS	MD
2	09/05/2023	Approved	AR	GS	MD
3	13/07/2023	Approved	AR	MD	MD

Contents

Definitions

DEFINITIONS	
ACKR	Allans Creek Remediation
ASS	Acid Sulphate Soil
BACH	Berth and Commodity Handling Projects
BlueScope	BlueScope Steel (AIS) Pty Ltd
EP&A Act	Environmental Planning and Assessment Act 1979
m	Metres
m^2	Square metres
PKSW	Port Kembla Steelworks
SEE	Statement of Environmental Effects
Three Ports SEPP	State Environmental Planning Policy (Three Ports) 2013
T&I SEPP	State Environmental Planning Policy (Transport and Infrastructure) 2021

1 Introduction

This Statement of Environmental Effects (SEE) has been prepared by BlueScope Steel (AIS) Pty Ltd (BlueScope) in relation to proposed remediation of the Allans Creek embankment along the edge of Harbour Road within the Port Kembla Steelworks (PKSW), including removal of vegetation.

The land on which remediation work will be carried out is partly zoned SP1 and partly zoned IN3 under State Environmental Planning Policy (Transport & Infrastructure) 2021 (T&I SEPP). The whole of the land on which the remediation work is proposed is referred to as "the project site" in this SEE.

The remediation work falls within the definition of "coastal protection works" for the purposes of the land use table within Part 5 of the T&I SEPP. In the SP1 zone, coastal protection works are permitted with consent. In the IN3 zone, coastal protection works are prohibited, however, as discussed further in section 4.1 of this SEE, the effect of clause 2.16 of State Environmental Planning Policy (Resilience & Hazards) 2021 (R&H SEPP) is to make coastal protection works permissible with development consent where the work is proposed by a person not being a public authority.

This SEE has been prepared to meet the relevant requirements of the T&I SEPP, the R&H SEPP and Section 4.15 of the EP&A Act. The development application includes vegetation removal as required for completion of the remediation works.

1.1 Summary of Proposed Development

The proposed development involves bank stabilisation and emergency erosion protection works along the southern embankment of Allans Creek, adjoining to Port Kembla's Inner Harbour. Both tidal action and creek flow velocity have resulted in the lower section of the bank becoming eroded, compromising the stability of the bank and the infrastructure above it.

This section of bank supports infrastructure that is frequented by heavy vehicles including a section of Harbour Road and Allans Creek Road, the abutments for Iron Ore Road Bridge, and a Pipe Gantry bridge. If left without remediation, there is an increasing potential for slump failure of the embankment, especially during periods of wet weather or during storm conditions, presenting both safety and environmental risks.

BlueScope proposes to emplace graded levelling rock on the embankment to restore the slope stability followed by placement of geotextile and final scour protection. This work will reinstate the original embankment gradient and ensure the required resistance to both flow and tidal erosion is achieved.

2 Site Description and Analysis

2.1 Location

The stretch of bank requiring repair is approximately 300 metres long running from the Eastern headland of Allans creek up to the previously remediated section of bank to the south of the Iron Ore Road bridge. The project site is located within Lot 1 DP 606434, which is land owned and occupied by BlueScope (refer Figure 3).

As shown in Figure 4, the majority (approximately 6,200m^2) of the project site is zoned IN3 – Heavy Industrial under the T&I SEPP while a small portion (approximately 600m^2) is zoned SP1 Special Activities.

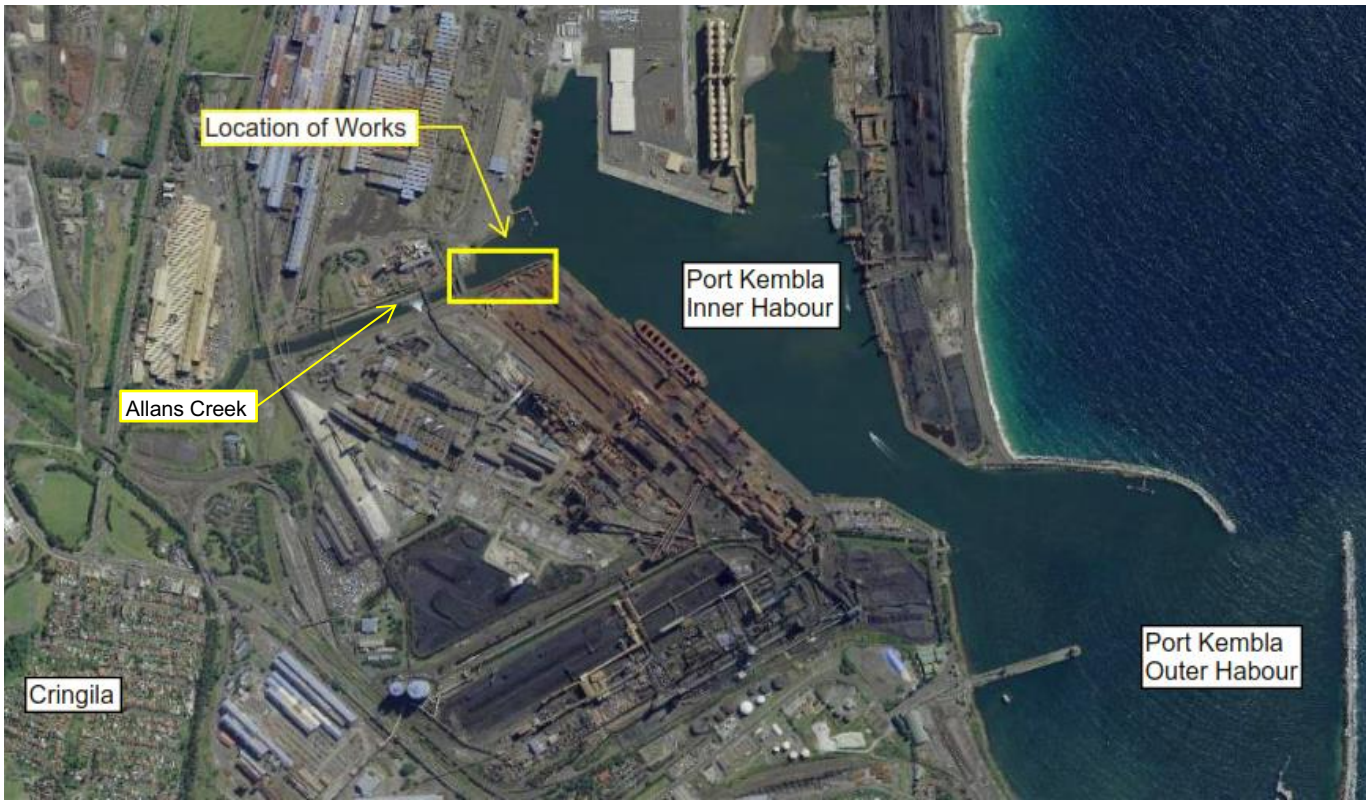


Figure 1: Project Location

Figure 2: Location of Works

Figure 3: Boundary of Property & DP number.

Figure 4: Area Zones

3 Details of Proposal

The section of the bank to which BlueScope's application relate has been eroded through tidal action and creek flow velocity during storm periods. This loss of bank has compromised the stability of the bank and the infrastructure above it (refer Figure 5 - Figure 8).

The remediation work is required to stabilise the bank and re-support the above road while preventing any further erosion. It is intended to emplace levelling rock to obtain adequate slope gradient and stability to prevent slump failure, followed by installation of geotextile and final scour protection. This will effectively reinstate the original embankment gradient and ensure the required resistance to both flow and tidal erosion is achieved for a greater than 25-year design life.

3.1 Proposed Works

The work consists of:

- Mobilisation of equipment and traffic control management
- Vegetation clearance
- Excavation as required
- Emplace levelling layer materials and geotextile
- Scour protection emplacement
- Survey conformance
- Demobilisation of equipment and traffic control management

Figure 5: Erosion of Bank under Bridges (Low Tide)

Figure 6: General Condition of Embankment – Starting to Undermine Road

Figure 7: General Gradient of Embankment - Starting to Undermine Road

Figure 8: Heavy Haul Roadway at Crest of Bank

3.2 General Revetment Profiles

An above water laser scan survey and a below water bathymetry scan survey were conducted to determine the slope of the existing bank and the results used to determine the necessary slope gradient to provide slump failure protection to the relevant Australian Standards. Two design profiles are applicable along the length of the bank, with the Composite Revetment as seen in Figure 10 likely being most relevant to the area for this application. These profiles ensure optimum slump failure protection and erosion protection.

Clean and graded rock will be placed to form a levelling layer to rebuild the bank to the necessary profile and then scour protection in the form of a concrete revetment blanket installed over the top. This work will be performed from the land side utilising a long reach excavator and other mobile equipment with some access from divers required to install the scour protection.

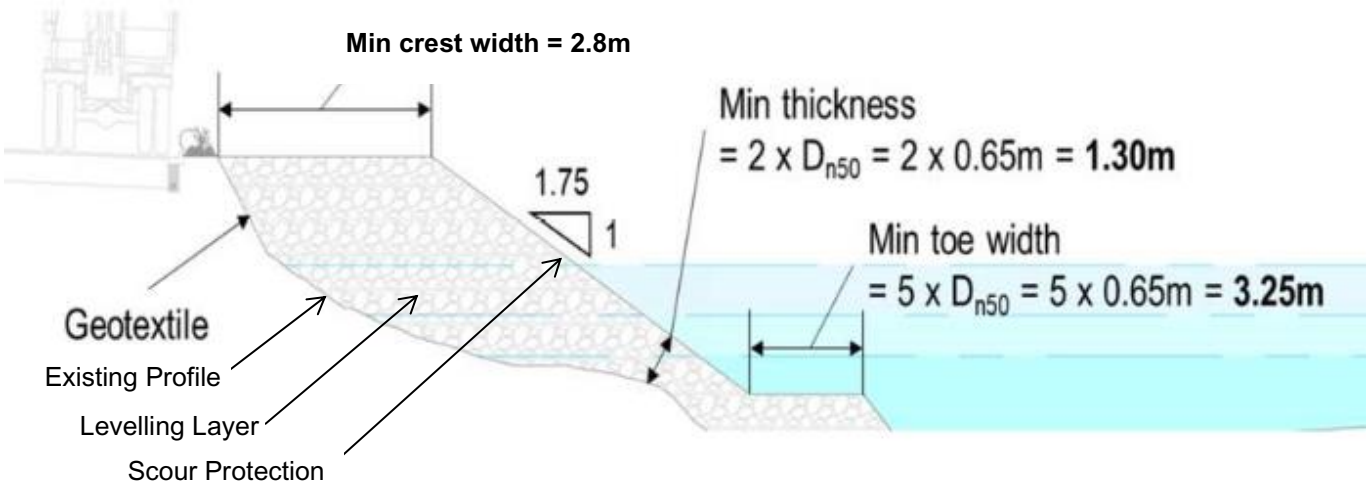


Figure 9: General Straight Revetment Slope Design

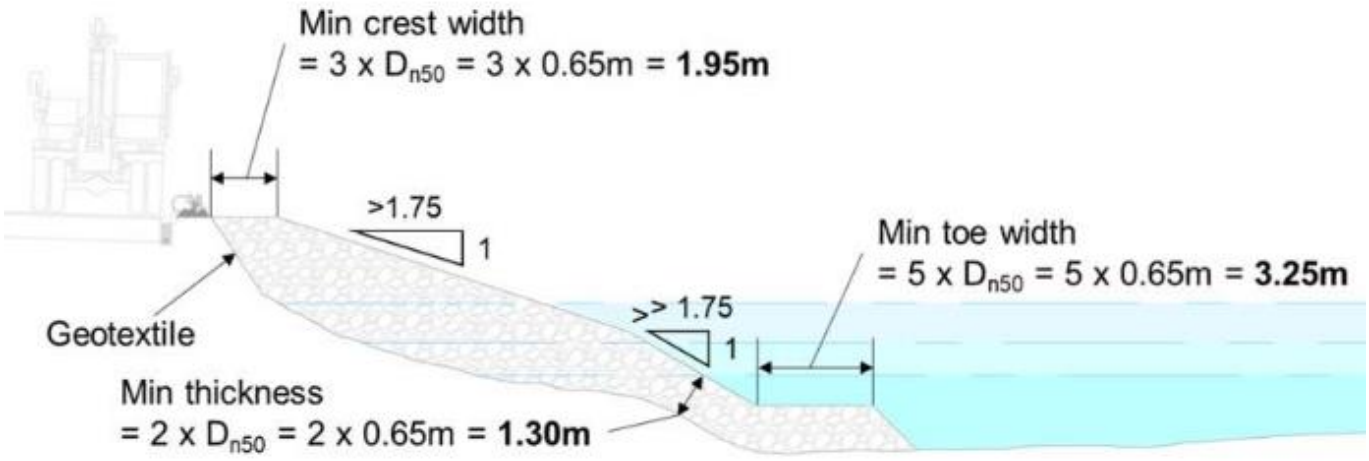


Figure 10: General Composite Revetment Slope Design

3.3 Excavation Works

Due to the uneven nature of the erosion of the embankment, some excavation work is required to level the profile in preparation for the emplacement of the levelling layer material and scour protection. In general, the excavation and removal of material is limited, and fill material is required to be added to replace the material that has been eroded from the tidal and creek flow effects. To level and produce the necessary profile to achieve the required slope stability, approximately 8000t of clean, graded rock fill will be placed along the embankment. Before emplacing the levelling layer, some benching on the steeper sections of the top of the embankment is necessary to prevent the newly placed material from slipping. Prior to performing this work, a Construction and Environment Management Plan including an Erosion and Sediment Control Plan will be developed detailing the controls to be utilised during the execution of the project.

