

Guidelines for preparing an  
Environmental Impact  
Statement for  
*Category B Landfill Cells 10-17,  
Copping Landfill*  
Copping Refuse Site Joint  
Authority (Southern Waste  
Solutions)

*June 2021*



ENVIRONMENT PROTECTION AUTHORITY

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## Information for the Proponent

### Purpose

The *Environmental Management and Pollution Control Act 1994* (the EMPC Act) requires the Board of the Environment Protection Authority (the Board) to provide guidance to the proponent about what should be included in the case for assessment (the Environmental Impact Statement).

The Board will assess environmental aspects of the proposal. The relevant Planning Authority (Council) will assess planning aspects if the *Land Use Planning and Approvals Act 1993* (the LUPA Act) applies. The Board has authorised EPA Tasmania to undertake administrative tasks and establish the information base to inform decision making on its behalf.

These guidelines provide information on preparing an Environmental Impact Statement (EIS) for an activity being assessed by the Board under the EMPC Act. They have been prepared based on the permit application (DA 5.2021.98.1) for the proposed Landfill Cells 10-17 at Copping Landfill by Copping Refuse Site Joint Authority (Southern Waste Solutions).

Information solely for the purpose of assessment under the relevant Planning Scheme should be supplied to the Planning Authority either:

- as required under s54 of the LUPA Act, where the planning application has commenced the environmental assessment process; or
- where it is intended to submit an EIS (draft or final) with the planning application, a combined planning and environmental report can be prepared. However, the information required for the Board's assessment must be distinguished from that supplied for the purposes of LUPA Act.

### **Risk Based Assessment**

The EIS should be prepared using a risk-based approach. Not all issues nominated in these guidelines will have the same degree of relevance to all proposed activities. Depending on the nature of the proposed activity and its location, some of the issues may be more relevant than others, and some may not be applicable at all. The level of detail provided on each issue should be appropriate to the level of significance of that environmental issue to the proposal.

As well as the issues identified in the guidelines, other significant matters may emerge during preparation of the EIS from environmental studies, public comments or other sources, which will need to be factored into the EIS. The assessment process may also change the understanding of the level of risk associated with some of the issues. This may in turn change the level of detail needed in the EIS to reflect the level of significance of that environmental issue to the proposal.

After the public consultation phase, additional information may be requested from the proponent in response to public and government agency submissions. This generally takes the form of a supplement to the EIS.

### Objectives of the EIS

The objectives of the EIS are to provide:

- Information for individuals and groups to gain an understanding of the proposal, the need for the proposal, the alternatives, the environment that it could affect, the positive and negative environmental impacts that may occur and the specific management measures that will be taken to maximise positive outcomes, and minimise any adverse environmental impacts.

- A basis for public consultation and informed comment on the proposal.
- A framework against which decision makers, particularly the Board, and sometimes the relevant Planning Authority, can consider the proposal and determine the conditions under which any approval might be given.
- A demonstration that the proposal is consistent with the objectives of the relevant laws and policies, including the Tasmanian Resource Management and Planning System (RMPS) and the Environmental Management and Pollution Control System (EMPCS).

### *How the Board uses the EIS*

The EIS is the basis on which the Board makes its assessment. The Board considers the EIS, as well as other relevant information, against the objectives of the RMPS and EMPCS objectives. These objectives focus on the concept of sustainable development, which requires consideration of the economic and social needs of people now and in the future, while sustaining the environment and avoiding or mitigating adverse effects. The Board will consider the objectives and endeavour to make the decision which best furthers them, when considered together. That decision may be to approve the proposal with conditions, or in some cases, the Board may decide the objectives cannot be upheld and the proposal is rejected.

### *Structure and Formatting of the EIS*

The following points should be considered when writing the EIS:

- The title page should include the proponent's name, the activity name, the proposal address or location, the EIS version number (where relevant) and the month and year of submission.
- The main text of the EIS should be written in a clear and concise style that can be easily understood by the general reader.
- Technical terminology should be avoided as far as possible. The detailed technical data and supplementary reports necessary to support the main text should be included in appendices.
- Assertions and assumptions should be supported by adequate argument and/or evidence, and the source of any evidence should be referenced. An indication should also be given as to how current the information is, how its reliability was tested, and the degree of confidence attached to any predictions.
- Where necessary, information should be presented in maps, plans, diagrams and photographs, to enhance understanding of the proposal. These must be of high quality and reproducible in monochrome with all text and relevant features clearly visible. Maps and plans should include a north arrow and scale.
- When spatial information (including maps, plans, grid coordinates and heights) is provided or referred to, the coordinate reference system must be specified<sup>1</sup>. It is recommended that the following coordinate reference systems are used:
  - **Horizontal** – Geocentric Datum of Australia 2020, Map Grid of Australia Zone 55 (GDA94 MGA55)
  - **Vertical** – Australian Height Datum (Tasmania) (AHD83)

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<sup>1</sup> Information on coordinate reference systems used in Tasmania can be found on the DPIPWE website at: <https://dPIPWE.tas.gov.au/land-tasmania/geospatial-infrastructure-surveying/geodetic-survey/coordinate-height-and-tide-datums-tasmania>

- Any sensitive information should be provided in a separate, confidential appendix. A comment should be made in the EIS that the information has been provided in this way.
- Specific management measures must be clearly identified in the text and included in the summary table referred to in Section 9 of these Guidelines.
- Where appropriate, information provided in other sections should be referenced to minimise duplication.

### **Submission of draft and final document**

Close consultation with EPA Tasmania while preparing the EIS is recommended. It is advisable for the proponent to submit a draft EIS to EPA Tasmania for review before it is finalised. Please note that a draft document may be rejected without detailed review if it is incomplete, contains significant formatting or typographical errors, or does not comply with the EIS Guidelines. More than one draft may be necessary before the document is considered suitable for public release.

