Appendix P

Guideline ACT procedures and checklists

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Guideline ACT will implement Their own procedure for Environment Management control following this CEMP.

The following 17 elements of ISO 14001 are required for the Guideline ACT EMS:

1. An environmental policy supported by senior management (GLA-EP-3.0.1);

2. The identification of environmental aspects and impacts, and the identification of significant environmental impacts that the organisation may cause (GLA-EP-3.0.2);

3. Identification of legal and other requirements (GLA-EP-3.0.3);

4. The development of objectives and targets, and their environmental management programs (GLA-EP-3.0.1);

5. Defined resources, roles, responsibilities and authorities for environmental management (GLABP-1.3.1);

6. The development of competence, training and awareness procedures (GLA-BP-1.2.2);

7. A communication process of the EMS to all stakeholders and interested parties (GLA-EP-3.0.1);

8. The development of EMS documentation as required by the standard (GLA-EP-3);

9. The development of document control procedures (GLA-QP-4.1.1);

10. The development of operational control procedures (All GLA BMS);

11. The development of emergency preparedness and response procedures (GLA-EP-3.1.1);

12. The development of procedures for monitoring and measuring of operations that can have significant impact on the environment (GLA-EP-3.2.1);

13. An evaluation of compliance procedure (GLA-QP-4.2.3);

14. Procedures developed for the management of non-conformance, corrective and preventative actions (GLA-QP-4.2.2);

15. The development of a records management procedure (GLA-QP-4.1.1);

16. A program for completing internal EMS audits and corrective action (GLA-QP-4.2.3);

17. The development of procedures for management review by senior management (GLA-BP-

1.1.1).

3.1 Environmental Management - Project Startup Phase

This series of procedures covers the Environmental Management System for the Project Startup Phase.

Procedure 3.1.1	Preparation of Environmental Management Plan (EMP);
Procedure 3.1.2	Environmental Approvals

3.1.1 Preparation of Environmental Management Plan (EMP)

PURPOSE

The purpose of this procedure is to describe what is required for preparing an Environmental Management Plan for each project.

METHODOLOGY

A Project Management Plan (PMP) incorporating four separate plans is to be drawn up and approved prior to any works commencing (Refer to the Preparation of PMP Procedure GLA-QP-4.1.2). The four separate plans are:

1. Work Health & Safety (WHS) Management Plan
2. Environment Management Plan
3. Quality Management Plan
4. Contract Management Plan

The EMP must contain the following as a minimum (refer to Sample EMP GLA-EF-3.1-01):

- Environmental Management Policy
- Environmental Approvals
- General Project Information
- Key Characteristics of the Construction Project
- Environmental Factors & Controls
- Environmental Incident Control Measures
- Environmental Checklists
- Plans, Specifications & Charts.
    - Project Drawings
    - Construction Program
    - Establishment of Erosion Controls Checklist
    - Erosion & Sediment Control Plan
    - Waste Management Plan & Disposal Register
    - Site Environment Weekly Checklist
    - NCA Report Form

The EMP as part of the PMP must be approved internally and externally (usually by the Client's Representative) and on occasion by the Environment Protection Authority.

DOCUMENTATION

GLA-EF-3.1-01 Environmental Management Plan (EMP)

3.1.2 Environmental Approvals

PURPOSE

The purpose of this procedure is to outline the Environmental Approvals that are required prior to construction commencing.

METHODOLOGY

No work, except the implementation of the environmental controls, can commence onsite until the following has been completed:

1. The EMP as part of the PMP will need to be approved internally (by General Manager) and externally (by Client's Representative and/or Environment Protection Authority)
2. The Erosion and Sediment Control Plan has been reviewed and approved (with a stamp) by the Environment Protection Authority
3. Any Licences or Permits required from Environment Protection Authority have been obtained
4. The appropriate erosion and sediment controls are put in place and checked off using the Establishment of Erosion Controls checklist (GLA-EF-3.1-02)

1) EMP (refer to Preparation of PMP Procedure GLA-QP-4.1.2)

2) Erosion and Sediment Control Plan

The current edition of the *Environment Protection Guidelines for Construction and Land Development in the ACT (Environment Protection Authority – March 2011);* aka "The Green Book", Schedule 11.1 outlines the 'Minimum Standards for Submission of Pollution Control Plans'. When preparing the Erosion and Sediment Control Plan, the PE must address these requirements.

