ENVIRONMENTAL GUIDELINES FOR PREPARATION OF AN ENVIRONMENT MANAGEMENT PLAN

Environment Protection Authority, ACT | May 2009

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These guidelines are provided to assist with the preparation of the proponent's Environment Management Plan (EMP). It is recommended that an Environment Management Plan address all elements of these guidelines.

The Environment Protection Authority (EPA) expects the proponent to fully consult with relevant stakeholders, and to take due care in ensuring any other relevant environmental factors, which may be of interest to the public and stakeholders, are addressed. The EMP should document the results of all consultations undertaken.

1. OVERVIEW

The *Environment Protection Act 1997* (the Act) provides for the protection of the environment. Part 7 of the Act allows the Environment Protection Authority (the Authority) to enter into an environmental protection agreement (an agreement) with a person conducting an activity. Whilst Part 8 of the Act allows the Authority to require an environmental authorisation (an authorisation) for an activity.

To assist with assessing proposed and existing developments and the preparation of agreements and authorisations, Environment Management Plans (EMPs) should be developed by all agreement holders and authorisation applicants. Where the submission of an EMP is required or desirable, the structure of the submission should be consistent with these guidelines.

All EMPs have the purpose of protecting the environment, and are based around the objectives of Part 1 of the Act. This includes requiring persons engaging in polluting activities to prevent environmental degradation and adverse risks to human and ecosystem health, make progressive environmental improvements, achieve effective integration of environmental, economic and social considerations in the decision making process, promote shared responsibility for the environment and promote the principles of ecologically sustainable development.

The primary purpose of the EMP is to provide information to the Authority on a proposed/existing activity within the local and regional framework. The plan emphasises how the proposed/existing activity may impact on the relevant environmental factors and how those impacts may be mitigated and managed to be environmentally acceptable. An EMP requires the proponent to:

- describe the proposed/existing activity;
- describe the receiving environment;
- carry out a risk assessment to identify environmental issues relevant to the site and the potential impacts of the proposed/existing activity on the environment;
- identify the proposed management strategies to ensure the environment is appropriately protected and environmental issues are appropriately mitigated; and
- demonstrate that the proposed/existing activity should be judged by the Authority to be environmentally acceptable.

Throughout the assessment process it is the objective of the Authority to assist the proponent to design the EMP to improve the protection to the environment, in line with the objectives of the Act, and manage their environmental performance in partnership with the Authority.

2. OBJECTIVES OF THE ENVIRONMENT MANAGEMENT PLAN

The objectives of the EMP are to:

- place the proposed/existing activity in the context of the local and regional environment;
- adequately describe all components of the proposed/existing activity, so that the Authority can consider approval of a well-defined project;
- identify the environmental issues/risks associated with the proposed/existing activity;
- provide the basis of the proponent's environment management program, which shows that the environmental impacts resulting from the proposed/existing activity, including cumulative impact, can be acceptably managed; and
- provide a document that clearly sets out the reasons why the proposed/existing activity should be judged by the Authority to be environmentally acceptable.

3. PREPARATION OF THE ENVIRONMENT MANAGEMENT PLAN

Proponents are encouraged to maintain close contact with the Authority during the preparation of the EMP. Contact details are provided below:

Environment Protection Authority
Department of the Environment, Climate Change, Energy and Water
Level 3 Macarthur House
GPO Box 158 Canberra ACT 2601
Phone: 13 22 81, Fax: 02 6207 6084

It is not a requirement for all information to be presented in a professionally drafted form. However, all information must be accurate, clear, unambiguous and suitable for an understanding of the treatment, control and backup methods to be employed.

When the Authority is satisfied with the standard of the EMP it will provide a written sign-off to the proponent and will be implemented as a condition of an environmental authorisation or agreement.

3.1 The Submission

3.1.1 General requirements

The EMP should provide a comprehensive description of the proposed/existing activity including its location (street address, block and section and certificate of title details where relevant).

Specific matters requiring attention are:

- justification and/or objectives for the proposed/existing activity;
- the legal framework, including existing zoning and environmental approvals, decision making authorities and involved agencies; and
- consideration of alternative options.

