

Environmental Impact Statement Guidelines

Hydro Tasmania

*Tarraleah Redevelopment Project,
Western and upstream component
Tarraleah*

August 2024



ENVIRONMENT PROTECTION AUTHORITY

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Glossary and abbreviations

Term	Definition
Board	Board of the Environment Protection Authority
Case for assessment	Information required for environmental impact assessment, prepared according to the Board's requirements.
Director	Means the Director, Environment Protection Authority holding office under Section 18 of <i>Environmental Management and Pollution Control Act 1994</i> and includes a delegate or person authorised in writing by the Director to exercise a power or function on the Director's behalf.
EIS	Environmental Impact Statement
EMPCA	<i>Environmental Management and Pollution Control Act 1994</i>
EMPCS	Environmental Management and Pollution Control System. Objectives found in Schedule 1 of EMPCA.
Environmentally hazardous material	Means any substance or mixture of substances of a nature or held in quantities which present a reasonably foreseeable risk of causing serious or material environmental harm if released to the environment and includes fuels, oils, waste and chemicals but excludes sewage.
EPA	Environment Protection Authority. Tasmania's independent principal environmental regulator which administers EMPCA and consists of a Board and a Director.
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>
LUPAA	<i>Land Use Planning and Approvals Act 1993</i>
MNES	Matters of National Environmental Significance
NCA	<i>Nature Conservation Act 2002</i>
Noise sensitive premises	Residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.
Planning Authority	Council for relevant local government area
RMPS	Resource Management and Planning System, Tasmania. Objectives found in Schedule 1 of EMPCA.
Suitably qualified person	Means suitably qualified person in the opinion of the Director
RFA	<i>Tasmanian Regional Forest Agreement</i>
TSPA	<i>Threatened Species Protection Act 1995</i>

Part A. Introduction

These Guidelines provide instructions for proponents on how to prepare an Environmental Impact Statement (EIS) for an activity being assessed in Tasmania by the Board of the Environment Protection Authority (the Board). The Board uses an EIS as a ‘case for assessment’, to assess the environmental impact of an activity, as required under the *Environmental Management and Pollution Control Act 1994* (EMPCA).

Activities subject to assessment by the EPA Board are construction-related works that occur west and upstream of the proposed new power station. These works, which are to be addressed by the EIS, include:

- Headrace pipeline, approximately 4.2 km long up to 4 m diameter, connected to the intake on Lake King William and tunnel completed during upgrade works.
- Arched headrace tunnel, approximately 12 km long, up to 6.5 m high and 5.5 m wide.
- Access tunnels and portals to headrace and power tunnels and associated permanent spoil storage stockpiles.
- Surge tower, up to 75 m high (above ground level) and 14 m diameter and associated underground surge shaft to control water pressure in the headrace and power tunnels.
- Existing pumping station and approximately 1.1 km pipeline to transfer water from the existing No. 2 Pond to the surge tower.

An indicative location of the area for assessment is shown in Figure 1.