No work can proceed until the PE obtains a stamped, signed copy of the Erosion & Sediment Control Plan from their Environment Protection Authority representative.

3) Licences and Permits

Environmental Protection Agreement

Guideline ACT has an Environmental Protection Agreement with the Environment Protection Authority which all employees must adhere to

The Environment Protection Agreement is valid for a period of 3 years and is for:

i. Land development, or the construction of a commercial building, on a site of 0.3 hectares or more and including the construction of associated public infrastructure; or
ii. The construction of public infrastructure on a site of 0.3 hectares or more.

There may be other licences and permits that are required for particular projects. The PE is to discuss with the Environment Protection Authority which licences and permits are applicable to their project.

4) Establishment of Erosion Controls

The erosion controls need to be established as per the approved Erosion and Sediment Control plan. Once the controls are in place, they need to be checked using the Establishment of Erosion Controls checklist (GLA-EF-3.1-02). The Foreman is to sign the checklist, verifying that the controls have been

implemented. The PE is then to sign the checklist verifying that they have inspected the environmental controls, which are installed as per the Erosion & Sediment Control Plan.

Upon completion of the Establishment of Erosion Controls checklist (GLA-EF-3.1-02), the local Environment Protection Authority representative must be notified so they inspect the controls. The notification must be nominated by the PE on the checklist.

DOCUMENTATION

GLA-EF-3.1-02	Establishment of Erosion Controls

3.2 Environment - Construction Phase

This series of procedures covers the Environmental Management System for the Construction Phase.

Procedure 3.2.1	Environmental Monitoring;
Procedure 3.2.2	Discharging Water;
Procedure 3.2.3	Contaminated Sites;
Procedure 3.2.4	Waste Management.

3.2.1 Environmental Monitoring

PURPOSE

This procedure is to describe the method for monitoring the effectiveness of the environmental controls on site as well as the implementation of the environmental system.

All environmental controls require maintenance.

METHODOLOGY

Weekly Environmental Checklist

A site environment inspection needs to be completed at least once per week and after a rain event to monitor all environmental controls and their effectiveness. The inspection is to be recorded using the Site Environment Weekly Checklist (GLA-EF-3.2-01). The Project Engineer (PE) is responsible for ensuring the check is completed and documented by competent personnel.

The Foreman is to ensure any actions raised are completed before the next inspection. After completion of appropriate action, the checklist is to be forwarded to the PE for review, signing and filing in the project file. The PE shall ensure that any actions raised have been completed.

Auditing

Environmental management forms part of the following audits:

Project Management System Audit:

The Environmental Management Plan (EMP) shall be subject to an audit at least once for each project to determine whether the provisions of the Environmental Management System are being implemented effectively and in accordance with legislative requirements. Refer to the Quality - Construction Phase - Audit Procedure (GLA QP-4.2.3) for further details.

Guideline Internal Audit:

Significant aspects of the Environmental Management System will be audited internally by the Systems Manager (SM) approximately once per month for each project. Refer to the Quality - Construction Phase - Audit Procedure (GLA QP-4.2.3) for further details.

The above audits may identify areas of potential improvements to the Environmental Management System.

Management Review

The Managing Director (MD) shall carry out an annual management review to evaluate the continuing suitability, adequacy and effectiveness of the Environmental Management System. In the review the MD shall consider outcomes from summaries of Non Conformance/ Corrective Action (NCA) Reports (GLA-QF-4.2-20), discussions with the SM & review of KPIs. The MD will report the outcomes of the review to the Management Review Meeting and the SM will record this review on the Management Review Meeting Minutes (GLA-BF-1.2-02).

DOCUMENTATION

GLA-EF-3.2-01 Site Environment Weekly Checklist

3.2.2 DISCHARGING WATER

PURPOSE

The purpose of this procedure is to describe the requirements for discharging water.

METHODOLOGY

The management of water quality involves consideration of:

- Surface Water
- Ground Water
- Waterway

The protection of the above is addressed in the following documentation:

- ✓ EMP (refer to Preparation of EMP Procedure GLA-EP-3.1.1, and Preparation of PMP Procedure GLA-QP-4.1.2)
- ✓ Erosion & Sediment Control Plan (refer to the Environmental Approvals Procedure GLA-EP-3.1.2)
- ✓ EPA Licences and Permits (refer to the Environmental Approvals Procedure GLA-EP-3.1.2). The conditions of the license or permit must be followed at all times

De-watering

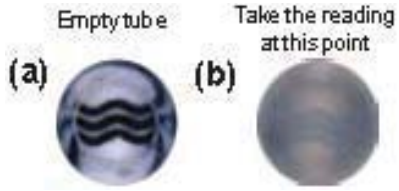
Most projects will require the discharge of treated water back into the waterway; the following procedure must be followed:

When de-watering, the following tests are required to ensure that the water being discharged is the same or better quality than the waterway that it will end up in:

- Turbidity (must be less than 50NTU's)
- pH (must be between 6.5 and 8.5).