The EIS is to be submitted in electronic format (such as Microsoft Word), and suitable for publishing on the internet (PDF format). Once the proposal is advertised for public comment, copies of the EIS must be made available to the public on request, in either printed or electronic format. The EIS will also be available on the EPA website.

### **Commonwealth environmental assessment**

In addition to Tasmanian requirements, the Commonwealth Government may also have a role in the environmental assessment and approval of the proposal. Approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is required for an action which has, will have, or is likely to have, a significant impact on a matter of national environmental significance or on Commonwealth land<sup>2</sup>. The matters of national environmental significance are:

- World Heritage properties;
- National Heritage Places;
- wetlands of international importance (RAMSAR wetlands);
- nationally listed threatened species and communities;
- nationally listed migratory species;
- Commonwealth marine areas;
- nuclear actions; and
- large coal mines with water quality impacts.

The Commonwealth and Tasmanian Governments have signed a bilateral agreement relating to environmental impact assessment under section 45 of the EPBC Act, which effectively accredits the State assessment process. Where the proposal has been determined to be a controlled action under the EPBC Act and is being assessed in accordance with the bilateral agreement, the EIS should specifically describe the implications of the proposal for the relevant EPBC Act controlling provisions.

If the proposal is being assessed under the bilateral agreement, the EIS should contain a summary table showing that it addresses the matters specified in Schedule 4 of the Commonwealth [Environment Protection and Biodiversity Conservation Regulations 2000](#).

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<sup>2</sup> Information on the EPBC Act can be obtained from the Commonwealth Department of Agriculture, Water and Environment's website at [www.environment.gov.au/epbc/](http://www.environment.gov.au/epbc/) or by calling 1800 803 772.

***False or misleading statements***

Under section 43A of the EMPC Act, the EIS must not include information that is known to be false or misleading; and nothing should be omitted if it is known that without it the EIS would be false or misleading.

## Key Issues

While the EIS should evaluate all potential effects of the proposal, it should be principally focused on the key issues identified in the table below. The level of detail provided on other issues should be appropriate to the level of significance of that issue for the proposal. Variables or assumptions made in the assessment must be clearly stated and discussed. The extent to which the limitations, if any, of available information may influence the conclusions of the environmental assessment should be discussed.

The key issues identified for this proposal, which should be the focus of the EIS, are:

Key Issues	
1	Water Quality and Leachate Management
2	Air Quality

***It should be noted that other matters deemed to be significant or matters that emerge as significant from environmental studies, public comments or otherwise during preparation of the EIS, should not be excluded from consideration.***

## Survey and Study Requirements

The following surveys and studies will be required as part of the EIS.

Issue	Surveys Required	Studies Required
6.1 Water Quality	-	Water balance model
	-	Conceptual groundwater model
6.2 Air Quality	Fugitive emissions survey	-
6.6 Natural Values	Natural Values Survey	-



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## Contents of the EIS

### Executive Summary

An executive summary of the EIS should be included, to provide a clear and concise overview of the proposal, its environmental implications, the approvals process and the function of the EIS in the context of the approvals process.

For a large EIS, it is recommended that the executive summary be written as a stand-alone document, able to be provided on request to interested parties who may not wish to read or acquire the full EIS.

### Table of Contents

The EIS should include a table of contents, to allow the reader to easily locate information. It should also contain a list of figures and tables.

### List of Abbreviations and Glossary

Provide a list of the abbreviations and acronyms used in the EIS and, if relevant, a glossary of terms.

### Proposal/Proponent Information

- Title of the proposed activity
- Address of the proposed activity
- Proponent details:
  - Name of proponent (legal entity)
  - Name of proponent (trading name)
  - Registered address of proponent
  - Postal address of proponent
  - ABN number
  - ACN number (where relevant)
- Contact person's details:
  - Name
  - Telephone
  - Email address
- Activity operator details (if the operator will be a different entity to the proponent).
- General background information on the proponent, such as relevant development and operational experience.

## Information to be provided

### 1. Introduction

The introduction should provide:

- General background information on the proposal, including the location, current status of the proposal, an overview of the principal components of the proposal, anticipated establishment costs, likely markets/customers, and the possibilities for future expansion.
- General background information on the proponent, such as relevant development and operational experience.
- An examination of how the proposal relates to/interacts with the currently operating landfill, and any other proposals that have been or are being developed in the same region.
- Environmental legislation, standards and guidelines that will be applicable (such as policies, regulations and industry codes of practice).
- Other relevant Commonwealth, State and Local Government policies, strategies and management plans with which the proposal would be expected to comply.

### 2. Proposal Description

Provide a full description of what the proposal entails, at the construction, commissioning, operational phases. Any associated works, infrastructure or activity that are required for the proposal (e.g. access works, clay borrow pits, leachate ponds) must be included, well as any off-site ancillary facilities required to operate the proposed activity.

Since the proposal is subject to a permit application under the LUPA Act, the proposal description and specification of the site must be consistent with the current or intended permit application.