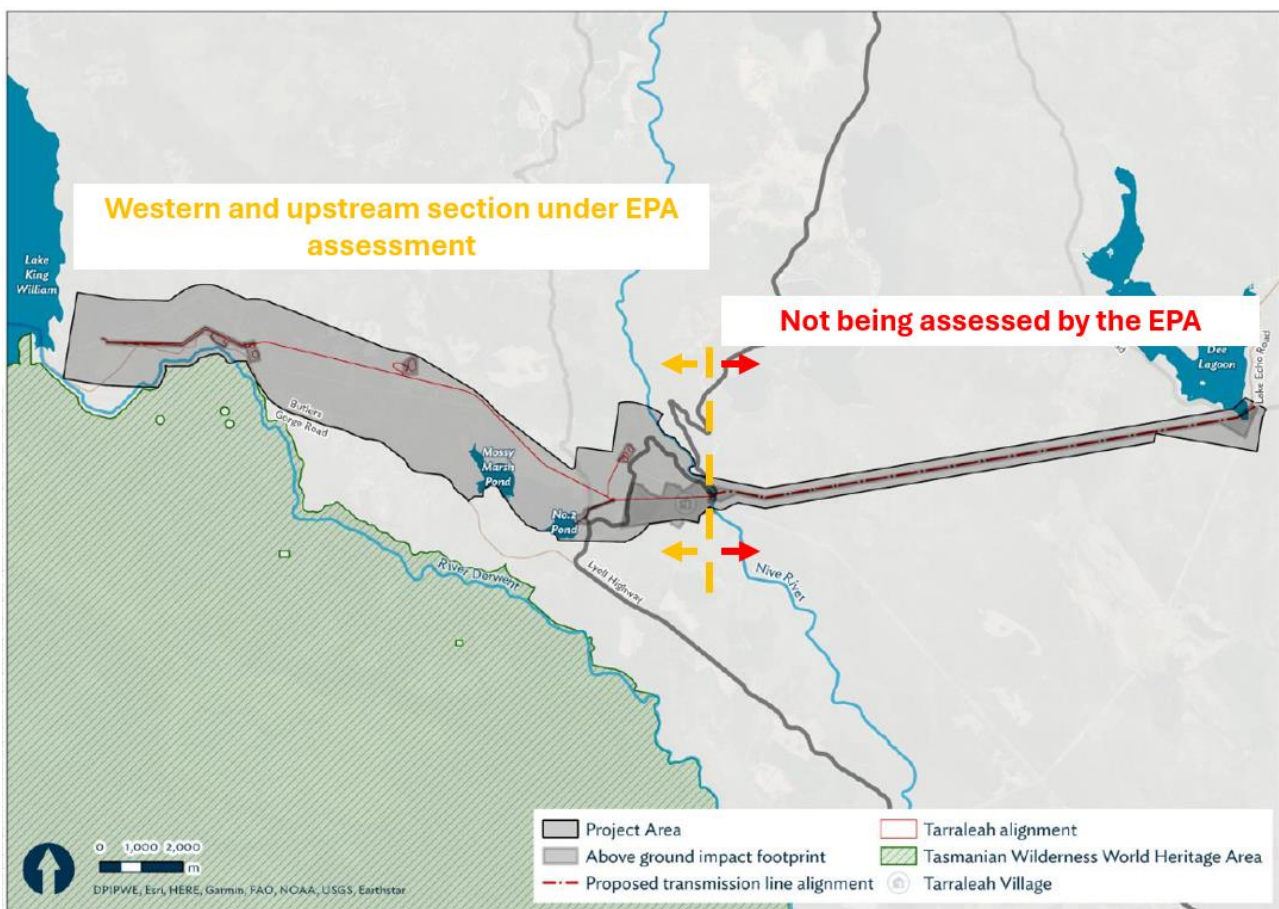


Figure 1 Indicative location associated with the activities to be assessed within the EIS

The following activities, which occur on the eastern and downstream section, are outside the scope of the EPA Board's assessment, and are not required to be addressed by the EIS except where there may be geographical or environmental impact overlap or implications:

- new hydropower pump station
- new transmission lines
- new switchyard.

The role of the EIS

An EIS is generally required for larger scale developments, classed as requiring 2B or 2C assessments under EMPCA. It is a document that provides information about a proposal, its potential impacts and proposed mitigation measures. As a publicly available document, an EIS should facilitate public consultation and informed comment and should contain sufficient information to establish the conditions of approval by authorities, if approved.

The EIS should demonstrate that the proposal is consistent with the objectives of relevant laws and policies, including the Tasmanian Resource Management and Planning System (RMPS) and the Environmental Management and Pollution Control System (EMPCS). These systems are designed to facilitate sustainable development.

Further information on the EPA Assessment Process is available on the [EPA website](#).¹

Refer also to Appendix A *General principles for assessing environmental impacts*, for further information on EIS principles.

How the Board uses the EIS

The Board uses the EIS to inform decision making as part of the environmental impact assessment process. The EIS must be prepared in accordance with guidance provided by the Board under section 74(4) of EMPCA. The staff of the EPA support the Board during the assessment process.

The EIS will be advertised publicly to allow for public consultation. The proponent may then be required to supply additional information in response to public and government agency submissions. This information is generally supplied in the form of a supplement to the EIS.

The Board considers the EIS as well as other relevant information in the context of the objectives of the RMPS and EMPCS. These objectives aim to sustain the environment and avoid or mitigate adverse effects, while considering the economic and social needs of people now and in the future. The Board will endeavour to make the decision which best furthers the objectives of the RMPS and EMPCS. It may approve the proposal with conditions, or in some cases may decide to reject the proposal if the objectives cannot be upheld.

The Environmental Impact Statement Guidelines are adapted for each specific proposal. In general, more detailed studies and information will be required where issues are considered by the Board to involve a higher level of environmental risk.

Other significant matters may emerge while preparing the EIS, from environmental studies, public comments, or other sources. These must also be considered in the EIS. Information collected or generated during the assessment process may also change the understanding of the level of risk associated with some issues. This must also be reflected in the EIS.

¹ See <https://epa.tas.gov.au/Pages/Assessment-Process.aspx>

Planning information

The relevant Planning Authority (local Council) will assess planning information if the *Land Use Planning and Approvals Act 1993* (LUPAA) applies. Information solely for the purpose of assessment under the relevant Planning Scheme should be supplied to the Planning Authority either:

- as required under section 54 of LUPAA where the planning application has started the environmental assessment process; or
- as a combined planning and environmental report where it is intended to submit an EIS (draft or final) with the planning application. Where this option is selected, the information required for the Board's assessment must be clearly distinguished from that supplied for the purposes of LUPAA.

Australian Government environmental assessment

The Australian Government (Commonwealth) may have a role in the environmental assessment and approval of the proposal in addition to Tasmanian requirements. Approval under the *Australian Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is required for an action which has, will have, or is likely to have, a significant impact on a Matter of National Environmental Significance (MNES).

The nine MNES are:

- world heritage properties
- national heritage places
- wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed)
- nationally threatened species and ecological communities
- migratory species
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (including uranium mining)
- a water resource, in relation to coal seam gas development and large coal mining development.

Information on the EPBC Act can be obtained from the [Australian Government, Department of Climate Change, Energy, the Environment and Water \(DCCEEW\) website](https://www.dcceew.gov.au/environment/epbc),² or by calling 1800 803 772.

The Australian and Tasmanian Governments have signed a bilateral agreement for environmental impact assessment under section 45 of the EPBC Act, which accredits the Tasmanian assessment process. This allows a proposal that has been determined to be a controlled action under the EPBC Act to be assessed by the Board on behalf of the Australian Government.

The project was deemed a controlled action on 3 April 2023 under the EPBC Act (EPBC no. 2023/09482). The proponent has not elected to have their proposal assessed under the bilateral agreement.

² See <https://www.dcceew.gov.au/environment/epbc>

Reserve Activity Assessment parallel assessment

Components of the proposal are located within the Tarraleah Conservation Area, which requires assessment and authorisation under the *National Parks and Reserves Management Act 2002* (NPRMA). The Parks and Wildlife Services (PWS) will initiate a Level 3 Reserve Activity Assessment (RAA) for assessment, public consultation and decision making.

During PWS review of the EPA's draft EIS guidelines, PWS identified that there are benefits for all parties, including Hydro Tasmania, if a coordinated assessment process can be undertaken. Most of the information requested aligns with the PWS information requirements. Additionally, the public consultation process that will be conducted by the EPA would likely fulfil the general requirements for a PWS Level 3 RAA process.

Any draft EIS by Hydro Tasmania for the assessment under *Environmental Management and Pollution Control Act 1994* (EMPCA) may also be applicable for assessment under the NPRMA. To facilitate this, PWS has identified additional information requirements relevant to the RAA process.

