Advanced Steel Manufacturing Precinct (ASMAP)

Title: CEMP-01 (Enabling works) Construction Environmental Management Plan

Document No: ASMAP-PROJ-MGMT-PLN-0007

1 May 2024

BlueScope
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DOCUMENT INFORMATION		
DOCUMENT TYPE	Management Plan	
DOCUMENT NO	ASMAP-PROJ-MGMT-PLN-0007	
TITLE	**CEMP-01 (Enabling works) Construction Environmental Management Plan**	
GENERAL DESCRIPTION	This document details the Management Plan for the Advanced Steel Manufacturing Precinct (ASMAP)	
REFERENCED DOCUMENTS		
Appendix 1	634 tmp 240521	Construction Traffic Management Plan - Enabling Works
Appendix 2	0650342 ASMAP CNVMP 15052024-SB (Reviewed)98	Construction Noise and Vibration Management Plan - Enabling Works
Appendix 3	BlueScope ESCP_v1	Progressive Erosion and Sediment Control Plans - Enabling Works
Appendix 4	SP-ENV-07-03	Contact Procedure for Complaints and Enquiries

REVISIONS

REV NO	DATE	DESCRIPTION	BY	Checked	Approved
A	1/02/2024	Original	AA	AA	MI
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Contents

1 Glossary of Terms and Acronyms

Term	Definition
ASMAP	Advanced Steel Manufacturing Precinct Project
Approval	Development Consent
Approval Condition	Condition of Development Consent
BlueScope	BlueScope Steel (AIS) Pty Ltd
BSL	BlueScope Steel Limited
CEMP	Construction Environment Management Plan
CLM Act	Contaminated Land Management Act 1997
CSSI	Critical State Significant Infrastructure
DPHI	Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979
EPA	Environment Protection Agency
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPL	Environment Protection Licence
FRNSW	Fire and Rescue New South Wales
GGBF	Green and Golden Bell Frog (Litoria Aurea)
ha	Hectare
Hold Points	Certain activities that must not commence until specified obligations have been met
HSE	Health, Safety and Environment
Incident	An incident is an occurrence or set of circumstances that causes or threatens to cause harm and which may or may not result in a non-compliance.
AS/NZS ISO 14001	Australian/New Zealand Standard. Environment Management Systems – Requirements with guidance for use.
JSEA	Job Safety and Environment Analysis
km	Kilometre
LPG	Liquefied Petroleum Gas
Material Harm	Material harm is harm that: a) Involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or b) Results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practical measures to prevent, mitigate, or make good harm to the environment.
Non-compliance	A non-compliance is an occurrence or set of circumstances that breach the conditions of the Infrastructure Approval, Environment Protection Licence and/or any other legal requirement
Non-conformance	A non-conformance is a situation or event that does not comply with the safeguards required in this CEMP
OEH	Office of Environment and Heritage

Term	Definition
PIRMP	Pollution Incident Response Management Plan
PKSW	Port Kembla Steelworks
POEO Act	Protection of the Environment Operations Act 1997
Project	Advanced Steel Manufacturing Precinct Project
RTS	Response to Submission
SSW	Safe System of Work
SWMS	Safe Work Method Statement
t	Tonnes
T&I SEPP	State Environmental Planning Policy (Transport and Infrastructure) 2021
TfNSW	Transport for New South Wales

2 Introduction

2.1 Background

BlueScope Steel (AIS) Pty Ltd (**BlueScope**) is one of Australia's leading manufacturers and with its parent company, BlueScope Steel Limited (**BSL**), is a global leader in finished and semi-finished steel products.

BlueScope proposes to construct and operate the Advanced Steel Manufacturing Precinct (ASMAP) (**Project**), located within BlueScope's Port Kembla Steelworks (PKSW) in Port Kembla, New South Wales (NSW). The PKSW covers an area of approximately 837 hectares (ha).

The Project is situated approximately 3 kilometres (km) (direct-line) south of the Wollongong central business district (**CBD**) and 80 km (direct-line) south of Sydney CBD. The Project Area is entirely located within the Wollongong City Council (**WCC**) Local Government Area (**LGA**), in the Illawarra Region of NSW.

The existing Plate Mill was commissioned in 1963 and produces up to 430,000 tonnes of plates per year and operates 24 hours a day, seven days a week. The Project proposes to modernise and upgrade the Plate Mill and to increase the throughput to approximately 600,000 tonnes of plate steel per year.

3 Context of the Construction Environment Management Plan

3.1 Purpose, Scope and Staging of the CEMP

The Construction Environmental Management Plan (CEMP) has been prepared to support BlueScope's Environmental Management System for the Project in compliance with the Approval.

This CEMP describes the strategies and controls that will be implemented to mitigate or minimise the risks associated with the construction and commissioning activities of the Project which have the potential to impact the environment or the community. It also outlines the monitoring and reporting obligations required by regulators.

The CEMP has been developed in accordance with the Approval Conditions, "BlueScope Port Kembla Advanced Steel Manufacturing Precinct (ASMAP)", and EPL 6092, and with reference to the Australian/New Zealand International Standard for Environment Management Systems (ISO 14001) and NSW Department of Planning, Housing and Infrastructure (DPHI) Environmental Management Plan Guideline, 2020.

It should be read in conjunction with the Project Construction Management, Safety Management, and Emergency Management Plans.

It is proposed to split the CEMP into proposed indicative construction stages and timing as follows;

Table 1 Staging Strategy

Stage	Stage Details	Indicative Timing of CEMP	CEMP
Enabling works	Site establishment, demolition, excavation to 3m depth to remove concrete slab and underground services etc and electrical infrastructure preparation	June 24 – Sept 24	CEMP-01
Stage 1	Cranes and Roof installation. Services relocation and infrastructure	Sept 24 – Dec 24	CEMP-02
Stage 2	Major civil works including furnace & fourth route foundations, auxiliary foundation and miscellaneous footings	Dec 24 – Feb 25	CEMP-03
Stage 3	Mechanical and electrical installations	April 25 – July 25	CEMP-04
Stage 4	Building Fit out and Auxiliary building works	Aug 25 – Jan 26	CEMP-05

Based on the indicative timing of the Enabling and Construction works the CEMP will be developed to apply to the relevant stage .

This CEMP (CEMP-01) relates to;

Enabling works	Site establishment, demolition, excavation to 3m depth to remove concrete slab and underground services etc and electrical infrastructure preparation.

3.2 Objectives of the CEMP

The objectives of the CEMP are to:

- Describe the measures and controls to be implemented to maintain compliance with statutory requirements and commitments made in the EIS.
- Provide an overview of the environmental management systems and practices that will be implemented for the Project.
- Provide a consistent and uniform approach to ensure the required standards of environmental practices are attained and maintained for the Project.
- Ensure that environmental standards, specifications, regulatory obligations, and contractual obligations are consistently and uniformly achieved; and
- Demonstrate the relationship between BlueScope's Environmental Management System, this CEMP, Project contract documents, Project procedures, and Project vendor/contractor environmental management plans.

4 Health, Safety, Environment & Community Policy

BlueScope highly values the health and safety of employees, the environment and its' communities. The BlueScope Health, Safety, Environment and Community Policy (BSL-MS-P-01) (**BlueScope HSEC Policy**) establishes the principles and actions expected of all employees to fulfil BlueScope's commitment to people and the environment and is integral to business. It is supported by the BlueScope Steel Health, Safety and Environmental Standards and forms the foundation of BlueScope's Environmental Management System. The policy applies to all personnel working on BlueScope sites, including the Project.

It has been ratified by the BlueScope Steel Limited executive officers, and copies are on display in all Project and site offices. Copies are also freely available on request. This CEMP aligns to the BlueScope HSEC Policy and incorporates detail around the high-level action framework.

The Project will be undertaken in accordance with the BlueScope HSEC Policy. Fundamental standards are defined by BlueScope Steel Limited policies and should any Project policy be considered by the Project Management Team to be of a higher standard than the analogous BlueScope Steel Limited policy, the Project policy will take precedence.

5 Project Description

5.1 Project Overview

The Project will involve the replacement of two existing furnaces at the Plate Mill, the construction and installation of a new walking beam furnace and upgrades and installation of associated equipment at the Plate Mill.

The Project has been revised and refined over time in response to design and constructability requirements, and in consideration of environmental constraints and the outcomes of ongoing community and stakeholder consultation.

The key elements of the Project are as follows:

- Modification of existing structures to enable the integration of new equipment;
- Installation of a new walking beam furnace for the Plate Mill;
- Installation of a new plate mill processing equipment and infrastructure, including cutters, turnover table, transfer car upgrade, Crane #3 upgrade, new cranes and a rail extension (referred to as Fourth Route Processing);
- Upgrades to the existing electrical infrastructure, including a 11 kilovolt (kV) sub-system, switch rooms, distribution boards and transformers; and
- Construction of associated infrastructure, including hardstands, construction compounds and laydown areas.

The existing Plate Mill has produced up to 430,000 tonnes of plates per year. The Project will increase the throughput to up to 600,000 tonnes of plate per year.

5.2 Site Location

The Project is located in Port Kembla in the Wollongong LGA and Illawarra region of NSW. Sydney is approximately 80 km to the north of Port Kembla, while the Wollongong CBD is approximately 3 km to the north, and Lake Illawarra is approximately 3 km to the south. Port Kembla is the main industrial centre of the Illawarra region as shown in Figure 1.

The PKSW site is zoned IN3 – Heavy Industrial under State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP). The PKSW covers an area of approximately 837 hectares (ha) and is mostly built around the western and southern side of Port Kembla's Inner Harbour. The PKSW site is a multi-use industrial area which includes storage, manufacturing, port berths, private internal roads and offices. Access to PKSW is provided by Springhill Road, Five Islands Road and Flinders Street, and then private internal roads within PKSW.

The Project Area refers to the location of the Project within the broader PKSW. The Project Area currently contains plate mill furnaces, plate processing cutters and cranes within existing buildings, as well as car parks, access roads and other ancillary infrastructure. The Project Area occupies a total area of 14.7 ha.

The area surrounding the Port Kembla industrial area is primarily occupied by residential development. These urban areas provide small and large-scale retail outlets, community services (eg. medical facilities, hospital, schools and sporting facilities) and commercial facilities (eg. banking and post office). The closest urban developments to PKSW are the suburbs of Cringila, Berkeley, Lake Heights, Warrawong and Port Kembla to the south, Unanderra, Cobblers Hill, Mount St Thomas, Coniston and Figtree to the north and west. The urban areas of Cringila are located adjacent to the No.1 Works and No.2 Works areas and are the nearest to the Project site, being approximately 1.2 km to the southwest as shown on Figure 2.

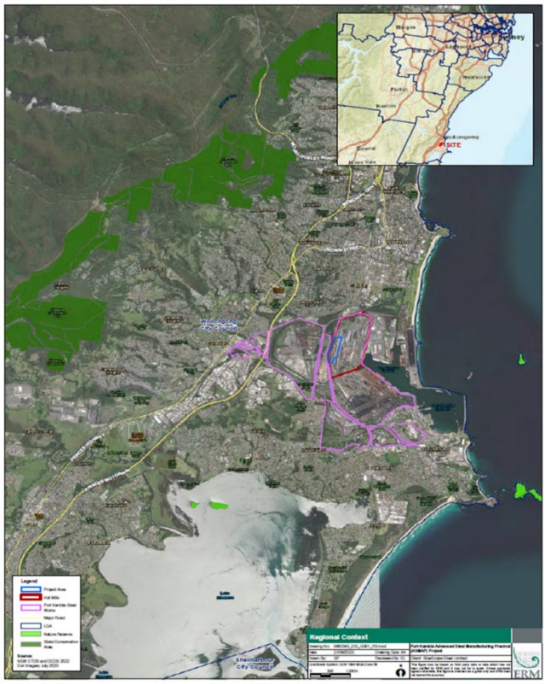

Figure 1: Project Regional Location. Extracted from *BlueScope Port Kembla Advanced Steel Manufacturing Precinct (ASMAP) EIS*

Figure 2: Project Regional Location. Extracted from *BlueScope Port Kembla Advanced Steel Manufacturing Precinct (ASMAP) EIS*

5.3 1Scope of Work

5.3.1 WBF3 Walking Beam Furnace 3

Enabling Works (This CEMP)

- Site Establishment, Temporary offices, facilities & preparation of the Project laydown areas
- Demolition, excavation to 3m depth to remove concrete slab and underground services etc and electrical infrastructure preparation *(i.e. upgrading of existing circuit breakers, running cables)*

Execution Phases (future CEMP)

- Phase 1 - Construction of the new Furnace Building including a 25T overhead gantry crane, services relocation and associated infrastructure.
- Phase 2 - WBRF Major civil works, excavations including furnace foundations, auxiliary foundation and miscellaneous footings.
- Phase 3 - Auxiliary building works for the WBFR – Switchroom, hydraulics room, fan enclosures and miscellaneous prefabricated buildings.
- Phases 4 – comprising of the following;
  - WBRF Desing, Supply & Monitoring – Designing, manufacturing and supplying FOB (Free on Boat) the Furnace and associated equipment (incl. Charger tables, weighing machine, charger machine, extracting machine, discharge table, water treatment, hydraulics and electrical). Monitoring the installation and commissioning of the new Furnace,
  - Transportation, receiving and unloading the Furnace Suppliers equipment form the FOB site(s) to the Project Laydown Area (Pickle Line Building),
  - Assembly of the new furnace Mechanical, Electrical & Refractory works, and
  - Commissioning of the new furnace.

Fourth Route Processing (future CEMP)

The Fourth Route Processing Area will be executed from enabling works through to Stage 4 and includes the following:

- Removal of redundant equipment.
- Crane #2 and magnet beam.
- AC rail system and associated electrical infrastructure eg. racking, cabling, transformer, etc.
- Upgrade to an existing transfer car from the 120” building to the 78” building.
- Crane #3 upgrade.
- Turnover table.
- Oxy/plasma cutter and associated infrastructure eg. compressors, dust collector, pipework, etc.
- Cutter crane.
- Modification of laser plate operations.
- Hot stacking area.
- Plate inspection and storage area.
- Electrical infrastructure to support the new equipment e.g. racking, cabling, distribution, transformer, etc.
- Extension of existing rail line.

5.4 Indicative list of equipment likely to be required

An indicative list of the equipment likely to be required for the Project for the works as follows:

This CEMP – (Early works)

- Civil works – equipment likely to include but not be limited to the following:

  Excavators ranging from 5t to 48t, bobcats (skid steer), rock breakers, dump trucks, Vacuum loading (suck) trucks, ground water pumps, water treatment plant, concrete mixers, concrete pumps, fuel trucks, flat Bed trucks, rollers, piling rigs, loaders, liquids tankers, water blasters, Semi-trailers, telescopic boom excavator, front end loaders, various brick saws and mixers.

Future CEMP

- Mechanical & Electrical Works - equipment likely to include but not be limited to the following:

  Cranes of various capacity ranging from 15t to 800t, grit blasters, material hoists/ winches, air compressors, Abbey hoists, diesel welders, forklifts, temporary stove burners, fuel pipe and fans, welding Machines, oxygen-acetylene packs, LPG, Argon, Nitrogen welding and cutting gases, Scaffolding, elevated work platforms.

5.5 Project Work Schedule (Complete Project across all CEMPs)

Current planning aims for a transition to #3 Walking Beam Furnace in 2027 and Fourth Route online in 2026. The estimated duration and planned start times for construction activities are outlined in Table 1.

Table 2: Works Schedule

Activities	Estimated Duration	Planned Start
Plate Mill Walking Beam Furnace #3		
Site Establishment, Preparation of the Project laydown areas and Demolition, excavation to 3m depth to remove concrete slab and underground services etc and electrical infrastructure preparation	3 months	Q1 FY25
Construction of the new Furnace Building including a 25T overhead gantry crane, services relocation and associated infrastructure	4 Months	Q2 FY25
Civil Works (Sheeting piling, Excavation & concrete construction)	18 months	Q3 FY25
Auxiliary building works for the WBFR	6 Months	Q1 FY26
Furnace Construction incl. mechanical installation, electrical installation, refractory installation & Insulation installation	12 months	Q1 FY26
Furnace Commissioning	9 months	Q1 FY27
Crane #2 live rail installation	6 months	Q1 FY25
Civil Construction for Cutter and Electrical Infrastructure	3 months	Q3 FY25
Transfer Car and Crane #3 Upgrade	2 months	Q4 FY25
Crane #2 Installation	1 month	Q1 FY25
Cutter and Turnover Table Installation	2 months	Q1 FY25

5.6 Work Hours

Work will be carried out during the hours in Table 2, as per SSD-50268731 Condition B5.

Table 3: Hours of Work

Activity	Day	Time
Earthworks & Construction	Monday – Friday	7 am to 6 pm
	Saturday	8 am to 1 pm
Commissioning	Monday – Sunday	24 hours
Operation	Monday – Sunday	24 hours

Works outside of the hours identified in condition B5 may be undertaken in the following circumstances as per SSD condition B6:

(a) works that are inaudible at the nearest sensitive receivers;

(b) works agreed to in writing by the Planning Secretary;

(c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or

(d) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

6 Mitigation and Management Measures

Table 3 outlines the mitigation and management measures that will be applied throughout the whole of the Project.

Table 4: Mitigation and Management Measures

Aspect	Mitigation Measure	Timing
Air quality	• The Project will operate in accordance with EPA requirements. The furnace shall be designed to monitor and alarm abnormal process conditions (including combustion controls), thus reducing risks of elevated air emissions. • The plant will be operated in a manner that is consistent with the purpose for which it was designed to be used. Operations will follow authorised Standard Operating Procedures that comply with legislative requirements and BlueScope standards. The walking beam furnace shall be operated in a manner to control combustion and to ensure efficient control of air emissions. • Maintenance requirements for all equipment will be assessed and inspection and maintenance plans implemented to the frequency set by BlueScope. • Tuning of the burners will be conducted at the start of a furnace campaign. The burners may be tuned as many times as required during the furnace campaign. Oxygen analysers will be used for monitoring burner performance. • Heavy vehicle routes will be optimised for shortest transport routes, thus minimising vehicle kilometres travelled, and corresponding local air quality impacts. • Operators will be formally trained and accredited in how to operate the plant. • Emission testing will be performed in accordance with the requirements specified in EPL 6092.	During operation

Aspect	Mitigation Measure	Timing
	• Suitable dust management mitigation measures will be included in the CEMP as appropriate. Refer to • **Fugitive Dust Management System MA-ENV-02-02** • **Stockpile Environment Management Plan MA-ENV-03-08** • **Table 8: Monitoring during Construction and Commissioning** • **Table 9 - Inspections during Construction and Commissioning**	During construction
Noise	• Detailed noise specification for the stack induction fan, when available shall be reviewed against the modelling assumptions made in the NVIA. The stack induction fan noise specifications and assumed noise levels shall not exceed the modelling assumptions.	During detailed design
	• Should the configuration of the building facade be altered, the minimum acoustic performance as presented in the NVIA shall be maintained. A review of the assessment may be undertaken if significant changes are proposed.	During detailed design
	• A Construction Environmental Management Plan (CEMP) shall be considered prior to commencing works to ensure 'best practice' measures are adhered to. The CEMP shall include appropriate noise management strategies. **Refer to Appendix 2**	Prior to construction
	• Construction work will be conducted in accordance with in EPL 6092 conditions L6.2 and L6.3 refer to **Table 2: Hours of Work section3.5 of CEMP-01** • Control to Limit High Intensity noise.	During construction
	• A noise compliance assessment report will be submitted to the EPA within three months of the completion of the commencement of operation. The assessment will be prepared by a qualified competent person and will include: a. an assessment of compliance with noise limits in the Development Consent; and b. an outline of any management actions taken within the monitoring period to address any exceedances of the limits contained in the Development Consent; and c. where exceedances of noise limits are identified the report shall identify the cause and corrective and preventative actions implemented and/or proposed to ensure compliance with the noise limits.	During operation
Hazards	• The recommendations from the HAZID workshop, as detailed in the PHA, should be implemented in the design and during the operation of the Project.	During detailed design
	• Electrical infrastructure works will be carried out in accordance with the relevant safety standards and procedures prepared by Endeavour Energy, SafeWork NSW and WorkCover NSW.	During construction
	• A Fire Safety Study (FSS) is developed in accordance with the requirements of Hazardous Industry Planning Advisory Paper (HIPAP) No.2 and submitted to FRNSW for review.	Prior to occupation
	• The FSS will include an Initial Fire Safety Report (IFSR) and / or Performance-Based Design Brief / Fire Engineering Brief Questionnaire (FEBQ).	Prior to occupation
	• Safe, efficient, and effective access will be provided in accordance with FRNSW fire safety guideline - Access for fire brigade vehicles and firefighters.	Prior to occupation
	• An Emergency Plan (EP) will be developed in accordance with HIPAP No. 1.	Prior to occupation
	• An Emergency Services Information Package (ESIP) will be prepared in accordance with FRNSW fire safety guidelines – Emergency Services Information Package and Tactical Fire Plans.	Prior to occupation

Aspect	Mitigation Measure	Timing
Contamination	• Prepare CEMP-02 including procedures to mitigate exposure to potential soil and groundwater contamination underlying the Project Area and outline the management procedures to support beneficial re-use of the excavated material.	Prior to construction
	• Preparation of an Acid Sulfate Soil Management Plan (ASSMP) as part of the CEMP-02 to outline the relevant management procedures for PASS that is disturbed during the excavation of soils or during the disposal of groundwater during dewatering.	Prior to construction
	• The contact between intrusive workers on-site should be limited to the extent practicable. This is to reduce incidental exposure to contamination due to the variable nature associated with contamination present within fill material.	During construction
	• To be Prepares in CEMP-02 - Groundwater quality during dewatering will be checked before disposal against the current EPL held by BlueScope which includes the Project Area. If the water quality is below that specified by the licence, additional assessment for treatment options or disposal of the groundwater will be conducted before dewatering commences.	During construction
Water quality	• CEMP-01 has been prepared to include measures required to manage the potential erosion, sedimentation and water quality risks of the Project. (**Appendix 3)**	Prior to construction
	• The site-specific Erosion and Sediment Control Plan **(Appendix 3)** has been prepared in accordance with the Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book (Landcom, 2004) guideline. The Erosion and Sediment Control Plan will be updated throughout the construction period so that it remains relevant to the activities.	Prior to construction
	• Groundwater extracted during the dewatering process may require treatment prior to discharge. to reduce the total suspended solids concentration or other contaminants before discharge to the existing drainage network to be detailed **in CEMP-02**	During construction
	• The Applicant must implement the Erosion and Sediment Control measures before the commencement of construction works and maintain the erosion and sediment control measures throughout the duration of construction of the development. **Refer to Appendix 3**	During construction
	• The Applicant will monitor Project operations and maintain the discharge from the Plate Mill operations in accordance with the existing licence conditions (EPL 6092).	During operation
	• The Applicant will obtain a water access licence (WAL) to account for the maximum predicted water take for construction. **in CEMP-03**	Prior to construction
	• The Applicant will ensure sufficient water entitlement is held in WAL(s) to account for the maximum predicted take prior to the water take occurring. • To be obtained **prior to issue of CEMP-03 Major Civil works**	During construction
	• A Dewatering Management Plan will be prepared in consultation with DPH&I Water. The DMP should consider the Guidelines for Groundwater Documentation for SSD/SSI Projects (2022) and the Minimum Requirements for Building Site Groundwater Investigation and Reporting (2022) • To be obtained prior to **issue of CEMP-03 Major Civil works**	Prior to construction
	• Within 12 months of the commencement of operations, the Proponent will prepare and submit a proposed Post-Commissioning Surface Water Monitoring Plan (Plan) to the EPA to inform Environment Protection Licence conditions for discharge to waters. • The Proponent will submit a Post-Commissioning Monitoring and Assessment Report to the EPA.	During operation

Aspect	Mitigation Measure	Timing
Traffic and transport	• **CEMP-01 has been prepared to include a Construction Traffic Management Plan (Appendix 1)** that includes measures related to construction traffic management and will provide additional information regarding: ◦ Road traffic volumes, distribution and vehicle types by hours and days of construction, and schedule for phasing/staging of the Project; ◦ The origin, destination and routes for employee and contractor light traffic, heavy vehicle traffic, and oversize and overmass traffic ◦ A map of the primary haulage routes highlighting critical locations; ◦ An induction process for vehicle operators and regular toolbox meetings. ◦ A complaint resolution and disciplinary procedure; and ◦ Local climatic conditions that may impact road safety of employees throughout all phases.	Prior to construction
	• Application will be made to the relevant road authority should any ancillary road works be required along the OSOM route to facilitate access to the Project Area	Prior to construction
	• A Driver Code of Conduct is to be implemented as a measure to maintain safety within and around the site.	During operation
	• The relevant rail network managers ARTC and Sydney Trains will be consulted on the required train paths of existing and new services required to manage rail freight once specific details are known on the volume and destination.	During operation
	• Prior to transporting any OSOM loads on the road network, the Applicant will review the approved routes for the vehicle to be used and obtain a National Heavy Vehicle Regulator (NHVR) OSOM permit, if required, for each OSOM load.	Prior to construction
Visual	• Consideration should be given to the material finish of the furnace stack to minimise visual contrast with the existing furnace stacks within the PKSW.	During detailed design
Landscape	• Compensatory planting will be undertaken with a minimum of three replacement trees planted (i.e., 1:1 ratio) to mitigate the loss of the existing trees as a result of the Project.	Prior to operation
	• Species selected for compensatory planting should be of endemic origin and have a minimum container size of 75 L, as well as compliance with the relevant standards.	Prior to operation
Aboriginal heritage	• All reasonable steps will be taken to avoid harm, modification or other impact to Aboriginal objects except as authorised by this approval.	During construction
	• Local Aboriginal community groups will be provided with updates during key milestones of the Project, including factors relating to the cultural heritage management requirements.	Prior to construction
	• Prior to the commencement of ground disturbance works, a protocol for the management of unexpected Aboriginal objects (including ancestral remains) will be developed and implemented for the life of the Project. The protocol will be prepared in accordance with Heritage NSW guidelines and standards and will include provision for consultation with the Registered Aboriginal Parties regarding the management of Aboriginal objects.	Prior to construction
	• Workers on site will receive information on Aboriginal cultural heritage management requirements as part of the induction process, with records to be kept of these inductions.	During construction
	• If suspected Aboriginal heritage objects are found during works, the following Unexpected Finds Procedure should be followed and applies to the entire Project Area:	During construction

Aspect	Mitigation Measure	Timing
	◦ All activity in the immediate area should cease and the location should be cordoned off and an appropriately qualified heritage professional should be consulted; ◦ Heritage NSW should be immediately contacted; ◦ ILALC should be notified (potential Aboriginal objects only); ◦ An appropriately qualified heritage professional should record the location and attributes of the Project Area and determine the significance of the find; and ◦ Works will only recommence once the area has been cleared by further assessment by an appropriately qualified heritage professional and heritage permits (where required).	
	• In the event of the discovery of human skeletal material (or suspected human skeletal material) during Project activities in the Project Area the following steps should be followed: ◦ All activities and/or works in the immediate area must cease; ◦ The State Police must be contacted along with Heritage NSW; and ◦ Any sand/soils removed from the near vicinity of the find must be identified and set aside for assessment by the investigating authorities.	During construction
Waste management	• The CEMP shall include waste management measures addressing the following: ◦ Separation of recyclable and non-recyclable materials where possible; ◦ Separation of materials for reuse within the Port Kembla Steelworks site . ◦ Waste receptacles will be collected on a regular basis by licensed contractors and transported for off-site disposal at an appropriately licensed landfill or recycling facility; ◦ Awareness of waste minimisation practices and recycling requirements will be included in the Project induction; ◦ All waste disposal will be in accordance with the POEO Act and 'Waste Classification Guidelines' (EPA, 2014) and EPL 6092; and ◦ Waste tracking will occur for any types and quantities of waste that trigger the requirement for tracking. ◦ Section	Prior to construction
	• Continue to consult with Sydney Water in relation to water serviceability requirements.	During construction
Social	• Maintain the established 'contact procedure for complaints and enquires' currently in-effect at PKSW, to appropriately manage stakeholder concerns that may arise including during day-to-day construction activities.	During construction
	• Ensuring cultural heritage awareness and acknowledgement measures are embedded within induction training for employees, including an understanding of the duty of care requirements.	During construction
	• The Project will uphold existing relationships with local suppliers established through previous PKSW activities, where procurement requirements can be met;	During construction
	• Create awareness amongst the community, in partnership with LGAs and other partner organisations to foster a better understanding as to the ways prospective workers may be able to take part in the Project.	During construction

7 Community and Stakeholder Engagement

7.1 Interested Parties

Interested parties relevant to the Project include BlueScope inter-departments, service providers, Environment Protection Agency, Sydney Water, Wollongong City Council, Department of Planning, Housing and Infrastructure, and the neighbouring community.