#### 2.1 Construction

- Provide a step-by-step description of significant activities during the construction phase of the proposal.
- Provide an indicative timetable for completing major stages of construction.
- Specify the proposed hours per day and days per week of construction activities.
- Provide details of any pre-construction works required, including site preparation works, and any temporary or permanent removal of vegetation.
- Provide details of any pre-clearance surveys to be carried out prior to commencing construction, including flora and fauna and geotechnical studies.
- Provide estimates of the quantities of major raw materials required for construction (e.g. gravel, clay, sand/aggregate and water) and how and where these will be sourced.
- Provide details of the engineered features of the proposed landfill cells, including the leachate barrier, leachate storage and disposal system, stormwater management works, landfill gas management infrastructure, and final capping. Include plans, specifications and engineering drawings, preferably as appendices.
- Detail the nature, capacity and location(s) of temporary construction equipment required on-site (such as cranes, concrete batch plants, construction camps).
- Detail the volume, composition, origin, destination and route for vehicle movements likely to occur during the construction phase.

## 2.2 Commissioning

- Provide a step-by-step description of major commissioning activities (if any) following construction. Include indicative timeframes for the completion of major steps and describe the point at which commissioning will be considered complete.

## 2.3 Operation

- Describe the processes involved in operating the activity in a step-by-step manner, using explanatory diagrams and flow charts where appropriate.
- Describe the major items of equipment and on-site facilities involved in operating the activity. Detailed technical information on major items of equipment or facilities may be included in appendices.
- Specify the source, nature and quantities of waste received at the landfill, both in total and specific to the proposed new landfill cells. Discuss potential changes in amount/proportions due to future developments (e.g. the proposed compost facility). Confirm whether the proposal will include acceptance of recycling materials, medical waste or short-term storage of other wastes.
- Specify the quantities and characteristics of raw materials required for operating the proposal, including over materials.
- Specify the energy requirements for operating the proposal, and the means of meeting this demand.
- Specify the hours of operation for the proposal (hours per day and specific days per week) including any seasonal variations.
- Specify the expected timelines and filling sequences for operation of the landfill cells, and timeline for final closure.
- Specify any planned or projected changes to general landfill operations as a result of the proposed new cells, such as operating hours, days or waste quantities received at the landfill.
- Detail the volume, composition, origin, destination and route for vehicle movements likely to be generated during operation.
- Since the proposal is associated with an existing activity, describe any current approvals or regulatory conditions.

## 2.4 Definition and Map of the Land

Provide a definition of the land on which the activity will take place. “The land” can be defined by:

- Cadastral boundaries (Title Reference, Property ID)
- Lease boundaries (Mining Lease, Crown Lease, Marine Farming Lease, etc.)
- Topographic features (roads, waterways, etc.)
- Surveyed grid coordinates
- Other boundary types

If the land is defined as the whole of an existing defined boundary, such as a title reference or lease, the definition of the land is simply the title reference or lease name (e.g. Title Reference 136529/1 or Mining Lease 901 IP/M). If not, it may be necessary to define the boundary by reference to specific topographic features and or surveyed grid coordinates. The boundary must be consistent with any intended or current permit application under the LUPA Act.

A map is required, which clearly shows the boundary of the land in relation to cadastral boundaries and topographic features. The boundary of the land should also be provided to the

Board in a geospatial vector format (shapefile or DXF). If a boundary survey is required to adequately identify the land boundary, this may be requested during the assessment process.

## 2.5 General location map

Provide a general location map (1:25,000 scale or better, as appropriate) which identifies the following:

- The location of the proposal site
- Boundaries of the property on which the proposal is located
- Road access to and from the site
- The distance(s) to any nearby sensitive uses (such as residences)
- Topographical features, aspect and direction of drainage
- Location of waterways and drains (including ephemeral)
- Electricity transmission lines
- Surrounding land tenure
- Surrounding land use (identify areas of conservation or recreational significance)
- Surrounding land zoning in the local government planning scheme

## 2.6 Site plans

Provide site plans which show the existing and proposed conditions and features of the site and surrounding area. Include:

- The location of existing and proposed landfill cells and associated infrastructure, buildings/structures, internal roads, plant and machinery, storage areas and loading/unloading areas and clay borrow pit/s.
- The location of existing and new proposed stormwater and leachate collection, treatment and transfer structures.
- Elevation contours and levels of the existing site and proposed landfill cell area, including maximum filling heights.
- The positions of other topographic features, as relevant.
- Details of any screening vegetation or bund walls.
- The location(s) of any monitoring sites.

If the site plan is not based on a feature and level survey and the Board determines that this information is needed to adequately assess the proposal, one may be requested during the assessment process. Geospatial data included on the plan(s) should also be provided to the Board in a geospatial vector format (shapefile or DXF).

## 2.7 Off-site infrastructure

Describe any new infrastructure or off-site ancillary facilities required to allow the proposal to proceed (e.g. water supply, electricity supply, roads or other transport infrastructure).

## 3. Project Alternatives

Discuss the rationale for the proposed activity. Describe the site selection process, including site selection criteria, alternative sites considered and an assessment of those alternatives. The assessment should compare alternatives according to clearly defined environmental, social,

economic and technical considerations, and provide a justification for the preferred site. Describe the effect that undertaking community consultation had on the selection process, if any.

A critique of other available technologies and the reason for the selection of the preferred technology, including from an environmental perspective, should be included where relevant. Transparency around alternatives and the criteria on which decisions have been based is encouraged.

For any part of the proposal where alternative technologies, materials, design options or management practices with different environmental consequences may exist, the alternatives should be identified, their environmental performance evaluated and the reason for the proposed choice justified. Alternatives should have regard to best practice environmental management, including those measures listed under section 4(2) of the EMPC Act.

#### 4. Consultation

Describe the nature and results of any public consultation undertaken by the proponent during project planning and preparation of the EIS, as well as any proposals for further public consultation during and beyond project implementation.

Early community engagement often leads to better outcomes for all and is strongly encouraged. The Board has produced a guide to community engagement which is available on the EPA website at: <http://epa.tas.gov.au/assessment/assessment-process/guidance-documents>.