The additional requirements and further information required by PWS are provided in Attachment I. Information provided solely for the purpose of assessment by PWS may be included within the EIS but should be clearly identified as such.

Part B. Instructions

The EIS must present information in a way that can be easily understood. It should provide summaries in non-technical language to give readers a general understanding of the proposal. It must also provide technical detail to allow analysis and understanding of impacts and mitigation measures by technical specialists, regulatory bodies, and people with an interest in specific matters arising from the proposal.

Section C of these Guidelines sets out the structure and **minimum** content requirements of the EIS.

Proponents are advised to consult the EPA during preparation of the EIS, including in the case of any uncertainty in relation to the requirements set out in these Guidelines.

General requirements

- Avoid technical terminology where possible in the main body of the EIS. It should be able to be read as an independent document which provides a general understanding of the proposal.
- Include any detailed technical data or supplementary reports as appendices.
- Consider document accessibility. The Australian Government Style Manual provides information about inclusion and accessibility.
- Use cross-referencing to prevent unnecessary duplication between sections.
- Reference all sources of information using a consistent style.
- Define all key terms and words used.
- Information in the EIS must be relevant.
 - Show reasoning for arguments. Support conclusions with referenced evidence.
 - Indicate how current information is, how reliability has been tested, and the degree of confidence attached to any predictions.
 - Sufficient technical detail must be provided to allow for environmental impact assessment, even when details are not final at the time of preparation.
 - If information is currently unavailable, estimates and alternative options should be provided, however the limitations of available information must be evaluated.
- Provide any sensitive commercial or corporate information in a confidential appendix. Provide a comment in the EIS if this has been done.

The EIS must not include information that is known to be false or misleading, and nothing should be omitted if it is known that without it the EIS would be false or misleading (section 43A of EMPCA).

Spatial and visual information requirements

- Present information in maps, plans, diagrams, and photographs where necessary, to enhance understanding.
- Images must be high quality and reproducible in monochrome, with all text and relevant features clearly visible.
- Maps and plans should include a north arrow and scale.

- Use a consistent base plan throughout the EIS where appropriate, to allow elements to be overlaid and compared. Ensure that detailed information is clear and visible, particularly when using satellite images as background layers. This is best achieved using a geographical information system (GIS).
- Specify the coordinate reference system when providing or referring to spatial information, including maps, plans, grid coordinates and heights. Further information on coordinate reference systems used in Tasmania can be found on the [Land Tasmania website](#)³.

Recommended systems are:

- Horizontal – Geocentric Datum of Australia 1994⁴ Map Grid of Australia Zone 55 (GDA94 MGA55)
- Vertical – Australian Height Datum (Tasmania) (AHD83).

Independent Review

For large proposals, such as Class 2C activities, prior to submission to the EPA, the draft EIS should be independently reviewed by a suitably qualified person to confirm that it meets the requirements detailed in Guidelines issued for the proposal.

Submission

It is strongly recommended that proponents submit a draft EIS to the EPA for review prior to formal lodgement of the EIS with the Board.

The EIS (and any drafts submitted for review) may be submitted via email to assessments@epa.tas.gov.au and your nominated contact officer. Proponents should contact the EPA if alternative submission methods are deemed necessary.

³ See <https://nre.tas.gov.au/land-tasmania/geospatial-infrastructure-surveying/geodetic-survey/coordinate-height-and-tide-datums-tasmania>

⁴ Geocentric Datum of Australia 2020 (GDA2020) is the new official datum for recording the horizontal location of spatial information in Australia, but is not yet fully implemented in Tasmania.

Part C. EIS structure and content

The EIS must follow the structure set out below and must address all requirements unless otherwise agreed following consultation with the EPA. For clarity, organise content with further headings and subheadings as appropriate.

Title page

The title page must include:

- name of proponent (legal entity)
- name of proposal (include “expansion” or “upgrade” where appropriate)
- proposal address or location
- EIS version number
- month and year of submission.

Executive summary

The executive summary must provide a clear and concise overview of the proposal, its environmental implications, and the function of the EIS in the context of the assessment process. For a larger EIS, the executive summary must be written as a stand-alone document for people who may not wish to read or acquire the full EIS.

Table of contents

The EIS must include a table of contents and a list of figures and tables to allow the reader to easily locate information. The table of contents should include hyperlinks to allow documents to be navigated easily.

Glossary and abbreviations

Provide a list of abbreviations and acronyms and a glossary which clearly defines any technical terms used in the EIS.

Proponent information

Proponent details:

- Name of proponent (legal entity)
- Name of proponent (trading name)
- Registered address of proponent
- Postal address of proponent
- ABN
- CAN (where relevant)

Contact person’s details:

- Name
- Telephone
- Email address

Activity Operator details must be provided if the operator will be a different entity to the proponent.

1. Introduction

The introduction should provide:

- General background information on the proponent, including relevant development and operational experience.
- General background information on the proposal, including:
 - current status of the proposal
 - an overview of the principal components of the proposal
 - the proposal location
 - likely markets for the product
 - possibilities for future expansion.
- If the proposal is associated with an existing activity, information on current permits, regulatory approvals and/or licences.
- A discussion about how the proposal relates to any other proposals that have been or are being developed in the same region as the proposal.
- Environmental legislation, standards and guidelines that will be applicable, such as policies, regulations, and industry codes of practice.
- Other relevant Commonwealth, State and Local Government policies, strategies, and management plans with which the proposal would be expected to comply.

2. Proposal description

The scope of the proposal must be clearly described, and must include:

- a summary table
- a detailed description of proposal
- definitions of the Land and the footprint of the proposed activity (see 2.2 below)
- maps, plans and visual information
- a summary of planning aspects
- socio-economic context
- off-site infrastructure.

Where a proposal will require a permit application under LUPAA, the proposal description and specification of the site must be consistent with the intended or current permit application.

