

Project Environmental Management Plan (PEMP)

SYD57 - ECHIDNA 10 EASTERN CREEK DRIVE, EASTERN CREEK

E-PLAN-03 (March 2023) | Approved by Andrew Andreou
Uncontrolled copy once printed.

Contents

1. Introduction	3
2. Hierarchy of HSE System Documents	6
3. Legal and Other Requirements	8
4. Environmental Risk Identification and Assessment	11
5. Objective and Targets	12
6. Roles and Responsibilities	13
7. Induction	26
8. Training and Competency	27
9. Communication	27
10. Environmental Risks	28
11. Incident and Emergency Management	35
12. Environmental Monitoring and Inspections	36
13. Non-Conformity, Corrective and Preventive Actions	37
14. Purchasing / Procurement	37
15. Contractor Management	38
16. Environmental Audit	38
17. Review of This Plan	38
Appendix 1 – Global Mark Accreditation	39
Appendix 2 – Environmental Policy	41
Appendix 3 – Taylor’s Construction Spill Reponse Procedure Flow Chart	43
Appendix 4 – Site Environmental Emergency Reponse Plans	45
Appendix 5 – Site Map: Environmental Requiremets	48
Appendix 6 – Sediment Control Plan	50
Appendix 7 – Environmental Legal and Other Requirements Register	52

1. Introduction

1.1 Project Information Table

Project information table		
Project name	SYD57 – Echidna	
Location	10 Eastern Creek Drive, Eastern Creek	
Client	Amazon Website Services (AWS)	
Duration of contract	24 Months	
Taylor contacts information		
Company name	Taylor Construction Group Pty Ltd	
ABN	25 067 428 344	
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Project Director	Hazem Gergis	0435 009 588
Project Manager	Harrison Cornay	0426 255 741
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Site Supervisor	TBC	
Site Supervisor	TBC	
HSE Manager	Andrew Andreou	0404 492 614
Safety Advisor	Nathan Hunter	0402 229 939
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Contract Administrator	Rafa Haidary	0432 559 934
Graduate Contract Administrator	Dorsa Faghireh	0451 500 201
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Project Engineer	David Tran	0433 618 021
Site Engineer	Jason Hanna	0401 898 918



Document control	Name	Position	Signature	Date
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Reviewed by:	David Perreira	Site Manager		
Reviewed by:	Andrew Andreou	Head Of WHS&E		
Reviewed by:	Tim Christie	General Manager – General Build		
Revised by:	Revision #	Date	Changes made	
Jason Hanna	1	26/10/2023	Initial Creation	
Nathan Hunter	2	15/04/2024	Personnel Changes	

1.2 Project Description

The SYD057 Echidna Data Centre is strategically located at 10 Eastern Creek Drive, Eastern Creek NSW. The site shares its location with existing facilities including the SYD55 Data Centre and SYD701 Puggle, as well as a substation currently under construction by Ausconnex.

The project involves the construction of a state-of-the-art, two-storey data centre building. The facility is designed to be a hub of technological innovation and operational efficiency, featuring a range of specialized internal areas:

- Data Centre: This is the core of the facility, comprising Data Halls, Electrical Rooms, and Mechanical Plantrooms. These areas are designed to host servers and other critical IT equipment, supported by advanced electrical and mechanical systems.
- Front of House Administrative Areas: These spaces will serve as the administrative nerve centre of the facility, housing offices, meeting rooms, and other support spaces.
- Medium Voltage Switch Room: A dedicated space for medium voltage switches, ensuring reliable and efficient power distribution throughout the facility.

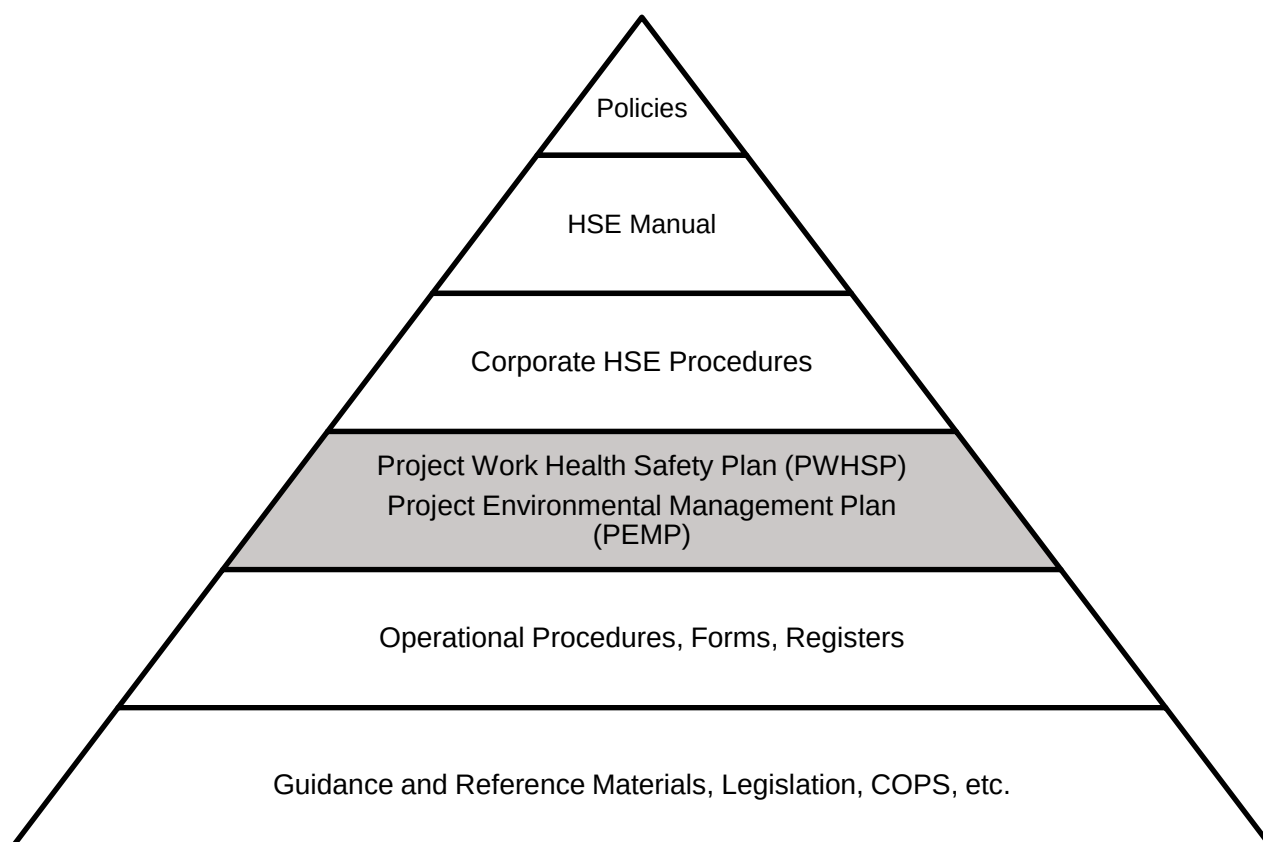
1.3 Purpose of the Project Environmental Management Plan

Taylor Construction Group Pty Ltd has a documented Quality, Health, Safety and Environmental (QSE) Management System. While the management systems are integrated, key documents such as the Project Environmental Management Plan (PEMP), the Project Safety Plan (WHSP) and the Project Management Plan (PMP, overarching plan with Quality provisions) are developed as separate documents to give each area a strong individual focus. The 'hierarchy of system documents' diagram below provides an overview of where the PEMP fits in the management system hierarchy.

This document is a key component of the integrated QSE Management System and sets out the environmental management strategy to be adopted on site by Taylor Construction Group Pty Ltd as the principal contractor for works undertaken on this project. The purpose of this document is to provide guidance on the essential environmental requirements on a project level and reference to other important management system processes and procedures. A Project Environmental Management Plan must be prepared for each project managed by Taylor Construction Group.

The project-specific Environmental Management Plan is to be read in accordance with Taylor Construction Management Manual, Site Management Plan and Site Safety Plan.

2. Hierarchy of HSE System Documents



QSE System documents can be found on SharePoint under the Taylor Management System (TMS), within the 'Quality' and 'HSE' folders.

The management system structure:

- Corporate
- QSE manual
- Corporate policies
- Corporate (system) procedures
- Forms and templates
- Registers and matrices
- Objectives and targets
- Organisational charts
- Certificates/ accreditations
- Training material.

HammerTech is a cloud-based software platform will used to enable teams to manage their processes effectively and maintain uniformly across all projects. This includes the collating and storing of:

- Onboarding and inductions
- Safety plans / SWMS / risk assessment
- Permits
- Pre-start and toolbox talks
- Equipment and maintenance records / schedules
- Personnel training records / competencies / licences

- 
- WHS&E inspections / audits
 - Accident and incident
 - Attendance (site diaries).

HammerTech can also be used to send out news bulletins and updates to individuals advising of alerts, meetings, industry news and updates to site rules and procedures.

Environmental Policy

Taylor has an Environmental Policy outlining our commitment to the protection of the environment. This policy can be found in Appendix 2 of this document. A copy of the Environmental Policy is to be posted on the walls or notice board at the project site.



3. Legal and Other Requirements

The processes for identifying and keeping up to date with legal and other requirements are outlined in the **Legal and Other Requirements Procedure SE-R-01**.

An **Environmental Legal and Other Requirements Register E-R-01** has been prepared and is periodically updated to ensure that it reflects current legal requirements. This register identifies the key relevant legislation and guidelines, please see Appendix 7.

