FORTEC

Environmental Management Plan

For

Shoalhaven City Council

Project

D&C Murrays Bridge, Murrays Rd, Conjola

Engineered better.

Accreditations

Document Revision Summary

Rev No.	Rev Date	Revision Description	Prep by	Check by	Approved by
00	05/10/2024	Original Document	RA	HC	JH
01	25/10/2024	Client Review	JP	AH	JH
02	12/11/2024	Review Management Files	JP	HC	JH

Document Review Frequency

The project manager is responsible for the review of the management plan at frequencies set out in the table below. The management plan may require reviewing and amending after major scope change, incident. Identification of new risks or changes to legislation.

Project Length	1 Month Review	3 Month Review	6 Monthly Review
<3 months	✓	N/A	N/A
3 month-6 months	✓	✓	N/A
>6 months	✓	✓	✓

EMP Authorisation and Control

The Environment Management Plan (EMP) is authorised by the Project Manager and HSEQ Manager or delegate and accepted by the client.

Revision

This EMP shall be reviewed at least six (6) months and approved by the Project Manager, with all updates communicated to all workers. The Project Manager shall ensure the EMP remains controlled and up to date.

Contents

1 Introduction

This plan is intended to guide Fortec staff in meeting the requirements for Shoalhaven City Council, D&C Murrays Bridge Replacement The plan identifies the processes to be controlled during the execution of the contract and the standards to be met.

1.1 Scope Of Work

The scope and particulars of work under the contract which Fortec will be undertaking is as per contract award contract No. 76803E D&C Murrays Bridge, Murray Rd, Conjola

Fortec is responsible for reviewing the data provided and ensuring that all requirements for undertaking the works on the bridge are included in the methodology are reflected in the price schedule.

A new bridge will be built alongside the old heritage timber bridge using modern bridge construction methods. This project extends to encompass various ancillary infrastructure elements including but not limited to new road approaches, pavement, head and wing walls, rock protection and traffic signs in the vicinity of the construction site.
The key deliverables of this project shall include (but not limited to) the following works:

- Road and Bridge design for new alignments within the road reserve.
- Take precautions to prevent any damage to the existing bridge during the construction of the new bridge.
- Minor alignment adjustments such as the widening roading area to enhance the road safety for all road users within the area.
- New road land capacity with adequate shoulder width
- Provision of new drainage
- Provide safer approaching roads
- Reduce the vertical slopes and sharp bends of the road segment.

1.2 Construction Period / Working Hours

The construction will take about 20 to 25 weeks to complete, subject to the inclement weather.
Construction activities would be undertaken within the following standard hours:

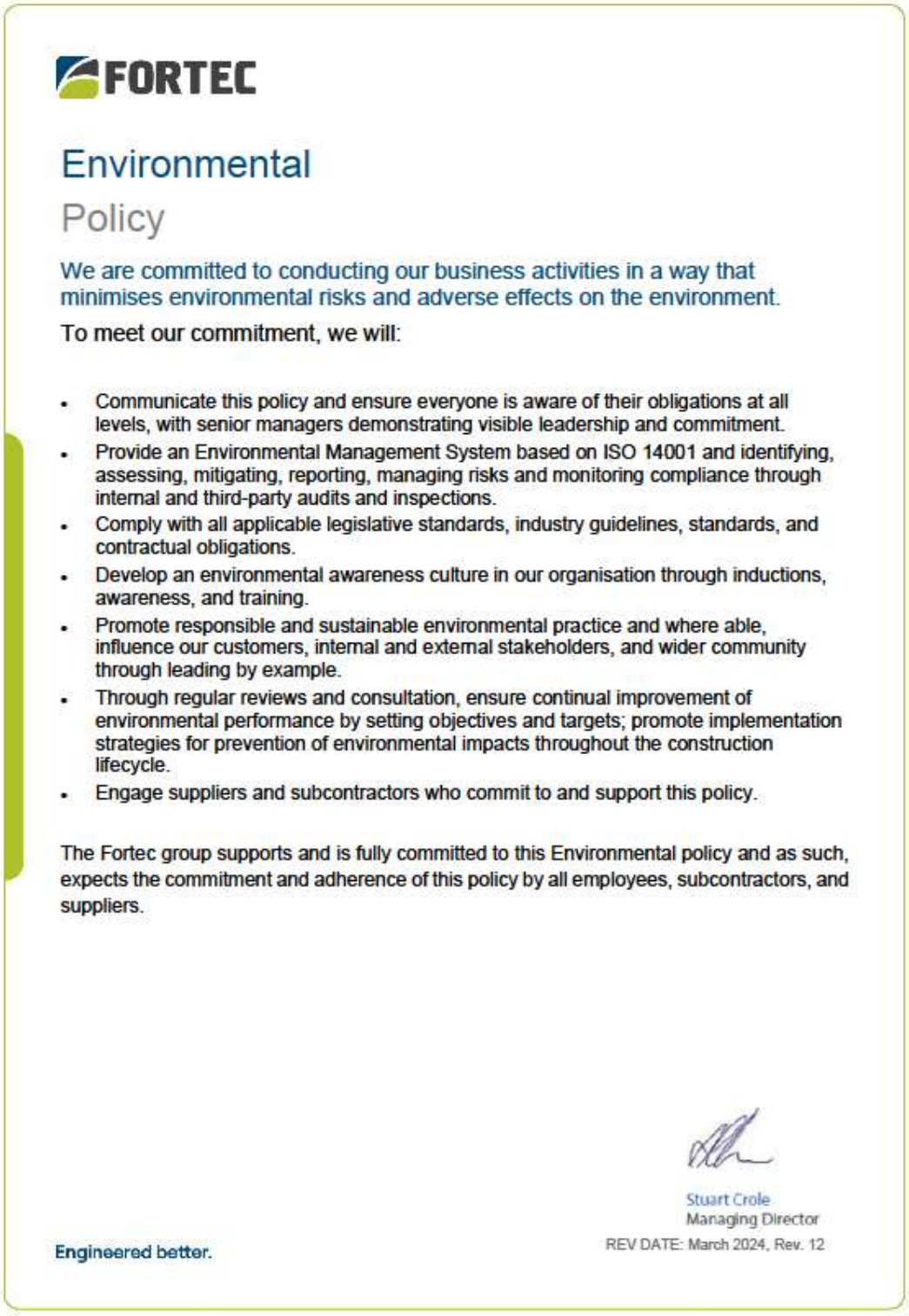
- Monday to Friday: 7am to 6pm
- Saturday: 8am to 1pm
- Sunday and Public Holidays: only if critical and approved by the principal

1.3 Site Location

View of Existing Bridge on Murray's Rd

1.4 Environmental Policy

Fortec's Environmental Policy demonstrates Fortec's commitment to the environment and is included in Appendix A of this EMP.



FORTEC

Environmental
Policy

We are committed to conducting our business activities in a way that minimises environmental risks and adverse effects on the environment.

To meet our commitment, we will:

- Communicate this policy and ensure everyone is aware of their obligations at all levels, with senior managers demonstrating visible leadership and commitment.
- Provide an Environmental Management System based on ISO 14001 and identifying, assessing, mitigating, reporting, managing risks and monitoring compliance through internal and third-party audits and inspections.
- Comply with all applicable legislative standards, industry guidelines, standards, and contractual obligations.
- Develop an environmental awareness culture in our organisation through inductions, awareness, and training.
- Promote responsible and sustainable environmental practice and where able, influence our customers, internal and external stakeholders, and wider community through leading by example.
- Through regular reviews and consultation, ensure continual improvement of environmental performance by setting objectives and targets; promote implementation strategies for prevention of environmental impacts throughout the construction lifecycle.
- Engage suppliers and subcontractors who commit to and support this policy.

The Fortec group supports and is fully committed to this Environmental policy and as such, expects the commitment and adherence of this policy by all employees, subcontractors, and suppliers.

Stuart Crole
Managing Director
REV DATE: March 2024, Rev. 12

Engineered better.

TheEnvironment Policy is communicated at induction and various stages of the project. A copy of the policy shall be displayed in a prominent location onsite. Additional copies shall be made available to all workers upon request.

1.5 Environmental Management System (EMS)

Fortec is committed to providing services that conforms to contractual, regulatory and Company requirements.

To achieve this, the project shall plan, implement and control construction activities in accordance with Fortec's ISO 14001:2015 accredited Environmental Management System (EMS). The EMS if fully integrated into Fortec's Integrated Management System (IMS) and is available to employees via the server and provides documented policies and procedures.

Copied of the EMS shall be made available to workers, the supply chain, Client and other interested parties where relevant / upon request.

1.6 Governance

1.6.1 EMP Authorisation

The initial Environmental Management Plan (EMP) shall be approved by the Project Manager and HSEQ Manager (or delegate) prior to submission and acceptance by the client.

This EMP shall be reviewed at least bi-annually, or earlier where major changes are required, including though not limited to:

- Audit
- A major incident resulting in changes to method or controls.
- Regulatory changes
- Contractual / scope change
- Management reviews

Minor revisions are approved by the Project Manager. Major changes shall be reviewed and accepted by the SQE Manager (or delegate) and client representative.

