

Works approval application



Environment
Protection
Authority Victoria

Publication 1658* June 2017

Guideline

* This guideline explains what information is required in a works approval application. It replaces Section 2 of *Works approval application* guideline (publication 1307.10)

Abbreviations and glossary of terms	5
Introduction	7
Works Approval Application	8
SECTION 1 – General information	8
1. Primary information	9
1.1 Company legal entity	9
1.2 Application fee	9
2. Land use	10
2.1 Planning and other approvals	10
2.2 Choice of location for new premises	10
3. Track record	10
4. Community engagement	10
5. Process and integrated environmental assessment	10
5.1 Existing operation	10
5.2 Description of the proposal	11
5.3 Process and technology	11
5.4 Environmental best practice	11
5.5 Choice of process and technology	11
5.6 Integrated environmental assessment	12
SECTION 2 – Environmental information	13
6. Energy use and greenhouse gas (GHG) emissions	14
6.1 General information	15
6.2 Detailed information	15
6.2.1 Energy use and greenhouse gas emissions	15
6.2.2 Non-energy-related greenhouse gas emissions	15
6.2.3 Best practice energy and greenhouse gas management	15
6.3 EPA's assessment considerations – Energy use and GHG emissions	15
7. Water resource use	16
7.1 General information	16
7.2 Detailed information	16
7.2.1 Water use in process	16
7.2.2 Water use best practice	16
8. Air emissions	16
8.1 Air emission assessment	16
8.2 Air emission sources	17
8.2.1 Air quality management best practice	17
8.2.2 Air quality impact assessment	17
8.2.2.1 Point source emission assessment	17
8.2.2.2 Fugitive emissions	18

8.2.2.3	Other information	18
8.2.3	EPA's assessment considerations for air emissions	18
8.3	Further air emission assessment	19
8.3.1	Emission during plant start-up or shut down	19
8.3.2	Risk assessment	19
8.3.3	Impact on air sheds	19
9.	Noise emissions	20
9.1	General noise impact assessment	20
9.2	Detailed noise impact assessment	21
9.2.1	Noise emission sources	21
9.2.2	Best practice noise control measures	21
9.2.3	Noise impact assessment	21
9.2.3.1	Noise control measures	21
9.2.3.2	Determining noise limits	21
9.2.3.3	Multiple premises making noise	21
9.2.3.4	Noise impact calculation or modelling	22
9.3	EPA's assessment considerations for noise emissions	22
10.	Water	23
10.1	Managing stormwater run-off discharges	23
10.1.1	Stormwater management	23
10.1.2	EPA's assessment considerations for stormwater management	24
10.2	Leachate management from organic waste processing activities	24
10.2.1	Organic waste processing facility	24
10.2.2	EPA's assessment considerations for organic waste processing management	25
10.3	Wastewater treatment system	26
10.3.1	Existing wastewater treatment system	26
10.3.2	Proposed wastewater treatment system	26
10.3.3	Treated wastewater quality and compliance with SEPP (WoV)	27
10.3.4	Sludge management	27
10.3.5	Other information	27
10.3.6	EPA's assessment considerations for wastewater treatment systems	27
10.4	Discharge to surface water	28
10.4.1	Justification for discharging to surface waters	28
10.4.2	Background condition of receiving water	28
10.4.3	Wastewater characteristics	28
10.4.4	Risk assessment	28
10.4.5	Mixing zone	29
10.4.6	EPA's assessment considerations for discharges to surface water	29
11.	Land and groundwater	29
11.1	Land and groundwater impact assessment	29
11.2	Reuse of treated wastewater and biosolids	30
11.2.1	Reuse of treated wastewater	30
11.2.1.1	General information	30
11.2.1.2	Impact on soil	31
11.2.1.3	Impact on groundwater	31
11.2.1.4	Reuse environmental improvement plan(EIP)	31
11.2.2	Reuse of biosolids assessment	31
11.2.3	EPA's assessment considerations for reuse of biosolids	31
12.	Waste	32
12.1	Industrial waste generation	32
12.1.1	General information	32
12.1.2	Detailed information	32
12.1.2.1	Waste generation	32
12.1.2.2	Best practice solid waste management	32

12.1.3	EPA's assessment considerations for industrial waste generation	33
12.2	Prescribed Industrial Waste (PIW) generation	33
12.2.1	General information.....	34
12.2.2	Detailed information	34
12.2.2.1	Existing PIW generation.....	34
12.2.2.2	Proposed PIW generation	34
12.2.2.3	Proposed PIW handling and final destination.....	34
12.2.2.4	Temporary storage of asbestos waste/designated waste not generated at the premises	35
12.2.2.5	Best practice of managing PIW generation	35
12.2.3	EPA's assessment considerations for PIW generation	35
12.3	Waste handling and treatment premises (A01, A02, A07, A08,A09 and glass reprocessors (H05))	36
12.3.1	Existing operation.....	36
12.3.1.1	Industrial waste/PIW received.....	36
12.3.1.2	Industrial waste/PIW handling.....	36
12.3.1.3	Industrial waste/PIW treatment and final destination.....	37
12.3.2	Proposed operation.....	37
12.3.2.1	Industrial waste/PIW received.....	37
12.3.2.2	Industrial waste/PIW handling.....	37
12.3.2.3	Industrial waste/PIW treatment	37
12.3.2.4	Industrial waste/PIW final destination.....	37
12.3.3	Best practice of PIW management.....	37
12.3.4	Financial assurance	37
12.3.5	EPA's assessment considerations for waste treatment and handling premises.....	38
12.4	Landfill premises (A05)	39
12.4.1	Consistent with Regional Waste and Resource Recovery Implementation Plan (RWRRIP)	40
12.4.2	The proposal and the existing operations (if applicable)	40
12.4.2.1	Existing operation (if applicable)	40
12.4.2.2	The proposed work	40
12.4.3	Background environmental condition and siting consideration.....	40
12.4.3.1	Background environmental condition	40
12.4.3.2	Groundwater	40
12.4.3.3	Separation distances.....	41
12.4.4	Best practice design.....	41
12.4.4.1	Site layout	41
12.4.4.2	Liner and leachate management.....	41
12.4.4.3	Water management.....	42
12.4.4.4	Air quality	42
12.4.4.5	Noise.....	43
12.4.4.6	Traffic considerations	43
12.4.4.7	Other environmental impacts	43
12.4.5	Operation and management	43
12.4.5.1	Financial assurance	43
12.4.5.2	Waste minimisation, acceptance, pre-treatment and placement.....	43
12.4.5.3	Other operational practices	43
12.4.6	Post Closure	43
12.4.6.1	Rehabilitation	44
12.4.6.2	Aftercare management.....	44
12.4.7	Environmental monitoring and auditing	44
12.4.7.1	Environmental monitoring	44
12.4.7.2	Auditing.....	44
12.4.8	EPA's assessment considerations	45
12.5	Contaminated sites – Onsite soil containment (L02).....	46
12.5.1	Site-specific information	46
12.5.2	Information about the contaminated soil	47
12.5.3	Containment proposal	47
12.5.4	Monitoring and environmental management plan	47

Works approval application

12.5.5	Financial assurance	47
12.5.6	EPA's assessment consideration	47
12.6	Contaminated sites – long term management (L04 Premises)	48
13.	Environmental management	48
13.1	Risk assessment of non-routine operations	48
13.2	Management system.....	49
13.3	Construction impact management	49
SECTION 3 – Other approvals		50
14.	Seeking other EPA approvals	50
14.1	Commissioning plan.....	50
14.2	New licence or licence amendment subsequent to works approvals	51
14.3	Application for a new landfill cell and licence	52
15.	Post-decision – Operational requirements	52
15.1	Financial assurance	52
15.2	Polychlorinated Biphenyls (PCBs) Management.....	52
15.3	Monitoring	52
15.4	Reporting annual performance.....	53
Appendix A:		54
List of policies, regulations, protocols and guidelines used for EPA's works approval assessments		54
Appendix B:		56
Summary of information requirements by the scheduled premises		56

Abbreviations and glossary of terms

BOD	biological oxygen demand
CFA	Country Fire Authority
CO	carbon monoxide
CO ₂	carbon dioxide
DHHS	Department of Health and Human Services
EIP	environmental improvement plan
EP Act	Environment Protection Act 1970
GHG	greenhouse gas
Greenhouse PEM	Protocol for Environmental Management – Greenhouse Gas Emissions and Energy Efficiency in Industry
IBC	intermediate bulk container
IWR Regulations	Environment Protection (Industrial Waste Resource) Regulations 2009
kL	Kilolitre
Landfill BPEM	Best Practice Environmental Management: Siting, Design, Operation and Rehabilitation of Landfills
Landfill WMP	Waste Management Policy (Siting, Design and Management of Landfills)
LFG	landfill gas
MFB	Metropolitan Fire Brigade
MWMP	Metropolitan Waste Management Plan
mg/L	milligram per litre
ML	megalitre
NIRV	Noise from industry in regional Victoria
NO _x	nitrogen oxides
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PIW	prescribed industrial waste
RO	reverse osmosis
RTO	regenerative thermal oxidisers
RWMP	Regional Waste Management Plan
Scheduled Premises Regulations	Environment Protection (Scheduled Premises) Regulations 2017
SEPP	State Environment Protection Policy
SEPP (AAQ)	State Environment Protection Policy (Ambient Air Quality)
SEPP (AQM)	State Environment Protection Policy (Air Quality Management)
SEPP (PMCL)	State Environment Protection Policy (Prevention and Management of Contamination of Land)
SEPP N-1	State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No N-1
SEPP (GoV)	State Environment Protection Policy (Groundwater of Victoria)
SEPP (WoV)	State Environment Protection Policy (Water of Victoria)
SO ₂	oxides of sulfur

Works approval application

SWRRIP	State-wide Waste Resource Recovery Infrastructure Plan
T/year	Tonnes per year
TJ/year	terajoule per year
tCO ₂ -e	tonnes CO ₂ equivalent
TDS	total dissolved solids
VCAT	Victorian Civil and Administrative Tribunal
VOC	volatile organic compound
WMPs	waste management policies
waste hierarchy	In the order of avoidance, reuse, recycling, and recovery of energy, treatment, containment and disposal

Works approval application

Introduction

When to use	This guideline should be used by you, the applicant, after you have either submitted an Approvals Proposal Pathway Form and/or been recommended by the EPA to apply for a works approval.
Purpose	<p>This guideline replaces publication 1307.10 Works Approval Guidelines to reflect the release of the State-wide Waste and Resource Recovery Infrastructure Plan by Sustainable Victoria and the Environment Protection (Scheduled Premises) Regulations 2017.</p> <p>The purpose of this document is to:</p> <ul style="list-style-type: none">• provide you with information of what the regulatory requirements are for your works approval and how EPA assesses them• instruct you on how to complete the works approval application document <p>We expect that you can:</p> <ul style="list-style-type: none">• understand and comply with the regulatory requirements• follow the guideline to adequately address environmental issues when developing proposals and preparing applications for an EPA approval.
Legal status	This guideline provides advice for works approval applicants. If the requested information is not provided, it may result in EPA not accepting the application for assessment and/or EPA requesting further information resulting in delays.
Applies to	<p>This guideline relates to applications for works approvals under Section 19B of the Environment Protection Act 1970 (EP Act). It also addresses commissioning approvals under Section 30A and applications for new licences or licence amendments subsequent to works approvals.</p> <p>It does not cover:</p> <ul style="list-style-type: none">• approval pathway selection (Approvals Proposal Pathway Form and Guidelines (EPA publication 1560))• works approval exemption applications (see webpage for Works Approval Exemptions)• research, development and demonstration approval applications (see webpage for Research, Development And Demonstration (RD&D) Approvals).

Works Approval Application

Introduction	<p>A works approval application consists of two components:</p> <ul style="list-style-type: none">• an application checklist• an application document <p>Information in this part provides you with details of how to complete your application checklist and document.</p> <hr/>	
When and how to complete the application document	<p>This document should be used together with the EPA publication:</p> <ul style="list-style-type: none">• Guideline on EPA’s works approval assessment process• Selected scheduled premises prompt sheets <p>You should prepare your works approval application after completing the checklist which enables you to generate a tailored template for your application document. You should develop your application document based on this template and refer to appropriate sub-sections of this part to address each requirement.</p> <p>To help you complete the checklist and the application document, refer to:</p> <ul style="list-style-type: none">• Appendix B – which highlights the key environmental issues and levels of information for a particular scheduled premises <hr/>	
What a template is used for	<p>A system-generated template enables you to use standard information grouping, scope and levels of information relevant to your application. A template normally consists of:</p> <ul style="list-style-type: none">• lists of information which you need to complete• levels of information which you need to provide• prompts for you to provide key information or attachments. <hr/>	
Section 1	General Information – contains questions about you and your proposals	8
Section 2	Environmental Information – consists of general and detailed environmental impacts as well as industrial sector-specific impact assessment	13

SECTION 1 – General information

Introduction	<p>This section requires general information about your proposal.</p> <p>You only need to submit additional information regarding community engagement, as well as planning and other approvals if you have obtained additional information after submitting your Approvals Proposal Pathway Form. We will refer to your information already provided in the Approvals Proposal Pathway Form.</p>								
Applies to	All applications.								
In this section	<p>This section contains the following topics:</p> <table><tr><th>Topics</th><th>Page</th></tr><tr><td>Primary Information</td><td>9</td></tr><tr><td>• Company Legal Entity</td><td>9</td></tr><tr><td>• Application Fee</td><td>9</td></tr></table>	Topics	Page	Primary Information	9	• Company Legal Entity	9	• Application Fee	9
Topics	Page								
Primary Information	9								
• Company Legal Entity	9								
• Application Fee	9								

Works approval application

Land Use	10
• Planning and Other Approvals	10
• Choice of Location for New Premises	10
Track Record	10
Community Engagement	10
Process and Integrated Environmental Assessment	10
• Existing Operation	11
• Description of the Proposal	11
• Process and Technology	11
• Environmental Best Practice	11
• Choice of Process and Technology	12
• Integrated Environmental Assessment	12

1. Primary information

1.1 Company legal entity

EPA issues a works approval to a legal entity (legal person) who is the *occupier* of the premises. The legal person will be in control of either the use, the discharge of waste or emission of noise, or in the case of certain scheduled premises the treatment/storage of prescribed industrial waste (PIW).

The relevant documentation must be provided if the applicant is:

- a proprietary or public company registered under the Corporations Act 2001:
 - the address of its registered office in Victoria; and
 - a current ASIC company extract
 - in the case of a partnership, the application must specify the full names of the individual partners under company name, in addition to referring to the trading name and supplying a business name certificate.
- an owners corporation within the meaning the Owners Corporations Act 2006:
 - the address for service of notices; and
 - a certified copy of the registered plan of subdivision or a plan of strata creating the owners corporation.
- an incorporated association under the Associations Incorporation Act 1981:
 - the name and address of the public officer, as registered with Consumer Affairs Victoria; and
 - the certificate of incorporation of the association.
- a municipal Council constituted in accordance with the Local Government Act 1989:
 - full name of the Council; and
 - the address for service of notices.
- a body created under statute:
 - full name of the body and the legislation under which the body is created; and
 - the address for service of notices.

1.2 Application fee

An application fee must accompany all works approval applications. The application fee is the greater of:

- 1 per cent of the estimated cost; or
- 81.83 fee units.

For latest fee unit value refer to the web page [Fees and penalties](#). However, the maximum fee payable is 4,500 fee units.

The 'estimated cost' means the amount that you estimate is required to carry out works, other than any amount required for the purchase of land associated with the works, or to construct or modify any building which will not or doesn't contribute substantially to the control of pollution or to the production capacity of the plant (Refer to Section 6 of Part 2 of the [Environment Protection \(Fees\) Regulations 2012](#)).

Payment methods are made by:

- cheque
- credit card

Works approval application

- electronic fund transfer (EFT).

For the EFT payment, you need to contact EPA's finance unit to arrange the payment.

2. Land use

2.1 Planning and other approvals

The Environment Protection Act 1970 states that a works approval cannot take effect if a planning permit is required and has not been granted.

If your proposed works require a planning permit and since the lodgement of the Proposal Form you have received a planning permit from your council or other approvals from relevant agencies, provide a copy of the permit.

Provide contact details of the planning authority if you submit the planning permit application in conjunction with the works approval application. EPA can then contact them to arrange joint advertising where possible.

For waste tyre storage (A09), identify if located within a Bushfire Prone Area or Bushfire Management Overlays.

2.2 Choice of location for new premises

The environmental impact of a proposal can vary with its location, its siting and layout. Describe key factors for selecting the location, including any environmental considerations.

If applicable, attach a location map.

3. Track record

Summarise your environmental performance for the existing operations at the premises (if applicable) over the past three years, including:

- a summary of any community concerns or public feedback
- a list of any enforcement actions that you have received from EPA, including any written warnings, penalty infringement notices or prosecutions
- the steps you have taken to deal with any environmental issues
- and an explanation of how your proposal will affect any existing issues.