3.1 Environmental Factors

Factor	Objectives	Requirements
Noise Management*		
Noise/ vibration	Protect the amenity of nearby residents from noise/ vibration impacts resulting from activities associated with the proposed or existing development by ensuring that noise/ vibration levels meet statutory requirements and acceptable standards.	– Identification of sources of noise/ vibration and estimates of project-wide noise. – Ensure that noise and vibration levels meet acceptable standards and that an adequate level of service, safety and public amenity is maintained. – Propose measures to manage and/ or mitigate impacts.
Water Management*		
Surface water quality	Maintain or improve the quality of surface water to ensure that existing and potential uses, including ecosystem maintenance, are protected.	– Details of site drainage, hydrocarbon use, disposal of plant site waste (including sewage), dewatering, and fate of water used/ pumped. – Incorporate measures and/ or operating procedures to ensure that storm water run-off from the site reflects patterns, volumes and quality that exist prior to development, as far as reasonably practicable. – Drainage lines are to be naturalised as much as possible and should enhance the ecological values and recreational opportunities. – Propose measures to manage and/ or mitigate impacts.
Groundwater quality	Maintain or improve the quality of groundwater to ensure that existing and potential uses, including ecosystem maintenance, are protected.	– Describe water requirements for any on-site processing. – Incorporate measures and/ or operating procedures that will minimise the demand of the development on potable water supplies. – Ensure that no contaminated water, including those containing sediments, leaves the site. – Propose measures to manage and/ or mitigate impacts.
Air management		
Air	Ensure that potential air pollutants are contained and that activities do not impact on the natural environment.	– Identify sources of air pollution. – Propose measures to manage and/ or mitigate impacts.
Particulates/ dust	Ensure that particulate/ dust emissions, both individually and cumulatively, meet	– Identification of sources of particulates/ dust and estimates of project-wide emissions.



	appropriate criteria and do not cause an environmental or human health problem.	– Propose measures to manage and/ or mitigate impacts.
Odour	Ensure that operations do not generate odour that causes environmental nuisance.	– Identification of sources of odour and estimates of project-wide emissions. – Propose measures to manage and/ or mitigate impacts.
Waste Management		
Solid/ liquid waste	Ensure that wastes are contained and isolated from land, ground and surface water surrounds and treatment or collection does not result in long-term impacts on the natural environment.	– Identify sources of solid and liquid waste and estimate the proposed amount generated. – Propose measures to manage and/ or mitigate impacts.
Contaminated Land and Water		
Land	Ensure that existing or proposed activities do not discharge to land.	– Identify activities that have the potential to discharge to land. – Propose measures to manage and/ or mitigate impacts.
Surface water	Ensure that existing or proposed activities do not discharge to surface waters.	– Identify activities that have the potential to discharge to surface waters. – Propose measures to manage and/ or mitigate impacts.
Groundwater	Ensure that existing or proposed activities do not discharge to groundwater.	– Identify activities that have the potential to discharge to groundwater. – Propose measures to manage and/ or mitigate impacts.
Hazardous Materials Management		
Scheduled wastes	Ensure scheduled wastes are specially treated for their destruction.	– Identify scheduled wastes and describe the treatment of their destruction. – Propose measures to manage and/ or mitigate impacts.
Resource storage	Ensure that chemicals and other potentially harmful resources used in the manufacturing process are stored and disposed of correctly.	– Describe the use and management of chemicals and other potentially harmful resources. – Propose measures to manage and/ or mitigate impacts.
Compressed/ liquid gas	Ensure the suitable storage of compressed/ liquid gas.	– Describe the use and management of compressed/ liquid gas. – Propose measures to manage and/ or mitigate impacts.



3.2 Development Consent Conditions

Consent working hours are:

Day	Start Time	Finish Time
Monday to Friday	7:00am	6:00pm
Saturday	8:00am	1:00pm
Sunday and Public Holidays	No Work	

3.3 Environmental Protection License or Other Approvals

- NSW Environmental Management System Guidelines 2015.
- Legal and Other Requirements Procedure SE-R-01.
- Environmental Legal and Other Requirements Register E-R-01.



4. Environmental Risk Identification and Assessment

Standard ISO 14001 requires that environmental aspects relating to the organisation's activities, products and services are identified and those aspects that can have a significant impact on the environment, determined. At Taylor, the environmental aspects relating to general construction activities have been identified through a risk assessment workshop attended by key project and site managers and an environmental consultant. The aspects, impacts, risk assessment outcomes and generic controls are documented in the **HSE Risk Register HSE-R-01**. Detailed requirements for risk assessments (environmental and OHS) are described in **Risk Assessment Procedure SE-OP-03**.

4.1 Environmental Risk Assessment

The methodology for risk assessments is based on the requirements described AS/NZS 4360 (Risk Assessment) and HB203 (Environmental Risk Assessment).

Taylor's procedure requires an initial Project Risk Assessment to be undertaken at the commencement of each project. The risk assessment is to be conducted in the form of a workshop and is to include the Project / Site Manager, HSE Manager, key members of the project team and, to the extent required, key subcontractors, and is to be recorded on form **HSE-R-01 HSE Risk Register**.

The HSE Risk Register is to be developed to address both legal and other requirements covered in this plan and is to be referenced to implement systems and work practices that will eliminate or minimise the likelihood of injury, illness or incident occurring.

When developing the project HSE Risk Register, members of the workshop will take into consideration available information which is relevant to the works and is contained in any published copies of the below documents:

- HSE acts.
- WHS regulation.
- Australian / National Standards.
- Codes of practice.
- Available internal and external industry bulletins/alerts.
- Industry reports.

This will ensure members of the workshop identify and document any known or foreseeable hazards associated with that task.

The completed Environmental Risk Assessment can be found in Appendix 13 of the project HSE Plan (**WHS-PLAN-02**).

References:

- SE-P-03 Risk Assessment Procedure.



5. Objective and Targets

Objectives and targets are set at a corporate level. They are monitored and measured to ensure that Taylor continually improves our environmental performance. To ensure that we meet our corporate objectives and targets, key performance indicators (KPIs) are set at a project level and reported to management monthly.

Objectives	Targets
Effective site environmental controls.	– Achieve alignment with Taylors and Client expectations in relation to best practice control measures. – Fulfil environmental obligations.
Increase amount of waste being recycled, reduce waste cost.	– Eighty-five per cent (85%) of waste to be recycled.
Environmental performance.	– Zero major environmental incidents and no breaches. – Zero infringement notices. – All environmental spills to be reported to Taylor Construction within 2 hours of occurrence. – Environmental inspection completed weekly and documented in SE-F-02 HSE Inspection Checklist (more often if required).
Reduce the amount of environmental impact our operations have on the environment.	– Environmental issues identified and controlled prior to causing negative impacts on the project or on the environment.
Effective implementation of the environmental system.	– Eighty per cent (80%) or better internal audit results. – Full compliance with planning approval requirements.
Community issues carefully handled.	– Zero valid complaints. All complaints reported to Taylor's representative.



6. Roles and Responsibilities

All persons working for and on behalf of Taylor have responsibilities in relation to ensuring that environmental issues are appropriately managed. Generic WHS and environmental responsibilities are outlined in the **Roles, Responsibilities and Authorities Procedure QSE-P-06**.

Subcontractors

The subcontractor shall be required to comply with all applicable work health, safety and environmental legislation, including any additional Taylor's requirements, whilst engaged on a Taylor-managed project. The subcontractor shall be responsible to communicate any relevant environmental information to their personnel (workers) who are engaged in carrying out the work or providing material to the job site, including any secondary subcontractors or sole traders engaged by them and approved by Taylor.

Subcontractor's minimal environmental requirements:

- Has the subcontractor identified in the SWMS environmental hazards and controls in relation to the work task (where required), i.e. refuelling plant and equipment on site, nuisance dust controls, nuisance noise, waste management (off-cuts), rubbish, concrete wash-out?
- Have hazardous substances or dangerous goods to be used on site by the subcontractor been identified?
Note: the subcontractor will need to provide copies of relevant Safety Data Sheets (SDS) for all materials and/ or hazardous substances or dangerous goods to be used on site and note reference to training of employees in the SDS prior to first use and controls listed in the SWMS.

Taylor Construction Personnel

For this project, the key roles and specific responsibilities of our managers, supervisors, and site personnel regarding environmental management on site are outlined below. Project-related management and staff are required to sign off that they have read and understood their responsibilities.

6.1 Directors

Directors are responsible for:

- Defining Taylor Construction workplace WHS&E policies and setting their objectives.
- Acquiring and keeping up to date with knowledge of environmental matters relevant to the organisation.
- Gaining an understanding of the nature of the operation of the business or undertaking and general environmental issues associated with those operations.
- Providing leadership that promotes and maintains Taylor's determination to continually improve its performance in workplace health safety and the environment.
- Demonstrating genuine interest in workplace health and safety and the environment; supporting all project teams to encourage incident prevention.
- Ensuring that there is available for use and used by those engaged in the business or undertaking, appropriate resources and processes to eliminate or minimise risks to the environment and non-compliance with licences during the conduct of the business or undertaking.
- Ensuring that people engaged in the business or undertaking have appropriate processes for receiving and considering information regarding environmental incidents, hazards, and risks, and respond in a timely way to that information.
- Ensuring that those engaged in the business or undertaking have in place and implement processes for complying with any duty or obligation of the organisation under the Act, including complying with licence conditions and notices served.



6.2 Chief Executive Officer

The Chief Executive Officer's responsibilities include:

- Informing the board of all events within, or which reasonably should be within, his/her knowledge or awareness, which may or do have a material impact on the organisation's activities or well-being.
- Monitoring and interpreting the external environment in order to continually position the organisation in its markets to best advantage.
- Maintaining awareness of political, governmental, business, and industry components of the external environment, on a local, national, and international level.
- Reviewing environmental objectives and targets to ensure compliance with our environmental commitments and achieve continuous improvement in our environmental performance.
- Working proactively with our clients, regulators, and other community stakeholders to enable environmental issues to be addressed at an early stage of development.
- Monitoring the activities which are undertaken by employees and subcontractors are done so in a manner that is consistent with the principles of ecologically sustainable development.
- Overseeing the implementation of company procedures and policies that will prevent pollution and reduce adverse environmental impacts of our activities on the natural, built, and cultural environment.
- Setting realistic environmental objectives and targets at all relevant levels within the company and continually monitoring performance.
- Promote the efficient use of natural resources and reduce waste using the waste hierarchy – avoid, reduce, re-use, recycle and finally dispose of.
- Identifying alternative, financially viable, and sustainable courses of action to minimise environmental impacts.
- Defining Taylor Construction WHS&E policies and setting their objectives.



