Construction Environmental Management Plan

Wallgrove Redevelopment

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Acronyms

AFG	Aboriginal Focus Group
CEMP	Construction Environmental Management Plan
D&C	Design and Construct
ECM	Environmental Constraint Maps
EPL	Environmental Protection License
ER	Environmental Representative
ERG	Environmental Review Group
IMS	Integrated Management System
KPI	Key Performance Indicator
KRA	Key Review Area
MCOS	Minimum Condition of Satisfaction
MRG	Management Review Group
NCR	Non-Conformity Report
OEH	Office of Environment and Heritage
PCG	Project Control Group
PDG	Project Design Group
REF	Review of Environmental Factors
PMP	Project Management plan
RMP	Risk Management Sub-Plan
IRMS	Roads and Maritime Services
SWTC	Scope of Works and Technical Criteria
QMP	Quality Management Plan

1. Introduction

This Construction Environmental Management Plan (CEMP) is designed to satisfy the requirements of Hanson Construction Materials' Integrated Risk Management System (IRMS).This CEMP is project specific and addresses the applicable best practice management guidelines and relevant legislation. It is a working document and is used to control the environmental management aspects of the Project.

This CEMP is prepared for use during the construction phase of the Wallgrove Redevelopment, Eastern Creek, NSW.

This CEMP interfaces with the other associated plans, which together describe the proposed overall project management system for the Project.

This CEMP is applicable to all staff, employees and subcontractors throughout the duration of the contract until project completion and its implementation and on-going development will be managed by the project team.

The latest revision of this plan is available on the Hanson Intranet. If any unsigned hard copies of this document are printed, they are valid only on the day of printing. In addition, this CEMP will be made available up request.

The revision number is included at the bottom of each page. When revisions occur, the entire document will be issued with the revision number updated accordingly for each owner of a controlled copy.

Attachments/Appendices to this plan are revised independently of this plan.

1.1. Project Description

The development comprises a redevelopment of the current site operations and includes the creation of 12 industrial lots, Collector and Estate roads and industrial land uses as summarised in Table 2. The development is proposed to be staged, with the site roads and Lots 1 – 5 developed initially, with Lots 6 – 14 developed at a later stage.

Lot	Area (ha)	Proposed Site Use
1	1.326	Concrete Batching Plant
2	1.058	Office and Laboratory
3	1.248	Maintenance and Fuel Facility
4	1.833	Concrete Recycling Facility
5	3.902	Concrete Recycling Facility
6	3.335	Future Industrial
7	2.853	Future Industrial
8	1.676	Future Industrial
9	1.794	Future Industrial
10	1.463	Future Industrial
11	2.344	Future Industrial
12	1.697	Future Industrial

The proposed development also includes the provision of site services including potable water, sewer, stormwater, electricity and telecommunications. Existing buildings, stockpiles, dams and sedimentation basins on the site shall be removed / reconfigured as part of the works.

2. Environmental Management System

2.1. Environmental Policy and Commitment

Hanson's Policies is available on the Hanson Construction Materials website. Within the policies, the Commitment to Sustainability in combination with the Enviromental Managment defines the company environmental policy. The policies are available on the Hanson Construction Materials website. http://www.hanson.com.au/Sustainabilty.aspx

2.2. Construction Environmental Management Plan

2.2.1. Purpose

The primary purpose of the CEMP is to provide an easily interpreted reference document that ensures that the project environmental commitments, safeguards and mitigation measures from the Project Environmental Documents are being implemented, monitored, audited and improved.

The purpose is also to document the hazard and risk identification and management process for the construction and to document the systematic process of implementing controls to minimise the impacts to the environment and the surrounding landowners.

2.2.2. Objectives and Targets

When setting objectives and targets for the Project, consideration is given to the high level company objectives and targets detailed in the corporate Risk Management Plan 2011-2012, legal and other requirements, the Project's significant environmental aspects, available technological options, likely hazards and risks, operational requirements and the views of interested parties.

The environmental objectives and targets for the Project align with the corporate and state business plans and are set out in Table 1.

Table 1: Environmental objectives and targets (non incentive KPIs)

Objective	Target	Key performance indicator
Compliance *Ensure the project operates in accordance with all relevant environmental legislation.*	*Zero fines for breaches of legislation.* *(0 fines / year)*	*# fines/ year*
Commitment *Reporting and close out of identified hazards* *IRMS Compliance*	*All HIQE (Hazard Identification Quality and Environmental Report) are to be actioned and closed out with the time frame agreed with the ER (Eastern Region) Risk Manager*	*<3% over due risk reports*

Objective	Target	Key performance indicator
	Following the completion of the project, an improvement is required based on the previous IRMS audit completed on the site collectively	*Improvement on %*
Environmentally sustainable development	*Minimise impacts which have a significant or irreversible effect to the environment in a manner that has minimal social and fiscal cost.* *(0 threatened fauna species deaths due to site activities).*	*# threatened fauna species deaths due to site activities.*

Modifiers for Environmental Incidents

The Environmental Performance KPI percentage, as determined from the above mentioned environmental performance criteria table, is reduced by the occurrence of environmental incidents in accordance with the criteria noted in the table below:

Table 4: KPI percentage reduction

Criteria	Percentage Reduction in KPI Percentages
*Occurrence of an incident defined as either one Category 1 Environmental Incident (Tier 2 under POEO Act) or one Penalty Infringement Notice (PINs) for water quality issues in any receiving environment (**Incident**)*	*40%*
Occurrence of a second Incident	*100%*

The incentive KPIs will be reported monthly in the Project Monthly Reports.