Where applicable:

- Summarise any relevant offences as defined in Section 20C of the [EP Act](#). They include any indictable offences¹ and certain summary offences². Relevant offences are considered by EPA in determining whether applicants are fit and proper persons to hold a works approval. Please note that under Section 20C of the [EP Act](#), EPA may refuse to issue a works approval if you are, in the opinion of EPA, not a fit and proper person to hold the authorisation.
- Indicate whether you³ have been found guilty of any relevant offences in the past 10 years. Where applicable, attach a statement setting out the specific circumstances and why you think those circumstances should not prevent this application from being approved.
- Indicate the recent track record of any other operations in Victoria or interstate.

4. Community engagement

If you did not provide any information regarding or have progressed further in community engagement since lodging your [Approvals Proposal Pathway Form](#), summarise and attach what progress you have made, including:

- the consultation planned or undertaken on this project
- the concerns raised if you have started talking with your neighbours
- an explanation of how you will be addressing these questions.

For details of community engagement requirements refer to Approvals Proposal Form and Pathway Guidelines ([EPA publication 1560](#)).

5. Process and integrated environmental assessment

5.1 Existing operation

¹ And any offence committed outside Victoria that would have been an indictable offence if it had been committed in Victoria on the date it was committed.

² Summary offences under the *Environment Protection Act 1970*, *Dangerous Goods Act 1985*, *Occupational Health and Safety Act 2004* or the *Equipment (Public Safety) Act 1994*.

³ Where you are a corporation, this applies to any director or person who is involved in the management of the corporation.

Explain the existing operation onsite, including:

- facility
- process
- production rate.

5.2 Description of the proposal

Provide a more detailed outline of your proposal, including (where applicable):

- the reasons for your proposal
- what the wastes are and how much the proposal will produce
- the likely hours of operation
- the source of raw materials
- the expected market
- site layout plan if not provided in the Pathway Form
- the separation distance of the site from nearby sensitive premises (houses, schools, hospitals, etc.), water courses (rivers, streams, creeks, etc.).

For a waste or wastewater treatment, handling or disposal operation, describe the nature of the input streams, the input or disposal rates and other relevant information.

5.3 Process and technology

- Explain the key processes and technologies involved in your proposal, including:
- the key inputs, including raw materials, energy and water inputs at each of the key steps in the process
- the key outputs, including emissions, product, by-product and waste outputs at each of the key steps in the process
- the key process controls at each of the key steps in the process, including:
 - any emissions control
 - waste treatment
 - measurement and feedback systems that will be used to manage environmental performance.

Attach:

- a process flow diagram to illustrate the key processes, inputs, outputs and controls
- a resource efficiency diagram⁴ with material balance data included where possible.

For waste tyre storage (A09) provide EPA with a copy of the site fire risk assessment and advice from the responding fire service. Explain how the site will implement the necessary fire hazard controls, including:

- identification of site fire hazards and how all other possible ignition or fuel sources have been minimised
- quantity of fire water and foam required, and the equipment necessary to deliver it to a potential fire.

5.4 Environmental best practice

Best practice is defined as ‘the best combination of techniques, methods, processes or technology used in an industry sector or activity that demonstrably minimises the environmental impact of that industry sector or activity’.

Best practice is a requirement of statutory policy. Under the [EP Act](#) and various SEPPs, the following activities affecting the quality of the environment must be managed in accordance with best practice:

- energy use and greenhouse gas emissions (refer to [6.2.3](#))
- discharging to air (refer to [8.1.2](#))
- noise emissions (refer to [9.2.2](#)).
- discharge to surface water (refer to [10.4.1.1](#))
- solid waste or PIW generation (refer to [12.1.2.2](#) or [12.2.2.4](#))
- solid waste treatment facility (refer to [12.3.3](#)).

You need to demonstrate that your proposal applies best practice in one or a number of above areas. EPA’s [Demonstrating Best Practice – Guideline](#) (EPA publication 1517) provides details, including:

- the meaning of best practice
- guidance on what your application should include, consisting of a methodology for demonstrating best practice and suggested types of evidence and analysis techniques.

Selected scheduled premises prompt sheets provides examples of best practice for most of the scheduled premises.

5.5 Choice of process and technology

The environmental impact of a proposal can vary with the type of raw materials, processes and technology used. In deciding on these, explain:

- what were the key factors, including any environmental considerations

⁴ See *EREP toolkit module 3* (publication 1223) – Guidance (note 2, section 1.2.2, pp. 38–39).

- what were alternatives considered
- the advantages and disadvantages of each option.

5.6 Integrated environmental assessment

There may be aspects of your proposal where further improvement in one area can lead to greater environmental impacts in another. For example, extra aeration at a wastewater treatment plant will produce better water quality but use more energy, and gas scrubbing at a chemical works will produce cleaner air but create more wastewater.

Identify these areas and indicate how you intend to balance the competing considerations to achieve the best overall environmental outcome.

SECTION 2 – Environmental information

Introduction This section provides you with the details of how to address information requirements across all environmental segments relevant to your proposal, including:

- energy and water resources
- air and noise emissions
- water discharges
- waste generations
- land and groundwater contamination.

These elements are relevant to all applications, but the degree of impact varies. Therefore, the details of information requirements contain two levels, except for the land and groundwater.

In addition to the above, this section outlines industry sector-specific questions for premises scheduled under A01, A02, A05, A07, A08 and L02.

Furthermore, to help you to better understand your environmental obligations for each environmental segment, we also include the following information:

- regulatory requirements
- EPA's key assessment considerations, including standards and guidelines.

How to use this section You only need to refer to the information in the areas that are relevant to your application with reference to the generated template for your application (using the [checklist](#) and Appendix B and *Selected scheduled premises prompt sheets*).

In this section

Topics	Page
Energy Use and Greenhouse Gas Emissions	14
• General Information	15
• Detailed Information	15
• EPA's Assessment Considerations – Energy Use and GHG Emissions	15
Water Use	16
• General Information (<10 ML/year)	16
• Detailed Information (>10 ML/year)	16
Air Emissions	16
• Air Emission Assessment	16
• Further Air Emission Assessment	19
Noise Emissions	20
• General Noise Impact Assessment	20
• Detailed Noise Impact Assessment	21
• EPA's Assessment Considerations for Noise Emissions	22
Water	23
• Managing Stormwater Run-off Discharges	23
• Leachate Management From Organic waste processing Activities	24

• Wastewater Treatment System	26
• Discharge to Surface Water	28
Land and Groundwater	29
• Land and Groundwater Impact Assessment	29
• Reuse of Treated Wastewater and Biosolids	30
Waste	32
• Industrial Waste Generation	32
• Prescribed Industrial Waste (PIW) Generation	33
• Waste Handling and Treatment Premises (A01, A02, A07, A08 and A09)	36
• Landfill Premises (A05)	39
• Contaminated Sites – Onsite Soil Containment (L02)	46
• Contaminated sites – Long Term Management (L04)	48
Environmental Management	48
• Risk Assessment of Non-routine Operations	48
• Management System	49
• Construction Impact Management	49

6. Energy use and greenhouse gas (GHG) emissions

When to complete	<p>Complete 6.1 if your proposed works will:</p> <ul style="list-style-type: none"> • use <10 TJ/year of energy or result in <1,000 tCO₂-e/year of energy related GHG emissions; and/or • emit <1,000 tCO₂-e/year of non-energy-related GHG emissions. <p>Complete 6.2 if your proposed works will:</p> <ul style="list-style-type: none"> • use >10 TJ/year of energy or result in >1,000 tCO₂-e/year of energy-related GHG emissions; and/or • emit >1,000 tCO₂-e/year of non-energy-related GHG emissions. <p>Industries that must assess these emissions include landfills and wastewater treatment plants that will emit methane.</p>
Why complete?	<p>Section 14 of the Climate Change Act 2010 (Vic) requires EPA, when it makes a works approval decision, to have regard to the potential impacts of climate change relevant to the decision and the potential contribution of the decision to GHG emissions. Furthermore, Clause 33 of SEPP (AQM) requires that generators of emissions of greenhouse gases implement Protocol For Environmental Management — Greenhouse Gas Emissions and Energy Efficiency in Industry (the Greenhouse PEM), (EPA publication 824) to support measures to address climate change.</p>
What EPA uses this for	<p>To determine the:</p> <ul style="list-style-type: none"> • level of GHG emissions. <p>Further, for detailed information to determine whether:</p> <ul style="list-style-type: none"> • your proposed works has adopted best practice for minimising energy consumption and GHG emissions.

6.1 General information

Indicate the overall level of energy use and energy-related GHG emissions associated with your current and proposed works. For assistance in determining these figures refer to the latest issue of [National Greenhouse Accounts \(NGA\) Factors, published by the Department of Climate Change and Energy Efficiency](#).

Provide the overall emission rate of any non-energy-related GHG associated with your proposal.

6.2 Detailed information

6.2.1 Energy use and greenhouse gas emissions

Provide a detail of your current and expected energy use respectively, including:

- the types of energy or fuel used
- the annual quantity of each
- the associated GHG emissions.

Explain where any current energy use and GHG emissions will be replaced or reduced by the new works.

Explain how you have derived the data provided above (for example, motor capacities and expected operating hours) and provide details if you have relied on factors other than those in the [National Greenhouse Accounts \(NGA\) Factors](#).

Identify the main processes and major equipment items where energy will be used in the new works. Complete this in tabular form or provide pie charts showing the same information.

6.2.2 Non-energy-related greenhouse gas emissions

Provide details of the sources from which non-energy-related GHG emissions are currently emitted and will be emitted by the proposed works. For example carbon dioxide from gas-fired boiler, or methane from landfill and wastewater treatment facilities (refer to [Environmental Guidance for Reducing Greenhouse Gas Emission from Landfills and Wastewater Treatment Facilities](#) (EPA publication 722). Present this information in tabular or graphical form.

Indicate where any current energy use and GHG emissions will be replaced or reduced by the new works.

Explain how you have derived the data provided above, and provide details, if you have relied on factors other than those in the [National Greenhouse Accounts \(NGA\) Factors](#).

6.2.3 Best practice energy and greenhouse gas management

Clause 18 and 33 of SEPP (AQM) requires that generators of emissions of GHG avoid and minimise emissions in accordance with the waste hierarchy, and must apply best practice to the management of their emissions.

Indicate how you determined best practice for your energy use and GHG emissions including:

- the steps taken to identify best practice energy and GHG management, including comparing the available processes and technologies
- the options considered to avoid or minimise GHG emissions, including comparing energy efficiency indicators for this proposal against industry standards
- an explanation of why the chosen option is best practice, including the reasons for your selected process.

Where applicable, discuss how your proposal may contribute to regional GHG emissions.

6.3 EPA's assessment considerations – Energy use and GHG emissions

Steps	EPA considerations	Further details
1	Annual quantity of energy use and energy-related GHG emissions	Greenhouse PEM section 2.1 step 3
2	Best practice energy management	Greenhouse PEM requirement now applied to applications with more than 10,000 GJ/year of energy use or 1,000 tCO ₂ -e/year of GHG emissions. Applicant must implement best practice. Refer to EPA publication 1517
3	Annual quantity of non-energy-related GHG emissions	Greenhouse PEM section 2.1 step 3

4	Best practice GHG emissions management	PEM requirement now applied to applications with >1,000 t CO ₂ -e/year of GHG emissions. Applicant must implement best practice. Refer to EPA publication 1517
---	--	---

7. Water resource use

When to complete	Complete 7.1 if your proposed works will use water < 10 ML(mega litre) /year. Complete 7.2 if your proposed works will use water >10 ML/year.
Why complete?	Clause 40 of SEPP (WoV)) requires that water-saving practices be implemented to ensure a sustainable water supply.
What EPA uses this for	To determine whether your proposed works: <ul style="list-style-type: none">• use significant water resources• have adopted best practice in minimising water consumption.

7.1 General information

Indicate your current and expected annual water usage if it is <10 ML/year.

7.2 Detailed information

7.2.1 Water use in process

Indicate your current and expected annual water usage if it is >10 ML/year.

Explain the following:

- the main process areas where water is used (for example, cooling water, boiler-feed water)
- the amounts that will be used in each of the key process areas.
- how you estimated these figures, including any existing water usage rates.

7.2.2 Water use best practice

Explain how the proposal has adopted best practice:

- the steps taken to identify best practice for saving water, including comparison of available processes and technologies
- the options considered to avoid or minimise water usage
- explain why the chosen option is best practice, including comparison of water efficiency of this proposal compared to industry standards.

An example of best practice is to harvest roof run-off or stormwater for use in the process. You may consider this option, particularly if you are a big user of water and generate a large volume of run-off.

8. Air emissions

8.1 Air emission assessment

When to complete	Complete 8.1 if your proposed works will cause an increase or alteration in air emissions. <div>① If your proposed works do not cause an increase/or alteration of air emissions, briefly explain the reason in the checklist.</div>
Why complete?	Air emissions must be managed in accordance with the State Environment Protection Policy (Air Quality Management) SEPP (AQM)). The goals of the policy (clauses 6, 8 and 9) include protecting human health and local amenity, as well as achieving the cleanest air possible.

What EPA
uses this for

To determine:

- types and levels of air emissions
- whether air emissions are managed in accordance with the SEPP (AQM), including :
 - the adoption of best practice in managing air emissions
 - air emission assessment
 - emission levels in compliance with standards specified in the SEPP (AQM).

8.2 Air emission sources

Schedule A of SEPP (AQM) prescribes air pollutants classified as Classes 1, 2, 3 and also provides unclassified indicators.

Describe the existing works in relation to air emissions:

- the existing emissions source, including area or volume source
- the existing stack emission details:
 - stack height and diameter
 - exhaust gas flow velocity, rate and temperature.

Describe proposed works in relation to air emissions:

- the future emissions source, including area or volume source
- details of air emissions, including:
 - source/process step
 - indicators (for example, combustion gases, solvents, odours, dust or other chemicals)
 - the emission rate of each pollutant
- explain how you estimated these figures
- the future stack emission details:
 - stack height and diameter
 - exhaust gas flow velocity, rate and temperature.

8.2.1 Air quality management best practice

Clauses 18 and 19 of SEPP (AQM) require that generators of emissions must apply best practice to manage those emissions. Indicate how you determined best practice for your air emissions, including:

- the steps taken to identify best practice for air emissions
- why the chosen option is best practice
- the options considered to avoid or minimise air emissions.

Clause 20 of the air policy requires that Class 3 indicators⁵ must be reduced to the maximum extent achievable. Indicate:

- how you determined the maximum extent achievable for your Class 3 indicator emissions
- the options considered and the reasons for the chosen option.

8.2.2 Air quality impact assessment

Where air emissions may impact on local amenity or public health, they should be assessed against the requirements in clauses 10, 27, 28 and Schedule A of SEPP (AQM).

8.2.2.1 Point source emission assessment

These air emissions need to be assessed against the design criteria specified in Schedule A of SEPP (AQM), involving:

- select air dispersion model and meteorological file
- undertake modelling to predict the ground level air quality once emissions are dispersed
- compare the predicted ground level concentrations (GLCs) with the design criteria for each indicator. The predicted GLCs should include relevant background concentrations⁶ and any significant nearby emissions sources. EPA should be consulted on establishing the relevant background concentrations
- comment on any uncertainties in the emission rates or the modelling that may lead to underestimates of these concentrations, where predicted concentrations are close to the design criteria.

Modelling requirements:

Clause 28 of the SEPP (AQM) requires that modelling must be done in accordance with Schedule C, including the use of air pollution regulatory model. From 1 January 2014, the regulatory model is AERMOD. However, if you have a good

⁵ Class 3 indicators are extremely hazardous substances that are carcinogenic, mutagenic, teratogen, highly toxic or highly persistent, and which may threaten the beneficial uses of the air environment. Refer to clause 10 of SEPP (AQM).

⁶ See State Environment Protection Policy (Air Quality Management) Schedule C Part B (3).

reason for not using EPA's standard air dispersion model, you will need to contact us and obtain approval for the use of your proposed model.

For details of the AERMOD model refer to web page: [AERMOD air pollution modelling](#) and the following guidelines:

- [Construction of Input Meteorological Data Files for EPA Victoria's Regulatory Air Pollution Model \(AERMOD\)](#) (EPA publication 1550).
- [Guidance Notes for Using the Regulatory Air Model AERMOD in Victoria](#) (EPA publication 1551).

You may also wish to check that you are using appropriate input and meteorological data, the correct model options and an appropriate receptor grid and/or specific receptors.

Provide air quality modelling report.

8.2.2.2 Fugitive emissions

For assessing the impact of fugitive emissions, if emission levels cannot be quantified, demonstrate that best practice is applied to minimise emissions.