6.3 General Manager

General Manager is responsible for:

- Demonstrating genuine interest in workplace health, safety, and environment; supporting all project and site managers to encourage incident prevention and compliance.
- Assessing and allocating appropriate resources and equipment within the company for the effective implementation of the workplace health, safety, and environmental management systems and the management of WHS&E-related hazards/ risks relevant to the construction projects.
- Being fully briefed on the WHS&E performance and compliance of all current Taylor projects.
- Assisting in the development and implementation of continuous improvement processes for workplace environmental management
- Defining Taylor Construction WHS&E policies and setting their objectives.
-

Specific roles:

- Ensuring project teams’ compliance with any licence, permit notice or order from the EPA. For example, failure to have a monitoring program at a licensed site is a breach of your licence.
- Ensure the implementation and overall effectiveness of the Taylor environmental, health, and safety programs.
- Provide visible commitment to a safe and healthy work environment by ensuring regular reviews are undertaken. Participate in WHS&E meetings and consultations regarding workplace health safety and environmental matters.
- Consider workplace health safety and environment matters with other senior members of the organisation as part of normal business practice and incorporate WHS&E into meeting agendas.
- Allow appropriate budget allocations for WHS&E management and improvement.
- Encourage and promote safety within the company by participating and openly consulting with employees with respect to their health and safety.
- Follow up with the WHS&E Manager and site teams on any compliance breaches or external authority notices issued to projects and or subcontractors.
- Report on critical incidents which then embed lessons learned and system improvement will demonstrate the board’s commitment to environmental responsibility.
- Participate in periodic compliance inspections/audits to review the effectiveness of management structures and risk controls for environmental performance that are appropriate and remain effective.

Name:	
Signed:	
Date:	



6.5 Project Director

The Construction Manager is responsible for:

- Demonstrating genuine interest in workplace health and safety; supporting all the project/ site managers to encourage environmental incident prevention.
- Confirm that legislative obligations are met, and that Taylor's Environmental Policy is effectively implemented throughout all company construction projects under their control.

Specific roles:

- Provide leadership in the development of project teams to ensure the fostering of the business culture and approach to doing business with our clients, consultants, and subcontractors.
- Attend sites on a regular basis to ensure compliance with workplace environmental and programming requirements of both the head contract and the company's systems.
- Provide visible commitment to a safe and healthy work environment by ensuring regular reviews are undertaken, and by participating in safety and health meetings and consultation regarding WHS&E matters.
- Ensure that the Project / Site Manager has developed and implemented systems, which will ensure subcontractors/ suppliers engaged by the company comply with the health safety management and environmental systems and the relevant HSE legislation.
- Consider workplace health safety and environmental matters with other senior members of the organisation as part of normal business practice and incorporate WHS&E into meeting agendas.
- Support the Head of WHSE in ensuring Project / Site Managers have developed and implemented systems that will ensure subcontractors and suppliers engaged by the company comply with the WHS&E management systems and the relevant legislation.
- Respond to non-conformance by any member of the company who fails to discharge their duties as set by the Responsibility Statement and actively participate in dispute resolution where required.
- Participating in periodic compliance inspections/audits to review the effectiveness of management structures and risk controls for environmental performance are appropriate and remain effective.
- Where events or non-compliance occurs, all reasonable and appropriate precautions are reviewed and as necessary, ensure new controls are designed and implemented.

Name:	
Signed:	
Date:	

**** If no construction manager has been allocated to the project these roles and responsibilities will be shared by the project manager and the site manager.



6.6 Project Manager

The Project Manager is responsible for:

- Ensuring that environmental, health and safety obligations are carried out by everyone working in their operations.
- Communicating to employees, workers, and visitors that health and safety and concern for the environment are top priorities on Taylor projects and that everyone shares in the obligation to perform work in a safe, healthful, environmentally protective manner.
- Analysing work procedures to identify hazards; ensuring measures are implemented to eliminate or control those hazards.
- Ensuring the PCBU has implemented processes for complying with any legal duty or obligation.
- Curtail or stop work being carried out under their authority if they reasonably believe that continuation of the work poses an imminent danger to health or safety. Upon directing that work be curtailed or stopped, if the situation cannot be corrected immediately, the Manager must notify the WHS&E Manager
- Ensuring that self-assessment inspections are performed regularly, that records are retained and that deficiencies identified in any inspection (self-assessment or HSE inspections) are addressed.
- Consulting with Taylor's Construction Manager and HSE Manager to ensure enough resources are allocated to the project to comply with legislative and Taylor's WHS&E requirements.
- Ensuring compliance with safety legislation, regulations, licensing conditions, and authorities' requirements relevant to all construction work.
- Ensuring Taylor's site supervision is maintained throughout all hours of operation and those assigned with supervisory roles are competent and authorised to do so (e.g., PM, SM, or foreman).
- Ensuring incidents are investigated and appropriate action taken as required by Taylor's site safety plan requirements in consultation with the WHS&E Manager.
- Providing a visible commitment to a safe and healthy work environment by ensuring regular reviews are undertaken, and by participating in health and safety meetings and consultation regarding WHS&E matters.
- Ensure safety notices issued and/ or visits made to the project by industrial representatives and/ or SafeWork NSW are reported to both the General Manager and the head of WHSE.
- Selecting appropriate subcontractors, giving due regard to their ability to comply with legislative and Taylor's WHS&E requirements.
- Owning and understanding the key project environmental issues involved.
- Participating in at least one formal site HSE inspection per month on a project under their control.
- Reporting back to Taylor's senior managers on project HSE incidents, any external authority visits, and/ or Notices issued by external authorities.
- Overseeing the development and implementation of site evacuation and emergency procedures and overseeing at least one spontaneous evacuation drill every six months and assessing the results of that drill.
- Supporting the Site Manager in the management of employee, subcontractor, and supplier performance in complying with Taylor's environmental plan and the site-specific rules for the project.
- Be familiar with the emergency plan, the emergency assembly area, and emergency coordinators for their project and participate in emergency drills.
- Promoting and overseeing procurement standards for goods and services that help minimise environmental hazards.
- Where required, engaging with the local community to understand their environmental concerns and impacts linked to the organisation's operations.
- Ensuring compliance with Taylor's accredited QSE systems is maintained and implemented across all Taylor-managed projects under their control.

Name:	
Signed:	
Date:	



6.7 The Head Of WHS&E

The Head Of WHS&E is responsible for:

- Overseeing the development and implementation of Taylor policies and procedures related to environmental health and safety that provide additional support for the environment.
- Developing and maintaining electronic systems and technology solutions related to environmental health and safety.
- Disseminating information and providing guidance regarding compliance with federal, state, and local regulations and Taylor policies and procedures.
- Providing guidance, direction, and oversight to help ensure adherence to federal, state, and local regulations and Taylor policies and procedures instituted to protect the health and safety of employees, workers, visitors, and the environment.
- Overseeing the implementation of Taylor's health, safety, and environmental management systems throughout all Taylor activities.
- Ensuring that a systematic internal reporting system exists to guarantee that information about environmental hazards and unsafe practices is promptly conveyed to senior management and acted on.
- Maintaining a good relationship with external regulatory authorities.
- Setting targets and allocating priorities within the framework of the QSE System.
- Safeguarding compliance and maintenance of the company's third-party accreditations.
- Planning and delivering training in environmental management and/ or arranging for the appropriate internal or external trainers/ facilitators to conduct the training.
- Researching, developing, and implementing new procedures and forms, and updating the manual as required.
- Reviewing, analysing, and reporting on safety and environment project performance to Taylor's managing director, sector managers, and any party as arranged by the managing director.
- Ensuring compliance with environmental legislation, regulations, licensing conditions, and authorities' requirements.
- Ensuring Taylor's workplace health safety and environmental performance are reviewed on a regular basis (i.e., arranging for internal and external audits).
- Ensuring that periodic audits of the effectiveness of management structures and risk controls for environmental performance are conducted.
- Review internal and external (independent) audit reports and, in consultation with the directors and the project manager, develop appropriate action plans if necessary.
- Identifying environmental hazards, assessing risks, and in consultation with project teams selecting risk control measures for site-specific situations.
- When required, acting as the lead investigator in workplace incidents/ accidents, liaise with external authorities in managing them and report back to the managing director and/ or sector managers on outcomes of investigations.
- Ensuring WHS&E policies and procedures are implemented on all projects and that a specific site environmental plan is prepared and implemented for all projects.

Name:	
Signed:	
Date:	



6.8 Project Safety Advisor

The Project Safety Advisor is responsible for:

- Providing a visible commitment to a safe and healthy work environment by ensuring regular reviews are undertaken, and by participating in safety and health meetings and consultation regarding WHS&E matters.
- Ensuring workplace hazards and environmental, health, and safety-related policies and procedures are communicated to employees, workers, and visitors.
- Assisting the WHS&E manager and project teams in implementing Taylor's health, safety, and environmental procedures, policies, and project systems in line with best practices and the relevant statutory legislation.
- Reporting any serious environmental incident or near miss and unexpected finds immediately to the WHS&E manager.
- Safeguarding compliance and maintenance of the company's third-party accreditations.
- Assisting project teams and subcontractors in meeting their workplace health safety and environmental obligations.
- Ensuring compliance with this project's environmental plan.
- Monitoring subcontractor's compliance with the site environmental plan, and subcontractor compliance to their Safe Work Method Statements by conducting regular task observation/ audits.
- Undertaking regular workplace inspections to identify hazards and unsafe/ unhealthy workplace conditions and practices.
- Being familiar with the emergency plan, the emergency assembly area, and emergency coordinators for the project and participating in emergency drills.
- Assisting the Site Manager / Foreman in the supervision of subcontractors.
- Ensuring WHS&E items identified by safety inspections and or audits are rectified within specified timelines in consultation with the Site Manager, and subcontractors.
- Reporting incidents and/ or identified environmental hazards and appropriate risk control measures to line managers.
- Ensuring all workplace health and safety and environment documents are maintained and filed in accordance with Taylor's filing requirements.
- Coordinating or conducting site toolbox talks and ensuring subcontractors regularly consult with their employees on matters relating to environmental issues.
- Liaising with the Project / Site Manager to implement controls on hazards identified.
- Completing Safe Work Method Statement checklists for the site (task observation).
- Collating completed contractor required forms, authority to work permits, and checklists.
- Acting site safety representative for the site (unless another person has been elected to perform this role as per the consultation statement S-F-04 WHS Consultation Statement).
- Other HSE and/ or CW's issues or activities that may require their attention.