All revisions must be communicated to workers (via induction, toolbox talk, internal training etc)

1.6.2 EMP Compliance

This EMP complies with:

- Fortec Integrated Management System
- ISO 1400:2015 Environmental Management Systems
- PRO-06-01 Environmental Management Procedure

2 Project Information

Project Name / Description			
Project Location	Murrays Road Bridge, Murrays Rd, Conjola (also known as Lower Conjola Creek Bridge.		
Scope	Design and Construction of Murrays Bridge		
Project Manager	Harsha Anantha	Contact	0428 680 367
Project Engineer	Annamalai Ramanathan	Contact	0409 981 565
Enviro Representative	Joanne Preece	Contact	0429 023 416
Environmental Incident Contact			
Wildlife contact			

3 Planning

3.1 Environmental Objectives and Targets

The following environmental objectives and targets apply to the project. Note: *Key Performance Indicators listed below are further described within the relevant activity located in Section 5*

Objective	Key Performance Indicator (Target)	Performance Measure
Minimise environmental impact	Where the project has influence, adopt a lifecycle perspective during procurement of raw materials, production, transportation, use, maintenance recycling and disposal	Nil environmental incidents Nil complaints
Minimise air quality impact	Compliance with EA/ Development permit conditions	Nil dust complaints
Minimise Fauna and Flora impact	Nil incidents	Target achieved
Minimise noise nuisance	Compliance with EA/ Development permit conditions	Nil noise complaints

Reduce waste	Minimise volume of material to landfill appropriate disposal of related waste	Waste generated per tonne aggregate produced
Minimise impact to ground and surface water	Capture and store stormwater run-off on site for reuse. Implement effective erosion and sediment controls	Nil water quality issues
Minimise Erosion and sediment impact	Nil incidents	Target achieved
Minimise use of resources (energy, water)	Reduce electricity consumption. Minimise water consumption. Reduce energy consumption	Target achieved
Increase environmental / cultural awareness	Changed practices and environmental impacts. Educate through ongoing awareness (e.g., pre-starts, toolbox talks, inductions)	Target achieved
Ensure compliance to regulatory requirements	Complete inspections of vehicles, plant and equipment as per EMP Monitor pest fauna where identified. Eradicate identified / declared weeds on site	Target achieved
Prevent the release of hazardous substances	Compliance with EA and Regulatory requirements No hazardous waste spillage or leaks Nil contamination of water quality or soil due to hazardous materials	Target achieved.
Minimise vehicle impact	Only authorised mobile plant is to access site on a need to basis. All mobile plant will use the allocated tracks and not deviate.	Target achieved

Prevent damage to the 19th Century Murrays Road Bridge	Conserve the heritage value of the Murrays Road Bridge. Nil disturbance, damage or impact to the bridge. eliminate the use of the old bridge during the construction of the new bridge. ply wood attached to the side by	Target achieved

3.2 Responsibilities and Accountabilities

Fortec interface and reporting structure is contained in the Project Management Plan, which also contains the project organisation chart. Individual job descriptions also provide quality related accountabilities and are managed separately to this EMP.

Responsibilities, Accountability, Consulted and informed roles specific to environmental management are summarised in the matrix below.

Task / Activity	SQE Manager	Operations Manager	Project Manager	Environmental Rep	Engineer	Supervisor	Worker incl Subcontractor)
Planning							
Tailor this plan to suit project specific requirements	C		A	R			
Review and approve this plan	R		A/R				
Communicate the requirements of this EMP	C		A	R			
Identify project specific aspects and impacts, associated hazards and risks and develop controls	C		A	R	C	C	
Assign appropriate resources to manage environmental controls	C	A	R	C			
Ensure environmental emergency planning considerations are incorporated into the EMP and overall ERP			A	R	C	C	C
Environmental Implementation and Control							
Ensure project activities comply with relevant environmental policies and regulatory standards and CoP requirements			A	R			

Comply with instructions given by authorised personnel regarding environmental management and controls			A	R	R	R	R
Ensure environmental consultation and communication occurs through the project lifecycle.	C		A	R	C	C	C
Conduct / actively participate in regular environmental inspections (formal/informal) and report any unsatisfactory conditions or practices as soon as possible			A	R	R	R	R
Ensure SDS are obtained, current and communicated			A	C	R	R	I
Advise the Project Manager and management team on informal issues and status.		I	A	R	R	R	R
Not wilfully or recklessly interfere with anything that contravenes the interest of environmental care.			A	R	R	R	R
Immediately re3port incidents and accidents upon identification	C		A	R	C	C	I
Conduct periodical environmental drills			A	R	R	R	R
Proactively participate in investigations as required			A	R	I	R	I
Conduct / actively engage in planned environmental audits as required / identified	C	I	A	R	C	C	I
Completion							
Close out any permits, approvals, or licences with regulatory or other bodies as required			A	R	C	I	I
Where identified, provide all completion documentation and reports			A	R	C	I	I

NOTE: SQE Manager or delegate (e.g. HSE Superintendent) to be consulted, where relevant e.g.: corporate or companywide auditing, regulator visits etc. internal audits as required in accordance with the contract are the responsibility of the project. The SQE manager or delegate are nominate, though may not attend.

3.3 Risk Management

The Project Risk Register contain high-level environmental risk and opportunities, along with proposed controls. Those risks are incorporated into the relevant Safe Work Method Statement (SWMS), methodologies and Section 6 of this EMP.

Activity	Risk	Controls
Site Establishment	Waste pollution	Portable toilets will be monitored and scheduled for empty regularly Housekeeping being completed regularly Industrial bins to be used and emptied
Extreme weather conditions: heavy rain causing waterway to increase	Construction debris to contaminate waterway	ESCP to be enforced.
Pile works, disturbance of erosion and sedimentation control		Neutralising with agricultural lime to minimise the generation of acid and acid products associated with the disturbance o ASS. Lime treatment rates will be approved by the client. Bunding of stockpiling of acid sulphate soil will be appropriately contained / bunded to collect leachate for testing and neutralisation if required. Prior to disposal
Excavation	Erosion	Enforce ESCP controls
	Dust	Dust levels during construction will be visually monitored and dust suppression will be undertaken by water trucks where unacceptable levels are apparent.

	Carbon emissions	Mobile Movement Plan will be implemented and enforced by the site supervisor Mobile plant working on site will complete the site mobile pre-start induction process.
Abutment & wingwall	Noise	Monitor noise and vibration to be acceptable levels
Blinding Concrete	Dust	Dust levels during construction will be visually monitored and dust suppression will be undertaken by water trucks where unacceptable levels are apparent.
	Carbon Emissions	Mobile Movement Plan will be implemented and enforced by the site supervisor Mobile plant working on site will complete the site mobile pre-start induction process.
	Waste Pollution	Housekeeping will be monitored on regular basis Industrial bin will be provided on site for general waste. Ordering of supplies will consider the quantities and packaging
Steel & Formwork	Waste Pollution	Housekeeping will be monitored on regular basis Industrial bin will be provided on site for general waste. Ordering of supplies will consider the quantities and packaging

Pour concrete	Water Pollution	Enforce control measures stated in ESCP House keeping will be monitored on regular basis
	Dust	Dust levels during construction will be visually monitored and dust suppression will be undertaken by water trucks where unacceptable levels are apparent.
	Flora & Fauna Disturbance	Allocated mobile plant movement plan to be implemented. Speed limits to be implemented Allocated light vehicle parking Traffic Management implemented Industrial bin will be provided on site for general waste. Ordering of supplies will consider the quantities and packaging
Install concrete & finish	Dust	Dust levels during construction will be visually monitored and dust suppression will be undertaken by water trucks where unacceptable levels are apparent.
Backfill	Dust	Dust levels during construction will be visually monitored and dust suppression will be undertaken by water trucks where unacceptable levels are apparent.
Site Restoration	Dust	Dust levels during construction will be visually monitored and dust suppression will be undertaken by water trucks where unacceptable levels are apparent.

3.4 Legal and Other Requirements

Environmental management is subject to regulatory controls such as statutes and associated legislation throughout the construction lifecycle. Statutory controls are evidence via relevant approvals. Permits and licences that may be associated with the works.

Applicable legislation and standards include.

Legislation	
New South Wales	
Environmental Protection Act 1986	Environmental Protection Regulations 1987
Environmental Protection and Biodiversity Act 1999	Aboriginal Heritage Act 1972 and Regulations 1971
Biodiversity Conservation Act 2016	Conservation and Land Management Act 1984
Contaminated Siters Act 2006	Contaminated Sites Regulations 2006
Environmental Protection (Cleaning of Native Vegetation) Regulations 2004	Environmental Protection (Controlled Waste) Regulations 2004
Environmental Protection (Noise) Regulations 1997	
	Mining Act 1978
Mining Regulations 1981	Planning and Development Act 2005
Waterways Conservation Act 1976	Waterways Conservation Regulations 1981
Standards	
ISO 14001:2015 Environmental Management Systems	ISO 9001:2015 Quality Management System Requirements
AS/ISO 31000:2018 Risk Management – Guidelines	

3.4.1 Environmental Design

Fortec will ensure environmental components included within the design are properly implemented, monitored and reviewed during the construction lifecycle to assess their effectiveness. Changes to environmental controls included within the design shall be initiated via the change management process where they are found to not meet their objectives. In accordance with PRO-01-07 Change management.

4 Training, Competency and Awareness

4.1 Introduction

All workers shall complete a site-specific induction prior to commencing works onsite. Which addresses general and project-specific environmental management, including though not limited to:

- Environmental Policy
- Cultural Heritage (Indigenous/ European)
- Environmental Management Plan (EMP)
- Environmental controls utilised on site.
- Emergency management

4.2 Training and Awareness

Environmental training needs are identified and documented within the Project-specific training matrix, detailing requirements per role. The Environmental Representative is consulted in the development of the training matrix in accordance with PRO-03-01 Training and Development procedure. The performance and development process provides an opportunity to identify and plan the delivery of training needs that is not provided within the matrix and is integral to the development of an individual Worker.

Subcontractor training and competency requirements are included in subcontract agreements.

A project training matrix shall be developed and managed via Hammertech that details when training shall be delivered as identified within the training matrix. Refresher training shall also be included.

Training records shall be maintained by the Project within Hammertech. Where communications or connectivity is not consistent an electronic copy shall be securely retained on site.

4.3 Training Evaluation and Review

Training evaluation and review is used to assess the effectiveness of training provided.

5 Environmental Management

5.1 Water Quality

Objective	Ensure no debris from Anchor load monitoring enters waterway
Aspect	Small items, loose construction materials will be captured within the workbox platform due to lining
Potential Impact	Pollution in waterway
Construction Equipment falling into waterways during construction	Routine inspection to remove any equipment and tools from workbasket that are not necessary. Install plastic lining within the workbasket to ensure small debris. All waste is removed from site to an approved waste disposal facility. Removal of old grease will be stored in plastic bags and disposed of within the appropriate waste removal procedure outlined by client. Order appropriate qualities and consider type and quantity of package use. Burying and burning of waste materials is prohibited on the site. Dust vacuum attachments will be fitted to any equipment where dust is generated whilst drilling into concrete.