8.2.2.3 Other information

You should also complete the relevant sub-section as specified below, if any of the following statements are relevant to your application:

Scenarios	Tick relevant box	Complete further information
Predicted emission levels above the design criteria during equipment start-up or shut down	Yes <input type="checkbox"/>	8.2.1 Emissions during start-up or shut down
Predicted ground level concentration above the design criteria	Yes <input type="checkbox"/>	8.2.2 Risk assessment
Very large air emissions in or around air quality control regions	Yes <input type="checkbox"/>	8.2.3 Impact on air sheds
Proposed air emission limits for new licence or licence amendment	Yes <input type="checkbox"/>	14.2 New Licence or Licence Amendment Subsequent to Works Approvals

8.2.3 EPA's assessment considerations for air emissions

Steps	EPA considerations	Further details
1	Meet separation distance requirement	Meet requirements in Recommended Separation Distances for Industrial Residual Air Emissions – Guideline (EPA publication 1518)
2	Emission sources and types of indicators	Part II and Schedule A of SEPP (AQM)
3	Best practice and control measures: <ul style="list-style-type: none"> • adopt best practice for managing classes 1 and 2 indicators. • adopt the maximum extent achievable for managing emissions of class 3 indicators • any other control measures. 	<ul style="list-style-type: none"> • comply with clauses 18 and 19 and part IV SEPP (AQM); and/or • comply with clauses 20 and part IV of SEPP (AQM).

4	<p>Impact assessment:</p> <ul style="list-style-type: none"> air emissions of the predicted ground level concentrations (GLC) are appropriately calculated air emissions of the predicted GLC (including relevant background concentrations and any significant nearby emission sources) will impact on local amenity or public health proposed stack emissions limits meet the policy requirements comment on any uncertainties in the emission rates or the modelling that may lead to underestimates of these concentrations 	<ul style="list-style-type: none"> calculate by using established data of similar technology/proven operation; or modelling meets the requirements of clause 28 and schedule C of SEPP (AQM). EPA publications 1550 and 1551 explain air modelling comply with the design criteria in clauses 10, 27 and 28, and schedules A and C of SEPP (AQM) comply with Schedules D or E for of SEPP (AQM)
---	---	---

8.3 Further air emission assessment

8.3.1 Emission during plant start-up or shut down

When to complete	Complete 8.2.1 if your proposed works generate abnormal emissions during start-up or shut down.
Why complete?	Clauses 23 of SEPP (AQM) may allow emission limits in Schedules D and E to be exceeded during plant start-up or shutdown under specific conditions.
What EPA uses this for	To determine whether the predicted emissions are acceptable.

Specify circumstances of these situations, including the frequency, duration and predicted emission levels and address the management of these events.

8.3.2 Risk assessment

When to complete	EPA may require you to undertake a risk assessment when predicted GLCs are above the design criteria.
Why complete?	Clause 16 of SEPP (AQM) states that a risk assessment may be used, including the assessment of the environmental and health impacts of air pollution.
What EPA uses this for	To determine whether the risk level is acceptable.

The risk assessment will involve determining the frequency and severity of concentrations that are predicted to be above the design criteria and the levels of public exposure and reassessing options for reducing air emissions.

① You should contact EPA to discuss and agree on the scope of work prior to undertaking a risk assessment.

8.3.3 Impact on air sheds

When to complete	If your proposed works will involve very large air emissions in or around air quality control regions, for example, Melbourne and Geelong (Port Phillip Airshed) or the Latrobe Valley, you will need to assess your impact on regional air quality.
Why complete?	Clause 30 of SEPP (AQM) states that “for the purpose of improving or maintaining regional air quality within an air quality control region, the Authority (EPA) may require emission generators to reduce their

emissions to a greater extent than required by clause 18 and 19”.

What EPA uses this for

To determine:

- the level of impact in the regional air shed
- whether your emissions need to be reduced to a greater extent.

Very large air emissions for the Port Phillip region are specified below, which represent approximately 1 per cent of total regional emissions:

- >1000 t/year nitrogen oxides
- 2000 t/year volatile organic compounds
- > 200 t/year particles.

① You should contact EPA to discuss and agree on the scope of work prior to undertaking an impact assessment on regional air quality.

9. Noise emissions

When to complete

Complete 9.1 if your proposed works will generate or cause an increase in noise emissions:

- that are inaudible at the nearest sensitive receptors
- and the sound power level of emission from each source is <80 dB(A).

Complete 9.2 if your proposed works will generate or increase noise emissions:

- that are audible at the nearest sensitive receptors, and/or
- sound power level of emission from each source is ≥80 dB(A).

① If your proposed works do not result in an emission of audible noise at the nearest noise sensitive receptors, or change to existing emissions, briefly explain the reason in the [checklist](#).

Why complete?

If your proposed works will generate or cause an increase in noise emissions, you must manage them in accordance with relevant noise policy and guidelines as below:

- [State Environment Protection Policy \(Control of Noise from Commerce, Industry and Trade\)](#) No N-1 (SEPP N-1). This applies to premises located in Melbourne ‘metropolitan region’.
- [Noise From Industry in Regional Victoria \(NIRV\)](#) (EPA publication 1411). This applies to premises located in the rest of Victoria.

The main goal of these documents is to protect the sleep and amenity of residents from the impact of industrial noise.

What EPA uses this for

To determine whether:

- the proposed works will cause an increase in noise emissions or the noise emissions are audible at the nearest receptors.

Further detailed noise assessment to determine whether:

- the proposal has adopted best practice in managing noise emissions
- emission levels will comply with the noise limits SEPP N-1 or [NIRV](#).

9.1 General noise impact assessment

Provide the following:

- any existing equipment that will continue to operate
- new equipment associated with the proposed works
- their hours of operation
- audibility at the most affected residences, or other noise sensitive receptors.

9.2 Detailed noise impact assessment

① You should contact EPA to discuss and agree on the scope of work prior to undertaking a detailed noise assessment.

When noise modelling is required, you should engage an acoustic consultant who is suitably qualified and a member of the Association of Australian Acoustical Consultants to undertake the assessment.

9.2.1 Noise emission sources

Describe existing work in relation to noise emissions:

- indicate any existing noise emissions and whether they comply with relevant noise limits. These limits are defined in accordance with the Schedule B of SEPP (N-1) in the metropolitan area or Part 3 of [NIRV](#) in the regions.
- explain how you manage current emissions if your existing operation doesn't comply with the relevant limits. For example, whether you have an EPA-approved Noise Environment Improvement Plan (noise EIP). Clause 15 of SEPP N-1 requires that where noise emissions from existing premises exceed the limits, the occupier should undertake steps to reduce the level of noise emissions to, or below, the relevant noise levels.

Describe proposed works in relation to noise emissions:

- identify the sources and types of your noise emissions from the proposed works (for example, constant hum from fans, reversing beepers on forklifts). Noise emissions should be expressed in dB(A).
- explain how you estimated these figures.

9.2.2 Best practice noise control measures

Clause 19 of SEPP N-1 states that “where equipment is to be replaced or new equipment installed, the quietest equipment available should be used where a significant noise reduction in sensitive areas can be expected to occur”.

[NIRV](#) Part 3 restates this obligation. It also advises that industry should apply routine noise control measures where these will have a demonstrable reduction in noise at sensitive areas.

SEPP N-1 and [NIRV](#) refer to noise-control measures that:

- have a significant or demonstrable reduction in noise
- reduce noise at noise sensitive areas.

Demonstrate how you will minimise noise emissions:

- explain how you choose equipment and/or control measures to minimise your noise emissions. This may include using silencers and acoustic enclosures and locating noisy equipment and doors and openings away from residents
- compare the available processes and technologies
- explain the reasons for selecting the equipment and control measures proposed.

9.2.3 Noise impact assessment

9.2.3.1 Noise control measures

Describe what noise control measures have been adopted in key noise process areas.

9.2.3.2 Determining noise limits

Clause 16 of SEPP N-1 requires that new proposals in the Melbourne metropolitan region must be designed to meet the relevant noise limits for daytime, evening and night-time. In the regions, recommended maximum noise levels (the recommended levels) should be complied with.

Provide noise limits applicable to your proposal and explain how you have determined them. Note that:

- these limits/recommended levels for your proposal will depend on the background noise in the area and the surrounding mix of residential, industrial and other zonings. Assess the closest dwellings, or other noise sensitive receptors and any others where your noise impact may be significant.
- SEPP N-1 provides procedures for determining limits in the Melbourne metropolitan region, whereas [NIRV](#) provides procedures for determining the recommended levels in regional Victoria.

9.2.3.3 Multiple premises making noise

If there are other or future noise sources on your site or in the area, you must include these emissions in your assessment and demonstrate that the total emissions meet the noise limits or the recommended levels, as explained below:

SEPP N-1 area

Clause 18 of SEPP N-1 requires that “where two or more premises contribute to the effective noise level in a noise-sensitive area, each should be controlled, so that the contribution from each of the premises, when combined, will meet the noise limits at the noise sensitive area”. Appendix F of [SEPP N-1 and NIRV Explanatory Notes](#) (EPA publication 1412) further explains that new individual noise sources should be chosen, sited or abated so that the noise contributions are 10–15 dB below the noise limits.

① For a new facility, [EPA publication 1412](#) provides a formula to apply when designing for total noise emissions to meet the noise limit.

NIRV area:

[NIRV](#) requires that the recommended levels apply to the total of all industrial noise emissions affecting a noise-sensitive area. Section 5 of [Applying NIRV to Proposed and Existing Industry](#) (EPA publication 1413) explains that the noise emissions from an individual site should be no greater than the recommended level, minus three decibels (3 dB), for each period of the day.

9.2.3.4 Noise impact calculation or modelling

Levels of noise impact assessment will depend on scale of a project, number of noise emission sources and separation distances. The following table outlines the general rules for the levels of noise impact calculation:

Scale of project/component of project	Levels of assessment
Complex or large project (power station, chemical complex, refinery)	Noise modelling required
Many noise sources or refrigeration plant, cooling tower	Noise modelling required
A few noise sources	Noise calculation required

Where predicted noise levels are close to the limits or the recommended levels, comment on any uncertainties in the noise emission rates or the modelling that may lead to underestimates of these levels.

Provide noise modelling report or calculation details where applicable.

9.3 EPA's assessment considerations for noise emissions

Steps	EPA considerations	Further details
1	Locations of noise-sensitive receptors relative to the site	Show on a map
2	Emission sources identified Any other noise sources in the area considered.	Clause 18 of SEPP N-1 or 2.2 of NIRV
3	Best practice and control measures Noise from multiple premises: <ul style="list-style-type: none">SEPP N-1 areaNIRV area	<ul style="list-style-type: none">adopt best practice for minimising noise emissions (clause 19 of SEPP N-1)noise from multiple premises:<ul style="list-style-type: none">meet requirements in Appendix F of EPA publication 1412meet requirements in section 5 of EPA publication 1413

4	<p>Impact Assessment</p> <ul style="list-style-type: none"> background noise is appropriately measured noise limits/recommended levels are appropriately calculated predicted noise levels, including adjustments for annoying characteristics of the noise are appropriately calculated or modelled predicated noise levels comply with relevant limits/recommended levels, and predicted combined noise from all industrial and commercial sources meet relevant limits/recommended levels. where predicted noise levels are close to the limit, comment on any uncertainties in the emissions or the modelling that may lead to underestimates of emission levels 	<ul style="list-style-type: none"> using procedures specified in Schedule C of SEPP N-1 calculate using steps specified in Schedule B of SEPP N-1 or Part 3 of NIRV noise modelling is conducted as agreed with and acceptable to EPA meet requirements: <ul style="list-style-type: none"> in Appendix F of EPA publication 1412 in SEPP N-1 area section 5 of EPA publication 1413 in NIRV area
---	---	--

10. Water

10.1 Managing stormwater run-off discharges

When to complete	Complete 10.1.1 if your proposed works will result in generating contaminated stormwater.
Why complete?	Clause 39 of the EP Act requires that a person shall not pollute any waters.
What EPA uses this for	To determine whether you have considered sufficient measures to prevent surface water contamination.

10.1.1 Stormwater management

Contaminated stormwater and process wastewater must not be discharged to stormwater drains or surface water. Stormwater run-off from process areas is likely to be contaminated. For example, run-off from a galvanised steel roof can contain toxic levels of zinc. For example, run-off from areas exposed to heavy traffic on a premises can contain hydrocarbons and hardstands on a rendering plant can contain high organic load, oil and grease.

Demonstrate that pollutants are contained within the site boundary and there is no discharge of contaminated stormwater to surface water/stormwater drains:

- explain the existing and future stormwater management system, including:
 - stormwater catchment area, indicating the contaminated run-off area and volumes based on at least the 9th decile (90th percentile) wet year
 - sources and types of contaminants
 - attach map of stormwater catchment.
- describe how you segregate contaminated and uncontaminated stormwater, including:
 - containment and collection of contaminated run-off
 - control measures relating to storage of materials (bundling design details)
 - possibility of accidental spills, preparation of contingency plans, and appropriate disposal methods.
- indicate whether contaminated stormwater is treated prior to its discharge. If yes:
 - describe the treatment system and design calculation. For example, if you have a first flush system or triple interceptor, please provide design assumptions, catchment area, how the system operates and supporting calculations
 - provide design drawing of contaminated stormwater treatment system.

For stormwater management and pollution control measures for thermophilic, aerobic composting facilities, refer to Designing, constructing and operating composting facilities (EPA publication 1588).

For organic waste reprocessing (A07) and waste tyre storage (A09), areas for waste material processing or storage are to have the additional capacity to contain surface runoff from the site during fire fighting activities as informed by a site fire risk assessment.

① You must complete chapter [10.3](#) of Part B if the treatment system involves a wastewater treatment plant.

10.1.2 EPA's assessment considerations for stormwater management

Steps	EPA considerations	Further details
1	Type of pollutants	
2	Containment of pollutants, for example, waste and chemical storage	Meet the requirements in EPA publication 347 .
3	Contaminated run-off adequately segregated	
4	Treatment <ul style="list-style-type: none"> properly design and adequate capacity (for example, first flush or triple interceptor) wastewater treatment plant 	<ul style="list-style-type: none"> refer to 10.3 of Part B
5	Quality of contaminated run-off is suitable for its disposal method: <ul style="list-style-type: none"> tanker away discharger to waterway apply on land 	<ul style="list-style-type: none"> comply with SEPP (WoV) comply with EPA publication 464

10.2 Leachate management from organic waste processing activities

When to complete	<p>Complete 10.2.1 if the premises will process waste by aerobic or anaerobic biological conversion and:</p> <p>(a) accept more than 100 tonnes or 200 cubic metres of organic waste in any month; or</p> <p>(b) accept more than 70 tonnes or 140 cubic metres of organic waste in any month and produce more than 50 tonnes of pasteurised material, compost or digestate in any month.</p> <p>Potential scheduled premises are: A07, A08, B01 or D01.</p>
Why complete?	Leachate from organic waste processing can be contaminated by toxic material, nutrients, micro-organisms, organics salts and/or metals. These may post a risk of environmental impact on receiving surface water, groundwater or soil.
What EPA uses this for	To determine whether leachate will be managed properly to prevent it causing contamination to land, a waterway or groundwater.

10.2.1 Organic waste processing facility

Organic waste processing facilities for aerobic composting must be sited, designed and managed in accordance with the requirements specified in the EPA publication 1588.

Specify the following:

- the separation distance between the compost pad and water courses (rivers, streams, creeks, etc.)
- the distance to the groundwater table.

For a commercial compost facility, provide:

- characteristics of the current groundwater quality
- soil type and permeability of underlying site
- the contamination status of underlying soil.

Explain leachate management, including the collection, storage, treatment and disposal:

- leachate flow and method of leachate collection
- estimated volume. All contaminated water should be treated as leachate. This must be based on water balance calculation (for example, rainfall, water use and evaporation), using at least the 9th decile (90th percentile) and a one-in-20 year storm event (attach water balance calculation)
- design of leachate collection dam (permeability, liner, capacity). The dam should be constructed with an impermeable lining
- method of leachate treatment (aeration etc.)
- maintenance of leachate collection dam (freeboard)
- consideration of design features for stormwater in EPA Publication 1588, including built-in redundancy, permeability of 1x10⁻⁹m/s etc.

Explain compost pad /facility design, including dimensions, compaction, soil leachability, and bunding. The pad should:

- be sloped from the composting pad towards leachate dam to capture leachate
- be constructed with cut-off drains, bunding and hard standing to keep contact water separate from clean stormwater, and to minimise groundwater intrusion
- composting pad should be sealed using suitable, stable, low-permeability (1 x 10⁻⁹m/s) construction material such as concrete or low permeable clay, that is able to support the weight of the material and machinery
- have a few metres of grass/turfed planted which act as a sediment filter between the pad and the pond
- have windrows and piles between 1.5 and 3 metres high.

Explain method of separating uncontaminated stormwater from the site and contaminated stormwater from the organic waste processing operation. For example, bunding or cut-off drains are provided around compost pad to segregate leachate from clean stormwater run-off.