Loose material will only be removed where it is necessary to establish a firm foundation for the levelling layer to ensure replacement of material is stable. The crest and top sections of the existing bank consist of topsoil and other naturally occurring organic vegetative matter which is required to be removed as it does not provide a suitable compactable base (Refer **Error! Reference source not found.** for example of typical material).This top soil and vegetative material will be removed in the early stages of the construction sequence using techniques to minimise disturbance of the compacted fill beneath in order to maintain stability of the slope. This is the only material that will be removed from the site and is estimated to be approximately 400m^3 of soil and vegetative matter over the length of the embankment. The material will be disposed of in accordance with BlueScope's waste management procedures as per Section **Error! Reference source not found.**.

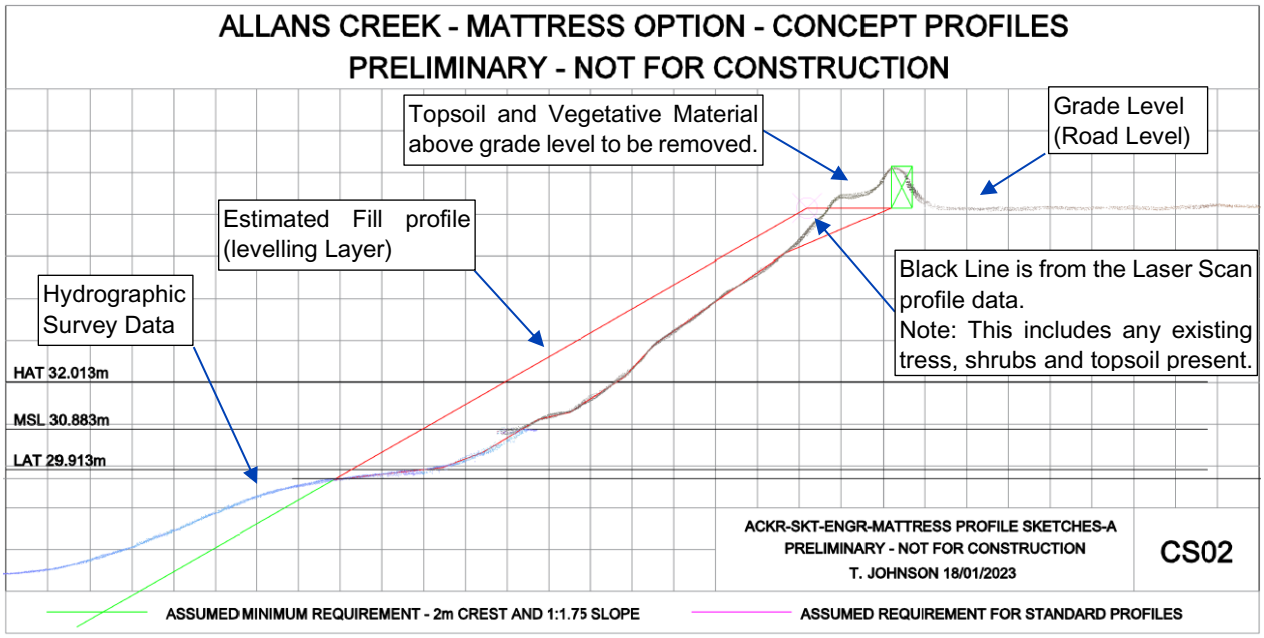


Figure 11: Cross Section 02

In some instances, the erosion has resulted high spots in the embankment profile where the material exceeds the requirements of the bank for slope stability. This material needs to be levelled to produce a smooth and continuous profile to prevent areas of high velocity and for a streamlined revetment to be installed. In these instances, the material will not be removed from site but will be cut and used to fill nearby low areas.

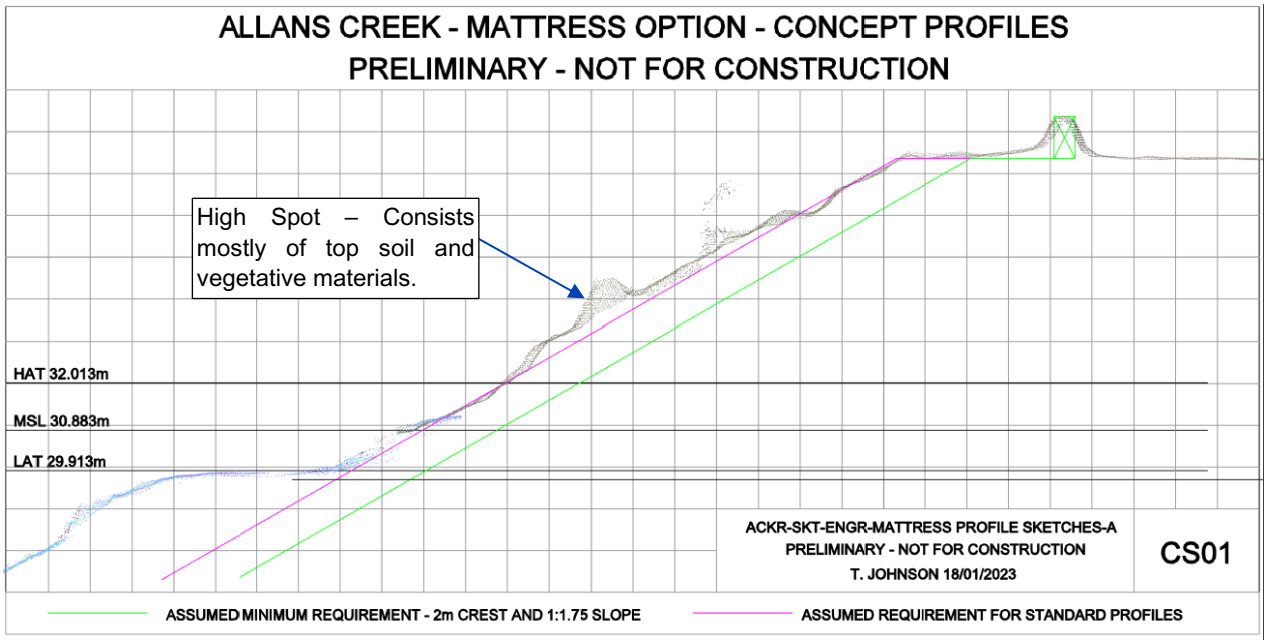


Figure 12: Cross Section 01

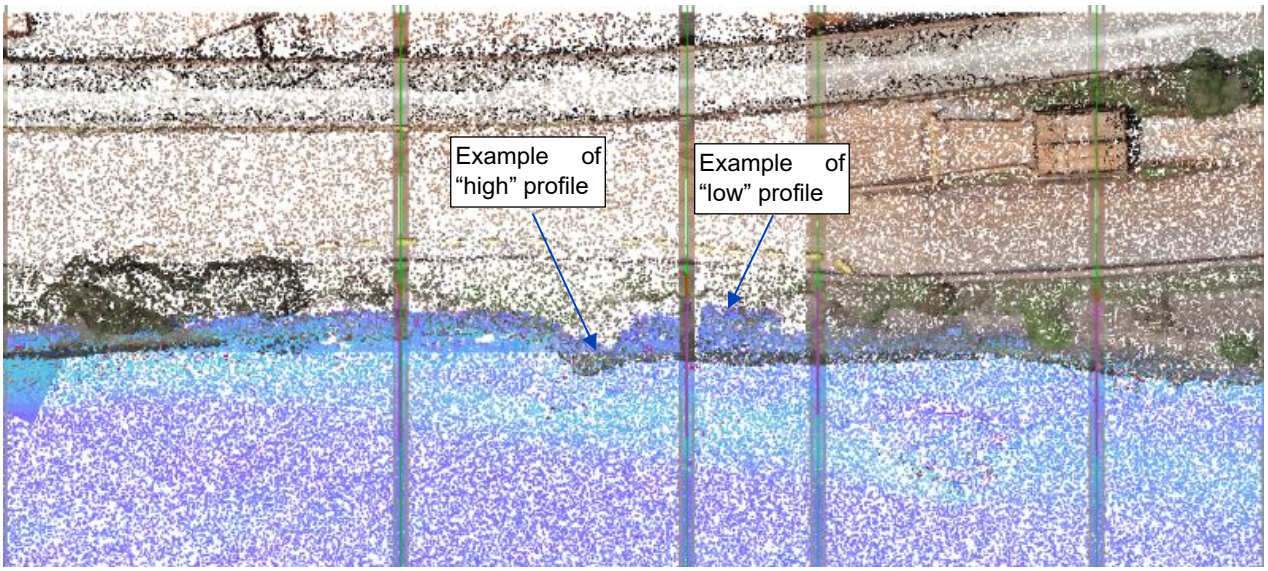


Figure 13: Plan View from Bathymetry and Laser Scan Data - Low and High Profiles

4 Matters for Consideration

The following provides an assessment of the proposed development against the relevant provisions of Section 4.15 of the EP&A Act.

4.1 Environmental Planning Instruments

4.1.1 State Environmental Planning Policy (Transport and Infrastructure) 2021

The T&I SEPP is the primary planning instrument for the project site.

The majority of the project site is zoned IN3 – Heavy Industrial under the T&I SEPP while a small portion is zoned SP1 Special Activities (refer Figure 4). The project site is contained within the area marked in yellow on the Land Application Map (refer Figure 14) and does not intrude on the Lease Area.

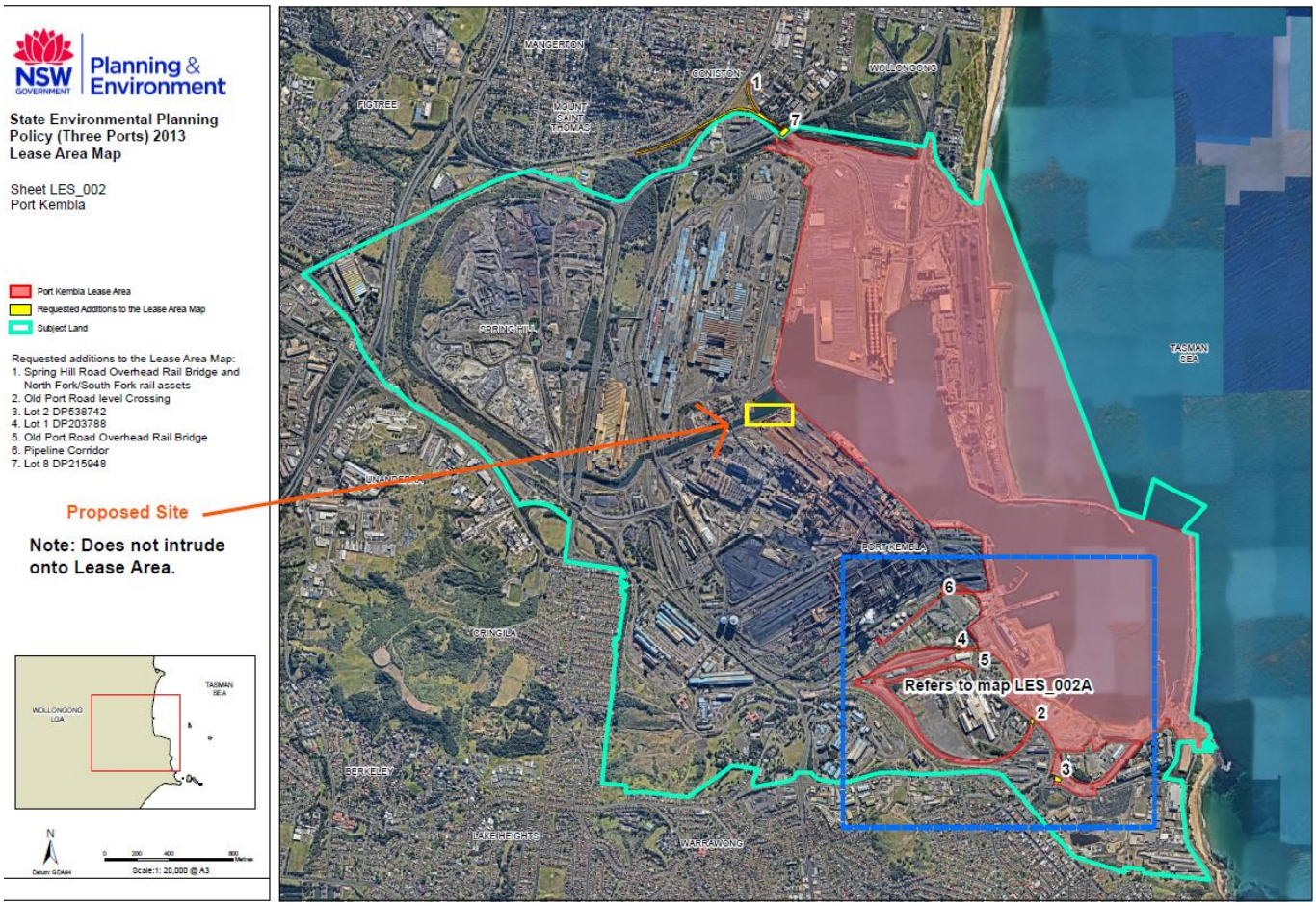


Figure 14 Land Application Map

The land use table for development on land in the IN3 zone provides as follows:

2 Permitted without consent

- Environmental protection works

3 Permitted with consent

- Depots; Food and drink premises; Freight transport facilities; Heavy industries; Port facilities; Roads; Transport depots; Warehouse and distribution centres; Waste and resource management facilities

4 Prohibited

- Any development not specified in item 2 or 3

The land use table for development on land in the SP1 zone provides as follows:

2 Permitted without consent

- Jetties; Moorings; Roads

3 Permitted with consent

Capital dredging; Environmental facilities; Environmental protection works; Food and drink premises; Maintenance dredging; Navigation and emergency response facilities; Neighbourhood shops; Port facilities; Wharf or boating facilities; Any other development not specified in item 2 or 4

4 Prohibited

- Any development not specified in item 2 or 3 but specified in the Land Use Table – Zone SP1- 4 Prohibited.

The proposed development is for the purpose of coastal protection works and is therefore permissible with consent for that part of the project site zoned SP1. Coastal protection works is not specified as either permitted without consent, or permitted with consent, in the land use table for the IN3 zone and would therefore be prohibited on that part of the project site zoned IN3 were it not for the provisions of the R&H SEPP discussed below.

4.1.2 State Environmental Planning Policy (Resilience and Hazards) 2021

Clause 2.16 in Chapter 2 of the R&H SEPP provides that development for the purpose of coastal protection works may be carried out by a person other than a public authority only with development consent on land to which the Chapter applies (that is, the coastal zone as defined by the Coastal Management Act 2016 (NSW), in which the project site is located). Pursuant to clause 2.5 of the R&H SEPP, Chapter 2 takes precedence over the provisions of any other SEPP (such as the land use table within Chapter 5 of the T&I SEPP) to the extent of any inconsistency. The proposed remediation works are therefore permissible with consent on that part of the project site zoned IN3 as well as on that part of the project site zoned SP3.

The fact that the project site falls within the coastal zone also requires consideration generally of relevant provisions of the R&H SEPP in relation to the proposed remediation works. Clause 2.12 of the R&H SEPP provides that development consent must not be granted to development on land within the coastal zone unless the consent authority is satisfied that the proposed development is not likely to cause increased risk of coastal hazards on that land or other land. The contents of this SEE allows consent authority to satisfy itself that the requirements of clause 2.12 of the R&H SEPP have been met.

4.1.3 State Environmental Planning Policy (Planning Systems) 2021

Under clause 2.19 of State Environmental Planning Policy (Planning Systems) 2021, development specified in Schedule 6 of the SEPP is declared to be regionally significant development. Clause 8A of Schedule 6 includes certain coastal protection works, including such works carried out:

- on land within the coastal zone that is directly adjacent to the entrance to an estuary; and
- by a person other than a public authority,

such as the remediation works proposed by BlueScope. The effect of the declaration as regionally significant development is that the consent authority for the proposed remediation works will be the Southern Regional Planning Authority pursuant to section 4.5 of the EP&A Act.

4.1.4 Coastal Management Act 2016 (NSW)

In addition to the environmental planning instruments discussed above, BlueScope has also considered the requirements of section 27 of the Coastal Management Act 2016 (NSW). Section 27 prevents a consent authority from granting consent to development for the purpose of coastal protection works unless the consent authority is satisfied that:

(a) the works will not, over the life of the works—
  (i) unreasonably limit or be likely to unreasonably limit public access to or the use of a beach or headland, or
  (ii) pose or be likely to pose a threat to public safety, and
(b) satisfactory arrangements have been made (by conditions imposed on the consent) for the following for the life of the works—
  (i) the restoration of a beach, or land adjacent to the beach, if any increased erosion of the beach or adjacent land is caused by the presence of the works,
  (ii) the maintenance of the works.

In relation to these matters:

- The project site is part of an operating steelworks to which public access is prevented for safety reasons. The proposed remediation works therefore will not unreasonably limit public access to or the use of a beach or headland;

- The remediation works are required to avoid increasing potential for slump failure of an embankment which could present both safety and environmental risks;
- The carrying out of the works is prevent further erosion, such that arrangements to ensure security to address increased erosion is not relevant;
- Similarly, the proposed remediation works constitute maintenance works, and so no arrangement is required to ensure maintenance.

5 Environmental Risk Assessment

An assessment of potential environmental risks has been carried out during the development of the basic design and production of documentation associated with the project.

The risks outlined below shall be addressed by completing detail design, construction management and commissioning, in accordance with operational procedures and practices upon approval of this development application and application for permission to remove vegetation.

A construction environment management plan will be developed and will include any additional risks identified during the detailed design phase.

5.1 Land

- Contamination
    - The PKSW is listed as a contaminated site by the EPA. The site has had four notices issued to it, the last being in March 2018, which was a notification to cease the Voluntary Management Plan for the site on the basis that regulation of the site under the Contaminated Land Management Act 1997 (CLM Act) is no longer warranted. Ongoing management of site contamination occurs under EPL 6092.
    - A series of historical photographs taken during the construction of Berth 113 (the eastern most berth utilised by BlueScope), shows that the natural soils in the vicinity of the proposed works were removed down to an elevation of approximately 15m below Port Kembla Height Datum (PKHD) and replaced with select fill (typically sand, slag from the ironmaking process, and coal washery rejects) as part of the construction of the berth.

Figure 15 - Construction of Berth 113 at the PKSW

- Geotechnical investigations have been conducted in the vicinity of the proposed works in the project area. The investigation identified the presence of fill consisting of sandy gravel, slag, and coal washery rejects to approximately 14-16.5m. Slag and coal washery rejects are commonly used for application to land in accordance with Steel Furnace Slag, Blast Furnace Slag, and Coal Washery Rejects Resource Recovery Orders and Exemptions. Previous waste classification analysis of excavated slag and coal wash identified both materials as general solid waste (non-putrescible).
- As the proposed project area is not located in a plant processing area, there is a low risk of contamination from other sources. Therefore, the risk of land contamination as a result of the project is considered to be unlikely. A waste classification analysis will be conducted on the excavated material to confirm the concentration of contaminants where present.
- The project activities associated with the works will not result in the introduction of any sources of land contamination.
- The plant machinery that will be used in the remediation works will be fully serviced and pre-checks completed prior to commencement of work to avoid oil leaks. Spill kits will be available to contain and clean any spills.

- Soil Erosion

  The aim of the project is to rectify the soil erosion on the embankment of Allans Creek. A sediment and erosion control plan will be developed and followed during construction activities. The remediation work will prevent further erosion for at least the 25 year design life of the works.

- Acidity/Acid Sulphate Soils
    - A review of the Department of Planning and Environment's dataset for acid sulphate soil (ASS) risk mapping indicates that project site is mapped as having a high probability of acid sulphate bottom sediments, therefore it is possible that some acid sulphate soil material may be present below the layers of fill at the site. Geotechnical investigations have been performed with two bore holes on Harbour Road, adjacent to Allans Creek. The findings of these investigations indicate sandy gravel is largely present until approximately 14m below surface. This suggests there is a low likelihood that ASS will be encountered as all work will be conducted above this datum. In the unlikely event that ASS is observed during any excavation, they will be managed in accordance with the National Acid Sulphate Soils Guidance (2018).
    - There is no change or ongoing impact post implementation.

5.2 Air

- Dust Emissions
    - During construction, there is potential for dust emissions to be created. BlueScope's existing fugitive dust management procedure identifies dust control measures and reporting requirements and will be implemented during the work.
- There is no change or ongoing impact post implementation.

5.3 Water

- Contamination
    - Emplacement of levelling rock, geotextile and the scour protection on the bed of Allans Creek, near the embankment, may also stir up the sediment and result in discolouration of the water. Controls such as a silt screen will be implemented to contain any sediment that may be disturbed during execution of the project. These controls will be identified in an erosion and sediment control plan.
    - Plant machinery that will be used will be fully serviced and pre-checks completed prior to commencement of work to avoid oil leaks. Spill kits will be available to contain and clean any spills.
- Stormwater Management
    - There is no existing drainage network in the section of the creek bank that is the proposed project area. Drainage outfall pipes from a nearby truck wash and the raw materials handling area are present in the bank. No modifications to these assets are proposed for the project.
    - Stormwater management controls to be used during project execution will be incorporated in the erosion sediment control plan.
- Salinity
    - The nature of the work will not involve any change to the salinity of Allans Creek.
- There is no change or ongoing impact post implementation.

5.4 Waste

- Minimal waste will be generated as a result of the proposed works and will consist of vegetation waste and excavated material.
- In line with BlueScope's circular economy goals and the waste hierarchy, all waste material generated will be recycled where possible. Waste that cannot be recycled will be disposed of in accordance with BlueScope's existing waste management procedures and via appropriately licenced facilities.
- There is no change or ongoing impact post implementation

5.5 Noise

- The pre-works and construction of the project will not generate noise above the acceptable site boundary limits.

- There is no change or ongoing impact post implementation.

5.6 Flora and Fauna

5.6.1 Vegetation

- Existing vegetation within the project site along the crest of the bank must be removed to execute the work (refer Figure 16). A survey conducted by Moore Trees on behalf of BlueScope in January 2023 identified approximately 100 River She Oak *(Casuarina cunninghamiana)* trees that are unable to be retained due to the extent of the proposed work. The Arborist Report noted that the trees would be classed as having a 3c SULE rating. A copy of the Arborist Report is provided in Appendix A.
- BlueScope will undertake compensatory planting at an alternate location within the Port Kembla Steelworks for each tree removed.
- The loss of vegetation may result in a minor visual impact from within the inner harbour however, the overall amenity will be consistent with existing operations.