Policies and procedures are in place at BlueScope and will apply to the Project to ensure compliance to the needs and expectations of interested parties is achieved through a range of activities including the effective management of legal obligations, reporting of environmental requirements and performance, communication with regulatory authorities where applicable, employee/contractor engagement activities, and community consultation.

7.2 Community Consultation

The community will be regularly informed about the construction, commissioning, and operation of the Project through the existing Bluescope Community Consultative Committee. Information about the Project will be made publicly available on the BlueScope Illawarra website, noted below;

(https://www.bluescopeillawarra.com.au).

7.3 Stakeholder Engagement

A communications plan has been developed for the Project (ASMAP-PROJ-MGMT-PLN-0014). This plan aims to ensure that stakeholders are informed of the Project status and environmental performance. It details internal and external stakeholders, the forum through which engagements occur, the purpose and frequency of communications, and the roles responsible for conducting the engagement.

7.4 Complaints Handling

BlueScope has an established complaints handling procedure, Contact Procedure for Complaints and Enquiries (SP-ENV-07-03), that is applicable to the Project. The procedure addresses external complaints and enquiries as well as internal complaints, enquiries or self-reports and defines the key contacts and actions to be taken following a complaint or enquiry.

Any complaints or enquiries that relate to the Project will be recorded in accordance with the established procedure and the Project Manager will be notified.

8 Environment Management Framework

8.1 Relationship to existing Environment Management System

BlueScope's ASP Manufacturing Management System Manual (MM.BZ-MS-M-01-01) describes the Company's established environment management system that meets the requirements of and is certified to ISO 14001. The management system utilises BlueScope's Safety, Environment, and Quality system (SEQ System) which is aligned with the BlueScope 14 Health, Safety and Environment (HSE) Standards and provides information related to managing risks, monitoring legal compliance, and maintaining the systems and documentation associated with health, safety, environment, and quality.

The SEQ system fits into the hierarchy of BlueScope's HSE documents as depicted in Figure 3. This CEMP fits into the *Sub-Business Policies, Procedures and Guidelines* section of the hierarchy.

Figure 3: BlueScope's HSE Document Hierarchy

8.2 Environmental Management Documents

BlueScope's existing environmental management procedures and systems apply to the Project activities. These include but are not limited to the procedures and systems listed in Table 4.

Table 5 - BlueScope Environmental Management Procedures and Systems

Document/System	Reference	Purpose
BlueScope's HSEC Policy	BSL-MS-P-01	Identifies BlueScope's commitment to Health, Safety, Environment, and Community
ASP Manufacturing Management Systems Manual	MM.BZ-MS-M-01-01	Describes at the highest level, those systems and processes used by BlueScope Australian Steel Products Manufacturing Businesses to effectively manage its operations
BlueScope's Safety, Environment, and Quality system	SEQ System	A management system for Safety, Environment and Quality that provides access to the SEQ procedures, tools and other resources.
HSE Risk Management	BSL-HSE-SD-03-01	Sets the requirements and mechanisms for implementing the BlueScope Risk Management Standard within a Health, Safety and Environmental (HSE) context.
HSE Incident Management	BSL-HSE-SD-12-01	Sets the requirements for incident management across BlueScope in order to meet the expectations of the BlueScope Health, Safety & Environment (HSE) Management System
Management of Excavated Soil at PKSW	MA-ENV-02-02	Outlines how excavated soil, arising during construction, demolition or maintenance activity, is managed to minimise harm to human health and the environment
Fugitive Dust Management System	MA-ENV-02-02	Describes the system used to monitor and report both fugitive dust emissions and the conditions contributing to the dust emissions from the BlueScope PKSW site
Vegetation Management Plan	MA-ENV-02-08	Identifies the requirements of tree planting, pruning, removal, weed management and disposal

Document/System	Reference	Purpose
Management of Threatened Species, The Green and Golden Bell Frog, *Litoria Aurea*	MA-ENV-03-03	Identifies the actions and requirements necessary to promote the development and maintenance of existing sub-populations of the Green and Gold Bell Frogs on the PKSW site.
Stockpile Environment Management Plan	MA-ENV-03-08	Details the how stockpiles and fugitive dust emissions are to be managed at BlueScope's PKSW site
Biodiversity Management Plan	MA-ENV-03-09	Assists with the identification, protection and management of native vegetation and fauna habitats across BlueScope's Illawarra sites
Unexpected Finds Procedure	MA-ENV-03-11	Provides guidance for the management of any unexpected finds including contamination and heritage items on BlueScope Steel licenced sites in New South Wales
Spill Response Guidelines	MA-ENV-11-02	Outlines the necessary steps to be taken by Plant Departments to prepare for or respond to spills reported within their area.
Pollution Incident Response Management Plan for NSW Licenced Premises	MA-ENV-11-04	Details the procedure for the notification of pollution incidents that result in or have the potential to cause material harm to the environment in BlueScope licenced sites across NSW
Contact Procedure for Complaints and Enquiries	SP-ENV-07-03	Define actions to be followed by the Environment Department personnel, External Affairs personnel and the PKSW Switchboard in relation to handling complaints and enquiries
Management of Waste Material	DIV-AR-RS-01	Describes the system for waste management within PKSW and for movement of waste materials to and from the PKSW site
SAP Learning Centre	SAP Learning Centre	A repository of training and support materials to assist in the use of the BlueScope SAP systems and processes
Job Safety/ Environment Analyses	F.BZ-SEQ-S-03-02.02	A tool used to identify task related hazards and controls based on the sequential job steps or unplanned changes to the job
Safe System of Work	BZ-OHS-S-03-01	Processes that may include procedures, risk assessments, permits, inductions and training, that collectively form a system for undertaking work in a safe manner
Safe Work Method Statement	F.BZ-SEQ-S-09-10.21	A tool used to identify task related hazards and controls based on the sequential job steps or unplanned changes to the job

Specific Environment Management Documents relevant to the construction and commissioning phases of the are required in accordance with the conditions of Approval and commitments made in the EIS. Some of the requirements are adequately covered by existing BlueScope procedures, while others have been prepared specifically for the Project as outlined in Table 5.

Table 6: Specific Environment Management Plans Relating to (CEMP-01) Enabling Works

Project Management Plan	SSD Condition	Reference
Construction & Environmental Management Plan (CEMP-01) Enabling Works	Condition C2	This Document
Construction Traffic management Plan	Condition B19/ C3(b)	Appendix 1
Site-specific Erosion and Sediment Control Plan	Condition B11/ C3(c)	Appendix 2

Project Management Plan	SSD Condition	Reference
Noise and vibration measures	Condition B9/ C3 (d)	Appendix 3
Community Consultation and Complaints Handling.	Condition C3(e)	Appendix 4

8.3 Environmental Management Structure and Responsibilities

All personnel working on the ASMAP Project must comply with regulatory and BlueScope requirements and must conduct work in a proper and efficient manner to protect the environment.

The Project Director takes primary responsibility for environmental issues and compliance with this CEMP. Environmental advisors within the BlueScope Environment Department will support the Project Director and will assist managers and supervisors fulfill their accountabilities.

Each position in the ASMAP Project management team has defined responsibilities for the management of environmental aspects and issues. All members of the ASMAP Project management team should contribute to and participate in environmental management and improvement initiatives, contribute to a positive environmental culture, and participate in incident investigations.

Contractor managers and supervisors working on the Project also have defined responsibilities for environmental management.

The environmental responsibilities for the key management and supervision roles include (but are not limited to) those listed in Table 6.

Table 7: Key Management Roles and Environmental Responsibilities

Role	Responsibilities
Project Director	• Develop a culture in which environmental effects are considered at all times. • Contribute to and participate in the environmental program
Project Manager	• Develop a culture in which environmental effects are considered at all times. • Participate in environmental audits and communication sessions. • Set objectives, monitor, and analyse environmental performance. • Understand and manage ASMAP Project environmental compliance for legislative requirements. • Incorporate environmental safety goals into the roles of all team members. • Ensure that environmental responsibility is an integral part of all management systems and processes. • Review training needs for all employees. • Provide resources to ensure that actions to address environmental issues are implemented. • Ensure that adequate environmental evaluations are made of all modification designs and plant and equipment purchases. • Ensure that systems are in place to inform employees, contractors and visitors of pertinent environmental issues. • Ensure that meetings are held to discuss environmental issues. • Ensure that desktop exercises are carried out to test the effectiveness of Emergency Response Plans. • Ensure that there is responsible management of contractors on the site. • Ensure that competent and trained, responsible engineers and supervisors exist to manage contractors on the works. • Maintain a relationship with BlueScope management on environmental issues.

Role	Responsibilities
Engineering Manager	• Ensure that management systems are in place and understood to give environmentally safe design and operation. • Ensure that environmental hazards and risks are identified for all plant and major equipment. • Ensure that designs are fit for purpose and that adequate consideration has been given to environmental issues. • Ensure that all engineering staff are inducted and have received the required training to enable adequate environmental management of site. • Contribute to and participate in the ASMAP Project management team environmental program. • Provide engineering support as required to assist in the implementation and compliance of this CEMP. • Promote the involvement of all employees in improving environmental management. • Conduct environmental audits to evaluate compliance with environmental management plans and systems as per the audit/inspection schedule. • Liaise with BlueScope's Environment Department to ensure full understanding and communication of all environmental issues impacting on BlueScope operations from ASMAP Project activities and vice versa. • Participate in environment meetings. • Assist in the preparation of Emergency Response Plans. • Identify hazards and risks through analysis and inspection, including personnel, plant and environment. • Focus on the elimination of environmentally hazardous acts and rectify unsafe conditions quickly. • Conduct workplace inspections.
Construction Manager	• Contribute to a positive environmental culture by example. • Ensure that management systems are in place and understood to provide an environmentally safe construction workplace. • Ensure that environmental hazards and risks are identified on all construction activities. • Arrange construction pre-start hazard-analysis studies for all "at risk" operations. • Contribute to and participate in the ASMAP Project management team environment program. • Participate in environment meetings. • Participate in environmental inspections and serious incident investigations. • Participate in environmental audits. • Focus on the elimination of environmentally unsafe acts and rectify unsafe conditions quickly. • Ensure that there is responsible management of contractors on the site. • Ensure that competent and trained, responsible engineers and supervisors exist to manage contractors on the works. • Maintain a relationship with BlueScope management on environmental issues. • Facilitate reviews of the CEMP. • Participate in a pre-start environmental review with the vendors'/Contractor's management to facilitate an Environmental Bridging Document to remove any uncertainty/differences between this CEMP and the vendors'/Contractor's CEMP.
HSE Manager	• Understand and manage ASMAP Project environmental compliance for legislative requirements. • Participate in the ASMAP Project management team environmental programs. • Contribute to a positive environmental culture by example. • Ensure that meetings are held to discuss environmental issues. • Ensure that management systems are in place for environmentally safe execution of the Project. • Report HSEC matters and performance to BlueScope. • Coordinate and participate in drills and exercises to test the effectiveness of Emergency Response Plans. • Review training needs for all employees and provide training as required.

Role	Responsibilities
	• Ensure that proper training is provided to enable an environmentally safe execution of the Project. • Ensure that environmental hazards and risks are identified, and control measures introduced on all Project activities. • Maintain a relationship with BlueScope management on environmental issues.
Commissioning Manager	• Contribute to a positive environmental culture by example. • Ensure that management systems are in place and understood to provide an environmentally safe workplace. • Ensure that environmental hazards and risks are identified on all commissioning activities. • Arrange commissioning pre-start hazard-analysis studies for all “at risk” operations. • Contribute to and participate in the ASMAP Project management team environment program. • Participate in environment meetings. • Participate in environmental inspections and serious incident investigations. • Participate in environmental audits. • Focus on the elimination of environmentally unsafe acts and rectify unsafe conditions quickly. • Ensure that there is responsible management of contractors on the site. • Ensure that competent and trained, responsible engineers and supervisors exist to manage contractors on the works. • Maintain a relationship with BlueScope management on environmental issues.
Area Managers	• Ensure that environmental hazards and risks are identified in design stage. • Ensure that management systems are followed to give environmentally safe designs. • Ensure self and others’ environmental awareness at all times. • Be aware of environmental hazards and risks in the plant area of activity. • Participate in and contribute to the ASMAP Project management team environmental plan. • Promote a culture in which environmental effects are considered at all times. • Define and document environmentally safe systems of work and, through consultation, ensure they are applied. • Ensure that all incidents are thoroughly investigated to avoid re-occurrence. • Ensure that there is responsible management of contractors on the site. • Ensure that competent and trained, responsible engineers and supervisors exist to manage contractors on the works. • Ensure that contractors and employees understand any environmental hazards associated with performing tasks. • Promote the involvement of all employees in improving environmental awareness. • Focus on the elimination of environmentally unsafe acts and rectify unsafe conditions quickly. • Conduct environmental inspections, monitor behaviour on site and participate in audits. • Notify incidents and address environmentally unsafe acts and conditions in accordance with this CEMP and BlueScope’s Environment Management System, and follow-up to ensure corrective and preventative actions are timely and effective. • By actions, demonstrate to contractors at all times the commitment of the ASMAP Project team to the highest standards of environmental management. • Participate in accident /incident investigations.

Role	Responsibilities
Environment Advisor	• Promote a culture in which environmental effects are considered at all times. • Understand and manage ASMAP Project environmental compliance for legislative requirements. • Liaise with regulatory bodies and other external agencies. • Promote the involvement of all employees in improving environmental compliance. • Focus on the elimination of environmentally hazardous acts and rectify unsafe conditions quickly. • Ensure self and others' environmental awareness at all times. • Participate in accident/incident investigations. • Report to the ASMAP Project Management team on environmental issues • Participate in and contribute to the ASMAP Project management team environmental plan. • Ensure that all incidents are thoroughly investigated to identify root causes.
Construction Co-ordinators	• Compliance with the requirements of the CEMP. • Ensuring environmental aspects are adequately addressed and mitigated during Job Safety and Environment Analyses and execution of Works. • Arranging toolbox meetings to the defined schedule and ensuring that the meetings are of high standard with all employees attending and participating. • Initiation and completion of environmental audits and inspections. • Reporting all incidents, accidents and non-conformance in accordance with the CEMP. • Participation in relevant investigations of accidents, incidents and non-conformance. • Demonstrating to the vendor / contractor workforce, by their actions, commitment to the highest standards of environmental management. • Provision of appropriate resources to control / mitigate environmental hazards. • Compliance with the requirements of the CEMP. • Attendance at team's environment meetings. • Pro-active addressing of environmental issues, looking for improvements and looking after themselves and the environment. • Ensuring hazards and controls are addressed and implemented prior to and during the execution of Works

9 Legal and Compliance Requirements

At all times, the Project must comply with relevant legal and compliance requirements including:

- legislative, regulatory and other requirements such as permits and licences;
- conditions of the Infrastructure Approval; and
- guidelines, policies, and standards.

Key legislative requirements relevant to the ASMAP Project are detailed in Table 7.

Table 8: Key Legislative Requirements

Requirement	Project Relevance	Reference in this CEMP
Environmental Planning and Assessment Act 1979 (EP&A Act)	The Project has been declared SSD in accordance with Section 4.36 of the EP&A Act and clause 9 in Schedule 1 of State Environmental Planning Policy (Planning Systems) 2021. The Project must comply with all conditions specified in SSD-50268731 Development Consent	This CEMP

Requirement	Project Relevance	Reference in this CEMP
Protection of the Environment Operations Act 1997 (POEO Act)	An objective of the POEO Act is to protect, restore and enhance the quality of the environment, in recognition of the need to maintain ecologically sustainable development. The POEO Act provides for an integrated system of licensing and contains a core list of activities in Schedule 1 which require an Environment Protection Licence (EPL). PKSW is operated under EPL 6092. This licence will be varied, as required, to incorporate any new and remove any discontinued scheduled activities or conditions associated with the Project.	This CEMP
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	Part 9 of the EPBC Act provides that an action that has, will have or is likely to have a significant impact on MNES may not be undertaken without prior approval from the Commonwealth Minister. No potential significant impacts on listed threatened species and communities and any other were identified as part of the EIS. A known population of the Green and Golden Bell Frog (Litoria Aurea) (GGBF) occurs within the greater PKSW site, approximately 200m from the Project site. All measures outlined in Management of Threatened Species, The Green and Golden Bell Frog, Litoria Aurea (BlueScope, 2020) will be implemented during construction of the Project, and all Project personnel with be trained in this procedure.	Section 8.2
Environment Protection Licence 6092	All activities conducted on the PKSW site, including those relating to the Project, must comply with the Environment Protection Licence.	This CEMP
Infrastructure Approval (once granted)	All activities relating to the Project must comply with the Infrastructure Approval conditions.	This CEMP
Contaminated Land Management Act 1997 (CLM Act)	The CLM Act establishes a process for investigating and (where appropriate) remediating land that is considered to be contaminated. The PKSW site is listed as a contaminated site by the EPA and the EIS identified the potential for the presence of acid sulphate soil material.	Unexpected Finds Procedure (MA-ENV-03-11)

10 Training and Awareness

All personnel involved in the construction and commissioning works (including contractors and sub-contractors) must complete the Project induction program, which will advise them of the requirements of this CEMP and any other specific site requirements, prior to commencing work. A Project-specific environment induction will include key environmental aspects, impacts, risks, and controls associated with the Project, as well as relevant legislative responsibilities and penalties for failing to meet these responsibilities. A copy of this CEMP will be made available prior to commencement of training and throughout the life of the Project.

A Training Needs Analysis will be conducted by the Project Manager and the HSE Manager for all personnel working on the Project. The HSE Manager is responsible for implementing the training program which will be reviewed and approved by the ASMAP Project Management Team prior to commencement. The Training Needs Analysis will ensure all personnel have the required skills and competency to perform the relevant environmental management, reporting, monitoring, and stakeholder engagement functions of their role.

10.1 ASMAP Project Team Training

BlueScope employee training records are registered in SAP. The HSE Manager is responsible for ensuring that all members of the ASMAP Project team undertake the relevant training as outlined in the Training Matrix.

Training needs and competency records are managed in through BlueScope's training system, SAP.

10.2 Contractor Training

Vendors and Contractors will be required to undertake work-specific inductions for their employees prior to commencing work on the ASMAP Project site. Vendors and Contractors will be responsible for engaging competent and experienced supervisors and employees who hold the appropriate qualification and certification for the required tasks. The Training Needs Analysis identifies training that will be required for Vendors and Contractors, in order to perform their tasks in compliance with site requirements.

Training needs and competency records are managed in through BlueScope's Contractor management system, Comply Flow.

10.3 Toolbox Talks

Routine Toolbox Talks will be conducted to ensure Project personnel are aware of Project progress, planned works, incidents and near misses, and other general matters relating to the Project.

Prior to the commencement of work each day, work teams are required to undertake a documented Toolbox Talk to confirm task outcomes, review the risks specific to the task, and ensure the necessary safety and environment controls for the task are understood and in place.

10.4 HSEC Meetings

Each month, a meeting will be scheduled with the Project team to provide an overview of HSEC performance and discuss current and emerging issues.

11 Environment Impacts, Controls, and Risk Assessment

11.1 Environmental Risk Assessment

BlueScope has an established HSE Risk Management standard (BSL-HSE-SD-03-01) which guides the identification, assessment, treatment and monitoring of HSE risks. In accordance with this standard, a Risk Management Plan has been developed for the Project (ASMAP-PROJ-MGMT-PLN-0011). The Risk Management Plan outlines the risk management processes, activities, timings, communication and responsibilities for the Project and describes how the associated risks will be identified, assessed and managed.

An environmental risk assessment was undertaken to identify the environmental aspects and impacts relevant to the Project, determine the potential likelihood and consequence of these events, and propose mitigation measures to manage and minimise the potential impacts. The results of the environmental risk assessment were recorded the Project's risk register (ASMAP-PROJ-HSEC-RSK-0001) .

Additionally, all personnel must carry out a risk assessment before undertaking a specific task. A Job Safety and Environment Analysis (JSEA), Safe Systems of Work (SSW), or Safe Work Method Statements (SWMS) will be developed to identify hazards and controls of a specific task prior to commencing the job. The JSEA/SSW/SWMS must be reviewed and updated following unplanned changes to the job or in identification of unidentified hazards.

11.2 Environmental Management Measures

The EIS and the risk assessment process identified the environmental risks associated with the Project's construction and commissioning activities. Management measures to mitigate or minimise these risks are presented in Table 4: Mitigation and Management Measures

11.3 Spoil Management

All spoil generated from the Project shall be emplaced at the ASMAP Spoil Placement Site (HCPD1 Building) within the redundant Coil Annealing (CA) Line Furnace reinforced concrete basement with the exception of:

- Recycling concrete steel from the demolition of redundant structures within the footprint of the proposed new Plate Mill WBF3 and Fourth Route equipment, and
- Hazardous, Restricted or Special Waste materials (eg. Asbestos) which will need to be dealt with in accordance with NSW EPA Waste Classification Guidelines.

The Project shall

- Separate recyclable and non-recyclable materials where possible;
- Separate of materials for reuse within the Port Kembla Steelworks site .
- Waste receptacles will be collected on a regular basis by licensed contractors and transported for off-site disposal at an appropriately licensed landfill or recycling facility;
- Include Awareness of waste minimisation practices and recycling requirements will be included in the Project induction;
- Disposal of waste in accordance with the POEO Act and 'Waste Classification Guidelines' (EPA, 2014) and EPL 6092; and
- Tracking waste for any types and quantities of waste that trigger the requirement for tracking.