End User (through traffic) little / rubbish entering waterway during construction	Routine inspections to remove litter and rubbish on the roadside. There should be no discharge of waste oil, grease, solvent, paint, lubricant, epoxy, acid, brake fluid, radiator coolant or detergent in any water body.
Diesel / oil from machinery	Refuel away from water ways. Pre-start inspections completed daily on all machinery on site.
Compliance Obligations	
Responsibility	
Performance indicators	**Water Quality Parameter** | pH | Turbidity | Suspended Solids | Secchi depth | Dissolved Oxygen **Value** | xx - xx | <xx NTU | < xx mg/L | > xx mm | xx% saturation
Monitoring	**During Construction Works:** Daily visual inspection of waterways within work site.
Reporting	All incidents to be reported to client as soon as reasonably practicable. Complaints, actions and water quality data to be included in weekly/ monthly report

5.2 Waste Management

Objective	To prevent adverse environmental impact from waste management. To minimise generation of waste.
Aspect	Creation of waste generated by the project. Construction waste mismanaged, contaminating waterways
Potential Impact	Contamination of land, surface water or ground water or poor visibility amenity though poor waste management practices:
Control Measures	• Waste producing activities use general site rubbish and culvert construction. • Order appropriate quantities and consider the type and quantity of packaging used. • An industrial bin shall be provided on site for general waste. • Burying and burning of waste material is prohibited on the site. • Hazardous wastes are managed in compliance with regulatory requirements. • All waste is removed from site to an approved waste disposal facility
Responsibility	Supervisor, Project Manager
Performance Indicators	Nil environmental incidents due to unnecessary waste generation or mismanagement
Monitoring	Daily / Weekly visual inspection
Reporting	Complaints / actions shall be recorded and reported weekly.

5.3 Noise

Objective	To prevent, so far as reasonably practical, nuisance to the community as a result of construction activities (e.g. Mobile Plant, drilling)
Aspect	Noise generation over and above allowable limits (e.g.: DbA as per local municipality / council, EPA / Specified limits – not here).
Potential Impact	Control Measures
Nuisance noise generated by construction activities affecting the local community and adjacent residents. Potentially noise sensitive areas impacted include: • Closest resident • Closest business • Closest school / hospital	Limit hours of operation to comply with contractual and local council requirements Monday to Friday 0600 to 1800 Saturday 0600 to 1088 Sunday 0700 to 1300 Public Holidays no work (unless dispensation provided) • Commence consultation activities as early as possible with those impacted (e.g residents, occupations and other interested parties) where there is potential to exceed compliance limits. • Where controls may not reduce or mitigate the exceedance of noise limitations, consult with the client and or client representative to introduce, were reasonably practicable, methods to manage sensitive receptors. • Heavy vehicles / Plants and large / noise generating equipment to operate within timeframes noted above. • Temporary noise barriers to be constructed where identified / relevant. • Were reasonably practicable. Fit the least noise intrusive reverse alarm to plant and vehicles • Ensure plant and equipment is serviced and maintained in accordance with OEMs to minimise potential noise generation.
Depletion of local fauna due to noise generation within the local area immediately within or adjacent to the Project boundary.	• Ensure equipment is serviced and in good condition for use. • Do not let equipment sit running – turn off when not in use. • Consider power supply by batteries instead of generator or petrol powered.
Responsibility	Supervisor, Project Manager
Performance Indicators	Nil environmental incidents due to unnecessary waste generation or mismanagement
Monitoring	Daily / Weekly visual inspection
Reporting	Complaints / actions shall be recorded and reported weekly.

5.4 Fauna and Flora Management

Objective	To prevent or minimise the impact and keep site disturbance to a minimum of construction activities on fauna & flora
Aspect	Harm to Fauna (injury, fatality, ecosystem) & protect vegetation and trees.
Potential Impact	Unintentional removal or damage to protected trees and flora. Spread of pests to and from site
Control Measures	• Weed free materials certificated to be provided for imported materials. • No trees and plants will be removed without approval from principal. • Mobile plant will only travel in designated routes for access to the site. • Designated site roads and access routes for all movement on and adjacent to the site. • Vehicles and plant allocated parking zones. • No removal for birds, fish and animals will be removed from sites. • No pesticides and herbicides will be sprayed. • No pets are allowed on site. • Follow recommended speed limits when driving through areas known for active wildlife.
Responsibility	Site Supervisor
Performance Indicators	No damage or injury to fauna or flora on site
Monitoring	Daily
Reporting	Incidents will be recorded and reported weekly.

5.5 Cultural / Heritage Management

Objective	To minimise retention of natural, historical and cultural resources at each location and minimise impacts to Aboriginal and historic heritage impacts during construction
Aspect	Damage to indigenous artifacts and / or historical objects
Potential Impact	Disturbance to, or destruction of items of potential indigenous cultural or historical heritage.
Control Measures	• Confirm cultural heritage applies to project and identify associated areas. • Cultural heritage induction to form part of project-specific induction.
	• Land disturbance shall be controlled and recorded to minimise the project's environmental footprint. • If an item (or suspected item) of indigenous or non-indigenous heritage is found, construction shall cease in the area of the find, and the client representative shall be notified immediately to make arrangements for the site to be assessed. In the interim and until instructed otherwise the site shall be fenced off ant treated as an exclusion zone. • Personnel shall be instructed of the find, area and proposed treatment as soon as possible, but prior to commencement work on site of the next working day. • If suspected human remains are found onsite, works shall cease immediately in the area of the fine. The police shall be notified immediately, in the interim. And until instructed otherwise, the site shall be fenced off and treated as an exclusion zone. Personnel shall be instructed of the find area and proposed treatment as soon as possible, but prior to commencing work onsite the next working day.
Responsibility	Supervisor, Project Manager / Client Representative.

Performance Indicators	Nil impact on identified cultural heritage artefacts.
Monitoring	Daily visual inspections by supervisor to ensure nil disturbance and that fencing, and exclusion zoned are not impaired.
Reporting	

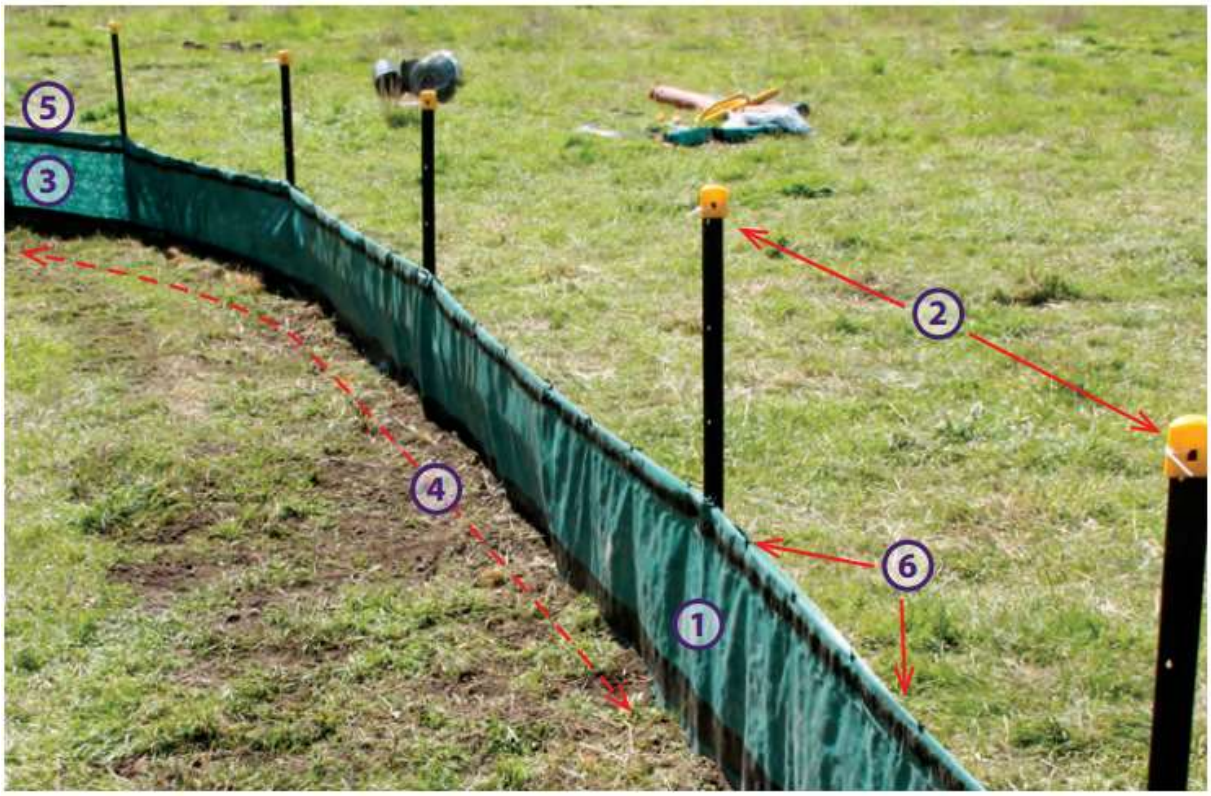
5.6 Erosion and Sedimentation Management

Objective	To prevent the release of hazardous materials to the surrounding environment
Aspect	Pollution to water
Potential Impact	Pollution of soil and waters due to spills of fuels, greases and oils or other hazardous material.
Control Measures	Site Access: • Site Access will be lined with needle punched Geofabric and constructed of DGB 20 road base or 30mm aggregate, compacted • Entrance / exits will be topped up with aggregate as required to form a bump large enough (200mm minimum) to contain runoff from your site. • Stockpiles will be covered as soon as possible before rain or wind. • Silt fence will be used around contaminated stockpiles • Dust levels from stockpile will be controlled by covering and or wetting down with a fine spray. • No vehicles will be allowed near or on the stockpile • Diversion drain will be created around stockpiles to ensure no runoff enters waterways. Working with Concrete: • When possible concrete tasks will be conducted on dry days. Supervisor to check weather forecast • Bunded area at the base of site to contain the wash water • Clear bunded area by pumping the wash water into a container (1000 litre cube or similar). To be hauled to an approved disposal facility. • Safety Data Sheets for hazardous materials shall be maintained at the site compound. • Permanent and temporary containers that hold hazardous materials must be labelled with the relevant safety and risk phrases. • Diesel and unleaded fuels shall be kept in small quantities in the chemical storage container (Approximately 50litres for each) • All chemicals will be stored in bunded areas that meet Australian standards and minimise water ingress into the bund. • Spill kit will be available in the site container and close to works. • Mobile plant will be approved via Hammertech before entering site. • All mobile plant operators will adhere to mobile plant plan and not deviate off allocated tracks provided.
Responsibility	Supervisor
Performance Indicators	No spills or incidents.
Monitoring	Daily / Weekly visual inspections and surveys.
Reporting	All incidents will be reported to client representative immediately.

