

GENERAL SPECIFICATION

G10 CONSTRUCTION
ENVIRONMENTAL
MANAGEMENT PLAN

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DEPARTMENT of INFRASTRUCTURE, ENERGY and RESOURCES
TASMANIA
GENERAL SPECIFICATION
G10 – Construction Environmental Management Plan
June 2012

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G10.1 SCOPE

This specification sets out the requirements for the development, implementation and maintenance of the Contractor's Construction Environmental Management Plan (CEMP) for the contract. Implementation includes ongoing auditing, review and reporting.

The CEMP is to be supported by the Contractor's Environmental Management System (EMS). The EMS is to be certified in accordance with *AS NZ ISO 14001 "Environmental Management Systems – Requirements with guidance for use"*.

Through the CEMP, the Contractor shall demonstrate that both known and potential environmental effects are clearly understood and are to be effectively managed throughout all stages of the contract including the defects liability period.

G10.2 OBJECTIVES

This specification defines the principles by which environmental management is to be achieved on DIER contracts.

The objectives of this specification are to:

- ensure that environmental management is appropriately planned, implemented and maintained
- ensure environmental management is included in the Contractor's Worksite Risk Management process
- ensure the principles of Best Practice Environmental Management (BPEM) feature throughout all stages of the project, and
- drive compliance (legislative, permit, DIER specification, EMS) and sound record keeping.

G10.3 REFERENCES AND STANDARDS

The Contractor's CEMP shall be compatible with the provisions of all DIER standard specifications for Design, Construction and Maintenance in particular:

- G1 – General Provisions
- G2 – Contract Management Plan
- G3 - Traffic Management
- G8 – Construction Survey
- G9 – Product Quality
- T5 – Environmental Investigations and Reports
- All other DIER specifications relevant to the project.

The Contractor's CEMP shall also be compatible with the provisions the following standards, Guides and Legislation:

Australian Standards and Guides

- AS NZ ISO 9001 "Quality Management System – requirements"
- AS NZ ISO 14001 "Environmental Management Systems – Requirements with guidance for use".
- AS/NZ4801 and 4804 "Occupational Health and Safety Management Systems",
- AS/NZS ISO 31000 Risk Management, Principles and Guidelines
- HB 206 Initial Environmental Review
- HB 327 Communication and Consulting
- ISO Guide 73 Risk Management, Vocabulary.

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Austrroads Guides

- AP-R185 Environmental Risk Management, Guidelines and Tools for Road Projects.

Legislation

- The Tasmanian Environmental Management and Pollution Control Act”
- the Commonwealth “Environmental Protection and Biodiversity Act” and
- the Regulations under these Acts.

G10.4 DEFINITION OF TERMS

The terms used in this specification shall be as defined in *Table G10.1 Definitions*.

Table G10.1 Definition of Terms

EMS	Environmental Management System
EER	Environmental Effects Report.
Environmental Harm	<i>Harm</i> is a term defined by the <i>Environmental Management & Pollution Control Act 1994</i> , however for the purpose of the CEMP, harm is defined as “any adverse impact on the natural environment.” To that effect, use of the word “harm” in a CEMP extends to a diversity of legislation including, but is not limited to: <ul style="list-style-type: none"> • <i>Threatened Species Protection Act 1995</i>; • <i>Nature Conservation Act 2002</i>, and the • <i>Environment Protection & Biodiversity Conservation Act 1999</i>.
EMPCA	<i>Environmental Management & Pollution Control Act 1995</i>
EPA	Environmental Protection Authority
Environmental Effect	The consequence of a given action that results in a change to environmental condition that would not have occurred otherwise. An environmental effect can be both positive and negative, however is more often referred to in the negative. Often referred to as an ‘environmental impact’.
EPBCA	<i>Environment Protection & Biodiversity Conservation Act 1999</i>
ESR	Environmental Scoping Report.
DPEMP	Development Proposal & Environmental Management Plan.
FPA	<i>Forest Practices Act 1985</i>
Management Measures or Mitigation Measures	Are actions/measure developed to prevent/mitigate/offset an expected/known environmental effect, the direct/indirect result of a given action. The measures are to be auditable and may be integrated in to DIER’s contractor auditing program.
NCA	<i>Nature Conservation Act 2002</i>
NoI	Notice of Intent
TSPA	<i>Threatened Species Protection Act 1995</i>
The ‘Board’	Board of Environmental Protection Authority

G10.5 INTELLECTUAL PROPERTY

Information, data and outputs that are the direct and/or indirect result of works conducted for and on behalf of DIER, is the Intellectual Property (IP) of DIER. All project related information that is sourced, collated, generated and produced by virtue of a DIER contract, is owned by DIER.