Refer to Appendix 3 Erosion and Sediment Control Plan

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11.4 Potential Acid Sulphate Soils (PASS)

Potential Acid Sulphate Soils (PASS) have been identified in underlying natural clay layers across the Project site. Prior to emplacement, any PASS is required to be treated in accordance with the Acid Sulphate Soil Management Plan (ASSMP) and retested to confirm neutralising of excavated soils has occurred. Once emplaced the basement will be sealed, mitigating any potential leaching into the surrounding groundwater system.

For all material (excluding excepted material listed above) generated from the proposed new Plate Mill WBF3 and Fourth Route equipment installation, the following process shall be adopted and addressed in the following documents;

CEMP-01 – Excavated material from Enabling Works from 0.0-3.20mbgl (does not contain PASS) shall be placed at the ASMAP Spoil Placement site (HCPD1 Building) within the redundant Coil Annealing (CA) Line furnace basement, and

CEMP-03 – Project phases where the work shall include the deep excavation from 3.2-7.0mbgl where the presence of PASS is known, spoil shall be dealt with in accordance to the Acid Sulphate Soil Management Plan (ASSMP).

12 Environmental Incident and Emergency Response

A Project Emergency Response Plan (ASMAP-PROJ-MGMT-PRD-0004) has been developed to ensure that effective systems and appropriately trained personnel are in place to detect and respond to an emergency. This plan identifies potential emergency scenarios and their safety and environmental impacts, describes the response

process, specifies personnel who are responsible and others that must be notified, and details the locations of emergency assembly areas, emergency shower and eyewash stations, spill kits, and fire suppression equipment.

All incidents must be reported and managed in accordance with BlueScope's HSE Incident Management procedure (BSL-HSE-SD-12-01) and documented in an incident and risk management system (MARS) Corrective and preventative actions relating to incidents will be included in the incident report. Contractor incident reports must be provided to the plant or work owner (as identified in the relevant JSEA/SSW/SWMS) such that they can be documented in the Project's incident and risk management system (MARS).

A BlueScope Environment Officer on call is available 24 hours 7 days per week on 1800 640 252 or (02) 4275 7522. The Environment Officer will receive and respond to incident reports, provide clean up advice where required, and will notify appropriate government agencies, such as the EPA and DPHI in accordance with relevant statutory requirements. In accordance with Condition C9 of the Infrastructure Approval, incidents relating to the Project will be reported to the DPHI via the Major Projects website.

BlueScope has an existing Pollution Incident Response Management Plan (PIRMP) for the Port Kembla Steelworks as required by the Protection of the Environment Operations Act 1997 (POEO). The existing PIRMP (MA-ENV-11-04) applies to all activities on the PKSW premises, including those associated with the Project.

13 CEMP Review and Revision Process

As specified in Condition C7 and C8 of the Infrastructure Approval, this CEMP will be reviewed within three months of:

- the submission of a Compliance Report under condition C13
- the submission of an incident report under condition C9;
- the approval of any modification of the conditions of this approval; or
- the issue of a direction of the Planning Secretary under condition A2(b) which requires a review,

the strategies, plans and programs required under this approval must be reviewed, and the Planning Secretary must be notified in writing of the outcome of any review.

Where the CEMP is revised as a result of the review, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review in accordance with C9 of the Approval.

Appendix 1. Construction Traffic management Plan (Enabling works)

BlueScope Steel - ASMAP Project

Port Kembla Steelworks

Construction Traffic Management Plan - Enabling Works

May 2024

Reference: 634 tmp 240625 final - tc

BlueScope Steel - ASMAP Project

Port Kembla Steelworks

Construction Traffic Management Plan - Enabling Works

Prepared for: Environmental Resources Management Australia Pty Ltd

Status: Final report

Date: 23 May 2024

Reference: 634 tmp 240625 final - TC

Revision	Date	Description	Author	Reviewed	Approved
A	23/05/24	Draft 01	Tom Dwyer	Mike Willson	Mike Willson
A	23/05/24	Final 01	Tom Dwyer	Mike Willson	Mike Willson
B	25/06/24	Final – incorporate DPHI comments	Tom Dwyer	Mike Willson	Mike Willson

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1. Introduction

1.1 Project Background

Amber Organisation Pty Ltd was engaged by Environmental Resources Management Australia Pty Ltd (ERM) to conduct a Traffic Impact Assessment (TIA) of the Advanced Steel Manufacturing Precinct (ASMAP) (the 'Project') for BlueScope Steel (AIS) Pty Ltd ('BlueScope') (the 'Proponent').

The Project Area is located within BlueScope's Port Kembla Steelworks (PKSW), which is situated approximately 3 kilometres (km) (direct-line) south of the Wollongong central business district (CBD) and 80 km (direct-line) south of Sydney CBD. It is located within the Wollongong Local Government Area (LGA) in the Illawarra Region of NSW. The Project Area covers the area within the PKSW site where the proposed works are to be undertaken. Figure 1 shows the Project Area within PKSW and in relation to the broader regional context and road network.

The project involves upgrades and modernisation of steel manufacturing equipment. Specifically, the project comprises:

- Installation of a new walking beam furnace for the Plate Mill;
- Installation of a new plate mill processing equipment and infrastructure, including cutters, turnover table, transfer system, cranes and the rail extension referred to as Fourth Route Processing;
- Upgrades to the existing electrical infrastructure, including a 11 kilovolt (kV) sub-system, switch rooms, distribution boards and transformers;
- Installation of a new refractory lined structure in the slab yard;
- Construction of associated infrastructure, including, hardstands, construction compounds and laydown areas; and
- Modification of existing structures to enable the integration of new equipment.

The existing Plate Mill has previously produced up to 430,000 tonnes of plates per year. The Project proposes to increase the throughput to up to 600,000 tonnes of plate per year.

The project was granted consent to the development application on 9 May 2024 by Director, Industry Assessments, under delegation from the Minister for Planning and Public Spaces and section 4.38 of the Environmental Planning and Assessment Act 1979 (the Act).

BlueScope is the project owner and will manage the construction activities to deliver the project with multiple subcontractor engaged for specialised services. BlueScope is the Proponent and ultimately takes responsibility for compliance with SSD-50268731. This responsibility is reflected in the management plans, programs and strategies developed for the project.

The Development Consent (DC) - Application Number: SSD–50268731 requires the preparation of a Traffic Management Plan (TMP). Commitments relevant to traffic management were also made by ERM in the Environmental Impact Statement (EIS) for inclusion in the management plans.

It is proposed to construct the project in a number of stages, as follows:

- Enabling works: Site establishment, demolition, excavation to 3 metres depth to remove concrete slab and underground services.
- Stage 1: Cranes and Roof installation. Services relocation and infrastructure.
- Stage 2: Major civil work.

- Stage 3: Mechanical, electrical installation works.
- Stage 4: Building Fit out and Auxiliary building works.

This management plan is for the Enabling Works.

Vehicular access is to be provided via the existing internal roads which connect to the existing main entrance (Northgate) to Springhill Road which connects to the broader arterial road network via Masters Road and Five Islands Road.

The construction workforce is expected to primarily be located in Wollongong, Shellharbour, and the surrounding area.

The primary traffic impacts relate to the traffic generation associated with the transport of materials and the workforce to and from the site, with these effects able to be managed with minimal impact to the road network.

This TMP has been prepared based on the available construction information at this time.

Figure 1: Project Site, Area and Regional Context

Source: ERM

1.2 Objectives

The key objective of this TMP is to ensure safe and efficient movement of vehicles to/from the site, whilst minimising disruptions and impacts to the local community and other road users, and maintaining a safe environment for vehicular traffic external to the site. More specifically, the objectives of the TMP are to:

- Provide a safe environment for the travelling public and construction personnel;
- Cater for the needs of all traffic;
- Communicate the purpose of the proposed traffic management measures; and
- Communicate the arrangements for and impacts of any management measures affecting traffic.

To assist in meeting these objectives the TMP provides information on:

- The Scope of Works;
- Site conditions;
- Permissible working times; and
- Procedures and responsibilities.

BlueScope, as the Principal Contractor, shall ensure that the requirements of the document and other relevant information will be monitored and the TMP adjusted to meet changing requirements where necessary. The Applicant must implement and comply with the TMP at all times to the satisfaction of the Responsible Authority and the Planning Secretary.

1.3 TMP Staging

The TMP is to be staged as follows:

- Enabling works: Site establishment, demolition, excavation to 3 metres depth to remove concrete slab and underground services.
- Stage 1: Cranes and Roof installation. Services relocation and infrastructure.
- Stage 2: Major civil work.
- Stage 3: Mechanical, electrical installation works.
- Stage 4: Building Fit out and Auxiliary building works.

This TMP applies to the Enabling Works, with separate TMPs to be prepared for future stages.

1.4 Statutory Requirements

This document fulfills the requirements of Environmental Condition B19 of the Development Consent (Application Number: SSD-50268731) which requires the provision of a Construction Traffic Management Plan (TMP). The TMP forms part of the Construction Environmental Management Plan (CEMP) required under C3 (b) of the Development Consent.

The TMP has been prepared with consideration to the other transport conditions outlined within the Development Consent, with the matters relevant to transport outlined within Table 1.

Table 1: Relevant Development Consent Requirements

CONDITION B19	REFERENCE LOCATION

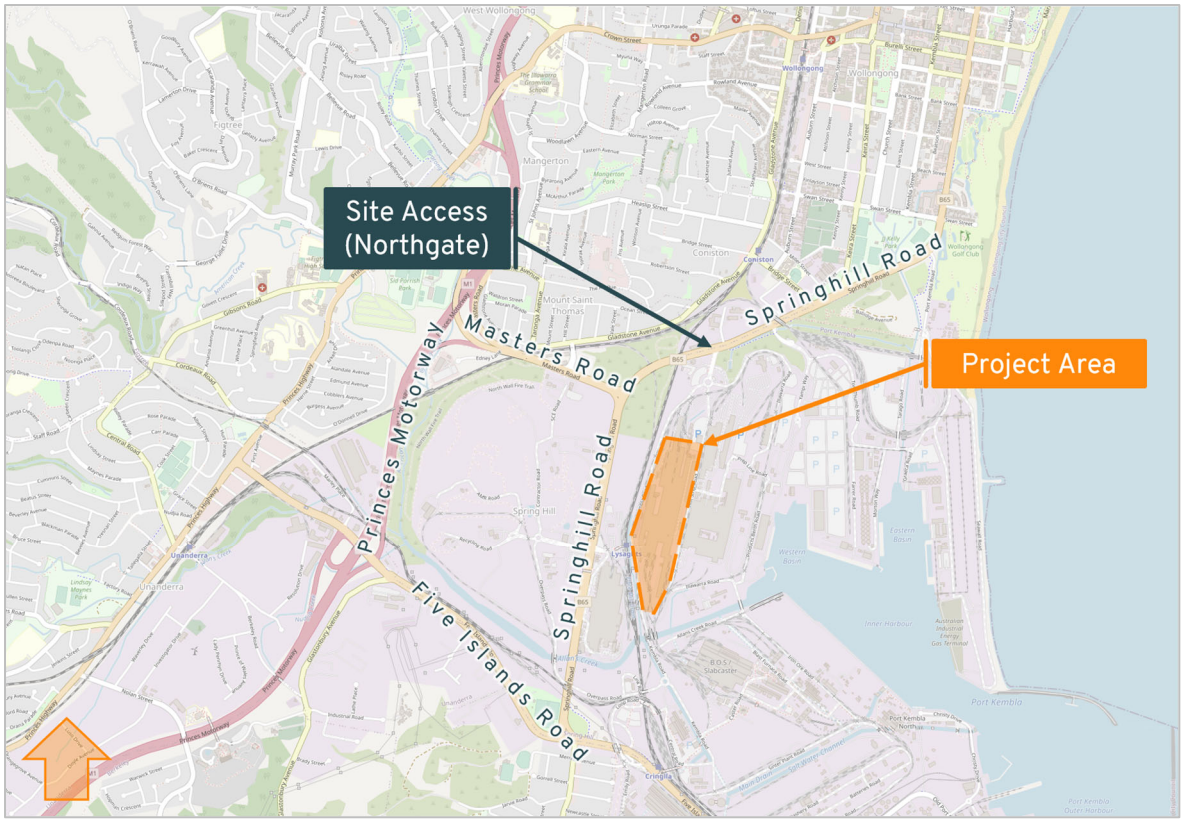
Prior to the commencement of construction of the development, the Applicant must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary. The plan must form part of the CEMP required by condition C2 and must: a) be prepared by a suitably qualified and experienced person(s);	**Complies:** This document
b) detail the measures that are to be implemented to ensure road safety and network efficiency during construction;	**Complies:** The traffic impacts for the Enabling Works are anticipated to be low (refer Section 3.5, Table 3) so little impact to road network operation is expected Measures to ensure safety are outlined through this document, specifically Section 4.
c) include details of: i. vehicle types, heavy and OSOM vehicle routes, access and parking arrangements for construction and operational staff associated with the existing Plate Mill; ii. the strategies that would be implemented to manage access to the existing operations at the site; iii. the strategies that would be implemented to minimise conflict between existing operations at the site and construction vehicles;	**Complies:** Vehicle types are outlined in Section 3.5.1, Table 3 and Section 3.5.3. Access and safety strategies are listed in Section 4.4.
d) include a Driver Code of Conduct to: iv. minimise the impacts of earthworks and construction on the local and regional road network; v. minimise conflicts with other road users; vi. minimise road traffic noise; and vii. ensure truck drivers use specified routes;	**Complies:** Driver Code of Conduct included Appendix A
e) include a program to monitor the effectiveness of these measures; and	**Complies:** Section 8, 9 and Table 4
f) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	**Not Applicable:** Given the expected traffic (refer Section 3.5, Table 3) no routes or disruptions are expected on the road network.

2. Existing Road Environment

2.1 Project Area

The Project Area is located within BlueScope's Port Kembla Steelworks site which is situated approximately 3.0 kilometres south of Wollongong. The Project Area occupies a total of 14.7 hectares, with its relationship with the surrounding transport network shown in Figure 2. The figure also shows the location of the PKSW site access (Northgate) which is a signalised intersection with Springhill Road.

Figure 2: Site Location



Source: Open Street Map

The figure shows the Project Area has direct access to the broader State road network via Springhill Road, Masters Road and Five Islands Road which provide access to the Princes Motorway, which is located approximately 1.9 kilometres west of the Project Area via Masters Road.

The site and the surrounding area are zoned IN3 – Heavy Industrial (under *Transport and Infrastructure SEPP 2021*) and are primarily occupied by industrial land uses. Figure 3 provides an aerial photograph of the site and the surrounding area.

Figure 3: Aerial Photograph of Site and Surrounds

Source: Nearmaps

The aerial imagery confirms the surrounding area reflects the land use zoning, and also shows associated rail and port facilities, internal access roads and parking areas at the PKSW. The figure also shows the Project Area which contains the current Plate Mill facility.

2.2 Road Network

Springhill Road is a State Road under the care and management of TfNSW. It runs in a north-south to northeast-southwest alignment between Five Islands Road in Cringila to Swan Street in Wollongong, where it continues as Corrimal Street. Near the PKSW, it has a sealed carriageway with a concrete central median and three traffic lanes in each direction, with additional turning lanes provided at intersections. It has a posted speed limit of 80km/hr and on-street parking is prohibited.

Masters Road is a State Road that runs in an east-west alignment between Springhill Road and The Avenue with a total length of approximately 1.2 kilometres. It has a sealed road surface with a concrete central

median and three traffic lanes in each direction with additional lanes at intersections. On-street parking is prohibited.

Five Islands Road is a State Road that operates in a northwest to southeast alignment between the Princes Highway and Old Port Road in Port Kembla, where it continues as Military Road. Near the PKSW it has a configuration consistent with Springhill Road and Masters Road, operating with three traffic lanes in each direction and a concrete central median.

The **Princes Motorway** is the key road link between Sydney and Wollongong which is managed by TfNSW. It is generally configured with a dual carriageway with two through lanes in each direction. Access to the motorway is available from Masters Road and Five Islands Road.

The primary PKSW site access is known as **Northgate**. It forms a t-intersection with Springhill Road and provides access to internal roads and parking areas in the Port Kembla Steelworks. The access is signalised and additional turning lanes are provided on all approaches.

2.3 Traffic Volumes

Amber commissioned turning movement count surveys at the following intersections:

- Springhill Road and Northgate (site access),
- Springhill Road and Masters Road, and
- Springhill Road and Five Islands Road.

The surveys were undertaken on Tuesday 27 June 2023 from 6:00am to 10:00am and from 3:00pm to 7:00pm by way of on-site video observations.

The full survey results along with analysis are presented in the Traffic Impact Assessment prepared by Amber included as part of the EIS (Revision E dated 22 October 2023).

In summary, the survey results indicate that:

- The peak hour recorded across the intersections occurred between 8:00am and 9:00am in the morning and between 3:00pm and 5:30pm in the evening.
- The highest volumes were recorded in the morning peak hours.
- During the morning, traffic volumes were highest in the north and northeast direction on Springhill Road, with the reverse occurring in the evening. This reflects the function of Springhill Road as a key arterial road link to Wollongong for commuters.
- A high proportion of traffic recorded was heavy vehicles (between 7 and 8%) which would be expected given the nature of the surrounding industrial land uses.

A review was also undertaken of the video surveys which showed that the whilst the intersections were busy, movements through the intersection were generally observed to operate without significant compounding delays or queues.

2.4 Public Transport Services

The Project has access to a range of public transport services located in the area, as follows:

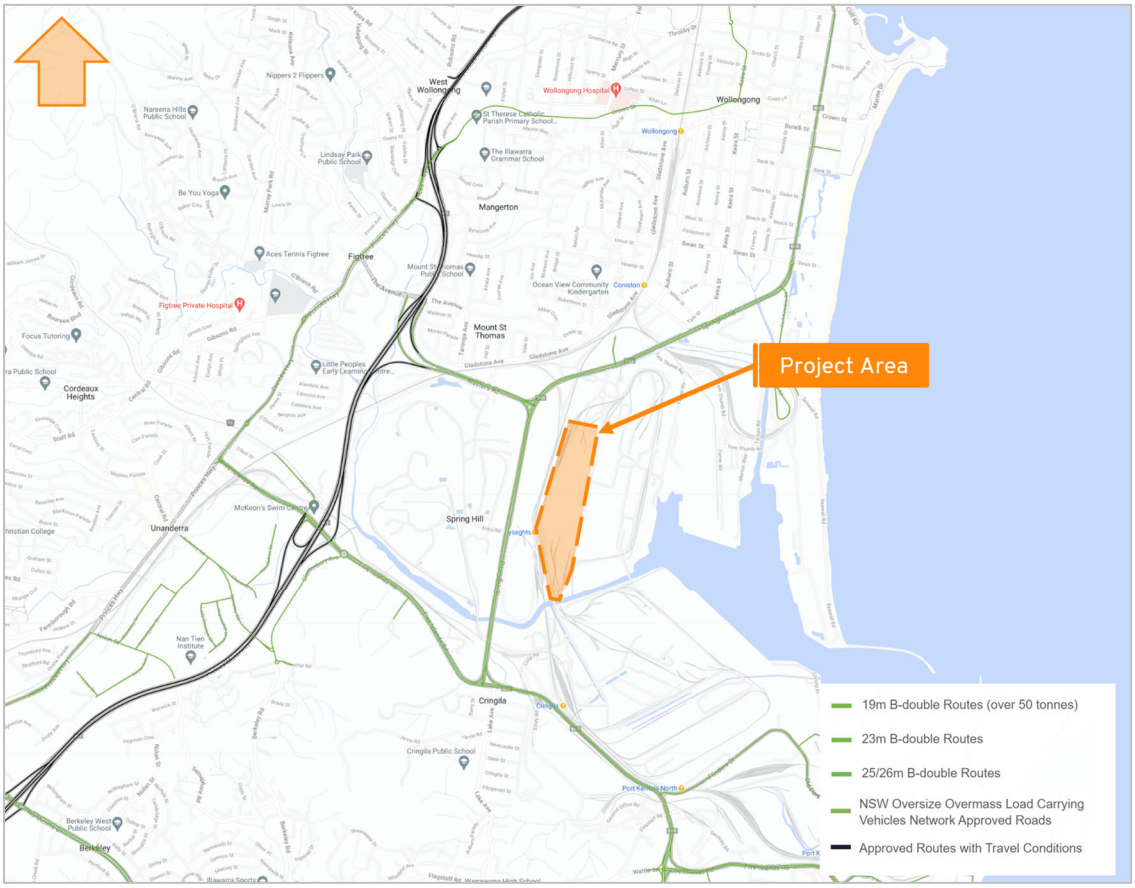
- Cringila Train Station (South Coast Line) is located approximately 2.5 kilometres south of the Project Area. The South Coast Line provides access between Kiama and Sydney along with connections to other lines.
- Bus Routes 51 (Oak Flats to Wollongong via Stockland Shellharbour), 53 (Shellharbour to Wollongong via Shell Cove and Warrawong), 57 (Wollongong to Shellharbour via Warrawong) and 65 (North Wollongong to Port Kembla) operate along Springhill Road with stops located within 100 metres of the project access point (Northgate). All four of these services typically operate with hourly services during business hours Monday to Friday with limited services on weekends.

The public transport services provide an alternative for transport to and from the Project Area, with access available via the footpaths along Springhill Road, Five Islands Road and pedestrian paths within the PKSW.

2.5 Heavy Vehicle Access

The TfNSW Restricted Vehicle Access Map for the surrounding area is provided within Figure 4. The green lines indicate approved B-Double and OSOM routes while the black lines represent approved routes with travel conditions.

Figure 4: TfNSW Restricted Access Vehicle Map



Source: TfNSW Restricted Vehicle Access Map

The figure shows that the adjacent arterial road network is approved for B-Double and OSOM vehicle use which would be expected given the industrial land uses in the area, with conditions applying on the Princes Motorway. These conditions limit access for OSOM vehicles during peak times on the motorway, including commuter periods.

2.6 Rail Infrastructure and Operation

Materials are delivered from and to the PKSW via the existing rail freight network which serves Port Kembla. The freight network connects to the broader rail freight network via the Moss Vale – Unanderra Line and the Illawara Line.

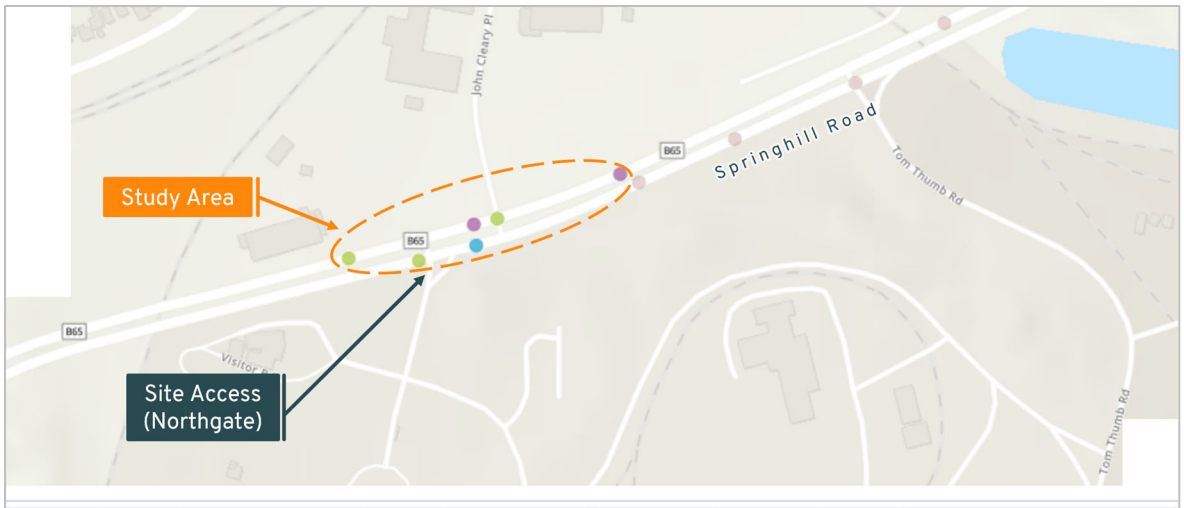
Transport via rail freight provides an alternative to road transport and a significant proportion of the materials currently produced at the PKSW utilises rail freight for transport.

2.7 Crash History

TfNSW along with the police and emergency services collect data related to road crashes on public roads in NSW. Data is available for a five-year reporting period (2016 – 2020) on the TfNSW Centre for Road Safety website.

A review was undertaken for road crashes in a study area near the site access at the intersection of Springhill Road and Northgate as shown in Figure 5. There was a total of six crashes recorded with the most common crash type being rear end.