References	0022 Control of erosion and sedimentation (design) Shoalhaven Builders Guide Best Environmental Practice June 2020 Protection of the Environment Operations Act 1997 (The blue book) Soils and Construction Volume 1, 4th Edition March 2004

5.6.1 Sediment fence around stockpile will be installed as followed:

1. Use of approved geotextile filter fabric
2. Install 1.5-metre-long star pickets a maximum of 2.5m apart, drive them to a minimum depth of 400mm. place safety caps on all your star pickets.
3. Install wings/ returns at either end of the sediment fence projecting up-slope at least 500mm to prevent flow bypass (stormwater running around the fence and leaving your site).
4. Cut a trench (a minimum of 150mm deep) on the up slope of the star picket for the bottom of the sediment fabric to be entrenched.
5. Beginning at one end with the first star picket, thread wire tires or other fixing material recommended by the manufacturer thought he star pickets. For extra strength.
6. Fix filter fabric with wire tires to the upslope side of the star pickets ensuring it gois to the base of the trench. Join sections of fabric at the support post with a 150mm overlap. Back fill the trench over the geotextile fabric and compact it toughly.



Refer : Shoalhaven Builders Guide

5.6.2 Design Checklist 8 – Erosion and Sedimentation Control Plans

Checkpoints
Initial and date the following checkpoints or tick box if not applicable.

		By	Date	NA
8.1	Check that the ESCP and supporting design documents confirm to the 0022r Control erosion and sedimentation (design) work section for the construction and operational phase and includes: • Construction detail drawings. • Remedial action plans for areas requiring corrective action			
8.2	Check that the erosion and sedimentation control conform to development consent conditions and state sentimental legislation.			
8.3	Check that the soil management plans, and water management plan conforms to 0022r Control of erosion and sedimentation (Design) work section and to state and local government authority requirements.			
8.4	Check that stormwater management conforms to the 0074r Stormwater drainage (design) work section.			

5.7 Acid Sulphate soils

Objective	To mitigate environmental impacts
Aspect	Acid Sulfate soils have been identified in the area. Our aim is to: Minimise the disturbance Preserving the water quality. Comply with statutory requirements
Potential Impact	Disturbance of the below water table containing Acid Sulfate Soils during piling
Control Measures	• Information provided in Site induction for Workforce on Acid Sulfate Soils • Acid Sulfate Soils will be pumped into a bunded area away from the water's edge The stockpile will be designed as per section 5.5.1 to contain runoff. • If wet weather is forecast a subsidiary diversion drain will be created and will contain bales of hay within the trench. Bales of hay will be disposed of by approved supplier if runoff contaminates. • operators will adhere to mobile plant plan and not deviate off allocated tracks provided. • Neutralise ASS or acid produced by adding neutralising agents such as lime or dolomite (see table 4.5 treatment categories and lime required to treat a weight of disturbed acid sulfate soils • Silt curtains will be positioned around piles • Floating hydrocarbon boom with attached silt curtain to be completely surrounding the barge and piles. • Spill kits will be at location • Stop Work procedure will be implemented if the contaminants reach over the bunded zones. • The depth of disturbance of the sold will be identified. • Daily review of weather conditions and assess stockpile diversion drains for effectiveness. • Soil sampling will be conducted by the council
Responsibility	Supervisor

Performance Indicators	No spills or incidents.
Monitoring	Daily / Weekly visual inspections and surveys. Acid Sulfate Soil monitoring will be conducted by client
Reporting	Records to be kept by the Site Manager on the monitoring activities, complaints received, and control actions subsequently taken. Records to be made available to council as requested. All incidents will be reported to client representative immediately.
References	0022 Control of erosion and sedimentation (design) Shoalhaven Builders Guide Best Environmental Practice June 2020 Protection of the Environment Operations Act 1997 (The blue book) Soils and Construction Volume 1, 4th Edition March 2004 Acid Sulfate Soil Manual

ASSMAC
Assessment Guidelines
August 1998

TABLE 4.5 Treatment categories and lime required to treat a weight of disturbed acid sulfate soils – based on soil analysis

The tonnes (t) of pure fine lime required to fully treat the total weight/volume of ASS can be read from the table at the intersection of the weight of disturbed soil (row) with the soil sulfur analysis (column). Where the exact weight or soil analysis figure does not appear in the heading of the row or column, use the next highest value (or calculate values exactly using factors from Table 4.6).

Disturbed soil (tonnes)	Soil Analysis - Oxidisable Sulfur (S %) or equivalent TPA/TAA													
	0.03	*0.06*	*0.1*	*0.2*	*0.4*	*0.6*	*0.8*	*1*	*1.5*	*2*	*2.5*	*3*	*4*	*5*
1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.1	0.2	0.2
5	0.05	0.05	0.05	0.05	0.1	0.1	0.2	0.2	0.4	0.5	0.6	0.7	0.9	1.2
10	0.05	0.05	0.05	0.1	0.2	0.3	0.4	0.5	0.7	0.9	1.2	1.4	1.9	2.3
15	0.05	0.05	0.1	0.1	0.3	0.4	0.6	0.7	1.1	1.4	1.8	2.1	2.8	3.5
20	0.05	0.1	0.1	0.2	0.4	0.6	0.7	0.9	1.4	1.9	2.3	2.8	3.7	4.7
25	0.05	0.1	0.1	0.2	0.5	0.7	0.9	1.2	1.8	2.3	2.9	3.5	4.7	5.9
35	0.05	0.1	0.2	0.3	0.7	1.0	1.3	1.6	2.5	3.3	4.1	4.9	6.6	8.2
50	0.1	0.1	0.2	0.5	0.9	1.4	1.9	2.3	3.5	4.7	5.9	7.0	9.4	11.7
75	0.1	0.2	0.4	0.7	1.4	2.1	2.8	3.5	5.3	7.0	8.8	10.5	14.0	17.6
100	0.1	0.3	0.5	0.9	1.9	2.8	3.7	4.7	7.0	9.4	11.7	14.0	18.7	23.4
200	0.3	0.6	0.9	1.9	3.7	5.6	7.5	9.4	14.0	18.7	23.4	28.1	37.5	46.8
500	0.7	1.4	2.3	4.7	9.4	14.0	18.7	23.4	35.1	46.8	58.5	70.2	93.6	117.1
750	1.1	2.1	3.5	7.0	14.0	21.1	28.1	35.1	52.7	70.2	87.8	105.3	140.5	175.6
1,000	1.4	2.8	4.7	9.4	18.7	28.1	37.5	46.8	70.2	93.6	117.1	140.5	187.3	234.1
2,000	2.8	5.6	9.4	18.7	37.5	56.2	74.9	93.6	140.5	187.3	234.1	280.9	374.6	468.2
5,000	7.0	14.0	23.4	46.8	93.6	140.5	187.3	234.1	351.2	468.2	585.3	702.3	936.4	1170.5
10,000	14.0	28.1	46.8	93.6	187.3	280.9	374.6	468.2	702.3	936.4	1170.5	1404.6	1872.8	2341.0

L	**Low treatment**: (<0.1 t lime). Apply 0.05 t (1 bag) or 0.1 t (2 bags) of lime to prevent some soil acidity from the ASS disturbance.
M	**Medium treatment:** (>0.1 to 1 t lime).
H	**High treatment**:(>1 to 5 t lime).
VH	**Very High treatment:** (>5 tonne lime).

A detailed management plan is required if disturbing > 1,000 tonnes of ASS (oxidisable S ≥ 0.03 %S or equivalent TPA or TAA.)
Lime rates are for pure fine $CaCO_3$ using a safety factor of 1.5. A factor that accounts for Effective Neutralising Value is needed for commercial grade lime (see Management Guidelines).
An approximate volume (cubic m) can be obtained by dividing weight (tonne) by bulk density (t/m^3).

5.6 Air Quality (Dust)

Objective	Minimise / eliminate potential dust, fumes and odours generated as a result of construction activities.
Aspect	Generation of dust.
Potential Impact	Decrease in air quality from construction related activities, drilling concrete
Control Measures	• Prior to works commencing a risk evaluation shall be undertaken in order to determine the appropriate level of controls (SWMS) • To limit dust generation the extent of disturbed area at any one time shall be minimised and vegetation shall be retained where possible to dissipate wind velocity at ground level.
	• Dust levels during construction will be visually monitored and dust suppression will be undertaken by water trucks where unacceptable levels are apparent. • Visual monitoring will be ongoing to ensure compliance with documented requirements. • Where dust control cannot be achieved at a satisfactory level. (e.g. poor operator visibility work activities shall cease. • M or H vacuum attachment will be installed to cutting devices • Water suppression will be used if necessary. • Barricades should be used to contain dust if required.
Responsibility	Site Supervisor
Performance Indicators	No dust generation
Monitoring	Daily / Task monitoring.
Reporting	When dust suppression is required, it shall be noted in the daily diary. Excessive dust generation impacting offsite shall be reported to the Workplace Manager and if persistent shall be recorded as an environmental incident. Works shall be suspend3ed until remedial measures are implements.

6 Communication and Consultation

6.1 Internal Consultative Forums

A schedule of communication forums shall be developed which includes:

Managers meetings that are to address HSE matters – minimum monthly.