G10.6 INFORMATION PROVIDED BY THE PRINCIPAL

The Principal will provide all relevant documents associated with project planning and approval, e.g. Environmental Effects Report (EER) or Development Proposal & Environmental

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Management Plan (DPEMP). (*Refer Standard Specification T5 Environmental Investigations and Reporting*)

Information provided by the Principal may include a list of environmental commitments made by DIER during the project planning process. These commitments may be included in environmental permits issued by the relevant regulators. These commitments are to be honoured where appropriate and incorporated in to the CEMP.

Note:

The pre-existing commitments cannot be modified or dropped without documented justification to do so. This may require formal notification from the regulator. Additional commitments are encouraged.

G10.7 CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

The Construction Environmental Management Plan (CEMP) is the environmental element of the Contract Management Plan (CMP) *refer Standard Specification G2 Contract Management Plan.*

The Contractor shall detail the requirements of this specification and the specific environmental requirements in all other specifications in the CEMP.

The CEMP must show that the Contractor has considered and understood the requirements of the specification and has:

- obtained the required level of third party certification with respect to the Contractor's EMS
- demonstrated project specific environmental understanding
- demonstrated skills, experience, capacity and competence relevant to the project
- provided a tool that will assist all persons to effectively manage environmental harm throughout all stages of construction
- demonstrate sound project specific environmental understanding
- provided the key reference tool to be used by all persons to prevent and/or effectively manage environmental harm throughout all stages of construction
- a demonstrated monitoring process including an outline of how monitoring information will be communicated (and to whom) to improve site management and how 'reactive' monitoring (i.e. monitoring that is outside the scope of routine monitoring programs) is to be managed
- a demonstrated auditing process including reporting.

Appendix G10A CMP/CEMP Structure and Content Guide lists a minimum number of topics that DIER expects would be addressed depending on the complexity of the contract.

G10.8 ENVIRONMENTAL MANAGEMENT

G10.8.1 Contractor's Responsibilities

The Contractor shall:

- identify and prevent environmental harm from occurring
- manage construction activities to mitigate unavoidable environmental impacts
- monitor and track change in environmental condition over time
- respond effectively to environmental incidents
- undertake remedial works in a manner appropriate to the effect/impact document and maintain records in accordance the Contractors EMS.

G10.8.2 Environmental Management Systems (EMS)

The Contractor is required operate in accordance with a certified EMS as per AS NZ ISO 14001 "Environmental Management Systems – Requirements with guidance for use".

Alternatively the Contractor may have achieved certification under the Civil Contractors Federation, "Civil Construction Management Code".

G10.8.3 Risk Management

Risk assessments shall be undertaken in accordance with the documents listed in this specification and other relevant documents as required. The objective (refer AS/NZS ISO 31000 clause 2.1) of any CEMP risk management process is to reduce the likelihood of a legislative breach, through sound project understanding and site management practices. This includes residual risk, i.e. the risk that remains post implementation of all practical and feasible mitigation measures.

It is essential that key outcomes (i.e. location of conservation areas) of the planning and design process are incorporated in to, and feature heavily throughout the CEMP. It should be noted that a failure to manage for known environmental values, or a failure to manage for potential environmental impact, may result in a breach of environmental legislation, be it State or Federal.

G10.8.4 Environmental Monitoring

Environmental performance and condition shall be monitored throughout all stages of construction (including the defect liability period). Monitoring programs are to be tailored to each environmental aspect (e.g. hazardous materials or stormwater) with the preferred method and frequency of monitoring clearly identified.

The location of monitoring sites shall be identified (on site maps), where possible even though locations may be indicative only.

G10.8.5 Environmental Auditing

The Contractor shall undertake audits to verify that the systems and processes designed to prevent and manage environmental impact have been implemented correctly, are operating effectively and can used to identify where improvements can be made.