2.2.3. Authorisation of the CEMP

In summary, the Authorisation of the CEMP process will be as follows:

- Project Manager prepares CEMP and associated Sub Plans in accordance with the Project Environment Documents and standards and inputs from various sub-consultants as required;
- The CEMP is submitted to Regional Risk Manager and Development Manager for comments.
- Once the comments received from both Regional Risk Manager and the Development Manager; Hanson considers the comments in finalising CEMP.
- Hanson re-issues CEMP.
- If no further comments received from Regional Risk Manager and/or the Development Manager within 5 days of re-submission, Hanson will commence applying for an Project Approval.
- Once the Project Approval is granted, Hanson will commence with substantial construction.

The Development Manager authorises the first and subsequent issues of this CEMP. Authorised revisions will be issued as per distribution list for controlled copies included in this plan. The revision number and date shall be entered in Revision History for each subsequent revision. Proposed revisions will be prepared in consultation with IRMS' Representative, the Project Verifier and all relevant Authorities and stakeholders.

It is noted that the requirements set out in the Project Environment Documents are the minimum requirements for the CEMP and these requirements will not be decreased or otherwise reduced, including those relating to the scope, processes, procedures, effort, resources, experience or expertise, in the developed and any subsequently amended versions of the CEMP.

2.2.4. Changes to CEMP & Associated Documents

Hanson IRMS allows for implementing changes to the CEMP. Specifically, if the CEMP documents:

- are not adequately addressing the Project requirements, are causing nonconformity;
- are no longer representing current practice or as a result of adverse audit findings; or
- are no longer representing Hanson's current or appropriate practice.

This also includes the following requirements:

- changes in project management processes;
- changes identified by the continuous improvement of processes;
- changes in law;
- changes in design;
- changes in construction sequencing, staging, methodology;
- changes in resourcing;
- the status and progress of the works;
- changes in access to the Site;
- variations; and
- any other event or circumstance impacting the delivery of the Project.

The changes must:

- remedy the deficiency in the Management Plans;
- not disturb the work under the contract significantly; and
- not reduce the effectiveness of the control and supervision of the works.

2.2.5. Control of the CEMP

The Project Manager issues copies of the CEMP to persons on the distribution list shown on the front cover.

The Project Manager records the issue of all copies of the CEMP on the Company Intranet. When revisions are made to the CEMP, all persons in the distribution list will receive a copy and the register is updated. Registered holders of the CEMP are responsible for destroying obsolete copies upon receipt of revisions.

2.3. Environmental Management Sub Plans

Environmental management Sub Plans document how significant specific environmental aspects or risks are managed.

The Sub Plans that are required to be included as part of this CEMP include:

- Erosion and Sediment Management Plan
- Noise, Dust and Vibration Management Plan
- Vegetation, Clearing and Grubbing Protocols

These Sub Plans are appended to this Plan.

2.4. Environmental Work Method Statements

Environmental Work Method Statements (EWMSs) are designed as practical management documents to be actively used during the construction phase for on-site implementation during the undertaking of all major construction activities, which may include:

- Clearing and grubbing.
- Work within waterways, watercourses and water bodies.
- Work within areas of potential and known cultural heritage value.
- Temporary waterway crossings.
- Excavation and treatment in areas of acid sulphate materials.
- Sediment basin management.
- Excavation and/or treatment of contaminated soils.
- Works within areas of ecological protection (Including Riparian areas as per the ECM)

Hanson will develop EMWSs for the construction phase progressively, utilising issue-specific information from the CEMP and Sub Plans as it applies to each activity. For example, management actions and constraints documented in the Erosion and Sediment Management Plan and Vegetation, Clearing and Grubbing Protocol Sub Plans would be expected to be considered in the EWMS for Clearing and Grubbing to ensure prevention of water pollution and damage to prescribed species.

Each EWMS will involve a detailed assessment of environmental risks for the proposed activities and contain information from the CEMP and Sub Plans, and may also contain information derived from site specific technical assessments undertaken by expert sub-consultants and have incorporated the findings of any relevant site or activity-specific reports/documents undertaken for the Project.

EWMSs will be forwarded to the Development Manager and to relevant authorities for comments prior to commencement of the relevant activity. Proposed changes to EWMSs will be advised to the Development Manager and appropriate authority before being implemented, allowing adequate time for authority comment.

2.5. Environmental Constraints Maps

The following environmentally sensitive areas exist on the Project and are shown on environmental constraints maps (ECMs) below;

- Riparian Corridors

A suite of environmental controls (e.g. exclusion fencing, signage) are implemented in environmentally sensitive areas and are described in the relevant Sub Plans. The ECMs are to be read in conjunction with the relevant and/or associated environmental work method statement, Job Safety and Environmental Analysis (JSEA)/SWMS and Erosion and Sediment Control Plans (ESCPs). Sensitive receivers and proposed monitoring locations are described on maps in the relevant Sub Plans.