If no safety advisor is allocated to the project, the roles and responsibilities mentioned above are to be allocated to alternative Taylor Construction persons engaged in the project who are competent or have been suitably trained to fulfill these duties.

Name:	
Signed:	
Date:	



6.9 Site Manager

The Site Managers are responsible for:

- Providing a visible commitment to a safe and healthy work environment by ensuring regular reviews are undertaken, and by participating in safety and health meetings and consultation regarding WHS&E matters.
- Facilitating the process to ensure the project team and the WHS&E manager are consulted and participate in the development of the project specific WHS&E risk assessment. This is to be done prior to such activities commencing.
- Ensuring that prior to the works commencing a formal assessment of the emergency control equipment requirements has been completed and that these remain effective throughout the duration of the project. (e.g., first aid, nurse call, emergency warning alarms, fire extinguishers, spill kits, lighting, and signage)
- Ensuring workplace hazards and environmental, health, and safety-related policies and procedures are communicated to employees, workers, and visitors.
- Ensuring individuals working in their operations have the proper safety equipment and personal protective equipment to perform their work safely.
- Leading or participating in formal site safety inspections weekly and record results using **SE-F-02 HSE Inspection Checklist**. Daily informal inspections should be noted in the site diary.
- **Unexpected finds** – ensure all unexpected finds are treated, reported, and managed in accordance with Taylor's unexpected finds procedure.
- **Environmental controls** – ensure all environmental controls (sediment and erosion, noise, hours of operation, etc) as mentioned by permits or building approvals are adhered to and workers are advised of these requirements during the site induction process.
- **Emergency Response and Training Plan** – contribute to the development of the ERP, ensure that all employees, workers, and others know about the plan, and communicate the importance of participating in drills and otherwise following procedures set out in the plan.
- **Groundwater protection Program** – report any hazardous materials or other pollutants spilled to or discovered in soil or groundwater to EH&S for appropriate emergency or non-emergency clean-up.
- **Hazardous material and waste management** – inform employees and workers that hazardous materials and hazardous waste, except as expressly authorized by regulations, licenses, or permits, may not be disposed of via the sewer system, or other unsafe or environmentally damaging routes; and to stress the importance of proper hazardous material/waste management.
- **Training** – ensuring that everyone working in their operations is appropriately trained to identify and mitigate potential hazards. Ensure that work requiring training is performed only by persons who have received the proper training.
- **Hazardous spill response** – upon request, provide assistance in hazardous material spill clean-up, prepare written reports about reportable releases, and notify appropriate persons about reportable spills.
- **Noise monitoring and hearing conservation** – conduct noise surveys to determine exposure levels.
- **Environmental procedures/permits** – ensure activities requiring an internal and or external permit or approvals do not commence until a permit or approval has been formally granted the user has the responsibility for providing relevant information to obtain permits, meeting permit conditions, and any responsibility. Taylor site management shares in the responsibility to advise those performing the works of Taylors' procedure and permit requirements.
- Ensuring WHS&E items identified by safety inspections and or audits are rectified within specified timelines in consultation with the Project Manager, Project Safety Advisor, and subcontractors.
- Ensuring that all plant and equipment used on Taylor sites are environmentally safe, and correctly maintained and that the operator is appropriately licensed or qualified to operate and or use that equipment.
- Utilising experience and judgment to shut down and/ or evacuate any part of the site if a major health and safety and environmental risk occur.
- Reviewing, coordinating, and implementing emergency evacuation procedures and participating in drills at specified intervals (quarterly).

Name:	
Signed:	
Date:	



6.10 Site Foreman

The Site Foreman is responsible for:

- Implementing, through consultation with the Project Manager, the site environmental plan and procedures in accordance with WHS&E legislation, regulations, codes of practice, Australian Standards, and/ or other statutory requirements.
- Ensuring no work is undertaken on site until the relevant SWMS has been reviewed and signed off in accordance with form **SE-F-14 Safe Work Method Statement Review Form**.
- Monitoring subcontractors' compliance with the site environmental plan and subcontractors' compliance to their Safe Work Method Statements by conducting regular task observation /audits.
- Ensuring all workers and, if required, visitors, are site-inducted and aware of any environmental compliance obligations.
- Assisting with implementing and undertaking formal and proactive consultation measures between the project team and subcontractors.
- Ensuring items identified by environmental or system audits findings are rectified and closed out within specified timelines in consultation with the project manager, site manager, site safety advisor and subcontractors.
- Consulting with all persons on environmental issues, including changes to the workplace layouts and access egress points, and encourage the involvement of all personnel in achieving a safe and healthy site.
- First response in managing site-specific workplace environmental issues in the first instance, and discussing these with the project manager, site manager and/ or site safety advisor as required.
- Assisting the site manager with developing, planning, implementing, and reviewing site-specific emergency and evacuation procedures.
- Identifying any environmental hazards and assessing any risks on site and implementing risk control measures.
- Leading or participating in formal site safety inspections weekly using form **SE-F-02 HSE Inspection Checklist**. Note: informal inspections should be noted in the site diary.
- In consultation with the Project Manager and Senior Site Manager, and utilising experience and judgment, shut down and/ or evacuate any part of the site if a major environmental risk or situation occurs.
- When requested by the Site Manager participate in any environmental incident and assist with the investigating, recording, and reporting,
- Be familiar with the emergency plan, the emergency assembly area, and emergency coordinators for the project and participate in emergency drills.
- Monitoring the use of personal protective equipment (PPE) by site personnel.
- Where requested by the Site Manager, assist with monitoring of environmental issues (e.g., dust, noise, air quality)
- Assist the Site Manager with reviewing, coordinating, and implementing emergency evacuation procedures and participating in drills at specified intervals, minimum every six months.
- Ensuring that all plant and equipment used on Taylor sites are environmentally safe to use, and appropriately maintained and that the operator is correctly licensed or qualified for operating that equipment.

Name:	
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Date:	

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Date:	



6.11 Contract Administrator / Site Engineer

The Contract Administrator and Site Engineer's responsibilities are to:

- Support the Project Manager and Site Manager in the management of employee, subcontractor, and suppliers' performance in complying with Taylor WHS&E and the site-specific rules for the project.
- Assist the project/ site manager to ensure the site environmental plans and associated documentation, including standard forms, procedures, and templates, remain current and up to date.
- Where required, assist the project and site manager with site inductions.
- Include in the subcontract agreement the requirement for subcontractors to carry out their works in accordance with the company's or subcontractor's approved QSE plans.
- Forward to subcontractors a copy of HSE subcontractor requirement, **Contractor's HSE Requirements QSE-F-15.23** (letter template), ensuring this is completed and returned by subcontractor prior to commencing.
- Discuss with the subcontractors, at the tender interview stage, their obligation for managing HSE requirements by issuing to the relevant sections of the tender interview form and ensuring this is completed by the subcontractor prior to commencing on site.
- Request and obtain from the subcontractor prior to their arrival to the site copies of their Worker's Compensation and Public Liability Certificates of Currency, environmental and or council licences and or required permits ensuring they are current and that copies are available on site.
- Ensure that all completed copies of form **Contractor's HSE Requirements QSE-F-15.23** (letter template) are returned and filed in the project files.
- Ensure that the latest copies of project plans and WHS&E risk assessments are uploaded onto the project centre, or preferred data control system used, and engaged subcontractors have access to these.
- Ensure all external complaints/ incidents are recorded on **SE-F-21 Incident Report Form** and filed in the external complaints register or HammerTech.
- Assist the Project Manager and Site Manager in the general administration of WHS&E where requested.
- Be familiar with the emergency plan, the emergency assembly area, and emergency coordinators for the project and participate in emergency drills.

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6.12 Building Cadet

The Building Cadet's health, safety, and environmental responsibilities are to:

- Provide general assistance to management on an assigned project.
- Provide administrative assistance in managing site safety, quality assurance, and environmental management systems.
- Maintain project registers and records up to date.
- Where requested, assist with site contract administration and tendering.
- Manage project document control and provide design management assistance.
- Assist the Project / Site Manager to ensure the site QSE plans and associated documentation, including standard forms, procedures, and templates, remain current and up to date.
- Fulfil responsibilities as outlined in the 'Taylor Cadet Program Guidelines, including undertaking an approved course of study at an Australian University.
- Assist the Project Manager and Site Manager in the general administration of HSE where requested.
- Monitor the use of personal protective equipment (PPE) by site personnel.
- Complete site diaries as per project administration requirements.

Name:	
Signed:	
Date:	



6.13 First Aid Officers

It is the job of the trained first aider to provide initial treatment to injured or ill employees, which is consistent with first aider's level of training and competency. Where the treatment required is beyond a first aider's level of competency, they should recommend that the employee seek immediate medical assistance.

The nominated site first aid officers shall possess the required level of competency (Senior First Aid Certificate or Occupational First Aid Certificate) and they shall be responsible for:

- Providing first aid assistance to persons ill or injured on site.
- Recording all such assistance provided.
- Liaising with the site manager and/ or site foreman to achieve first aid obligations.

First Aid Officer Records

The nominated first aider shall be relied upon to exercise a common sense approach in determining what type of injuries require a first aid report to be completed. First aid/ incident reports shall only be completed for injuries or illnesses for which first aid assistance was sorted **immediately** following an event. Employees, including subcontractors, is, seeking to report an injury or incident for which first aid assistance was not initially sort **shall not** be provided with a copy of the report unless this has been authorised by the Site / Project Manager and/ or Taylor's WHS&E Manager.

Some typical injuries that may require reporting are:

- All injuries requiring off-site medical treatment.
- Impact injuries.
- Head injuries.
- Musculoskeletal injuries.
- Open wounds (cuts).
- Eye injuries.

The first aid officers shall also be responsible for the regular maintenance and replenishment of the first aid kits and equipment. At all times during normal operations there shall be a minimum of one (1) trained first aider on site for every 25 workers.