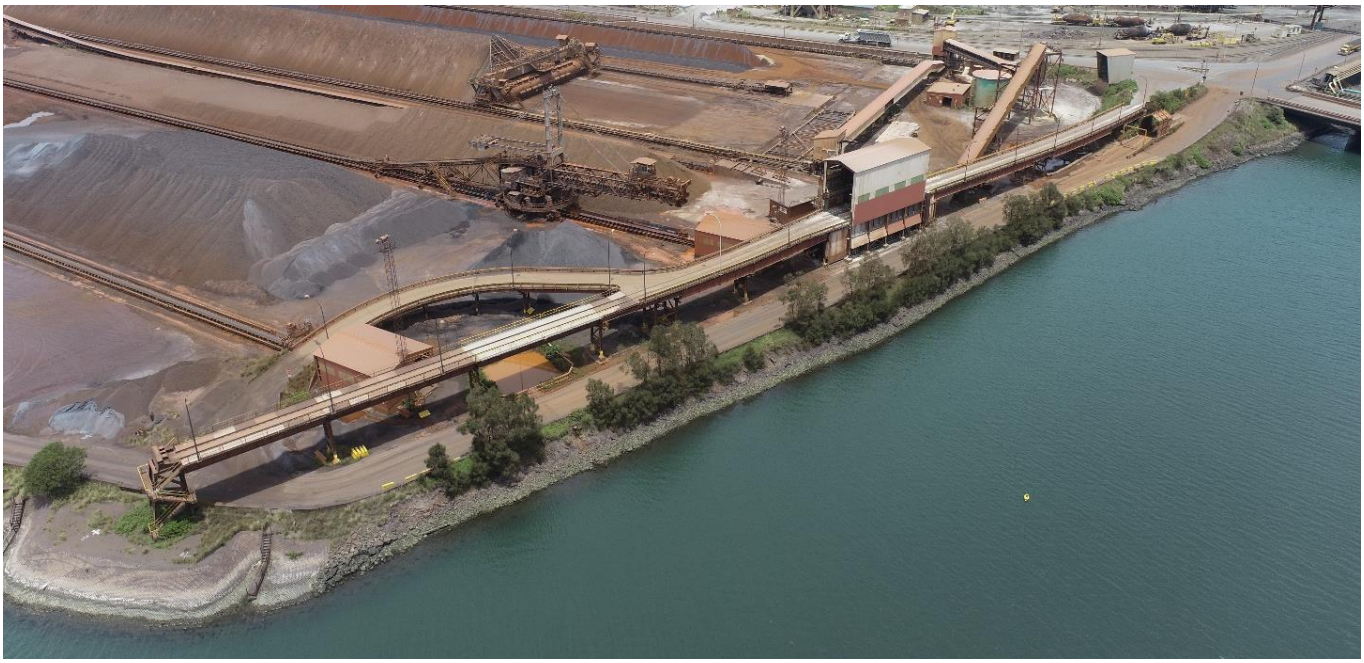


Figure 16: Existing Vegetation

5.6.2 Threatened Species

The Green and Golden Bell Frog is listed as endangered under the Biodiversity Conservation Act 2016 (NSW) and vulnerable under the Environment Protection and Biodiversity Conservation Act 1999 (Cth). A known population of Green and Golden Bell Frog (*Litoria aurea*) occurs within the greater PKSW site. The presence of the Green and Golden Bell Frog is managed across PKSW in accordance with site manual Management of Threatened Species, the Green and Golden Bell Frog (MA-ENV-03-03). Known Green and Golden Bell Frog habitat and associated corridors within the PKSW are shown in Figure 17.

The closest habitat that has been mapped for this population is located approximately 1.6 kilometres northeast of the project area with probable corridors located approximately 600m from the project site at the nearest point. No sightings of the Green and Golden Bell Frog have been recorded within the project site. It is therefore unlikely that there will be any impacts to this species as a result of the project.

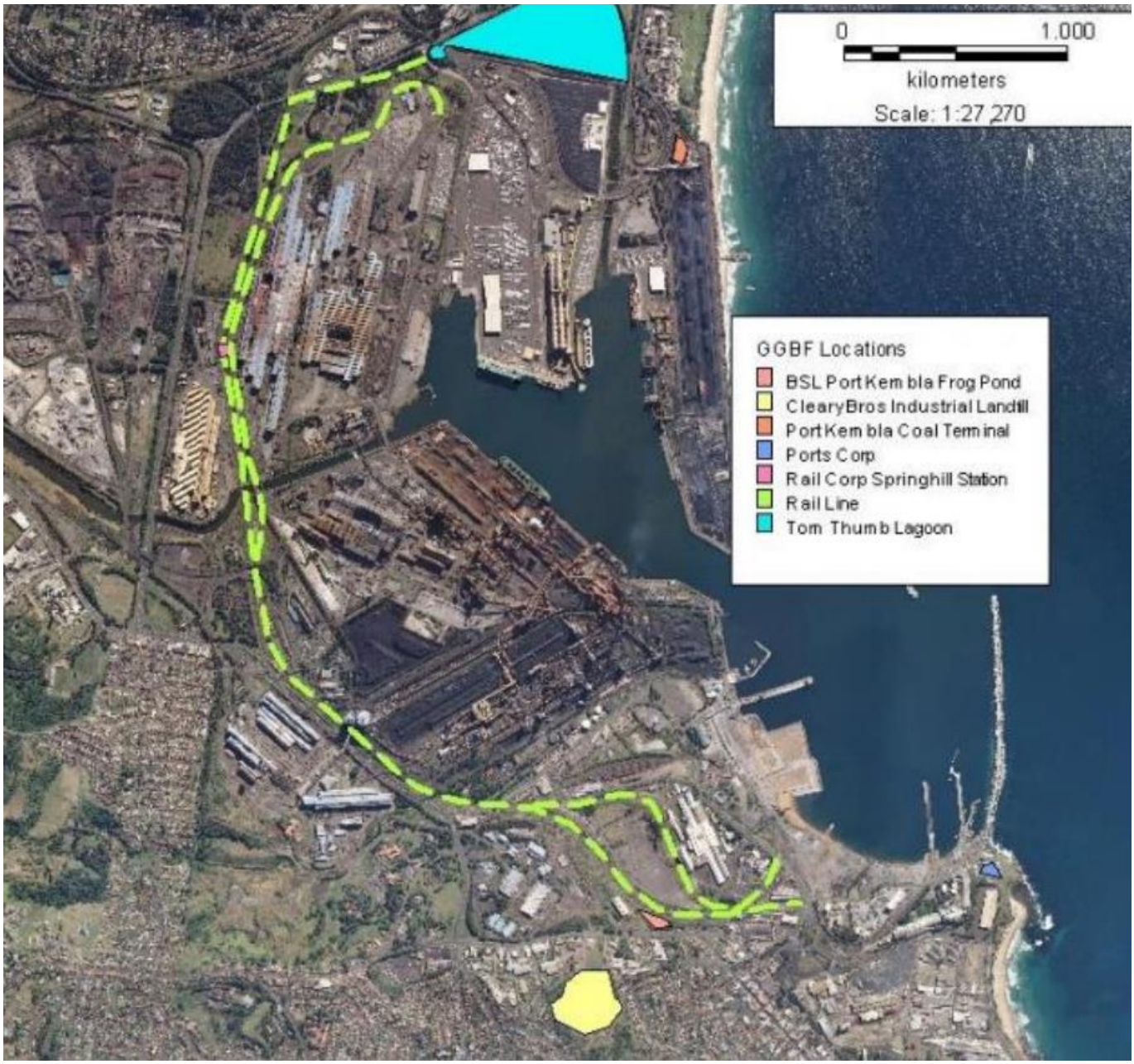


Figure 17: Green and Golden Bell Frog Potential Habitat and Corridors

5.6.3 Marine Habitat

Between November 2009 and March 2011, an ecological survey was conducted in Allans Creek. Species recorded in this survey included algae, ascidians, barnacles, bivalves, bryozoans, hydroids, serpulids, sponges, crustaceans, molluscs, polychaetes, phoronids, and priapulids (Dafforn et. al, 2012). A review of the Department of Climate Change, Energy, the Environment and Water's Species Profile and Threats Database did not identify any of the recorded species as threatened.

6 Other Considerations

6.1 Visual Impacts

The proposed development will not have any substantial visual impacts beyond the site boundary. The loss of vegetation may result in a minor impact within the inner harbour location however, the overall amenity will be consistent with existing operations.

6.2 Carparking

Existing carparks located across the PKSW site currently have excess capacity and may be utilised for construction vehicle parking. A section of Ore Bed B will be temporarily designated for site use, inclusive of vehicle parking. A maximum average daily crew of 15 people will be present on site, minimising the requirement for excess parking space.

No additional parking will be required following the completion of the project.

7 Conclusion

This SEE provides the Council with information about the matters relevant to an assessment of BlueScope's development application in accordance with section 4.15 of the EP&A Act, and for its assessment of BlueScope's request for permission to remove vegetation.

The proposed development involves bank stabilisation and emergency erosion protection works along the southern embankment of Allans Creek. The proposed project aims to renew the embankment to a standard that will no longer be at risk of slump failure which presents both safety and environmental risks.

Consideration has been given by BlueScope to the environmental impacts of the proposed project. BlueScope considers that the project will not entail or generate significant or adverse environmental impacts and can be appropriately managed through the controls as identified in the environmental risk assessment.

8 References

Dafforn, K. A., Clark, G. F., McKinley, A. C., & Johnston, E. L. (2012). *Pollution Reduction Program 146: Assessment of the ecological condition of Port Kembla Inner Harbour and Allans Creek and a comparison with two reference estuaries.*