The ECMs will be issued to all relevant staff working on site and will be utilised in site inductions and training where relevant. The ECMs will be updated progressively to address changes to the site, work methods or construction stage during construction and will be reissued in accordance with the Project document control process.

3. Legal and Other Requirements

Compliance with legal obligations is a mandatory and important part of delivering a successful project. Hanson will take appropriate measures to manage environmental risks during the Project in compliance with the Project Environmental Documents and relevant legislation.

3.1. Licenses, Permits and Approvals

The Development Manager is responsible for the identification of all planning and environmental approvals, permits and licenses and the Project Manager is responsible for ensuring that works do not proceed without these.

3.1.1. Internal Permit System

An internal Permit System will be created for each situation where an internal permit is required to ensure all required approvals are in place and approval obligations are met prior to construction activities commencing. Internal Permit details and required supporting documentation is provided below.

Table 5: Internal permits/ hold points

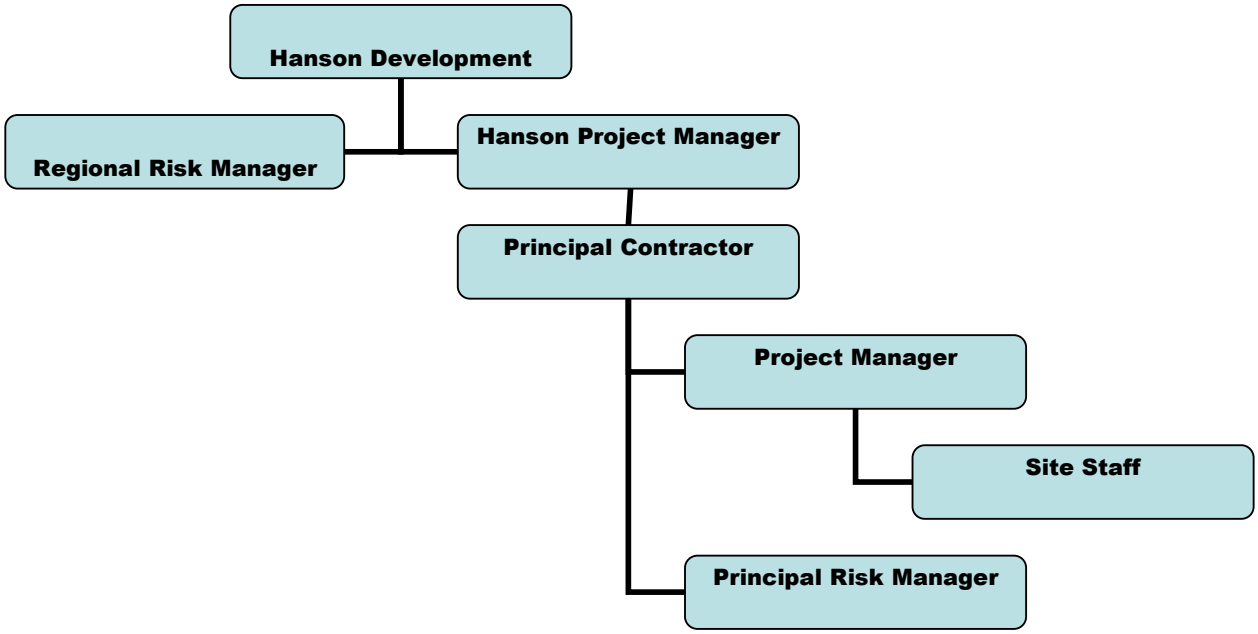
Internal permit/ hold point	Required supporting documentation	Release of Permit
All dewatering operations, including sediment basins and any other water to be released that requires an approval, licence, notification and/or permit. This internal permit must document measures to avoid / reduce pollution, pump location/ size and suction heights, release qualities / limits, locations of approved release points, monitoring of discharge, and signoffs on the permit before release.	Relevant Dewatering Record	Development Manager
All clearing works which require an approval, licence, notification and / or permit. This internal permit must document measures to reduce impacts, fauna rescue measures, sediment control measures and signoffs on the permit before release.	Relevant EWMS Relevant ECM Relevant Progressive Erosion and Sediment Control Plans Relevant Ecologist Report	
Approval to enter an environmental no go area or environmentally sensitive area. This permit must include details of proposed works, justification for works, measures to reduce impacts, consultation with the Development Manager, and signoffs on the permit before release.	Relevant EWMS Relevant ECM Proof of Consultation with relevant authorities	
All required out of hours works approved in accordance with Environmental Documents. This permit must include measures to reduce impacts, location of equipment to minimise impacts,	After hours work approval form	

Internal permit/ hold point	Required supporting documentation	Release of Permit
monitoring of out of hours works and signoffs on the permit before release.		

4. Authorities, Duties and Responsibilities

The management of construction activities in the Wallgrove Redevelopment Project is organised under the control of the Development Manager, as depicted in the *Project Organisation Charts* as per the below. The Principal Contractor will be responsible for the day to day operation of the project, however will be monitored by the Hanson Project team to ensure all requirements are being met.

The roles of the Principal Contractor and its underlying structure may change depending on the internal organisational structure. The Organisational chart will be finalised once the Principal Contractor is appointed.