3.1.2 Key characteristics of the proposed/existing activity

Include a description of the components of the proposed/existing activity, including the nature and extent of proposed and current works. This information can be summarised in the form of a table, an example of which follows:

Table 1: Key characteristics (example only)

Element	*Description*
Life of project	< 5 yrs (continual operation)
Total land area of site	10 hectares
Any subsurface developments, identify	Bore, approximately 40 metres
Water table depth	50m below ground surface
Area of disturbance (including access)	5 hectares
Operating hours: - during construction	8.00am to 5.00pm, Monday to Friday
- business operating hours	8.30am to 5.30pm, Monday to Friday 8.00am to 12.00pm, Saturday
List of major components	refer 'plans, specifications, charts' section immediately below for details of map requirements.
Solid waste management	Waste materials taken to landfill.
Water supply • source • maximum hourly requirement • maximum annual requirement	 • bore • 180 cubic metres • 1 000 000 cubic metres
Fuel storage capacity and quantity used	litres; litres per year
Number of fuel storage tanks (above or underground)	3 underground storage tanks

3.1.3 Plans, specifications, charts

Provide adequately dimensioned plans clearly showing the location and elements of the proposed/existing activity that are significant from the point of view of environmental protection. Locate and show dimensions (for progressive stages of development, if relevant) of plant, amenities buildings, access ways, stockpile areas, dredge areas, waste product disposal and treatment areas, all dams and water storage areas, storage areas including fuel storage and waste oil and landscaped areas.

Only those elements of plans, specifications and charts that are significant from the point of view of environmental protection are of relevance here.

Always include:

- a map showing the proposed/existing activity in the local context - an overlay of the proposed/existing activity on a base map of the main environmental constraints and surrounding land uses;
- a map showing the proposed/existing activity in the regional context; and, if appropriate,
- a process chart/mass balance diagram showing inputs, outputs and waste streams.

The plan/s should include contours, north arrow, scale bar, legend, grid coordinates, the source of the data and a title. The dates of any aerial photos should be shown.

Other logistics

The EMP will need to include:

- timing and staging of project; and
- ownership and liability for waste during transport, disposal operations and long-term disposal (where appropriate to the proposed/existing development).

3.2 Environmental Factors

The EMP should focus on the relevant environmental factors for the proposed/existing development, and these should be agreed in consultation with the Environment Protection Unit and relevant public and government agencies.

To assist with addressing the environmental factors the proponent may choose to document every activity, product and/or service that interacts or has the potential to interact with the environment. For example:

Activity	*Interaction ('cause')*	*Change to Environment ('effect')*	*Management/Mitigation Measures*
Driving company vehicle	Use of fossil fuels	Depletion of non-renewable resource	Reduce usage of vehicle for short distances

The following table documents environmental factors, objectives and EPA requirements.

Table 2: Environmental Factors and EPA Requirements

Factor	*EPA objective(s)*	*EPA requirements*
Noise Management*		
Noise/Vibration	Protect the amenity of nearby residents from noise/vibration impacts resulting from activities associated with the proposed/ existing development by ensuring that noise/vibration levels meet statutory requirements and acceptable standards.	Identification of sources of noise/vibration and estimates of project-wide noise. Ensure that noise and vibration levels meet acceptable standards and that an adequate level of service, safety and public amenity is maintained. Propose measures to manage and/or mitigate impacts.
Water Management*		
Surface water quality	Maintain or improve the quality of surface water to ensure that existing and potential uses, including ecosystem maintenance are protected.	Details of site drainage, hydrocarbon use, disposal of plant site waste (including sewage), dewatering, and fate of water used/pumped. Incorporate measures and/or operating procedures to ensure that stormwater run-off from the site reflects patterns, volumes and quality that exist prior to development as far as reasonably practicable. Drainage lines are to be naturalised as much as possible and should enhance the ecological values and recreational opportunities. Propose measures to manage and/or mitigate impacts.
Groundwater quality	Maintain or improve the quality of groundwater to ensure that existing and potential uses, including ecosystem maintenance are protected.	Describe water requirements for any on-site processing. Incorporate measures and/or operating procedures, which will minimise the demand of the development on potable water supplies. Propose measures to manage and/or mitigate impacts, including over-abstraction.