Name:	
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Date:	



6.14 PCBU and Workers

PCBU and Workers are responsible for:

- Attending Taylor’s site-specific induction prior to commencing work on site.
- Taking reasonable care for their individual health and safety and that of others on site, including members of the public.
- Familiarising themselves and adhering to Taylor Construction corporate policies.
- Performing only those works in which they possess the required competencies for or have been suitably trained to perform.
- Taking corrective actions to eliminate hazards within the workplace and /or reporting those hazards they cannot correct.
- Reporting all injuries to a first aid officer or supervisor.
- Cooperating with Taylor management in all requirements imposed in the interest of health, safety the environment, and wellbeing.
- Never intentionally or recklessly interfere, misusing, or remove any items and/ or equipment provided in the interest of health and safety.
- Complying with all site safety instructions and abiding by the procedures and work practices identified in the Workplace Health Safety Project Plans and/ or as directed or informed by the Site Manager / Foreman.
- Complying with all relevant workplace health and safety legislation, standards, and codes of practice.
- Reporting promptly to a Site Manager / Foreman any unsafe conditions, practices or defects discovered in any control measures, including personal protective equipment.
- Maintaining safe work practices when working with, or near, hazardous substances, so that their own health and safety, and the health and safety of those around them, is maintained.
- Using personal protective equipment (PPE) as required. The equipment should be kept clean and maintained in an appropriate manner.
- Practicing high-standard personal hygiene in and around all amenity areas such as lunch, change and toilet facilities by washing thoroughly and removing all protective clothing before eating, drinking, and smoking.
- Do not perform any activity or act that endangers or impacts the environment.

6.15 Other Personnel with Specific Environmental Responsibilities

Add any specific responsibilities here. If no specific positions or responsibilities, DELETE this section and UPDATE the table of contents.

References:

- Roles, Responsibilities, and Authorities Procedure QSE-P-06.



7. Induction

Taylor employees, including those workers engaged by or working on behalf of the subcontractors, are required to be site-inducted prior to commencing work on the site. General environmental awareness and specific environmental requirements of this PEMP must be incorporated into the site-specific induction as required.

As a minimum, inductions must include the following environmental information:

- Community issues.
- Hours of operation.
- Noise and vibration.
- Dust management.
- Traffic access.
- Washing requirements for construction plant and equipment.
- Storage and handling of fuels, oils, and other chemicals.
- Waste management: recycling, disposal, litter.
- Soil and water issues: controls, tracking of mud off-site.

Where there are significant environmental issues identified for the project, these must be incorporated into the site-specific induction. These may include but shall not be limited to (where required):

- Environmentally sensitive areas of the site (specify details in this section).
- Contaminated or Acid Sulphate soils.
- Endangered flora and fauna.
- Environmental controls and management.
- Noise emissions.
- Plant emissions.
- Archaeology and heritage management.

References:

- SE-F-11 Site Induction Form and Mandatory Safety Requirements.
- SE-F-11a Induction Register.



8. Training and Competency

All persons undertaking work on the project (employees and subcontractors) must be trained and competent to carry out their work. This includes undertaking tasks in an environmentally sound manner.

Subcontractors shall be responsible to ensure that Taylor's environmental risk management, as prescribed in [Section 10.3](#) of this plan, are adopted and controls, as contained in Taylor's **HSE-R-01 HSE Risk Register**, are implemented when developing their systems of work.

The subcontractor shall be responsible to consult and train workers under their management in the agreed environmental system. Evidence of appropriate training shall be made available by the subcontractor to Taylor upon request by a Taylor-nominated representative.

The Project / Site Manager, along with relevant members of the project team, must be made aware of the requirements of the Taylor environmental management system and shall be required to attend Environmental Awareness and Due Diligence training sessions when organised by the company.

References:

- QSE-P-19 Training, Competency, and Awareness Procedure.
- WHS-PLAN-02 Project Workplace Health and Safety Plan (PWHSP).

9. Communication

The requirements for internal and external communication are outlined in the QSE Management System Manual. The following provides essential information in relation to environmental communication on projects.

9.1 Internal Communications

Essential information relating to project environmental management will be communicated through toolbox talks and inductions.

Environmental alerts will be periodically prepared and sent to sites for posting on notice boards.

Key changes to environmental legislation will be sent by email to all project managers and site managers.

9.2 External Communications – Community

Community complaints must be reported as environmental incidents and all correspondence relating to the complaint must be retained and filed on site, including information on how the complaint was resolved.

9.3 Regulator Site Visits and Written Communications

If an authorised officer (Council or DECCW representative) visits your site, you should contact the HSE Manager or Construction Manager for assistance and advice. While you can request that a higher level of management assists you, you cannot refuse to answer questions. An authorised officer must show their identification on request (ensure you ask for it) and has the right to ask any person on site questions relating to environmental issues. When being enquired, always be polite, discuss only the facts and do not elaborate or provide opinions.

Any Penalty Infringement Notices or official warnings from regulators are to be treated as 'incidents' and reported in the Incident Report Form, investigated and corrective actions assigned and completed to address the root cause of the infringement.



Any communication from a regulator must be notified to the HSE manager. Records of all communications must be retained and appropriately filed.

10. Environmental Risks

10.1 Standard Operating Procedures

Several standard operating procedures have been developed as part of the HSE management system to provide detailed information on the management of site issues in relation to environmental and safety risks. The following procedures have been developed to date and are available on SharePoint:

- SE-OP-01 Hazardous Substances and Dangerous Goods Procedure.
- E-OP-01 Erosion and Sedimentation Controls.
- E-OP-02 Waste and Resource Management.
- QSE-OP-02 Asbestos Management Procedure.
- SE-OP-04 Noise Management (OHS and Environmental).

10.2 Safe Work Method Statements (SWMS)

While SWMS are primarily used in WHS to manage high-risk activities, any relevant or foreseen environmental risk must also be considered in the preparation of the SWMS.

Taylor's site managers or their nominees are responsible for ensuring that subcontractors include environmental issues in their task-specific SWMS by using **SE-F-14**. If environmental issues are not appropriately addressed, the subcontractor should be advised of the requirements. It is recommended that subcontractors are assisted with identifying environmental issues, particularly during the early implementation of Taylor's environmental management system and PEMP.

References:

- SE-F-03 Taylor Construction Group Safe Work Method Statement.
- SE-F-14 Safe Work Method Statement Review Form.
- SE-F-14.1 Contractor's HSE Plan Review.

10.3 Environmental Risk Management and Control

This section provides an overview of environmental issues typically encountered on-site based on the generic issues identified in the master Environmental Risk Assessment. When preparing this document, the project manager should add any additional environmental issues that may have been identified through the environmental impact assessment, development consent/ approval, etc.

10.3.1 Project Design – Environmental Considerations

During the planning phase of the project, consideration should be given to the following:

- How will design minimise energy use and allow for and use the natural environment?
- How will materials, products and systems be selected or designed to minimise adverse impacts and/ or benefit the environment?

These questions should be considered prior to commencement of the project and may require the input from the client.

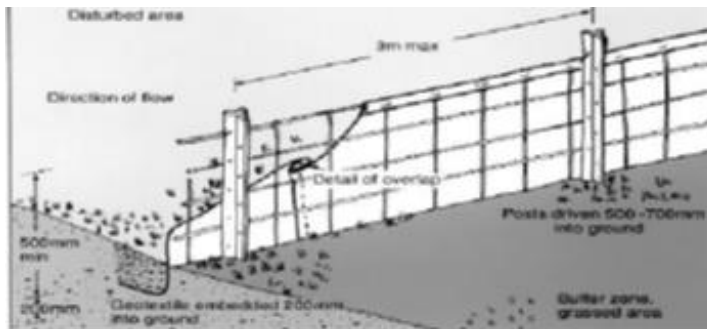
10.3.2 Soil and Water Management / Sedimentation and Erosion Control

Taylor and subcontractors shall plan and carry out works to avoid erosion and prevent sediment from leaving the site to the surrounding land, watercourses, water bodies, wetlands, and stormwater drainage systems. This includes the installation of erosion and sedimentation controls prior to commencing clearing works. Where possible, works should be staged to reduce the areas cleared at the same time to minimize soil disturbance. Where required, prepare erosion and sediment control plans (ESCP), install the controls in accordance with the plan, and maintain them regularly. For more detailed information, refer to the procedure and external guidelines listed below.

The following controls will be implemented within Taylor site boundaries to control erosion, sediment, and pollution within the site:

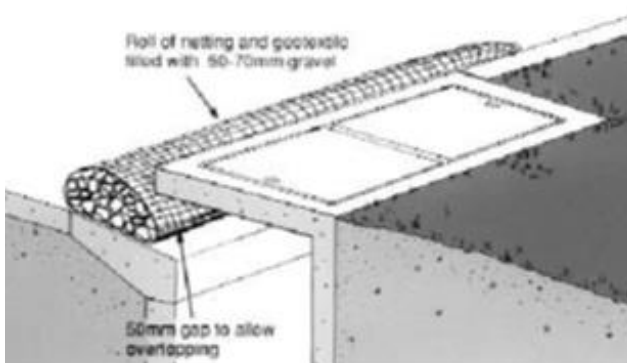
Sediment and erosion control devices – unnecessary disturbance of the site shall not occur, and all cuts are to be stabilised as soon as possible after the completion of site earthworks. Extra care will be taken to prevent sediment run-off into all neighbouring lots and stormwater. Any collected silt will be disposed of in accordance with all other relevant codes and standards.

Silt fences – are to be installed to site boundaries as required. Geotextile fabric will be fixed to the temporary construction fencing where 'downhill' boundaries exist. The fabric will be turned down under the existing ground line and secured at regular intervals not exceeding 3m, in accordance with the following diagram:



Vehicle access – will be controlled to prevent sediment being tracked. This will be done by maintaining an all-weather access/ driveway composed of an approved coarse aggregate surface. Moreover, if the need arises, a shaker grid will be installed to the main access by Taylor during the construction works. Any sediment that is tracked onto the surrounding roads will be cleaned off in a timely manner.

Storm water inlets – all storm water inlets are to be covered with geotextile fabric in a roll or other format to ensure that no sediment enters the storm water system. This will be the responsibility of the site manager to enforce. The rolls will not only be placed directly at the inlets as shown below, but also at regular intervals in the gutters 'upstream' from the inlets, creating multiple barriers.