10.2.2 EPA's assessment considerations for organic waste processing management

Steps	EPA considerations	Further details
1	Separation distance	Distances to sensitive receptors (for example, surface water, groundwater): <ul style="list-style-type: none"> • 100 metres to watercourse where practicable • 2 metres to groundwater (Landfill BPEM criteria)
2	Surface water	The proposed stormwater management practices are adequate/reasonable – refer to 10.1.1 of Part B
3	Groundwater	Groundwater is protected, for example, <ul style="list-style-type: none"> • soil type and permeability • groundwater table and background condition • permeability of composting pad • permeability of the leachate collection dam (for example, with liners)
4	Leachate	Leachate management, including its collection, storage, treatment, treatment and/or reuse or disposal. Design of leachate collection dam: <ul style="list-style-type: none"> • accuracy of leachate volume calculation using 9th decile (90th percentile) wet year • sufficiency capacity Proposed leachate treatment and disposal method

10.3 Wastewater treatment system

When to complete	<p>Complete 10.3 if:</p> <ul style="list-style-type: none">• your premises:<ul style="list-style-type: none">- is or will be scheduled under the Scheduled Premises Regulations as Sewage Treatment (A03), or- involves operating a wastewater treatment system which does not discharge to a centralised treatment plant. <p>and</p> <ul style="list-style-type: none">• you intend to:<ul style="list-style-type: none">- discharge the wastewater to surface water, or- apply the treated wastewater on land for reuse.
Why complete?	<p>SEPP (WoV) governs the management of treated domestic and industrial wastewater, including its discharge to waterways, recycling and reuse on land. The goal of the policy is to protect the beneficial uses of surface waters.</p> <p>Your application needs to demonstrate that the quality of treated wastewater is suitable for its intended discharges, recycling or reuse and meets standards set in the policy and/or relevant guidelines, as specified below.</p>
What EPA uses this for	<p>To determine wastewater is adequately treated for its intended discharges, recycling or reuse.</p>

10.3.1 Existing wastewater treatment system

Describe the existing wastewater treatment system, including:

- sources of wastewater
- quality and quantity of wastewater
- existing wastewater treatment processes
- treated wastewater quality, including quality monitoring data
- indicate where the treated wastewater is discharged to or disposed of.

10.3.2 Proposed wastewater treatment system

Characterise the quality and quantity of raw wastewater in the proposed system, including:

- sources of wastewater
- characteristics of raw wastewater
 - flow rates
 - contaminants
 - BOD
 - SS
 - toxicants (for example, heavy metals)
 - pH
 - E.coli, etc.

Explain how flow rates and contamination of raw wastewater have been determined. You may refer to [Code of Practice for Small Wastewater Treatment Plants \(EPA publication 500\)](#).

Describe the proposed treatment system and attach a flow diagram showing proposed treatment segments.

Provide engineering calculations proving that the proposed wastewater treatment is suitable for intended discharge/disposal or reuse, as explained below:

- reuse in compliance with the standards set in Table 1 of [EPA publication 464 and/or Industrial Water Reuse \(EPA publication IWRG632\)](#)
- discharge to inland or marine waters in compliance with Clause 27 of SEPP (WoV) which requires that the beneficial uses of surface waters must be protected
- application of waste in compliance with SEPP (GoV), particularly Clause 16
- technical drawings of the wastewater treatment plant drawn to scale. They must show all main parts of the wastewater treatment system and their dimensions.

10.3.3 Treated wastewater quality and compliance with SEPP (WoV)

Describe the targeted quality and quantity of treated wastewater.

Comment on compliance with SEPP (WoV), specifically:

- clause 27 if discharge to waterway, or
- clause 31 if disposal to land.

10.3.4 Sludge management

If biosolids are generated on site, they must be managed to meet the requirements specified in [Guidelines for Environmental Management: Biosolids Land Application \(EPA publication 943\)](#).

Provide the following:

- the estimated volume of sludge produced per annum
- method of biosolids treatment.
- classification of biosolids in accordance with Tables 1 and 2 of [EPA publication 943](#).
- explain the proposed biosolids end-use.

10.3.5 Other information

You must also complete other relevant information as indicated below, if any of the following statements are relevant to your application.

Type of waste	Destination	Tick relevant box	Complete further information
Wastewater	Waterway	Yes <input type="checkbox"/>	10.4 Discharge to surface water
	Land	Yes <input type="checkbox"/>	11.2.1 Reuse of treated wastewater
Sludge	Land	Yes <input type="checkbox"/>	11.2.2 Reuse of biosolids assessment

10.3.6 EPA's assessment considerations for wastewater treatment systems

Steps	EPA considerations	Further details
1	Separation distance	Comply with EPA publication 1518
2	Best practice	Comply with EPA publication 1517
3	Flow rate and BOD loadings	Measured or calculated in accordance with Table 2 of EPA publication 500
4	Wastewater treatment design	Comply with typical design parameters published in reputable scientific literature, EPA publication 500 or manufacturer's specification
5	Discharge to land	Comply with EPA publications 464 and Guidelines for Waste Irrigation (EPA publication 168)
6	Discharge to water	Comply with SEPP (WoV)

10.4 Discharge to surface water

When to complete	Complete 10.4 if you intend to discharge contaminated stormwater, process wastewater or treated wastewater to surface water.
Why complete ?	Discharge of wastewater to surface water must be managed in accordance with SEPP (WoV).
What EPA uses this for	<p>To determine:</p> <ul style="list-style-type: none">• whether the discharge to surface will be unavoidable• whether the discharge will not cause impact to the receiving water• what extent of a mixing zone will be required, if applicable.

10.4.1 Justification for discharging to surface waters

Usually wastewater should be discharged to sewer, irrigated to land or reused. Clauses 27, 28 and 29 of SEPP (WoV) require that discharge of wastewater is managed in accordance to the waste hierarchy: avoidance, reuse and recycling. The highest priority is avoidance. Disposal of wastewater to surface waters should be the last option.

Explain why discharge to inland water/marine environment is the only option there is for wastewater disposal:

- how wastewater and waste produced during a treatment process are managed
- what options were considered to avoid or minimise the need to discharge treated wastewater to inland water or marine environment.

10.4.2 Background condition of receiving water

Characterise flow regimes for rivers and streams or the nature of water movements in marine environments, including tidal flows.

Provide water quality and the biological condition of the receiving inland water or marine environment.

10.4.3 Wastewater characteristics

Characterise the quality and quantity of wastewater discharged to inland water or marine environment, including:

- volume
- toxicants:
 - heavy metals
 - ammonia
 - organic chemicals
- plant nutrients
- salinity
- oxygen-demanding substances
- suspended sediment
- pathogens
- stressor⁷ levels in an effluent discharge.

10.4.4 Risk assessment

An ecological risk assessment may be required for proposed discharging to surface water. This will be determined considering volume of discharges, characteristics of wastewater and sensitivity of receiving waters (for example, high conservation significance).

① You should contact EPA to discuss and agree on the scope of work prior to undertaking an ecological risk assessment.

If a risk assessment is required, refer to [Guidelines for Risk Assessment of Wastewater Discharges to Waterways](#) (EPA publication 1287) which provide guidance on how to conduct wastewater discharge risk assessments.

⁷ Stressors are defined as any physical (for example, scouring, sediment deposition), chemical (for example, toxicants) or biological entity (for example, bacteria) that can induce a harmful response in a value. Refer to [Guidelines for Risk Assessment of Wastewater Discharges to Waterways](#) (EPA publication 1287).

10.4.5 Mixing zone

A mixing zone is an area with explicitly defined boundaries where SEPP (WoV) environmental quality objectives or background levels may be exceeded, but beyond which they must be met.

Clause 30 of SEPP (WoV) states that EPA may approve a mixing zone where it is not practicable to avoid, reuse, recycling and effectively manage wastewater. To meet this requirement:

- justify why a mixing zone is required
- define and provide the drawing of the mixing zone if it is different to the existing one and explain how you determine it.

[Guidance for the Determination and Assessment of Mixing Zones](#), (EPA publication 1344) provides the assessment and designation of mixing zones.

10.4.6 EPA's assessment considerations for discharges to surface water

Steps	EPA considerations	Further details
1	Risk assessment	Comply with EPA publication 1287
2	Determination of the mixing zone	Comply with EPA publication 1344
3	Beneficial uses of surface waters are protected	Comply with clauses 10, 11, 27, 28, 29 and 30 of SEPP (WoV) SEPP objectives are for the protection of beneficial uses in particular water segments. Comply with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality

11. Land and groundwater

11.1 Land and groundwater impact assessment

When to complete

Complete 11.1 if your proposed works will involve any of the following:

- underground storage of petroleum
- pipeline transfer of petroleum
- groundwater extraction
- injection of waste to groundwater.

Why complete?

The beneficial uses of soils and groundwater must be protected as outlined in SEPP (PMCL) and SEPP (GoV).

SEPP (PMCL) states that:

- contamination of land must not adversely affect produce quality or yield (Table 2).

SEPP (GoV) states:

- beneficial uses will be protected (clause 9)
- the groundwater quality indicators and objectives (clause 10)
- that a hydrogeological assessment to determine risk to groundwater beneficial uses may be required (clause 16)
- when an attenuation zones can be designated (clause 17)
- when non-aqueous phase liquid is permitted (clause 18)
- when direct waste discharge to groundwater is permitted (clause 20)
- the requirements of groundwater monitoring and assessment (clause 29).

What EPA uses this for	<p>To determine the proposed activities will not cause:</p> <ul style="list-style-type: none"> land and/or groundwater contamination impact to groundwater level.
------------------------	---

① You should discuss your proposal with EPA to agree on the scope of the assessment as the information requirement is case specific.

Land and groundwater impact assessments typically include the explanation of:

- beneficial uses or locations of sensitive uses (for example, waterways, houses, etc.)
- the level of groundwater table and whether the proposal intersects with the groundwater table
- the compaction and permeability of soil
- the groundwater flow using information from the Visualising Victoria's Groundwater website (www.vvg.org.au)
- how the proposal has adopted best practice in preventing land and groundwater pollution.

The following guidelines provide information about EPA's requirements for installation and management of underground petroleum storage systems:

- [Guidelines on The Design, Installation and Management Requirements for Underground Petroleum Storage Systems](#) (EPA publication 888).
- [Design, Installation and Management Requirements for Underground Petroleum Storage Systems](#) (EPA publication 892).

You may be required to undertake a hydrology assessment to determine any existing groundwater contamination and any resulting risk to the beneficial uses of groundwater. Refer to [Hydrogeological Assessment \(Groundwater Quality\) Guidelines](#), EPA publication 668.

11.2 Reuse of treated wastewater and biosolids

When to complete	Complete 11.2 if you intend to reuse treated wastewater on land.
Why complete?	<p>Reuse of treated wastewater on land must protect the beneficial uses of soils, groundwater and surface water as outlined in the relevant SEPPs: SEPP (WoV), SEPP (PMCL) and SEPP (GoV). For example:</p> <p>SEPP (PMCL) states that:</p> <ul style="list-style-type: none"> contamination of land must not adversely affect produce quality or yield (Table 2) the occupier of a premises, where the principal activity is storing or handling chemical substances or waste that has the potential to contaminate land should prepare and implement an environment improvement plan. <p>Clause 31 of SEPP (WoV) requires that reuse of wastewater:</p> <ul style="list-style-type: none"> is sustainable and does not pose an environmental risk to the beneficial uses of surface waters and groundwater be consistent with the EPA publication 464. <p>Clause 16 of SEPP (GoV) requires Hydrogeological Assessment to determine risk to the beneficial uses of groundwater.</p>
What EPA uses this for	<p>To determine the proposed reuse is sustainable and will not cause:</p> <ul style="list-style-type: none"> long-term soil impact surface water and groundwater contamination.

11.2.1 Reuse of treated wastewater

11.2.1.1 General information

Provide the following:

- volume of wastewater reused
- organic loading
- water balance budget for 90th rainfall event and nutrient balance budget calculations to determine the required irrigation area and winter storage
- explanation of the proposed irrigation system, including:

- a schematic diagram of the irrigation system, including irrigation area, winter storage, cut-off drains, run-off collection lagoon, moisture probes, groundwater monitoring bores, etc.
- a description of the type of irrigation system: flood, spray, trickle or furrow and separation distances.
- explain how your proposal compares with the reuse guidelines: [EPA publications 464 and/or IWRG632](#).

① If you can demonstrate compliance with [EPA publication 464](#), you don't need to obtain a works approval and licence for operating the reuse scheme. You can operate under an reuse environmental improvement plan (EIP) approved by EPA (refer to [11.2.1.4](#)).

11.2.1.2 Impact on soil

Provide the following:

- site selection consideration with reference to section 7.1.1 of [EPA publications 464](#)
- identification of likely impacts on the soils, including nutrient build up, soil salinity, sodium absorption ratio, etc.
- a proposed soil monitoring program, including parameters, frequency and locations.

11.2.1.3 Impact on groundwater

Identify any potential impacts on groundwater, including:

- groundwater quality and segment in accordance with Table 2 of SEPP (GoV)
- predicted concentration and water quality objective.

① Where any predicted concentrations are above the objectives, provide an attenuation zone assessment (refer to [Groundwater Attenuation Zones](#), EPA publication 841).

Assess any impacts on the level of the water table.

11.2.1.4 Reuse environmental improvement plan(EIP)

Under Regulation 11 (d) of the Scheduled Premises Regulations, an effluent reuse scheme or activity which meets discharge, deposit and operating specifications acceptable to EPA can be exempted from licensing to operate.

To meet this requirement, normally you are required to submit an EIP to demonstrate how you will ensure a safe and sustainable reuse scheme. An EIP, prepared in accordance with [EPA publication 464](#) must be approved by EPA. The EIP must contain a monitoring program for the treated wastewater, soil and groundwater.

Wastewater reuse schemes that will use less than 1 ML of reclaimed water on any day do not require EPA approval. However, an EIP for all Class A reuse schemes must be approved by EPA, refer to [Guidelines for Environmental Management: Dual Pipe Water Recycling Schemes – Health and Environmental Risk Management](#) (EPA publication 1015).

11.2.2 Reuse of biosolids assessment

① You should contact EPA to agree on the scope of the assessment prior to undertaking the assessment.

The assessment should demonstrate compliance with [EPA publication 943](#).

11.2.3 EPA's assessment considerations for reuse of biosolids

Steps	EPA considerations	Further details
1	Suitability of land for reuse	Soil type, soil salinity, nutrient levels
2	Water balance budget	Consider 9 th decile (90 th percentile) rainfall event and evaporation to determine required reuse area and winter storage capacity
3	Nutrient balance budget	Consider nitrogen and phosphorus application rates for wastewater reuse
4	Biosolids classification	Biosolids should be classified into different grades based on contaminants and treatment method. See EPA publication 943 .

5	Nutrient and contaminant application rates	Calculate NLAR ⁸ and CLAR ⁹ to determine application rate for biosolids reuse
6	Impact on groundwater	Assess potential seepage of nutrients and other contaminants into groundwater

12. Waste

12.1 Industrial waste generation

When to complete

① Industrial wastes include any waste arising from commercial, industrial or trade activities or from laboratories, as defined in [Industrial Waste Fact Sheets – 6 Legal Definitions](#) (EPA publication 1442). Some of these wastes are also listed in Schedule 1 of the [Environment Protection \(Industrial Waste Resource\) Regulations 2009](#) (IWR Regulations).

Complete 12.1.1 if your proposed works will generate industrial wastes <1,000 tonnes per year (t/year).

Complete 12.1.2 if your proposed works generate industrial wastes >1,000 t/year.

Why complete?

If your proposed works generate industrial wastes, they must be managed in accordance with the [IWR Regulations](#).

For detailed information, your application needs to demonstrate that wastes generated will be managed in accordance with the waste hierarchy in the following order of preference: avoidance, reuse, recycling, and recovery of energy, treatment, containment and disposal (refer to EPA web page: [Waste – guidance for business](#)).

What EPA uses this for:

To determine whether:

- you will manage your waste in accordance with the Industrial Waste Resource Regulations 2009.

Further, for detailed information to determine whether:

- you have adopted best practice in minimising wastes generation
- you will need to undertake additional measures to reduce its generation.

12.1.1 General information

Provide the following:

- a list of the types and volume of industrial wastes that your proposal will generate
- an explanation of how your wastes will be stored, including detailed design and drawings of waste storage and bunding area
- an explanation of how your wastes will be dealt with (transported, treated, disposed of etc.).

12.1.2 Detailed information

12.1.2.1 Waste generation

Provide information in [12.1.1](#) as well as the following:

- the source type and volume of solid waste generated from the existing and /or proposed operations at the premises, (for example, green waste, cardboard, plastic, etc. as described in Schedule 1 of the [IWR Regulations](#))
- for existing facilities, explanation of whether the proposed works will result in any changes to the current solid waste generation and how you estimated these figures
- explain where the wastes will go for reuse, recycling, and recovery of energy, treatment, containment and disposal (for example the timber recycled or used as a fuel source, bricks, cardboard, etc).

12.1.2.2 Best practice solid waste management

Demonstrate that wastes generated will be managed in accordance with the waste hierarchy:

⁸ NLAR: Nutrient limited application rate. The maximum rate at which biosolids can be applied without exceeding agronomic nutrient requirements.

⁹ CLAR: Contaminant limited application rate. The maximum rate at which biosolids can be applied without exceeding the receiving soil contaminant limit (RSCL).

- explain how you selected the proposed waste management process according to the waste hierarchy
- compare the available processes and technologies
- compare the waste efficiency indicators for this proposal against industry standards.