Figure 5: TfNSW Crash Statistics



Reporting year	Crash Id	Degree of crash	RUM - code	RUM - description	Type of location	Natural lighting	Longitude	Latitude	Number killed	Number injured
2017	1133368	Serious Injury	60	Parked	Divided road	Daylight	150.881408	-34.443503		2
2018	1162978	Minor/Other Injury	30	Rear end	Divided road	Daylight	150.882565	-34.443248		1
2018	1176369	Serious Injury	13	Right near	T-junction	Daylight	150.882775	-34.443201		1
2020	1224938	Moderate Injury	30	Rear end	Divided road	Daylight	150.882586	-34.443405		1
2020	1240173	Minor/Other Injury	30	Rear end	Divided road	Daylight	150.883904	-34.442864		1
2020	1248281	Serious Injury	30	Rear end	Divided road	Daylight	150.882058	-34.443518		2

Source: TfNSW Centre for Road Safety: Interactive Crash Statistics

The results of the road safety review are indicative of the high traffic volumes carried on the arterial road network.

3. Construction Overview

3.1 Overall Project Description

The Project will involve the construction and installation of a new walking beam furnace and upgrades and installation of associated equipment at the Plate Mill. The upgrade of the furnace will allow the facility to increase the throughput of steel plate from 430,000 to 600,000 tonnes per year depending on the product grades produced.

Construction is anticipated to begin in the second quarter of 2024, with a total estimated construction period of 39 months.

Construction activities will generally be as per the standard daytime construction hours outlined in the Interim Construction Noise Guideline (Department of Energy and Climate Change, EPA). Construction activities will be 24 hours per day 7 days per week during the plant shutdown (one week in July). Otherwise construction activities will be as the standard construction hours, being
8am to 6pm Monday to Friday and 8am to 1pm Saturday.

The key construction activities are broken into three stages as outlined below:

- Enabling works: Site establishment, demolition, excavation to 3 metres depth to remove concrete slab and underground services.
- Stage 1: Cranes and Roof installation. Services relocation and infrastructure.
- Stage 2: Major civil work.
- Stage 3: Mechanical, electrical installation works.
- Stage 4: Building Fit out and Auxiliary building works.

This TMP applies to the Enabling Works, with future TMPs to prepared for other construction stages.

3.2 Duration of Construction Works and Schedule

The Enabling works are anticipated to commence July 2024 and be completed in January 2025. The key construction activities are summarised in Table 2.

Table 2: Construction Activities – Enabling Works

No.	Construction Activity	Commencement (Month, Year)	Completion (Month, Year)	Staffing Requirements
1	Site mobilisation and establishment	July 2024	September 2024	Up to 10 on-site
2	Excavation and Demolition	July 2024	January 2025	Up to 15 on-site
3	Underground services electrical infrastructure preparation	July 2024	October 2024	Up to 5 on-site

As shown in Table 2, a total of up to 30 staff would be expected on-site at any one-time when the three construction activities are undertaken concurrently July to September 2024.

3.3 Workforce Transport

The construction workforce for the Enabling Works are expected to primarily be located in Wollongong, Shellharbour, and other nearby towns.

3.4 Construction Vehicles and Equipment

The expected traffic generated for the Enabling Works can broadly be separated into the following categories:

- Light vehicles associated with transporting staff to/from the site;
- 8 to 13 metre long rigid trucks to deliver materials and smaller plant;
- Truck and Dog vehicles will be used to transport concrete and scrap metal from the site to appropriate recycling facilities; and
- 19.0 metre long Articulated Vehicles will be used to transport larger plant and for waste removal.

Shuttle buses will be used to transport staff during later construction stages.

Oversized and overmass (OSOM) vehicles will be required for the delivery of larger plant and materials during the Enabling Works, comprising excavators and articulated dump trucks.

3.5 Traffic Movements

3.5.1 Traffic Generation

The overall construction traffic volumes for the project have been provided by the Applicant and are also provided within the *BlueScope Steel ASMAP Project – Traffic Impact Assessment*.

The peak daily traffic associated with construction activities during the Enabling Works is summarised in Table 3. Expected Oversize/Overmass vehicles which will be one-off trips for the delivery of plant and equipment are discussed in Section 3.5.3.

Table 3: Traffic Generation During Enabling Works

Construction Activity / Time	Vehicle Type	Vehicle Size	Expected Peak Vehicle Movements to and from the site per Day
Enabling Works July 2024 to January 2025	Light Vehicle	Light Vehicle (car / 4WD)	40
	Heavy Vehicle	8 to 13 metre long rigid trucks	4
		Truck & Dog	4
		AV	2
Total			**50**

Table 3 shows that Enabling Works would generate up to 50 movements to and from the site per day. This is within the traffic volumes considered in the Traffic Impact Assessment (TIA) prepared by Amber which concluded the following:

The project construction and cumulative impacts are therefore considered to be

within acceptable levels and would not be expected to have adverse impacts in terms of intersection performance. The results are expected given that the generated traffic represents a minimal proportional increase carried through the adjoining intersections which have been designed and configured to cater for high traffic volume.

Given the expected negligible impacts to the operation of the surrounding road network, no road upgrades are warranted as a result of the project.

3.5.2 Light and Heavy Vehicle Access Routes

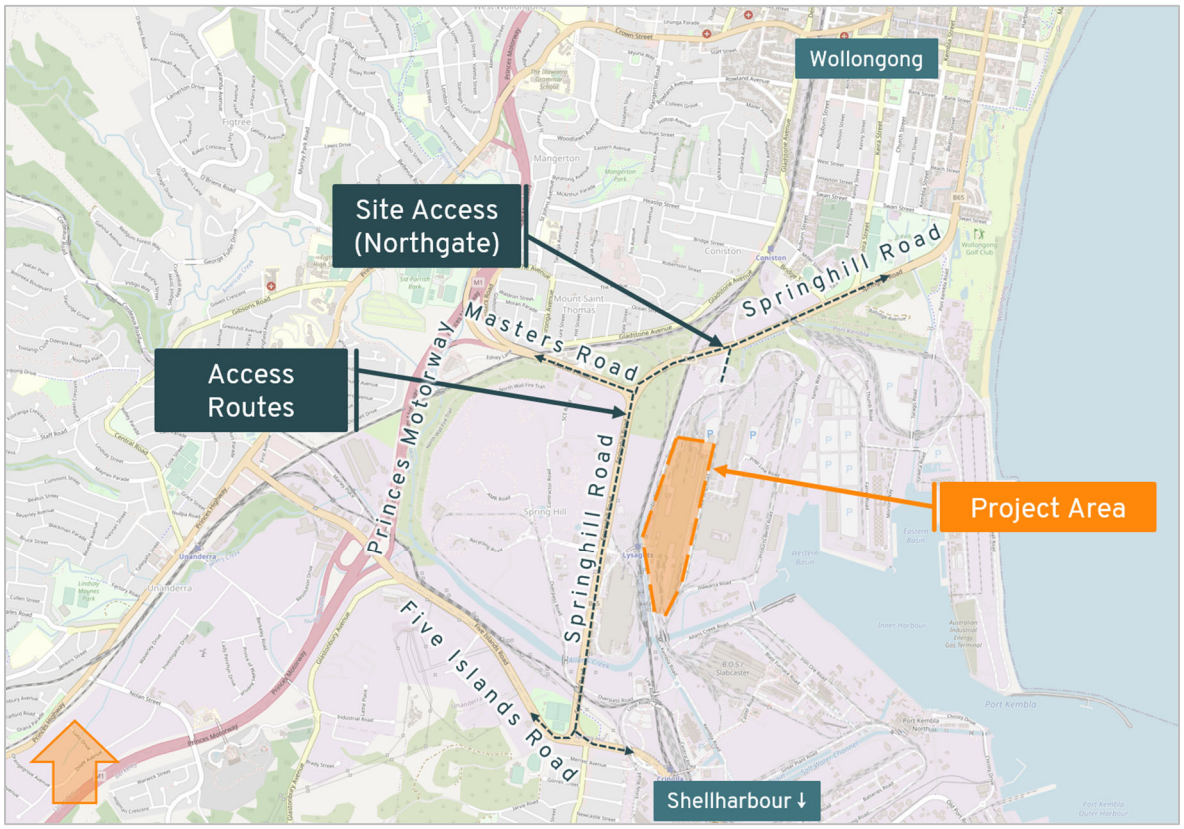
The construction workforce is to be primarily located in Wollongong, Shellharbour, and other nearby towns. All light vehicles will enter the site via the Northgate main access to Springhill Road.

Materials required for the Enabling Works will be transported directly from locations in Port Kembla, Wollongong and nearby towns. Materials from the demolition works (concrete, scrap metal and the like) will be transported by truck to suitable recyclers and refuse facilities in Port Kembla.

All heavy vehicles will enter and exit the site via the Northgate main access to Springhill Road.

The heavy and light vehicle access route between the site and the nearby arterial road network is via the Princes Motorway, Masters Road, Springhill Road and the Northgate main entry as shown in Figure 6.

Figure 6: Light and Heavy Vehicle Access Route



Source: Open Street Maps

3.5.3 OSOM Vehicles

Excavators and articulated dump trucks are required for the Enabling Works which will be transported by OSOM vehicles (likely three axel low-loader combinations).

These will be a total of up to four movements a day to site in July 2024 at the start of works and up to four movements per day from the site at the completion of the Enabling Works in January 2025.

The OSOM vehicle combinations will not require pilots or escort vehicles and will comply with the following documents and the associated Heavy Vehicle National Law:

- *National Heavy Vehicle Regulator (NHVR) Multi-State Class 1 Load Carrying Vehicle Mass Exemption Notice 2020 Information Sheet*; and
- *NHVR Multi-State Class 1 Load Carrying Vehicle Dimension Exemption Notice Information Sheet*.

Regular movements by OSOM vehicles will not be required for the Enabling Works.

3.5.4 OSOM Access Route

The excavators and articulated dump trucks required for the Enabling Works will be transported by OSOM vehicle combinations from a construction contractor located in Smeaton Grange[1].

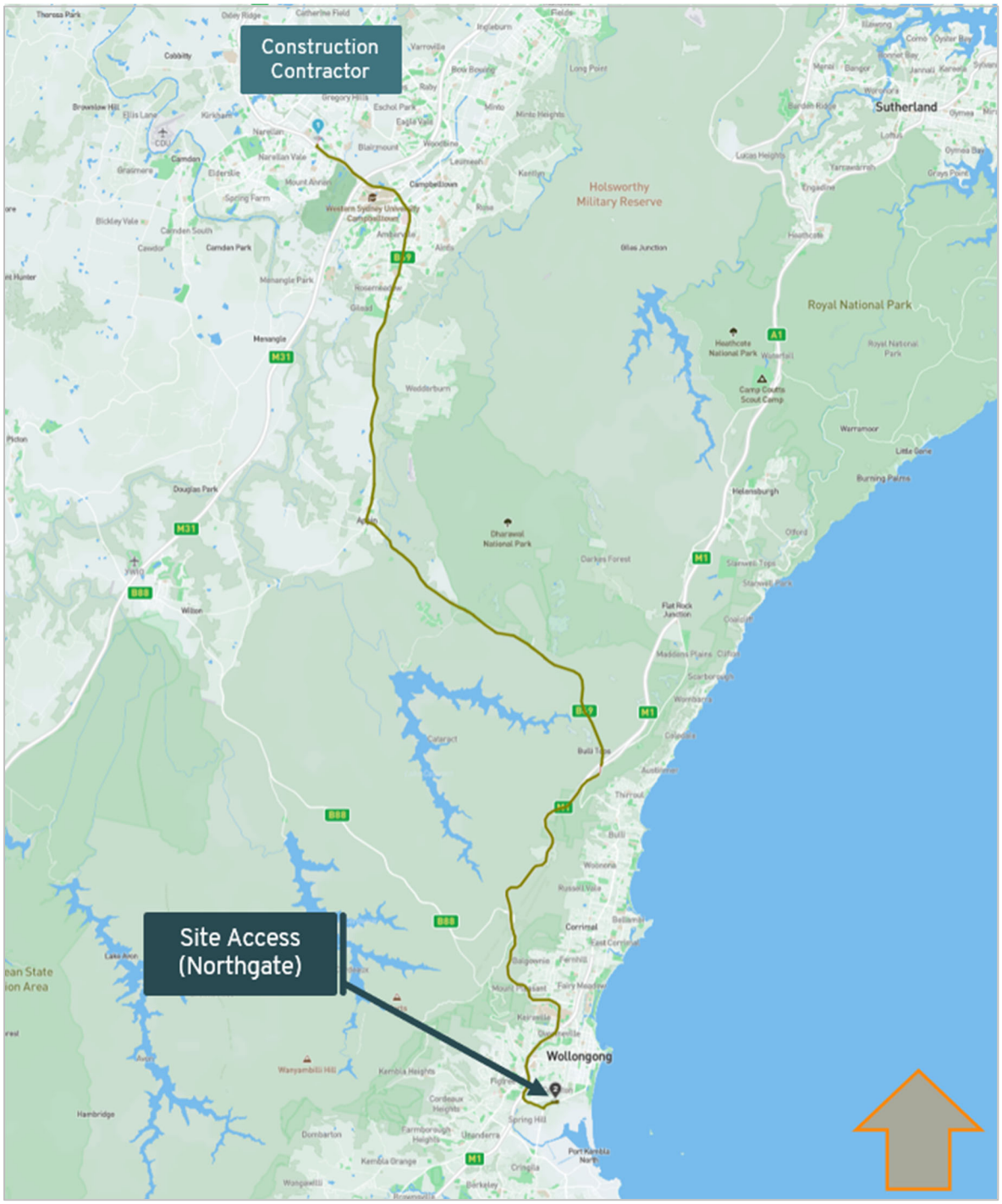
The OSOM route to site is shown in Figure 7, and involves the following:

- Hartley Road, Narellan Road, Appin Road, Bulli Appin Road, Princes Motorway, Masters Road, Springhill Road and Northgate main access.

All roads on this route are pre-approved for OSOM use where they comply with the information sheets described in Section 3.5.3 per the *NSW Oversize Overmass Load Carrying Vehicles Network map.*

[1] Brefni, Unit 5/11 McPherson Road, Smeaton Grange

Figure 7: OSOM Vehicle Access Route



Source: NHVR Route Planner

3.6 Car Parking

Construction staff with light vehicles will park in the existing on-site car parking facilities at the steelworks, as indicated in Figure 8 along with additional parking near the construction area shown in Figure 9 below.

A total of approximately 200 car parking spaces area available in the main car parking area. There is capacity in this car parking area to fully accommodate the parking demand during construction periods.

Nevertheless, in the unlikely event that the car parking capacity is exceeded during construction, overflow parking will be accommodated within adjacent hardstand areas.

Construction and operational staff are to be safely transferred from the main car parking areas to the appropriate work site with a mini-bus or other suitable vehicles via the internal road network.

Figure 8: On-Site Car Park

Source: Nearmaps

4. Traffic Management Strategy

4.1 Driver Protocols

Management of vehicular access to and from the site is essential to maintain the safety of the general public as well as the labour force. Exemplar driver protocols are to be implemented and a driver code of conduct established. The Driver Code of Conduct is provided within Appendix A. All vehicle drivers that visit the construction site are required to read, agree to and sign the Driver's Code of Conduct.

The following measures will be implemented by the BlueScope Project Manager and the Construction Site Manager:

- Mandatory site induction given to all workers on the site which clearly sets out the TMP requirements including on-site speed restrictions and the Driver Code of Conduct.
- Monitoring complaint and safety incident registers (including near miss and hazard observation) are also tracked to address any incidences of non-compliance and improvement opportunities in relation to routes and driving behaviour.

4.2 Delivery Logistics

The Construction Site Manager will be responsible for managing the heavy vehicle movements to and from the site.

The Construction Site Manager is to liaise with transport companies to ensure they are aware of the access route to site and that schedule major deliveries so that deliveries during the following periods are avoided :

- during peak hours and to avoid conflict with local traffic; and
- any school zones during peak school times, and

Furthermore, the varying origins of the haulage movements and limited number of deliveries to site each day will limit the potential for haulage vehicles to form convoys or platoons.

4.3 Information and Communications

The Construction Site Manager is required to provide weekly reports to the BlueScope Project Manager. The BlueScope Project Manager will be the main point of contact for non-emergency ongoing communication with the community, Council, TfNSW, local residents and other key stakeholders.

For emergency issues the Project/Site Managers will be the first points of contact to resolve issues. Details and contact information of each of these positions will be provided to Council, local residents and other relevant stakeholders.

4.4 On-Site Measures

Measures to be implemented to manage access to the existing operations of the plate mill and to minimise conflict with construction vehicles are as follows:

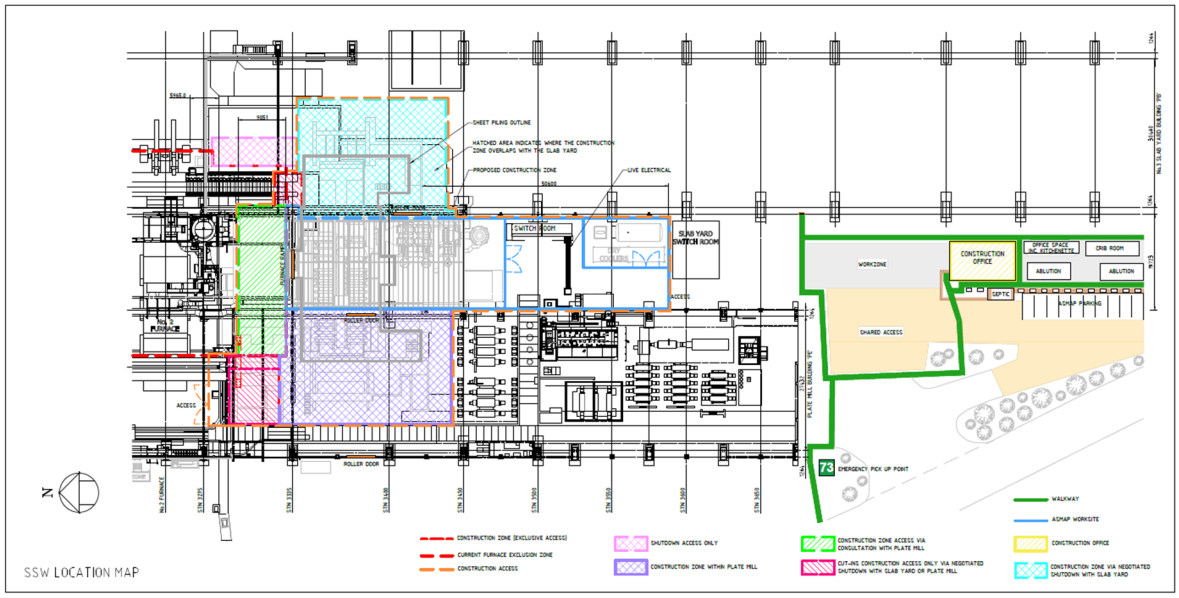
- On-site speed limits (40 km/h) are to be adhered to at all times.
- Figure 9 shows the site offices, work zone, parking areas and clear pedestrian access paths for staff. These paths are to be used for access for construction and operations are to be clearly marked by signs and line marking.

Figure 9: Pedestrian Access Plan

Source: BlueScope

- Construction and operational staff that are to be transferred from the main car parking areas to the work site with a mini-bus or other suitable vehicles via the internal road network.
- Due to the nature of the works at the Plate Mill, the impacted locations will change over the course of the Enabling Works. To ensure clear separation of construction and operation activities, an 'Ownership of Area' map is to be clearly displayed and run through at daily pre-start meetings by the Construction Site Manager. The map is to be updated daily or when construction conditions change by the Construction Site Manager.
- The map will clearly indicate which areas are used for construction and operational activities and the paths of access between. An example is shown in Figure 10.
- The key construction areas to be fenced and separated from existing operations with control points for access.
- The internal haulage route between the demolition site and on-site stockpile to be clearly delineated by way of clear and prominent signs.

Figure 10: Example Ownership of Area Map



Source: BlueScope

5. Traffic Management Responsibilities

5.1 BlueScope Project Manager

The BlueScope Project Manager as the Applicant representative has ultimate responsibility for the project and shall:

- Ensure all traffic control measures are implemented and maintained in accordance with this plan and the relevant Acts, Codes, Standards and Guidelines;
- Ensure suitable communication and consultation with any affected stakeholders is maintained;
- Ensure inspections of the Traffic Controls are undertaken in accordance with the TMP, and results recorded. Any variations shall be actioned and documented; and
- Arrange and/or undertake any necessary audits and incident investigations.

5.2 Construction Site Manager

The Construction Site Manager is responsible for overseeing the day-to-day activities, and is therefore responsible for the practical application of the TMP, and shall:

- Instruct workers on the relevant safety standards, including the correct use of Personal Protective Equipment (PPE);
- Ensure traffic control measures are implemented and maintained in accordance with the TMP;
- Undertake and submit the required inspection and evaluation reports to the Project Site Manager;
- Render assistance to road users and stakeholders when incidents arising out of the works affect the network performance or the safety of road users and workers; and
- Take appropriate action to correct unsafe conditions, including any necessary modifications to the TMP.

5.3 Workers and Subcontractors

Workers and Subcontractors shall:

- Correctly wear high visibility vests, in addition to other protective equipment required (e.g. footwear, eye protection, helmet, sun protection, etc) at all times whilst on the worksite;
- Comply with the requirements of the TMP and ensure no activity is undertaken that will endanger the safety of other workers or the general public; and
- Enter and leave the site by approved routes and in accordance with safe work practice.

6. Implementation

6.1 Hazard Identification, Risk Assessment and Control

In establishing adequate controls for the hazards, a structured approach shall be adopted via the use of the hierarchy of control as outlined below:

- Elimination
- Substitution
- Engineering
- Administration
- Personal Protection Equipment

Traffic management practices require that the Construction Site Manager evaluate all traffic arrangements before they are open to use by construction and operation staff and immediately following the opening. Adjustments are to be made as required and recorded, including reasons for the changes. The Construction Site Manager is also required to evaluate the traffic arrangements when site conditions change, and new hazards that arise throughout the works will be subject to a risk assessment and incorporated onto a Risk Register.

7. Communicating TMP Requirements

Clear lines of communication through all levels and functions (e.g. management, staff and sub-contractors), is key to minimise impacts and achieving continual improvements in performance.

The methods of communication on-site will include site inductions, pre-start and toolbox meetings, and through Safe Work Method Statements (SWMS).

7.1 Site Inductions

All construction personnel entering the site are to go through a Site Induction that details the requirements of the TMP, Personal Protective Equipment (PPE), Occupational Health and Safety (OFS), and risk management procedures. All personnel wishing to enter the works zone are to be properly inducted before access is allowed.

The requirements of the TMP will be communicated to all personnel entering the site through the online induction prior to workers and visitors coming to the site, including delivery drivers' online induction.

7.2 Pre-Start and Toolbox Meetings

A prestart meeting is to be conducted at the start of works, on a daily basis, and if unforeseen changes are required. Progress, hazard assessment and any new issues, information or changes are to be discussed. Safe Work Method Statements (SWMS) documentation is to be read and signed during prestart meetings.

7.3 Safe Work Method Statements

A site-specific SWMS is to be produced for the set up and shutdown of control of traffic on-site and is to be read through, discussed, and signed by all personnel working on site.

8. Monitoring and Measurement

8.1 Site Inspections and Record Keeping

The BlueScope Project Manager will ensure that the TMP is implemented and evaluated for effectiveness. The Construction Site Manager shall inspect and monitor traffic movements around the site in conjunction with the personnel who have erected the control measures. The outcomes of the inspection will be recorded.

A record of the inspections should be kept indicating:

- When traffic controls were erected;
- When changes to controls occurred and why the changes were undertaken;
- Any significant incidents or observations associated with the traffic controls and their impacts on road users or adjacent properties.

Where significant changes to the work or traffic environment or adverse impacts are observed, the controls should be reviewed as a matter of urgency. Inspection Sheets shall be completed by the person undertaking the inspections and reviewed by the Construction Site Manager.

8.2 Incident Reporting

All workers are responsible for ensuring timely and effective initial internal reporting of Incidents that they are involved with or witness.

BlueScope are to be informed of any environmental incidents immediately verbally and within 24 hours in writing. Incident reports will include lessons learnt from each environmental incident occurring. Including lessons learnt from each environmental incident and proposed measures to prevent the occurrence of a similar incident. All efforts will be undertaken immediately to avoid and reduce impacts of incidents and suitable controls put in place. Incidents will be closed out as quickly as possible, taking all required action to resolve each environmental incident.

8.3 Management and Monitoring Summary

A summary of the management and monitoring measures is provided within Table 4.