Development Manager

The Development Manager is responsible for the overall control of the Project and the CEMP. The Development Manager also:

- ensures resources are made available to enable the Project works to comply with the CEMP and relevant legislation; and
- liaises with the Hanson Project Manager and approval authorities as required.

Principal Risk Manager

The Principal Risk Manager (PRM) is shown in the organisation chart and is a functional member of the Project team and is the Environmental Management Representative for the Wallgrove Redevelopment Project. The PRM should have suitable environmental qualifications to undertake his/her environmental responsibilities.

The PRM has adequate time available to carry out his/her environmental responsibilities and fulfils this role under instruction from the Project Manager.

The PRM is responsible for:

- advising on environmental matters specified in the specifications and conditions of approval;
- liaising with relevant authorities on environmental matters;
- maintaining a register of all environmental management documents for the Contract;
- ensuring that the CEMP is established, implemented and maintained in compliance with the Project Specifications;
- establishing, managing, monitoring and maintaining erosion and sediment controls;
- carrying out regular inspections and auditing of the works to ensure that environmental safeguards are being followed;
- identifying where environmental measures are not meeting the targets set and where improvement can be achieved;
- preparing reports on a monthly basis outlining the works undertaken and the achievements that have been met, as well as identifying those areas where improvements were made;
- facilitating environmental induction and toolbox talks for all site personnel; and

The PRM is also given the responsibility, authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur.

Project Manager (Hanson and Principal Contractor)

The Project Manager is responsible to the Development Manager for the formal implementation of the CEMP.

Specifically, The Project Manager is responsible for:

- reviewing, implementing and maintaining the provisions of the CEMP;

- undertaking a review of environmental aspects at the Project Launch;
- ensuring all licenses, permits and approvals are obtained by the responsible entity, copies are kept in the Project Filing System for the duration of the project and any conditions are complied with;
- providing required resources necessary to ensure the CEMP is properly implemented;
- ensuring all personnel are inducted as to the Project environmental requirements prior to commencement on site;
- ensuring suppliers receive the Project environmental induction, or are made aware of the environmental objectives pertaining to them through conditions of contract, as applicable;
- ensuring personnel are adequately trained to undertake their tasks in an environmentally responsible manner;
- ensuring environmental inspections and monitoring is carried out in accordance with the Contract;
- ensuring accurate records are kept of all environmental monitoring and inspections;
- determining if an environmental issue should be recorded as a Non-conformance;
- attending to environmental emergencies which occur on site after working hours (first point of contact); and
- ensuring Monthly Project Environmental Reports on the CEMP compliance are completed and included in the Project Monthly Report to the IRMS Representative.
- ensuring environmental controls identified in the Sub Plans are in place prior to commencement of construction activities;
- undertaking environmental monitoring and inspections in accordance with the requirements of the CEMP;
- initiating remedial works to ensure environmental controls are effectively maintained;
- maintaining records of all monitoring and inspection activities; and
- preparing and submitting to the Environmental Manager a Monthly Report on implementation of the CEMP.
- developing and reviewing all erosion, sediment and water pollution plans, controls and measures prior to installation;
- fortnightly inspection and review of all erosion and sediment controls, at a minimum, until the Date of Completion; and
- assistance in Project training regarding Project erosion and sediment control issues.

Principal Contractor Function

The below roles have been included in the structure however this has been summarised as a whole as “Principal Contractor” in the organisational chart. The structure may change once a Principal Contractor is contracted.

Project / Site Engineers

The Project / Site Engineer is responsible to the Project Manager for:

- ensuring all workers and subcontractors under their control are properly inducted and instructed in the requirements of the CEMP pertaining to their part of the work;
- ensuring all work under their control is undertaken in accordance with the CEMP and statutory environmental requirements; and
- identifying, recommending and initiating solutions to any Project environmental risk.

Superintendents

The Superintendent is responsible to the Project Manager for:

- ensuring all workers and subcontractors under their control are properly inducted and instructed in the requirements of the CEMP pertaining to their part of the work;
- ensuring all work under their control is undertaken in accordance with the CEMP and statutory environmental requirements; and
- identifying, recommending and initiating solutions to any Project environmental risk.

Foreman

The Site Foreman is responsible to the Project Manager for:

- ensuring all work under their control is undertaken in accordance with the CEMP and Statutory environmental requirements; and
- identifying, recommending and initiating solutions to any Project environmental risk.

Employees

All project employees are responsible for undertaking their work in accordance with the CEMP and Hanson's Environmental Policy as directed at their induction and as instructed by their supervisor.

Subcontractors and Suppliers

All subcontractors and suppliers shall be responsible for ensuring that their work or product complies with the Project Environmental Documents. This will be achieved through out the Project induction and/or contract engagement process.

5. Environmental Aspects

5.1. Risk Assessment

The major environmental aspects and impacts of the Project will be identified prior to the commencement of the project and relevant controls will be developed to minimise the impact of construction activities on the environment.

The Project's environmental aspects and impacts will be tabulated in a Appendix. The register, together with the relevant Sub Plan/s outline control measures, responsible persons and references for each environmental aspect.

In addition, Sub Plans to this CEMP provide further detailed information on relevant controls/safeguards, monitoring, sampling and inspections to manage identified risks.