12.1.3 EPA's assessment considerations for industrial waste generation

Steps	EPA considerations	Further details
1	Waste hierarchy assessment	Apply waste hierarchy to manage industrial wastes
2	Waste types, volume and source	Comply with EPA publication 1442
3	Best practice – apply waste hierarchy to manage industrial wastes	Clauses 7, 8, and 9 of the IWR Regulations
4	Available processes and technologies	On a case-by-case basis
5	Waste efficiency indicators	On a case-by-case basis
6	<p>If onsite treatment (for example, incineration, organic waste processing, etc.) is proposed that the requirements are:</p> <ul style="list-style-type: none"> • control and minimise air, odour and noise impacts • prevent, contamination of water, land and groundwater. 	<p>Comply with relevant policies, including SEPP (AQM), SEPP- N1 and SEPP (GoV)</p> <p>Comply with EU requirements¹⁰ for incineration/thermal degradation on a case-by-case basis</p>

12.2 Prescribed Industrial Waste (PIW) generation

When to complete

① PIWs can be solid, liquid, sludge or a mixture/assortment. [EPA publication 1442](#) provides a definition of what is a PIW.

Complete 12.2.1 if your proposed works will generate PIWs <100 t/year or 100 kL/year of PIW.

Complete 12.2.2 if your proposed works generate >100 t/year or 100 kL/year of PIW.

Why complete?

If your proposed works generate PIWs, they must be managed in accordance with the [IWR Regulations](#).

What EPA uses this for

To determine whether you will store PIWs properly to:

- prevent contamination of surface water, land and/or groundwater
- prevent volatile compounds from entering the air.

Further, for detailed information to determine whether:

- you have correctly categorised PIWs
- you have adopted best practice to minimise PIW generation
- you will store PIWs properly to prevent contamination of surface water, land and groundwater
- you will minimise air and odour emissions
- you will handle and dispose of PIWs in accordance with the above regulation. EPA wants to ensure that facilities receiving waste are licensed for the particular waste and the activity.

¹⁰ DIRECTIVE 2000/76/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL Of 4 December 2000 On The Incineration Of Waste

12.2.1 General information

Provide the following:

- a list of the types and volume of PIWs that your proposal will generate¹¹
- an explanation of how your wastes will be stored, including detailed design and drawing of waste storage and bunding area
- an explanation of how your wastes will be dealt with (transported, treated, disposed of etc.).

12.2.2 Detailed information

12.2.2.1 Existing PIW generation

If applicable, provide the information for any PIW that is currently generated.

Provide the following:

- the types (for example, F180 paint residues)
- volumes of PIW generated with their waste codes, using [Waste Codes](#) ([EPA publication IWRG822](#))
- their sources.

Indicate the hazard category of the waste (A, B or C), using [Solid Industrial Waste Hazard Categorisation and Management](#) (EPA publication IWRG631), and/or [Soil Hazard Categorisation and Management](#) (EPA publication IWRG621) for [contaminated soil](#).

Describe the destination for reuse, recycling, and recovery of energy, treatment, containment and disposal of each waste type.

12.2.2.2 Proposed PIW generation

Provide the information for any PIW that will be generated from the proposed works:

- the types of PIW using the [IWR Regulations](#) to determine if the waste is PIW
- details of the PIW sources
- details of the volumes of PIW that will be generated with their waste codes, using [EPA publication IWRG822](#)
- where possible, indicate the hazard category of the waste (A, B or C), using EPA publications [IWRG631](#) and/or [IWRG621](#) for contaminated soil
- the destination for reuse, recycling, and recovery of energy, treatment, containment and disposal of each waste type.

Explain the changes to the current PIW generation from the proposed works.

Explain how you estimated these figures.

Explain what record-keeping and procedures are followed for management of wastes.

12.2.2.3 Proposed PIW handling and final destination

Explain how each type of waste will be handled and stored, including:

- area where waste will be consolidated
- storage area and its design:
 - capacity, covered/enclosed
 - site layout
 - bunding. Storage area must be designed to meet the requirements of the [EPA publication 347](#)). Attach bunding design drawing
 - air emission control mechanisms, including ventilation air, fugitive and point source emissions, for all emission indicators, as specified in SEPP (AQM) (for example, odour)

① This question should link to your air emissions information in section [8.1.3](#) of Part B which you may refer to for details.

types of waste containers used: intermediate bulk containers (s), small volume refillables (SVRs), skips, etc. Describe how they are stored in storage area (for example, tanks, pallets, bays and/or pits, etc.) to meet WorkSafe requirements for Dangerous Goods & Occupational Health & Safety¹² requirements and/or PCB storage requirements.

① If onsite treatment is proposed, describe the proposed treatment technology (refer to the information in [5.3](#) of Part B (Process and Technology)).

You must address environmental impacts, for example, odour, particulates and noise emissions, as well as potential contamination of water with reference to the respective requirements in [8.1.3](#), [9.2.3](#) and [10.1.1](#) of Part B where applicable.

¹¹ Note that any liquid waste (including tankered trade waste) is considered as a PIW (Category A), as defined in Schedule 2 of the Environment Protection (Industrial Waste Resource) Regulations 2009.
¹² They include AS1940 Storage and Handling of Dangerous Goods and AS 3833 Storage and Handling of Mixed Classes of Dangerous Goods.

Specify final disposal destination and explain transportation procedures, including waste transport certificates (refer to [Permit to Transport Prescribed Industrial Waste](#), EPA publication IWRG811).

Provide information that the facility receiving the PIW is appropriately licensed to receive the waste.

① If polychlorinated biphenyls (PCBs) are generated onsite, you need to provide an environmental improvement plan (EIP) to manage this type of waste (refer to [15.2](#)).

12.2.2.4 Temporary storage of asbestos waste/designated waste not generated at the premises

The Scheduled Premises Regulations include the requirements in Regulations 12(1)(d), 12(1)(e) and 12(2) that determine whether a temporary storage site is exempt from works approval or licensing requirements. EPA's webpage on temporary storage contains further information.

12.2.2.5 Best practice of managing PIW generation

Demonstrate that wastes generated will be managed in accordance with the waste hierarchy:

- the steps taken to identify best practice for the available processes and technologies
- the options considered to avoid or minimise PIW generation
- explain the reasons for your selected management.

12.2.3 EPA's assessment considerations for PIW generation

Steps	EPA considerations	Further details
1	Waste types and categorisation	In accordance with EPA publications IWRG822 , IWRG631 and/or IWRG621
2	Best practice – apply waste hierarchy to manage PIW	Clauses 7, 8 and 9 of the IWR Regulations
3	Storage: <ul style="list-style-type: none"> • placarding • separation to buildings and boundaries • segregation of incompatible chemicals • spill containment or bunding • ventilation • exclusion of ignition sources • fire protection • emergency planning • house-keeping • correct racking and stacking 	Design of storage in accordance with EPA publication 347 Meets WorkSafe requirements for Dangerous Goods and Occupational Health and Safety: for example: <ul style="list-style-type: none"> • AS1940 Storage and Handling of Dangerous Goods • AS3833 Storage and Handling of Mixed Classes of Dangerous Goods
4	Transport requirements	In accordance with Waste Transport Certificate EPA publication IWRG811 .
5	PCB management EIP (if applicable)	In accordance with Polychlorinated Biphenyls (PCB) Management (EPA publications IWRG643) and Variation of an Order Relating to Notifiable Chemicals Victoria Government Gazette Feb 2000 .

12.3 Waste handling and treatment premises (A01, A02, A07, A08, A09 and glass reprocessors (H05))

When to complete	<p>Complete 12.3 if your premises is or will be scheduled under the Scheduled Premises Regulations as:</p> <ul style="list-style-type: none">• Prescribed industrial waste (PIW) management (A01)• Other waste treatment (A02)• Organic waste processing (A07)• Waste to energy (A08)• Waste tyre storage (A09)• Glass waste reprocessors (H05)
Why complete?	<p>The IWR Regulations, in conjunction with SEPPs and Scheduled Premises Regulations, establish a framework for managing the above listed industrial waste treatment facilities. SEPPs that are particularly relevant in this regard include the SEPP (WoV), SEPP (GoV), SEPP (AQM) and SEPP N-1 or NIRV.</p> <p>The following information is about waste identification, storage, treatment and disposal to ensure that wastes are managed in accordance with the IWR Regulations and relevant guidelines. However, as a result of these activities, they are likely to cause environmental impacts, such as air, odour and noise emissions, contamination of water, land and groundwater. You must also complete information in the relevant sections to demonstrate compliance with SEPPs.</p>
What EPA uses this for	<p>To determine whether:</p> <ul style="list-style-type: none">• you have correctly categorised PIWs• you will store industrial waste/PIWs to prevent contamination of surface water, land and groundwater• you have adopted best practice to minimise environmental impacts (for example, air, odour and noise emissions, etc.)• you will handle and dispose of industrial waste/PIWs in accordance with the IWR Regulations.

12.3.1 Existing operation

If you are currently operating a waste handling/treatment facility, you need to complete 12.3.1.

12.3.1.1 Industrial waste/PIW received

The applicant should provide:

- the types of industrial waste/PIW received, using the [IWR Regulations](#) to determine if the waste is PIW
- details of the industrial waste/PIW sources
- details of the volumes of industrial waste/PIW received with their waste codes (if applicable), using [EPA publication IWRG822](#)
- where possible for PIW, indicating the hazard category of the waste (A, B or C), using EPA publications [IWRG631](#) and/or [IWRG621](#) for contaminated soil
- package types (for example, ISO containers or IBCs etc.) when wastes are received.

Explain what record-keeping and procedures are followed for management of wastes.

12.3.1.2 Industrial waste/PIW handling

Describe how industrial waste or PIW are currently loaded and unloaded.

Explain how each type of waste is stored, including:

- storage area and its design:
 - capacity, covered/enclosed
 - site layout¹³

¹³ For waste tyre storage (A09) you should also provide site layout and configuration of tyre (and tyre-derived product if applicable) storage areas and separation distances to other tyre piles, buildings and boundaries in accordance with the Victorian Fire Services Guidelines for the [open air](#) and [indoor](#) storage of tyres.

- bunding. Storage area must be designed to meet the requirements of the [EPA publication 347](#). Attach bunding design drawing
- air emission controls mechanisms, including ventilation air, fugitive and point source emissions, for all emission indicators, as specified in SEPP (AQM) (for example, odour)
- type of waste container (IBCs, SVRs, skips etc.). Explain how they are stored in storage area (for example, tanks, pallets, bays and/or pits, etc.) to meet WorkSafe requirements for Dangerous Goods & Occupational and Health & Safety (see [footnote¹⁴](#)) and/or PCB storage requirements.

① This question should link to your information in [8.1](#) of Part B which you may refer to for details.

12.3.1.3 Industrial waste/PIW treatment and final destination

Describe the existing treatment process where applicable.

Describe the final destination for reuse, recycling, and recovery of energy, treatment, containment and disposal.

Explain transportation procedures, including waste transport certificates (refer to EPA [publication IWRG811](#)).

12.3.2 Proposed operation

12.3.2.1 Industrial waste/PIW received

Describe types of wastes that will be received and record-keeping procedures using information in [12.3.1.1](#)

12.3.2.2 Industrial waste/PIW handling

Provide the following:

- explanation of how industrial waste or PIW will be loaded and unloaded
- design and drawing of loading area.

Explain how each type of waste will be stored using information requirements in [12.3.1.2](#).

12.3.2.3 Industrial waste/PIW treatment

Describe the types and rate of wastes that will be treated and their treatment method.

① You can refer to the information in [5.3](#) of Part B (Process and Technology) if applicable.

You must address environmental impacts, for example, odour and noise emissions, as well as potential contamination of water with reference to the respective requirements in [8.1.3](#), [9.2.3](#) and [10.1.1](#) of Part B where applicable.

Organic waste processing (A07) and waste tyre storage (A09) premises must provide processing and throughput capacity details on an annual and monthly basis.

12.3.2.4 Industrial waste/PIW final destination

Where applicable, categorise (using hazard categories A, B, or C) by-products and/or treated waste, using EPA publications [IWRG631](#) and/or [IWRG621](#) for contaminated soil.

Explain where the treated wastes will go for reuse, recycling, and recovery of energy, further treatment, containment and disposal.

Explain transportation procedures, including waste transport certificates. If it is liquid waste which will be discharged to sewer, you need to obtain a Trade Waste Agreement from the relevant water authority.

12.3.3 Best practice of PIW management

Indicate how you determined best practice for waste treatment:

- compare the available processes and technologies for each type of waste to be treated at the site
- provide the reasons for your selected process.

12.3.4 Financial assurance

Please submit financial assurance calculation proposal (details refer to [15.1](#)) if your premises is scheduled under A01.

Furthermore, if your premises is scheduled under A07 (organic waste processing) or A08 (waste to energy) and is handling or will handle PIW wastes, you need to provide a financial assurance. This is triggered since the premises is A01 as well as A07 or A08.

12.3.5 EPA's assessment considerations for waste treatment and handling premises

Steps	EPA considerations	Further details
1	Separation distance	Comply with EPA publications 1518 or (for compost) 1588.
2	Types and waste hazard categorisation	Comply with EPA publications IWRG621 , IWRG631 and/or IWRG822 .
3	Best practice for selected processes and technology	Demonstrating best practice in accordance with EPA publication 1517 .
4	Storage and handling <ul style="list-style-type: none"> • placarding • separation to buildings and boundaries • segregation of incompatible chemicals • spill containment or bunding • ventilation • exclusion of ignition sources • fire protection • emergency planning • house-keeping • correct racking and stacking 	<p>Design of storage in accordance with EPA publication 347</p> <p>Meet WorkSafe requirements for Dangerous Goods and Occupational Health and Safety: for example,</p> <ul style="list-style-type: none"> • AS1940 Storage and Handling of Dangerous Goods • AS 3833 Storage and Handling of Mixed Classes of Dangerous Goods. <p>For waste tyre storage (A09), storage design in accordance with the:</p> <ul style="list-style-type: none"> • Fire Services Guideline – Open Air Storage of New or Used Tyres (2014) • Fire Services Guideline – Indoor Storage of New or Used Tyres (2014).
5	Measures proposed to control fugitive emissions (odour or chemical substances) from waste storage or treatment buildings	Information should be provided with reference to 8 of Part B (Air Emissions) and assessed against criteria outlined in 8.1.4.
6	Treatment requirements are: <ul style="list-style-type: none"> • control air, odour and noise impacts • prevent contamination of water, land and groundwater 	<p>Comply with relevant policies, including SEPP (AQM), SEPP-N1 and SEPP (GoV), SEPP (PMCL).</p> <p>Comply with EU requirements for incineration/thermal degradation where required.</p>
7	Transport and disposal requirements	<p>Comply with Waste Transport Certificate publication IWRG811.</p> <p>Comply with Parts 3 and 4 of the IWR Regulations that relate to transport and management of waste, as well as PIW (transport certificates and permits).</p>
8	Financial assurance	Prepared in accordance with publication Financial assurance for licences and works approvals 1594 , Types of Financial Assurance 1595 and Calculation of financial assurance for landfills, prescribed industrial waste (PIW) management and container washing 1596 .
9	PCB management EIP required	In accordance with EPA publications IWRG643 and Variation of an Order Relating to Notifiable Chemicals Victorian Government Gazette Feb 2000 .

12.4 Landfill premises (A05)

When to complete

Complete 12.4 if:

- your proposed works are to be scheduled under the Scheduled Premises Regulations as A05 as a new landfill
- your existing landfill intends to increase its height or footprint.

① If your premises will treat PIW, you must also refer to [Q](#).

Why complete?

The [EP Act](#) requires that all new landfills must be consistent with the Melbourne Metropolitan Waste management Plan (MWMP) or a relevant Regional Waste Management Plan (RWMP).

The [Waste Management Policy \(Siting, Design and Management of Landfills\)](#) (Landfill WMP) in conjunction with SEPPs and the Scheduled Premises Regulations establish a framework to ensure that landfills are designed to minimise risks to the environment. The landfill WMP applies to all landfills in Victoria receiving solid non-prescribed waste and/or Category C PIW. The policy clarifies and strengthens the existing framework through promoting best practice and continuous improvement in the way we plan, site, design and manage landfills in Victoria. The policy also promotes waste minimisation and resource recovery infrastructure that will in turn encourage market opportunities for recycling.

Landfill WMP requires that applicants for a works approval for a landfill must meet the objectives and required outcomes set out in the [Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills](#) (Landfill BPEM) (EPA publication 788).

You must prepare your application in addressing the WMP, other relevant SEPPs and the required outcomes of [EPA publication 788](#). If you provide alternatives to the suggested measures in the BPEM, you must demonstrate that they would achieve equivalent or better outcomes.

What EPA uses this for

To determine whether:

- the landfill development proposal is in line with the MWMP (or relevant RWMP) and Landfill WMP
- your proposal complies with the Landfill [BPEM](#), including:
 - siting requirements and separation distances
 - aspects of design considerations including:
 - site layout
 - liner and leachate management
 - water management (surface and groundwater)
 - air quality management (landfill gas, odour and dust)
 - noise control
 - traffic management
 - operations management:
 - financial assurance
 - waste minimisation, acceptance, pre-treatment and placement
 - operational issues (for example, litter management and fire control, etc)
 - intended land use and post closure
 - rehabilitation, including capping and vegetation management
 - aftercare management
 - management of potential environmental impacts and monitoring.