2.1 Summary table

The summary table provides an overview of the proposal and identifies the key characteristics, including:

- location and planning context
- existing site information, including topography, local climate, geology, geomorphology, soils (e.g. erodibility and acid sulphate soils), vegetation, fauna, groundwater, and surface drainage (e.g. waterways, lakes, wetlands, coastal areas)
- proposed infrastructure
- proposed timeline
- inputs (e.g. water, materials, energy) and outputs (e.g. products, wastes and emissions)

Refer to *Appendix C* for an example of a project description summary table.

2.2 Definitions of the Land and footprint of the proposed activity

2.2.1 Definition of the Land

Provide a definition of the Land on which the activity will take place. The boundary must be consistent with any intended or current permit application under LUPAA. Information requirements will vary depending on how the Land is defined. Refer to Part B for spatial and visual information requirements for detailed mapping instructions. The definition of the Land should be indicated by:

- Cadastral boundaries (Title Reference, Property ID), e.g. Title Reference 136529/1

2.2.2 Definition of the footprint of the proposed activity

Provide a definition of the boundary of the proposed construction works within the scope of the Board's assessment, as per Figure 1 above. This definition is to inform any environmental conditions issued by the Board to define the extent of works to which the Board's conditions apply. This may be done using either cadastral boundaries, or surveyed grid coordinates. If cadastral boundaries are not able to be used:

- Provide a plan which clearly shows the boundary of the proposed construction works in relation to topographic features with surveyed grid coordinates.
- Provide the boundary of the proposed construction works in a geospatial vector format (shapefile or DXF).

2.3 Detailed description of proposal

This section should include information that has not been included in the summary table, or that requires further explanation. Provide detail on the proposed construction, commissioning and operation of the activity, including any ancillary works that are for the purpose of the proposal (e.g. access works).

2.3.1 Project Components

- Describe the physical components required for the proposal to function up to closure.
- Describe the major items of equipment (including pollution control equipment) and onsite facilities. Include detailed technical information on major items of equipment as appendices.
- Detail the total footprint of the proposal.

2.3.2 Construction

- Provide a step-by-step description of significant activities that will occur during the construction phase of the proposal.
- Provide an indicative timetable for completing major stages of construction.
- Detail the total construction footprint.
- Define the proposed hours within which construction activities will take place (hours per day and specific days per week).
- Describe the volume, composition, origin, destination, and route for vehicle movements (road, rail, shipping, and air) during construction. Specify what proportion of road usage and vehicle movements will involve over-dimension and heavy road vehicles. Compare the proposed vehicle movements with existing usage of relevant routes.
- If the proposal is associated with an existing activity, describe any current approvals or regulatory conditions.

2.3.3 Commissioning

- Provide a step-by-step description of significant commissioning activities that will occur following installation of equipment.
- Provide an indicative timetable for completing major stages of commissioning. Describe the point at which commissioning will be considered complete.

2.4 Maps, plans and figures

Provide maps and plans that detail the location of the proposal in relation to the local and wider region. Refer to Part B for spatial and visual information requirements.

2.4.1 General location maps

Provide general location maps of the existing environment and surrounding area (1:25,000 scale or better, as appropriate) which identify:

- the location of the proposal site
- boundaries of the property on which the proposal is located
- road access to and from the site
- the distance(s) to any nearby sensitive uses⁵
- topographical features, aspect, and direction of drainage
- location of waterways and drains (including ephemeral waterbodies and water courses)
- electricity transmission lines
- surrounding land tenure
- surrounding land use (including areas of conservation or recreational significance)
- surrounding land zoning in the local government planning scheme.

2.4.2 Site Plan

Provide a site plan that includes existing and proposed conditions and features of the site. This may include:

- elevation contours and levels
- the position of topographic features including roads, tracks, waterways, and drains
- the position of facilities, buildings, structures, major items of equipment, storage areas and loading or unloading areas
- a construction layout plan.

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

2.4.3 Figures and flowcharts

Present figures such as process flowcharts and images where they are likely to improve readers' understanding of the site and proposal. Any images and photos used must be high-quality, with an accurate description and date.

2.5 Planning aspects

The planning aspects description should include any additional planning information and data not included in the summary table.

- If a permit is required under LUPAA provide Use Class and Permissibility of the proposed activity under the applicable Planning Scheme.
- Detail land tenure and property boundaries of the proposed site, with certificate of title details.

⁵ Defined in the State Planning Provisions as 'a residential use or a use involving the presence of people for extended periods except in the course of their employment such as a caravan park, childcare centre, dwelling, hospital or school.'

- Detail land zonings for the proposed site and surrounding areas.
- Describe any rights of way, easements and covenants affecting the site.
- Discuss land use and planning history of the site, including the potential for site contamination⁶, present use and any existing buildings and significant structures.
- Describe land use and ownership in the vicinity of the site and those areas which may be affected by the proposal.
- Provide the location and nature of industrial facilities.
- Detail sensitive uses⁷ and residential zones within applicable attenuation distances including the location of individual residences, schools, hospitals, caravan parks and similar sensitive uses, and the location of any tourist or recreation facilities or routes (such as camping areas, picnic areas, walking tracks, historic routes).
- Consider any proposed or potentially sensitive uses within applicable attenuation distances from the proposal site, which have been or are likely to be granted approval under the local planning scheme.

2.6 Socio-economic context

Briefly describe the existing social and economic environment that may be affected by the proposal. This may include:

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

2.7 Offsite infrastructure

Describe any new infrastructure or offsite ancillary facilities required to enable the proposal to proceed, such as water supply, electricity supply, roads or other infrastructure.

3. Project Alternatives

Proponents should provide the rationale for the proposal. Alternatives should consider best practice environmental management, including measures listed under section 4(2) of [EMPCA](#).⁸ The rationale should:

- Describe the site selection process and criteria.
- Evaluate any alternative sites considered. Justify the choice of the proposed site in terms of clearly defined environmental, social, economic, and technical considerations.
- Describe the effect of any community consultation on the selection process.
- Identify and provide an assessment of other available technologies, materials, design options or management practices, where relevant. Evaluate the environmental performance of identified alternatives and provide justification for the preferred option.