Turbidity Tube Instructions:

1. Using a clean bucket or container, take a large sample of water (preferably from the center of the water body, not the edges)
2. Hold the tube out of direct sunlight (and have a piece of white paper underneath if possible)
3. Pour water slowly from the bucket/container into the tube (whilst looking in from the top of the tube) until the image at the bottom of the tube is just visible (see below).



4. Take the reading on the tube that is closest to the water level. If the water is between 2 marks, take the smaller number.
5. Repeat the process again to ensure the measurement is accurate.
6. Rinse the tube in clean water.

The results of this monitoring must be written on the Water Discharge Record (GLA-EF-3.2-02).

DOCUMENTATION

GLA-EF-3.2-02 Water Discharge Record

3.2.3 Contaminated Sites

PURPOSE

This procedure describes what to do when a suspected Contaminated Site is found, or areas of contamination are found.

Examples of potential contamination include:

- Smelly dirt
- Buried rubbish
- Asbestos in the form of fibro sheeting or conduits and other pipelines

METHODOLOGY

On discovering Asbestos, refer to the High Risk Activities Procedure (GLA-SP-2.2.4).

On discovering any other potential contamination:

- Immediately isolate and cordon off the potential contaminated site, preventing entry into the area;
- Contact the EPA to advise and assist in formulating an action plan. This may include specialist consultants and subcontractors;
- Contact Worksafe ACT to determine whether the contamination may contain a risk to workers or the general public and liaise to formulate an action plan;
- Contact the Client's Representative and inform them of the discovery and action to date;
- Raise an Incident Report (GLA-SF-2.2-09) and an NCA Report (GLA-QF-4.2-20).

Notifications and internal reporting are to be completed within 24 hours.

DOCUMENTATION

Contact the EPA for the following useful reference material:

EPA Information Sheet No. 4 - 'Requirements for the Re-use and Disposal of Contaminated Soil'

EPA Information Sheet No. 6 – 'Management of Small Scale, Low Risk Soil Asbestos Contamination'

EPA Information Sheet No. 5 – 'Requirements for the Transport and Disposal of Asbestos Contaminated Wastes'

3.2.4 Waste Management

PURPOSE

This procedure is to describe the requirements for formulation of a Waste Management Plan and monitoring it through the use of the Waste Management Register.

METHODOLOGY

A Waste Management Plan (GLA-EF-3.2-03) is to be drawn up at the commencement of the project between the Project Engineer (PE) and Systems Manager (SM). The Waste Management Plan is to be signed off by the General Manager (GM). This Waste Management Plan is to be incorporated into the PMP.

The Waste Management Plan is to be communicated to staff via toolboxes.

The Waste Register is to be maintained throughout the project construction period and the effectiveness of the Waste Management Plan is to be measured against it through audits.

Below are some examples of typical waste that need to be considered when formulating the Waste Management Plan:

- Waste from over ordering of materials etc
- Packaging from suppliers
- General refuse from site personnel e.g. lunch wrappers etc
- Off cuts
- Management of soils including rock
- Excess topsoil
- Recyclable existing pavements
- Out of date chemicals

At the construction phase the steps to follow to ensure effective waste management are as follows:

STEP 1 – Educate staff about the Project Waste Management Plan

- Communicate the plan with staff;
- Open dialogue with Client's Representative on reducing waste and the use of recycled material.

STEP 2 – Implement Waste *Avoidance* Strategies

- Design works to avoid waste generation;
- Request minimal packaging from material suppliers;
- Ensure that materials that will generate minimal waste are used;
- Order the correct quantity of material.

STEP 3 – Implementation of Reduction, Re-use and Recycling Strategies

Reduction

- Target locations and materials that contribute high levels of wastage;

- For maximum results in reducing waste, identify high levels of waste and attempt to reduce, resulting in a high result;
- Avoid damaging materials.