Toolbox talks – minimum monthly

Pre-start meetings – prior to commencing a shift.

The Project Manager shall establish appropriate environmental interfaces with the client and regulatory bodies. Records shall be kept of all HSE communication activities (e.g. Attendance records) The effectiveness of the meeting outcomes shall be reviewed six monthly.

6.2 Actions from Consultative Forums

Actions arising from consultative forums are assigned and communicated to a responsible person and confirmed as being completed.

The project shall track actions using the HSE Reporting System – Action Database.

6.3 HSE signs and Notice Boards

Dedicated HSE noticeboards shall be prominently located and maintained with current information.

6.4 Environmental Complaints and Enquiries

6.4.1 Responding to complaints and enquiries

For the purpose of this project, all environmental complaints are managed by Fortec.

Complaints are treated as an incident and managed in accordance with Section 7 of this EMP. Corrective actions are agreed and implemented. With accountabilities and time frames assigned. The complainant or enquirer is notified of the intended Project response once approved by the Project Manager.

Environmental incidents are managed in accordance with PRO-05-01 Incident and Investigation Reporting

6.4.2 Changes and internal notifications

Fortec HSEQ Manager and General Manager are notified of complaints that have or are likely to generate media interest.

7 Non-conformance and corrective actions

As referenced TfNSW G36 Environmental Protection

- Fortec will comply with G36 Environmental Protection and G36 TfNSW specifications.
- Fortec will act promptly if we observe that the implemented environmental controls are not effective.
- Fortec will provide safeguards against environmental incidents as defined in TfNSW “Environmental Incident Procedure”
- Environmental non-conformances are managed via two methods:
  1) Physical incidents and hazards via incident notification in accordance with Report and Investigate Incidents
  2) System non-conformances following audit or monitoring in accordance with Non-Conformance and Corrective Action procedures
- Continual improvement is achieved through constant measurement and evaluation, audit and review of the effectiveness of the EMP and adjustment and improvement.

8 Interested Parties

A comprehensive stakeholder analysis shall be performed to identify internal and external interested parties and their interests in the Project. This shall include project team members. The supply chain, client, Regulators, landowners. Community members and others who could be affected by the Project. The Environmental representative shall be involved in the analysis process.

Activities performed to effectively manage relations with external interested parties include.

Identifying risks that relate to stakeholder interest by considering the impacts to interested parties.

Determining suitable controls and activities to mitigate risks.

Performing inspections, audits. Stakeholder engagement and monitoring activities to assess the effectiveness of controls.

Actively engaging interested parties through open communication and involvement Interested parties associated are listed below:

Interested Party	Description	Managed by	Strategy
	Client	Project Manager	As per sec. contract reference
WorkSafe NSW	Regulator		Notification of incidents Permits and approvals
	Local Council	Project Manager	Notify of incidents

	Local Road Authority		
	Landowner		
	Licenced Waste Transporter		
	Cultural Heritage – indigenous		
	General Waste removal		

9 Supply Chain Management

Supply Chain Management includes the procurement. Engagement and participation of Subcontractors. Suppliers and Consultants throughout the lifecycle of the project.

9.1 Selection

Environmental obligations and requirements. Including communication, training, competency, reporting and accountability shall be incorporated into the selection process.

Fortec nominated environmental representative shall be consulted as required, to ensure environmental management requirements are included and evaluated where relevant to their scope of works.

Subcontractors and suppliers are communicated Fortec's Environmental Policy. Scope of work relevant to their contract. Associated risks and obligations relevant to their works. This EMP shall be communicated at induction in accordance with Section 4.1 of their EMP.

9.2 Participation

Subcontractors and suppliers are response for the installation, maintenance and monitoring of environmental controls specific to their works, and shall participate in environmental communication forums and monitoring activities, including though not limited to:

- Project-specific induction
- Scheduled HSE meetings and communications
- HSE Inspections, Observations and audits
- Incident investigations. Where required.
- Develop and review of safety work method statements relevant to their works.

Subcontractors shall comply with the project training needs analysis and ensure relevant competencies of tier workers prior to commencing work. In addition, subcontractors must proactively participate in project-specific environmental training and awareness where relevant.

9.3 Review

Subcontractor operational activities shall be regularly monitored and recorded in accordance with Section 10.1 if this EMP.

Construction methods, SWMS and other documentation provided for and maintained by the subcontractor shall be regularly reviewed in accordance with this EMP.

10 Environmental Incidents and Emergencies

10.1 Incidents

10.1.1 Incident Response

The immediate response to all incidents is to make the area safe and undertake measures to prevent further environmental and human harm. An assessment shall be made to ensure that these measures do not result in further harm. Advice shall be sought from the environmental Representative prior to installation.

10.1.2 Incident Notification

Fortec Project Manager is notified immediately following any incident. The environmental representative and community relations representative are notified immediately of all actual or potential level 3 or 4 incidents and High Potential incidents.

For level 3 or 4 incidents and HPIs, the Project Manager immediately notifies the General Manager, HSE Superintendent and HSEQ Manager. Where relevant, the Project Manager shall also notify the General Manager of the need to activate the Project's Emergency Response Procedure and the Group Crisis Management and response plan.

Appendix – 1 Environmental Control Plan - Layout

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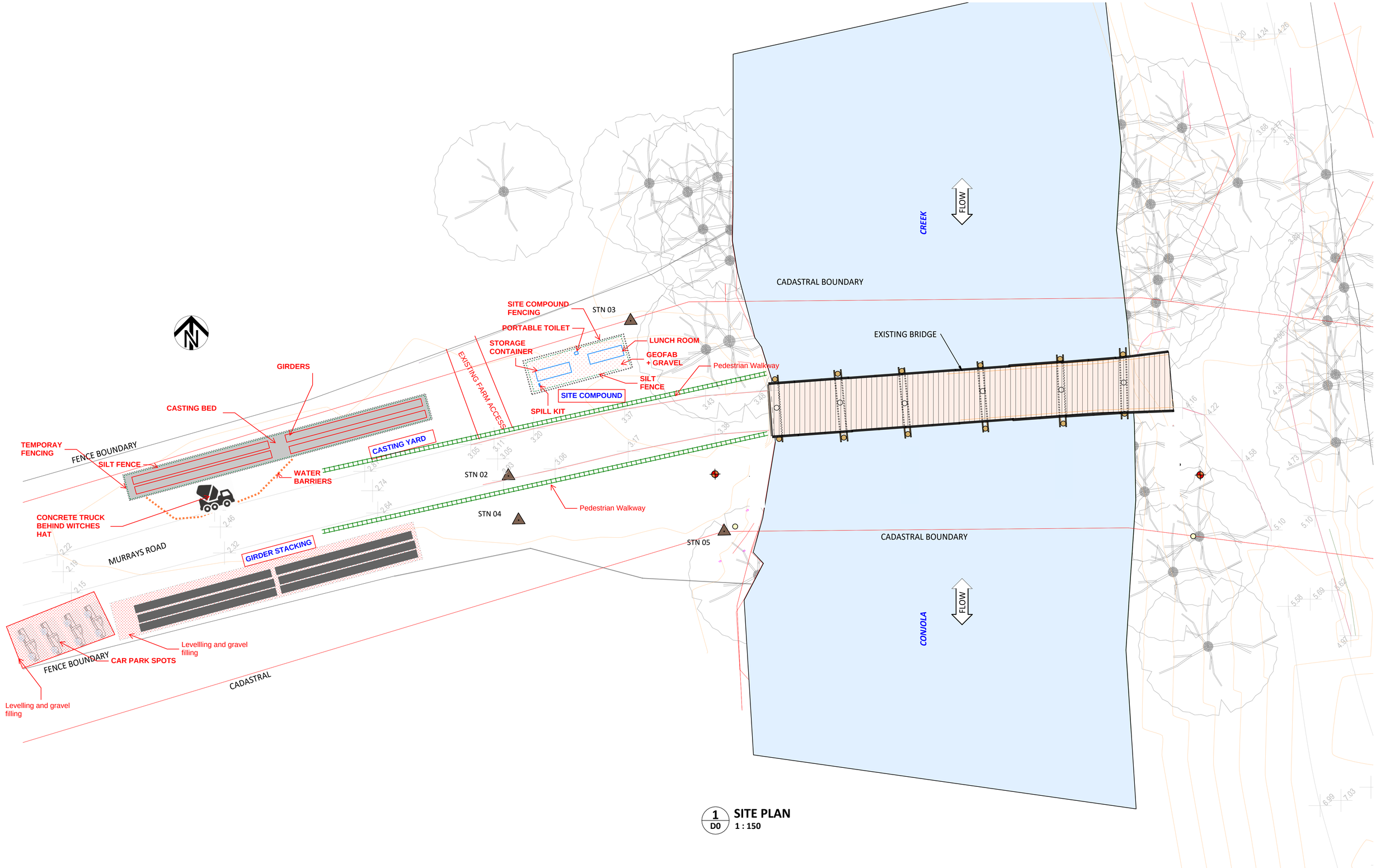

1 / D0 SITE PLAN
1 : 150

NOT FOR CONSTRUCTION

Drawing scales true at A1

Issue	Description	Name	Initial	Date

Design not to be amended without authorisation by Certifier

FORTEC
FORTEC AUSTRALIA
Unit 12/55-57 Newton Road
WEATHERILL PARK NSW 2450

SITE LOCATION
BRIDGE ON MURRAYS ROAD
NORTH OF FISHERMANS WHARF

Shoalhaven City Council

MURRAYS BRIDGE OVER CONJOLA CREEK

SITE COMPOUND, CASTING & STACKING YARD - LAYOUT WITH ENVIRONMENTAL CONTROLS

Project
Job Ref.

Sheet No. 0 of

Rev

Designed By:

Issue Date 0

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1 D0 **SITE PLAN** 1 : 150

GENERAL NOTES

DIMENSIONS IN MILLIMETERS.
CO-ORDINATES ARE TO MGA.
REDUCED LEVELS TO AHD (m).