⁶ Information on potentially contaminating activities and contaminated site assessment can be found online at <https://epa.tas.gov.au/Pages/Land.aspx>

⁷ Defined in the State Planning Provisions as 'a residential use or a use involving the presence of people for extended periods except in the course of their employment such as a caravan park, childcare centre, dwelling, hospital or school.'

⁸ See: <https://www.legislation.tas.gov.au/view/html/inforce/current/act-1994-044#GS4@EN>

4. Public Consultation

Describe any public consultation that has taken place during project planning and preparation of the EIS and summarise the results of this consultation. Describe any proposed future public consultation that will take place during project implementation and operation. The Board encourages early community engagement, as it often leads to better outcomes for all parties. Guidance on effective community engagement is available on the [EPA website](#).⁹

5. Potential Impacts and Management

Identify all potential environmental impacts and describe the proposed measures to avoid, mitigate or offset adverse consequences. The detail provided on each issue should reflect its significance. While key issues are identified for the proposal, other issues that emerge as significant while preparing the EIS, through environmental studies, public comments or otherwise, must be considered and addressed.

Address each discrete issue separately, using headings and subheadings where necessary to organise and separate discussions.

Use scientific data to support predictions and evaluate impacts and provide references to the data used. Where specialist reports have been required for key issues, summarise them within the body of the EIS where relevant, and attach the reports as appendices. Detail the qualifications of the authors of any specialist reports. Make sure that the information in the body of the EIS is consistent with the information in the appendices.

General information requirements for each potential impact are described below, and are in addition to any specific information requirements detailed later in this section.

Existing Environment

- Describe the existing environment in relation to the impact, including the vulnerability of the potentially affected environment.
- Analyse the issue in relation to the existing environment.

Methodology

- Describe how the assessment of the impact has been undertaken, such as by survey or desktop study.
- Identify any relevant guidelines and standards used.
- Discuss any choice of methodology over alternatives where relevant.

Assessment

- Clearly articulate potential impacts, using tables and figures to aid communication where possible.
- Support assertions and assumptions with adequate argument and/or evidence.
- Identify plausible worst-case scenarios and the reversibility of the impact.
- Summarise the proposal's contribution to any cumulative impacts, where appropriate.

Avoidance and Mitigation Measures

- Describe the measures proposed to avoid, mitigate or offset potential adverse impacts.
- Detail any specialist recommendations which have been/will be implemented. Where specialist recommendations are not to be implemented, justify why. All recommendations made in specialist reports should be addressed.

⁹ See [https://epa.tas.gov.au/Documents/Guidance on Community Engagement.pdf](https://epa.tas.gov.au/Documents/Guidance%20on%20Community%20Engagement.pdf)

- Analyse the effectiveness of the mitigation measures. Describe how and to what degree the impacts will have been avoided, minimised or offset.
- Discuss any residual impacts, referring to relevant guidelines or standards.
- Discuss any contingency measures related to pollution control equipment.

Refer to *Appendix A: General principles for assessing environmental impacts*.

Key issues

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

1. Potential impacts on water quality and groundwater during and associated with construction of the proposal.
2. Potential impacts on flora and fauna from habitat clearing and works disturbance for the proposal.

5.1 Water quality

Assess potential impacts of the proposal on surface water during and associated with construction, including methodology where appropriate.

Any proposed emission of contaminants to surface water must be justified in accordance with the principles under the *State Policy on Water Quality Management 1997* and with application of a ‘weight of evidence approach’ consistent with the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Reference should be made to determined (site specific) water quality guideline values for receiving environments or otherwise to published guidelines where suitable. For information regarding the water quality management framework and evaluation criteria in Tasmania refer to *Technical Guidance for Water Quality Objectives (WQOs) Setting for Tasmania, August 2020*.

5.1.1 Existing Environment

- Provide a description and map of the activity site with respect to topography and preferential surface water flow, existing surface water and stormwater drainage. Identify and state the distance of activities to nearby water bodies and watercourses likely to be impacted by the proposal.
- Provide a description and map of potential acid sulfate soils (PASS) and/or potentially acid forming material (PAF) in relation to proposed activities.
- Provide an overview of the receiving environment. Identify all relevant Protected Environmental Values (PEVs)¹⁰, including:
 - sensitive uses and associated water quality considerations
 - seasonal water quality, hydrological characteristics and biological condition of the receiving environment
 - reference to published or determined (site-specific) water quality guideline values for receiving environments. For information about the water quality management framework and evaluation criteria in Tasmania, refer to [Technical Guidance for Water Quality Objectives \(WQOs\) Setting for Tasmania, August 2020](https://epa.tas.gov.au/Technical%20Guidance%20for%20Water%20Quality%20Objectives%20(WQOs)%20Setting%20for%20Tasmania).¹¹
- Describe baseline water quality, biological and sediment monitoring undertaken. Detail any other information relevant to assessing potential impacts, such as ecotoxicological data or potential hydrological changes.

¹⁰ See <https://epa.tas.gov.au/environment/water/pevs-for-tasmanian-surface-waters>

¹¹ See [https://epa.tas.gov.au/Documents/Technical%20Guidance%20for%20Water%20Quality%20Objectives%20\(WQOs\)%20Setting%20for%20Tasmania.pdf](https://epa.tas.gov.au/Documents/Technical%20Guidance%20for%20Water%20Quality%20Objectives%20(WQOs)%20Setting%20for%20Tasmania.pdf)

- Include the results of monitoring in the report and provide separately as data. Provide metadata and monitoring data to the EPA following the instructions and using the Excel workbook templates or file formats provided on the [Water Quality Data Elements](#)¹² webpage.