5.2. Ongoing Identification, Assessment and Control

Environmental aspects are identified, assessed and controlled on an ongoing basis through development and review of:

- Environmental work method statements (EWMSs).
- Job safety and environmental analysis (JSEA)/Safe work method statements (SWMS).
- Erosion and sediment control plans (ESCPs).
- Environmental constraints maps (ECMs).
- Work method statements (WMSs).
- Toolbox talks.
- Emergency and Crisis Management Plant

5.3. Subcontracted Activities

All subcontractors are required to operate within and show commitment to the requirements of this CEMP and associated documents. This is clearly communicated to subcontractors during the subcontractor pre-award interview assessment and during the project induction.

All documentation forwarded by subcontractors is reviewed by Hanson Representatives. This includes but is not necessarily limited to the review of Subcontractor JSEA/SWMS by the EM/ EO using the JSEA / SWMS Review Checklist. Any deficiencies identified are highlighted to the subcontractor and the subcontractor is required to resubmit the JSEA/SWMS to Hanson for another review. Refer to Project OHS Management Plan for further details.

A subcontractor surveillance program is implemented to assess the effectiveness of the subcontractor's environmental protection measures and compliance with the CEMP. In particular, subcontractors are monitored through site inspections and the completion of checklists.

Internal audits are also conducted, which involve the inspection of site construction works including subcontracted activities.

5.4. Construction Operation Hours

The working days and hours of work are:

Monday – Saturday: 6am to 6pm

Sunday and Public Holidays: No work

Start up or warming up of equipment associated with the Project work is not permitted outside these hours.

5.4.1. Out of Hours Work

Any proposal to extend the working hours or working days is conditional on complying with the conditions of the EPL. Works which do not meet the criteria set in the EPL require compliance with the following at least five working days before the commencement of the period of extended working hours.

All activities must be complying with *Noise Management Plan*.

- Notify the Project Manager before the commencement of work.

6. Competence, Training and Awareness

A record of inductions and training attendance is maintained and kept on site in the Training matrix and register. This register records the topics, dates, names of attendees, and trainer qualifications.

6.1. Competence

The Project Manager is responsible for the monitor of environmental training needs to ensure that all personnel with environmental responsibility on the project are competent to perform their environmental duties. Training is provided to personnel with specific environmental responsibilities. This may include but is not necessarily limited to training in the areas of:

- emergency response;
- erosion and sediment control;
- environmental sampling; and
- environmental auditing.

6.2. Induction Training

Prior to commencing work on site, all Project personnel including subcontractors, attend a site induction. Where personnel are visiting, personnel attend a visitor induction.

All Project personnel, subcontractors and consultants will be required to undertake a site induction which will, as a minimum, address the following environmental topics:

- The CEMP and consequences of non-compliance with the CEMP.
- The requirements of due diligence and duty of care.
- Conditions of environmental licences, permits, notifications and approvals.

- Location of significant environmentally and socially sensitive areas and protected ecological communities.
- Incident management procedures (e.g. the action to be taken in emergencies, communication lines and contact details for emergency services and site representatives).
- An overview of the Environmental policy.
- Roles and responsibilities of all personnel in achieving environmental conformance.
- Definition and management of environmental incidents and operation of pollution/ spill control equipment.
- Definition and management of waste and an explanation of a waste minimisation and recycling strategy.
- Processes for refuelling and the management and use of hazardous substances.

Records of training, competency and qualifications including dates, names and trainer details, will be registered in the Inductions Register and kept with the Project Safety Manager.

6.2.1. Site Induction

The Project Manager or delegate conducts inductions in conjunction with the site safety induction prior to any person working on site. This induction process familiarises the staff and workforce with Hanson's commitments and policies, the project site and all specific requirements for the project in terms of safety and environmental controls. These can include, but are not limited to, site specific areas (e.g. environmentally sensitive areas, limits of construction, no-go zones), cultural heritage issues, definition and management of environmental incidents, refuelling, waste management and disposal. The induction will include an overview of the content and intent of the CEMP, including the expectations of staff and subcontractors to comply with the CEMP and environmental legislation and relevant approvals and permits.

Regular visitors and Contractors required to spend time on site unaccompanied, will also be inducted prior to them going onto the site.

6.2.2. Visitor Induction

Visitor inductions are provided for personnel visiting (not physically working on) the Project and where there is minimal potential for environmental harm. All visitors must undergo a visitor's induction. All visitors shall be under the control and supervision of a person who has been fully inducted.

6.3. Environmental Awareness Training

Personnel must undergo environmental awareness training before commencing construction activities and when new personnel commence work on site. This requirement is satisfied through the delivery of the site induction. To ensure personnel remain aware of their environmental responsibilities as the Project progresses, refresher environmental awareness training sessions will be held at no less than six monthly intervals to reiterate the environmental requirements of the project. More frequent

toolbox meetings may be undertaken based on environmental risk assessment and turnover of Project personnel.

Records of training, competency and qualifications including dates, names and trainer details, will be kept.

6.4. Environmental Toolbox Training

A toolbox talk involves the dissemination of information to Project personnel at the field level. Generally toolbox talks focus on safety aspects with reference to certain Project jobs or tasks. They can be used to disseminate environmental management information. Environmental toolbox talks will cover aspects such as:

- Explanation of new Project requirements.
- Explanation of the key environmental risks associated with an activity or specific procedures which could have potential environmental impacts.
- Explanation of mitigation strategies with reference to an activity or specific procedures which could have potential environmental impacts.
- Reminder of the importance of specific or generic environmental commitments.
- Obtaining feedback related to environmental issues.
- Changes in work process as a result of incident management.
- Any other purpose related to the implementation of the CEMP.