The Contractor shall have an audit programme that is tailored to the project. The programme should outline the purpose/type of auditing (1st, 2nd & 3rd), frequency, triggers, review process and proposed circulation of audit results.

The Contractor's environmental audits shall be undertaken at the direction of an Environmental Professional who is to be a full member of an Australian recognised Professional Environmental or Engineering Institute or Association.

G10.8.6 Completion Audit

The Contractor will arrange an environmental completion audit by a third party environmental professional for submission to the Superintendent prior to requesting a Certificate of Practical Completion. This audit must cover all the requirements of this specification.

The Contractor's environmental completion audit shall be undertaken at the direction of an Environmental Professional who is to be a full member of an Australian recognised Professional Environmental or Engineering Institute or Association.

G10.8.7 Qualifications of Environmental Professional

All environmental auditing and reporting shall be undertaken by a field- related professional with demonstrated experience and competence relevant to the project/task in question.

The environmental professional's qualifications shall be relevant to the individual elements required by the audit or report, i.e. experienced and qualified geoscientists, terrestrial ecologists, geomorphologists, water quality, environmental assessment and management specialists or other as identified by the task.

G10.8.8 Non-conformances

For the purposes of this specification non-conformances are defined as any deviation from what is required by law, what is stipulated by environmental permit/planning approval, or what is agreed to as an environmental commitment. Non-conformance's can range from minor through to extreme and can be a one-off or continuous.

G10.8.9 Incident Management

The Contractor shall have an incident management process that clearly define an incident and identifies:

- how an incident may be identified
- how an incident can be reported (and to whom)
- who has responsibility for an incident
- how an incident can be recorded
- how an incident is communicated (and to whom) i.e. communication protocol, and
- procedures for incident follow-up, resolution and close-out.

G10.8.10 Complaints Management

The Contractor shall have a management system for both internal and external complaints that identifies how complaints:

- can be made (e.g. phone or in person) and to whom
- will be managed (e.g. response times, notifications, follow-up procedures)
- will be documented and communicated (and to whom), and
- will be 'closed out' and reviewed over the course of the project.

G10.8.11 Emergency Management

Further to *Standard Specification G2 Contract management Plan Clause G2.5.5 Emergency Management* the Contractor shall have emergency response procedures covering all plausible environmental related emergencies that may include fire, explosion, chemical spill, landslip and flooding.

G10.8.12 Records

G10.8.12.1 General

The Contractor shall maintain records to provide a traceable link between identification of known and potential environmental effects and the subsequent management of them in the implementation of the requirements of the contract.

The records must be kept in an orderly manner to demonstrate that the works comply with the specification.

During the currency of the contract all inspection records and management records are to be made available for inspection within twenty four (24) hours of the completion of the inspection or management activities as requested by the Superintendent.

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G10.8.12.2 Audit Reports

Audit reports shall include as a minimum the following:

- a summary of audit results (e.g. based on inspections and monitoring events)
- a list of non-conformances, inclusive of an 'action list'/remedial works program
- a list of environmental incidents/emergencies and associated response measures/remedial actions, and
- copies of key correspondence, stakeholder/community engagement, public complaints and follow-up.

G10.8.12.3 Environmental Performance Reporting

The Contractor shall have an Environmental Performance Reporting (EPR) process that includes the defects liability period and documents the required reporting timeframes and also provides a reporting template. The EPR shall be a summary reporting tool that compares environmental performance against the Contractor's EMS, the provisions of the CEMP and relevant permits and approvals. The EPR will also report on complaints.

G10.8.12.4 Evidence of Compliance

The Contractor shall demonstrate compliance with all the requirements of this specification as a condition of payment.

The methods by which the Contractor will monitor and demonstrate compliance shall be detailed in the Contractor's Construction Environmental Management Plan.

The performance of the Contractor shall be measured according to the following criteria:

- the procedures detailed in the Construction Environmental Management Plan
- provision of adequate resources both to manage and respond to actual events within the required response time
- provision of all reports generated during the contract.