5.1.2 Assessment

- Provide a summary of the water management aspects of the Lake King William Intake upgrade project, relevant to this Proposal.
- Characterise the existing site hydrology and potential environmental impacts in relation to potential areas of disturbance, proposed engineered works and management of water.
- Identify and characterise all liquid emissions that could arise from the activity, detailing sources, locations of generation, potential contaminants of concern, estimated volumes, and receiving environments. Potential sources should include, without limitation, the following:
 - surface works, including roading laydown areas and waste management
 - PASS and PAF, if likely to be disturbed
 - host rock
 - blasting, including potential chemical residue
 - concreting.
 - the use of machinery
 - any other potentially contaminating activities.
- Assess the potential water quality impacts to identified receiving environments in relation to the selected water quality guideline values and the characteristics of liquid emissions. Provide relevant water quality data to support the assessment. The evaluation should include consideration of seasonal variations in liquid emissions, wastewater and receiving environment water quality and quantity.
- If necessary, undertake dilution/dispersion modelling to support analysis and conclusions.

5.1.3 Avoidance and mitigation measures

- Provide a water management plan which includes, but not limited to, details and management controls in relation to the following aspects:
 - stormwater including erosion and sediment control
 - discharge of water from intrusive works
 - wastewater including wash-water from concrete batching
 - other aspects of water-related measures, including any potential for leachate from acid sulphate soil, residue from blasting, or acid and metalliferous drainage from waste rock or exposed rock.

The management plan should consider construction timelines and stages and include mitigation and contingency measures.

- In relation to stormwater and erosion and sediment control, Detail the potential for mobilisation of sediment for each significant construction element and/or environmental setting and discuss suitable potential mitigation measures consistent with best practice erosion and sediment control principles.(e.g. Best Practice Erosion and Sediment Control, IECA 2008 (<https://www.austieca.com.au/publications/best-practice-erosion-and-sediment-control-bpesc-document>)).
 - Provide general classification of erosion potential for each land type and topography likely to be disturbed by construction activities. Activities may include roads, laydown areas, waste and material

¹² See <https://epa.tas.gov.au/environment/water/water-quality-data-elements>

stockpiles, quarries, construction footprints, concrete batching plant and other ancillary infrastructure.

- Discuss measures that may be employed to minimise erosion potential including staging of works, temporary surface treatments, cut-off drains, temporary drainage controls, and minimisation of disturbance footprints through rehabilitation staging.
- Detail design criteria for temporary and permanent drainage control and sediment containment infrastructure, including design rainfall average recurrence interval and emission limits for sediment retention basins, and drainage infrastructure.
- Discuss the potential for flocculant use and management where necessary to mitigate residual turbidity from stormwater prior to discharge from areas of disturbance.
- For significant works areas in scale or erosion risk, provide indicative plans of erosion and sediment control infrastructure that may be required at those locations to mitigate the potential for entrainment and release of sediment. Note where controls may be amended through the preparation, construction and commissioning phases.
- Detail any monitoring to be undertaken, including visual inspection, to assess effectiveness of erosion and sediment control measures.
- Provide contingency measures for events such as extreme rainfall, poor performance or operational changes.

Information on best practice erosion and sediment control is available at: Books 1-3 – International Erosion Control Association (austieca.com.au)

- In relation to intrusive works the plan must include but not be limited to:
 - discharge locations
 - measures to minimise generation of contaminants, for instance blasting methods
 - any treatment of contaminated water including dewatering of tunnelling spoils
 - any additional measure to mitigated impact in the receiving environment such measures to maintain dilution ratios
 - measure for the management of incidents accidents and malfunctions, including spill management of petroleum hydrocarbon spills.
- In relation to concrete batch plant the plan must include but not be limited to:
 - indicative locations of concrete batching infrastructure, material stockpiles and discharge locations
 - pH control and turbidity limits for discharge and details of treatment infrastructure
 - site specific stormwater controls as previously discussed.
- Provide details of all monitoring programs proposed to minimise impact of liquid emissions on receiving environments during each significant phase of construction and any ongoing post construction monitoring required to assess rehabilitation and/or construction associated impacts.

5.2 Groundwater

Discuss potential associated construction impacts of the proposal on groundwater (quality and quantity). Consider construction staging and include methodology details where appropriate.

5.2.1 Existing Environment

- Provide a site-specific qualitative conceptual groundwater model accounting for all geological rock types and units (including recharge and discharge processes). Figure(s) (e.g. cross sections) may be useful in explaining the hydrogeological environment.

- Provide a map showing the location of existing groundwater extraction bores nearest to the area impacted by the activity. Refer to [NRE's Groundwater Information Access Portal where relevant](#).¹³
- Identify any surface water and groundwater dependent ecosystems that may receive groundwater from areas impacted by the proposal.
- Provide details of baseline groundwater level and quality on the basis of geotechnical investigations and any additional groundwater monitoring undertaken.
- Include the results of monitoring in the report and provide separately as data. Provide metadata and monitoring data to the EPA following the instructions and using the Excel workbook templates or file formats provided on the [Water Quality Data Elements](#)¹⁴ webpage.

5.2.2 Assessment

- Identify any potential contaminants of concern that may arise as a result of construction activities including, blasting and concreting.
- Discuss the potential impact of the proposal on groundwater (quality and quantity) with reference to groundwater assessments undertaken where appropriate. Assessed impacts should be relative to the identified risks and issues.

5.2.3 Avoidance and mitigation measures

- Describe the measures proposed to avoid or mitigate potential adverse impacts to groundwater, including to groundwater dependent ecosystems. Include a map showing the location of any proposed groundwater bores.
- Provide details of a groundwater monitoring plan where the potential for ingress of contamination to groundwater exists.
- Justify any potential impact to groundwater in accordance with the principles outlined in the [State Policy on Water Quality Management 1997](#)¹⁵ and with reference to likely groundwater community values, associated guideline values and guideline values for receiving surface waters.

