APPIAN CIVIL

ENVIRONMENTAL MANAGEMENT PLAN

AC-IMS-PLA-002

TOOWOOMBA REGIONAL COUNCIL

ENDORSED DOCUMENT

referred to in Council's letter of endorsement dated

25/11/2025

This plan is subject to conditions of Approval Number

RAL/2024/4460

Assessment Manager

RECEIVED

20/11/2025

TOOWOOMBA REGIONAL COUNCIL

DOCUMENT HISTORY

REV	DATE	DESCRIPTION	APPROVED BY

Phone: 0400 607 640
Address: 100 Scenic Drive Silver Ridge, Qld 4352

Contents

1 Project Scope

Client: RMA Engineers

Site Address: Peters Road Meringandan West QLD 4352 Lot 900 on **23/SP323367**

Working Days and Hours: 6 days a week, 6:30 am to 6pm

Key Activities: Residential subdivision – Bulk Earthworks, Stormwater, Water and road works.

- *Location of construction areas and adjacent operational / residential areas;* construction will mainly be confined to the open site area with no impact to existing houses to the north. A road widening to the south along the Goombungee road will allow access to the southern entrance to the new estate.
- *Construction staff and vehicle numbers;* approximately 10 to 15 construction staff and vehicles will be on site at any given time.
- *Amenities;* office block, toilet and fuel pod will be on site.
- *Prohibited activities and prohibited areas where no work should be permitted:* there are no prohibited work areas within the site.

Description of the site: The site is and open paddock with a dry creek bed running west to east through the middle, this creek runs into a flowing creek on the eastern side of the site just out side the project boundary. The sediment and erosion plan details the protection measures required to ensure no dirt runoff enters the main creek. The site has exiting houses to the northern side where the new roads will join into.


TALONS STREET
ROAD 1
ROAD 2
ROAD 3
FOOTPATH LINK 1
FOOTPATH LINK 2
MERRIGAMDAN CREEK
Adjoining development
RAL/2023/3261
900
Drainage Reserve
BETERS ROAD
GOOMBUNGEE MERINGANDAN ROAD


MERRIGAMDAN CREEK

2 Purpose

The purpose of this Environmental Management Plan is to outline a comprehensive framework and set of strategies aimed at promoting environmental sustainability, minimising adverse impacts, and maximising positive outcomes within this Project. This plan serves as a guiding document that establishes proactive measures and protocols to effectively manage, monitor, and mitigate potential environmental risks and challenges.

3 Objectives

The overall objective of this Environmental Management Plan is to meet our client's expectations without exposing the environment to unnecessary risks. We also have the following objectives:

- Assessment of the environmental risks and implementation of risk control measures,
- Open and effective lines of communication with relevant stakeholders,
- Effective management of resources (inc. personnel, contractor workers, suppliers and materials),
- Effective waste management and recycling,
- Ensuring no negative impact on water bodies,
- Ensuring minimal impact on air quality,
- Preserving cultural heritage and biodiversity, and
- Ensuring minimal noise and vibration contamination.

4 Responsibilities

4.1 Project Manager

Project Manager: Clayton MacDonald
Phone: 0400607640
Email: clayton@appiancivil.com.au

The Project Manager is responsible for:

- Efficient and timely performance, in fulfilment of the contract outcomes,
- Establishing contract objectives with the client representative and ensuring the requirements of the Contract are understood by and communicated to all parties,
- Review of project requirements for environmental controls prior to works commencing,
- Identification of any environmental risks,
- Ensuring that subcontractors and suppliers are complying with environmental requirements,
- Ensuring that all personnel receive appropriate induction training, including details of the environmental and community requirements, and
- Maintaining project records and environmental documents.

4.2 Subcontractors

Subcontractors are expected to:

- Perform the assigned scope of work in accordance with the project specifications and contractual agreements,

- Ensure that all work performed meets the specified environmental standards and complies with relevant industry codes and standards,
- Complete work within the agreed-upon schedule, coordinating with the project manager and other subcontractors as necessary,
- Collaborate with other subcontractors and the project manager to coordinate work, resolve conflicts, and avoid disruptions,
- Maintain accurate records of work performed, including daily reports, progress updates, and any required environmental certifications or documentation, and
- Comply with change orders issued by the project manager, including adjustments to scope, schedule, or other project parameters.