Table 4: Management and Monitoring Summary

Aspect	Potential Problems	Performance Criteria	Mitigation and Control Measures	Monitoring Requirements	Responsibility	Timing	Frequency
Heavy vehicle movements	Heavy Vehicle movements occurring concurrent with school bus services	No Heavy Vehicle movements occurring concurrent with school peaks	Heavy Vehicles will be scheduled and delivery contractors to be advised of this prior to arranging any delivery to site.	Count and record time of heavy vehicle movements	BlueScope and Construction Contractor	Duration of construction	Daily
Driver behaviour	Poor driver behaviour leads to incidents, accidents or near misses	No accidents or incidents, including incidents on-site.	Encouraging good driver practice and reinforcing those messages during project meetings	Count and record number of incidents, accidents and near misses Ensure that all drivers have received a copy of the Driver Code of Conduct and are following the requirements.	BlueScope and Construction Contractor	Duration of construction	Daily
Driver behaviour	The approved route not being followed by staff and deliveries	No use of roads other than those on the approved access by staff and delivery drivers	Checking driver routes and reinforcing the approved routes to staff and delivery drivers during project meetings	Spot check of routes taken at site entry and adjoining local roads and monitoring any feedback from the Community, Council and TfNSW	BlueScope and Construction Contractor	Duration of construction	Daily
Condition of road	Vehicles have excessive mud or dirt	Dirt transferred from the site onto the external road network to be minimised	Vehicles exiting the site are to be cleaned so that excessive mud and dirt is not transferred to external roads.	Vehicles exiting the site are to be inspected and cleaned as required	Vehicle driver	Duration of construction	Daily

9. Management Review

9.1 TMP Review and Improvement

A review of the effectiveness of the TMP will be undertaken by the Construction Site Manager and BlueScope Project Manager on a fortnightly basis. Any updates to the TMP that are required to improve the effectiveness of the TMP as identified in the reviews will be undertaken by the BlueScope Project Manager.

Appendix A

Driver Code of Conduct

Driver Code of Conduct

This code of conduct applies to all vehicle drivers that visit the construction site. They are required to read, agree to and sign the Driver's Code of Conduct.

This code of conduct will be communicated to all site workers during the site induction process. Workers will be reminded of the requirements of the code of conduct weekly in toolbox meetings.

The Driver Code of Conduct is to be enforced by the Applicant, and records of the code are to be stored and maintained by the Applicant. The Applicant will share the code of conduct with all logistic companies, and suppliers prior to all deliveries to site.

Safe Driving Principles

The operators of all vehicles associated with the site shall respect all other road users. All on-site staff will receive a site induction, which will include:

- Details regarding the TMP and this code of conduct;
- Details of speed limit signs;
- Information on fatigue management;
- Reinforcement that they must drive to conditions;
- Details of vehicle inspections including maintenance records and risk assessments; and
- Details of inspections, and audits.

Regular toolbox meetings will be held to maintain awareness of required controls. Details of the traffic and access training and induction will focus on:

- Objectives of the TMP;
- Performance goals, which include no injuries on-site.
- Access routes that are to be adopted as outlined within the TMP;
- Mitigation measures required to be implemented;
- Traffic and access monitoring and reporting requirements; and
- Incident investigation and response protocols.

Training is to be provided prior to start-up of any traffic and access related management tasks and updated if task, equipment or procedures are expected to, or have changed.

Primary Driver Code

The following requirements shall be adhered to at all times:

- Obey all laws and regulations.
- Do not drive whilst under the influence of alcohol, drugs, nor any medication which may affect ability to drive.
- Be medically fit to drive and must inform site coordinators if they have any medical condition which may affect their ability to drive.
- Drive in a considerate manner and respect the rights of others to use and share the road space.

- Report all vehicle defects to their employer. Serious defects (e.g. brakes, steering) must be corrected immediately, or an alternative vehicle supplied.
- Any vehicle incident resulting in injury or significant damage to property must be reported to the police.
- Report any near misses.
- Always adhere to the site working hours.
- Securely fasten and cover load with the appropriate use of ratchets straps, tarpaulins or covers (loose material), chains and load binders, for example. Relevant vehicular load limits are not to be exceeded and all loads are to be suitably balanced. The maximum rear overhang shall not exceed limits under by relevant road rules for respective vehicle types.
- Keep their vehicle clean and in good mechanical condition to reduce the environmental impact.
- Extra care should be taken when driving at dawn or dusk, being particularly watchful for wildlife and/or livestock.
- Vehicles must give way to pedestrians, cranes, forklifts, mobile plant, emergency vehicles and livestock.

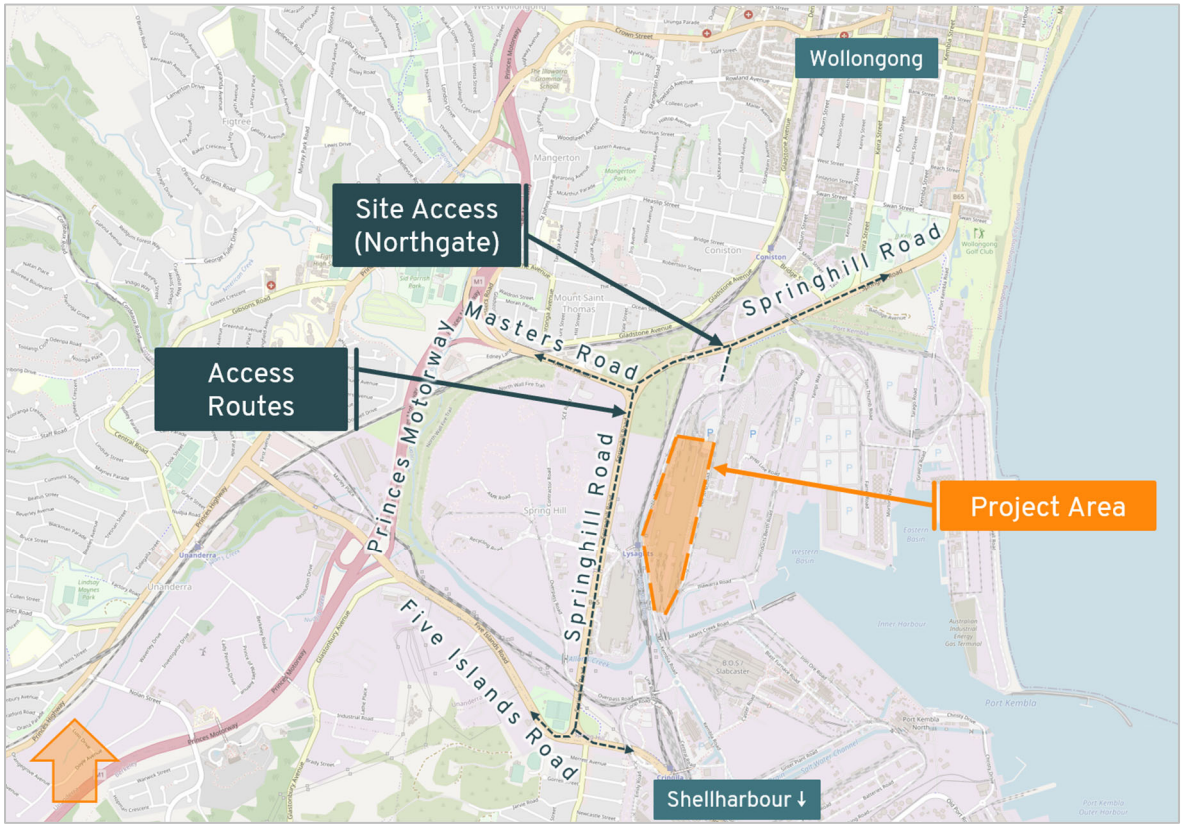
The following provides the required safety procedures for specific incidences that all drivers are required to adhere to:

- Drivers travelling to or from the site must do so safely, in full compliance with the law, including in respect of speed limits, following distances, forward sight when overtaking, being able to stop within the length of road visible (or half the length on roads without centrelines), and not driving carelessly or dangerously;
- Timing of deliveries are to be coordinated by the Applicant in order to prevent heavy vehicles travelling through school zones during peak times;
- Truck drivers must not use engine brakes in built up areas, except where the load being carried and the grade of the road make use of such braking absolutely necessary for safe driving;
- Dedicated rest stops are to be established and utilised by drivers to reduce driver fatigue.

Access Routes

All drivers to and from the site must adhere strictly to the specified routes outlined in the Traffic Management Plan as provided in Figure 11 below for reference.

Figure 11: Light and Heavy Vehicle Access Route



Source: Open Street Maps

The access route will be provided to all drivers to the site during regular toolbox meetings with reminders that it is to be adhered to at all times.

The appropriate use of the access route will be monitored by way of spot checks undertaken by the BlueScope Project Manager.

Chain of Responsibility

Corporate entities, directors, partners, and managers are accountable for the actions of individuals under their supervision, even if not directly involved in driving or operating a heavy vehicle under the Heavy Vehicle National Law (HVNL). This is referred to as the "chain of responsibility" (COR).

All entities on the CoR will be made aware of the Driver Code of Conduct, along with the responsibilities associated with safe loading practices and fatigue management.

Emergency Procedures

In the event of a breakdown, accident or road failure, the transporter crew shall do the following:

- Park the truck in locations where they maximise safety, considering overhanging components, and blind bends on approaches;
- Contact emergency services (including Police) as is appropriate in the case of an accident;
- Contact the project manager;

- Contact the Council or other road controlling authority as may be appropriate in the case of the incident; and
- Follow all instructions from Police and the road controlling authority.

In the case of an accident, the vehicles involved should not be moved until instructed by Police.

Driver Fatigue

Journey Management Plans

If a worker travels more than 100 kilometres because of construction activities in a single trip, then a Journey Management Plan will be required. The worker that the Journey Management Plan is for will be required to have breaks at least every two hours and contact a nominated person and once they have reached their destination contact the nominated person to let them know they have reached their destination.

The Applicant will identify areas where there is a higher risk of workers becoming fatigued (such as long shifts or physically onerous tasks) and implement control measures to mitigate the risk. This includes ensuring sufficient breaks and rotating staff shifts.

Heavy Vehicle Fatigue Management

In addition to the measure outlines above, there are regulations that apply to heavy vehicles that come from the HVNL which is maintained and improved by the National Transport Commission (NTC) and administered and enforced by the National Heavy Vehicle Regulator (NHVR). The HVNL applies in all states and territories except Western Australia and the Northern Territory and commenced in 2014.

One of the five regulations is the Heavy Vehicle (Fatigue Management) National Regulation, which recognises that fatigue is a key risk and one of the biggest causes of crashes for heavy vehicle drivers.

The fatigue management regulations have four key requirements that apply not just to drivers and all other parties in the Chain of Responsibility (CoR):

- Drivers must not drive a fatigue regulated heavy vehicle on a road while impaired by fatigue. Other parties in the CoR must ensure they prevent a driver from doing this.
- Drivers must work within set limits and have minimum rest requirements. Other parties must not ask or allow drivers to exceed these limits.
- Drivers (or in some cases a driver's record keeper) must make an accurate and complete record of their work and rest time in either a National Driver Work Diary or, if driving within an area with a radius of 100km of the driver's base, alternative work records.
- Drivers must provide their work and rest records to their record keeper within set time frames. A record keeper must retain these records for three years.

Failure to comply with these requirements can result in enforcement action from the NHVR.

A copy of NHVR's Heavy vehicle driver fatigue requirements bulletin is attached in Appendix B. This document outlines the relevant requirements and includes links to further information related to work diaries, CoR, accreditation, trip plans, and safety management systems. This information is to be used and followed when applicable.

Maintenance Requirements

The operators of all vehicles associated with the site shall maintain a high level of maintenance. The following requirements shall be adhered to at all times:

- Ensure their vehicle complies with relevant State legislation in relation to roadworthiness and modifications;
- Undergo regular vehicle checks and maintenance; and
- Ensure their vehicles have correctly fitted mufflers to minimise noise disturbance.

Appendix B

NHVR Heavy Vehicle Driver Fatigue Requirements Bulletin

Heavy vehicle driver fatigue requirements

Compliance and Enforcement bulletin 7

This bulletin provides practical advice to help heavy vehicle drivers and other parties to comply with the requirements of the Heavy Vehicle National Law (HVNL) as they relate to heavy vehicle driver fatigue.

What are my obligations under the HVNL?

Amendments to the HVNL in 2018 will introduce 'safety duties' that must be met by all parties in the Chain of Responsibility (CoR). This requirement means that all parties have a duty to ensure the safety of their transport activities, so far as is reasonably practicable.

Responsible parties in the chain include: employers, prime contractors, operators, schedulers, consignors, consignees, packers, loading managers, loaders, and unloaders.

In addition, the executive officers of each party in the chain must exercise 'due diligence' to ensure the safety of their business's transport activities. The law will require executive officers to:

- keep up-to-date with the safe conduct of transport activities in their business
- fully understand the hazards and risks associated with their transport activities and how these are being managed
- provide appropriate resources–including people, systems and equipment–to manage their safety hazards and risks effectively.

In terms of heavy vehicle driver fatigue, the safety duties provision of the HVNL places a requirement on responsible parties to prevent a driver from driving any heavy vehicle whilst fatigued, not just fatigue-regulated heavy vehicles.

These safety duties extend to identifying any fatigue risks to prevent or reduce potential harm or loss, to yourself and others.

What are the HVNL fatigue requirements?

Driver fatigue is a leading contributor to heavy vehicle crashes in Australia, with some studies showing fatigue involved in one eighth of Australian heavy vehicle crashes.

To assist drivers and operators of heavy vehicles to avoid driver fatigue, the HVNL sets four key requirements.

Four key HVNL requirements to avoid driver fatigue

Requirement	Description
1. Don't drive a heavy vehicle while fatigued	Drivers must not drive a fatigue-regulated heavy vehicle on a road while impaired by fatigue. Other parties in the CoR must ensure they prevent a driver from doing this.
2. Work within set limits	Drivers must work within set limits and have minimum rest requirements. Other parties must not ask or allow drivers to exceed these limits.
3. Keep work and rest records	Drivers (or in some cases a driver's record keeper) must make an accurate and complete record of their work and rest time in either a National Driver Work Diary or, if driving within an area with a radius of 100 km of the driver's base, alternative work records.
4. Provide records to record keeper	Drivers must provide their work and rest records to their record keeper within set time frames. A record keeper must retain these records for three years.

Understanding the HVNL fatigue requirements

1. Don't drive a heavy vehicle while fatigued

Under the HVNL, the safety duty for all heavy vehicle drivers is to not drive a fatigue-related heavy vehicle on a road while impaired by fatigue. A driver is impaired by fatigue when their ability to drive a heavy vehicle safely is affected by fatigue.

The HVNL defines fatigue as including (but not limited to) the following feelings and behaviours:

- feeling sleepy
- feeling physically or mentally tired, weary or drowsy
- feeling exhausted or lacking energy
- behaving in a way consistent with the above.

If a heavy vehicle driver is driving and experiences any of these symptoms, they must stop work immediately (as soon as it is safe to do so). The driver must not work again until they are no longer affected by fatigue.

Tip: Getting plenty of good quality rest and/or sleep are the most effective ways to prevent and recover from fatigue.

A driver can be impaired by fatigue at any time, even when they comply with work and rest hour limits. Regardless of how many hours they may have worked or rested, they must never drive if they are impaired by fatigue.

2. Work within set limits

The scientific evidence shows that fatigue increases the longer a person is awake and or the less sleep they have. To assist heavy vehicle drivers get enough time to sleep and to not work too long, the HVNL requires all heavy vehicle drivers to comply with set work and rest limits.

What is work and rest?

While driving is the most common type of work, it is important to note that any other task relating to the operation of a fatigue-regulated heavy vehicle is regarded as work, including for example:

- instructing/supervising another person driving a fatigue-regulated heavy vehicle
- loading or unloading a fatigue-regulated heavy vehicle
- inspecting, repairing or servicing a fatigue-regulated heavy vehicle
- inspecting or attending to a load (adjusting/securing load) of a fatigue-regulated heavy vehicle (a load includes passengers)
- cleaning and refuelling a fatigue-regulated heavy vehicle
- completing paperwork in relation to a fatigue-regulated heavy vehicle (organising loads/work)
- recording information or completing a document that is required under the HVNL
- helping another person or supervising any of the above
- occupying the driver seat of a fatigue-regulated heavy vehicle while its engine is running
  Note: Exemptions may apply.

These tasks have been limited because they extend the time a person is awake, increasing the risk of being fatigued.

Rest in relation to the operation of a fatigue-regulated heavy vehicle is not doing any of the above.

What work and rest options are available?

The HVNL provides heavy vehicle drivers and operators with various work and rest hours options, each with their own work and rest limits. There are four options available:

1. Standard hours
2. Basic Fatigue Management (BFM) hours
3. Advanced Fatigue Management (AFM) hours
4. Exemption hours.

Note: The following link to the NHVR website provides the work and rest requirements for each of the work and rest hours options.
www.nhvr.gov.au/safety-accreditation-compliance/fatigue-management/work-and-rest-requirements

BFM and AFM provide increased levels of flexibility by managing fatigue risks through the National Heavy Vehicle Accreditation Scheme (NHVAS). Heavy vehicle drivers can only work under these hours if they have been inducted into an accredited operators system.

Exemptions enable operators and drivers to apply for work and rest hours not possible under any of the other work and rest options. Strict constraints apply.

3. Keep work and rest records

When does a driver need to carry a Work Diary?

A driver of a fatigue-regulated heavy vehicle is required to carry a Work Diary when they are, or if they have in the last 28 days, been:

- driving outside a radius of 100km from their driver base (100+km work)
- working under BFM or AFM
- working under an exemption.

At the request of an Authorised Officer, drivers must produce their Work Diary records for the previous 28 days. An Authorised Officer is a police officer, state or territory road agency officer or an NHVR officer.

Note: Some specific state and territory exemptions exist.

Completing a Work Diary (100+km work)

Drivers of a fatigue-regulated vehicle undertaking or planning to undertake a 100+km journey in a day must complete their Work Diary (including all work and rest) for that day. Detailed instructions on how to complete your Work Diary, including examples, are located at the beginning of your Work Diary.

Counting time

There are detailed instructions on pages 21–25 of the Work Diary explaining how to count time. It is important to remember when counting time that:

- each 24-hour period starts at the end of a major rest break relevant to the work/rest hours arrangement under which the driver is working (e.g. standard hours solo (at least) seven hours continuous rest).
- each 24-hour period ends exactly 24 hours after commencement.
- it is possible that you could have more than one 24-hour period running at the same time. This can occur when there are two major rest breaks within a 24-hour period.

Tip: A major rest break does not reset your 24-hour period; it commences another 24-hour period.

Recording work/rest in non-participating jurisdictions

If you are the driver of a fatigue-regulated heavy vehicle travelling into WA or NT for a period of seven days or less, you are required to comply with both the HVNL fatigue requirements and any relevant local laws. To demonstrate your compliance, you should complete your Work Diary as you would if you were working in a participating jurisdiction.

For periods of work longer than seven days carried out in a non-participating jurisdiction, the driver will need to comply with the local heavy vehicle driver fatigue, work rest and record keeping requirements. When driving a fatigue-regulated heavy vehicle and returning from a non-participating jurisdiction to a participating jurisdiction, the driver must complete their Work Diary from the beginning of the last major rest break taken prior to re-entering the participating jurisdiction.

Further information can be found on page 9 of the Work Diary instructions.

4. Provide records to record keeper within set time frames

Record keepers must keep a record of specific information for drivers of fatigue regulated heavy vehicles. A record keeper may be the:

- employer, if the driver is employed
- accredited operator, if the driver is working under BFM or AFM accreditation
- driver (as a self-employed or owner driver).

Drivers must provide their record keeper with their relevant work and rest hours totals and any other relevant vehicle information the record keeper may not reasonably have access to (registration numbers, dates the driver worked, etc.).

The record keeper determines the record location and notifies the driver. The record location is usually the driver's base.

All records must be:

- kept for three years after they are created
- kept at a location accessible to an Authorised Officer for audit or investigation purposes
- in a format that is readable and reasonably assumed it will be readable in at least three years from the date of its creation.

When do HVNL fatigue requirements apply?

The heavy vehicle driver fatigue requirements found in chapter 6 of the HVNL apply to drivers and other parties operating a fatigue-regulated heavy vehicle.

A fatigue-regulated heavy vehicle is defined as a:

- motor vehicle with a Gross Vehicle Mass (GVM) of more than 12t
- combination with a GVM of more than 12t
- fatigue-regulated bus (GVM greater than 4.5t and built or fitted to carry more than 12 adults including the driver).

Some vehicles have been specifically excluded from this definition, these include motor vehicles that are:

- built to operate primarily as a machine or implement off-road and are not capable of carrying goods or passengers by road

or

- motorhomes.

For example, a truck with a GVM of 8.7t towing a trailer with a GVM of 3.4t (8.7t + 3.4t = 12.1t) would be classed as a fatigue-regulated heavy vehicle.

Tip: The manufacturer specifies the GVM and it can be located on the vehicle identification plate, registration label or papers.

What can I do to manage fatigue?

The implementation of a safety management system (SMS) that addresses the risks associated with fatigue will assist in satisfying the requirements of the HVNL as they relate to heavy vehicle driver fatigue.

While this bulletin is not intended to provide an exhaustive list, here are some examples of systems that can be established as part of an effective SMS:

- Reviewing driving or work schedules and work records of relevant drivers
- Regularly assessing fitness for duty of relevant drivers
- Reviewing contractual arrangements and documentation relating to the consignment and delivery of goods
- Reviewing loading and unloading times and delays at loading and unloading places
- Developing and adhering to trip plans
- Implementing formalised processes to engage and consult with other parties in the chain.

What actions can Authorised Officer's take?

Authorised Officers have powers relating to heavy vehicle driver fatigue requirements, including inspecting heavy vehicle driver's work and rest records.

Enforcement action for any breach of fatigue, work/rest hours or Work Diary requirements will depend on the nature and severity of the breach. Options available to Authorised Officers include (but are not limited to) formal warnings, infringement notices and court imposed penalties.

Drivers of fatigue-regulated heavy vehicles that are deemed to be driving while impaired by fatigue may face penalties and be prevented from working, even if they are complying with work and rest requirements.

Drivers of fatigue-regulated heavy vehicles may be directed to immediately stop work and not work again for a stated period if:

- the driver is impaired by fatigue
- the driver has committed a severe or critical work/rest hours breach
- the driver is unable to produce a Work Diary without a reasonable excuse
- the Work Diary produced cannot be relied on as an accurate record of the time the driver recently spent working or resting.

Where can I get more information?