12.4.1 Consistent with Regional Waste and Resource Recovery Implementation Plan (RWRRIP)

① EPA cannot approve any application for a new landfill that is not in the Regional Waste and Resource Recovery Implementation Plan or the relevant regional waste management plan (RWMP).

Section 50C of the [EP Act](#) 1970 specifies that EPA must refuse to consider a works approval for a new landfill, if the landfill is not provided for in the proposed sequence for the filling of available landfill sites in Part B of an Infrastructure Schedule of a Regional Waste and Resource Recovery Implementation Plan.

Provide supporting information to confirm that a new landfill or landfill extension (increased height or footprint) is included in Part B of an Infrastructure Schedule of a Regional Waste and Resource Recovery Implementation Plan.

Provide details showing how the proposal is consistent with the Statewide Waste and Resource Recovery Infrastructure Plan.

12.4.2 The proposal and the existing operations (if applicable)

12.4.2.1 Existing operation (if applicable)

If your proposal is to increase the height and/or footprint of the existing landfill, provide the relevant information listed in [12.4.2.2](#) below.

12.4.2.2 The proposed work

Provide the following:

- population to be served if it is a municipal landfill
- type(s) and origins of waste to be deposited and approximate annual volumes
- volume of air space to be filled
- an estimate of length of time landfill is to be in operation.

12.4.3 Background environmental condition and siting consideration

12.4.3.1 Background environmental condition

Explain whether the landfill type is the most appropriate to the local conditions, including:

- hydrogeology
- geology
- topography
- surface water
- groundwater quality and depth.

12.4.3.2 Groundwater

The Landfill WMP requires that:

- a landfill is not located in the areas listed in Schedule A of the Landfill WMP, including high-value wetlands, marine and coastal reserves, wildlife reserves, and water supply catchments and water supply protection areas. (clause 13(2))
- no new landfills should be established in Segment A groundwater areas unless additional design and management measures are provided (clause 13(3)), and EPA determines that regional circumstances exists that warrant the development of the new landfill.
- all new landfill sites must deposit waste at least 2 metres above the long-term undisturbed depth to groundwater, unless additional design and management measures are provided (clause 16(2)), and EPA determines that regional circumstances exists that warrant the development of the new landfill.

5.1.3 and tables 5.2 of [BPEM](#) specify the minimum separation distance of waste and groundwater table.

To meet these requirements,

- explain whether a minimum separation of 2 metres exists between the groundwater table and the base of the proposed new landfill or new cell(s). The groundwater level used must be the long-term high level for the specific aquifer or aquifers at risk from the proposed landfill operations
- provide site-specific information, including:
 - GPS location of the site boundaries
 - the height of the landfill site above the sea level (metres, AHD), (Australian Height Datum)
 - the depth of the landfill cell (the depth of the waste depositional level) (metres, AHD)
- provide distances to surface waters, buildings, structures, aerodromes etc. (refer to Table 5.2 of [BPEM](#) for details)
- provide a hydrology report
- the groundwater level (metres, AHD)
- specify the groundwater segment in the area of the proposed landfill. Landfills should not be located in areas where groundwater is classified as Segment A (potable), particularly when the groundwater resource is used for the beneficial uses that apply to its classification

- provide the salinity of groundwater (mg/L or $\mu\text{S/cm}$) in the area and additional design and management measures proposed to protect groundwater (refer to 13(3) of the WMP for details).

Special requirements for proposed works below groundwater table

Where a landfill or cell is proposed to be located below the groundwater table, provide additional design and management measures, including the use of groundwater pressure relief and extraction system.

12.4.3.3 Separation distances

Section 5.1.5 and Table 5.2 of [BPEM](#) recommend separation distances to sensitive receptors. Your proposal should comply with the separation distance requirements. The intention of these separation distances is to protect those receptors from any impacts resulting from a failure of landfill design or management or abnormal conditions. As the potential risks under such circumstances vary depending on the size (waste intake) of the landfill, the required separation distance for large landfills may need to increase.

Specify the following:

- the distances to the nearest operating landfill(s)
- the separation distance of the site boundary from nearby sensitive premises (houses, schools, hospitals, etc.), water courses (rivers, streams, creeks, etc.), if the proposal involves lateral extension.

Provide the following maps or plans which should be drawn to scale and show the direction of north and described the following features (where applicable):

- surface water, drains, easements, water bores, wells, water supply catchments, wetlands and floodways
- fault lines within 100 metres of landfill displaced in the Holocene period
- conservation areas, marine/coastal reserves
- crown land
- critical habitats for flora/fauna
- residential premises or areas
- hospitals, schools and other institutions
- airports (runways) within 3 km of the site
- other sensitive land use or features.

12.4.4 Best practice design

The Landfill BPEM provides the required outcomes for siting of new landfills and cells. These outcomes must be met for EPA to approve the proposed landfill or cell. It is critical that you establish a conceptual site model to assist you in answering the questions below.

12.4.4.1 Site layout

The design of the site layout must meet the requirements outlined in 6.2 of [BPEM](#).

Explain the site layout, including a clear explanation of the footprint being applied for.

Provide the following maps or plans which should be drawn to scale and show the direction of north and described the following features (where applicable):

- contours of the site and its surrounds
- site dimensions and boundaries
- proposed tipping area.

Explain filling sequence.

12.4.4.2 Liner and leachate management

The design objective of the liner and leachate collection is to maintain groundwater quality as close as practicable to background levels.

Liner

Provide preliminary design details for landfill base and side-wall liner system (refer to 6.3.1–6.3.4 of [BPEM](#)). Table 6.1 of [BPEM](#) provides the required liner performance and indicative liner systems.

① If the works approval is issued, you will need to provide detailed designs including plans, technical specifications and a construction quality assurance plan for EPA review and approval prior to construction of the first landfill cell. Please see [Landfill Licensing Guidelines](#) (EPA publication 1323 for further details on the procedure for this).

Leachate management

The design of a leachate management system must meet the requirements outlined in 6.5.2 of [BPEM](#).

Explain the following:

- the estimated volume of leachate, including water use in vehicle and wheel washing. This must be based on water balance calculations using at least two consecutive wet years (9th decile (90th percentile)). Attach the calculation details

- how the landfill leachate will be collected, including the preliminary designs of its collection system (drainage layer, sumps/wells, pumps, pipe network)
- how leachate will be stored, including the preliminary design of the leachate storage pond and/or evaporative storage dams if it is applicable
- whether leachate will be treated and where it will be disposed of (include trade waste discharge provisions if applicable). Refer to 6.3.5 of [BPEM](#) for details.

12.4.4.3 Water management

Water management consists of stormwater, leachate and groundwater. The objective is to protect beneficial uses of receiving waters and to avoid any adverse environmental impact on surface and groundwater.

Stormwater management

Explain how contaminated and uncontaminated stormwater run-off will be segregated. Detailed requirements refer to 6.5.1 of [BPEM](#).

Groundwater

Explain groundwater protection measures, including leachate management, cell designs and construction.

Demonstrate that groundwater is segregated from leachate (refer to [12.4.3.2](#) above and 6.5.4 of [BPEM](#)), if the proposed landfill cells are below the water table.

For leachate management refer to [12.4.4.2](#) above.

Discharge of waste to land or surface waters

Explain whether waste (i.e. leachate) will be discharged to land and or waters. Note that:

- if you propose to apply leachate or contaminated stormwater on land, you must ensure that these wastewaters are treated to the standard suitable for land application. For detail refer to Table 1 of [EPA publication 464](#)
- discharging treated waste to surface waters is not preferred. However, if you propose to discharge leachate or contaminated stormwater to a waterway, these wastewaters must be treated to the standards suitable for the receiving water body.

Provide supporting information, including:

- the treatment system design
- quality of treated water (leachate, groundwater and contaminated stormwater).

Demonstrate that the treated wastewater is suitable for your intended disposal option with reference to the requirements outlined in sections [10.3](#) and [11.2](#) of Part B.

12.4.4.4 Air quality

Landfills can pose a risk to air quality through emissions of landfill gas, odour and dust. The [BPEM](#)'s objective is to ensure that air quality objectives are met, and that there is no loss of amenity from odour or dust.

Landfill gas management

The design of a landfill gas (LFG) management system must comply with the requirements specified in 6.7 of [BPEM](#).

Explain how landfill gas will be managed, including:

- compliance with LFG management hierarchy with reference to figure 6.2 of [BPEM](#). LFG is also GHG intensity due to the presence of methane. Odour reduction and GHG intensity reduction or destruction of LFG with combined heat and power generation is considered to be best practice, as it is considered the most preferred on LFG management hierarchy

① You must address environmental impacts related to power generation, for example, GHG, odour and noise with reference to the respective requirements in [6](#), [8.1.3](#) and [9.2.3](#) of Part B where applicable.

- estimated gas volume and calculation details. Attach the calculation details
- collection method (for example, horizontal collection systems, vertical wells, transmission pipework). It is strongly recommended that the site LFG extraction system should use horizontal (sacrificial) pipes in early stages of operation, especially in sensitive areas
- treatment (combustion plant, including the electrical interconnection for generators).

Provide the following:

- an LFG management plan
- an appropriate level of construction quality assurance.

Explain what actions will be in place to comply with Table 6.4 of the [BPEM](#) in relation to LFG.

Odour

Landfill odour can result from aerobic decomposition of freshly deposited wastes, landfill gas emissions and leachate ponds.

Conduct odour modelling to assess offsite odour impacts, using the information requirements and method outlined in [8.1.3](#) (Air quality impact assessment) of Part B.

Explain how you will minimise potential odour emissions with reference to 6.7.3 of [BPEM](#).

Dust control

Potential dust emissions can be from vehicle movement and material stockpiles. Explain how you will minimise dust emissions, including dust suppression measures. (6.7.4 of [BPEM](#)).

12.4.4.5 Noise

The BPEM's objective is to ensure that policy and guideline noise requirements are achieved and that there is no loss of amenity from noise from the landfill site (6.9 of [BPEM](#)).

① If noise emissions can potentially cause impact, you must assess the impact using the information requirements outlined in [9.2.3](#) (noise impact assessment) of Part B.

12.4.4.6 Traffic considerations

The BPEM's objective is to minimise nuisance from traffic movement.

Explain how you are going to manage traffic in consultation with Vic Roads or councils (6.10 of [BPEM](#)). This should include truck movements in and out of the site and all the machinery and equipment used onsite.

12.4.4.7 Other environmental impacts

Where appropriate, you must address other environmental issues such as energy use and GHG emissions, and water use in accordance with information requirements in sections [6](#) (Energy Use and Greenhouse Gas Emissions) and [7](#) (Water Use) of Part B respectively.

12.4.5 Operation and management

The BPEM requires that in addition to landfill design and construction, you need to provide operational practices to further enhance the protection of the environment. The elements of the requirements are as follows:

12.4.5.1 Financial assurance

Please submit the financial assurance calculation for your proposal. Refer to [15.1](#) (Financial Assurance).

12.4.5.2 Waste minimisation, acceptance, pre-treatment and placement

Where applicable, demonstrate your proposal will:

- divert suitable wastes from landfill (7.3 of [BPEM](#))
- deposited only allowed wastes at the landfill (7.4 of [BPEM](#))
- pre-treat waste prior to landfilling (7.5 of [BPEM](#))
- place waste in a manner that is mechanically stable, controls litter and birds and that maximises the degree of compaction (7.6 of [BPEM](#)).

Demonstrate how your proposal complies with the Victorian Government's Getting Full Value Policy in relation to waste minimisation.

Explain, including the:

- volume of waste to be received
- volume of waste to be recycled/reused
- volume of waste to be disposed of.

12.4.5.3 Other operational practices

To further enhance the protection of the environment, explain:

- how the waste will be covered daily, weekly and when the cell has reached capacity
- what measures will be implemented to keep the landfill and surrounding environment in a litter-free condition (7.8 of [BPEM](#))
- how chemicals and fuels will be managed onsite, including the expected volumes, storage procedures, methods for controlling/minimising potential spills etc.
- what measures will be implemented to prevent landfill fires and efficiently extinguish fires at the site. If the site is prone to fires, specific requirements may apply (7.9 of [BPEM](#)). Refer to Country Fire Authority for further details on this
- what contingency measures will be applied to minimise potential impacts on air (odour, dust, noise), surface water, groundwater and land
- how potential disease vectors will be controlled
- how noxious weeds will be controlled.

12.4.6 Post Closure

12.4.6.1 Rehabilitation

The BPEM objective is to ensure that landfills are rehabilitated to minimise the seepage of water into the landfill and maximise the collection and oxidation of landfill gas from the landfill (8.1 of [BPEM](#)).

Submit a preliminary design for capping of the landfill. Refer to 8.1.6 and Table 8.1 of the [BPEM](#) for details.

Explain post-landfilling management issues, including:

- details and a program for the rehabilitation of the landfill
- details of the proposed use of the landfill after landfilling has ceased
- details for the aftercare of the landfill site.

12.4.6.2 Aftercare management

Provide an aftercare management plan which is prepared in accordance with 8.2 of [BPEM](#).

Provide separation distances for the life of the proposed landfill and a minimum of 30 years post closure in accordance with Table 8.2 of the Landfill [BPEM](#). In any case, you need to demonstrate how the risks (landfill gas and amenity) are to be managed to the same level.

Provide the following:

- what future land use will be
- how to maintain the landfill cap
- how to maintain leachate collection and disposal system
- how to maintain LFG control system
- how to undertake environmental monitoring (refer to [12.4.7.1](#) below) of groundwater, LFG, surface water and landfill cap and any vegetation to ensure that potential impacts are minimal.

12.4.7 Environmental monitoring and auditing

12.4.7.1 Environmental monitoring

The BPEM's objective is to monitor and report on the performance of measures taken to protect the environment from potential impacts from a landfill and to identify and address any arising environmental issues (7.14 of [BPEM](#)).

To achieve this objective, you are required to provide a preliminary monitoring program to be implemented during the landfill operation, post closure and aftercare period. It must be prepared in accordance with [Landfill Licensing Guidelines](#), EPA publication 1323.

Monitoring during the operation should include the following:

- LFG (6.7.1 of [BPEM](#))
- groundwater (6.6.2 of [BPEM](#)) – background, groundwater boreholes
- dust monitoring (6.7.4 of [BPEM](#))
- post-operation monitoring requirements – [EPA publication 1323](#)
- during aftercare (8.2 of [BPEM](#)):
 - groundwater
 - surface water
 - LFG
 - leachate.

12.4.7.2 Auditing

EPA has certain requirements that need the involvement of environmental auditors even though such requirements do not strictly apply during the works approval application stage. Environmental auditing of landfills occurs at several stages or falls under several categories:

- auditing of environmental monitoring of landfills
- auditing of landfill operations
- assessment of cell designs (plans, technical specifications and construction quality assurance plans)
- auditor verification of cell constructions.

Environmental auditors are appointed under the Environment Protection Act 1970 and have certain obligations and responsibilities when they undertake audit works. Refer to [EPA publication 1323](#) for more details.