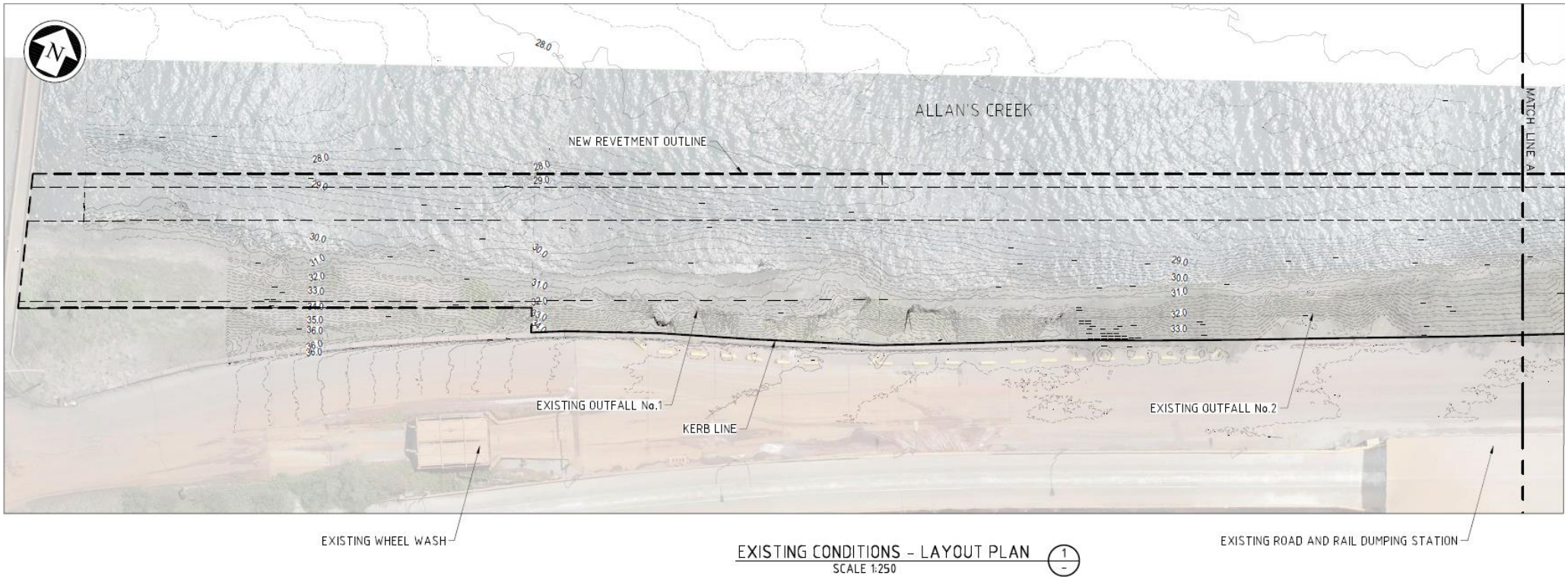


Figure 1: Upstream contour and outfall locations

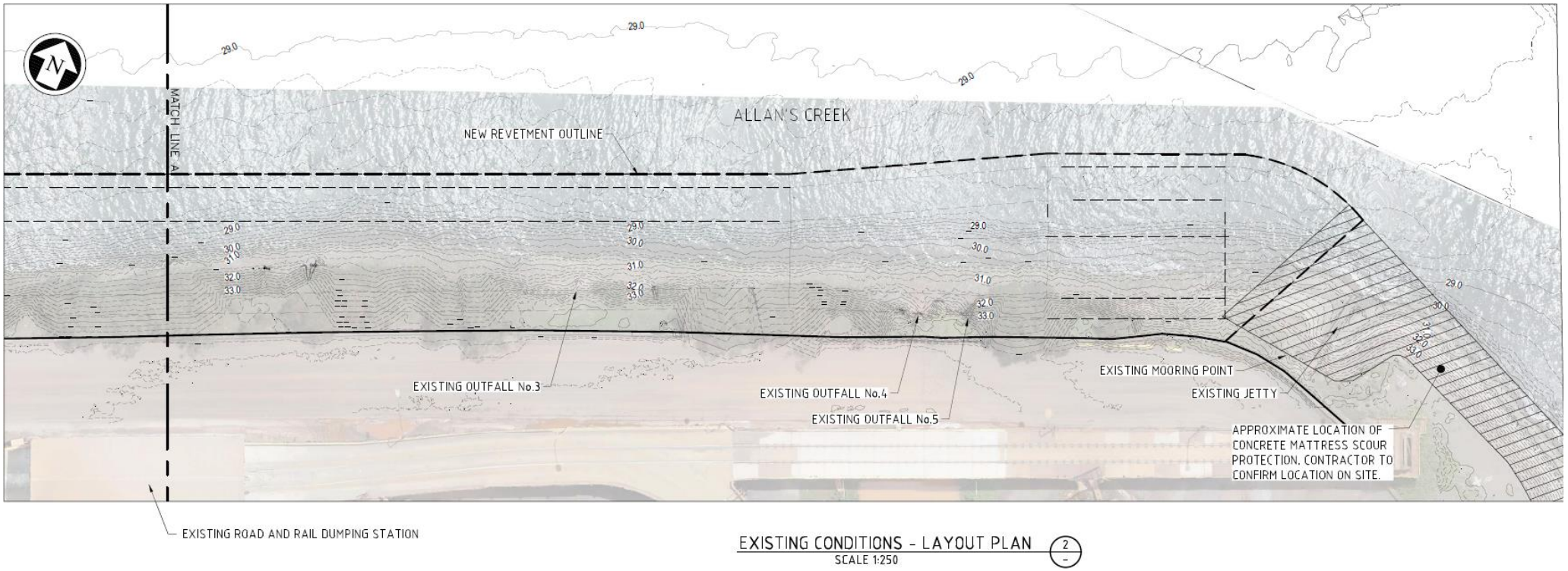


Figure 2: Downstream contour and outfall locations

Attachment 5 – Moore Trees Arboricultural Report for Allans Creek remediation works

MOORE TREES
Consulting Arborist

30 January 2023

Jaime Silva - Construction Coordinator (Civil)
Berth And Commodity Handling projects (BACH)
BlueScope Australian Steel Products
A BACH Project Office
Christy Drive
Port Kembla NSW 2505

Re: ACKR – Allans Creek remediation works

This Report has been commissioned by BlueScope Australian Steel Products. This Report concerns site trees, located along Allans Creek, that will be impacted by the proposed works. The study area is shown in Diagram 1.

1. Introduction: The proposed works include the demolition and construction of a new seawall that is located along the southern side of Allans Creek, where it enters Port Kembla Harbour. The length of vegetation within the study area extends for approximately 200 metres.

A site inspection was undertaken on 23rd January 2023 to assess the subject trees.

Recommendations have been made in this Report, for these trees, based on the project requirements and the current condition of the trees, taking into consideration the project impacts.

enquiries@mooretrees.com.au www.mooretrees.com.au
M: 0411 712 887 P: 0242 680 425
PO Box 3114 Thirroul NSW 2515
ABN 90887347745

The location of the subject trees can be seen in Diagram 1 below.

Diagram 1: Image showing the location of the subject trees. Google Earth 2022.

1. Methodology: A Visual Tree Assessment (VTA) was performed on the subject trees on 23rd January 2023 by Paul Vezgoff. The VTA consists of a detailed inspection of the subject trees from ground level to the upper canopy. This method of tree evaluation is adapted from Matheny and Clark, 1994 and is recognised by The International Society of Arboriculture, Arboriculture Australia and The Institute Australian of Consulting Arborists (IACA). It is also known as a Level 1: Limited Visual Assessment Process as per the International Society of Arboriculture best management practices.

2. Height: The heights and distances within this report have been measured with a Bosch DLE 50 laser measure.

3. Tree Protection Zones (TPZ): The Tree Protection Zone (TPZ) is the principal means of protecting trees on development sites. The TPZ is a combination of the root area and crown area requiring protection. It is an area isolated from construction disturbance, so that the tree remains viable. TPZ's have been calculated for the site trees as a group based on the largest stem within the group. The TPZ calculation is based on the Australian Standard *Protection of trees on development sites,* AS 4970, 2009.

4. Structural Root Zone (SRZ): The SRZ is a specified distance measured from the trunk that is set aside for the protection of tree roots, both structural and fibrous. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The TPZ and SRZ are measured as a radial measurement from the trunk. No roots should be severed within this area. A detailed methodology on the TPZ and SRZ calculations can be found in Appendix 2.

5. Safe Useful Life Expectancy (SULE): The subject trees were assessed for a Safe Useful Life Expectancy (SULE). A detailed explanation of SULE can be found in Appendix 1.

6. Impact Assessment: An impact assessment was conducted on the site trees. This was conducted by assessing a verbal description of the works. The proposed works were assessed for the following:

- Reduced Level (R.L.) at base of tree.
- Incursions into the Tree Protection Zone (TPZ).
- Assessment of the likely impact of the works.

7. Approval framework: This Report is only concerned with trees on the site that come under the Tree Management Permit Policy that is part of the Wollongong City Council Development Control Plan, 2009 (Chapter E17 Preservation and Management of Trees and Vegetation). Under this Chapter (E17), a person must not ringbark, cut down, top, lop, remove, injure or willfully destroy any prescribed tree or other vegetation, without development consent or a permit being granted by Council. Refer to Part 3 (Chapter E17) Definitions for the meaning of 'prescribed tree' and 'prescribed other vegetation'. Two application processes have been established to deal with the assessment and approval for prescribed trees:

a) Tree Management Permit (generally for individual/small scale tree removal and pruning in urban areas) - refer to Council's website for the Tree Management Permit Policy;

b) Development consent via either Complying Development or Development Application. This Chapter of the DCP should be read in conjunction with clauses 5.10 Heritage conservation; 5.11 Bushfire hazard reduction work; and 7.2 Natural resource sensitivity – biodiversity of Wollongong Local Environmental Plan 2009.

This Report is required as per clause (b) via a Development Application for the site.

8. Observations: The subject trees are all River She Oak *(Casuarina cunninghamiana)* that are approximately 7-9 metres in height, with approximately 2.5 metre spreads. The largest Diameter at Breast Height (DBH) is one hundred and eighty (180) millimeters. The majority of trees have a stem diameter less than one hundred and twenty (120) millimeters. There are extensive saplings and suckering occurring along the study area. These trees appear to have been planted for stabilization of the bank and total to around one hundred (100) trees.

Based on historical aerial imagery, the subject trees within the study area date from around the early 1990's (Diagrams 2 and 3).

Most of the specimens have heavy deposits of Iron Ore dust that has impacted on their overall vigor.

These trees would be classed as having a 3c SULE rating. *Trees that could live for more than 15 years but may be removed to prevent interference with more suitable individuals or to provide for a new planting.*

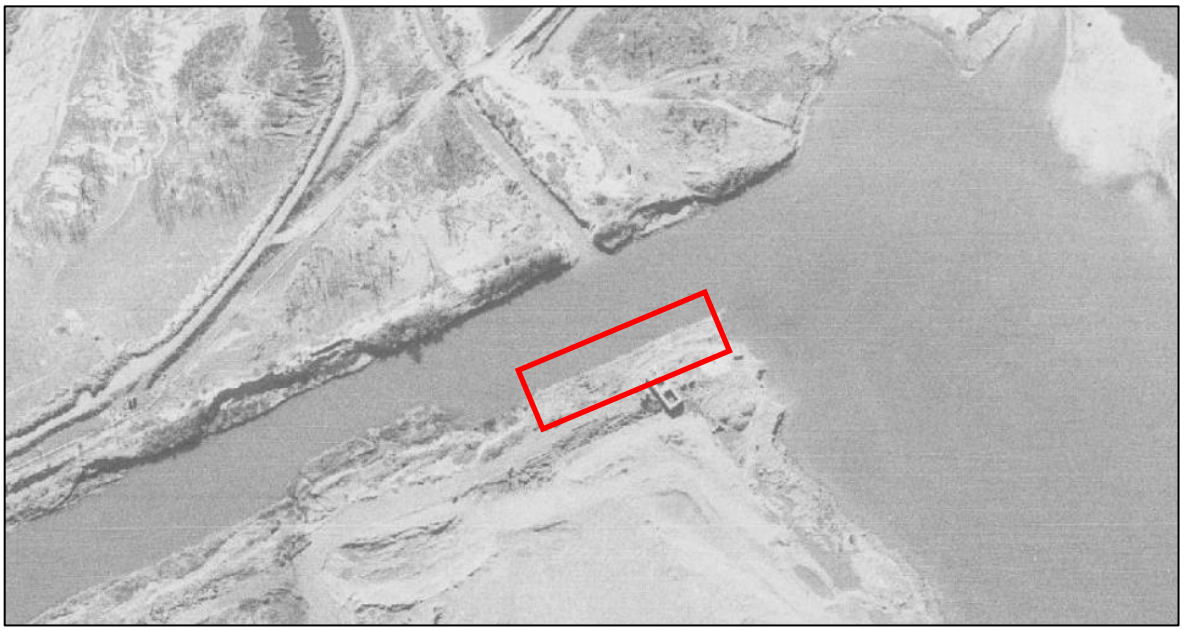


Diagram 2: Image showing the location of the subject trees in 1951. NSW Gov Spatial Services 2023.

Diagram 3: Image showing the location of the subject trees in 1993. NSW Gov Spatial Services 2023.

9. Impacts: As the works are located along the edge of a waterway, extensive excavations are required for the new wall to be constructed. The Tree Protection Zone (TPZ) for the site trees would all overlap and the drip line would be considered to be acceptable as a TPZ for the site trees.

Due the extent of works, none of the trees can be retained.

Council approval will be required for the removal of these trees based on their species and size. This Report can be used for the submission to Council, along with the application.

Yours sincerely

Paul Vezgoff, Consulting Arborist
Dip Arb (Dist), Arb III, Hort cert, AA, ISA

Plate 1: Image showing the site trees looking east. P.Vezgoff.

Plate 2: Image showing the small area of soil where the subject trees are located. P.Vezgoff.

Plate 3: Heavy Iron Ore dust has had a negative impact on the trees' overall vigor. P.Vezgoff.

Plate 4: Image showing where the embankment is narrow. P.Vezgoff.

Appendix 1

SULE categories (after Barrell, 2001)[1]

SULE Category	Description
Long	*Trees that appeared to be retainable at the time of assessment for more than 40 years with an acceptable level of risk.*
1a	Structurally sound trees located in positions that can accommodate for future growth
1b	Trees that could be made suitable for retention in the long term by remedial tree care.
1c	Trees of special significance that would warrant extraordinary efforts to secure their long term retention.
Medium	*Trees that appeared to be retainable at the time of assessment for 15-40 years with an acceptable level of risk.*
2a	Trees that may only live for 15-40 years
2b	Trees that could live for more than 40 years but may be removed for safety or nuisance reasons
2c	Trees that could live for more than 40 years but may be removed to prevent interference with more suitable individuals or to provide for new planting.
2d	Trees that could be made suitable for retention in the medium term by remedial tree care.
Short	*Trees that appeared to be retainable at the time of assessment for 5-15 years with an acceptable level of risk.*
3a	Trees that may only live for another 5-15 years
3b	Trees that could live for more than 15 years but may be removed for safety or nuisance reasons.
3c	Trees that could live for more than 15 years but may be removed to prevent interference with more suitable individuals or to provide for a new planting.
3d	Trees that require substantial remedial tree care and are only suitable for retention in the short term.
Remove	*Trees that should be removed within the next five years.*
4a	Dead, dying, suppressed or declining trees because of disease or inhospitable conditions.
4b	Dangerous trees because of instability or loss of adjacent trees
4c	Dangerous trees because of structural defects including cavities, decay, included bark, wounds or poor form.
4d	Damaged trees that are clearly not safe to retain.
4e	Trees that could live for more than 5 years but may be removed to prevent interference with more suitable individuals or to provide for a new planting.
4f	Trees that are damaging or may cause damage to existing structures within 5 years.
4g	Trees that will become dangerous after removal of other trees for the reasons given in (a) to (f).
4h	Trees in categories (a) to (g) that have a high wildlife habitat value and, with appropriate treatment, could be retained subject to regular review.
Small	*Small or young trees that can be reliably moved or replaced.*
5a	Small trees less than 5m in height.
5b	Young trees less than 15 years old but over 5m in height.
5c	Formal hedges and trees intended for regular pruning to artificially control growth.

updated 01/04/01)

1 (Barrell, J. (2001) "SULE: Its use and status into the new millennium" in *Management of mature trees*, Proceedings of the 4th NAAA Tree Management Seminar, NAAA, Sydney.