Heavy vehicle driver fatigue or Work Diary requirements

This bulletin summarises the key obligations set out in the HVNL and is not exhaustive. Visit our website for more information about heavy vehicle driver fatigue or Work Diary requirements or contact us on 1300 MYNHVR (1300 696 487). www.nhvr.gov.au/safety-accreditation-compliance/fatigue-management

Chain of Responsibility (CoR)

More information is available on the NHVR website at: www.nhvr.gov.au/safety-accreditation-compliance/chain-of-responsibility

NHVAS

More information is available on the NHVR website at: www.nhvr.gov.au/safety-accreditation-compliance/national-heavy-vehicle-accreditation-scheme

Fatigue management exemptions

More information is available on the NHVR website at: www.nhvr.gov.au/safety-accreditation-compliance/fatigue-management/fatigue-management-exemptions

Safety Management Systems (SMS)

More information is available on the NHVR website at: www.nhvr.gov.au/safety-accreditation-compliance/safety-management-systems

For more information

Subscribe:	www.nhvr.gov.au/subscribe
Visit:	www.nhvr.gov.au
Email:	info@nhvr.gov.au
Telephone:	1300 MYNHVR (1300 696 487)*

*Standard 1300 call charges apply. Please check with your phone provider.
Image source: Volvo Trucks Australia

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Appendix 2. Site-specific Erosion and Sediment Control Plan (Enabling works)

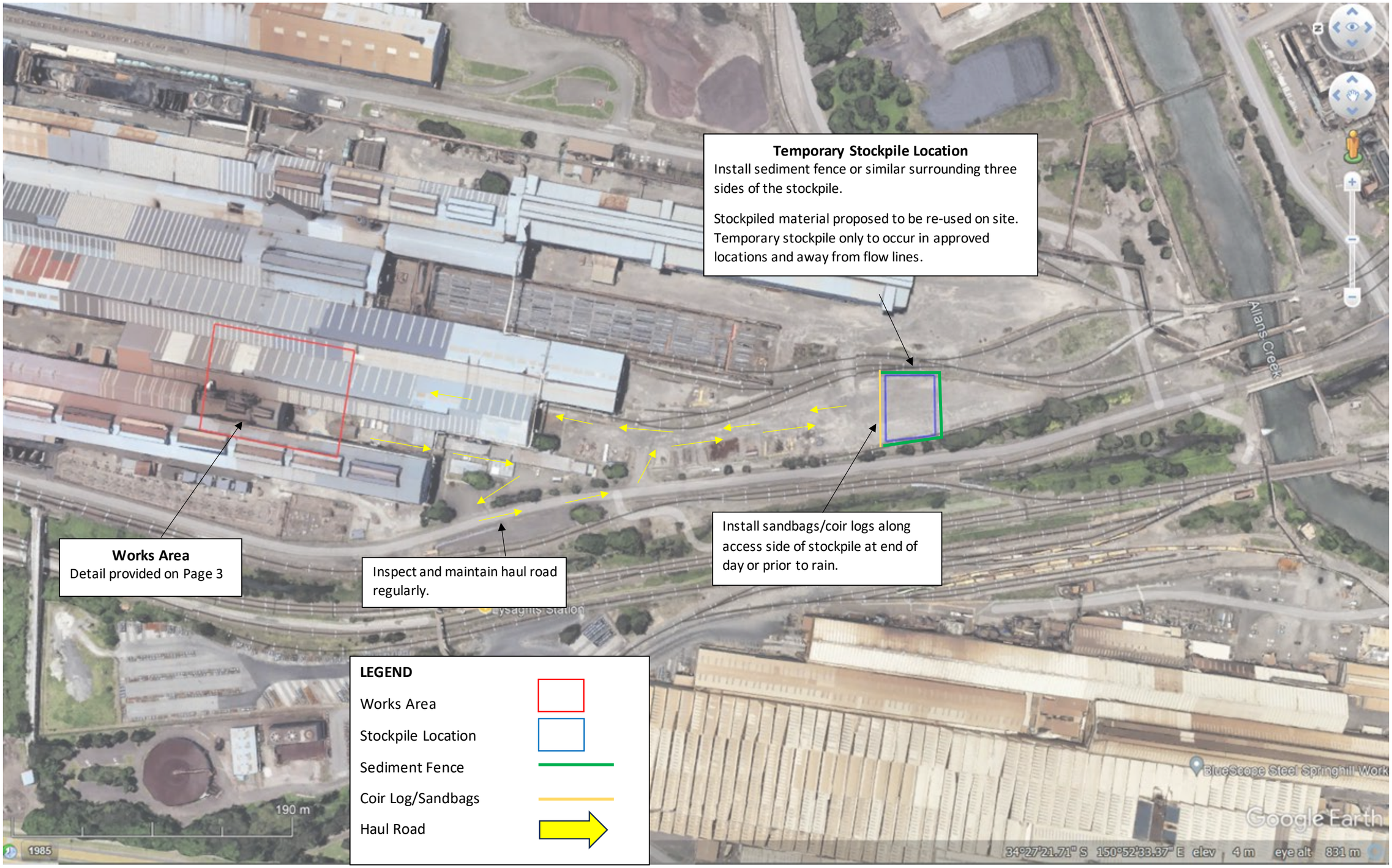
BlueScope Port Kembla Advanced Steel Manufacturing Precinct (ASMAP)

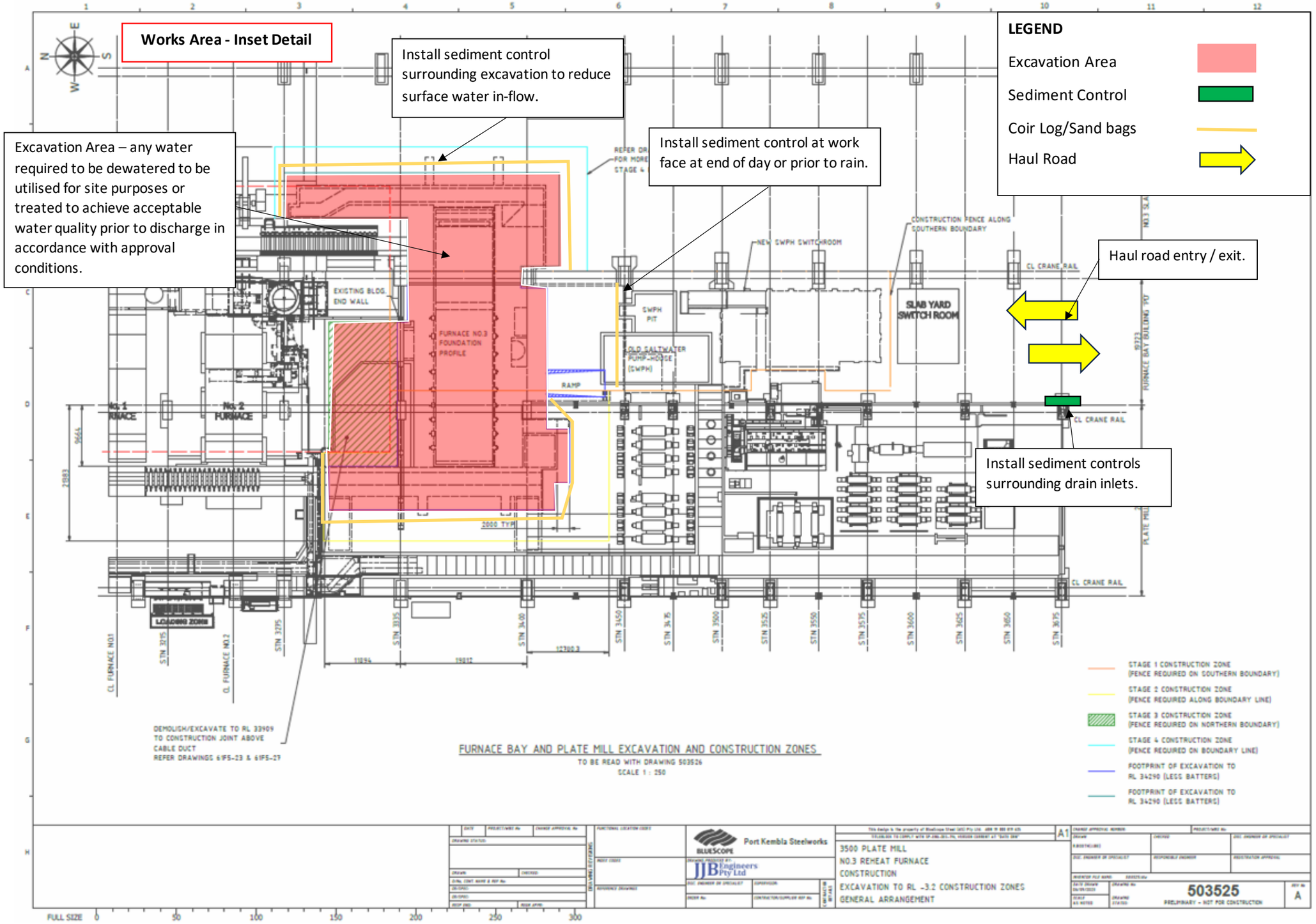
Progressive Erosion and Sediment Control Plans (PESCP) - Enabling Works – Version 1

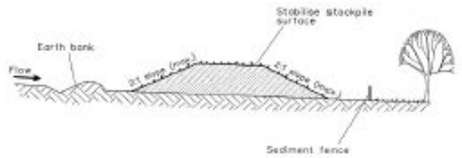
NOTES

1. This progressive plan is to be read in conjuction with the Construction Environmental Management Plan (CEMP) and relevant specifications and procedures.
2. Works programming to maximise the mitigation of erosion by the early implementation of permanent drainage measures and minimising the area and duration of soil disturbance.
3. Weather forecasting to be monitored and site management measures to be planned for imminent storm/rain/wind events.
4. The plan is to be revised as necessary (i.e. progression of works, altered site conditions or weather).
5. All erosion and sediment controls generally to be constructed in accordance with Managing Urban Storm Water: Soils and Contruction – 4th Edition, Landcom, 2004.
6. The controls depicted in the following plans are indicative only. The exact position and construction of the nominated controls will be determined, subject to site conditions and constraints. Any significant changes in the nature or function of controls will be progressively marked on this series of PESCP's.
7. Toolbox talks/daily briefings to regularly focus on erosion and sediment control for specific works, associated risks, potential impacts and mitigation measures.
8. Temporary controls in addition to those shown may be required at strategic locations as required by the progression of works or weather conditions.
9. Maximise the interception and diversion of 'clean' (off site water) away from works areas. The 'clean' flows to be conveyed in controlled drainage lines to suitable discharge points. The flows to be discharged to off-site areas at non-erosive velocities with adequate diffusers.
10. Ensure drainage paths and controls are adjusted as required to maximise the separation of 'clean' (off site) and 'dirty' (on site) water flows through/off site.
11. Temporary stockpiles to be located in approved areas and away from drains and flow lines.
12. Vehicles to maintain low speeds within the site particularly in unfavourable weather conditions i.e. wet or windy.
13. All erosion and sediment control devices shall be properly maintained for the duration of the work. All structures are to be inspected after rain events and sediment to be removed when the capacity has been reduced by 30% or more.
14. Any temporary stockpiles should be stabilised using sediment fencing or similar.
15. Any waste proposed for off-site disposal should be assessed in accordance with the NSW EPA Waste Classification Guidelines (2014).
16. Any encountered Acid Sulfate Soils to be managed in accordance with the Project's CEMP.
17. Do not discharge water or wastewater to stormwater, watercourses, drainage channels or into surrounding land without approval.
18. Cover, or otherwise protect from erosion, stockpiles that will be in place for more than 14 days.
19. Protect existing and constructed inlets to pits and culverts from sediment ingress.
20. Excavations to be dewatered where required and utilised for site purposes or treated to achieve acceptable water quality prior to discharge in accordance with approval conditions.
21. Undertake visual dust monitoring during site works, and provide measures where required including dust suppresion.
22. Regularly inspect ersosion and sediment control measures, including following rainfall events and repair as necessary.
23. Enter and exit the site via approved access points and monitor public roads for sediment tracking.
24. All site personnel to report any spills or leaks as soon as possible.
25. Standard drawings of ersoion and sediment control devices for reference provided at end of PESCP.

VERSION	DESCRIPTION	DRAWN BY	DATE
01	ORIGINAL ISSUE – ENABLING WORKS	NICK RAMSEY	20/05/2024


Temporary Stockpile Location
Install sediment fence or similar surrounding three sides of the stockpile.
Stockpiled material proposed to be re-used on site. Temporary stockpile only to occur in approved locations and away from flow lines.
Works Area
Detail provided on Page 3
Inspect and maintain haul road regularly.
Install sandbags/coir logs along access side of stockpile at end of day or prior to rain.
LEGEND
Works Area
Stockpile Location
Sediment Fence
Coir Log/Sandbags
Haul Road
Allans Creek
Lysaghts Station
BlueScope Steel Springhill Work
190 m
1985
Google Earth
34°27'21.71" S 150°52'33.37" E elev 4 m eye alt 831 m

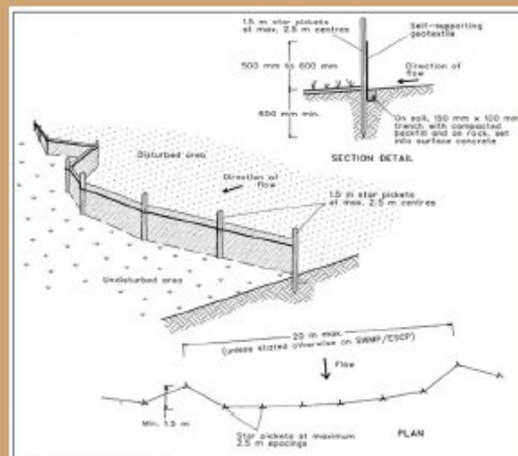

Works Area - Inset Detail
Install sediment control surrounding excavation to reduce surface water in-flow.
Excavation Area – any water required to be dewatered to be utilised for site purposes or treated to achieve acceptable water quality prior to discharge in accordance with approval conditions.
Install sediment control at work face at end of day or prior to rain.
LEGEND
Excavation Area
Sediment Control
Coir Log/Sand bags
Haul Road
Haul road entry / exit.
Install sediment controls surrounding drain inlets.
CONSTRUCTION FENCE ALONG SOUTHERN BOUNDARY
NEW SWPH SWITCH-ROOM
CL CRANE RAIL
SLAB YARD SWITCH ROOM
SWPH PIT
OLD SALTWATER PUMP-HOUSE (SWPH)
EXISTING BLDG END WALL
FURNACE NO.3 FOUNDATION PROFILE
RAMP
No.1 FURNACE
No.2 FURNACE
LOADING ZONE
CL FURNACE NO.1
CL FURNACE NO.2
DEMOLISH/EXCAVATE TO RL 33909 TO CONSTRUCTION JOINT ABOVE CABLE DUCT
REFER DRAWINGS 61F5-23 & 61F5-27
STAGE 1 CONSTRUCTION ZONE (FENCE REQUIRED ON SOUTHERN BOUNDARY)
STAGE 2 CONSTRUCTION ZONE (FENCE REQUIRED ALONG BOUNDARY LINE)
STAGE 3 CONSTRUCTION ZONE (FENCE REQUIRED ON NORTHERN BOUNDARY)
STAGE 4 CONSTRUCTION ZONE (FENCE REQUIRED ON BOUNDARY LINE)
FOOTPRINT OF EXCAVATION TO RL 34290 (LESS BATTERS)
FOOTPRINT OF EXCAVATION TO RL 34290 (LESS BATTERS)
FURNACE BAY AND PLATE MILL EXCAVATION AND CONSTRUCTION ZONES
TO BE READ WITH DRAWING 503526
SCALE 1 : 250
Port Kamba Steelworks
BLUESCOPE
JJB Engineers Pty Ltd
3500 PLATE MILL
NO.3 REHEAT FURNACE
CONSTRUCTION
EXCAVATION TO RL -3.2 CONSTRUCTION ZONES
GENERAL ARRANGEMENT
A1
503525
PRELIMINARY - NOT FOR CONSTRUCTION
A
FULL SIZE 0 50 100 150 200 250 300



Construction Notes

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

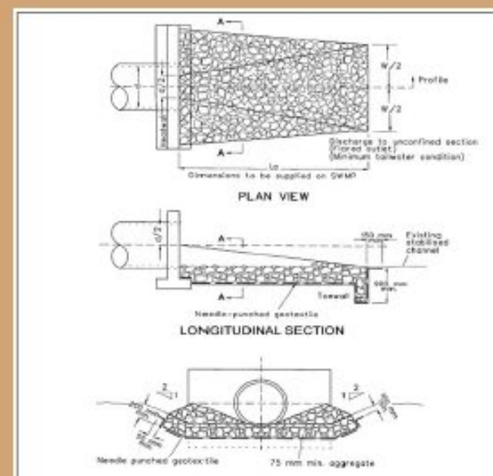
STOCKPILES **SD 4-1**



Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150–mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

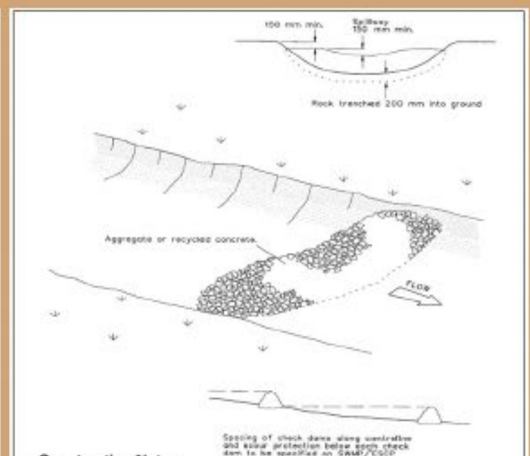
SEDIMENT FENCE **SD 6-8**



Construction Notes

1. Compact the subgrade fill to the density of the surrounding undisturbed material.
2. Prepare a smooth, even foundation for the structure that will ensure that the needle-punched geotextile does not sustain serious damage when covered with rock.
3. Should any minor damage to the geotextile occur, repair it before spreading any aggregate. For repairs, patch one piece of fabric over the damage, making sure that all joints and patches overlap more than 300 mm.
4. Lay rock following the drawing, according to Table 5.2 of Landcom (2004) and with a minimum diameter of 75 mm.
5. Ensure that any concrete or riprap used for the energy dissipater or the outlet protection conforms to the grading limits specified on the SWMP.

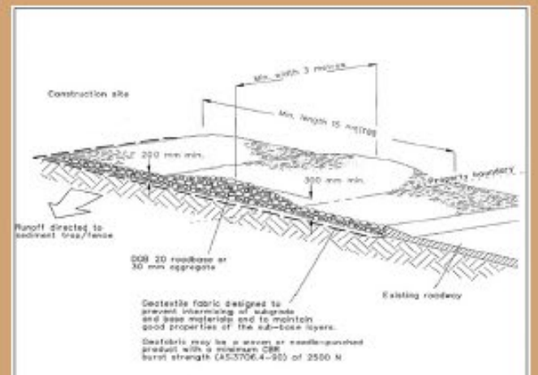
ENERGY DISSIPATER **SD 5-8**



Construction Notes

1. Check dams can be built with various materials, including rocks, logs, sandbags and straw bales. The maintenance program should ensure their integrity is retained, especially where constructed with straw bales. In the case of bales, this might require their replacement each two to four months.
2. Trench the check dam 200 mm into the ground across its whole width. Where rock is used, fill the trenches to at least 100 mm above the ground surface to reduce the risk of undercutting.
3. Normally, their maximum height should not exceed 600 mm above the gully floor. The centre should act as a spillway, being at least 150 mm lower than the outer edges.
4. Space the dams so the toe of the upstream dam is level with the spillway of the next downstream dam.

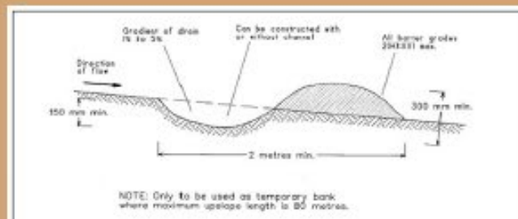
ROCK CHECK DAM **SD 5-4**



Construction Notes

1. Strip the topsoil, level the site and compact the subgrade.
2. Cover the area with needle-punched geotextile.
3. Construct a 200-mm thick pad over the geotextile using road base or 30-mm aggregate.
4. Ensure the structure is at least 15 metres long or to building alignment and at least 3 metres wide.
5. Where a sediment fence joins onto the stabilised access, construct a hump in the stabilised access to divert water to the sediment fence

STABILISED SITE ACCESS **SD 6-14**

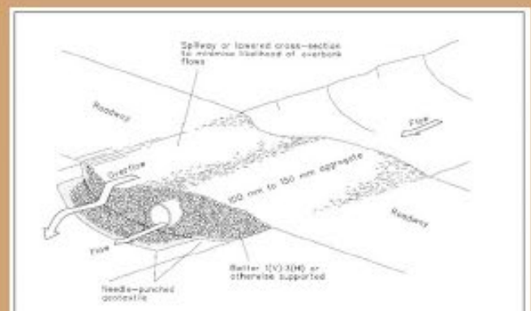


NOTE: Only to be used as temporary bank where maximum upslope length is 80 metres.

Construction Notes

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

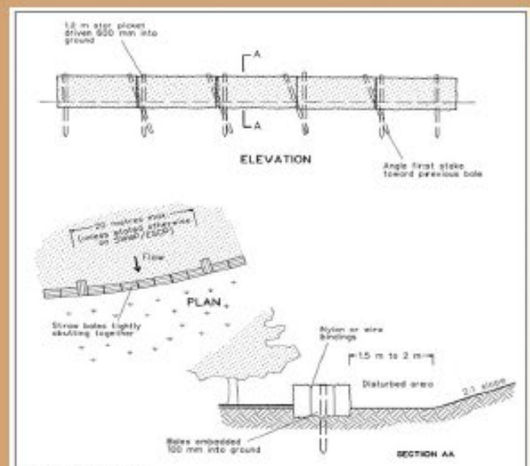
EARTH BANK (LOW FLOW) **SD 5-5**



Construction Notes

1. Prohibit all traffic until the access way is constructed.
2. Strip any topsoil and place a needle-punched textile over the base of the crossing.
3. Place clean, rigid, non polluting aggregate or gravel in the 100 mm to 150 mm size class over the fabric to a minimum depth of 200 mm.
4. Provide a 3-metre wide carriageway with sufficient length of culvert pipe to allow less than a 3(H): 1 (V) slope on side batters.
5. Install a lower section to act as an emergency spillway in greater than design storm events.
6. Ensure that culvert outlets extend beyond the toe of fill embankments.

TEMPORARY WATERWAY CROSSING **SD 5-1**



Construction Notes

1. Construct the straw bale filter as close as possible to being parallel to the contours of the site.
2. Place bales lengthwise in a row with ends tightly abutting. Use straw to fill any gaps between bales. Straws are to be placed parallel to ground.
3. Ensure that the maximum height of the filter is one bale.
4. Embed each bale in the ground 75 mm to 100 mm and anchor with two 1.2 metre star pickets or stakes. Angle the first star picket or stake in each bale towards the previously laid bale. Drive them 600 mm into the ground and, if possible, flush with the top of the bales. Where star pickets are used and they protrude above the bales, ensure they are fitted with safety caps.
5. Where a straw bale filter is constructed downslope from a disturbed batter, ensure the bales are placed 1 to 2 metres downslope from the toe.
6. Establish a maintenance program that ensures the integrity of the bales is retained - they could require replacement each two to four months.

STRAW BALE FILTER **SD 6-7**

Appendix 3. Noise and vibration measures (Enabling works)

BlueScope Port Kembla Advanced Steel Manufacturing Precinct (ASMAP)

Construction Noise and Vibration Management Plan

PREPARED FOR

BlueScope Steel (AIS) Pty Ltd

DATE
24 May 2024

REFERENCE
0650342

DOCUMENT DETAILS

DOCUMENT TITLE	BlueScope Port Kembla Advanced Steel Manufacturing Precinct (ASMAP)
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01	00	Keshav Dhayam	Magaesh Naidu	Lucy Baker	24.05.24	

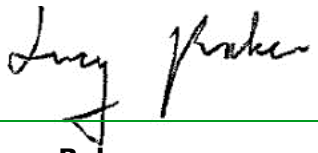
SIGNATURE PAGE

BlueScope Port Kembla Advanced Steel Manufacturing Precinct (ASMAP)

Construction Noise and Vibration Management Sub-plan

0650342

Keshav Dhayam
Managing Technical Consultant, Acoustics



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ACRONYMS AND ABBREVIATIONS

Acronyms	Description
Applicant	BlueScope Steel (AIS) Pty Ltd (BlueScope)
AADT	Annual Average Daily Traffic
ASMAP	Advanced Steel Manufacturing Precinct
BlueScope	BlueScope Steel (AIS) Pty Ltd (BSL)
CEMP	Construction Environment Management Plan
CNVMP	Construction Noise and Vibration Management Sub-plan
dB(A)	dB(A) denotes a single number sound pressure level that includes a frequency weighting ("A-weighting") to reflect the subjective loudness of the sound level. The frequency of a sound affects its perceived loudness. Human hearing is less sensitive at low and very high frequencies, and so the A-weighting is used to account for this effect. An A-weighted decibel level is written as dB(A).
DPE	NSW Department of Planning and Environment (formerly Department of Planning, Industry and Environment, DPIE)
DPHI	NSW Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
EPA	(NSW) Environment Protection Authority
EPL	Environment Protection Licence
ERM	Environmental Resources Management Australia Pty Ltd
Hz	Hertz - the measure of frequency of sound wave oscillations per second. 1 oscillation per second equals 1 hertz
L_{A1}	A-weighted sound pressure level which is exceeded for 1% of the measurement period. During the measurement period, the noise level is below the L_{A1} level for 99% of the time.
L_{A10}	A-weighted sound pressure level which is exceeded for 10% of the measurement period. During the measurement period, the noise level is below the L_{A10} level for 90% of the time. The L_{A10} is a common noise descriptor for environmental noise and road traffic noise.
L_{Aeq}	Time averaged A-weighted equivalent continuous sound pressure level.
L_{A90}	A-weighted sound pressure level which is exceeded for 90% of the measurement period. Often referred to as the background noise level.
L_{Amax}	The maximum sound pressure level of an event measured with a sound level meter satisfying AS IEC 61672.1-2004 set to 'A' frequency weighting and fast time weighting.
NSW	New South Wales
OOHW	Outside of the recommended construction standard hours
PKSW	Port Kembla Steel Works refers to BlueScope's existing Port Kembla Steelworks (PKSW). Total area of approximately 837 ha.
Project	The Project refers to enabling works of the Advanced Steel Manufacturing Precinct (ASMAP), it involves site establishment, demolition, excavation to 3m depth (to remove concrete slab), underground services and electrical infrastructure preparation

Acronyms	Description
Project Area Location	Approximately 3 kilometres (km) (direct-line) south of the Wollongong central business district (CBD) and 80 km (direct-line) south of Sydney CBD. The Project Area is entirely located within the Wollongong Local Government Area (LGA) in the Illawarra Region of NSW. The Project is located on freehold land within Part Lot 1 of DP 606434.
RBL	Rating Background Level. The background noise level as defined by the NSW NPI (2017). It is calculated by taking the median value of the lowest 10th percentile L90 measurements in any day, evening or night period.
SEARs	Secretary's Environmental Assessment Requirements
SPL	Sound Pressure Level - the level of sound pressure as measured at a distance by a standard sound level meter with a microphone. This differs from sound power level (L_W) in that this is the received sound as opposed to the sound 'intensity' at the source
SSD	State Significant Development
SWL	Sound Power Level - this is a measure of the total power radiated by a source. The Sound Power of a source is a fundamental property of the source and is independent of the surrounding environment
Topography	The Project Area is relatively flat with an elevation of approximately 6 metres Australian Height Datum (m AHD), with survey levels recorded in the Plate Mill courtyard of 6.4 m AHD. The surrounding area generally slopes to the east towards Port Kembla Inner Harbour.

EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd has been engaged by BlueScope Steel (AIS) Pty Ltd ("BlueScope") to prepare a Construction Noise and Vibration Management Sub-plan (CNVMP) as part of the Construction Environmental Management Plan (CEMP) for the enabling works of the Advanced Steel Manufacturing Precinct (ASMAP), located within the existing Port Kembla Steel Works (PKSW) in Port Kembla, 80 kilometres south of Sydney and approximately 3 kilometres south of Wollongong.