G10.9 PAYMENT

Payment for the development, implementation and maintenance of the Construction Environmental Management Plan shall be at the lump sum item in the schedule of rates (Item 8.08) paid on a pro rata monthly basis. Any non conformances (as measured against the requirements of this specification) identified during the month will result in a 20% reduction in the monthly payment. This reduction shall be non redeemable.

Payment for the third party environmental completion audit shall be at Schedule Item 8.06 (b).

G10.10 HOLD POINTS

The following hold points are identified in this Specification.

Ref	Description of Hold Point	Nominated Work not to proceed
G10.8.6	Completion of Environment Audit	Issue of Practical Completion
G10.8.8	Environmental non-conformances	All work impacted by non-conformance

ANNEXURE G10.A – CMP/CEMP STRUCTURE AND CONTENT GUIDE

This information is provided to assist in the preparation of a CEMP that contains the minimum information requirements expected by DIER.

GENERAL INFORMATION

Scope

- how does the CEMP support other project related documents? How will the CEMP support the proposed works?

Objective(s)

- the objectives of the CEMP need to be clear, tangible and drive the structure and content of the CEMP.

Project History

- provide a history of the project to date; include critical timelines from early stages of planning through to present. What are the needs/drivers for the project and what is the context?

Project Overview

- summarise the proposed works program
- document key stages of the project
- document major challenges and hurdles
- project timelines.

Project Location & Site Description

- address, location map, road number, Link/Chainage (if applicable).
- describe the site and surrounding landscape (where relevant) in terms of geography, topography, vegetation, land use, transport infrastructure, demographics, weather patterns etc.

Contractor(s) Description, Competence & Capability

- provide a brief description of the lead contractor/organisation/company
- provide a capability statement for the lead contractor and each key sub-contractor
- document relevant certifications, training courses and memberships that demonstrate competence and capability (include copies where relevant).

Key Roles and Responsibilities

- document the key roles and the responsibilities of positions that will drive implementation and compliance of the CEMP:
 - construction Manager/Foreman
 - superintendent
 - safety Manager
 - environment & Community Manager.

Policy & Management Systems

- include a copy of relevant environmental/sustainability policy
- document relevant management systems (e.g.)
 - AS/NZS ISO 9001:2008 Quality Management System
 - AS/NZS ISO 14001: 2004 Environmental Management System

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- provide evidence of currency.

PERMITS AND APPROVALS

Legislative Framework

- document the relevant legislation, regulations, standards, policies and guidelines *etc* that apply to the proposed works (include local, state and federal).

Permits and Approvals

- document all relevant permits and approvals (include full copies as appendices)
- provide a summary table of relevant permit conditions and reference to sections within the CEMP
- example permits/approvals include:
 - planning Permit (*Land Use Planning & Approvals Act*)
 - permit to 'Take' (*Threatened Species Protection Act*)
 - grant of Authority (GoA) (*Nature Conservation Act*)
 - permit to Interfere/Destroy (*Aboriginal Relics Act*)
 - access works permit/services (*Roads & Jetties Act 1935*).

Standard Operating Procedures (SOPs)

- auditing
- incident management
- complaints management
- emergency managements

Risk Management

Environmental Management

- soil, water
- flora
- fauna

Reporting

ANNEXURE G10.B – GUIDE TO SPECIFIC ACTIVITIES TO BE ADDRESSED IN THE CEMP

Activities that with potential environmental aspects that may be considered by a CEMP include but not limited to:

Earthworks

- erosion and sediment control
- import/export of construction materials (e.g. earth, general fill, aggregate, gravel and rock)
- acid-sulphate soils
- Topsoil
- air quality
- noise (construction) and dust
- Stream Diversions

Drainage

- stormwater and surface water
- protection of drainage features
- Stream Flow and Flooding

Site Hygiene/Hazardous Materials

- weeds, pests and diseases
- waste management (solid)
- waste management (liquid)
- chemical and hazardous materials
- Run Off
- Waste Materials

Flora (native) and fauna management

Heritage

- cultural (European) heritage management
- aboriginal heritage management
- natural features.



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Roads and Traffic Division
Department of Infrastructure,
Energy *and* Resources

GPO Box 936, Hobart 7001

Ph: 1300 135 513

Email: webmaster@dier.tas.gov.au

Visit: www.dier.tas.gov.au