4.3 Suppliers

Suppliers are expected to:

- Deliver materials, equipment, or services according to the agreed-upon schedule and specifications,
- Provide materials, products, or services that meet the specified environmental standards implemented in this Project,
- Maintain open and effective communication with the Project Manager and relevant stakeholders, including reporting any delays or issues promptly,
- Maintain accurate records of deliveries, invoices, and any required certifications or documentation, and
- Ensure that all products and materials supplied adhere to safety and environmental regulations and provide safety data sheets and instructions as necessary.

5 Environmental Risk Assessment

An environmental risk assessment is conducted to systematically identify potential hazards and environmental impacts associated with the site activities. This assessment encompasses critical factors such as air quality, water resources, soil contamination, noise levels, waste management, and biodiversity considerations. These evaluations are fundamental in pinpointing potential risks and challenges tied to the project.

The outcomes of this environmental risk assessment are meticulously documented within the Risk Register *(AC-IMS-REG-009 HSEQ Risk Register)* and Environmental Aspects and Impacts Register *(AC-IMS-REG-010 Environmental Aspects and Impacts Register)*. These registers serve as a repository of identified risks, providing a clear overview of the risks and associated impacts.

To prioritise and effectively manage environmental impacts, we categorise them into two distinct groups: significant and non-significant. This categorisation is based on an evaluation of multiple factors, which include:

- The severity of the impact on the environment,
- The frequency of occurrence of the impact,
- The regulatory implications and compliance,
- The potential for controlling or mitigating the impact,
- The degree of concern expressed by the local community, and
- The potential impact on business operations.

Each impact is scored from 0 to 100 across the above-mentioned factors, with the weighted score of 70 or above being classified as “significant”.

In cases where an environmental impact is identified as significant, swift and proactive measures are undertaken to effectively address and mitigate these impacts.

The below table summarises potential environmental impacts and possible mitigation controls applicable to this Project.

Table 5. Environmental Risk Assessment

Activity	Aspect / Impact	Weighted Significance	Actions to Address / Mitigate Impact
Construction	Waste generation	72	• Waste management in line with “Reduce Reuse Recycle” • Staff informed of requirements during induction • Recycle bins provided, if required • Quantities of purchases reviewed prior to purchase
	Water usage	62	• Turn taps off when not in use • Staff informed of requirements at induction
	Energy usage	62	• Turn light and tools off when not in use • Staff informed of requirements at induction
	Erosion and sediment control (including stockpiles)	76	• Erosion and sediment controls in place on site (coir logs, silt fencing) • Land disturbances minimised if possible • Staff informed of requirements at induction
	Emissions from vehicles / plant	62	• Plant and equipment maintained as per manufacturer’s specs • All faults reported and corrected • Staff informed of requirements at induction
	Use of chemicals	47	• SDS supplied • Controls implemented as per SDS • Staff trained on requirements at induction
	Disturbance of cultural heritage	57	• Preliminary research and assessment • Engagement with local authorities • Establishment of buffer zones • Consideration of alternate routes
	Disturbance of biodiversity	57	• Preliminary research and assessment • Engagement with local authorities • Provision of wildlife corridors • Limits of land clearing • Seasonal considerations
Travel	Use of fuel	57	• Plant and equipment maintained as per manufacturer’s specs • All faults reported

	Wear and tear on vehicles (maintenance)	57	• Plant and equipment maintained as per manufacturer's specs • All faults reported
Office Work	Water usage	62	• Turn taps off when not used • Staff informed of requirements at induction
	Energy usage	70	• Turn light and tools off when not in use • Signage implemented at workplace • Staff informed of requirements at induction
	Waste generation	67	• Waste management in line with Reduce Reuse Recycle • Staff informed of requirements during induction • Recycle bins provided • Quantities of purchases reviewed prior to purchase
	Use of chemicals	47	• SDS supplied • Controls implemented as per SDS

6 Stakeholder Engagement

Stakeholder engagement is a cornerstone of our environmental management, ensuring that diverse perspectives are considered, concerns are addressed, and solutions are collectively developed. We engage with local communities, indigenous groups, experts, and regulatory authorities to ensure that our actions align with local knowledge and values. Through transparent communication, we address concerns and integrate valuable insights into our strategies.