The construction works assessed in this report relevant to the enabling works include site establishment, demolition, excavation to 3m depth (to remove concrete slab), underground services and electrical infrastructure preparation. The report quantitatively assesses potential noise and vibration impacts via modelling at identified sensitive receivers, and conducting further investigations where necessary, to inform the recommendations for mitigation and management measures.

This assessment informs the CNVMP to the Construction Environmental Management Plan (CEMP), and addresses Conditions B5, B6 and B7 of the Development Consent for State Significant Development SSD-50268731, issued on 7 May 2024.

The existing environment and sensitive receivers were established, and construction noise assessment management levels were developed in accordance with the *Interim Construction Noise Guideline 2009* (ICNG) and the *Road Noise Policy 2011* (RNP).

Applicable worst-case construction assessment scenarios were developed based on project information provided by the Applicant. Construction noise levels were predicted and compared to the established noise limits to evaluate compliance.

The assessment results indicate that the ICNG Noise Affected Management Level may be exceeded at the southern receiver (Referred to as R3) for heavy intensity construction work outside of the recommended standard hours in the absence of any noise mitigation measures which is a worst-case construction scenario. It is recommended to limit the use of the 48t rock breaker, Floor saw and Handheld demo saw to the ICNG recommended standard hours (i.e., 7am to 6pm Monday to Friday and 8am to 1pm Saturdays and no work on Sundays or public holidays). Noise management and mitigation measures will also be required to be implemented in the CNVMP for the Project.

Construction traffic noise impacts due to the additional traffic associated with the Project have been assessed and no traffic noise impacts are expected. Compliance with the RNP criteria at all Sensitive Receivers is expected.

Any complaints received from the community regarding noise should be addressed in accordance with the complaints handling procedures included in the CEMP

No vibration sensitive receivers were identified within 100 metres of the Project, indicating that there are no residential areas, schools, hospitals, or other receivers that could be significantly impacted by potential vibration impacts caused by operation or construction of the Project. A vibration assessment has therefore not been conducted.

1. INTRODUCTION

This CNVMP informs the CEMP and addresses Conditions B5, B6 and B7 of the Development Consent for State Significant Development SSD-50268731, issued on 7 May 2024 (NSW DPHI, 2024).

The assessment has generally been prepared in accordance with the following standards, policies and guidelines:

- NSW Department of Environment and Climate Change (DECC), *Interim Construction Noise Guideline 2009* (ICNG) (NSW DECC, 2009);
- Australian Standards (AS) 1055:2018 *Acoustics – Description and measurement of environmental noise* (Standards Australia, 2018);
- NSW Department of Environment and Conservation (DEC) *Assessing Vibration: A Technical Guideline 2006* (NSW DEC, 2006);
- NSW Department of Environment, Climate Change and Water (DECCW), *Road Noise Policy* (NSW DECCW, 2011);
- Transport for NSW (TfNSW), *Road Noise Criteria Guideline (RNCG) 2022* (TfNSW RNCG, 2022); and
- Transport for NSW (TfNSW), *Noise Mitigation Guideline (NMG) 2022* (TfNSW NMG, 2022).

No vibration sensitive receivers were identified within 100 metres of the Project, indicating that there are no residential areas, schools, hospitals, or other receivers that could be significantly impacted by potential vibration impacts caused by the proposed construction works.

A vibration assessment has therefore not been conducted. However, general advice on the greatest risks of vibration is provided in this report.

2. OVERVIEW

The construction site is located at BlueScope's existing Port Kembla Steelworks (PKSW) within the Hot Mills area as **shown in Figure 2-1**. PKSW has an area of approximately 837 hectares (ha) and the Hot Mills is approximately 142 ha.

The construction site is situated approximately 3 kilometres (km) (direct-line) south of the Wollongong central business district (CBD) and 80 km (direct-line) south of Sydney CBD.

2.1 CONSTRUCTION ACTIVITIES – ENABLING WORKS

Construction works associated with the enabling works of the Project is anticipated to begin in July 2024, as follows:

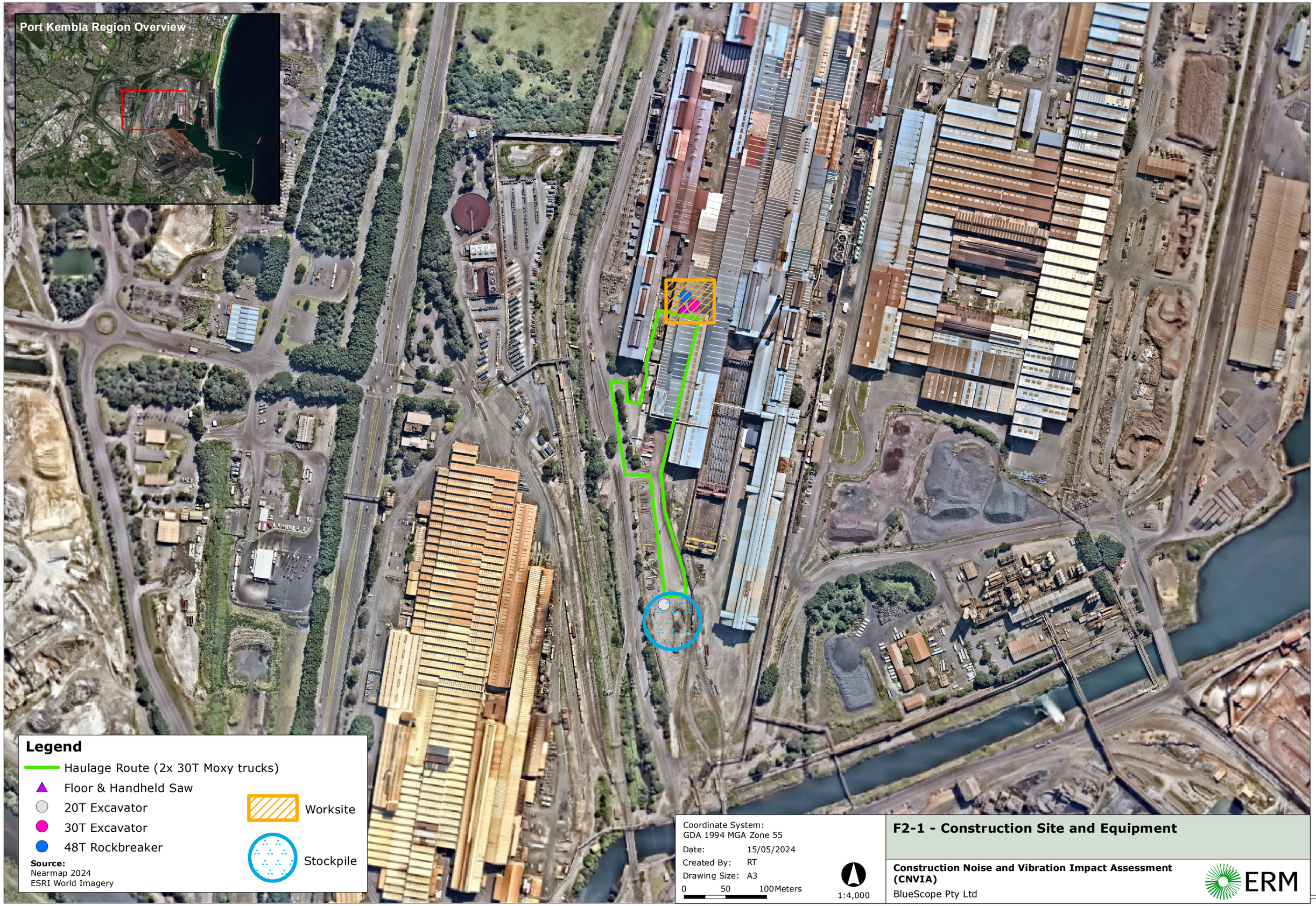
- Site establishment from July 24, involving installation of temporary buildings;
- Demolition and excavation to 3m depth from July 24; and
- Underground services electrical infrastructure preparation from July 24, generally low noise construction involving manual tasks and elevating work platforms (EWPs) and small excavations.

2.2 CONSTRUCTION EQUIPMENT

For the noise impact assessment of the enabling works, the loudest equipment, representing high intensity works, are modelled and assessed against the relevant assessment criteria. By meeting the assessment criteria for high intensity works, compliance is also expected to be achieved for less intensive construction activities.

The location of loudest equipment and construction activities used in the model are shown in **Figure 2-1**, and are described below:

- Worksite:
  - 1 x 30t Excavator;
  - 1 x 48t Excavator (with hammer attachment) (Rockbreaker);
  - Floor saw and
  - Handheld saw.
- Stockpile:
  - 1 x 20t Excavator.
- Haulage route:
  - 2 x 30t Moxy trucks.
- On surrounding road network:
  - Truck & Dog (50 loads approximate) will haul demo spoil (concrete) offsite from stockpile to recycler (SCE); and
  - Expected normal light vehicle movements, at change of shift, typically at 7am and 6pm.



F2-1 - Construction Site and Equipment

Construction Noise and Vibration Impact Assessment (CNVIA)

BlueScope Pty Ltd

ERM

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2.3 PROPOSED CONSTRUCTION SCHEDULE

BlueScope has advised on the proposed construction schedule, as summarised in **Table 2-1**, for the purpose of this assessment. The construction schedule for enabling works begins on 1 July 2024.

TABLE 2-1 PROPOSED CONSTRUCTION SUMMARY SCHEDULE

Activity	Forecast Dates
Site mobilisation & establishment	Jul 2024 – Sep 2024
Excavation and Demolition	Jul 2024 – Jan 2025
Underground services electrical infrastructure preparation	Jul 2024 – Oct 2024

TABLE 2-2 PROPOSED SHUTDOWN CONSTRUCTION SCHEDULE

Activity	Duration from July
Site mobilisation including plant and equipment	20 hrs
Site barricade and signage	4 hrs
Expose and saw cut pedestrian tunnel roof	16 hrs
Bulk excavate to ground level-3m (north to south)	36 hrs
Saw cut pedestrian wall	12 hrs
Demolish the tunnel	24 hrs
Form up and pour block off wall	16 hrs
Curing of block off wall	48 hrs
Strip form work of block off wall	4 hrs
Demolish redundant cable duct	12 hrs
Excavate & install 4 off 200 mm conduits	18 hrs
Install ATF around the excavation perimeter	4 hrs
Load haul and dump spoil to temporary location	24 hrs
Load and cart demolish concrete to Recyclers	24 hrs
Demobilisation from site	12 hrs
Work completion	0 days
Total	**7.5 days**

The Project is proposing construction work to be completed both during and outside the Recommended Standard Hours, defined as follows in the ICNG:

- Monday to Friday 7am to 6pm;
- Saturday 8am to 1pm; and
- No work on Sundays or Public Holidays.

3. DEVELOPMENT CONSENT

This report is prepared in accordance with Conditions B5, B6 and B7 of the Development Consent for SSD-50268731, issued on 7 May 2024 (NSW DPHI, 2024).

3.1 CONDITION B5 – HOURS OF WORK

Condition B5 states that the applicant must comply with the hours detailed in **Table 3-1**.

TABLE 3-1 HOURS OF WORK

Activity	***Day***	***Time***
Earthworks and construction	*Monday – Friday* *Saturday*	*7 am to 6 pm* *8 am to 1 pm*
Commissioning	*Monday–Sunday*	*24 hours*
Operation	*Monday–Sunday*	*24 hours*

Source: Table 1 of Condition B5 of the Development Consent for State Significant Development SSD-50268731, issued on 7 May 2024 (NSW DPHI, 2024).

3.2 CONDITION B6 – WORKS OUTSIDE OF THE HOURS

Works outside of the hours identified in condition B5 may be undertaken in the following circumstances:

(a) works that are inaudible at the nearest sensitive receivers;

(b) works agreed to in writing by the Planning Secretary;

(c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or

(d) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

3.3 CONDITION B7 – CONSTRUCTION NOISE LIMITS

The development must be constructed to achieve the construction noise management levels detailed in the Interim Construction Noise Guideline (NSW DECC, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures in the Appendix 2.

The two points relevant to construction noise in Appendix 2 of the Development Consent states that:

- Prior to construction: A Construction Environmental Management Plan (CEMP) should be considered prior to commencing works to ensure 'best practice' measures are adhered to. The CEMP should include appropriate noise management strategies; and

- During construction: Construction work will be conducted in accordance with EPL 6092 conditions **L6.2** and **L6.3** (NSW EPA, 2022), where,
  - **L6.2** All construction activities for new works (ie, excluding routine maintenance works), including pile driving, jack hammering, warning sirens and similar high intensity noise sources, undertaken at the premises, and which are audible at residential premises, must be restricted to the following times: a) 7:00 am to 6:00 pm Mondays to Fridays; b) 8:00 am to 1:00 pm on Saturdays; and c) At no time on Sundays and Public Holidays; and
  - **L6.3** The hours of construction specified above may be varied by written consent of the EPA.

4. EXISTING NOISE ENVIRONMENT

This chapter summarises the noise environment at the nearest Noise Sensitive Receivers (NSRs).

4.1 NOISE SENSITIVE RECEIVERS

Noise Catchment Areas (NCAs), which may be impacted by the Project, were identified. NCAs represent an area containing Noise Sensitive Receivers (NSRs) that may experience similar background noise characteristics. Four NCAs were identified as summarised in **Table 4-1**.

TABLE 4-1 NOISE CATCHMENT AREAS

Noise Catchment Area ID	Residential NSRs	Non-residential NSRs
NCA1 (Coniston) - North-east of ASMAP	Residents within Coniston, located to the north of the Project site. The residential area of Coniston nearest to Port Kembla currently experiences noise exposure from the local road network, heavy rail, Port Kembla industrial area, and commercial premises.	• Thrive Early Learning Centre, a childcare centre operating from 7am to 6pm (childcare centre) • Coniston Public School (school) • Older Peoples Mental Health Unit (hospital) • Wollongong Golf Club (active recreation use) • JJ Kelly Park (active recreation use) • Greenhouse Park (passive recreation use).
NCA2 (Mount St Thomas) - North-west of ASMAP	Residents within Mount St Thomas, located to the northwest of the Project site. The residential area of Mount St Thomas nearest to Port Kembla currently experiences noise exposure from the local road network, heavy rail, and the Port Kembla industrial area.	N/A
NCA3 (Cringila (North)) - South of ASMAP	Cringila (North), located to the south of the Project site. The residential area of Cringila nearest to Port Kembla currently experiences noise exposure from the local road network, heavy rail, Port Kembla industrial area, and commercial	• Centenary Park, Cringila (active recreation use) • Cringila Lions Football Club (active recreation use) • Bilal Mosque (place of worship).

Noise Catchment Area ID	Residential NSRs	Non-residential NSRs
	premises which front Five Islands Road and Lake Avenue	
NCA4 (Cringila (South)) - Further south of ASMAP	Cringila (South) residents are located slightly further south of NCA 3. These residents are positioned at a higher elevation, potentially resulting in higher exposure to noise from the Port Kembla industrial area, the local road network, heavy rail and nearby commercial.	• Cringila Public School (school).

The assessed NSRs are listed in Table 4-2. The NSRs represent the worst-case impacted receivers in each NCA. Achieving compliance at the NSRs, with the implementation of mitigation and/or management, indicates compliance of all receivers within the same NCA.

Figure 4-1 presents an overview of the NCAs and the NSRs.

TABLE 4-2 NOISE SENSITIVE RECEIVERS (NSRS)

NSR ID	NCA	NSR Type	NSR Address	Coordinates WGS UTM Zone 56H		Approximate Distance to the Worksite, km
				X, m	Y, m	
R1	NCA1	Residential	23 Bridge St, Coniston NSW 2500	305671	6187154	1.8
R2	NCA2	Residential	222 Gladstone Ave, Mount St Thomas NSW 2500	305054	6186772	1.2
R3	NCA3	Residential	2 Lake Ave, Cringila NSW 2502	304581	6184092	1.4
R4	NCA4	Residential	33 Jarvie Rd, Cringila NSW 2502	304319	6183781	1.8

4.2 EXISTING NOISE LEVELS

Ambient noise monitoring was undertaken by BlueScope to measure the existing noise environment at the NCAs. Noise monitoring was conducted for a continuous period between 19 July and 9 August 2022.

The noise monitors were placed at the following locations:

1. Noise Monitor 1 was placed at 17 Bridge Street in the front yard adjacent to the south-eastern boundary fence to measure background noise levels.
2. Noise Monitor 2 was placed at 208 Gladstone Avenue in the front yard adjacent to the southern boundary fence to measure background noise levels.
3. Noise Monitor 3 was placed at 29 Merritt Avenue in the front yard adjacent to the northern boundary fence to measure background noise levels.
4. Noise Monitor 4 was placed at 25 Jarvie Road in the front yard adjacent to the north-eastern boundary fence to measure background noise levels.
5. Noise Monitor 5 was placed in the open space between the Australia's Industry World Visitors' Centre and Tom Thumb Drive to measure road traffic noise levels from Springhill Road and Tom Thumb Drive.

The unattended noise monitors were configured to measure noise levels as follows:

- 'A' weighting;
- 'Fast' response;
- 15-minute statistical intervals; and
- Measurement descriptors L_{Amax}, L_{Aeq}, L_{A1}, L_{A10}, L_{A90}.

All monitoring was conducted in accordance with Australian Standard *AS1055.1-2018 Acoustics –Description and measurement of environmental noise.*

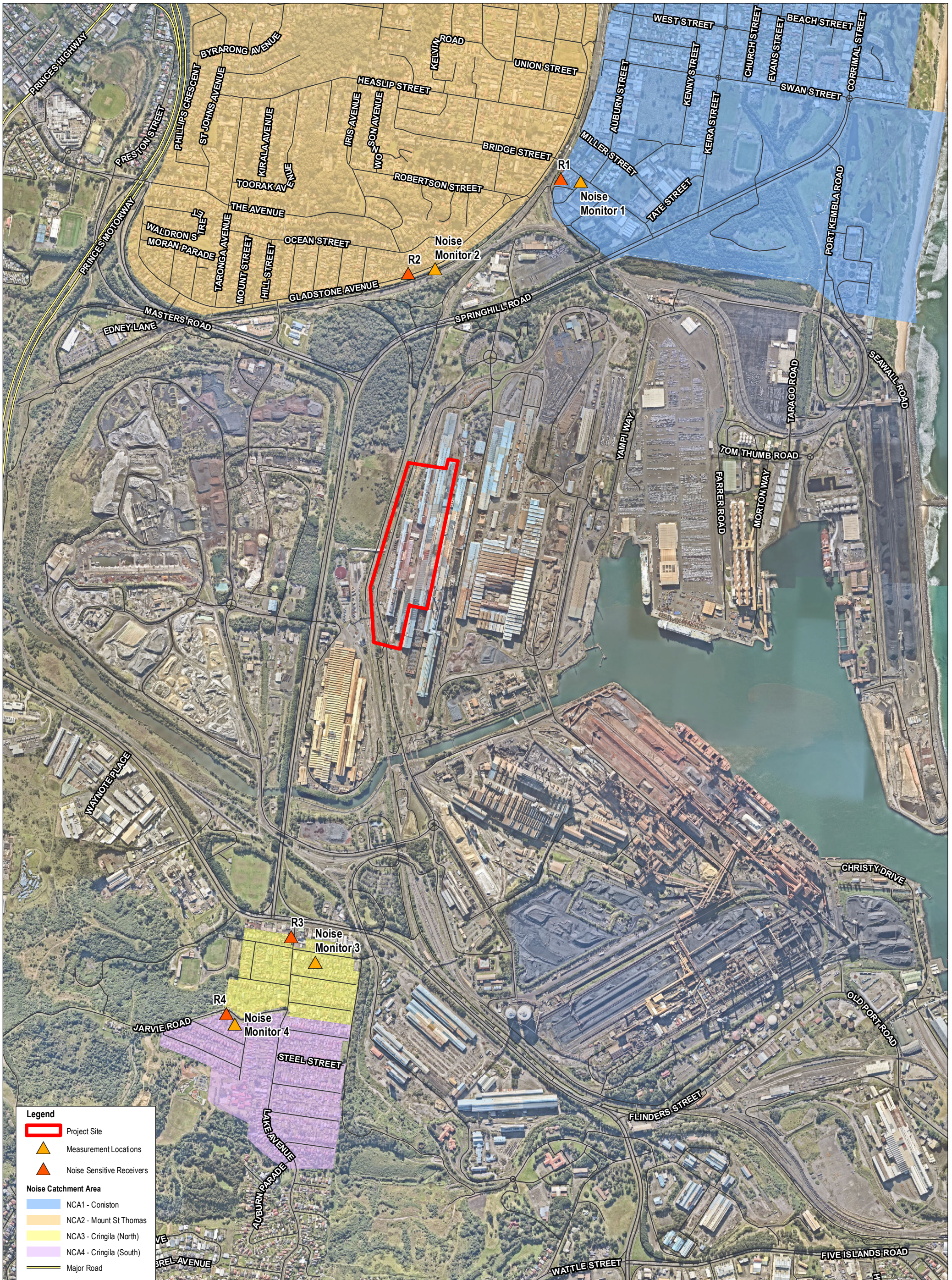
The noise monitoring results have been used to derive the operational noise criteria for this assessment. The Noise Monitoring Locations are shown in Figure 4-1.

The measurement instrumentation complied with the requirements of AS 61672.1 and AS/IEC 60942 with current NATA calibration certificates, with certification at intervals not exceeding two years at the time of use.

Calibration of the measuring equipment was carried out before and after the measurements. It is noted that the maximum variation was less than ±0.2dBA throughout the duration of the monitoring period for all equipment used.

The environmental conditions during the measurement period were referenced from the Bureau of Meteorology, Port Kembla Harbour weather station. Weather affected data was removed from the analysis of noise measurements in accordance with the requirements of the NSW EPA Noise Policy for Industry (NPI) 2017 (NSW EPA, 2017).

Wind speeds above 5 m/s and rainfall have the potential to generate extraneous and erroneous noise events, which reduce the accuracy and confidence in monitored data. Therefore, data acquired during such periods was discarded.



F4.1 Noise Catchment Areas, Noise Sensitive Receivers and Noise Monitoring Locations

Construction Noise and Vibration Impact Assessment

BlueScope Pty Ltd

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The noise monitoring results provided by BlueScope are summarised in **Table 4-3**.

TABLE 4-3 NOISE MONITORING RESULTS – AMBIENT NOISE LEVELS (PROVIDED BY BLUESCOPE)

NCA ID	Ambient Level per Period, LAeq, period in dB(A)			Rating Background Level (RBL), LA90 in dB(A)		
	Day	Evening	Night	Day	Evening	Night
NCA1	61	57	55	47	43	38
NCA2	59	57	55	49	47	46
NCA3	54	51	50	43	44	40
NCA4	56	53	50	44	45	39

Notes:
Time Period is defined as:
- Day-time period is from 0700 to 1800 (Monday to Saturday) and 0800 to 1800 (Sundays and Public Holidays);
- Evening period is from 1800 to 2200; and
- Night-time period is from 2200 to 0700 (Monday to Saturday) and 2200 to 0800h (Sundays and Public Holidays).

4.3 METEOROLOGICAL CONDITIONS

Table D1 of the NPI (NSW EPA, 2017) defines "Standard" and "Noise-enhancing" meteorological conditions as reproduced in **Table 4-4**.

TABLE 4-4 STANDARD AND NOISE-ENHANCING METEOROLOGICAL CONDITIONS

Meteorological conditions	Meteorological parameters
Standard meteorological conditions	Day/evening/night: stability categories A–D with wind speed up to 0.5m/s at 10m AGL.
Noise-enhancing meteorological conditions	Daytime/evening: stability categories A–D with light winds (up to 3m/s at 10m AGL). Night-time: stability categories A–D with light winds (up to 3m/s at 10m AGL) and/or stability category F with winds up to 2m/s at 10m AGL.

Notes:
m/s = metres per second; m = metres; AGL = above ground level;
Where a range of conditions is nominated, the meteorological condition delivering the highest-predicted noise level should be adopted for assessment purposes. However, feasible and reasonable noise limits in consents and licences derived from this process would apply under the full range of meteorological conditions nominated under standard or noise-enhancing conditions as relevant. All wind speeds are referenced to 10m AGL. Stability categories are based on the Pasquill–Gifford stability classification scheme.

Source: NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI) 2017 (NSW EPA, 2017)

In accordance with the NPI, there are two options for meteorological effects that can be considered in this assessment:

1. *Adopt the noise-enhancing meteorological conditions for all assessment periods for noise impact assessment purposes without an assessment of how often these conditions occur – a conservative approach that considers source-to-receiver wind vectors for all receivers and F class temperature inversions with wind speeds up to 2 m/s at night.*

Or

2. *Determine the significance of noise-enhancing conditions. This involves assessing the significance of temperature inversions (F and G class stability categories) for the night period and the significance of light winds up to and including 3m/s for all assessment periods during stability categories other than E, F or G. Significance is based on a threshold of occurrence of 30% determined in accordance with the provisions in this policy. Where noise-enhancing meteorological conditions occur for less than 30% of the time, standard meteorological conditions may be adopted for the assessment.*

For the purposes of this assessment, Option 1 (the conservative method) has been adopted.