Re-use

- Ensure separation of materials is achieved on site when possible;
- Ensure excess resources are retained for future use;
- Ensure salvageable resources are retained for future use or re-sale;
- Take care of all salvaged materials (signs, posts, etc)

Recycle

- Establish stockpile areas for separated materials for further processing or storage;
- Establish a mixed recyclables deposit facility on site if not separating;
- Use recycled material where possible and avoid cross contamination.

STEP 4 – Review and Improve

- Determine areas requiring improvement;
- Compare the outcomes and results to those from other work sites;
- Discuss results with all relevant staff; and
- Use the knowledge and experiences gained on the next project;
- Review the effectiveness of the waste management plan and monitoring in the project completion review.

DOCUMENTATION

GLA-EF-3.2-03 Waste Management Plan

ESTABLISHMENT OF EROSION CONTROLS

Project No.: _____ Project Name: _____

EPA approved Erosion & Sed Control Plan obtained? Dwg No. Date Approved:

Environmental Licences & Permits	Required?		Approved Date
	No	Yes	
Environmental Agreement			
Environmental Authorisation			
Permit to construct Sediment Control Pond			
Clarification on discharge requirements in non-urban areas			
Waterways Works Licence			
Water Access Entitlement			
Exemption from the Requirement for a Licence to Take Water			
Approval to remove spoil			
Approval to place material within a waterway (more than $100m^3$)			

Items that may need consideration for preparing the environmental control measures

Environmental Control	Required?	
	Yes	No
Buffer zone fencing		
Trees to be retained		
Stockpile locations		
Protect stormwater structures		
Erosion control ponds		
Concrete wash out bay		
Nominated parking areas		
Check for fauna habitats that may be affected by works		
Fuel and chemical storage		
Asbestos checklist		

Implementation of Erosion & Sed Controls	Complete?		Re -inspect Frequency
	Yes	No	
Install all measures as per approved plans			Weekly (Form GLA-EF-3.2-01)

Comments

EPA notified of commencement of works? EPA Name: Date:

Guideline ACT Sign Off (all actions above complete):

Foreman Name: Sign: Date:

Engineer Name: Sign: Date:

SITE ENVIRONMENT WEEKLY CHECKLIST

Project No. & Name: _____ Date: _____

Inspection completed by (Names): _____

Rainfall during week:
(dates & amount) _____

Environmental Check	Action Required/ Comments	Action Complete initial & date
All silt fencing in good effective operational condition		
Sedimentation pond still effective for site and has capacity		
Adequate quantity of flocculant stockpiled on site		
Date stabilised entry/exit maintained (turned over)		
Adjoining public roads - must clear mud/dirt or dust (record action complete eg “road swept on……..”)		
Dust control – dust adequately controlled		
Work area clear of rubbish		
Adequate construction waste bins provided and emptied regularly		
Recycling of construction waste adopted where appropriate		
Is contaminated waste being disposed of correctly? i.e. oil, asbestos		
All diversion drains maintained & without obstruction		
Straw bales secured in drainage lines & in good condition		
All pipelines & sumps protected from sediment?		
Tree protection installed as required		
All machinery used on site adequately silenced		
All fuel and chemical stored in correctly		
MSDS available (& current) for all fuels /chemicals		
Is the Waste Register up to date?		

NOTES:

PE CHECK: All outstanding items closed out

Name: _____ Sign: _____ Date: _____

WATER DISCHARGE RECORD

Project No. & Name: _____ Location: _____

Requirements for dewatering: Turbidity < 50NTU, pH between 6.5-8.5, ensure no oil or grease in pond

Date	Time	Name of Checking Person	Turbidity (NTU)				pH				Sign off – ok to proceed with dewatering		
			Result	Meets Requirements?			Result	Meets Requirements?					
				Yes	No	Action		Yes	No	Action	Name	Sign	Date of discharge

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Approved by: Managing Director	Date: February 2012	

WASTE MANAGEMENT PLAN

1. PRINCIPLES

The construction will use the following waste management principles, in order of priority:

1. avoid the use of excess materials and production of waste,
2. reuse waste materials (such as off cuts) on site where possible,
3. recycle waste, and
4. dispose of waste correctly.

REDUCTION RE-USE RECYCLING RECOVERY DISPOSAL

When deciding how to minimise waste management impacts, consider the following:

- will construction generate surplus material which can be recycled?
- will construction generate waste material which can be disposed on site?
- will construction generate waste material which will have to be disposed off-site?
- will site personnel generate litter or rubbish?