12.4.8 EPA's assessment considerations

Steps	EPA considerations	Further details
1	<p><i>Strategic context</i></p> <ul style="list-style-type: none"> comply with the provisions: <ul style="list-style-type: none"> in any relevant MWMP or RWMP Section 49L of the EP Act to prepare a solid industrial waste management plan ensure that a landfill is not located in the areas listed in Schedule A of the policy all new landfill sites must deposit waste at least 2 metres above the long-term undisturbed depth to groundwater 	<ul style="list-style-type: none"> comply with clause 11(1) of Landfill WMP comply with clause 13(2) of Landfill WMP comply with clause 16(2) of Landfill WMP comply with SEPP (WoV) comply with SEPP (GoV)
2	<p><i>Siting</i></p> <ul style="list-style-type: none"> Siting meets all the required outcomes of the BPEM distances between wastes and water table sufficient separation distances between landfill and sensitive receptors to minimise impact from landfill gas, odour, dust, litter and noise 	<ul style="list-style-type: none"> meet all the required outcomes in section 5 of BPEM comply with Table 5.1 of BPEM comply with Table 5.2 of BPEM
3	<i>Best practice design</i>	Section 6 of BPEM
	Liner and leachate management system	Meet all the required design outcomes in 6.3 of BPEM
	Water management: <ul style="list-style-type: none"> stormwater leachate management and discharge groundwater management water discharge 	<ul style="list-style-type: none"> comply with 6.5.1 of BPEM comply with 6.5.2 of BPEM comply with 6.5.3 of BPEM comply with SEPP (GoV) comply with 6.5.4 of BPEM comply with SEPP (WoV)
	Air quality <ul style="list-style-type: none"> landfill gas management systems, including management hierarchy odour control dust emission control 	<p>6.7 of BPEM</p> <ul style="list-style-type: none"> comply with 6.7.1 of BPEM comply with SEPP (AQM) – refer to 8.1.4 of Part B comply with 6.7.4 of BPEM
	Noise	Comply with SEPP-N1 or NIRV – refer to 9.3 of Part B
	Other issues: <ul style="list-style-type: none"> GHG emission water use 	<ul style="list-style-type: none"> comply with 6.3 of greenhouse PEM
4	<i>Operation management</i>	Section 7 of BPEM
	Waste minimisation, acceptance, pre-treatment and placement	Comply with 7.3 – 7.6 of BPEM
	Waste cover	Comply With 8.16 of BPEM
	Litter control	Comply With 7.8 of BPEM
	Fires	Comply With 7.9 of BPEM

5	<i>Post Closure</i>	
	Rehabilitation Plan	Comply with 8.1.1 of BPEM
	Landfill cap	Comply with 8.1.6 of BPEM
	Aftercare management	8.2 of BPEM
6	<i>Environmental monitoring and auditing</i>	
	Environmental monitoring during operation and post closure	Comply with 6 of BPEM – operation Comply with 8.2 of BPEM – post closure
	Auditing	Comply with EPA publication1323

12.5 Contaminated sites – Onsite soil containment (L02)

When to complete	<p>Complete 12.5, if your premises:</p> <ul style="list-style-type: none"> have onsite retention of contaminated soil and are designed to, or have, a capacity to hold at least 1,000M³ in an engineered facility¹⁴ have not been issued a notice for long-term management of contaminated soil.
Why complete?	<p>This type of facility must be managed in accordance with the SEPP Prevention and Management of Contaminated Land (SEPP PMCL).</p> <p>Their works approvals are currently assessed using Landfill BPEM and the Best Practice Guidelines for Landfills Receiving Category C Prescribed Industrial Waste (EPA publication 1208) as guidance documents. You need to demonstrate that the contaminant cell and capping design meet the BPEM and EPA publication 1208.</p>
What EPA uses this for	<p>To ensure that:</p> <ul style="list-style-type: none"> containment standard/proposal is appropriate to waste categories your proposal will not cause land and groundwater contamination in the long term.

① Before preparing a works approval application for this type of premises, please discuss with EPA to confirm what information is required as it can be site-specific.

This type of works approvals are currently assessed using Landfill [BPEM](#) as a guidance document. Common questions include the following:

12.5.1 Site-specific information

Provide the land use information:

- current land use. If a more sensitive land use is proposed an environmental auditor may need to be engaged
- proposed land use
- GPS coordinates for your premises.

Provide site-specific information:

- the height of the containment site above the sea level (metres, AHD) (Australian Height Datum)
- the depth of the containment cell (metres, AHD)
- the groundwater level (metres, AHD)
- the salinity of groundwater in the area (mg/L or µS/cm)
- the separation distance of the site from nearby sensitive premises (houses, schools, hospitals, etc.), water courses (rivers, streams, creeks, etc.).

¹⁴ If the quantity is less than 1,000m³, you should manage your site through an audit-endorsed Environmental Improvement Plan. The Plan should meet relevant requirements in the [National Environment Protection \(Assessment of Site Contamination\) Measure](#) by the National Environment Protection Council.

12.5.2 Information about the contaminated soil

Provide the following:

- confirmation that contaminated soil is generated onsite
- source(s) for the generation of contaminated soil at the site
- the total volume of contaminated soil to be managed
- total volume contaminated soil to be contained onsite
- explain how the site is contaminated and nature of contamination (types, concentrations) in accordance with [IWRG621](#)
 - list the contaminants of concern (95 per cent upper confidence limits of the total concentrations and leachability concentrations). This should take into consideration previous land uses
 - determine if there are any volatile/ organic compounds in the soil:
 - solvents and degreasers:
 - Tetrachloroethylene (PCE)
 - Trichloroethylene (TCE)
 - 1,1-Dichloroethane
 - 1,1-Dichloroethylene (1,1-DCE)
 - 1,2-Dichloroethane (1,2-DCA)
 - Chloroethene (vinyl chloride) or petroleum-related VOCs
 - Benzene
 - Toluene
 - Ethylbenzene, and
 - Xylene

① Consider the possibility of vapour intrusion into nearby buildings. See: www.epa.gov/Region6/6pd/rcra_c/ca/index.html

- confirmation that the contaminated soil is generated and will be contained under the same land title.

① If there are multiple land titles you may need multiple approvals.

- describe how the contaminated soil is spread (lateral and vertical extent).

12.5.3 Containment proposal

Explain what other management options have been considered for the contaminated soil (for example, destruction, treatment, disposal), and why this option has been chosen.

Explain the containment proposal, including:

- any previous investigations conducted on the land (if so, please attach a copy of the report or the results)
- method of remediation of the land
- proposed treatment of soil (if any) before containment
- the contaminant of concern (total and leachability concentration) method of containment. Please note that a containment facility must have:
 - appropriate lining for the base and side (refer to Landfill BPEM, [EPA publication 1208](#) or equivalent)
 - appropriate capping (Landfill [BPEM](#), [EPA publication 1208](#) or equivalent) with warning layer (which ideally is fluoro orange and has printed text which says 'contaminated soil below')
- the design, liner types, material specifications, construction methods, post-construction management requirements etc (refer to EPA publication [1323](#) for further details).

① The volumes, level of contamination (leachability), surrounding land uses, soil hazard category influence the level control measures required (i.e. composite liner for Category C and a double composite liner for Category B).

12.5.4 Monitoring and environmental management plan

Provide EPA with a copy of the environmental auditor-endorsed sampling delineation plan, soil placement and site construction location.

Provide the proposed long-term management of the facility (cap maintenance, surface water and groundwater monitoring).

12.5.5 Financial assurance

Submit financial assurance calculation proposal (details refer to section [15.1](#) of Section 3).

12.5.6 EPA's assessment consideration

Steps	EPA considerations	Further details
1	Separation distances to sensitive uses	Comply with EPA publication 1518 and/or BPEM, EPA publication 1208 . For examples: <ul style="list-style-type: none"> 500 metres to residences, 100 metres watercourse where practicable 2 metres to groundwater (BPEM).
2	Waste characterisation	Classification (contaminant levels and leachability) in accordance with IWRG621
3	Options analysis	Consider other management options in accordance with the waste hierarchy (the EP Act) for the soil (destruction, treatment, disposal), and justify why this option has been chosen
4	Management controls	The containment facility must have appropriate lining (bottom and side), capping and cover fill in accordance with BPEM, EPA publication 1208 or equivalent

12.6 Contaminated sites – long term management (L04 Premises)

These premises have soil or groundwater contamination and are managed through notices under the [EP Act](#). An environmental audit under S53V or 53X is required. EPA is guided by the auditor's advice and recommendations in its regulation of the site. Under the Scheduled Premises Regulations, they are exempt from works approval under Section 19A and licensing under Section 20 (1) of the [EP Act](#). However, in some cases the proposed remediation may be considered as a scheduled activity (for example, under L01 and A01) which requires a works approval. When the soil or groundwater needs treatment we recommend that you discuss with EPA about your proposal to determine whether there is a need for a works approval.

13. Environmental management

13.1 Risk assessment of non-routine operations

When to complete	Complete 13.1 if your proposed activities could cause environmental impacts under upset or non-routine operation conditions. They include power failure, loss of gas or water supply, equipment failures, accidents, leaks, spills and releases.
What EPA uses this for	To determine whether you have considered precaution measures to prevent or minimise unexpected environmental impacts.

Explain the following:

- how your process could be affected under upset or non-routine operation conditions
- what could be environmental impacts
- what are the methods to reduce the likelihood of the upsets occurring.
- Explain the following:
 - the steps taken to identify potential process upsets or failures
 - the approaches to identifying best practice in managing these environmental risks
 - the credible and likely to occur scenarios.

Where applicable:

- indicate the potential impacts of climate change that might affect the site or the proposed activity.
- describe the additional provisions that have been made to address these. For example, increases in the frequency and intensity of storm events may require better bunding and stormwater management systems or improved flood protection.

13.2 Management system

When to complete	Complete section 13.2 if you have an environmental management system in place.
------------------	--

What EPA uses this for	To ascertain that potential environmental risk will be low with an appropriate management system.
------------------------	---

Explain how you will manage your operations to maintain a high standard of environmental performance if relevant. Identify key environmental management systems, tools or procedures you will use.

13.3 Construction impact management

When to complete	Complete section 13.3 if your construction activities can potentially cause significant environmental impacts (dust and noise emissions, or discharging contaminated stormwater).
------------------	---

What EPA uses this for	To determine whether: <ul style="list-style-type: none">• you have considered pollution control measures to minimising environmental impacts (such as noise and dust) during the construction• you need to submit a construction environmental management plan.
------------------------	--

Identify any environmental risks, for example, construction noise, dust, sediment run-off and spills.

Indicate if there is, or is likely to be, any site contamination.

Explain how you will manage construction with consideration of these identified environmental impacts.

Refer to the following EPA publications on managing construction works:

- [Construction Techniques for Sediment Pollution Control](#) (EPA publication 275)
- [Environmental Guidelines for Major Construction Sites](#) (EPA publication 480)
- [Noise Control Guidelines](#) (EPA publication 1254).

SECTION 3 – Other approvals

Introduction This section explains how you can include applications for commissioning approvals, new licence or licence amendment as part of this application.

It also explains the operational requirements when your works are completed and ready to operate. You can include the operational requirements (for example, financial assurance or PCB management plan) in this application to achieve a greater certainty of meeting EPA's requirements at an earlier stage.

Applies to All applications.

In this section This section contains the following topics:

Topics	Page
Seeking Other EPA Approvals	50
• Commissioning plan	50
• New licence or licence amendment subsequent to works approvals	51
• Application for a new landfill cell and licence	52
Post Decision – Operational Requirements	52
• Financial assurance	52
• Polychlorinated Biphenyls (PCBs) Management	52
• Monitoring	52
• Reporting annual performance	53

14. Seeking other EPA approvals

Works approval application also includes an application for:

- a commissioning approval for commencing works (details in [14.1](#)); and/or
- a new licence or licence amendment, excluding landfill proposals, to operate proposed works (for details refer to [14.2](#)).

14.1 Commissioning plan

You don't need to apply for a commissioning approval separately. However, in this application, you must indicate whether you want to include the commissioning approval in this application. If yes, upon (partial) completion of works and you are ready to operate works, you should notify EPA and provide us with a commissioning plan. This plan is required when there is the likelihood of emissions (fugitive and point source) from the site. It may require a further approval from EPA for example, 30A approval, therefore further consultation with EPA is required.

Commissioning plan should include:

- a timeline
- details of process commissioning (including sequence and test conditions)
- critical control points and the environmental risks
- performance testing (including parameters to be monitored, frequency and reporting).

Where appropriate, EPA will issue a commissioning approval under Section 30A of the [EP Act](#). The commissioning approval conditions will cover performance requirements, testing and reporting over the commissioning period. The approval will last for 120 days.

14.2 New licence or licence amendment subsequent to works approvals

After completing installation and subsequent commissioning work, in some circumstances, you may need a licence or licence amendment to operate the new facilities.

A new licence is required if:

- the premises do not have an EPA licence, and require one under the Scheduled Premises Regulations.
- there will be new air or wastewater licensable discharge point(s)¹⁵.

A licence amendment is required if you currently hold an EPA licence for operating the existing facilities under any of the following:

- change to the premises boundary
- change to site layout
- changes to the types and amount of waste accepted at the premises
- addition of a new landfill cell
- new air and/or wastewater discharge points on the premises
- change in the quantity, frequency, type of the emissions or location of discharge points from the premises.

You don't need to apply for a new licence or licence amendment separately. However, in this application you must indicate whether you want to include a new licence or licence amendment application.

If your operation involves air or water discharges, you need to specify these limits as detailed below as part of the application. However, you can submit the proposed limits after completing installation and prior to your commencement of operating works.

An example of information requirements of proposed licence limits for air discharges:

Description of discharge point	Stack height (metres)	Emission indicator	Licence limit (mg/min)		Schedule D or E of SEPP (AQM)
			Existing (if applicable)	Proposed	

An example of information requirements of proposed licence limits for water discharges:

Description of discharge point	Emission indicator	Existing Licence Limit		Proposed Licence Limit		Proposed flow rate
		Maximum concentration (mg/L)	Median concentration (mg/L)	Maximum concentration (mg/L)	Median concentration (mg/L)	

¹⁵ Emission levels are above exemption threshold limits specified in Regulation 10 and 11 of the Environment Protection (Scheduled Premises) Regulations 2017.

14.3 Application for a new landfill cell and licence

After receiving a works approval for a landfill development and prior to constructing a new cell, you need to seek EPA's approval for the detailed design of the landfill cell. The [Landfill Licensing Guideline](#) (EPA publication 1323) provides the details for a new landfill cell approval process and obtaining a new landfill licence.

Small landfills serving a population of less than 5,000 people are exempt from licensing as detailed in the Scheduled Premises Regulations and [Landfills Exempt from Licensing](#), EPA publication 1563.

The Scheduled Premises Regulations limit works approval exemptions for municipal landfills, serving less than 500 people, to those in use prior to 25 June 2017.

15. Post-decision – Operational requirements

15.1 Financial assurance

Financial assurance (FA) is required for the following premises, as specified in the Scheduled Premises Regulations:

- A01 – PIW management
- A05 – Landfills
- G04 – Bulk storage
- G05 – Container washing
- L02 – Contaminated sites – onsite soil containment
- L04 – Contaminated sites – long term management.

A financial assurance ensures that money is available for cleanup at licensed premises in the event of insolvency or insufficient resources. The most common form of financial assurance is a bank guarantee. The amount a licence holder is required to provide in a financial assurance is based on the activities occurring at the premises and the quantity and type of wastes stored, treated or disposed.

A financial assurance proposal should include:

- amount (including supporting calculations and quotes where applicable)
- type/s – if the proposed type is not a bank guarantee, the proposal should include a justification and how risks to EPA are managed through use of the proposed type
- an overview of the premises and operations
- an overview of the company
- any information supporting the environmental track record of the company

Where applicable, we require you to include in the works approval application:

- a financial assurance calculation proposal for new sites; or
- a review of the financial assurance calculation for existing premises.

EPA will publish guideline on calculation of financial assurance outlines the components to include in the financial assurance calculation proposal (Refer to the webpage: [EPA position on provision of financial assurance for licences and works approvals](#)). Please discuss any questions with EPA in order to agree on the calculation method prior to submitting your application.

15.2 Polychlorinated Biphenyls (PCBs) Management

If your proposal involves storing, handling, using and/or transporting PCBs you need to provide an environmental improvement plan (EIP) for managing this substance for EPA's approval. This EIP should be prepared in accordance with the [EPA publication IWRG643](#). The EIP can be submitted as part of this works approval application or at a later stage prior to commencement of operation.

15.3 Monitoring

Depending on the nature of the proposed activities, a monitoring requirement may be included in your licence, such as, 'you must implement a monitoring program that enables you and EPA to determine compliance with this licence'. Normally, you are required to conduct monitoring if you:

- discharge to air or surface water
- operate a landfill.

You are responsible for developing, implementing and maintaining a monitoring program to assess the environmental management at the site. [Licence Assessment Guidelines](#) (EPA publication 1321) can assist you in developing a monitoring program using a risk-based approach. As a minimum, monitoring parameters for air or water should include all those listed in your licence.

While preparing a monitoring program, you should refer to the following publications, where relevant:

- monitoring of air emissions: [A Guide to The Sampling And Analysis of Air Emissions And Air Quality](#) (EPA publication 440).
- monitoring of waterway/marine environment: [Point Source Discharges to Streams: Protocol for In-stream Monitoring and Assessment](#) (EPA publication 596).
- landfill monitoring: [EPA publication1323](#).

15.4 Reporting annual performance

If you are an EPA licence holder you are required to submit an online annual performance statement, as detailed in [Annual Performance Statement Guidelines](#) (EPA publication 1320).

[Licence Management Guidelines](#) (EPA publication1322) explain what you need to do to achieve compliance for each licence condition and how you should respond to non-compliance incidents.