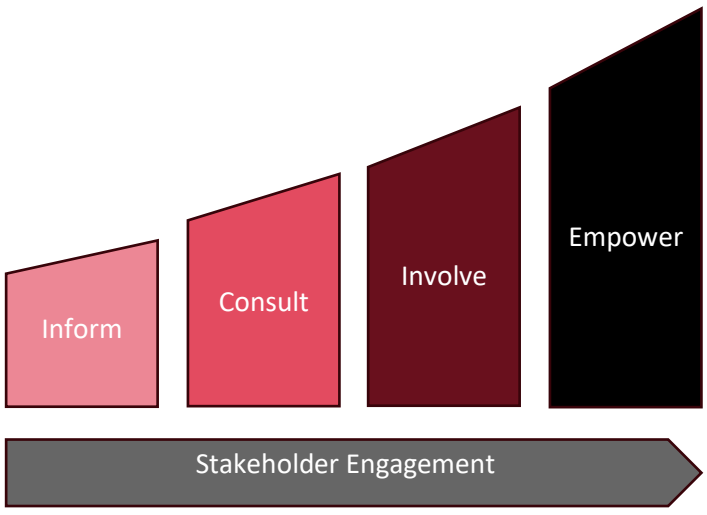

Diagram 6. Stakeholder Engagement

Our main strategies for involvement and information sharing with relevant stakeholders include:

- Community consultations,
- Public workshops and forums, and
- Online platforms and social media.

We provide periodic updates to stakeholders on project progress, milestones achieved, and any changes to plans.

7 Contractor Management

We believe that upholding high environmental standards extends beyond our direct operations to include our contractors and suppliers. To ensure alignment with our values, we thoroughly vet and select partners who demonstrate a strong commitment to environmental sustainability.

Prior to any collaboration all subcontractors and suppliers are subjected to:

- Supplier and subcontractor pre-qualifications,
- Supplier and subcontractor agreements and contracts,
- Site inspections and audits,
- Effective communications (inc. inductions and regular project meetings).

8 Environmental Management Measures

8.1 Waste Management and Recycling

Waste management strategies are executed, encompassing a comprehensive array of measures that adhere to both regulations and established standards. Efforts are placed on addressing waste at its source, aligning with the principles of the 5 R's hierarchy. This hierarchy constitutes five fundamental steps:

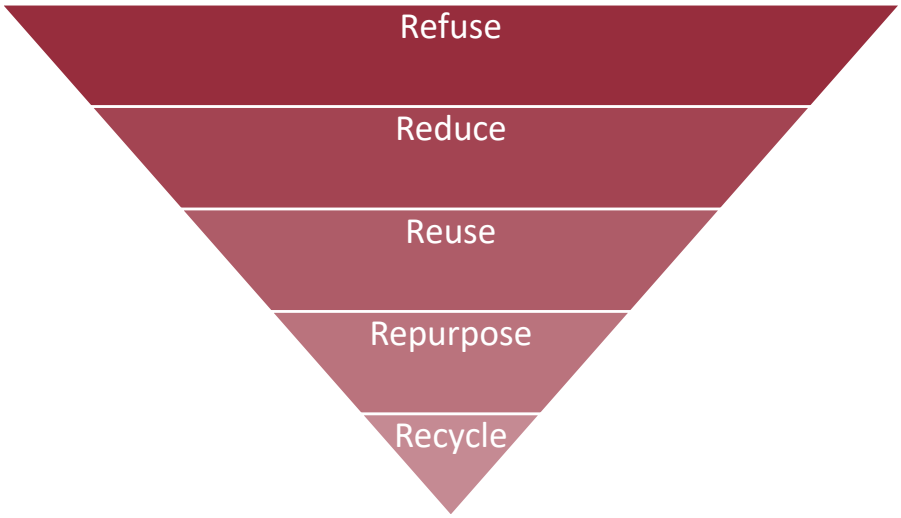

Diagram 8.1. 5 R's Hierarchy

Besides these principles, our waste management approach includes:

- Segregating waste at the source,
- Opting for sustainable materials,
- Enhancing resource recovery with on-site recycling bins,
- Ensuring the compliant disposal of non-recyclable and hazardous waste,
- Monitoring and auditing our waste management efficacy,
- Choosing suppliers who share our waste minimisation goals and provide eco-friendly / more sustainable products and materials, and

- Educating our staff about best practices in waste management.

8.2 Water Quality

We prioritise the protection of site water quality through the implementation of best management practices for preventing pollution and minimising contaminants from entering water bodies, including surface water and groundwater sources. These practices include:

- Erosion and sediment control plans,
- Preventing unauthorised and accidental discharges, and
- Monitoring (and testing, if required) of water quality.