Factor	*EPA objective(s)*	*EPA requirements*
Wastewater Management*		
Wastewater reuse	To protect the aquatic ecosystems, reduce the demand on potable water supplies and prevent off-stream diversions by reusing treated wastewater on site.	Describe potential wastewater reuse schemes for the site. Ensure that no contaminated water, including that containing sediments, leaves the site. Propose measures to manage and/or mitigate impacts.
Air Management*		
Air	Ensure that potential air pollutants are contained and that activities do not impact on the natural environment.	Identify sources of air pollution. Propose measures to manage and/or mitigate impacts.
Particulates/Dust	Ensure that particulate/dust emissions, both individually and cumulatively, meet appropriate criteria and do not cause an environmental or human health problem.	Identification of sources of particulates/dust and estimates of project-wide emissions. Propose measures to manage and/or mitigate impacts.
Odour	Ensure that operations do not generate odour that causes environmental nuisance.	Identification of sources of odour and estimates of project-wide emissions. Propose measures to manage and/or mitigate impacts.
Waste Management*		
Solid/liquid waste	Ensure that wastes are contained and isolated from land, ground and surface water surrounds and treatment or collection does not result in long-term impacts on the natural environment.	Identify sources of solid and liquid waste and estimate the proposed amount generated. Propose measures to manage and/or mitigate impacts.
Special waste (medical, radioactive, chemical)	Ensure that wastes are contained and isolated from land, ground and surface water surrounds and treatment or collection does not result in long-term impacts on the natural environment.	Identify the source of special waste and estimate the amount generated. Propose measures to manage and/or mitigate impacts.

Factor	*EPA objective(s)*	*EPA requirements*
Contaminated Land*		
Land	Ensure that existing or proposed activities do not discharge to land.	Identify activities that have the potential to discharge to land. Propose measures to manage and/or mitigate impacts.
Surface water	Ensure that existing or proposed activities do not discharge to surface waters.	Identify activities that have the potential to discharge to surface waters. Propose measures to manage and/or mitigate impacts.
Groundwater	Ensure that existing or proposed activities do not discharge to groundwater.	Identify activities that have the potential to discharge to groundwater. Propose measures to manage and/or mitigate impacts.
Hazardous Materials Management*		
Scheduled wastes	Ensure scheduled wastes are specially treated for their destruction.	Identify scheduled wastes and describe treatment of their destruction. Propose measures to manage and/or mitigate impacts.
Resource storage	Ensure that chemicals and other potentially harmful resources used in the manufacturing process are stored and disposed of correctly.	Describe the use and management of chemicals and other potentially harmful resources. Propose measures to manage and/or mitigate impacts.
Pest control	Ensure that pest control chemicals are used safely and appropriately.	Describe the use and management of pest control chemicals. Propose measures to manage and/or mitigate impacts.
Household chemicals	Ensure residual household chemicals are disposed of in accordance with guidelines.	Describe the use and management of household chemicals. Propose measures to manage and/or mitigate impacts.
Compressed/liquid gas	Ensure the suitable storage of compressed/liquid gas.	Describe the use and management of compressed/liquid gas. Propose measures to manage and/or mitigate impacts.

* Refer to relevant Environment Protection Policy for guidance on meeting the requirements of the Act and Regulation.

These factors should be addressed within the EMP document.

Further environmental factors may be identified during the preparation of the EMP, therefore on-going consultation with the Environment Protection Unit and other relevant agencies is recommended.

4. EMP REPORT STRUCTURE

Following is a suggested report structure.

General Information
As documented under 3.1.1 General requirements on page 5 of these guidelines.

Key Characteristics
As documented in the example Table 1 at 3.1.2 Key characteristics of the proposed/existing development on page 6 of these guidelines.

Environmental Factors
The environmental factors can be documented in table form. It is suggested that the table states the activity, identifies the source of all pollutants and potential pollutants, the environmental factors which may be impacted and documents measures to manage and/or mitigate the impacts on the environment.