#### 5. The Existing Environment

Describe the proposed site location and provide an overview of the existing environment which may be affected by construction and operation of the proposal, including areas associated with any ancillary activities. Include details of salient features of the existing environment and, where appropriate, include maps, plans, photographs, diagrams or other descriptive detail.

##### 5.1 Planning aspects

- Since a permit is required for the proposal under the LUPA Act, provide:
  - Use Class of the proposed activity under the applicable Planning Scheme.
  - Permissibility of the activity under the applicable Planning Scheme.
- Information on land tenure and property boundaries of the proposed site, with certificate of title details.
- Land zonings for the proposed site and surrounding areas.
- Any rights of way, easements and covenants affecting the site.
- Land use and planning history of the site, including the potential for site contamination<sup>3</sup>, present use and any existing buildings and significant structures.
- A description of land use and ownership in the vicinity of the site and those areas which may be affected by the proposal, including:
  - The location and nature of industrial facilities.

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<sup>3</sup> Information on potentially contaminating activities and contaminated site assessment can be found online at <http://epa.tas.gov.au/regulation/contaminated-sites>.

- Any sensitive uses<sup>4</sup> or residential zones within applicable attenuation distances including the location of individual residences, schools, hospitals, caravan parks and similar sensitive uses, and the location of any tourist or recreation facilities or routes (such as camping areas, picnic areas, walking tracks, historic routes).
- Any proposed or potentially sensitive uses within this distance of the proposal site, which have been or are likely to be granted approval under the local planning scheme, should also be considered.

## 5.2 Environmental aspects

- A description of the general physical characteristics of the site and surrounding area, including topography, local climate, geology, geomorphology, soils (including erodibility and acid sulphate soils), vegetation, fauna, groundwater and surface drainage (including waterways, lakes, wetlands, etc).
- A description of key surface water bodies and local water drainage.
- A description of groundwater (multiple aquifer systems, flow directions, likely receiving waters/discharge environments).
- A description of natural processes of particular importance for the maintenance of the existing environment (e.g. fire, flooding, etc).
- Any existing conservation reserves located on or within 500 metres of the site.
- Any high quality wilderness areas identified in the *Tasmanian Regional Forest Agreement* in the vicinity of the site.
- A description of the World and National Heritage values relevant to the activity.
- Information on species, sites or areas of landscape, aesthetic, wilderness, scientific or otherwise special conservation significance which may be affected by the proposal. Relevant information resources include the LIST ([www.thelist.tas.gov.au](http://www.thelist.tas.gov.au)) and the Natural Values Atlas (<https://www.naturalvaluesatlas.tas.gov.au>).
- An assessment of the vulnerability of the site to natural hazards (e.g. flooding, seismic activity, fire, landslips or strong winds).
- Any available ambient monitoring results for the vicinity of the proposed development (in tabular or graphical form). The results may be summarised (e.g. as annual averages) if the summary will provide adequate information.
- Since the proposal is associated with an existing activity, provide information on current regulatory approvals and licences.

## 5.3 Socio-economic aspects

Briefly describe the existing social and economic environment that may be affected by the proposal, which may include information on the following:

- A summary of the social or demographic characteristics of the population living in the vicinity of the proposal site, identifying any special characteristics which may make people more sensitive to impacts from the proposal than might otherwise be expected.
- A summary of the characteristics of the local and regional economy.

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<sup>4</sup> Defined in the State Planning Provisions as 'a residential use or a use involving the presence of people for extended periods except in the course of their employment such as a caravan park, childcare centre, dwelling, hospital or school.'

## 6. Potential Impacts and their Management

### Guide to preparing this section

While some details of the proposal may not be finalised at the time the EIS is submitted, the information in the document should be as up to date as possible. Where information is unavailable or details have not yet been finalised, estimates and the range of alternative options should be provided. However, sufficient technical detail must be provided to enable an appropriate level of assessment. For each potential impact the following should be discussed.

#### Existing conditions

Outline the existing conditions relevant to the impact. In the case of a proposal which involves expansion or redevelopment of an existing activity, a summary of public complaints received in recent years and a discussion of the operator's response and how this may affect the current proposal.

#### Performance requirements

Identify the environmental performance requirements to be achieved for each environmental impact and provide evidence to demonstrate that these can be complied with. These may be standards or requirements specified in legislation, codes of practice, state policies, national guidelines or as determined by agreement with the assessing agencies. Industry best practice standards should be referred to where appropriate. **Unsupported assertions that performance requirements will be achieved will not be considered adequate.**

#### Potential impacts

Outline the potential environmental, social and economic impacts of the proposal (positive and negative) through all stages, including construction, operation and closure, in the absence of special control measures. Any foreseeable variations in impacts during the start-up and operational phases should be identified. Include an analysis of the significance of the relevant impacts.

**The level of detail provided on each issue should be appropriate to the level of significance of that environmental issue to the proposal.**

The evaluation of potential impacts should identify **plausible worst case consequences**, the vulnerability of the affected environment to the potential impacts, and the reversibility of the impacts. Potential cumulative impacts of this proposal in light of other activities underway or approved also need to be addressed. Interactions between biophysical, socio-economic and cultural impacts should be identified.

Predictions and evaluations of impacts should be based on scientifically supportable data (for existing operations this should include the results of monitoring of current emissions). The methodologies used or relied on should be referenced, together with the relevant research and investigations supporting them. Assumptions, simplifications and scientific judgements should be stated clearly, and the nature and magnitude of uncertainties should be clearly defined. Where relevant, the choice of a particular methodology over alternative methodologies should be explained. Where impacts are not quantifiable, they should be adequately described.