NOT FOR CONSTRUCTION

Drawing scales true at A1

Issue	Description	Name	Initial	Date

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FORTEC

FORTEC AUSTRALIA
Unit 12/55-57 Newton Road
WEATHERILL PARK NSW 2450

SITE LOCATION

BRIDGE ON MURRAYS ROAD NORTH OF FISHERMANS WHARF

Shoalhaven City Council

MURRAYS BRIDGE OVER CONJOLA CREEK

ENVIRONMENTAL CONTROLS FOR ABUTMENT WORKS

Project Job Ref.

Sheet No. **0** of

Rev

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1 SITE PLAN
D0 1 : 150

GENERAL NOTES

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FORTEC
FORTEC AUSTRALIA
Unit 12/55-57 Newton Road
WEATHERILL PARK NSW 2450

SITE LOCATION
BRIDGE ON MURRAYS ROAD NORTH OF FISHERMANS WHARF

Shoalhaven City Council

MURRAYS BRIDGE OVER CONJOLA CREEK
ENVIRONMENTAL CONTROLS FOR PIER 1 WORKS

Project Job Ref.
Sheet No. 0 of
Rev
Designed By:


CADASTRAL BOUNDARY
EXISTING BRIDGE
FLOW
CREEK
STN 03
STN 02
STN 04
STN 05
FENCE BOUNDARY
MURRAYS ROAD
FENCE BOUNDARY
CADASTRAL
HEAVY DUTY BUILDERS PLASTIC
SILT FENCE SUPPORTED WITH START PICKETS
Spoil Drying Area & Potential Acid Sulphate Soil Neutralisation Area (If required)
BARGE WITH EDGE PROTECTION, BUILDERS PLASTIC AT BASE & SILT FENCE
FLOATING HYDROCARBON BOOM WITH ATTACHED SILT CURTAIN
WORK BOAT
CADASTRAL BOUNDARY
FLOW
CONJOLA

1 D0 **SITE PLAN** 1 : 150

GENERAL NOTES

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Issue	Description	Name	Initial	Date

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FORTEC
FORTEC AUSTRALIA
Unit 12/55-57 Newton Road
WEATHERILL PARK NSW 2450

SITE LOCATION
BRIDGE ON MURRAYS ROAD
NORTH OF FISHERMANS WHARF

Shoalhaven City Council

MURRAYS BRIDGE OVER CONJOLA CREEK

ENVIRONMENTAL CONTROLS FOR PIER 2 WORKS

Project Job Ref.

Sheet No. 0 of

Rev

Designed By:

CREEK
FLOW
CADASTRAL BOUNDARY
PATH FOR VESSLE MOVEMENT
EXISTING BRIDGE
STN 03
FENCE BOUNDARY
NO ENTRY SIGNS
STN 02
STN 04
STN 05
MURRAYS ROAD
FLOATING HYDROCARBON BOOM WITH ATTACHED SILT CURTAIN
PATH FOR VESSLE MOVEMENT
Barricades for no entry
Floating Radium Boom
CADASTRAL BOUNDARY
WORK BOAT
BARGE WITH EDGE PROTECTION, BUILDERS PLASTIC AT BASE & SILT FENCE
ENTRY FOR VESSELS
FLOW
CONJOLA
FENCE BOUNDARY
CADASTRAL

1 D0 **SITE PLAN** 1 : 150

GENERAL NOTES

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Issue	Description	Name	Initial	Date
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FORTEC

FORTEC AUSTRALIA
Unit 12/55-57 Newton Road
WEATHERILL PARK NSW 2450

SITE LOCATION
BRIDGE ON MURRAYS ROAD NORTH OF FISHERMANS WHARF

Shoalhaven City Council

MURRAYS BRIDGE OVER CONJOLA CREEK

ENVIRONMENTAL CONTROLS FOR PIER 2 WORKS

Project Job Ref.

Sheet No. 0 of

Rev

Designed By:

FLOW
CREEK
CADASTRAL BOUNDARY
PATH FOR VESSLE MOVEMENT
EXISTING BRIDGE
STN 03
STN 02
STN 04
STN 05
FENCE BOUNDARY
MURRAYS ROAD
FENCE BOUNDARY
CADASTRAL
NO ENTRY SIGNS
Barricades for NO ENTRY
PATH FOR VESSEL MOVEMENT
BARGE WITH EDGE PROTECTION & SILT FENCE
FLOATING HYDROCARBON BOOM WITH ATTACHED SILT CURTAIN
WORK BOAT
CADASTRAL BOUNDARY
ENTRY FOR VESSELS
Floating Radium Boom
FLOW
CONJOLA

1 SITE PLAN
D0 1 : 150

GENERAL NOTES

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FORTEC AUSTRALIA
Unit 12/55-57 Newton Road
WEATHERILL PARK NSW 2450

SITE LOCATION
BRIDGE ON MURRAYS ROAD
NORTH OF FISHERMANS
WHARF

Shoalhaven City Council

MURRAYS BRIDGE OVER CONJOLA CREEK

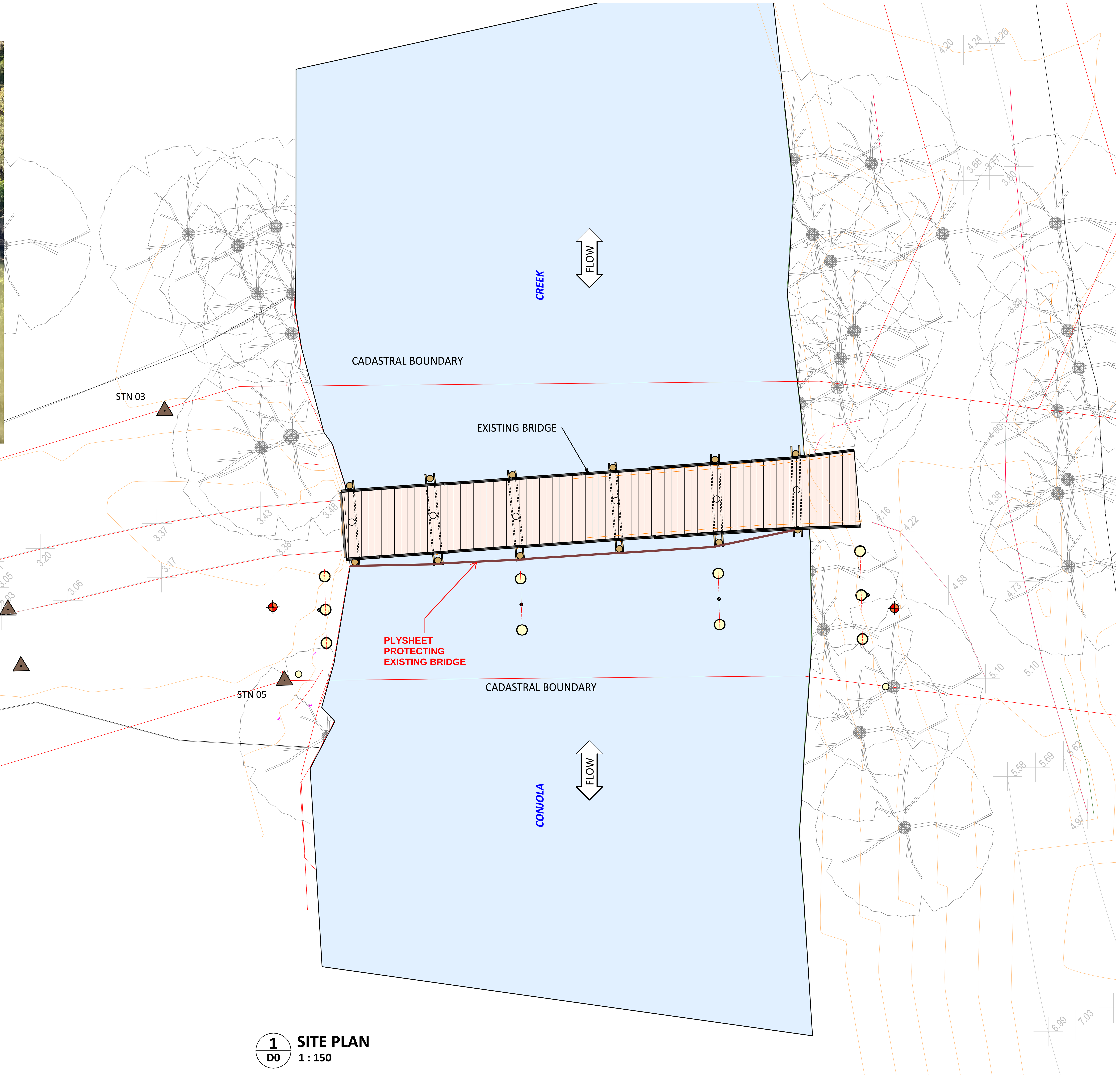
ENVIRONMENTAL CONTROLS FOR PIER 2 WORKS

Project
Job Ref.

Sheet No. 0 of

Rev

Designed By:



1 D0 **SITE PLAN**
1 : 150

GENERAL NOTES

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Issue	Description	Name	Initial	Date

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FORTEC

FORTEC AUSTRALIA
Unit 12/55-57 Newton Road
WEATHERILL PARK NSW 2450

SITE LOCATION
BRIDGE ON MURRAYS ROAD
NORTH OF FISHERMANS WHARF

Shoalhaven City Council

MURRAYS BRIDGE OVER CONJOLA CREEK
PROTECTION FOR EXISTING BRIDGE

Project Job Ref.

Sheet No. 0 of

Rev

Designed By:

1 D0 **SITE PLAN** 1 : 150

GENERAL NOTES

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FORTEC

FORTEC AUSTRALIA
Unit 12/55-57 Newton Road
WEATHERILL PARK NSW 2450

SITE LOCATION
BRIDGE ON MURRAYS ROAD NORTH OF FISHERMANS WHARF

Shoalhaven City Council

MURRAYS BRIDGE OVER CONJOLA CREEK

ENVIRONMENTAL CONTROLS FOR ABUTMENT WORKS

Project Job Ref.