Plans, Specifications and Charts
Attach all plans, specifications and charts as identified under 3.1.3 Plans, specifications, charts on page 6 of these guidelines.

5. EMP SUBMISSION CHECKLIST

This checklist is provided to help improve the information being received and as such assist in reducing the timeframe for assessments. Information should be provided on all those items that are relevant to your proposal/existing development.

	Issue and Comment	*Yes, No or Not Applicable*
1	Have you described the proposed/existing development in full and included plans showing the location of the proposed/existing development and surrounding environment (land uses/features)?	
	Description of proposed activities	
	Ownership details of proposed land area	
	Bushland areas, other system areas and reserves	
	Wetlands and waterways (eg. declared waterways, etc)	
	Priority surface and groundwater protection areas (eg. public drinking water sources and other declared areas)	
	Any existing site contamination or details of previous land uses which may have contaminated the soil or water resources	
	A layout of the proposed/existing development on a site plan with the current topography including contour lines and catchment boundaries, catchment areas, adjacent areas including creeks and buildings; the location of permanent stormwater inlets, pipes, outlets, and other permanent drainage facilities; current vegetation on site and vegetation to be removed from the site; and detailed alterations to existing land structures.	

	Issue and Comment	*Yes, No or Not Applicable*
2	Have you addressed relevant issues from the following list and identified control measures to address environmental impacts?	
	a. Air	
	b. Particulates/dust	
	c. Odour	
	d. Noise/vibration	
	e. Surface water	
	f. Groundwater	
	g. Wastewater reuse	
	h. Solid and liquid waste	
	i. Special waste (medical, radioactive, chemical)	
	j. Scheduled wastes	
	k. Hazardous materials	
	l. Resource storage	
	m. Pest control	
	n. Household chemicals	
	o. Compressed/liquid gas	
	p. Underground/above ground fuel storage tanks	
	q. Discharges to land	
	r. Discharges to surface water	
	s. Discharges to groundwater	
3	Have you addressed onsite water usage? for example	
	a. Irrigation	
	b. Laundry	
	c. Swimming pools	
	d. Cleaning	
	e. Drinking	
4	Have you provided the following information?	
	a. Operating hours	
	b. Timescale for completion of construction works	
	c. Planned timelines for construction and operation	
	d. Risk assessment	
	e. Environmental Protection measures required	
	f. Company contact details including 24-hour emergency phone number	

6. LODGING YOUR ENVIRONMENT MANAGEMENT PLAN

Environment Management Plans should be lodged with the Environment Protection Authority at:

Environment Protection
Level 3 Annexe, Macarthur House
12 Wattle Street
Lyneham ACT 2602
Phone: 13 22 81, Fax: 02 6207 6084

For further information, please contact the Environment Protection Authority on 13 22 81 or visit www.environment.act.gov.au

Appendix A – Further information for Service Station Environment Management Plans

This Appendix provides further information for those preparing an EMP for Service Stations. An EMP for Service Stations must include the following:

- The name of the person responsible for the system and a 24 hour contact number for that person;
- The street address of the storage site;
- Land title particulars;
- Incident management procedure which must outline the procedures to be followed in dealing with any leaks or spills from the system;
- Loss monitoring procedure – Australian Standard 4897 requires a loss monitoring system capable of detecting losses occurring at a rate of 0.76 litres per hour or more with at least 95% accuracy. (Currently Statistical Inventory Reconciliation Analysis (SIRA) is the only system capable of detecting losses at this rate.) If the site does not have SIRA outline the current loss monitoring system and the expected timeframe for SIRA installation;
- The maintenance schedule for the system which must include what maintenance is proposed to be carried out and when in relation to the system, measuring instruments, indicators and gauges and groundwater monitoring wells;
- A map showing the site in a local context, the main environmental constraints and surrounding land uses;
- A plan of the site that includes the locations of the storage system, all buildings and associated infrastructure, all fences and gates, all groundwater monitoring wells (including any codes or symbols by which they are designated), any unsealed ground surfaces, details of access to and security of the site. The plan should also include contours, north arrow, scale bar, legend, grid coordinates, source of the data and a title;
- Current 'as built' drawings for the system; and
- Location of all records kept for the authorisation.