Where positive benefits are claimed it will generally be appropriate to explain what measures are to be taken to ensure that those positive outcomes are realised and sustained.

#### Avoidance and mitigation measures

Describe the measures proposed to avoid or mitigate potential adverse impacts (having regard to best practice environmental management as defined in EMPCA) in order to achieve the environmental performance requirements (such as through pollution control technology or

management practices). The extent to which they will overcome the anticipated impacts should be specified. Where there are clear, alternative avoidance or mitigation measures for a particular adverse environmental impact, the alternatives should be reviewed, and the preferred option justified.

Where pollution control equipment and/or treatment processes are key factors in achieving satisfactory environmental performance, contingencies in the event of breakdown or malfunction of the equipment or processes should be discussed. It should be demonstrated that the maintenance of pollution control equipment can be provided for without causing performance requirements to be exceeded.

Where measures to control environmental impacts are necessary, but will not be undertaken by the proponent, the means by which the proponent will ensure that the necessary measures are implemented should be identified (e.g. lease conditions, trade waste agreement, contractual arrangement or other binding third party commitment). **Mitigation measures over which the proponent has no control will generally not be considered adequate.**

Specific measures can be presented in the form of a management plan, such as an Environmental Management Plan (EMP) that sets out the framework for management, mitigation and monitoring of relevant impacts of the action, including any provisions for independent environmental auditing. The EMP needs to address the project phases (construction, operation, decommission) separately.

#### **Assessment of net impacts**

An assessment of the overall impacts of the development on the environment after allowing for the implementation of proposed avoidance and mitigation measures. This should include an evaluation of the significance of impacts, the potential for emissions to cause environmental and health impacts and comparison with current environmental conditions (for existing activities) and with state, national and international regulations and standards. Any net benefits likely to result from the proposal should be identified.

Discuss the impacts of the proposal in terms of the constraints or benefits it may place on the current or future use of land within the proposal site and surrounding area as a result of environmental impacts or emissions, including impacts on other uses, particularly sensitive uses.

#### **Offsetting unavoidable adverse impacts**

If adverse residual environmental impacts from the proposal are considered unavoidable despite the adoption of best practice environmental management avoidance and mitigation measures, then proposals to offset such impacts should be detailed. For example, if the loss of conservation values, community assets or amenities is considered unavoidable, measures to compensate for those losses should be proposed in proportion to the loss. Any offset actions proposed must be demonstrated to be 'real' actions. That is, **the offset actions must have a measurable and relevant benefit which would otherwise not have occurred.**



## 6.1 Key Issue 1: Water Quality and Leachate Management

- Discuss potential impacts of the proposal on surface water and groundwater, including identifying any proposed new sources of liquid emissions (wastewater, leachate and stormwater).
- Provide a map of the location of all existing and proposed new point sources of liquid emissions.
- Provide details and plans of existing and proposed stormwater and leachate management infrastructure at the landfill.
- Provide the results of a water balance model, which provides a basis for designing the capacity of the proposed leachate and stormwater ponds. Include confirmation that the proposed leachate and stormwater ponds will have enough capacity to hold the expected volumes of leachate and stormwater generated at the site, including during high rainfall events.
- It is recommended that water balance modelling be completed on a daily timestep using a relevant historical climate record. However, other modelling approaches may be suitable. The water balance modelling should include a sensitivity analysis for relevant parameters, such as wet years and storm events, and should be supported by documentation of the modelling method and parameter selection (including cover types, characteristics and surface areas of different cover types).
- Describe the proposed monitoring and management actions for ensuring that leachate does not contaminate surface and/or ground water.
- If there are any circumstances under which discharge of leachate may occur, indicate the nature of those circumstances, and potential impacts to the receiving environment.
- Describe how stormwater will be captured and managed, and how clean stormwater will be prevented from mixing with contaminated water.
- Provide a map showing the location of any groundwater bores.
- Provide a conceptual groundwater model for regional and local aquifer flows, including seasonal variation in depth to groundwater, and direction of groundwater flow.
- Provide a description of how leachate quality and dam levels will be monitored and recorded.

### *Legislative and policy requirements*

It must be demonstrated that the proposal is consistent with the objectives and requirements of all relevant water management policies and legislation including the *Water Management Act 1999*, the *State Policy on Water Quality Management 1997*, and the *Tasmanian State Coastal Policy 1996*. In particular, it must be demonstrated that the proposal will not prejudice the achievement of any water quality objectives set for water bodies under the *State Policy on Water Quality Management 1997* (see <http://epa.tas.gov.au/policy-site/Pages/Water-Quality-Policy.aspx>). Where water quality objectives have not yet been set, EPA Tasmania should be consulted to identify the baseline water quality data required to enable the water quality objectives to be determined.

## 6.2 Key Issue 2: Air Quality

- Discuss potential impacts of the proposal on the local and regional air environment during construction and operation.
- Describe potential sources of fugitive gas emissions and other emissions such as odour and dust, and under what conditions these may occur.
- Identify any proposed new point source atmospheric discharge points, and provide a map of the location of all point sources of atmospheric emissions.
- Discuss the potential for fugitive and point source emissions from the proposed landfill cells to cause environmental harm or environmental nuisance, including under worst case or upset

conditions. Identify and discuss measures that will be implemented to mitigate any environmental harm/nuisance.

- Discuss the methodology and timing for landfill gas extraction, and any current or potential use for the generated landfill gas.

#### *Legislative and policy requirements*

Consideration should be given to the requirements of the Tasmanian *Environment Protection Policy (Air Quality)* (see <http://epa.tas.gov.au/policy-site/Pages/Air-Quality-EPP.aspx>).