5. NOISE POLICIES AND GUIDELINES

This assessment has been conducted in accordance with the following policies and guidelines:

- NSW Department of Environment and Climate Change (DECC) – *NSW Interim Construction Noise Guideline* (ICNG), July 2009.
- NSW Department of Environment, Climate Change and Water (DECCW) – *NSW Road Noise Policy* (RNP), March 2011.

Further information regarding the application of the key policy and guidelines is provided below.

5.1 NSW INTERIM CONSTRUCTION NOISE GUIDELINE (ICNG)

The ICNG (NSW DECC, 2009), presents an accepted method to assess construction noise impacts for a range of receptor types. As discussed in Section 1.1, construction works is proposed to be completed both during and outside the Recommended Standard Hours. Works outside the Recommended Standard Hours might be undertaken in accordance with the ICNG for the following categories of work:

- The delivery of oversized plant or structures that police or other authorities determine require special arrangements to transport along public roads;
- Emergency work to avoid the loss of life or damage to property, or to prevent environmental harm; and
- works where a proponent demonstrates and justifies a need to operate outside the recommended standard hours.

The ICNG encourages works to occur within the recommended standard hours of construction unless justification is provided. It focuses on minimising construction noise impacts, rather than only on achieving numeric noise levels, and recognises that some noise from construction sites is inevitable.

The ICNG encourages organisations involved with construction, maintenance or upgrading works (e.g., large scale contractors or Government agencies) to develop their best-practice techniques for managing construction noise and vibration and implementing feasible and reasonable mitigation measures.

The ICNG is suitable to quantitatively assess potential noise emissions and impacts associated with Project construction. The ICNG assessment methodology has been adopted to develop project-specific construction noise management levels, assess potential impacts, and recommend any necessary mitigation, management measures.

Table 5-1 details the ICNG construction noise management levels guidance for residential receptors.

TABLE 5-1 CONSTRUCTION NOISE MANAGEMENT LEVELS FOR RESIDENTIAL RECEPTORS

Time of day	Management Level, Leq (15min), dB(A)	How to apply
Recommended standard hours (SH): • Monday to Friday 7 am to 6 pm • Saturday 8 am to 1 pm • No work on Sundays or public holidays	Noise affected - Rating Background Level (RBL) + 10 dB(A)	The noise affected level represents the point above which there may be some community reaction to noise. Where the predicted or measured $L_{eq,\ 15\ minute}$ is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level.
	Highly noise affected - 75 dB(A)	The highly noise affected level represents the point above which there may be a strong community reaction to noise. Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, considering: • Times identified by the community when they are less sensitive to noise (e.g., before and after school for works near schools); • Mid-morning or mid-afternoon for works near residences; • If the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
Outside recommended standard hours (OOHW): • All other times including Public Holidays	Noise affected - Rating Background Level (RBL) + 5 dB(A)	A strong justification would typically be required for works outside the recommended standard hours. The proponent should apply all feasible and reasonable work practices to meet the noise affected level. Where all feasible and reasonable practices have been applied and noise is more than 5 dBA above the noise affected level, the proponent should negotiate with the community. For guidance on negotiating agreements see section 7.2.2 of the ICNG.

5.1.1 SLEEP DISTURBANCE

As construction works are expected outside the Recommended Standard Hours for potentially more than two consecutive nights, there is potential for night-time sleep disturbance at noise sensitive receivers as noted by the ICNG. As recommended in the ICNG, analysis should cover the maximum noise level, and the extent and the number of times that the maximum noise level exceeds the RBL. Guidance indicating the potential for sleep disturbance is in the superseded Environmental Criteria for Road Traffic Noise (ECRTN) (NSW EPA, 1999).

The ECRTN discusses a guideline aimed at limiting the level of sleep disturbance due to environmental noise – that the $L_{AF1,\ 1\ minute}$ level of any noise should not exceed the ambient L_{AF90} noise level by more than 15 dB. This guideline takes into account the emergence of noise events but does not directly limit the number of such events or their highest level, which are also found to affect sleep disturbance.

It is expected that assessment against ICNG Noise Management levels for outside standard hours (OOHW) will cover assessment with the the sleep disturbance guideline limit given that penalties are added for impulsive construction noise sources.

5.2 NSW ROAD NOISE POLICY

The RNP (NSW DECCW, 2011) outlines the range of measures needed to minimise road traffic noise and its impacts. It is intended for use by acoustics specialists as well as:

- Road project proponents;
- Determining authorities and regulators involved in the approval and construction of road projects and land use developments that generate additional traffic on existing roads; and
- City and transport planners and policymakers dealing with issues such as route corridors, heavy vehicle transport and building codes.

The RNP aims to identify the strategies that address the issue of road traffic noise from existing roads, new road projects, road redevelopment projects and new traffic-generating developments. In this case, the RNP is considered the suitable document to qualitatively assess potential noise emissions and impacts associated with construction road traffic.

6. PROJECT SPECIFIC MANAGEMENT LEVELS AND CRITERIA

6.1 CONSTRUCTION NOISE MANAGEMENT LEVELS

Construction works are expected to occur both during and outside of the Recommended standard daytime hours. Construction Noise Management Levels (NMLs) are most stringent for works conducted outside of the recommended standard hours for construction, are therefore the project-specific NMLs, as presented in **Table 6-1** below.

These NMLs have been established with due regard to the requirements of the ICNG for all identified residential (dwelling) and other sensitive (non-residential) receptors.

TABLE 6-1 CONSTRUCTION NOISE MANAGEMENT LEVELS

NSR ID	Rating Background Level (RBL), L_{A90} in dB(A)			Recommended standard hours		Outside recommended standard hours	
	Day	Evening	Night-time	Noise Affected Management Level, $L_{eq(15\ min)}$ in dB(A)*	Highly noise affected, $L_{eq(15\ min)}$ in dB(A)	Noise Affected Management Level, $L_{eq(15\ min)}$ in dB(A)	Sleep Disturbance, $L_{A1,\ 1\ minute}$ in dB(A)**
R1	47	43	38	53	75	43	53
R2	49	47	46	57	75	51	61
R3	43	44	40	53	75	45	55
R4	44	45	39	54	75	44	54

Note:
** Noise Affected Management Level during Recommended standard hours is calculated based on the lower RBL measured during either day or evening at each specific receiver.*
*** $L_{A1,\ 1\ minute}$ is approximated by L_{Amax} in this assessment.*

6.2 CONSTRUCTION ROAD TRAFFIC NOISE CRITERIA

The NSW RNP (NSW DECCW, 2011) provides guidance, criteria, and procedures for assessing noise impacts from existing, new, and redeveloped roads and traffic generating developments. The assessment of road traffic noise impacts on residences near public roads is assessed under the RNP.

The RNP details several noise assessment criteria for various road categories and land uses. Road access to the Project will be via Springhill Road. This road has been classed as an arterial road due to its function of acting as a connection between local main roads.

The RNP criteria applicable to the nearest NSRs affected by additional road traffic due to the Project is presented in **Table 6-2**.

TABLE 6-2 RNP RESIDENTIAL ROAD TRAFFIC NOISE CRITERIA

Road Category	**Type of Project/Land Use**	**Assessment Criteria – dB(A)**	
		Day 7am to 10pm	**Night 10pm to 7am**
Freeway/arterial/ sub-arterial roads	Existing residences affected by additional traffic on existing freeways/arterial/sub-arterial roads generated by land use developments.	$L_{Aeq,15hr}$ 60 (external)	$L_{Aeq,9hr}$ 55 (external)

Note: The assessment criteria for external noise levels apply at 1 metre from the façade of any affected residential receiver

Additionally, for land use developments generating additional traffic, the RNP states the following:

For existing residences and other sensitive land uses affected by additional traffic on existing roads generated by land use developments, any increase in the total traffic noise level should be limited to 2 dB above that of the corresponding 'no build option'.

It should be noted that the RNP is applicable to a permanent road traffic scenario. The usage of the RNP for construction, which is temporary, is considered conservative.

6.3 CONSTRUCTION VIBRATION SAFE WORKING DISTANCES

The safe working distances for typical vibration causing plant used in construction, as listed in the *Construction Noise and Vibration Guideline* (TfNSW, 2016) range from 7 to 100 metres to trigger a human response. The closest receivers are more than 100 metres away. Therefore, safe working distances for the proposed equipment and appropriate mitigation measures are not proposed during construction.

7. CONSTRUCTION NOISE ASSESSMENT

7.1 MODELLING METHODOLOGY

Noise modelling has been undertaken using SoundPLAN which is a software for the calculation, presentation, assessment, and prediction of environmental noise.

The noise predictions take into consideration the Sound Power Level of the equipment operating continuously for a 15-minute period. The construction noise levels at any receiver depend on the type and duration of construction activity being undertaken and are expected to be highly variable over the total construction program.

7.2 MODELLING PARAMETERS

The modelling parameters used are summarised in **Table 7-1**.

TABLE 7-1 MODELLING PARAMETERS

Modelling Aspect	Parameter
Software	SoundPLAN 9
Algorithm	CONCAWE incorporating the ISO 171534-3 (improved method selected)
Ground Absorption Factor	0.5 (50% acoustically hard ground and 50% acoustically soft ground)
Humidity	73%
Temperature	19°C
Topographical contours	5-metre intervals
Receiver height	1.5 metres
CONCAWE Meteorological Inputs	Daytime/Evening: Stability category D with wind speed of 3m/s Night-time: Stability category F with wind speed of 2m/s at 10m AGL

7.3 CONSTRUCTION NOISE SOURCES

Based on the construction equipment advised by BlueScope, the construction noise sources and their sound power levels used in the modelling for the project are listed in **Table 7-2**. The locations of the noise sources are presented in **Figure 2-1**.

TABLE 7-2 CONSTRUCTION NOISE SOURCES

Operating Zone (Refer to Figure 2-1)	Equipment	Quantity	Adjustment for Low Frequency / Tonality/ Impulsiveness, in dB	$L_{Aeq(15\ min)}$ Sound Power Level per unit with Adjustment, in dB(A)
Worksite	30t Excavator	1	0	107
	48t Rockbreaker	1	+5	123
	Floor saw	1	+5	122
	Handheld saw	1	+5	122
Stockpile	20t excavator	1	0	107
Haulage Route	30t Moxy trucks	2	0	107

The sound power levels provided in the above table are based on AS 2436:2010 (Standards Australia, 2010) and the Transport for New South Wales Construction Noise and Vibration Guideline (TfNSW, 2016).

For this CNVMP, the worst-case construction noise scenarios modelled and assessed are defined as follows:

1. Heavy intensity work: All the construction noise sources listed in **Table 7-2** (Note: It is assumed that both saws and the 48t rock breaker do not operate at the same time in the Worksite); and
2. Light intensity work: 30t excavator, 20t excavator and 2 X 30t Moxy Trucks as listed in **Table 7-2**.

7.4 PREDICTED CONSTRUCTION NOISE LEVELS

Predicted worst-case and unmitigated $L_{Aeq,\ 15minutes}$ noise levels for all construction equipment at the NSRs have been presented in **Table 7-3**.

The predicted noise level for heavy intensity work results in a 5 dB exceedance of the OOHW Noise Affected Management Level and indicate the following with respect to NML compliance:

- Both heavy and light intensity work can be conducted during the recommended standard hours; and
- Only light intensity work can be conducted outside of the recommended standard hours (OOHW). The 48t Rockbreaker, floor saw and handheld saw may not be used during OOHW.

TABLE 7-3 PREDICTED CONSTRUCTION NOISE LEVELS AT THE NEAREST SENSITIVE RECEIVERS

NSR ID	Recommended standard hours		Outside recommended standard hours (OOHW)	Predicted Noise Level, $L_{Aeq,15\text{-}minute}$ in dB(A)	
	Noise Affected Management Level, $L_{eq(15\ min)}$ in dB(A)*	Highly noise affected, $L_{eq(15\ min)}$ in dB(A)	Noise Affected Management Level, $L_{eq(15\ min)}$ in dB(A)	Heavy intensity work	Light intensity work
R1	53	75	43	28	18
R2	57	75	51	44	19
R3	53	75	45	50	39
R4	54	75	44	35	34

7.5 CONSTRUCTION TRAFFIC NOISE

7.5.1 CONSTRUCTION TRAFFIC VOLUMES

As documented in the Transport Study Report, Port Kembla Works to Hume Highway, prepared by BlueScope, dated 27 October 2022 (BlueScope, 2022), site access for construction vehicles will be via Springhill Road.

The construction traffic volume predictions for the enabling works provided by BlueScope, adapted for this assessment, are summarised as follows:

- Truck & Dog (50 loads Approximate) will haul demo spoil (concrete) offsite from stockpile to recycler (SCE); and
- Expected normal light vehicle movements, at change of shift, typically at 7am and 6pm.

7.5.2 PREDICTED CONSTRUCTION TRAFFIC NOISE IMPACT

The closest residential receiver to Springhill Road is R2 (Refer to **Figure 4-1**), located to the north of the site. R2 is approximately 200 metres from Springhill Road, and represents the location where the highest potential construction traffic impact will be experienced, among all the NSRs.

As a worst-case scenario assessment, 20 Truck and Dog (Heavy Vehicle) movements are assumed for both the day and night periods. Changes to Light Vehicle movements are assumed to be negligible.

The predicted construction traffic noise levels at R2 are presented in **Table 7-4.**

TABLE 7-4 PREDICTED CONSTRUCTION TRAFFIC NOISE LEVELS AT R2

Period	Existing Traffic*			Existing + Project Traffic			Noise Level Increase, dB
	Traffic Volume (vehicles/period)		Predicted Noise Level, dB(A)	Traffic Volume (vehicles/period)		Predicted Traffic Level, dB(A)	
	LV	HV**		LV	HV**		
Day (7am to 10pm)	24,838	4,383	$L_{Aeq,15hr}$ 59.4	24,838	4,408	$L_{Aeq,15hr}$ 59.5	+0.1
Night (10pm to 7am)	3,286	580	$L_{Aeq,9hr}$ 55.4	3,286	600	$L_{Aeq,9hr}$ 55.5	+0.1

Note: A façade refection of 2.5 dB has been applied to all calculated results as per the RNP.
LV = Light Vehicles; HV = Heavy Vehicles
** Source: Traffic Information Specialist, 22098 – Port Kembla ATC – Springhill Road, 19/07/2022*
*** HV assumed to be 15% of AADT*

The predicted construction road traffic noise levels at R2 indicate an insignificant increase of up to 0.1 dB. An increase of less than 2dB is considered as a minor impact and is barely perceptible to the average person (NSW DECCW, 2011). It is concluded that no construction traffic noise impact is expected at the identified noise sensitive receivers.

8. RECOMMENDATIONS AND MITIGATION MEASURES

This section presents recommendations for construction noise mitigation and management measures. All recommendations are based on the predicted noise levels and evaluation of the magnitude and extent of potential impacts identified in Section 7.4.

They are designed to ensure that, where feasible, reasonable, and practical to implement, construction and operational noise emissions are maintained within acceptable levels at all receptors. These recommendations also provide a general reassurance that suitable safeguards and provisions for monitoring are documented in this report to manage construction and operational noise.

8.1 PROJECT-SPECIFIC NOISE MITIGATION MEASURES

Based on the findings presented in Section 7.4, the ICNG Noise Affected Management Level is exceeded at NCA3 for heavy intensity construction work outside the recommended standard hours in the absence of any noise mitigation measures.

The following construction noise control measure involving scheduling is recommended to enable compliance with the Noise Affected Management Levels during outside of the recommended standard hours (OOHW):

- The use of the 48t rock breaker, Floor saw and Handheld demo saw should be limited to the ICNG recommended standard hours (i.e., 7 am to 6 pm Monday to Friday and 8 am to 1 pm Saturdays and no work on Sundays or public holidays);

The above-mentioned measure will enable compliance at all the Sensitive Receptors in NCA3.

8.2 OTHER NOISE MITIGATION MEASURES

The mitigation measures in **Table 8-1** should also be considered.

TABLE 8-1 OTHER NOISE MITIGATION MEASURES

Subject	Mitigation Measures Summary
Equipment	• Selection of the quietest plant, equipment and/or machinery for each construction activity, where practicable • Efficient work practices to minimise the total construction period and the number of noise sources onsite should be adopted; • Unnecessary noise due to idling engines should be avoided; • High engine speeds should be avoided when equipment can be powered down and lower engine speeds are feasible; • All plant, equipment and/or machinery used onsite should be in suitable condition, with particular emphasis on exhaust silencers, covers on engines and inspection of squeaking or rattling components. Excessive noise-generating machines should be repaired or removed from the site; • Reversal alarms shall be replaced with broadband "squash duck" motion alarms, where feasible; • Any equipment not in use for extended periods during construction should be turned off; • Vehicles and equipment should be regularly serviced according to manufacturers' instructions and maintained in proper working order; • Simultaneous operation of noisy equipment should be avoided where practical; and

Subject	Mitigation Measures Summary
	• Where practical, noisy equipment should be positioned behind structures that act as barriers to Sensitive Receptors, or at the greatest distance from Sensitive Receptors, or oriented to directed noise emissions away from Sensitive Receptors.
Training	All construction personnel should receive inductions prior to commencing on site. Inductions may occur via toolbox meetings, training and/or education, and should inform staff of: • Procedures to operate plant and equipment in a quiet and efficient manner; • Location of nearest Sensitive Receptors; • Standard construction hours; • Relevant approval conditions; and • Incidents and complaints handling procedures.
Sensitive Receivers Consultation	Affected Sensitive Receivers should be consulted with prior to the commencement of works that are expected to exceed noise criteria. Consultation activities should discuss: • The details of proposed works; • The anticipated noise impacts; • The time periods over which these woks would occur; and • To identify any management measures required to minimise impact at affected sensitive receivers.
Complaints Management	If any validated noise complaints are received, the machinery and equipment causing the noise nuisance should be identified. The following elements are recommended to be implemented as per the ICNG (NSW DECC, 2009): • Provide a readily accessible contact point, for example, through a 24-hour toll-free information and complaints line. • Give complaints a fair hearing. • Have a documented complaints process, including an escalation procedure so that if a complainant is not satisfied there is a clear path to follow. • Call back as soon as possible to keep people informed of action to be taken to address noise problems. • Call back at night-time only if requested by the complainant to avoid further disturbance. • Provide a quick response to complaints, with complaint handling staff having both a good knowledge of the project and ready access to information. • Implement all feasible and reasonable measures to address the source of complaint. • Keep a register of any complaints, including details of the complaint such as date, time, person receiving complaint, complainant's contact number, person referred to, description of the complaint, work area (for larger projects), time frame for providing a response.

9. CONCLUSION

This Construction Noise and Vibration Management Sub-plan has assessed potential construction noise and vibration impacts associated with the enabling works of the Advanced Steel Manufacturing Precinct (ASMAP).

No vibration sensitive receivers were identified within 100 metres of the Project, indicating that there are no residential areas, schools, hospitals, or other receivers that could be significantly impacted by potential vibration impacts caused by the proposed construction works.

The existing environment and sensitive receivers were established, and construction noise assessment criteria was developed in accordance with the ICNG and the RNP.

Applicable worst-case construction assessment scenarios were developed based on project information provided by the Applicant. Construction noise levels were predicted and compared to the ICNG Noise Management Levels to evaluate compliance.

The ICNG Noise Affected Management Level may be exceeded at NCA3 for heavy intensity construction work outside of the recommended standard hours (i.e., 7 am to 6 pm Monday to Friday and 8 am to 1 pm Saturdays and no work on Sundays or public holidays) in the absence of any noise mitigation measures. It is recommended to limit the use of the 48t Rockbreaker, Floor Saw and Handheld Saw to the ICNG recommended standard hours. Additional noise management and mitigation measures have also been provided.

Construction traffic noise impacts due to the additional traffic associated with the enabling works have been assessed and no traffic noise impacts are expected.

10. REFERENCES

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Appendix 4. Community Consultation and Complaints Handling.

Contact Procedure for Complaints and Enquiries

1.0 Purpose

The purpose of this procedure is to define actions to be followed by the Environment Department personnel, External Affairs personnel and the PKSW Switchboard in relation to handling complaints and enquiries. BlueScope security control room at Port Kembla Steelworks manage the switchboard calls after-hours and weekends for the sites within the scope.

2.0 Scope

This procedure relates to all complaints and enquiries received from the community, employees and regulatory bodies for the BlueScope Illawarra sites, Western Port and Western Sydney Service Centre. Complaints and enquiries are received via telephone, letters or emails.

3.0 References

BSL-HSE-S-12-01 HSE Incident Management Procedure

CH.BZ-SEQ-S-12-01.01 Notification of Environment Pollution Incidents – NSW sites

CH.BZ-SEQ-S-12-01.01 Notification of Environment Pollution Incidents – Victorian sites

4.0 Procedure

4.1 SAFETY

Whenever investigating a complaint, ensure that all personal safety, road safety and plant-related safety considerations are adhered to. When attending the residential premises of a community member, the responding SEA must be accompanied by another BlueScope colleague or a BlueScope security officer.

4.2 ENVIRONMENT CONTACT

The Port Kembla Switchboard and BSMS Security receive a forward roster detailing the SEA on-call and their respective contact details. If an SEA is contacted but does not respond, then another SEA shall be contacted from the roster until one answers. This process is to be followed for all incidents and urgent matters.

For incidents that occur at Western Sydney Service Centre, complaints or enquiries, the Western Sydney Service Centre SEA is the primary contact during business hours.

For incidents that occur at Western Port, all internal calls are directed firstly to Western Port Security and Emergency Services (SES), and if environment advise or reporting is required, the call is directed the Western Port SEA or the Port Kembla SEA on-call in their absence.

4.3 RESPONDING TO CONTACT

Complaints and enquiries may be received via telephone, email or letters. The BlueScope contact details are available to the community on the BlueScope in the Illawarra, the Western Sydney Service Centre and Western Port external websites.

- The Switchboard also receive internal reports of environmental pollution incidents; these are forwarded to the SEA on call.
- BlueScope Security (BSMS) have their own internal procedures detailing their required response.
- Steel Direct forward environment complaints to the Senior Environment Advisor on call via the Switchboard, or email and forward all general enquiries to the Environment and Sustainability Manager ASP- via the switchboard or email.

When a complaint or enquiry is received, an assessment is immediately made by the SEA on-call as to whether or not an environmental pollution incident causing or threatening material harm has occurred. If this is suspected, the on-call officer immediately discusses with the Environment and Sustainability Manager ASP to escalate if necessary. The appropriate priority actions in terms of notification, is carried out in accordance with the notification process detailed in CH.BZ-SEQ-S-12-01.01 (for NSW) or CH.BZ-SEQ-S-12-01.01 (for Victoria).

4.3.1 EXTERNAL COMPLAINTS or ENQUIRIES

When an external call is received by the Switchboard, the operator will record the complainants contact details and then explain the process. The call is transferred to the SEA on-call (unless the complainant specifically requests not to speak with them).

The response to the call will vary depending on the type of complaint or enquiry. The *Senior Environment Officer On-call Guidelines MA-ENV-12-01* provides guidance for the SEA on follow-up actions. The complaint or enquiry is logged into the “Complaints” module of MARS by the SEA, and follow-up action to the call is recorded.

When a complaint is received by mail or by the BlueScope Steel Direct “Contact Us” website, it will be forwarded to the SEA on-call via the switchboard or directly from the Steel Direct team. Details of the complaint will be logged within the Complaints module in MARS and forwarded to the appropriate SEA via e-mail.

If the complainant is enquiring about compensation or a legal issue, these are referred onto the External Affairs department.

If the complainant is enquiring about ethics and compliance issues (including Human Rights) these are referred to the Head of Social Impact & Inclusion for evaluation and response.

4.3.2 INTERNAL COMPLAINTS, ENQUIRIES or SELF-REPORTS

When an internal call is received by the Switchboard, the call is immediately transferred through to the SEA on call or Western Port or Western Sydney Service Centre SEA during work hours. Details of any complaints, enquiries or self reports are logged into the complaints module of MARS.

If further action is required from a complaint, the SEA on call will then take appropriate action based on the situation, including one/all of the following:

- Engage with the complainant via telephone, e-mail, or in person.
- Collect samples or conduct an inspection to visually assess the issue.
- Phone the EPA Hotline to undertake a Self-Report
- Determine actual or potential impacts (if requested by the EPA).
- Seek professional legal advice.
- Engage with the External Affairs Department.
- Escalate with the Environment Manager.

Once the appropriate actions have been taken, the SEA on call will update details relating to the complaint within MARS. The SEA should ensure that the complainant has been updated with the outcome or result of the matter. Complaints that have been closed out should be marked accordingly within the system as ‘Complete’. The records of any affiliated written communications with any external body i.e. EPA, is to be stored within Documentum and the recorded complaint within MARS.

All complaints, enquiries, or self-reports, both internal and external are responded to within 5 business days. Incident related and urgent enquiries are responded to immediately.

5.0 Definitions

EPA - Environmental Protection Authority

SEA - Senior Environmental Advisor

6.0 Document control

Prepared by:	Checked by:	Authorised by:	Registered by:	Summary of Changes:
Cherie Sammut	Natasha Porteous	Natasha Porteous	Mary-Ann Anderson	Nil