Toolbox training will help to ensure that relevant information is communicated to the workforce and will also provide a forum for feedback on issues of interest or concern. Toolbox training will generally be prepared and delivered by a representative of the Environmental Management Team but may also be delivered by other authorised persons.

6.5. Work Procedure Training

All personnel that have specific responsibility for implementing the CEMP or its Sub Plans are trained in the relevant work procedures prior to undertaking the activity. Work procedure training is recorded in the training attendance record.

7. Monitor, Review and Improve

The key activities of the Project that may have a significant impact on the environment are monitored on a regular basis.

A range of information is documented to enable performance to be monitored. Detailed records of all environmental inspections and performance checks are maintained. Section 9 provides detail regarding documentation.

7.1. Inspection and Surveillance

In addition to the specific environmental monitoring set out in the environmental management Sub Plans, the following environmental inspections are undertaken:

- The Principal Contractor as part of their daily duties conduct inspections of the Project (including all subcontractor activities). Only unresolved issues are noted in

their daily diaries and communicated to the Project manager for inclusion in the IRMS database

- The EM/EO conducts formal inspections of the Project. An environmental inspection checklist is developed to ensure compliance with the CEMP and that conditions nominated in license/permits/approvals are assessed. Actions arising from environmental inspections are recorded, tracked, communicated and closed out in accordance with the procedure detailed in Figure 1 below.

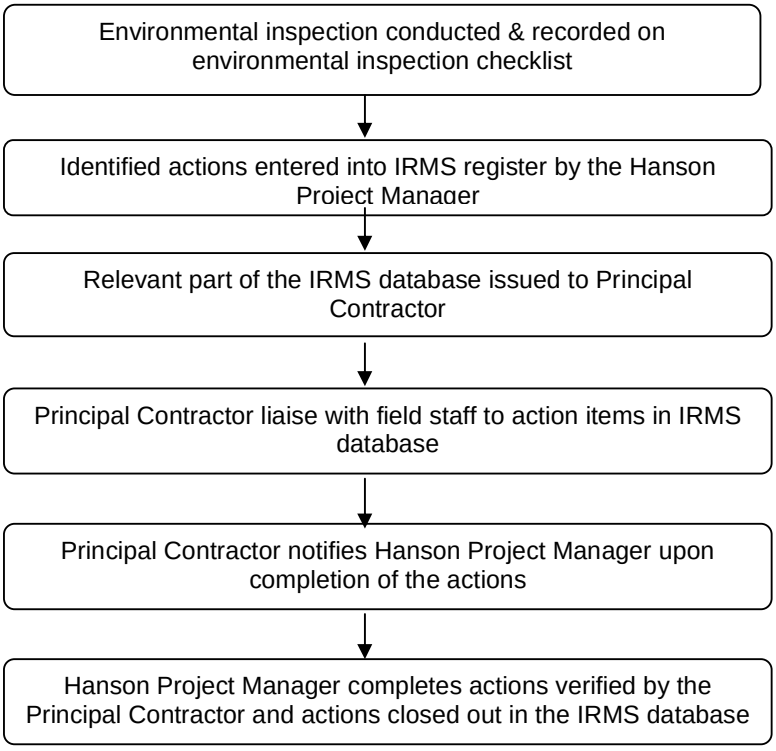


Figure 1: Procedure for environmental inspection

7.2. Environmental Sampling

Environmental sampling will occur as set out in the CEMP Sub Plans. Environmental sampling involves collecting and interpreting data to verify the effectiveness of the CEMP and environmental control measures. All environmental sampling details are contained in the relevant sub plans. Where sampling results are outside the nominated acceptance criteria, an incident report or non-conformance is raised in the IRMS database.

7.3. Incident Reporting and Investigation

Incidents and Emergencies shall be managed in accordance with the *IRMS* guidelines document.

These detail how to:

- prevent and/or prepare for emergency situations;
- respond in the event of different emergency scenarios;
- notify required persons;

- report; and
- undertake incident investigation.

Where required, the *Emergency and Crisis Management Plan* may be enacted for major or extreme incidents.

A record of all incidents is recorded in Hanson's IRMS database.

7.4. Environmental Alerts

As part of Hanson's commitment to environmental hazard identification, control and improvement, an Environmental Alert system is utilised. When an incident occurs or a potential hazard is identified externally or internally, an alert may be developed.

Alerts are distributed through email and printed off at each site and placed on site notice boards and communicated to the Project team at Toolbox meetings. The Environmental Alert identifies the key issues relating to the incident or hazard, the controls that are to be put in place to ensure the incident or hazard does not reoccur and key learning's from the event.

The Hanson Regional Risk Manager is responsible for preparing and disseminating alerts within four weeks of the incident or hazard.

7.5. Community Issues, Concerns and Complaints

Community management which includes, amongst other things, protocols for the distribution of letters informing the community of construction events, and contact details for further information, or the registration of complaints.