8.2.1 Erosion and sediment control

We consider erosion and sediment control plans as essential components of our water quality management approach. By implementing proactive measures to mitigate soil erosion and sediment runoff, we contribute to the preservation of local water bodies and aquatic ecosystems.

We minimise the movement of sediments from construction sites into nearby waterways by limiting land disturbing activities (where possible) and through the strategic deployment of:

- Erosion control mats,
- Sediment barriers, and
- Vegetation cover.

8.2.2 Prevention of unauthorised and accidental discharges

By implementing stringent protocols and controls, we minimise the risk of pollutants entering water bodies due to human error or negligence. We implement training programs for our personnel to raise awareness about the significance of proper waste disposal and spill prevention.

8.2.2.1. Spill prevention

Our spill prevention measures include a range of strategies designed to safeguard the environment and maintain the integrity of our operations during project life cycle. Central to our approach is the installation of containment systems, which may include storage tanks and hazardous material areas with secondary structures to prevent any potential spills from spreading. Routine equipment and facility checks are in place to identify and address any signs of leaks or vulnerabilities before they escalate into larger issues.

We provide staff training, where every team member is made aware of the proper handling of hazardous materials and equipped with a clear understanding of our spill response protocols. These protocols are regularly tested and refined through spill response drills and exercises, ensuring our team's readiness to manage any unexpected situations.

8.2.2.2. Dewatering

Dewatering is essential in construction, particularly when projects are below the groundwater table. When sediment-laden water accumulates onsite, such as in excavations and trenches, we employ a flex-drive pump (or similar) for water removal. Steps are taken to ensure dewatering is in line with environmental regulations and may include turbidity and PH testing prior to discharge.

Our focus is on dewatering to stabilized ground, ensuring that runoff doesn't enter any drainage line, creek, or gully. Additionally, we integrate sediment control measures and treat discharged water as required to meet established quality standards.

8.2.3 Monitoring of water quality

We conduct regular assessments of key water quality parameters, including pH, dissolved oxygen, turbidity, and pollutant levels. These monitoring efforts allow us to promptly detect any deviations from established baselines, enabling swift intervention in the event of deteriorating water quality. Our data-driven approach provides us with a comprehensive understanding of the dynamic conditions within local water bodies, allowing us to make informed decisions to protect these water resources.

8.3 Air Quality

We recognise the critical importance of maintaining air quality to safeguard both the environment and public health. Our approach includes a range of strategies and measures to minimise air pollutants, mitigate emissions, and foster sustainable air quality across our project sites.

Our commitment to air quality preservation involves the implementation of emission reduction and control strategies. We develop strategies to minimise emissions from equipment, machinery, and processes, which may include:

- Adopting low-emission vehicles,
- Installing air filtration systems, and
- Adhering to maintenance schedules.

We actively monitor for dust produced by construction activities. Should there be excessive dust generation, it's immediately reported to the Project Manager. To mitigate dust during dry or windy conditions, we may use the wetting method, spraying exposed areas with water. Additionally, when trucks transport spoil and fill material to and from the site via public roads, we ensure their loads are covered.

To ensure compliance with relevant air quality regulations and standards we monitor air quality through periodic assessments and sampling campaigns as required.

Stakeholders, including nearby communities, regulatory authorities, and relevant agencies, will be kept informed about the project's air quality performance and mitigation efforts through regular reporting and engagement activities as required.

8.4 Cultural Heritage

Robust measures will be implemented to prevent any disturbance or harm to significant cultural resources, such as archaeological sites, historic structures, sacred locations, and culturally important landscapes. In certain situations, active engagement with local communities, indigenous groups, and relevant stakeholders will be undertaken to ensure their meaningful involvement in identifying and protecting cultural heritage.

Clear protocols and procedures will be established to handle unexpected discoveries of cultural artifacts or sites, ensuring their careful documentation, preservation, and respectful consultation with appropriate authorities.

Continuous monitoring and site assessments will be conducted to proactively identify and address potential risks or impacts to cultural heritage, allowing for the development and implementation of customised strategies for their preservation and conservation.

8.5 Noise and Vibration

Throughout operational phases, noise and vibration sources will be identified and assessed, considering applicable regulatory standards and guidelines. Mitigation strategies will be employed, which may include:

- Use of noise barriers,
- Acoustic enclosures,
- Vibration dampening measures,
- Turning off plant and equipment when not in use, and
- Regular maintenance of plant and construction equipment to ensure items are kept in good working order.