Works approval application

Appendix A: List of policies, regulations, protocols and guidelines used for EPA's works approval assessments

PUBLICATION TITLE	
ACT	
Environment Protection Act 1970	
POLICIES and REGULATIONS	
State Environment Protection Policy (Ambient Air Quality)	
State Environment Protection Policy (Air Quality Management)	
State Environment Protection Policy (Prevention and Management of Contamination of Land)	
State Environment Protection Policy (Groundwaters of Victoria)	
State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No N-1	
State Environment Protection Policy (Waters of Victoria)	
Environment Protection (Scheduled Premises) Regulations 2017	
Environment Protection (Industrial Waste Resource) Regulations 2009	
Waste Management Policy (Siting Design and Management of Landfills)	
Waste Management Policies	
Variation of an Order Relating to Notifiable Chemicals Victorian Government Gazette Feb 2000	
EPA GENERAL GUIDELINES	PUBLICATION NO.
Bunding Guidelines	347
Environmental Guidelines for Major Construction Sites	480
Annual Performance Statement Guidelines	1320
Environment Protection (Fees) Regulations 2012	1428
Demonstrating Best Practice – Guideline	1517
Application of Environment Protection Principles to EPA's Approvals Processes	1565
Approvals Proposal Form and Pathway Guidelines	1560
EPA GUIDELINES FOR ENVIRONMENTAL SECTORS	PUBLICATION NO.
Air	
A Guide to The Sampling And Analysis of Air Emissions And Air Quality	440
Recommended Separation Distances for Industrial Residual Air Emissions – Guideline	1518
Construction of Input Meteorological Data Files for EPA Victoria's Regulatory Air Pollution Model (AERMOD)	1550
Guidance Notes for Using the Regulatory Air Model AERMOD in Victoria	1551
Greenhouse Gas Emissions	
Protocol For Environmental Management — Greenhouse Gas Emissions and Energy Efficiency in Industry	824

Works approval application

EREP Toolkit Module 3: A Resource Efficiency Site Assessment Procedure	1223
Land and Groundwater guidance	
Hydrogeological Assessment (Groundwater Quality) Guidelines	668
Groundwater Attenuation Zone	841
The design, installation and management requirements for underground petroleum storage systems (UPSS)	888
Guidelines for Environmental Management: Biosolids Land Application	943
Landfill	
Environmental Guidance for Reducing Greenhouse Gas Emission from Landfills and Wastewater Treatment Facilities	722
Best Practice Environmental Management: Siting, Design, Operation and Rehabilitation of Landfills	788
Policy Impact Assessment Waste Management Policy (Siting, Design and Management of Landfills)	968
Best Practice Guidelines for Landfills Receiving Category C Prescribed Industrial Waste	1208
Landfill Licensing Guidelines	1323
Landfills Exempt from Licensing	1563
Noise	
Noise Control Guidelines	1254
Noise from Industry in Regional Victoria	1411
SEPP N-1 and NIRV Explanatory Notes	1412
Applying NIRV to Proposed and Existing Industry	1413
Waste	
Industrial Waste Fact Sheets – 6 Legal Definitions	1442
Designing, constructing and operating composting facilities	1588
Soil Hazard Categorisation And Management	IWRG621
Soil Industrial Waste Hazard Category And Management	IWRG631
Polychlorinated Biphenyls Management	IWRG643
Permit to Transport Prescribed Industrial Waste	IWRG811
Waste Codes	IWRG822
Water	
Guidelines for Wastewater Irrigation	168
Construction Techniques for Sediment Pollution Control	275
Guidelines for Environmental Management: Use of Reclaimed Water	464
Code of Practice for Small Wastewater Treatment Plants	500
Point Source Discharges to Streams: Protocol for In-stream Monitoring and Assessment	596
Guidelines for Environmental Management: Dual Pipe Water Recycling Schemes – Health and Environmental Risk Management	1015

Works approval application

Guidelines for Risk Assessment of Wastewater Discharges to Waterways	1287
Guidance for the Determination and Assessment of Mixing Zones	1344
Industrial Water Reuse	IWRG632
Works Approval and Licence	
Appealing a Licence or Works Approval	
Licence Assessment Guidelines	1321
Licence Management Guidelines	1322
Financial Assurance	
Financial assurance for licences and works approvals - EPA Position	1594
Types of financial assurance	1595
Calculation of financial assurance for landfills, prescribed industrial waste (PIW) management and container washing	1596

EXTERNAL GUIDELINES	By whom
Australian and New Zealand Guidelines for Fresh and Marine Water Quality	Agriculture and Resource Management Council of Australia and New Zealand and the Australian and New Zealand Environment and Conservation Council, 2000
National Environmental Guidelines for Piggeries, Australian Port Limited	Australian Port Limited
National Greenhouse Accounts (NGA) Factors	Department of Climate Change and Energy Efficiency
Visualising Victoria's Groundwater website (www.vvg.org.au)	
Directive 2000/76/ec of the European Parliament and of the Council of 4 December 2000 on the incineration of waste	EU Standards
AS1940 Storage and Handling of Dangerous Goods	WorkSafe
AS 3833 Storage and Handling of Mixed Classes of Dangerous Goods	WorkSafe
Fire Services Guideline – Open air storage of new or used tyres (2014)	CFA and MFB
Fire Services Guideline – Indoor storage of new or used tyres (2014)	CFA and MFB

Appendix B: Summary of information requirements by the scheduled premises

To enable you to provide the right information, the following table is a summary of key environmental issues and their degrees of concerns for each scheduled premises. Further information can be found in the *selected scheduled premises prompt sheets*.

Works approval application

Legend

•	Usually impacted segment	* Specific to certain scheduled premises
•	Depends on proposal. Refer to "when to complete" table of each section	* Applicable to activities involving: Underground storage of petroleum, pipeline transfer of petroleum, ground water extraction, or Injection of waste to groundwater
•	Financial assurance is required for A07 premises where PIW is handled	

Sch Cat. Code	Segments of Environment	Energy use and greenhouse gas emissions		Water resource use		Air emissions	Noise emissions		Water				Land & Groundwater			Waste								Post Decision		
									Stormwater	Leachate	Wastewater treatment system	Discharge to surface water	Reuse of treated wastewater	Reuse of biosolids	Industrial waste generation	PIW generation		Waste handling and treatment premises	Landfills (A05)	Contaminated sites (L02)	Contaminated sites (L04)	PCB management	Financial assurance			
		11.1	11.2.1	11.2.2	12.1.1	12.1.2	12.2.1	12.2.2																12.3	12.4	12.5
		Section on works approval guideline		6.1	6.2	7.1	7.2	8.1	9.1	9.2	10.1	10.2	10.3	10.4	*	General										
Level of information		< 10 TJ/yr	> 10 TJ/yr	< 10 ML/yr	> 10 ML/yr		inaudible increase	audible increase									< 1,000 t/yr	> 1,000 t/yr	< 100 t/yr	> 100 t/yr						
Scheduled premises																										
A Waste treatment, disposal and recycling																										
A01	PIW management	●	●	●	●	●	●	●	●		●			●							●				●	●
A02	Other waste treatment	●	●	●	●	●	●	●	●								●				●				●	
A03	Sewage treatment	●	●	●	●	●	●	●	●		●	●		●	●		●	●	●	●						
A04	Industrial wastewater treatment	●	●	●	●	●	●	●	●		●	●		●	●		●	●	●	●						
A05	Landfills	●	●	●	●		●	●													●					●
A06	Land disposal			●	●	●								●	●											
A07	Organic waste processing	●		●	●	●	●	●	●	●	●			●	●						●					●
A08	Waste to energy		●	●	●	●	●	●		●				●	●		●	●			●					
A09	Waste tyre Storage	●	●			●	●	●	●								●	●	●	●						

Works approval application

Legend

•	Usually impacted segment	* Specific to certain scheduled premises
•	Depends on proposal. Refer to "when to complete" table of each section	* Applicable to activities involving: Underground storage of petroleum, pipeline transfer of petroleum, ground water extraction, or Injection of waste to groundwater
•	Financial assurance is required for A07 premises where PIW is handled	

Sch Cat. Code	Segments of Environment	Energy use and greenhouse gas emissions		Water resource use		Air emissions	Noise emissions		Water				Land & Groundwater			Waste								Post Decision																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
									Stormwater	Leachate	Wastewater treatment system	Discharge to surface water	Reuse of treated wastewater	Reuse of biosolids	Industrial waste generation	PIW generation		Waste handling and treatment premises	Landfills (A05)	Contaminated sites (L02)	Contaminated sites (L04)	PCB management	Financial assurance																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

Works approval application

Legend

•	Usually impacted segment	* Specific to certain scheduled premises
•	Depends on proposal. Refer to "when to complete" table of each section	* Applicable to activities involving: Underground storage of petroleum, pipeline transfer of petroleum, ground water extraction, or Injection of waste to groundwater
•	Financial assurance is required for A07 premises where PIW is handled	

Sch Cat. Code	Segments of Environment	Energy use and greenhouse gas emissions		Water resource use		Air emissions	Noise emissions		Water				Land & Groundwater			Waste								Post Decision		
									Stormwater	Leachate	Wastewater treatment system	Discharge to surface water	* General	Reuse of treated wastewater	Reuse of biosolids	Industrial waste generation		PIW generation		Waste handling and treatment premises	Landfills (A05)	Contaminated sites (L02)	Contaminated sites (L04)	PCB management	Financial assurance	
		6.1	6.2	7.1	7.2	8.1	9.1	9.2																		10.1
		Section on works approval guideline		< 10 TJ/yr	> 10 TJ/yr	< 10 ML/yr	> 10 ML/yr		inaudible increase	audible increase								< 1,000 t/yr	> 1,000 t/yr	< 100 t/yr	> 100 t/yr					
D04	Seafood processing	●	●	●	●	●	●	●	●		●															
D05	Pet food processing	●	●	●	●	●	●	●	●		●					●		●	●							
D06	Food Processing		●		●	●	●	●	●		●	●		●		●	●	●	●							
D07	Milk processing		●		●	●	●	●	●		●	●	●	●		●	●	●	●							
D08	Edible oil		●		●	●	●	●	●		●					●	●	●	●							
D09	Beverage manufacturing	●	●			●	●	●	●		●					●										
E	Textiles																									
E01	Textiles	●	●		●	●	●		●		●	●				●	●	●	●							
F	Wood and wood derivatives																									
F01	Timber preservation	●	●	●	●		●	●	●			●														

Works approval application

Legend

•	Usually impacted segment	* Specific to certain scheduled premises
•	Depends on proposal. Refer to "when to complete" table of each section	* Applicable to activities involving: Underground storage of petroleum, pipeline transfer of petroleum, ground water extraction, or Injection of waste to groundwater
•	Financial assurance is required for A07 premises where PIW is handled	

Sch Cat. Code	Segments of Environment	Energy use and greenhouse gas emissions		Water resource use		Air emissions	Noise emissions		Water				Land & Groundwater			Waste								Post Decision	
									Stormwater	Leachate	Wastewater treatment system	Discharge to surface water	* General	Reuse of treated wastewater	Reuse of biosolids	Industrial waste generation	PIW generation		Waste handling and treatment premises	Landfills (A05)	Contaminated sites (L02)	Contaminated sites (L04)	PCB management	Financial assurance	
		6.1	6.2	7.1	7.2	8.1	9.1	9.2	10.1	10.2	10.3	10.4	11.1	11.2.1	11.2.2		12.1.1	12.1.2							12.2.1
		Section on works approval guideline		< 10 TJ/yr	> 10 TJ/yr	< 10 ML/yr	> 10 ML/yr		inaudible increase	audible increase							< 1,000 t/yr	> 1,000 t/yr	< 100 t/yr	> 100 t/yr					
F02	Fibreboard		•	•	•	•		•	•																
F03	Paper pulp mills		•	•	•	•		•	•		•														
G Chemicals including petroleum																									
G01	Chemical works	•	•	•	•	•	•	•	•				•			•	•	•	•						
G02	Coal processing		•			•	•	•	•						•	•	•	•							
G03	Oil and gas refining		•	•	•	•		•	•				•			•		•							
G04	Bulk storage	•	•			•	•	•	•				•				•	•							•
G05	Container washing	•	•	•	•	•	•		•		•							•							•
H Non-metallic minerals																									
H01	Cement		•	•	•	•		•	•								•								

Works approval application

Legend

•	Usually impacted segment	* Specific to certain scheduled premises
•	Depends on proposal. Refer to "when to complete" table of each section	* Applicable to activities involving: Underground storage of petroleum, pipeline transfer of petroleum, ground water extraction, or Injection of waste to groundwater
•	Financial assurance is required for A07 premises where PIW is handled	

Sch Cat. Code	Segments of Environment	Energy use and greenhouse gas emissions		Water resource use		Air emissions	Noise emissions		Water				Land & Groundwater			Waste								Post Decision	
									Stormwater	Leachate	Wastewater treatment system	Discharge to surface water	* General	Reuse of treated wastewater	Reuse of biosolids	Industrial waste generation		PIW generation		Waste handling and treatment premises	Landfills (A05)	Contaminated sites (L02)	Contaminated sites (L04)	PCB management	Financial assurance
		Section on works approval guideline	6.1	6.2	7.1	7.2	8.1	9.1	9.2	10.1	10.2	10.3	10.4	11.1	11.2.1	11.2.2	12.1.1	12.1.2	12.2.1	12.2.2	12.3	12.4	12.5	12.6	15.2
	Level of information	< 10 TJ/yr	> 10 TJ/yr	< 10 ML/yr	> 10 ML/yr		inaudible increase	audible increase							< 1,000 t/yr	> 1,000 t/yr	< 100 t/yr	> 100 t/yr							
H02	Bitumen (asphalt) batching		●	●	●	●		●	●								●								
H03	Ceramics		●	●	●	●	●	●	●								●								
H04	Mineral wool		●	●	●	●	●	●	●				●												
H05	Glass works		●	●	●	●	●	●	●						●	●	●	●	●						
I Metals and engineering																									
I01	Primary metallurgical		●	●	●	●	●	●	●						●	●	●	●							
I02	Metal melting	●	●	●	●	●	●	●	●			●			●	●	●	●							
I03	Metal galvanising	●	●	●	●	●	●	●	●		●				●	●	●	●							
I04	Metal finishing	●	●	●	●	●	●	●	●						●	●	●	●							
I05	Can and drum coating	●	●	●	●	●	●	●	●						●	●	●	●							

Works approval application

Legend

•	Usually impacted segment	* Specific to certain scheduled premises
•	Depends on proposal. Refer to "when to complete" table of each section	* Applicable to activities involving: Underground storage of petroleum, pipeline transfer of petroleum, ground water extraction, or Injection of waste to groundwater
•	Financial assurance is required for A07 premises where PIW is handled	

Sch Cat. Code	Segments of Environment	Energy use and greenhouse gas emissions		Water resource use		Air emissions	Noise emissions		Water				Land & Groundwater			Waste								Post Decision		
									Stormwater	Leachate	Wastewater treatment system	Discharge to surface water	* General	Reuse of treated wastewater	Reuse of biosolids	Industrial waste generation	PIW generation		Waste handling and treatment premises	Landfills (A05)	Contaminated sites (L02)	Contaminated sites (L04)	PCB management	Financial assurance		
		6.1	6.2	7.1	7.2	8.1	9.1	9.2	10.1	10.2	10.3	10.4	11.1	11.2.1	11.2.2		12.1.1	12.1.2							12.2.1	12.2.2
		Section on works approval guideline		< 10 TJ/yr	> 10 TJ/yr	< 10 ML/yr	> 10 ML/yr		inaudible increase	audible increase							< 1,000 t/yr	> 1,000 t/yr	< 100 t/yr	> 100 t/yr						
I06	Vehicle assembly	●	●	●	●	●	●	●	●						●	●	●	●								
J	Printing																									
J01	Printing	●	●	●	●	●	●	●	●						●		●									
K	Utilities																									
K01	Power stations		●		●	●		●	●					●			●	●	●	●						
K02	Carbon geosequestration	●	●	●	●	●		●	●					●			●	●	●	●						
K04	Water desalination plants		●	●	●		●	●	●		●						●	●	●	●						
L	Other																									
L01	General emissions to air	●	●	●	●	●	●	●	●																	
L02	Contaminated sites — onsite soil containment	●	●	●	●	●	●		●													●			●	

Works approval application

Legend

•	Usually impacted segment	* Specific to certain scheduled premises
•	Depends on proposal. Refer to "when to complete" table of each section	* Applicable to activities involving: Underground storage of petroleum, pipeline transfer of petroleum, ground water extraction, or Injection of waste to groundwater
•	Financial assurance is required for A07 premises where PIW is handled	

Sch Cat. Code	Segments of Environment	Energy use and greenhouse gas emissions		Water resource use		Air emissions	Noise emissions		Water				Land & Groundwater			Waste								Post Decision		
													Stormwater	Leachate	Wastewater treatment system	Discharge to surface water	Reuse of treated wastewater	Reuse of biosolids	Industrial waste generation	PIW generation	Waste handling and treatment premises	Landfills (A05)	Contaminated sites (L02)	Contaminated sites (L04)	PCB management	Financial assurance
		* General	Reuse of treated wastewater	Reuse of biosolids	Industrial waste generation	PIW generation	Waste handling and treatment premises	Landfills (A05)	Contaminated sites (L02)	Contaminated sites (L04)	PCB management	Financial assurance														
		Section on works approval guideline	6.1	6.2	7.1	7.2	8.1	9.1	9.2	10.1	10.2	10.3	10.4	11.1	11.2.1	11.2.2	12.1.1	12.1.2	12.2.1	12.2.2	12.3	12.4	12.5	12.6	15.2	15.1
Level of information	< 10 TJ/yr	> 10 TJ/yr	< 10 ML/yr	> 10 ML/yr		inaudible increase	audible increase								< 1,000 t/yr	> 1,000 t/yr	< 100 t/yr	> 100 t/yr								
L03	Tunnel ventilation systems		●	●	●	●		●	●																	
L04	Contaminated sites — long-term management		works approval not required for this scheduled premises																							