TPZ and SRZ methodology

Determining the Tree Protection Zone (TPZ)

The radium of the TPZ is calculated for each tree by multiplying its DBH x 12.

TPZ = DBH x 12

Where

DBH = trunk diameter measured at 1.4 metres above ground

Radius is measured from the centre of the stem at ground level.

A TPZ should not be less than 2 metres no greater than 15 metres (except where crown protection is required.). Some instances may require variations to the TPZ.

The TPZ of palms, other monocots, cycads and tree ferns should not be less than 1 metre outside the crown projection.

Determining the Structural Root Zone (SRZ)

The SRZ is the area required for tree stability. A larger area is required to maintain a viable tree.

The SRZ only needs to be calculated when major encroachment into a TPZ is proposed.

There are many factors that affect the size of the SRZ (e.g. tree height, crown area, soil type, soil moisture). The SRZ may also be influenced by natural or built structures, such as rocks and footings. An indicative SRZ radius can be determined from the trunk diameter measured immediately above the root buttress using the following formula or Figure 1. Root investigation may provide more information on the extent of these roots.

SRZ radius = $(D \times 50)^{0.42} \times 0.64$

Where

D = trunk diameter, in m, measured above the root buttress

NOTE: The SRZ for trees with trunk diameters less than 0.15m will be 1.5m (see Figure 1).

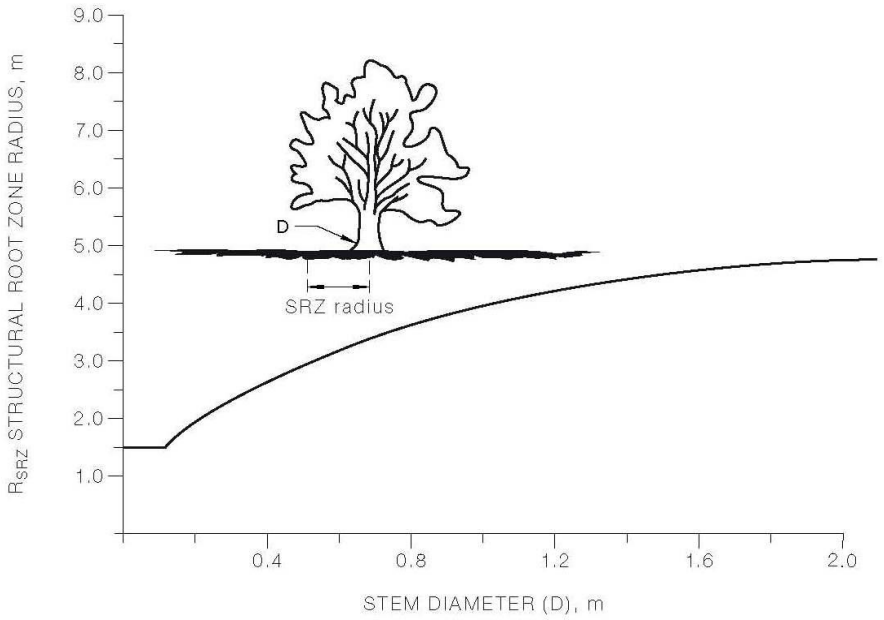


FIGURE 1 - STRUCTURAL ROOT ZONE

Notes:

1 R_{SRZ} is the structural root zone radius.
2 *D* is the stem diameter measured immediately above root buttress.
3 The SRZ for trees less than o.15 metres diameter is 1.5 metres.
4 The SRZ formula and graph do not apply to palms, other monocots, cycads and tree ferns.
5 This does not apply to trees with an asymmetrical root plate.

Attachment 6 – Allans Creek Remediation Concept Landscape Revegetation Plan

Allans Creek Remediation

Concept Landscape Revegetation Plan

1. Summary of Proposed Development

The proposed development involves bank stabilisation and emergency erosion protection works along the southern embankment of Allans Creek, adjoining to Port Kembla's Inner Harbour. Both tidal action and creek flow velocity have resulted in the lower section of the bank becoming eroded, compromising the stability of the bank and the infrastructure above it.

This section of bank supports infrastructure that is frequented by heavy vehicles including a section of Harbour Road and Allans Creek Road, the abutments for Iron Ore Road Bridge, and a Pipe Gantry bridge. If left without remediation, there is an increasing potential for slump failure of the embankment, especially during periods of wet weather or during storm conditions, presenting both safety and environmental risks.

BlueScope proposes to emplace graded levelling rock on the embankment to restore the slope stability followed by placement of geotextile and final scour protection. This work will reinstate the original embankment gradient and ensure the required resistance to both flow and tidal erosion is achieved.

2. Purpose of this Plan

The purpose of this plan is to document the revegetation works that will occur following the execution of the bank remediation.

3. References

MA-ENV-08-02 Vegetation Management Plan

Moore Trees Arboricultural Report for Allans Creek remediation works

ACKR-RPT-ENGR-Statement of Environmental Effects-01 Allans Creek Remediation Statement of Environmental Effects

4. Vegetation Removal

Existing vegetation within the project site along the crest of the bank must be removed to execute the work (refer Figure 1).

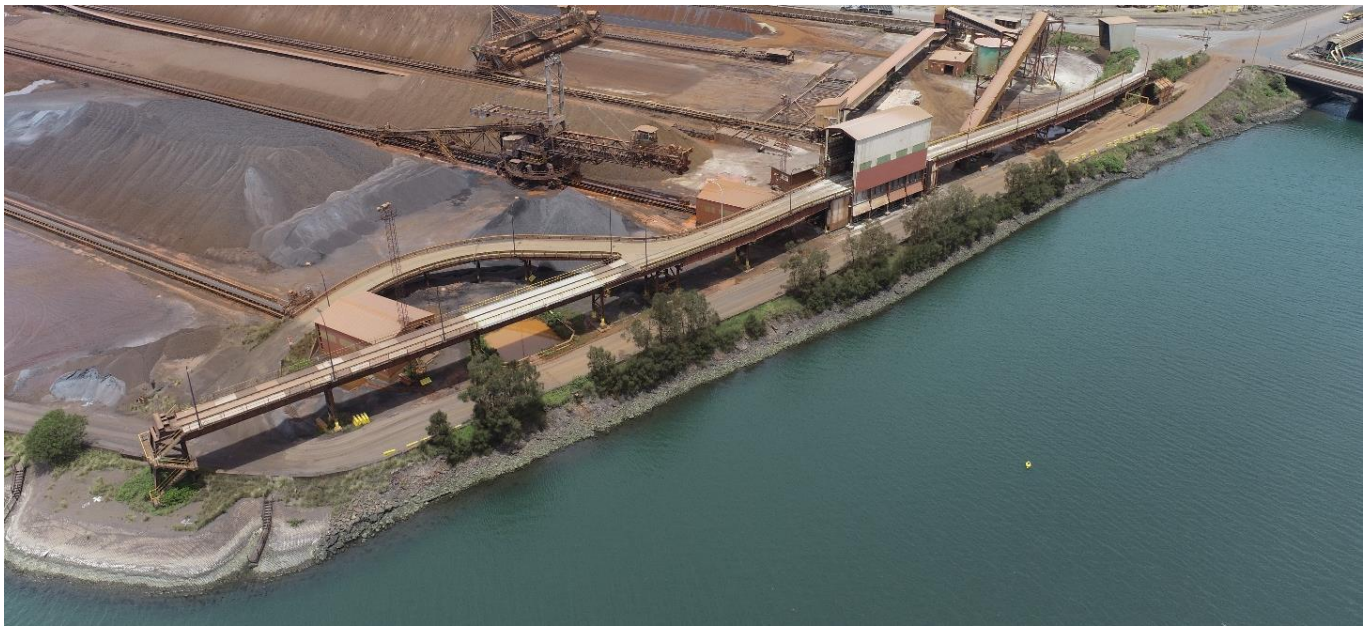


Figure 1 - Existing Vegetation in Project Area

In January 2023 Moore Trees were contracted by BlueScope to conduct a survey of the vegetation in the project area. Moore Trees identified approximately 100 River She Oak (Casuarina cunninghamiana) trees that are unable to be retained due to the extent of the proposed work. The resulting Arborist Report noted that the trees would be classed as having a 3c SULE rating.

A copy of the Arborist report has been provided with the Statement of Environmental Effects for the project.

The loss of vegetation may result in a minor visual impact from within the inner harbour however, the overall amenity will be consistent with existing operations.

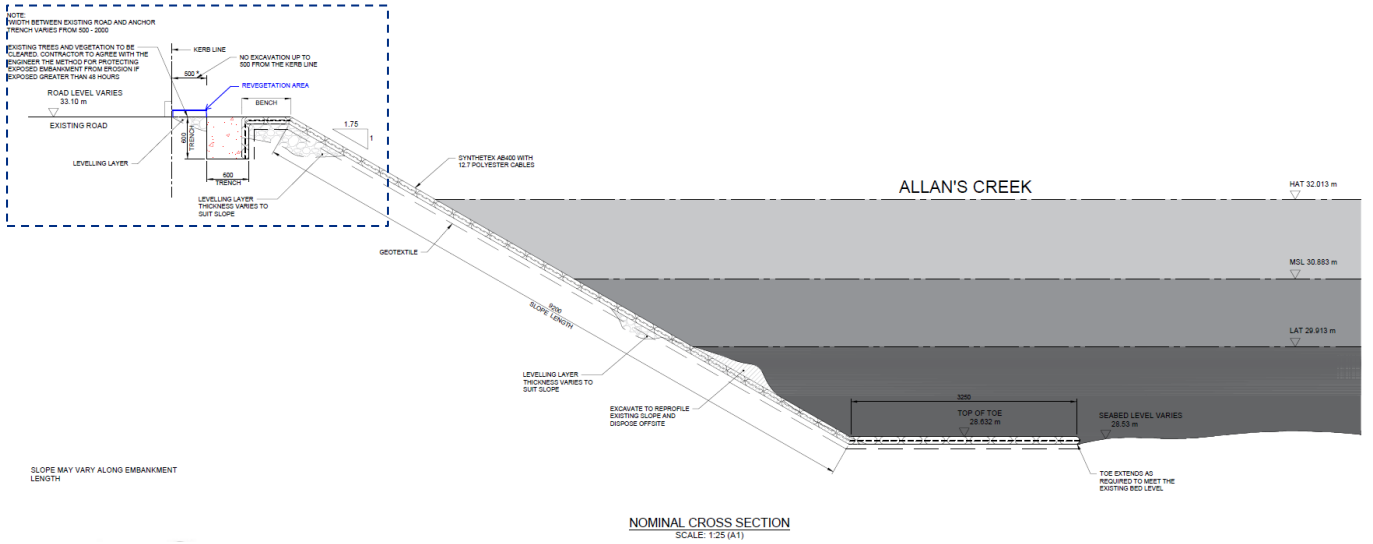
5. Revegetation

In accordance with BlueScope's Vegetation Management Plan, compensatory planting of native plants will occur for the trees removed. The design of the stabilisation work includes a 0.5 – 2.0 m width between the mattress and the concrete block and roadway as shown in Figure 2. The plants selected for revegetation must not have the potential to impact the stability of the mattress or the roadway.

Illawarra Grounds and Surrounds are the primary land care maintenance contractor for the PKSW site. BlueScope has engaged Illawarra Grounds and Surrounds for advice on an appropriate species of plant to revegetate this area.

Following this consultation, BlueScope will plant Lomandra longifolia (Spiny-headed Mat-rush) along the bank. These are native evergreen plants that grow suitably in a wide range of soils, including along creek banks. They have deep root systems that assist with erosion control and will not pose a potential future issue for the roadway and stabilising mattress proposed for the creek remediation. These plants have been successfully grown in other areas of the PKSW site.

Planting will occur within 6 months of the completion of the remediation works.