Additionally, regular monitoring and inspections will be conducted to ensure compliance and prompt identification of any deviations, enabling corrective actions to be taken.

Engagement and communication with stakeholders, such as neighbouring communities and relevant authorities, will be prioritised. This will involve sharing information regarding noise and vibration sources, monitoring results, and mitigation measures, while seeking feedback and addressing any concerns raised.

8.6 Biodiversity

Our approach to biodiversity management underscores the importance of preserving and restoring habitats. We initiate our strategy with comprehensive assessments, identifying critical habitats, including those of endangered or threatened species. The outcomes of these assessments serve as the foundation for our implementation of protective measures. These measures may include:

- Establishment of buffer zones,
- Creation of wildlife corridors,
- Establishment of land clearing limits,
- Seasonal considerations, and
- Execution of habitat restoration projects.

In instances where project activities impact local ecosystems, our approach includes mitigation and offset strategies. We work closely with experts to develop tailored mitigation plans that minimise disturbances and provide alternative habitats for affected species.

8.7 Biosecurity

In our environmental management, biosecurity stands as a paramount concern. Recognising the potential impacts of harmful biological agents, we have established processes to guard against their introduction and spread. These processes may include:

- Worker training on the weed management requirements,
- Disinfection of machinery and equipment before entering any site,
- Monitoring of movement of soil, water, and organic materials,

- Assessment of each site for environmental factors, ensuring that sensitive areas are protected,
- Chemical treatments as required, and
- Regular monitoring and inspections for signs of contamination.

In situations posing a risk of weed contamination, we collaborate with local authorities, ensuring that our mitigation strategies align with community safety standards.

8.8 Reinstatement and Rehabilitation

We recognise the importance of reinstatement and rehabilitation post-construction. Once construction activities conclude, we implement a range of specific methods to ensure the site's restoration, including:

- Safely storing and subsequently replacing the topsoil,
- Planting native species to restore the natural ecosystem,
- Prioritising prevention of soil erosion during construction works,
- Implementing drainage systems to manage water flow and quality, and
- Re-establishing specific habitats.

Through these methods, our goal is to return the affected land to its pre-construction state.

9 Environmental Incidents

Upon the occurrence of an incident, immediate reporting to the Project Manager is essential for review and documentation. This includes near misses, which are also subject to investigation.

The Project Manager is required to ensure all incidents, including near misses, are noted and to report notifiable incidents to the appropriate authority. If such incidents arise, the Project Manager assesses whether the site should be maintained for further investigation by the authority.

For documentation and potential investigations, we use our Incident Report and Investigation form *(AC-IMS-FOR-013 Incident Report and Investigation)*.

10 Monitoring, Evaluation and Continuous Improvement

Monitoring, evaluation, and continuous improvement form the core of a successful Environmental Management Plan. These components work in tandem to ensure that environmental objectives are met, performance is assessed, and strategies are refined over time. By systematically tracking progress, analysing results, and adapting measures as needed, we uphold environmental integrity and contribute to sustainable development.

Monitoring and evaluation of environmental management performance will be done as outlined within Performance Measurement and Monitoring Procedure *(AC-IMS-PRO-007 Performance Measurement and Monitoring Procedure)*. This includes:

- Collection and collation of statistics (including HSEQ Inspections, number of environmental incidents and applicable environmental monitoring and testing results),
- Review of internal audits and associated findings, and
- Incident reports.

Management reviews the results of the ongoing monitoring and evaluation with corrective actions and improvements listed and tracked to completion within the Corrective Actions Register *(AC-IMS-REG-006 Corrective Actions Register)*.

11 Training and Sustainability Culture

We prioritise sustainability in our operations and ensure our onsite personnel share this commitment. Regular training sessions keep our staff updated on environmental regulations and teach them practical sustainable practices for their daily tasks.

We also maintain open communication, inviting team members to share sustainability ideas and insights. Recognising and rewarding outstanding sustainable efforts further drives our collective commitment to environmental responsibility.

12 Reference Documents

The following documents are referenced within this plan:

- AC-IMS-PRO-007 Performance Measurement and Monitoring Procedure,
- AC-IMS-REG-006 Corrective Actions Register,
- AC-IMS-REG-009 HSEQ Risk Register,
- AC-IMS-REG-010 Environmental Aspects and Impacts Register, and
- AC-IMS-FOR-013 Incident Report and Investigation.