2. WASTE MANAGEMENT PLAN

The waste management plan involves three major steps:

1. estimating the type and quantity of waste generated on site;
2. specifying whether the waste is;
    - reused on site;
    - reused or recycled offsite; or
    - disposed of to landfill.
3. identifying who is responsible for recycling or landfilling.

This Plan is summarised in Attachment A.

Effluent from the amenities for which Guideline ACT is responsible, will be discharged into the local sewerage system, where available. Otherwise, septic tanks and portable self-contained toilets of suitable capacity may be used subject to acceptable arrangements for disposal of the effluent. Pit toilets are not to be used.

Littering or dumping of unwanted waste or disposal of surplus construction materials or permitting such activities on any land on or around the site, is illegal unless specifically permitted in accordance with the specification.

Set up skip bins or other appropriate receptacles to contain waste materials, litter and spoil. Provide separate bins for recyclable and non-recyclable material, dispose of their contents off-site at a suitable waste disposal location on a regular basis. Chemical, fuel and lubricant containers, solid and liquid wastes must be disposed of in accordance with EPA or local Guideline ACT Pty Ltd requirements.

Green wastes shall be mulched for re-use (when appropriate) or taken to a composing facility.

3. FURTHER REFERENCES AND CONTACTS

The following documents provide additional information on managing environmental impacts at construction sites:

- EPA ACT, Environment Protection Guidelines for Construction and Land Development in the ACT, the “Green Book”, March 2011
- Department of Territory and Municipal Services (TAMS), Waste Minimisation in the Construction and Demolition Industry, ACT NO Waste

Contacts

- ACT Environment Protection Authority 13 22 81
  www.environment.act.gov.au

Attachment A - Waste Management Plan

Waste Materials	**Estimated quantity**		**Destination**		
	Vol (m^3)	Mass (t)	**On site** (specify proposed reuse or recycling methods)	**Off site** (specify recycler and recycling outlet)	**Disposal** (specify landfill site)
Plastic wrapping					
Cardboard packaging					
Bricks					
Timber and green waste					
Fencing materials					
Asphalt and bituminous surfacing					
Concrete, rubble, pipes, etc.					
Mixed waste					
Topsoil					
Earthworks spoil					
Effluent					

WASTE DISPOSAL REGISTER

Date	Waste Material	Quantity	Transport By	Disposal Site

INCIDENT REPORT FORM

Date of Incident: _____ **Time of Incident:** _____ **Project No & Name:** _____

Exact Location of Accident/ Incident: _____

Name(s) of personnel involved: _____

Name(s) of Witness(es): _____

Describe the Incident: _____

Describe apparent **cause** of Incident: _____

Describe **result** of Incident (e.g. damage, near miss etc): _____

Did the Incident involve an injury? (tick box) ☐ No ☐ Yes

Name of Injured Person(s): _____

Was First Aid Administered? (tick box) ☐ No ☐ Yes

If yes for First Aid, provide details (injury location & first aid details):

First Aid Administered by (Name): _____

Was any of the following action taken? (tick as appropriate)

☐ Back to Work ☐ Hospital/ Ambulance: ☐ Doctor/ Clinic

Person Completing Report

Name: _____ Date Report Completed: _____ Signature: _____

Office Use Only

A Rehabilitation Officer:

Does the insurance company need to be notified? ☐ Yes ☐ No

If yes, provide details: _____

_____

_____

B Accident/Incident Investigation by General Manager (competent HSR)

Does the incident need to be reported to authorities? ☐ Yes ☐ No

Have the relevant authorities been notified? ☐ Yes ☐ No

Outcome of Investigation: _____

_____

_____

_____

_____

Action taken to prevent re-occurrence: _____

_____

_____

_____

_____

Is Toolbox Meeting required? Yes/No Date of Toolbox Meeting:_____

Does a Non Conformance/Corrective Action (NCA) Report need to be raised? Yes/No

Name: _____ Date: _____ Signature: _____

C Review by Health & Safety Manager

Have relevant authorities been notified? ☐ Yes ☐ N/A

Further preventative action required? ☐ Yes ☐ No

If yes, provide details: _____

_____

_____

Comment: _____

All required actions completed/ incident closed off:

Name: _____ Date: _____ Signature: _____

D Review by Managing Director

Comment: _____

Name: _____ Date: _____ Signature _____