For information about the water quality management framework and evaluation criteria in Tasmania refer to [Technical Guidance for Water Quality Objectives \(WQOs\) Setting for Tasmania, August 2020](#).¹⁶

5.3 Biodiversity and Natural Values

Discuss impacts of the proposal on biodiversity and nature conservation values (terrestrial and aquatic). Include details on how information has been collected or generated where applicable.

5.3.1 Existing Environment

- Specify and map known records of flora, vegetation communities and habitat, with particular reference to threatened species, communities and habitats, including those listed under the relevant Schedules of the Australian Government EPBC Act and the Tasmanian [Threatened Species Protection Act 1995](#) (TSPA)¹⁷ and Tasmanian [Nature Conservation Act 2002](#) (NCA).¹⁸

¹³ See <https://wrt.tas.gov.au/groundwater-info/>

¹⁴ See <https://epa.tas.gov.au/environment/water/water-quality-data-elements>

¹⁵ See <https://epa.tas.gov.au/about-the-epa/policy-legislation-cooperative-arrangements/statutory-policies/state-policies-and-environment-protection-policies/state-policy-on-water-quality-management-1997>

¹⁶ See [https://epa.tas.gov.au/Documents/Technical%20Guidance%20for%20Water%20Quality%20Objectives%20\(WQOs\)%20Setting%20for%20Tasmania.pdf](https://epa.tas.gov.au/Documents/Technical%20Guidance%20for%20Water%20Quality%20Objectives%20(WQOs)%20Setting%20for%20Tasmania.pdf)

¹⁷ See <https://www.legislation.tas.gov.au/view/html/inforce/current/act-1995-083>

¹⁸ See <https://www.legislation.tas.gov.au/view/html/inforce/current/act-2002-063>

Threatened Flora

The following threatened flora species were recorded within the Natural Values surveyed area presented in the submitted Planning Report:

- *Westringia angustifolia* (narrowleaf westringia) – listed as rare under the TSPA
- *Muehlenbeckia axillaris* (matted lignum) – listed as rare under the TSPA
- *Pherosphaera hookeriana* (Mount Mawson Pine) – listed as vulnerable under the TSPA.

Where there is the potential for threatened species or vegetation communities to be present, provide the results of a current natural values assessment undertaken by a suitably qualified person. The survey should target the identified species.

Threatened Fauna

Wedge-tailed Eagle (*Aquila audax* subsp. *Fleayi*) – listed as endangered under the TSPA and the EPBCA

There are known wedge-tailed eagle nests approximately 1 to 2 km of the Project area. For preparation of the EIS:

- Undertake a search for new eagle nests that may have become established since previous surveys in areas mapped as supporting suitable habitat, within 1 km of the above ground impact footprint, or from any other areas to which the proposed activity may pose a risk.
- Searches for the presence of nests are to be undertaken outside of the eagle breeding season management constraint period (July to January, inclusive). Nest searches are to be carried out by at least one assessor who has attended and passed an FPA/NRE Tas approved eagle management course.

Tasmanian devil (*Sarcophilus harrisii*) – listed as endangered under the TSPA and the EPBCA

Spotted-tailed quoll (*Dasyurus maculatus*) – listed as rare under the TSPA and vulnerable under the EPBCA

Suitable foraging and denning habitat for both Tasmanian devil and spotted-tailed quoll was observed within the survey area. Although there were no dens recorded in the existing Natural Values survey up until 2022, there is a potential for new dens to have become established by Tasmanian devils or spotted-tailed quolls during the time between the most recent surveys and the proposed commencement of construction (2025).

No further survey is required for preparing the EIS. However, it is likely that pre-construction den surveys and associated avoidance and management measures would be required.

Aquatic Threatened Flora

Regarding aquatic threatened flora, for preparation of the EIS:

- Identify any known occurrences of aquatic species of conservation significance, threatened aquatic fauna or flora species, or potential habitat for such species in the vicinity of the above ground impact footprint, or any other areas to which the proposed activity may pose a risk.
- If the potential for relevant aquatic species is identified, a survey is required, and the results presented in the EIS.

Threatened Native Vegetation Communities

The existing Natural Values survey identified the subalpine *Diplarrena latifolia* rushland and the Sphagnum peatland communities, which are listed as threatened native vegetation communities under the NCA. The *Diplarrena latifolia* rushland community occurs on the pipeline alignment and there is a 3.9 ha patch of Sphagnum peatland adjacent to Mossy Marsh Pond, approximately 1 km south of the tunnel alignment. While the latter community is not within the above ground impact footprint, it may potentially be affected by hydrological changes as a result of changes in the operation of the redeveloped Tarraleah hydropower scheme.

Assessment guideline actions related to Threatened Native Vegetation Communities are provided in Section 5.3.2.

Other Biodiversity and Natural Value Considerations

For preparation of the EIS:

- Identify areas or habitats of conservation significance, including designated conservation areas, areas relating to the requirements of international treaties (e.g. Japan-Australia and China-Australia Migratory Bird Agreements (JAMBA/CAMBA) and Ramsar (wetlands) Convention), or wetlands listed in Directory of Important Wetlands in Australia.¹⁹
- Identify any freshwater ecosystems of high conservation management priority using the [Conservation of Freshwater Ecosystem Values \(CFEV\) database](#),²⁰ including values in the vicinity of the proposal. The specific CFEV information should be Conservation Management Priority Potential.
- Specify and map known sites of geoconservation significance or natural processes (such as fluvial or coastal features), including sites of geoconservation significance listed on the Tasmanian Geoconservation Database.
- Describe natural processes of particular importance for the maintenance of the existing environment (e.g. fire, flooding, etc).
- List the weeds²¹, pests and pathogens occurring on or near the proposal site.
- Demonstrate that any surveys comply with requirements in [Guidelines for Natural Values Surveys](#).²²

5.3.2 Assessment

- Describe potential impacts on flora, vegetation communities and habitat, with particular reference to threatened species, communities and habitats, including those listed under the relevant Schedules of the EPBC Act, TSPA and NCA.
- Assess the impact to *Diplarrena latifolia* rushland and Sphagnum peatland threatened native vegetation communities in regard to hydrological changes resulting from the redevelopment project.
- Describe potential impacts on fauna, including impacts on species, communities and habitats. Provide details of impacts to threatened species, migratory species, communities and habitats, including those listed under the relevant Schedules of the EPBC Act, TSPA and NCA.
 - If any new eagle nests are recorded within 500 m or 1 km line of sight of the above ground impact footprint or from any other components of the activity that pose a risk, the proponent is to consider the impact the activity will have on the breeding success of eagles in the area, including a consideration of noise levels and blasting impacts.
- Assess impacts of noise and light²³ on fauna.
- Discuss environmental impacts associated with vehicle movements during construction on fauna.