The Hanson Project Manager shall notify the Development Manager of all site environmental issues, concerns and complaints.

Complaints from other parties shall be directed to the Project Manager for investigation.

All relevant environmental issues, concerns and complaints and include the following, are to be entered into the IRMS database:

- date and time;
- location;
- apparent cause;
- corrective action, if relevant; and
- other relevant information.

Completed corrective actions shall be documented in the IRMS database.

Copies of the report shall be distributed to the relevant parties indicated on the report.

Within one working day of receiving a complaint about any environmental issue, including noise and other pollution, arising from the Project works, a written notification will be submitted in the IRMS database, which will distribute to the Development Manager. The Risk Report raised in the IRMS database is to be closed out with the proposed measure to prevent the occurrence of a similar incident, within five working days.

A summary of complaints, issues and concerns will be provided in the project monthly report to the Development Manager. A register of all complaints about any environmental issues will be kept for the duration of the Project.

7.6. Audits

7.6.1. Internal Environment Audit

Audits by suitably qualified and experienced personnel not directly associated with the project shall be undertaken at intervals not exceeding 6 months, with the first audit occurring no longer than 3 months after commencement of construction, as part of the process of assuring compliance with performance requirements and enabling continuous improvement. The audits shall verify compliance with the CEMP.

The scope of internal audits may include:

- checking compliance with legislation, license, permit and approval obligations;
- checking compliance with the mitigation measures in the CEMP and Sub Plans;
- reviewing the CEMP, Sub Plans and all other environmental documentation (including e.g. EWMSs, ESCPs) to ensure relevance to current activities and recommend changes or improvements;
- reviewing sampling results against criteria;
- reviewing subcontractor activities;
- reviewing training records;
- reviewing environmental incidents to determine trends or additional controls required;
- reviewing non-conformance and corrective action request (CAR) information to determine trends or additional controls required;
- reviewing the IRMS Database to ensure timely and adequate close-out of actions.

Any deficiencies identified in the audit will be promptly rectified according to the level of risk, or full justification provided for not undertaking such action.

Following the initial audit, the risk based auditing program is reviewed and amended if necessary.

The results of all internal environmental audits are provided to the Project Managers and Principal Contractor for review and action if necessary. A copy of final audit reports is provided to the Project Manager and Development Manager within 5 days of audit report finalisation.

The outcomes of internal audits may trigger the requirement to update the CEMP and/or any associated Project Environmental Documents.

7.7. Achievement of Objectives and Targets

Implementation of this CEMP provides the overall strategy for achieving the Project environmental objectives and targets (refer Section 2). Environmental objectives and targets are reviewed on a regular basis and/ or when there is a major change in construction activities, to ensure compliance.

Performance is monitored through site inspections, monitoring, the completion of audits, management reporting and management reviews as described further in the related

sections of this CEMP. Performance is reporting through audits and the Project's monthly environmental report.

Should targets not be achieved, a non-conformance will be raised; control measures reassessed, staff trained (if required) and the CEMP updated to reflect any relevant changes.

Changes to environmental requirements as effected by legislative or regulatory changes will be monitored by the Regional Risk Manager and through regular contact with the Project Manager and Development Manager.

7.8. Review and Improvement of the CEMP

The CEMP is reviewed at least annually to ensure compliance with legislative requirements and its suitability and effectiveness for the project and other requirements. The CEMP may be reviewed more regularly due to a change in construction activities, where targets are not achieved or in response to audits.

The review is completed by the Hanson Project Manager and Principal Contractor. The review may be in the form of:

- a formal management review
- a second party audit; and
- inclusion as a separate item at site meetings.

Any revisions to the CEMP as a result of management review will be communicated to the project team through email notification and through monthly project meetings.

8. Communication and Reporting

The Project Manager is responsible for establishing procedures for receiving, recording and responding to communication.

The Project Manager is also responsible for coordinating and approving all reporting to meet contractual, regulatory and Hanson requirements.

8.1. Internal Communication

A program of internal communication networks and regular meetings will be developed by the Project Manager after the appointment of the principal contractor is made. The minimal level of commitment to internal communication will be.

- Daily toolbox meetings on site
- Fortnightly Safety/Environmental/Quality meeting on site
- Monthly Project Meeting onsite
- Monthly Project Stakeholders meeting

8.2. External Communication

8.2.1. Community

Communication with the community will be detailed in the *Community Engagement Plan,* which will be developed prior to project commencement. The *Community Engagement*

Plan will be developed to include with the function of the CEMP and other Project management plans.

Permissions and procedures for obtaining access to private property along the Project will be detailed in the *Community Engagement Plan*.

8.2.2. Environmental Regulatory Authorities

The following two Project team members are nominated as 24 hour contacts for environmental regulatory authorities, with the authority to take immediate action to shut down any activity, or to effect any pollution control measure:

- To be advised (Environmental Manager); and
- John Lardis (Project Manager), 0427 804 028.