### **6.3 Noise emissions**

- Identify and describe all major sources of noise (if necessary, provide a map of the location of all major sources of noise, and distance to receivers)
- Discuss potential impacts of the proposal on ambient (surrounding) noise levels (during both the construction and operational phases)
- Discuss the potential for noise emissions (during both the construction and operational phases) to cause nuisance for nearby land users, particularly at noise sensitive premises.<sup>5</sup> The nearest noise sensitive premises should be marked on the site map/s provided.
- Discuss the potential for noise emissions to affect terrestrial, marine and freshwater wildlife and livestock.

#### *Legislative and policy requirements*

Consideration should be given to the requirements of the Tasmanian *Environment Protection Policy (Noise) 2009* (see <https://epa.tas.gov.au/policy/statutory-policies/state-policies-and-environment-protection-policies/environment-protection-policy-%28noise%29-2009>).

### **6.4 Waste Management**

Discuss the impacts of solid waste *generated* by the proposal.

- Describe all forms of solid waste generated by the proposal at all stages.
- Describe the operational procedures used to minimise generation of litter during the filling of landfill cells.
- Detail ongoing litter control measures proposed.

### **6.5 Dangerous goods and environmentally hazardous materials**

Environmentally hazardous materials are any substance or mixture of substances of a nature or held in quantities which present a reasonably foreseeable risk of causing serious or material environmental harm if released to the environment. This includes fuels, oils, waste and chemicals.

- Identify the nature and quantity of any environmentally hazardous materials including Dangerous Goods (as defined in the *Australian Code for the Transport of Dangerous Goods by Road and Rail*) that may be used or produced during the construction and operation of the proposed landfill cells.
- Provide a map showing the location of temporary and permanent storage areas for dangerous goods, fuels, oils, chemicals or other environmentally hazardous materials.

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<sup>5</sup> 'noise sensitive premise' is defined as: residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.

- Describe and discuss proposed measures to prevent or control any accidental releases of dangerous goods and environmentally hazardous materials into the environment.
- Describe and discuss the contingency plans for when control measures fail or accidental releases to the environment occur, including proposed emergency clean-up measures and notification procedures.
- Identify any safety management requirements for the protection of human health and safety affecting the community.

## 6.6 Biodiversity and Natural Values

Discuss potential impacts of the proposal on biodiversity and natural values.

- Provide a report of any flora or fauna surveys undertaken on the site, ideally within the last 2 years. Surveys must comply with the requirements of the *Guidelines for Natural Values Surveys*<sup>6</sup> and any relevant species-specific guidelines.
- Provide a map of existing vegetation type and threatened species present.
- Discuss potential impacts on flora, vegetation communities and habitat, with particular reference to rare and threatened species, communities and habitats, including those listed under the relevant Schedules of the Commonwealth EPBC Act and the *Tasmanian Threatened Species Protection Act 1995*.
- Discuss potential impacts on fauna, including impacts on species, communities and habitats, with particular reference to rare and threatened species, migratory species, communities and habitats, including those listed under the relevant Schedules of the Commonwealth EPBC Act and the *Tasmanian Threatened Species Protection Act 1995*. Assessment of impacts should not be limited just to clearing or disturbance and also include noise, lights, vehicle movements, etc.
- Discuss potential impacts on any identified areas or habitats of conservation significance, including designated conservation areas, areas relating to the requirements of international treaties (e.g. Japan-Australia and China-Australia Migratory Bird Agreements (JAMBA/CAMBA) and Ramsar (wetlands) Convention), or wetlands listed in *A Directory of Important Wetlands in Australia*.
- Identify any freshwater ecosystems of high conservation management priority using the Conservation of Freshwater Ecosystem Values (CFEV) database<sup>7</sup>. The scope of investigation should encompass the vicinity of the proposed development where there is likelihood of alteration to the existing environment. The specific CFEV information used for the EIS should be Conservation Management Priority Potential which is appropriate for development proposals.
- Discuss potential impacts on natural processes (such as fluvial), or sites of geoconservation significance listed on the *Tasmanian Geoconservation Database*.
- Discuss potential impacts on any high-quality wilderness areas identified in the Tasmanian Regional Forest Agreement (Tasmanian RFA).
- Specify the total amount of native vegetation and other habitat which will be cleared for the construction and maintenance of the proposal, and discuss the impact of any clearing on species or ecological communities of special conservation significance. Include any impact on the:
  - comprehensive, adequate and representative reserve system identified as part of the Tasmanian RFA;

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<sup>6</sup> Available at: <http://dpiwwe.tas.gov.au/conservation/publications-forms-and-permits/forms-and-permits/development-planning-conservation-assessment-guidelines>.

<sup>7</sup> Available at: <https://wrt.tas.gov.au/cfev>

- maintenance of forest communities under the [Permanent Native Forest Estate Policy](#);
  - wildlife habitat strips under the *Tasmanian Forest Practices Code 2015* (<http://www.fpa.tas.gov.au>); and
  - non-forest communities.
- Where impacts cannot be avoided, present proposed measures to mitigate and/or compensate adverse impacts on biodiversity and natural values.
  - Discuss the potential for the introduction of pests, weeds and plant and animal diseases as a result of the proposal.
  - Discuss the potential that the proposal may encourage scavenging by vermin or native species, and how this is proposed to be managed.
  - Discuss any management measures proposed for dealing with pests, weeds and diseases, and include current or proposed management plans as appendices.
  - Describe any planned rehabilitation of disturbed areas (including clay borrow areas) following the completion of construction activities and cessation of the activity, including any proposed seed collection and progressive rehabilitation programme.