Sheet No. 0 of

Rev

Designed By:


FENCE BOUNDARY
MURRAYS ROAD
FENCE BOUNDARY
CADASTRAL
STN 03
STN 02
STN 04
STN 05
CADASTRAL BOUNDARY
EXISTING BRIDGE
CREEK
CONJOLA
FLOW
FLOW
CADASTRAL BOUNDARY
HEAVY DUTY BUILDERS PLASTIC
SILT FENCE SUPPORTED WITH START PICKETS
SPOIL DRYING AREA & POTENTIAL ACID SULPHATE SOIL NEUTRALIZATION AREA IF REQUIRED
SILT FENCE SUPPORTED WITH START PICKETS
BARGE WITH EXCAVATOR
FLOATING HYDROCAR BON BOOM WITH ATTACHED SILT CURTAIN
SILT FENCE SUPPORTED WITH START PICKETS
WATER BARRIERS
100T CRANE
CHS PILE SECTIONS
WATER BARRIERS

1 / D0 **SITE PLAN**
1 : 150

GENERAL NOTES

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FORTEC AUSTRALIA
Unit 12/55-57 Newton Road
WEATHERILL PARK NSW 2450

SITE LOCATION
BRIDGE ON MURRAYS ROAD NORTH OF FISHERMANS WHARF

Shoalhaven City Council

MURRAYS BRIDGE OVER CONJOLA CREEK

ENVIRONMENTAL CONTROLS FOR ABUTMENT WORKS

Project Job Ref.
Sheet No. 0 of
Rev
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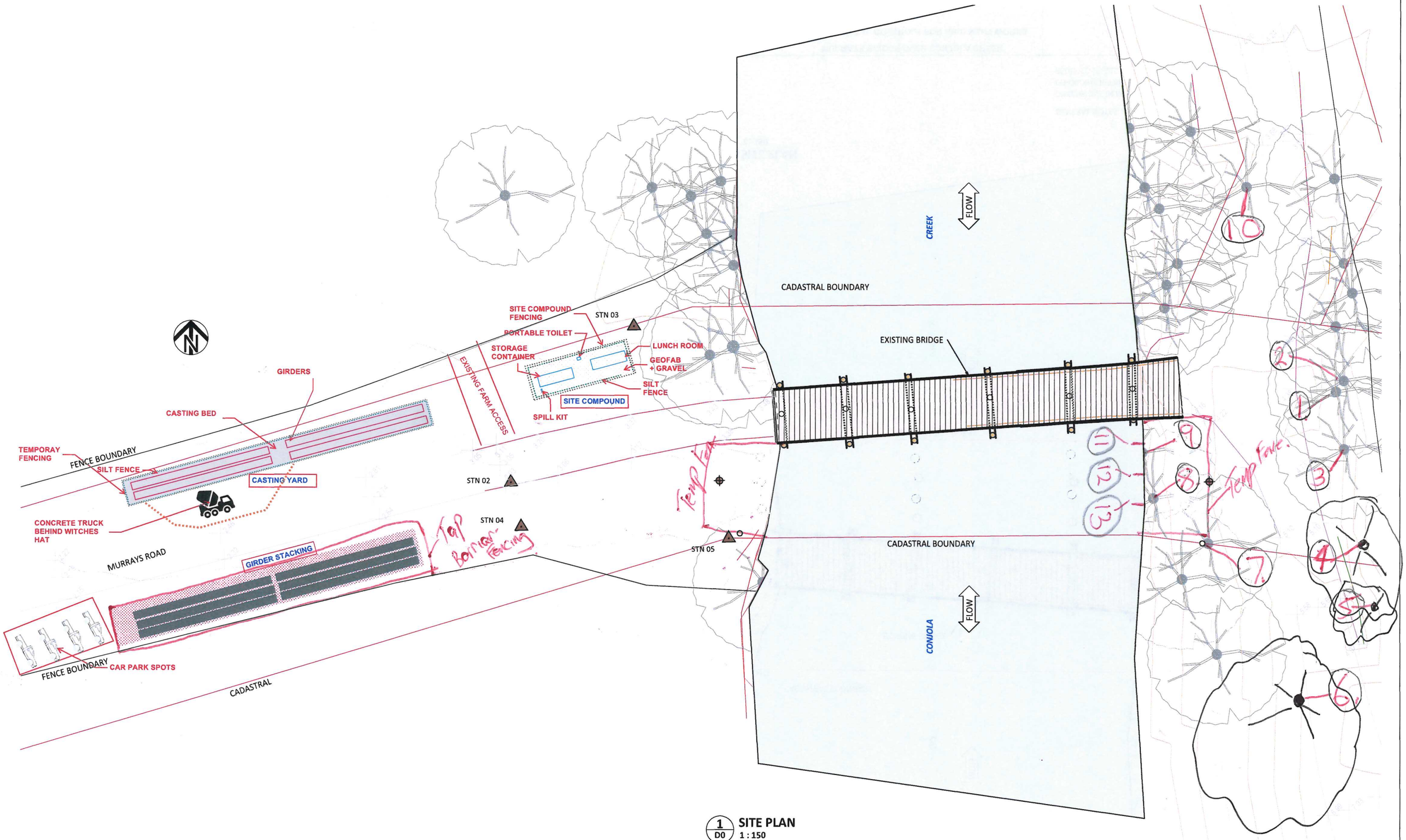
Appendix – 2 Tree Removal Markup Plan



1 / D0 SITE PLAN
1 : 150

NOT FOR CONSTRUCTION

Drawing scales true at A1

Issue	Description	Name	Initial	Date

Design not to be amended without authorisation by Certifier

FORTEC

FORTEC AUSTRALIA
Unit 12/55-57 Newton Road
WEATHERILL PARK NSW 2450

SITE LOCATION

BRIDGE ON MURRAYS ROAD
NORTH OF FISHERMANS WHARF

Shoalhaven City Council

MURRAYS BRIDGE OVER CONJOLA CREEK

SITE COMPOUND, CASTING & STACKING YARD - LAYOUT WITH ENVIRONMENTAL CONTROLS

Project
Job Ref.

Sheet No. 0 of

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TREE ONE
MARKED WITH PAINT
ON TREE

Steve Wilson Tree Services
PH 0409 843 181
stevewilsontreeservices@hotmail.com
ABN: 68620677955

1

Tree Inspection Checklist
Location MURRAY'S ROAD BRIDGE CONJOLA
Inspected by STEVE WILSON Date 22-10-24

Criteria	Y/N/ X	Comments
Species	Y	SWAMP MAHOGANY EUCALYPTUS ROBUSTA
Significance - Endemic	x	
- Historical	x	
- Cultural	x	
- Locality	✓	TREE MARKED NO 1
Age (YSMO)	S	SEMI MATURE
Habitat Tree	x	NO HABITAT
Neighbours Tree	x	
Own Tree	x	
Boundary Tree	x	
Problem reported -overhanging braches		
-invading roots		
-fear of falling trees		
-dropping branches		
-other eg. BA/DA		

TREE IS 20 MTRS TALL
HEALTHY

Steve Wilson Tree Services
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stevewilsontreeservices@hotmail.com
ABN: 68620677955

2

Tree Inspection Checklist
Location MURRAY'S ROAD BRIDGE CONJOLA
Inspected by STEVE WILSON Date 22-10-24

Criteria	Y/N/ X	Comments
Species	✓	SPOTTED GUM EUCALYPTUS MACULATA
Significance - Endemic	x	
- Historical	x	
- Cultural	x	
- Locality	✓	MARKED NO 2
Age (YSMO)	S	SEMI MATURE
Habitat Tree	x	NO HABITAT
Neighbours Tree	x	
Own Tree	x	
Boundary Tree	x	
Problem reported -overhanging braches		
-invading roots		
-fear of falling trees		
-dropping branches		
-other eg. BA/DA		

TREE IS 25 MTRS TALL
HEALTHY

Steve Wilson Tree Services
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stevewilsontreeservices@hotmail.com
ABN: 68620677955

3

Tree Inspection Checklist
Location MURRAY'S ROAD BRIDGE CONOLA
Inspected by STEVE WILSON Date 22-10-24

Criteria	Y/N/ X	Comments
Species	✓	SWAMP MAHOGANY EUCALYPTUS ROBUSTA
Significance - Endemic	X	
- Historical	X	
- Cultural	X	
- Locality	✓	TREE MARKED 3
Age (YSMO)	S	SEMI MATURE
Habitat Tree	X	NO HABITAT
Neighbours Tree		
Own Tree		
Boundary Tree		
Problem reported -overhanging braches		
-invading roots		
-fear of falling trees		
-dropping branches		
-other eg. BA/DA		

TREE IS 18 MTRS HIGH

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stevewilsontreeservices@hotmail.com
ABN: 68620677955

4

Tree Inspection Checklist
Location MURRAY'S ROAD BRIDGE CONOLA
Inspected by STEVE WILSON Date 22-10-24

Criteria	Y/N/ X	Comments
Species	✓	SWAMP MAHOGANY EUCALYPTUS ROBUSTA
Significance - Endemic	X	
- Historical	X	
- Cultural	X	
- Locality	✓	TREE MARKED 4
Age (YSMO)	✓	MATURE
Habitat Tree	✓	NO HABITAT
Neighbours Tree		
Own Tree		
Boundary Tree		
Problem reported -overhanging braches		
-invading roots		
-fear of falling trees		
-dropping branches		
-other eg. BA/DA		

TREE IS 23.5 MTRS TALL
HEALTHY

Steve Wilson Tree Services
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stevewilsontreeservices@hotmail.com
ABN: 68620677955

5

Tree Inspection Checklist
Location MURRAY'S ROAD BRIDGE CONJOLA
Inspected by STEVE WILSON Date 22-10-24

Criteria	Y/N/ X	Comments
Species	✓	SWAMP SHE OAK CASUARINA GLAUCA
Significance - Endemic	x	
- Historical	x	
- Cultural	x	
- Locality	✓	TREE MARKED 5
Age (YSMO)	Y	YOUNG
Habitat Tree	✓	NO HABITAT
Neighbours Tree		
Own Tree		
Boundary Tree		
Problem reported -overhanging braches		
-invading roots		
-fear of falling trees		
-dropping branches		
-other eg. BA/DA		