Stockpiles – if appropriate topsoil is to be stockpiled on site, then the following measures will be put in place:

- Stockpiles shall be stored at least 2 metres away from drainage lines, natural watercourse and established trees.
- Stockpiles will have temporary silt fences around it to create an enclosure and, if necessary, they will be covered with shade cloth or tarpaulin to retain the materials inside it. The location of stockpiles will be determined on site.



Monitoring – to maintain the various erosion and sediment control devices, regular inspections, repairs and cleaning will be carried out on the silt fences to the boundaries, stockpiles, waste enclosures and to the stockpile covers.

References:

- E-OP-01 Erosion and Sedimentation Controls Procedure.
- Managing urban stormwater: soils and construction, Volume 1, 4th edition, 2004.

10.3.3 Vegetation Management

Taylor and subcontractors shall plan the works to preserve existing trees, plants and other vegetation, that are to remain within or adjacent to the works. Areas of the site that contain vegetation that must be preserved should be fenced-off, marked or otherwise isolated to ensure they are not inadvertently damaged. If there are any endangered species on site, specific management techniques may be required; these should be addressed in an Environmental Impact Assessment.

On completion of the works, all areas disturbed by construction activities shall be restored to the contract specifications. Where required and practical, efforts will be made to mulch and re-use vegetation on site or send it to a green waste recycling facility.

10.3.4 Waste Management and Resource Recovery

Taylor and subcontractors shall adopt the hierarchy of waste (avoid, reduce, reuse, recycle/ reprocess), dispose to maximise resource recovery and minimise disposal wherever possible and practical. The importance of appropriate waste management practices is to be included in the site induction.

Sites are to be provided with suitable bins and skips for appropriate collection and separation of waste and recyclables, and these are to be collected with appropriately qualified and licensed (where required) waste contractors.

Prior to disposal, waste must be classified in accordance with the DECCW Waste Classification Guidelines (latest version 2014) prior to transporting waste off-site. Excerpts from the waste classification guidelines are contained within appendix B of the **Waste and Resource Management Procedure E-OP-02**. Waste receipts must be kept for legal requirements; details of waste separated and disposed of is to be documented in the **Waste and Recycling Register QSE-R-16**. The information from the register is to be used to complete the waste management section of the KPI Monthly Report Form and forwarded to the HSE manager for tracking of Taylor environmental targets.

References:

- E-OP-02 Waste and Resource Management Procedure.
- SE-F-23 KPI Monthly Report Form.
- QSE-R-16 Waste and Recycling Register.



10.3.5 Noise Management

From an environmental viewpoint, noise can create a nuisance to neighbours and members of the public and is subject to legal requirements. Taylor and subcontractors shall make all practical efforts to comply with statutory requirements for noise management and minimise nuisance to neighbours. Protection of the Environment Operations Act 1997 (sections 139 and 140) and the Department of Environment and Climate Change NSW 'Interim Construction Noise Guideline' risk controls for noise must be incorporated in relevant SWMS, including nuisance to neighbours. Where required by development consent conditions, environmental noise monitoring will be undertaken as per the conditions. Further information on noise management from a WHS and environmental viewpoint is contained within the Noise Management Procedure.

References:

- SE-OP-04 Noise Management Procedure.

10.3.6 Water Quality Management

Taylor and subcontractors shall comply with the requirements of section 120 of the Protection of The Environment Operations Act 1997 (Prohibition of Pollution of Waters). The act prohibits all forms of water pollution unless specifically authorised through an environment protection license (EPL). On most projects undertaken by Taylor, an EPL will not be required.

There are substantial penalties for individuals and the company and controls must be in place to ensure that site activities do not cause water pollution.

Potentially hazardous activities, including washing out of concrete delivery vehicles and washing down of construction plant, are not permitted on site except in specially constructed bays that retain high PH water. Washing out of concrete delivery vehicles off-site is only permitted at locations approved for that purpose by the appropriate authority. Drains will be labelled to reduce the likelihood of misuse.

Washing of paint brushes must be undertaken to avoid any paint wash-water entering drains or waterways. Wash water must be removed from the site and appropriately treated and/ or disposed of. The chemicals, acids, or residue from any 'wet trades' such as brick cleaning must also be prevented from entering drains and waterways.

All liquids and materials that could cause water pollution must be stored in areas with secondary containment. Also refer to the section on hazardous substances, chemicals, oils, and other contaminants and the related procedure.

Pumping of stormwater – if a sediment basin is required and stormwater is required to be pumped out of the site, the pump intake is to be located no more than one metre (1m) below the surface of the collected water to reduce the amount of settled silt being pumped out for further treatment.

Stormwater treatment – there are two treatment options for stormwater collected on-site, flocculation and/ or filtration. For each option, the applicable procedures in their entirety are to be followed.

References:

- SE-OP-01 Hazardous Substances and Dangerous Goods Procedure.
- Storing and Handling Liquids - Environmental Protection (DECCW).

10.3.7 Air Quality Management

Taylor and subcontractors shall comply with all statutory requirements governing air quality management, i.e. Protection of The Environment Operations (POEO) Act 1997, section 124, and the POEO Clean Air Regulation 2010.

The Project / Site Manager will ensure that all construction facilities erected at the site are designed and operated to minimise the emission of smoke, dust, cement dust, plant and vehicle exhausts, and other substances into the atmosphere.

Taylor and subcontractors shall employ construction methods that will keep the air pollution to a minimum and apply measures such as those listed below to ensure that airborne pollutants do not cause pollution and nuisance near the works:

- The spraying of disturbed soil and roads with water whilst under construction as required.

- The removal of mud from the wheels and bodies of plant and vehicles before it enters public roads or other sealed pavements. This could be rumble grids, dry brushing, wheel wash, etc., depending on the nature of the site.
- The removal of mud or dirt spilled by construction equipment onto public roads or other sealed pavements.
- The provision of coverings or stabilisation of topsoil stockpiles.
- Covering all loads leaving the site.
- Stabilisation of ground likely to be exposed for significant time periods (e.g., using sterile seed).
- Fitting power tools with dust collection devices where practical.
- Keeping all plant and equipment well maintained and not leaving them idling while not being used.
- Reporting excess air emissions from plant and arranging for a service to fix the problem.

On-site burning of any materials is not permitted on Taylor sites.

Dust Including Crystalline Silica Dust

Dust containing respirable crystalline silica particles is commonly called silica dust. Activities such as cutting, grinding, sanding, drilling, loading or demolishing products that contain silica can generate respirable particles of crystalline silica dust that are small enough to breathe into your lungs. Crystalline silica dust can be harmful when it is inhaled into your lungs over a long period of time at low to moderate levels, or short periods at high levels.

From the **1st of July 2020** in NSW dry cutting will be an offence and for those who choose to ignore the law and put their employees at risk, SafeWork inspectors will issue tough new fines for noncompliance.

All subcontractors working on a Taylor project that is using, drilling, cutting, sanding or grinding products that are known to contain silica will need to have a system in place that will allow their workers to either wet cut or drill, or will be required to use dust extraction systems on portable tools, or adopt other methods that eliminate or minimise the generation of silica dust.

10.3.8 Hazardous Substances, Chemicals, Oils, and Other Contaminants

Prior to commencing work on site, an assessment of the quantities and locations of hazardous substances, chemicals, etc. likely to be held on-site must be undertaken. The location of hazardous substances and other contaminants must be marked on a site map (refer to appendix 5). The Site Manager will use the assessment when planning the works to minimise the potential for pollution. This includes providing appropriate storage, separation of incompatible materials and bunding, and ensuring that all activities that use or handle these substances are undertaken in an area that will not cause water pollution or land contamination.

Spill kits will be provided wherever substances that could potentially cause pollution are stored and handled. Relevant site personnel will be trained in spill response and will be familiar with the contents and function of the spill kit materials on site. All spills, no matter how small, must be cleaned up immediately and be reported as an environmental incident.

Refuelling or maintenance of plant and equipment, or any other activity which may result in the spillage of a chemical, fuel or lubricant on the site, is not permitted without appropriate temporary control measures.

The use and storage of any hazardous substances or other chemicals will be made strictly in accordance with the manufacturer's instructions and the relevant materials safety data sheets (MSDS).

References:

- SE-OP-01 Hazardous Substances and Dangerous Goods Procedure.
- Storing and Handling Liquids - Environmental Protection (DECCW).

Spill Response

Major spillages must be notified immediately, and all efforts made to contain the spill and prevent escape into stormwater drains and waterways, provided it is safe to do so. If the spill is beyond the capacity of the site personnel to contain and clean up, specialist services must be employed.

Minor spillages must be cleaned up immediately. If soil or ground is contaminated, the soil is to be removed and placed into a bag or designated waste drum and disposed of appropriately.



If the spill enters drains or waterways, the incident may be required to be reported to the appropriate regulatory authority (local council) as soon as practicable, in accordance with the duty to report under the POEO Act. The decision to report must be discussed with the HSE Manager or a Director prior to making the report.

Spill response procedures for this project are:

- Spill Response Procedure flow chart (Appendix 3).
- Call emergency services (fire, hazmat): call 000.
- Local council phone number: 02 5300 6000
- MSDSS are located at: Hazardous Storage Cupboard

10.3.9 Pesticide Use and Storage

If pesticides are used at the site, they must be stored appropriately as per 'hazardous substances' section (11.3.8 above) and used in accordance with the manufacturer's requirements and the NSW Pesticides Management Act and Regulations. The act and regulations have strict record-keeping requirements for the use of more than 20 litres of product.

Taylor Construction Group's general policy on the use of pesticides is that they should only be applied by suitably qualified pest control contractors.

10.3.10 Contaminated Land

Prior to commencing project work, checks should be made on the potential for the site to be contaminated. This should generally be identified by the client and addressed in an Environmental Impact Assessment. If the site is found to be contaminated, the recommendations for the management of the contaminated soils from the assessment and other reports should be incorporated into this PEMP below.

Should contamination be suspected once working on the site (e.g., unusual odours, visual indications of soil or water pollution, etc.) work should cease immediately and Taylor's project/ site manager contacted. Where relevant, the client should be notified by Taylor's project manager, and investigations undertaken into the nature of the contamination. Work should not recommence until the nature and extent of the contamination is established and can be safely managed without environmental risk.