### **Requirements for surveys**

Any flora and fauna surveys must, as a minimum, comply with the requirements of the Department of Primary Industries, Parks, Water and Environment (DPIPWE) [Guidelines for Natural Values Assessments](#). The methodology for surveys should be developed in consultation with the Department.

## **6.7 Greenhouse gases and ozone depleting substances**

For proposals with the potential for significant release of greenhouse gas emissions or the release of ozone depleting substances, discuss impacts of the proposal in relation to greenhouse gases and ozone depleting substances including:

- A description of the direct and indirect effects of the proposal on greenhouse gas production and ozone depleting substances and any greenhouse benefits of the proposal discussed.
- Demonstration that the development will implement cost-effective greenhouse best practice measures to achieve on-going minimisation of greenhouse gas emissions.
- Describe how the landfill gas management system may provide benefits for greenhouse gas emission management.

### **Legislative and policy requirements**

Discuss impacts of the proposal in terms of the evolving national response to climate change and greenhouse gas emissions and the targets set in the Climate Change Action Plan 2017 – 2021. Proponents will need to determine whether they are required to report to the Commonwealth under the *National Greenhouse and Energy Reporting Act 2007*.

## **6.8 Socio-economic issues**

Discuss the social and economic impacts of the proposal. Details may include the following:

- An estimate of total capital investment for the proposal and where that capital will be expended (particularly in relation to the source of large capital items of processing equipment).
- Operational expenditures and revenues.
- The impacts on local and State labour markets for both the construction and operational phases of the proposal. The number and nature of direct and indirect jobs arising from the proposal must be detailed. Skills and training opportunities should also be discussed.

- A qualitative assessment of impacts on local social amenity and community infrastructure, including recreational, cultural, health and sporting facilities and services. Any proposals to enhance or provide additional community services or facilities should be described.
- Impacts on land values, and demand for land and housing.
- Impacts on the local, regional, state and national economies.
- Any publicly funded subsidies or services to be relied upon for the construction or operation of the proposal.
- Any impacts on Local, State and Federal Government rate, taxation and royalty revenues.

Modest proposals with relatively low level and localised environmental impacts or risks may only need details of intended capital expenditure, operational expenditures, revenues and employment (distinguishing between direct and indirect employment) and a qualitative discussion of other socio-economic aspects of particular relevance.

Proposals with higher level or broader scale environmental impacts will need a more comprehensive analysis of economic and social benefits to allow the Board to assess the benefits and adverse impacts of the proposal. This may include an explanation of the methods used to model impacts and describe the manner and results of engagement with the local community to determine their needs and aspirations in relation to the proposal.

## **6.9 Hazard analysis and risk assessment**

If applicable, provide a preliminary analysis (appropriate to the scale of the project) of the potential for a major hazard event (such as an explosion) that may cause impacts to the environment to occur and proposed safeguards to prevent such an occurrence. The preliminary analysis should systematically identify all potential major environmental hazards (internal and external) to people and the environment associated with the construction, operation, maintenance and decommissioning of the proposal.

### **6.10 Fire risk**

Discuss the potential fire risk associated with the proposal, including:

- Consideration of fire within the site, fire escaping from the site and the impact of wildfire originating outside the development and the environmental impacts that could result from such an event.
- The objectives and management principles to be adopted to prevent and respond to potential fire events.
- Where a fire response plan is appropriate, it should be fully integrated with other relevant documents, such as a Tasmania Fire Service Local Area Fire Management Plan, a Forestry Tasmania Fire Management Plan and a Parks and Wildlife Service Fire Action Plan for relevant districts.

### **6.11 Infrastructure and off-site ancillary facilities**

Discuss potential environmental impacts of the proposal on any significant off-site or infrastructure facilities (including increased use of existing infrastructure, such as roads, ports and quarries), identify measures to avoid and mitigate any possible adverse impacts and assess the overall impacts following implementation of the proposed avoidance and mitigation measures.

Identify roads and other infrastructure to be used by vehicles for the proposal (during both construction and operation). Potential environmental impacts associated with construction and use of such infrastructure should be assessed.

### **6.12 Environmental Management Systems**

This section should provide information on strategic matters relating to environmental management of the proposal, including a description of the following:

- Any environmental management systems or environmental policies implemented or proposed by the proponent, which are relevant to the environmental management of the proposal.
- Organisational structure and environmental responsibility within that structure for the proposal.
- Procedures and instructions to employees (including contractors) on minimising adverse environmental impacts of activities, as well as employee induction and education programs to ensure an appropriate response to operational environmental concerns should be included in relevant sections.

### **6.13 Cumulative and interactive impacts**

Where relevant, this section should contain an assessment of the potential cumulative impacts of the proposal in the context of existing and approved developments in the region, if such impacts have not been addressed in previous sections. Interactions between biophysical, socio-economic and cultural impacts of the proposal should be discussed.

Other proposals which have been formally proposed, and for which there is sufficient information available to the proponent to allow a meaningful assessment of their impacts, should also be considered in that assessment. Uncertainties about potential impacts in such cases should be identified.

### **6.14 Environmental Impacts of Traffic**

This section should identify the traffic routes for the proposal (both during construction and operation) and the likely volume and nature of traffic and timing of traffic flows, including details of the current usage of these roads. Environmental impacts associated with current and altered traffic flows and usage should be discussed (such as noise and dust impacts on other roads users and residences adjacent to roads). The assessment should focus on roads within the land defined by the proposal but also indirect impacts on public roads.