TREE IS 9 MTRS TALL
HEALTHY

Steve Wilson Tree Services
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stevewilsontreeservices@hotmail.com
ABN: 68620677955

6

Tree Inspection Checklist
Location MURRAY'S ROAD BRIDGE CONJOLA
Inspected by STEVE WILSON Date 22-10-24

Criteria	Y/N/ X	Comments
Species	✓	SWAMP MAHOGANY EUCALYPTUS ROBUSTA
Significance - Endemic	X	
- Historical	X	
- Cultural	X	
- Locality	✓	MARKED NO6
Age (YSMO)	M	MATURE
Habitat Tree	✓	NO HABITAT
Neighbours Tree		
Own Tree		
Boundary Tree		
Problem reported -overhanging braches	✓	DROPPING DEADWOOD-LIMBS OVER ROAD
-invading roots	✓	ROOT SYSTEM IS WASHED AWAY DOWN ENBANKMENT
-fear of falling trees	✓	IF ROADWORK DISTURBES ROOTS TREE WILL BECOME UNSTABLE
-dropping branches	✓	YES ON ROAD
-other eg. BA/DA		

TREE IS 27 MTRS TALL
NOT HEALTHY

6

Diagnosis/tree condition: • root damage	YES	
• major deadwood	✓	
• borers-fresh	✓	
• borers-old	✓	
• epicormic shoots		
• crown cover	✓	. DROPPING LIMBS
• trunk damage	✓	BLACK CREEPER INHNOCARPUS FRUTESCENS
• foliar insects		
• previously lopped		
• other	✓	BUILDING ROAD NEXT TO TREE WILL DISTURB ROOT SYSTEN
Actions necessary/ recommendations • remove tree	✓	REMOVE TREE
• remove branches		
• thinning		
• deadwooding		
• replace(species)		
• prune roots		
• other		
Problem to be referred:		


6

Steve Wilson
0409843181
ABN 68620677955
stevewilsontreeservices@hotmail.com

7

Diagnosis/tree condition: • root damage		
• major deadwood		
• borers-fresh		
• borers-old		
• epicormic shoots		
• crown cover		
• trunk damage		
• foliar insects		
• previously lopped		
• other	✓	SWAMP ~~MAHOGANY~~ MAHOGANY EUCALYPTUS ROBUSTA
Actions necessary/ recommendations • remove tree		
• remove branches		
• thinning		
• deadwooding		
• replace(species)		
• prune roots		
• other		
Problem to be referred:		

NO HABITAT
TREE IS 23 MTRS HIGH
MATURE

STEVE WILSON TREE SERVICES
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Stevewilsontreeservices@hotmail
ABN 68620677955

8

Diagnosis/tree condition: • root damage		
• major deadwood		
• borers-fresh		
• borers-old		
• epicormic shoots		
• crown cover		
• trunk damage		
• foliar insects		
• previously lopped		
• other	✓	SWAMP MAHOGANY EUCALYPTUS ROBUSTA
Actions necessary/ recommendations • remove tree		
• remove branches		
• thinning		
• deadwooding		
• replace(species)		
• prune roots		
• other		
Problem to be referred:		

NO HABITAT
TREE IS 20 MTRS HIGH
SEMI MATURE

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9

Diagnosis/tree condition: • root damage		
• major deadwood		
• borers-fresh		
• borers-old		
• epicormic shoots		
• crown cover		
• trunk damage		
• foliar insects		
• previously lopped		
• other	✓	SWAMP CASUARINA GLAUCA SHE OAK.
Actions necessary/ recommendations • remove tree		
• remove branches		
• thinning		
• deadwooding		
• replace(species)		
• prune roots		
• other		
Problem to be referred:		

NO HABITAT
TREE IS 8 MTRS HIGH

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TREE 10 11 12 13
4 TREES

Diagnosis/tree condition: • root damage		
• major deadwood		
• borers-fresh		
• borers-old		
• epicormic shoots		
• crown cover		
• trunk damage		
• foliar insects		
• previously lopped		
• other	X3	SWAMP SHE OAKS CASUARINA GLAUCA
Actions necessary/ recommendations • remove tree	X1	SWAMP MAHOGANY-EUCALYPTUS ROBUSTA TREE 4
• remove branches		
• thinning		
• deadwooding		
• replace(species)		
• prune roots		
• other		
Problem to be referred:		

3 SHE OAKS - UNMARKED - OVER THE WATER - EAST SIDE OF BRIDGE

TREE 1 8 MTRS HIGH - NO HABITAT

TREE 2 6 MTRS HIGH - NO HABITAT

TREE 3 6 MTRS HIGH - NO HABITAT

TREE 4 18 MTRS HIGH - NO HABITAT - UNMARKED - NTH SIDE OF BRIDGE - REMOVE FOR ROAD BUILD - PIPES -


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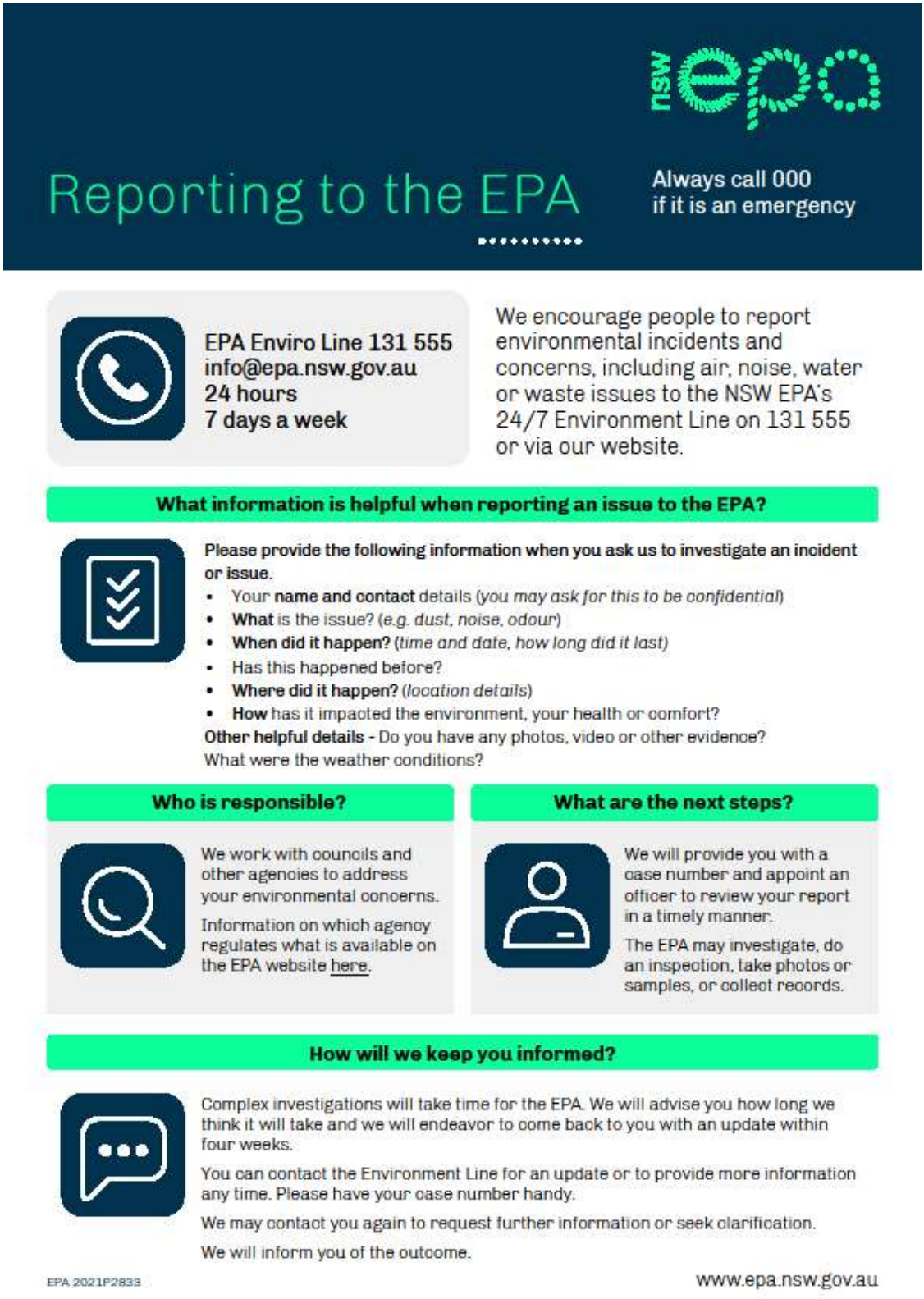
Appendix - 3 Reporting to the EPA



Reporting to the EPA

Always call 000 if it is an emergency

EPA Enviro Line 131 555
info@epa.nsw.gov.au
24 hours
7 days a week

We encourage people to report environmental incidents and concerns, including air, noise, water or waste issues to the NSW EPA's 24/7 Environment Line on 131 555 or via our website.

What information is helpful when reporting an issue to the EPA?

Please provide the following information when you ask us to investigate an incident or issue.

- Your **name and contact** details (*you may ask for this to be confidential*)
- **What** is the issue? (*e.g. dust, noise, odour*)
- **When did it happen?** (*time and date, how long did it last*)
- Has this happened before?
- **Where did it happen?** (*location details*)
- **How** has it impacted the environment, your health or comfort?

Other helpful details - Do you have any photos, video or other evidence?
What were the weather conditions?

Who is responsible?

We work with councils and other agencies to address your environmental concerns.

Information on which agency regulates what is available on the EPA website here.

What are the next steps?

We will provide you with a case number and appoint an officer to review your report in a timely manner.

The EPA may investigate, do an inspection, take photos or samples, or collect records.

How will we keep you informed?

Complex investigations will take time for the EPA. We will advise you how long we think it will take and we will endeavor to come back to you with an update within four weeks.

You can contact the Environment Line for an update or to provide more information any time. Please have your case number handy.

We may contact you again to request further information or seek clarification.

We will inform you of the outcome.

EPA 2021P2833

www.epa.nsw.gov.au