Taylor and subcontractors shall comply with relevant statutory requirements of the Contaminated Land Management Act and the POEO Act (NSW) in relation to the disturbance or treatment of potentially contaminated ground.

The company shall install any control measures needed to divert surface run-off away from the contaminated ground and to treat any surface run-off contaminated by exposure to contaminated ground. Contaminated material removed from the site must be recorded on the **Waste and Recycling Register QSE-R-16**.

References:

- Waste and Recycling Register QSE-R-16.

10.3.11 Acid Sulphate Soils (ASS)

Acid sulphate soils are naturally occurring soils generally found in estuarine areas. When exposed to air, they can oxidise and cause run-off of highly acid water. Acid sulphate soils require specialist management techniques.

The client should be aware of any potential for encountering acid sulphate soils and, if there is a potential, it should be addressed in the Environmental Impact Assessment undertaken for the project.

10.3.12 Community Complaints

Community complaints should be treated as incidents. They must be reported to the HSE Manager, be thoroughly investigated and reported on SharePoint. Reference to these must also be documented and included in site diary



entries. The project or site manager should try to resolve the issue with the community member in a conciliatory manner.

References:

- SE-F-21 Incident Report Form.
- SE-F-22 Incident Investigation Form (report on SharePoint – forms are back-up only).
- SE-F-23 KPI Monthly Report (as above).

10.3.13 Archaeology and Heritage Management

If any unexpected heritage item is discovered during maintenance and construction works, the following must be taken into consideration:

Indigenous heritage – all Aboriginal and Torres Strait Islander, regardless of significance, are protected under law. Should any deposit, artefact or material evidence (including skeletal remains) of Aboriginal and Torres Strait Islander origin be found, Taylor and subcontractors shall cease all construction works that might disturb or damage the deposit, artefact or material. The Project Manager will notify the client immediately, who will then consult the relevant government department (i.e., DECCW - National Parks and Wildlife Services). Examples of Aboriginal and Torres Strait Islander objects include stone tool artefacts, shell middens, axe grinding groves, pigment or engraved rock art, burials, and scarred trees.

Historic heritage – historic (non-Aboriginal) heritage items may include archaeological ‘relics and other historical items such as works, structures, buildings or moving objects. Should any item which is suspected to be of historical heritage value be encountered, Taylor and subcontractors shall cease all construction works that might disturb or damage the item. The Project Manager will notify the client immediately, who will arrange for an officer from the relevant government heritage department to be consulted. A ‘relic’ is ‘any deposit, artefact, object or material evidence that relates to the settlement of the area, not being Aboriginal and Torres Strait Islander settlement; and is of State or local heritage significance’. It can include bottles, remnants of clothing, pottery, building materials and general refuse.

References:

- Heritage Act 1977.
- National Park and Wildlife Act 1974.
- Unexpected Heritage Items Procedure – Roads and Maritime Services, 2022.

11. Incident and Emergency Management

11.1 Emergency Response

The Emergency Response Plan for this site has been developed based on a template provided in the **SE-P-07 Project Emergency Control Management Plan**. Additional information for the management and control of emergency situations can be found in the Project Safety Plan (**WHS-PLAN-02**) but a Spill Response Procedure Flow Chart is contained in appendix 3 of this plan. For additional information on response to a spill, refer to section [10.3.8](#).

Emergency response posters and flow charts are to be posted in the site and induction office, WHS notice boards, in crib rooms and other areas of the site as required.

References:

- SE-P-07 Project Emergency Control Management Plan.
- QSE-F-10.1 Pre-Start Site QSE Checklist.
- SE-F-31 Emergency Evacuation Rehearsal Register.
- SE-F-05 Site Layout Evacuation Plan.
- SE-F-06 On-Site Emergency Control Plan.

11.2 Incident Reporting and Investigation Reporting

Site environmental incidents must be reported to the Project / Site Manager as soon as practically possible. In addition, any major environmental incidents must also be reported to the HSE Manager in accordance with the **Incident Reporting and Investigation Procedure QSE-OP-05**. The priority is to ensure that the situation is controlled as soon as possible and to avoid further pollution or other adverse environmental consequences. Reporting of the incident should not delay any immediate responses to the incident.

Incident Reports must be completed and forwarded to the HSE manager within 24 hours and must be kept for a minimum of five (5) years.

Environmental incidents that cause, or threaten to cause, material environmental harm must be reported to the Appropriate Regulatory Authority (ARA, the local council in which the project is located) as soon as practicable following the incident. This would include any spillage or leak of substances that cause water or land pollution. Material environmental harm generally means that the harm is not trivial and/ or costs more than \$10,000 to clean up. The phone number of the ARA should be included in the Emergency Response Plan.

If the Site Manager believes that the incident may be reportable to the ARA, contact the WHS Manager for further advice prior to making an investigation report.

All environmental incidents that cause, or could potentially result, in an environmental harm are to be investigated, and corrective actions implemented following the investigation. Depending on the seriousness of the incident, key site personnel, the HSE Manager, witnesses, etc. should be consulted on the investigation and in determining appropriate corrective or preventive actions.

References:

- QSE-OP-05 Incident Reporting and Investigation Procedure.
- SE-F-21 Incident Report Form (report on SharePoint – forms are back-up only).
- SE-F-22 Incident Investigation Form (as above).



12. Environmental Monitoring and Inspections

12.1 Site Environmental Inspections

Site environmental inspections are to be undertaken weekly using **SE-F-02 HSE Inspection Checklist** to ensure that environmental hazards are recognised and can be promptly rectified. Additional environmental issues may be added to the site HSE inspection form as required.

12.2 Physical Monitoring

For many projects undertaken by Taylor, physical environmental monitoring is not typically required (e.g., dust, water quality, noise levels and air quality). Should the Environmental Impact Assessment specify that environmental monitoring is required, the project manager will arrange for appropriately qualified consultants to undertake that monitoring. All equipment used to measure environmental parameters will be calibrated in accordance with manufacturer's instructions.

12.3 Monitoring of Project Environmental Targets

Objectives and targets for the project are specified under 'Objectives and Targets' section of the PEMP. Data relating to these targets will be documented daily using site diaries, reviewed by Project / Site Managers monthly and forwarded to the HSE Manager for reporting to senior management.

The KPI monthly report captures information on lag and lead indicators. The current indicators are:

Lag indicators:

- Number of environmental incidents.
- Number of penalty infringement notices (pins) or clean-up notices.
- Number of community complaints.

Lead indicators:

- Number of toolbox talks (combined with WHS and environmental issues);
- Number of environmental inspections undertaken.
- Waste and recycling volumes (initially to set benchmark, then track improvement)

Add any additional KPIs that may be set from Environmental Impact Assessments, conditions of consent and client requirements, etc.



13. Non-Conformity, Corrective and Preventive Actions

Taylor has a non-conformance and corrective action process in place to address all non-conformities across the business, regardless of the source. The process is defined in the **Reporting Non-Conformance, Corrective and Preventive Actions Procedure QSE-OP-29**. Typically, environmental non-conformances would result from audits, inspections and from observations by the site manager of poor environmental practices, including incorrect waste disposal/ recycling (liquid waste, poor storage of hazardous substances, oils, chemicals and damage to existing environmental controls such as sediment fencing, etc.). Non-conformances may be issued for serious breaches or repeated minor breaches.

References:

- QSE-OP-29 Reporting Non-Conformance, Corrective and Preventive Actions Procedure.
- Notices (electronic) raising of non-conformances (internal).
- Notices (printable) for raising NCRS on subcontractors.

14. Purchasing / Procurement

Purchasing and procurement includes the purchase of goods and the supply of services of contractors. When purchasing goods, the following environmental considerations should be considered:

- Is there a less toxic, less harmful alternative (e.g., chemicals, paints, solvents, etc.)?
- How much do we need? Will anything be wasted? Precise ordering will minimise wastage of resources and money.
- Can the product be purchased locally to reduce transport impacts?
- Are there any opportunities to use 'green' products in construction to improve the efficiency of the building in terms of energy and water usage (design issue – may need client input)?
- S-F-18.1 Pre-Hire Purchasing Assessment Form

When engaging contractors, the following should be taken into consideration:

- Has the environmental capability been assessed and signed-off through contract administration?
- Has the contractor attended a pre-award interview and assessed Taylor Construction Group environmental requirements?
- Has **Subcontractor Tender Interview and Assessment Form QSE-F-15.6** been completed?

References:

- QSE-OP-15 Subcontracting, Purchasing and Hiring Procedure
- QSE-F-15.6 Subcontractor Tender Interview and Assessment Form.



15. Contractor Management

Taylor, as the principal contractor, will ensure that contractors performing work on site are aware of the environmental requirements and enforce compliance to requirements.

Prior to commencing on site, contractors are to be inducted to the site as part of the HSE requirements. Inductions will include an environmental component to ensure all contractors are aware of the environmental risks on the project.

Contractors are required to submit Safe Work Method Statements (SWMS) prior to commencement of work as part of the WHS requirements. SWMS must also address the environmental risks for the tasks and will be reviewed and checked-off on **SE-F-14 Safe Work Method Statement Review Form** by the site manager to ensure that all environmental risks are appropriately identified, and controls documented.

Environmental inspections will be undertaken at least once monthly. This will include an inspection of the contractor's work area and checking that all environmental controls are in place. Serious breaches or repeated minor breaches will result in the issue of a Non-Conformance Report, and the issue must be resolved within designated time frames.

16. Environmental Audit

Audits of the Environmental Management System will be conducted regularly to ensure the system is appropriately in place and implemented. As part of the audit program, audits will also be undertaken on project sites for compliance to the requirements of the Project Environmental Management Plans. Audits should be undertaken by suitably experienced auditors.

Projects that have duration of more than six months will have at least one audit against the PEMP and, after the six months, will be audited at least once per year. This will generally be undertaken as an integrated audit in conjunction with the Project Safety Plan and Project Management Plan (Quality). Projects with high-risk activities or that performed poorly at the initial audit may be audited at a higher frequency. The HSE Manager is responsible for coordinating project audits.