## **7. Monitoring and Review**

This section should outline any proposed monitoring, review and reporting programmes for the proposal, including volumetric surveys, leachate, fugitive emissions, groundwater and surface water. Include a table of proposed monitoring locations, procedures, parameters and frequencies, and a map showing the location of all monitoring sites. Monitoring, review and reporting programs should be designed to:

- Assess compliance with the proposed management measures defined in the EIS.
- Assess compliance with emission standards and other identified performance requirements.
- Assess the effectiveness of the performance requirements and environmental safeguards in achieving environmental quality objectives.
- Assess the extent to which the predictions of environmental impacts in the EIS have eventuated.

## **8. Decommissioning and Rehabilitation**

Describe the on-going, staged approach to site decommissioning and rehabilitation which will take place as the landfill cells are progressively filled. Provide a preliminary Decommissioning and Rehabilitation Plan or Closure Plan for the proposal, including details of the planned final shape of the landfill, and proposed final land use once landfilling has ceased.

## **9. Management Measures**

This section comprises a table listing all management measures previously detailed in the EIS. These must be sequentially numbered and refer to the section where the measure was discussed. Each measure must be an unambiguous statement of intent and specify when it is to be implemented.

## **10. Conclusion**

Describe the proposal and draw together the environmental, social and economic impacts of the proposal, both positive and negative. Present a balanced overview of the net impacts of the proposal, and the extent to which any adverse impacts can be satisfactorily avoided, mitigated, remediated or compensated and positive impacts promoted and sustained. The conclusion should also describe how the proposal meets and furthers the objectives of relevant Commonwealth and State legislation, policies, plans and strategies. This should be done by itemising the RMPS and EMPCS objectives and providing a commentary about how the proposal addresses each of the objectives.

## **11. References**

Provide details of authorities consulted, reference documents and other information sources, using a consistent referencing style.

## 12. Appendices

Detailed technical information which supports the EIS should be included in appendices. The salient features of the appendices should be included in the main body of the EIS. Take care to avoid inconsistencies between the technical content of appendices and the EIS itself, unless carefully explained.



## Appendix A: Other issues and agency contacts

In addition to a permit under the LUPA Act and the EMPC Act, there may be other legal requirements to allow your proposal to proceed. These may include other permits, licences or landowner consent. You may also need to contact other Government agencies to obtain information for the purpose of assessment under the LUPA Act or the EMPC Act. The following list identifies some of the key agencies you may need to contact:

Note: your proposal may be referred to other agencies in the process of preparing guidelines. Should assessments or approval outside of the Board's responsibilities be required, the respective agency will engage with you to progress them.

*Natural values including flora, fauna, and geoconservation values, or permits to deal with threatened species:*

Natural and Cultural Heritage Division

Telephone: (03) 6165 4396

Email: [conservationassessments@dpipwe.tas.gov.au](mailto:conservationassessments@dpipwe.tas.gov.au)

Website: [www.dpipwe.tas.gov.au](http://www.dpipwe.tas.gov.au)

*Historic cultural heritage, including State-level site listings, impacts and permits as required under the Historic Cultural Heritage Act 1995:*

Heritage Tasmania

Telephone: (03) 6165 3700

Email: [enquiries@heritage.tas.gov.au](mailto:enquiries@heritage.tas.gov.au)

Website: [www.heritage.tas.gov.au](http://www.heritage.tas.gov.au)

Note: Where works are proposed in or in close proximity to a heritage place entered on the Tasmanian Heritage Register or likely to be of heritage significance to the whole of Tasmania, and a permit is required under the *Land Use Planning and Approvals Act 1993*, the proposal will be referred to Heritage Tasmania by the planning authority. There may also be additional sites listed under local planning schemes, impacts on which are assessed by the relevant planning authority.

*Aboriginal heritage, including desktop assessment, artefact survey requirements, permits:*

Aboriginal Heritage Tasmania

Telephone: (03) 6165 3152

Email: [aboriginal@heritage.tas.gov.au](mailto:aboriginal@heritage.tas.gov.au)

Website: <http://www.aboriginalheritage.tas.gov.au>

Note: your proposal will be referred to Aboriginal Heritage Tasmania (AHT) on submission or referral to the Board. If Aboriginal Heritage matters are identified, AHT will engage directly with the proponent regarding relevant assessments and approvals.

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*Parks and reserves, including where any proposal may impact on land managed by Parks & Wildlife:*

Parks and Wildlife Service

Telephone: 1300 827 727

Website: [www.parks.tas.gov.au](http://www.parks.tas.gov.au) and [www.thelist.tas.gov.au](http://www.thelist.tas.gov.au)

*Crown land, including where any proposal may impact on land owned by the Crown:*

Property Services – Parks and Wildlife

Telephone: (03) 6169 9015

Email: [PropertyServices@parks.tas.gov.au](mailto:PropertyServices@parks.tas.gov.au)

Website: [www.parks.tas.gov.au](http://www.parks.tas.gov.au)

*State roads, including where any proposal requires works on or access from a State-managed road asset:*

Department of State Growth

Telephone: (03) 6166 3369

Email: [permits@stategrowth.tas.gov.au](mailto:permits@stategrowth.tas.gov.au)

Website: [www.transport.tas.gov.au](http://www.transport.tas.gov.au)

*Mining leases:*

Mineral Resources Tasmania

Telephone: 03 6165 4800

Email: [info@mrt.tas.gov.au](mailto:info@mrt.tas.gov.au)

Website: [www.mrt.tas.gov.au](http://www.mrt.tas.gov.au)

*Works impacting natural waterway flow, e.g. dams or fords:*

Agriculture and Water Division

Telephone: (03) 6165 3222

Email: [Water.Enquiries@dpipwe.tas.gov.au](mailto:Water.Enquiries@dpipwe.tas.gov.au)

Website: [www.dpipwe.tas.gov.au/water](http://www.dpipwe.tas.gov.au/water)



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