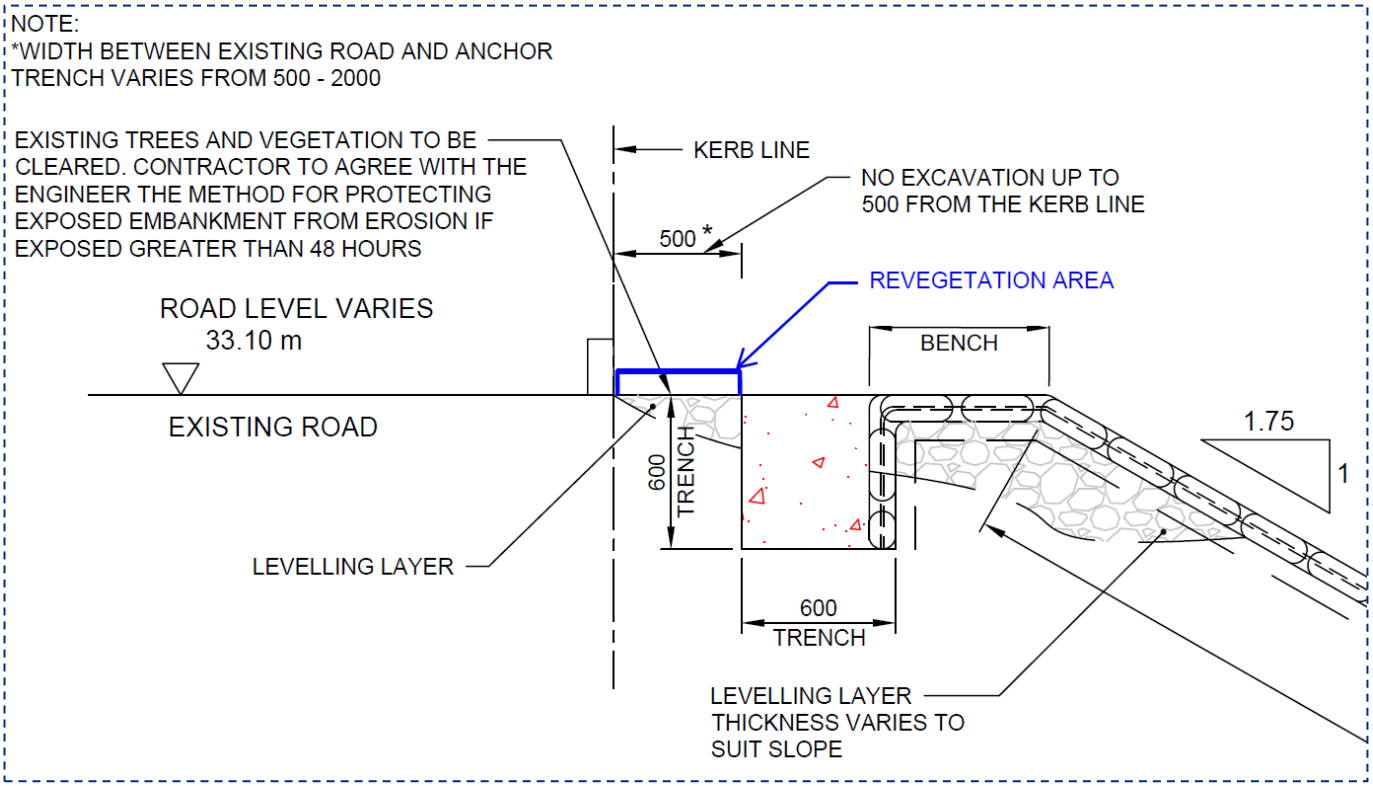


Figure 2 – Cross section of work showing revegetation location

6. Document control

Prepared by:	Date:	Revision	Checked by:	Authorised by:
Anita Rojas	29 August 2023	1	Greg Szloch	Greg Szloch

Attachment 7 - Draft Conditions

The development proposed is Integrated Development and approval is required from the approval bodies listed below:

Department of Planning and Environment - Water Management Act 2000
Pursuant to s91 - authorisation under the Water Management Act 2000 - General Terms of Approval issued by the Department of Planning and Environment dated 11 October 2023 as attached shall form part of this Notice of Determination.

Reason:
To satisfy the requirements of the legislation.

Conditions imposed by Council as part of this Integrated Development Consent are:

1. **Approved Plans and Supporting Documentation**
Development must be carried out in accordance with the following approved plans and supporting documentation (stamped by Council), except where the conditions of this consent expressly require otherwise.

Plan No	Revision No	Plan Title	Drawn By	Dated
1458-HC-SYN-01	A	Existing conditions	Hychem	25.10.22
1458-HC-SYN-02	A	Typical Details	Hychem	25.10.22
542508_0001	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0002	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0003	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0004	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0005	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0006	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0007	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0008	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0009	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0010	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0011	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0012	A	Raw Materials Handling General Arrangements	Hychem	30.05.23

542508_0013	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0014	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0015	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0016	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0017	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0018	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0019	A	Raw Materials Handling General Arrangements	Hychem	30.05.23
542508_0020	A	Raw Materials Handling General Arrangements	Hychem	30.05.23

Document Title	Version No	Prepared By	Dated
Allans Creek Remediation Concept Landscape Revegetation Plan	1	Bluescope	29 August 2023
Arboricultural Report for Allans Creek remediation works	1	Moore Trees	30 January 2023

In the event of any inconsistency between the approved plans and the supporting documentation, the approved plans prevail. In the event of any inconsistency between the approved plans and a condition of this consent, the condition prevails.

Note: An inconsistency occurs between an approved plan and supporting documentation or between an approved plan and a condition when it is not possible to comply with both at the relevant time.

Reason:
To ensure all parties are aware of the approved plans and supporting documentation.

General Conditions

2. Tree Retention/Removal
This consent permits the removal of all trees as indicated on the Arborist Report by Moore Trees Dated 30 January 2023]. No other trees shall be removed without prior written approval of Council.

Reason:
To ensure satisfaction of legislation.

3. Compliance with the Building Code of Australia (BCA)
Building work must be carried out in accordance with the requirements of the BCA.

Reason:
To ensure the development is built in accordance with the Building Code of Australia.

4. Construction Certificate
A Construction Certificate must be obtained from Council or a Registered Certifier prior to work commencing.

A Construction Certificate certifies that the provisions of Part 3 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 have been satisfied,

including compliance with all relevant conditions of Development Consent and the Building Code of Australia.

Note: The Certifier must cause notice of its determination to be given to the consent authority, and to the Council, by forwarding to it, within two (2) days after the date of the determination, the plans and documentation referred to in Section 13 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.

Reason:
To satisfy the requirements of the legislation.

5. Controlled Activity Approval

The attached GTA issued by the Department of Planning and Environment—Water do not constitute an approval under the *Water Management Act 2000*. The development consent holder must apply to the department for a Controlled Activity approval after consent has been issued by Council and before the commencement of any work or activity.

Reason:
To satisfy the requirements of the legislation.

6. Development Contributions

In accordance with Section 4.17(1)(h) of the Environmental Planning and Assessment Act 1979 and the Wollongong City Wide Development Contributions Plan (2022), a monetary contribution of $6,840.00 (subject to indexation) must be paid to Council towards the provision of public amenities and services, prior to the release of any associated Construction Certificate.

This amount has been calculated based on the proposed cost of development and the applicable percentage levy rate.

The contribution amount will be indexed quarterly until the date of payment using Consumer Price Index; All Groups, Sydney (CPI) based on the formula show in the Contributions Plan.

To request an invoice to pay the contribution go to www.wollongong.nsw.gov.au/contributions and submit a contributions enquiry. The following will be required:

- Application number and property address.
- Name and address of who the invoice and receipt should be issue to.
- Email address where the invoice should be sent.

A copy of the Contributions Plan and accompanying information is available on Council's website www.wollongong.nsw.gov.au.

Reason:
To ensure the development contributes to the provision of local infrastructure, through the payment of development contributions.

Before the Issue of a Construction Certificate

7. Environmental Management Plan

The submission of a detailed Environmental Management Plan which addresses but is not limited to, the following issues:

a. Introduction.

b. Project Description.

This section should include:

i. Timing and duration of works.

ii. location of work sites offices, compounds, stockpiles and refuelling areas.

iii. a description of the site and surrounds and location of environmentally sensitive areas.

c. Objectives of the CEMP.

This section should state what the CEMP is trying to achieve.

d. Context of the CEMP.

This section should specify how the CEMP fits into the planning process of the project.

e. Planning Project Environmental Actions.

f. Environmental Impact Assessment (EIA) Obligations.

This section should identify all EIA documentation related to this project.

g. Environmental Aspects.

This section should reference or describe the aspects and impacts associated with the construction activities. Each impact should be assigned a risk ranking of low, medium or high. Control measures should be selected for all impacts ranked as medium or high. Low risk impacts should be monitored to ensure that they do not increase.

h. Legal and Other Requirements.

This section should detail the legislative requirements of the work, and all other specifications.

i. Supplementary Environmental Plans.

These include:

i. Erosion and Sediment Control Plan (ESCP) or Soil and Water Management Plan (SWMP).

ii. Note: Requirements for ESCPs and SWMPs are provided in “Managing Urban Stormwater: Soils and Construction” Landcom, 2004.

iii. Noise and Vibration Management Plan.

iv. Landscaping and Revegetation Plan.

v. Flora and Fauna Management Plan.

vi. Traffic Management Plan/Traffic Control Plan (TCP).

vii. Air Quality Management Plan.

viii. Waste Management Plan.

ix. Acid Sulfate Soil Management Plan (ASSMP).

x. Indigenous and European Heritage Plan.

xi. Contaminated Soil Management Plan.

j. Implementation.

k. On-site Structure and Responsibility.

This section should state the duties and responsibilities of all contractors and sub-contractors working on site and the relationship between these parties.

l. Training, Awareness and Competence.

This section should detail the environmental training that all site personnel are required to undertake. Environmental training should include:

i. Knowledge and understanding of the CEMP.

ii. Site induction, and may include:

- Emergency response training.
- Familiarisation with site environmental controls.

- Erosion and sediment control training.

m. Communication.

This section should include how the contractor plans to keep affected residents informed as to the nature and scope of works, the type of consultation and frequency. This section should identify and list details for relevant external stakeholders such as:

i. EPA.

ii. NPWS.

iii. NSW Fisheries.

iv. DPE.

v. Aboriginal Groups.

vi. Council.

This section should also detail the procedures for the notification of complaints and identify the person responsible for its maintenance and follow up action.

n. Emergency Planning and Response.

This section should detail the procedure to be followed in the event of an environmental emergency. An environmental emergency is any event that causes or has the potential to cause environmental damage. The procedure needs to include:

i. The names of key emergency response personnel.

ii. Personnel responsibilities and contact details.

iii. Contact details for emergency services (ambulance, fire brigade, spill clean up services).

iv. The location of on-site information on hazardous materials, including SDSs and spill containment material.

v. The procedure to follow to minimise/control the emergency.

vi. Procedures for notifying the Superintendent, the public and/or EPA.

Emergency Response Contacts should be listed in table form.

o. Auditing and Monitoring.

p. Environmental Action Monitoring.

This section should detail how all environmental actions identified in Section 2 are going to monitored and verified. This section should also detail or refer to a procedure to ensure that all monitoring results that exceed set criteria are acted on quickly and that the appropriate regulatory authorities are notified.

q. Auditing.

This section should detail audit criteria, frequency and scope.

r. Non-Conformance and Corrective and Preventive Action.

This section should state how these items should be addressed.

s. Review of CEMP.

This section should detail the procedure and frequency of reviewing the CEMP and how those using it will be aware of changes.

t. Appendix 1 - Environmental Action Table.

The Environmental Action Table should provide sufficient information to ensure effective and efficient on-site environmental management. The Environmental Actions Table

should include all environmental actions that were identified in Section 2.0 of the CEMP. The Environmental Actions Table must clearly convey what action is required, when it needs to be done and who is supposed to do it.

u. Appendix 2 - Environmental Action Monitoring Table.

This section should detail how all of the environmental actions listed in Appendix 1 are going to be monitored and verified. The monitoring must clearly convey what monitoring is required, when the monitoring is to take place and who is to do it.

Reason:
To ensure ongoing protection of the environment and neighbourhood amenity.

8. Before the Issue of a Construction Certificate - Methods to Control Soil and Sediments
Details outlining the methods to control soil and sediments likely to be blown or washed off-site from disturbed areas during the demolition, excavation and construction phases of the development shall be submitted to the Principal Certifier (and Council in the event that Council is not the Principal Certifier), prior to the issue of the Construction Certificate.

Reason:
To ensure ongoing protection of the environment and neighbourhood amenity.

9. Watercourse Approved Works - Controlled Activity Approval
The submission of documentary evidence to the Principal Certifier is required prior to the issue of the Construction Certificate confirming that a controlled activity approval under Section 91 of the Water Management Act 2000 has been obtained from the Department of Planning and Environment (DPE) for the proposed works. Evidence that the construction details approved by DPE are consistent with the details provided on the Construction Certificate plans, must be provided prior to the release of the Construction Certificate.