17. Review of This Plan

This Environmental Management Plan must be reviewed by the project manager in consultation with the project team and HSE manager whenever any major change occurs on the site that may have an impact on the environment, or at least twice (every six months) during construction.

Appendix 1 – Global Mark Accreditation



global-mark®

Certificate of Approval

This certificate confirms that the company below complies with the following standard:

Company Name	Taylor Construction Group		
Company Other Name			
Client ID	101009	Scheme	Environmental Management Systems Scheme
Certification Standard	AS/NZS ISO 14001-2016: Environmental management systems - Requirements with guidance for use		
Scope of Certification	Design, construction, project management and property development services		
Type of Certification	Management System		

The control set source for controls applied in the Statement of Applicability (referenced above) does not imply these controls are certified by Global-Mark.

CERTIFICATE DATES:

Original / Initial	19/11/2009	Last Certificate update	13/05/2021
Certification / Re Certification	4/05/2021	Expiry	7/05/2024
Last Certification Decision	13/05/2021		

APPROVED COMPANY/SITE ADDRESS(ES):

Level 13, 157 Walker Street North Sydney NSW 2060 Australia

The use of the Accreditation Mark indicates accreditation by the Joint Accreditation System of Australia and New Zealand in respect to those activities covered by JAS-ANZ accreditation. Refer to www.jas-anz.org/register for verification.

This certification remains valid until the above mentioned expiry date and subject to the organisation's continued compliance with the certification standard, and Global-Mark's Terms and Conditions.

This Certificate of Approval remains the property of Global-Mark Pty Ltd, Company Number: ACN 108-087-654



Certification Manager

Unique Certificate Code: E15D2CE263BF3E6CCA2586CF0001C4EF

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Appendix 2 – Environmental Policy

Environmental Policy

Taylor regards appropriate management of environmental issues as integral to our business. We are committed to the protection of the environment and ecologically sustainable practices in all aspects of our operations.

We will comply with all relevant legislation governing the protection of the environment. Our environmental management systems will address all aspects of the International Standard, ISO 14001:2016: "Environmental Management Systems – Requirements with guidance for use".

In managing our business, we make a commitment to:

- Work pro-actively with our clients, regulators, and other community stakeholders to enable environmental issues to be addressed at an early stage of development.
- Take local community views into consideration and ensure that we inform, listen to and respond to reasonable concerns relating to our projects.
- Undertake our activities in a manner that is consistent with the principles of ecologically sustainable development.
- Prevent pollution and reduce adverse environmental impacts of our activities on the natural, built and cultural environment.
- Promote the efficient use of natural resources and reduce waste through the use of the waste hierarchy – avoid, reduce, re-use, recycle and finally dispose.
- Set realistic environmental objectives and targets at all relevant levels within the company and continually monitor performance.
- Promote environmental awareness among all employees and subcontractors to achieve our environmental objectives.
- Continually improve our environmental performance through periodic review and evaluation of our policy and management systems to ensure they remain suitable, adequate and effective.
- Encourage a sense of personal responsibility for environmental issues amongst employees and subcontractors through effective communication, training and positive organisational culture.

This policy will be reviewed in December 2023.



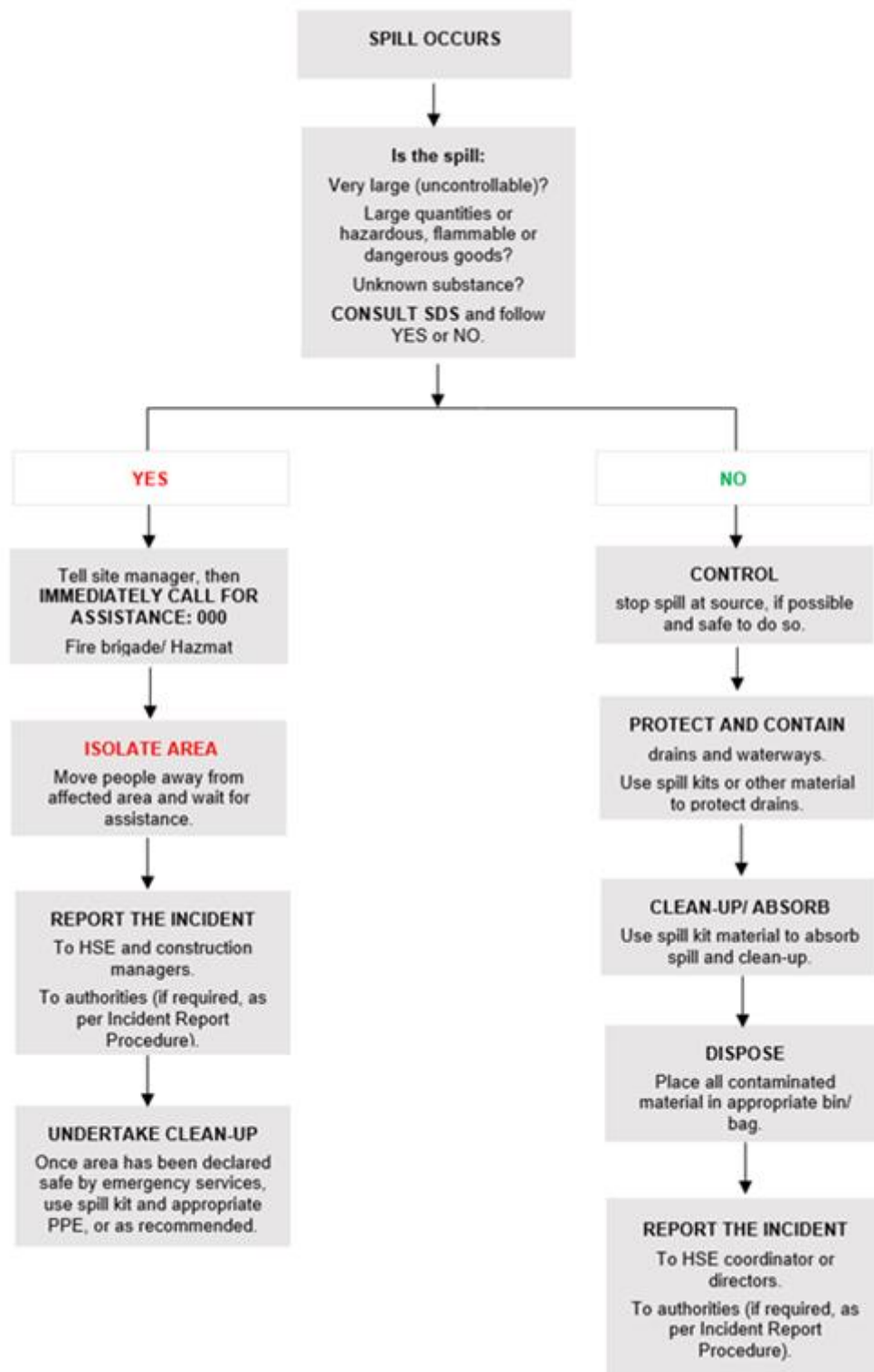
George Bardas
Chief Executive Officer



Appendix 3 – Taylor’s Construction Spill Reponse Procedure Flow Chart



Taylor's Construction Spill Reponse Procedure Flow Chart



Appendix 4 – Site Environmental Emergency Response Plans



Site Environmental Emergency Response Plans

Potential emergency	What to do?	Relevant authorities and persons
Injury caused by: – Fire – Explosion – Machinery accidents – Minor injuries	– For serious injuries, call an ambulance. You should also have the contact details of the nearest doctor, medical centre and hospital. – Immediately inform the site first aid officer. – Follow the procedures as detailed in the Site Safety Plan. – For major injuries, contact the site manager or project manager.	– Emergency services – Nearest doctor – Medical centre – Site Manager – Project Manager
Fire Fire at the diesel tank Fire at any of the machineries Fire caused by vandalism	– Evacuate all personnel to a safe area immediately. – Call the fire brigade (emergency services). – If the fire is likely to damage neighbouring property, inform the adjacent residents. – Follow the procedures as detailed in the Site Safety Plan. – For major fire emergencies, contact the site manager or project manager. – Inform terminal security. Note: fire extinguishers are located throughout the site as detailed in the Emergency Evacuation Map.	– Emergency services – Site Manager – Project Manager – Adjacent residents
Spills management and contaminated soils. Major spills: – Spill or release of diesel fuel or oil – Spill or release of other hazardous chemicals or material.	For major spills (defined as a spill that is likely to have direct environmental consequences): – Immediately call the Fire Brigade and notify the project manager. – Identify the source of the spill. – Refer to the Material Safety Data Sheet (MSDS) and evaluate the hazards of the material.	– Emergency services (fire brigade) – HSE Manager – Site Manager and Project Manager – EPA
Minor site spills Acid sulphate soils	– If the material is dangerous, evacuate the site immediately and notify all neighbours. – If it is safe to do so, halt the source of the spill immediately. – Contain the spill and control its flow. – Block storm water drains downstream of the spill. – EPA and local council must be notified about any spills that are likely to threaten the environment. – Minor spills (defined as spills which can be contained and rectified correctly without the need of external services), shall be contained and rectified with the site spill kit and disposed of correctly. Superintendent to be notified via incident report. – Reported to the Site Manager.	– Emergency services (fire brigade) – HSE Manager – Site Manager and Project Manager – EPA



Potential emergency	What to do?	Relevant authorities and persons
	– Where acid sulphate soils are discovered, the spoil shall not be removed from site; subsequent notification and testing will follow.	
Heavy rainstorm and flood beyond the capacity of the sediment and erosion controls on-site or failure of the sedimentation control measures.	– Contain/ minimise the flow. – Contact council immediately. – Investigate reasons for failure and prepare an incident report. – Contact the Project Manager.	– Council – Site manager – Project manager
Discovery of items of conservation value (e.g., flora and fauna, heritage).	Fence-off the area as 'no go' zone and contact the site manager or project manager immediately for further action.	– Site Manager – Project Manager
Discovery of contaminated material on site (e.g., underground fuel storage tanks).	Fence-off the area as 'no go' zone and contact the site manager or project manager immediately for further action.	– Site Manager – Project Manager

Appendix 5 – Site Map: Environmental Requirements



Appendix 6 – Sediment Control Plan



Appendix 7 – Environmental Legal and Other Requirements Register



Thank you

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