Upon consultation with the Regional Risk Manager and the Development Manager, each relevant authority will be notified immediately via the appropriate telephone number should a pollution incident occur that causes or threatens material harm to the environment. Harm to the environment is material if:

- it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
- it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations), and
- loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

The relevant authorities, in the order they are to be notified, are:

▪ the appropriate regulatory authority (ARA)	
▪ the EPA, if it is not the ARA	131 555
▪ the Ministry of Health via the local Public Health Unit	
(ask for the Public Health Officer on call)	(02) 9845 5555
▪ WorkCover	131 050
▪ Blacktown City Council	
8.45am to 4.15pm Monday to Friday (*public holidays excepted*)	(02) 9839 6000
Emergencies	1300 133 491
▪ Fire and Rescue NSW	000

For further details, refer to the Emergency Contacts Register within the Emergency and Crisis Management subplan.

Should the Project Manager be notified of any pollution incident, the Development Manager will be verbally notified within two hours and in writing as soon as the cause, extent and details are known.

A report is submitted to the Development Manager on each occasion when the site is visited by any Authority, other than for arranged inspections. The report will detail the

purpose, outcome and actions pertaining to the visit and is submitted to the Development Manager within one working day of the OEH or any other Authority visit.

8.2.3. Project Monthly Report

Each month, the Project Manager will prepare a summary report of environmental performance to the Development Manager and the Regional Risk Manager.

The monthly reports will include details on:

- all cases of non-compliance with environmental obligations;
- all cases of non-compliance with the environmental management plans;
- actions resulting from all environmental inspections and audits
- any failure to address low/ high monitoring levels (as appropriate) or monitoring exceedance;
- actioning and reporting of all environmental incidents;
- the frequency of environmental checklists and actioning concerns; and
- environmental KRA's/KPI's.

8.2.4. Project Steering Committee Meetings

Environmental matters are tabled for discussion at monthly development meetings. Matters raised may include:

- cases of non-compliance with the CEMP or environmental obligations;
- incidents;
- community contact topics and frequency;
- frequency of environmental inspections; and
- key issues arising from review and auditing.

9. Document Control and Records Management

The system used for document control and records management is detailed in the *Document Control Document*. This enables the complete management of all documents, including the identification of document or drawing lists, author and recipient management and ensuring that documents remain legible and readily identifiable.

10. Emergency Preparedness and Response

10.1. Emergency Preparedness

In addition to the environmental training, selected staff will be trained in emergency procedures for chemical spills, or other potential incidents, including use of spill kits provided on site.

In the event of an emergency the persons/authorities nominated on the Emergency Contact List shall be notified as applicable.

The Emergency Contacts List, Evacuation Procedure and Emergency Evacuation Plan (Marshalling Areas) is included with, and displayed in accordance with, the procedure in the *Emergency and Crisis Plan.*

10.1.1. After Hours Response

Upon becoming aware of an environmental incident outside of normal working hours, the Project Manager or Principal Contractor shall attend the site to determine if any immediate remedial works are required and shall arrange for such works to be completed as soon as possible.

10.1.2. Oil and Fuel Spills

The environmental risks posed by fuel and oil spills will be minimised through the provision of appropriate storage for fuels, oils and chemicals.

Approved hydrocarbon spill kits capable of containing or cleaning up a spill of 100 litres minimum will be strategically located and readily available. Several people trained in the use of the spill kit shall be on site whilst work is being undertaken.

Where safe and practical, the spill kit or other containment measures will be used as soon as possible after an incident. The hydrocarbon spill kit shall be replenished as soon as possible after the event.

Where the use of the spill kit or other containment measures would be ineffective, or the spill is of a scale where it can't be safely handled on site, then the Fire Brigade (spill response unit) will be called in accordance with the *Emergency and Crisis Plan.*

Approved contractors shall be engaged for the appropriate disposal of soil affected by the spill and residual absorbents.

Transportation and landfill dockets shall be provided to Hanson by the disposal contractor.

10.1.3. Control of Fire

Bushfire response measures are detailed in the Emergency Preparedness and Response Sub Plan. Relevant fire response contacts have been included in the site's 24 hour Emergency Contact List.

Inducting site personnel in good housekeeping and safe working practices will reduce the risk of fire breaking out.

Where work is undertaken which may involve a risk of fire spreading to adjacent vegetation and/or properties, appropriate preventive measures will be implemented in accordance with the JSEA/SWMS.

If a fire breaks out and cannot be controlled by use of immediate resources (fire extinguisher, hose etc.) the fire brigade will be requested to attend.

The affected area shall be visually inspected for, and assistance given to, any injured or distressed fauna, but only if it is safe and practical to do so.

10.1.4. Dust Generated on Site

In the event of dust causing a nuisance to surrounding and adjacent properties or roadways, or when directed by the Development Manager to cease work, the following procedure will be followed:

- The Project Manager shall halt works and plant movement immediately to prevent further dust from being generated.
- A water cart shall be used to spray the area where the dust generation has occurred, or stockpiles shall be covered or dampened as necessary.
- Where possible, working operations shall be relocated to another section of the site, provided that wind/weather conditions are favourable.
- Where a complaint is received from any adjoining property owner, the property shall be inspected by the delegated personnel and corrective actions determined.
- Details shall be recorded in the IRMS Database.
- Work shall not resume in the affected area until conditions ensure visible dust will not escape the confines of the site.

10.2. Emergency Response

Environmental emergency situations are managed in accordance with the Emergency and Crisis Management Plan. Incidents are recorded in the IRMS database.

Revision History

Rev	Revised By	Reviewed & Approved By	Date	Description/Summary of Changes
0				