Reason:
To satisfy the requirements of the legislation.

Before the Commencement of Building Work

10. Before the Commencement of Building Work - Inspection of Erosion and Sediment Control Measures
Prior to the commencement of any works, the approved erosion and sediment control measures must be implemented by the contractor, and inspected and approved by the PCA prior to the commencement of any other site works. The erosion and sediment measures must be maintained for the life of the construction period and until runoff catchments are stabilised.

Reason:
To ensure ongoing protection of the environment and neighbourhood amenity.

11. Site Management Program - Sediment and Erosion Control Measures
A site management program incorporating all sediment and erosion control measures (eg cleaning of sediment traps, fences and maintenance of silt curtain) is to be initiated prior to the commencement of any works and maintained throughout the demolition, excavation and construction phases of the development.

Reason:
To ensure ongoing protection of the environment and neighbourhood amenity.

12. Sediment Control Measures
The developer must ensure that sediment-laden runoff from the site is controlled at all times subsequent to commencement of construction works. All sediment control measures, including the silt curtain, must be maintained at all times and checked for adequacy at the conclusion of each day's work.

Reason:
To ensure ongoing protection of the environment and neighbourhood amenity.

13. Erosion and sediment controls in place

Prior to the commencement of any works on site, including demolition, all erosion and sedimentation control measures are to be established in accordance with the requirements of the approved CEMP and detailed sediment and erosion control plan.

Reason:
To ensure ongoing protection of the environment and neighbourhood amenity.

14. Appointment of Principal Certifier

Prior to commencement of work, the person having the benefit of the Development Consent and a Construction Certificate must:

a. appoint a Principal Certifier and notify Council in writing of the appointment irrespective of whether Council or a Registered Certifier is appointed; and

b. notify Council in writing of their intention to commence work (at least two [2] days' notice is required).

The Principal Certifier must determine when inspections and compliance certificates are required.

Reason:
To satisfy the requirements of the legislation.

15. Signs On Site

A sign must be erected in a prominent position on any site on which building work or demolition work is being carried out:

a. showing the name, address and telephone number of the Principal Certifier for the work, and

b. showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours, and

c. stating that unauthorised entry to the worksite is prohibited.

Any such sign is to be maintained while the building work or demolition work is being carried out but must be removed when the work has been completed.

Note: This does not apply in relation to building work or demolition work that is carried out inside an existing building that does not affect the external walls of the building.

Reason:
To satisfy the requirements of the legislation.

16. Temporary Toilet/Closet Facilities

Toilet facilities are to be provided at or in the vicinity of the work site on which work involved in the erection or demolition of a building is being carried out at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

Each toilet provided must be:

a. a standard flushing toilet, and

b. connected to either:

   i. the Sydney Water Corporation Ltd sewerage system or

   ii. an accredited sewage management facility or

   iii. an approved chemical closet.

The toilet facilities shall be provided on-site, prior to the commencement of any works.

Reason:
To satisfy the requirements of the legislation.

17. Structural Engineer's Details
Structural Engineer's details for all structurally designed building works such as reinforced concrete footings, reinforced concrete slabs and structural steelwork must be submitted to the Principal Certifier, prior to the commencement of any works on the site.

Reason:
To ensure structural integrity.

18. Enclosure of the Site
The site must be enclosed with a suitable security fence to prohibit unauthorised access, to be approved by the Principal Certifier. No building work is to commence until the fence is erected.

Reason:
To ensure safety.

19. Notification to SafeWork NSW
The demolition licence holder who proposes demolition of a structure or part of a structure that is loadbearing or otherwise related to the physical integrity of the structure that is at least six (6) metres in height, involving load shifting machinery on a suspended floor, or involving the use of explosives must notify SafeWork NSW in writing at least five (5) calendar days before the work commences.

Reason:
To ensure safety.

20. Demolition Works
The demolition of the existing structures shall be carried out in accordance with Australian Standard AS 2601:2001: The Demolition of Structures or any other subsequent relevant Australian Standard and the requirements of SafeWork NSW.

No demolition materials shall be burnt or buried on-site. The person responsible for the demolition works shall ensure that all vehicles leaving the site carrying demolition materials have their loads covered and do not track soil or waste materials onto the road. Any unforeseen hazardous and/or intractable wastes shall be disposed of to the satisfaction of the Principal Certifier. In the event that the demolition works may involve the obstruction of any road reserve/footpath or other Council owned land, a separate application shall be made to Council to enclose the public place with a hoarding or fence over the footpath or other Council owned land.

Reason:
To satisfy the requirements of the legislation and Australian Standards.

21. Waste Management
The developer must provide an adequate receptacle to store all waste generated by the development pending disposal. The receptacle must be regularly emptied and waste must not be allowed to lie or accumulate on the property other than in the receptacle. Consideration should be given to the source separation of recyclable and reusable materials.

Reason:
To protect neighbourhood amenity.

While Building Work is Being Carried Out

22. Copy of Consent in the Possession of Person carrying out Tree Removal
The Developer/Applicant must ensure that any person carrying out tree removal is in possession of this development consent and/or the approved landscape plan, in respect to the tree(s) which has/have been given approval to be removed in accordance with this consent.

Reason:
To satisfy the requirements of the legislation and DCP.

23. Excess Excavated Material - Disposal
Excess excavated material shall be classified according to the NSW Environment Protection Authority's Waste Classification Guidelines – Part 1: Classifying Waste (2014) prior to being

transported from the site and shall be disposed of only at a location that may lawfully receive that waste.

Reason:
To satisfy the requirements of the legislation and ensure ongoing protection of the environment.

24. While Building Work is Being Carried Out - Accordance with EPA licence
All works are to be undertaken in accordance with the requirements of *Environment Protection Licence 6092*.

Reason:
To satisfy the requirements of the legislation.

25. While Building Work is Being Carried Out - Accordance with Resource Recovery Orders
All works, including waste management and disposal, excavation and filling, are to be done in accordance the relevant Resource Recovery Orders.

Reason:
To satisfy the requirements of the legislation.

26. While Building Work is Being Carried Out - New Information/Unexpected Finds
In the event that demolition and/or construction works cause the generation of odours or the uncovering of previously unidentified contaminants or hazardous materials, works must immediately cease and the Principal Certifying Authority and Council (in the event that Council is not the Principal Certifying Authority) must be notified in writing within seven (7) days and an appropriately qualified environmental consultant appointed to undertake an assessment of the potential contaminant and works required to make the site safe from potential human health and environmental harm.

Reason:
To satisfy the requirements of the legislation and Australian Standards.

27. While Building Work is Being Carried Out - Imported Fill Material
Any imported fill material brought onto the site shall be virgin excavated natural material as defined by the NSW Environment Protection Authority, that is natural material such as clay, gravel, sand, soil or rock fines that has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities, and that does not contain sulfidic ores or soils, or any other waste including fragments or filaments of asbestos. A certificate from a suitably qualified environmental consultant confirming the fill material is not contaminated shall be submitted to Council for its records.

Reason:
To satisfy the requirements of the legislation.

28. While Building Work is Being Carried Out - Maintenance of erosion and sedimentation control measures
Daily inspection and maintenance of the erosion and sedimentation control measures shall be undertaken to ensure their effectiveness.

Daily inspection and maintenance of the Silt Curtain is to include:

1. Inspection for damage and ensuring the curtain is free of tears or gaps.
2. Ensuring the top of the barrier is above the water surface.
3. Ensuring the barrier is in the correct location to capture any sediment or debris from the site.
4. Checking all anchor points.
5. Check for any sediment build-up at the bottom of the curtain that may drag the curtain under. Remove and dispose of excess sediment if required.
6. Make any repairs or adjustments if necessary.

Reason:
To ensure ongoing protection of the environment.

29. **While Building Work is Being Carried Out - Erosion and Sediment Control Measures**
All erosion and sediment control measures are to be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as the ground disturbed by the works has been stabilise and rehabilitated so that it no longer acts as source of sediment.

Reason:
To ensure ongoing protection of the environment and compliance with the legislation.

30. **While Building Work is Being Carried Out - Building Operations Not to Discharge Pollutants or result in water pollution**
Any works or activities associated with this approval shall not result in the discharge of pollutants, including silt or sediment, into the watercourse, or result in water pollution.

Reason:
To ensure ongoing protection of the environment and satisfy the requirements of the legislation.

31. **Control of Access to Prevent Tracking of Sediment**
Vehicle access is to be controlled so as to prevent tracking of sediment onto adjoining roadways, particularly during wet weather or when the site has been affected by wet weather.

Reason:
To ensure ongoing protection of the environment.

32. **Drains Maintained Free of Sediment**
Drains, gutters, access ways and roadways must be maintained free of sediment and any other material. Gutters and roadways must be swept/scraped regularly to maintain them in a clean state.

Reason:
To ensure ongoing protection of the environment.

Before the Issue of an Occupation Certificate

33. **Before the Issue of an Occupation Certificate - Decommissioning of sediment and erosion control measures at completion of works.**
Prior to the decommissioning of the sediment and erosion control measures at the completion of works, the entire site shall be swept clean and any sediment that has accumulated at the sediment barriers is to be collected, removed from site and suitably disposed of.

Reason:
To satisfy the requirements of the legislation and ensure ongoing protection of the environment.

34. **Before the Issue of an Occupation Certificate - Removal of Silt Curtain**
Following the completion of works, the Silt Curtain shall be removed as follows, ensuring that any pollution risk is minimised as much as possible:

    1. If excessive sediment or debris has accumulated or collected around the Silt Curtain, then remove the sediment and waste material prior to the barrier being removed, and dispose of appropriately.
    2. Prior to removing the Silt Curtain, ensure the water within the enclosed area has achieved a suitable water quality and all sediment has been allowed to settle out.
    3. Ensure there is no release of sediment or damage to the watercourse during the removal of the silt curtain.

Reason:
To ensure ongoing protection of the environment and satisfy the requirements of the legislation.

Reasons

The reasons for the imposition of the conditions are:

1. To minimise any likely adverse environmental impact of the proposed development.
2. To ensure the protection of the amenity and character of land adjoining and in the locality.
3. To ensure the proposed development complies with the provisions of Environmental Planning Instruments and Council's Codes and Policies.
4. To ensure the development does not conflict with the public interest.

General Terms of Approval

for proposed development requiring approval under s89, 90 or 91 of the Water Management Act 2000

Reference Number:	IDAS-2023-10362
Issue date of GTA:	11 October 2023
Type of Approval:	Controlled Activity
Location of work/activity:	Lot 1 DP 606434, SPRINGHILL ROAD, PORT KEMBLA 2505
Waterfront Land:	Allans Creek
DA Number:	DA-2023/228
LGA:	Wollongong City Council

The GTA issued by Department of Planning and Environment—Water do not constitute an approval under the *Water Management Act 2000*. The development consent holder must apply to the Department of Planning and Environment—Water for the relevant approval **after development consent** has been issued by Council **and before** the commencement of any work or activity.

Condition Number	Details
TC-G001	Before commencing any proposed controlled activity on waterfront land, an application must be submitted to Department of Planning and Environment—Water, and obtained, for a controlled activity approval under the Water Management Act 2000.
TC-G004	A. This General Terms of Approval (GTA) only applies to the proposed controlled activity described in the plans and associated documents found in Schedule 1, relating to Development Application DA-2023/228 provided by Council to Department of Planning and Environment—Water. B. Any amendments or modifications to the proposed controlled activity may render the GTA invalid. If the proposed controlled activity is amended or modified, Department of Planning and Environment—Water, must be notified in writing to determine if any variations to the GTA will be required.
TC-G005	A. The application for a controlled activity approval must include the following plan(s): i. Site plans; ii. Detailed civil construction plans; iii. Erosion and sediment control plans; iv. Construction cut and fill cross sections and plan view details of site; v. Landscape plan. B. The plan(s) must be prepared in accordance with Department of Planning and Environment—Water 's guidelines located on the website https://www.dpie.nsw.gov.au/water/licensing-and-trade/approvals/controlled-activity-approvals/what/guidelines

SCHEDULE 1

The plans and associated documentation listed in this schedule are referred to in general terms of approval (GTA) issued by Department of Planning and Environment—Water for integrated development associated with IDAS-2023-10362 as provided by Council:

- Civil Engineering Drawings, Ref. 1483, prepared by HyChem, dated 25.10.2022
- Concept Landscape Revegetation Plan, prepared by Anita Rojas, dated 29.08.2023