An increase in night-time (between one hour before sunset and one hour after sunrise as defined by the Bureau of Meteorology) traffic on internal and nearby roads of more than 10% combined with a high abundance of Tasmanian Devils and/or Tasmanian Devil roadkill records in the Natural Values Atlas is considered significant regarding likely impacts on the Tasmanian Devil. See the [Survey Guidelines and Management Advice for Development Proposals that may impact on the Tasmanian Devil \(*Sarcophilus harrisii*\)](#)²⁴ for more information.

¹⁹ See <https://www.environment.gov.au/water/wetlands/australian-wetlands-database/directory-important-wetlands>.

²⁰ See <https://nre.tas.gov.au/water/water-monitoring-and-assessment/cfev-program>

²¹ Plant species declared as a weed under the *Biosecurity Act 2019* and the *Biosecurity Regulations 2022*.

²² See <https://nre.tas.gov.au/Documents/Guidelines%20for%20Natural%20Values%20Surveys%20related%20to%20Development%20Proposals.pdf>

²³ See [National Light Pollution Guidelines for Wildlife \(dccew.gov.au\)](https://www.dccew.gov.au/national-light-pollution-guidelines-for-wildlife)

²⁴ See <https://nre.tas.gov.au/Documents/Devil%20Survey%20Guidelines%20and%20Advice.pdf>

- Discuss impacts on existing conservation reserves that may be affected by the proposal, with reference to the management objectives of the reserve(s) and the reserve management plan(s) (if any).
- Discuss impacts on any high-quality wilderness areas identified in the Tasmanian Regional Forest Agreement (Tasmanian RFA) that may be affected by the proposal (if any).
- Discuss impacts on other species, sites or areas of special conservation significance, including areas of wilderness or scientific value.
- Discuss potential impacts on:
 - the reserve system identified as part of the Tasmanian RFA
 - maintenance of forest communities under the [Permanent Native Forest Estate Policy](#)²⁵
 - wildlife habitat strips under the Tasmanian Forest Practices Code 2015²⁶
 - non-forest communities.
- Discuss the potential introduction or spread of pests, weeds²⁷ and plant and animal diseases as a result of the proposal, including the placement and rehabilitation of permanent stockpiles.
- Discuss impacts on sites of geoconservation significance or natural processes (such as fluvial), including sites of geoconservation significance listed on the Tasmanian Geoconservation Database.

5.3.3 Avoidance and Mitigation Measures

- Describe management measures that will be implemented to avoid or mitigate adverse impacts to threatened fauna, flora and vegetation communities and other natural values, including management of weeds, pests and diseases.
- Provide mitigation measures, if required, to reduce impacts of hydrogeological changes to threatened native vegetation communities from the proposal.
- Include any roadkill management measures as required in the *Survey Guidelines and Management Advice for Development Proposals that may impact on the Tasmanian Devil (Sarcophilus harrisii)*.²⁴
- Where impacts cannot be avoided, present proposed measures to mitigate and/or compensate adverse impacts on biodiversity and nature conservation values. Discuss rehabilitation of disturbed areas following the completion of construction activities and cessation of the activity, including any proposed seed collection and progressive rehabilitation program.

5.4 Air Quality

This air quality assessment should detail potential impacts of the proposal on the local and regional air environment during construction stages, including methodology where appropriate. Additionally, it should provide evidence demonstrating that the construction will not cause environmental nuisance or harm. The air quality assessment should:

5.4.1 Existing Environment

- Provide a site map including the land boundary and the location of nearest receptors.
- Describe the existing environment including climatic/meteorological conditions, terrain, land use and air quality in the vicinity of the proposal.

²⁵ See https://www.stategrowth.tas.gov.au/energy_and_resources/forestry/native-forest

²⁶ Available at <https://fpa.tas.gov.au/>

²⁷ Weed means a plant species that has, or is likely to have, an adverse impact on the environment because of the introduction, spread or increase in population size of the species in an area; and includes a declared weed as defined in the *Biosecurity Act 2019* and subordinate regulations.

5.4.2 Assessment

- Provide a figure showing the locations and names of all potential sources of atmospheric emissions from the proposed construction.
- Describe all potential sources (point and fugitive) of atmospheric emissions and the composition of the atmospheric emissions, including dust and particulate matter from the site associated with the proposed construction. The description should include, but is not limited to, the emissions generated from general construction activities conducted at the site above the ground, disturbed topsoil (clearing and grubbing), temporary and permanent stockpiles, concrete/shotcrete batch plants, aggregate storage, and traffic movements on and off site.
- Provide the details and locations of equipment to be used on the site.
- Describe and assess the potential impacts of the atmospheric emissions from the proposed activity on the environment in a context of the existing environment (local meteorology, terrain) and land use (particularly proximity of sensitive receptors).
- Demonstrate that the assessment is consistent with the requirements of the [Tasmanian Environment Protection Policy \(Air\)](#) and any supplementary documents (including the [Board Statement Jan 2022](#)).

5.4.3 Avoidance and Mitigation Measures

- Describe measures to be implemented to mitigate all atmospheric emissions from the site that may cause environmental nuisance or harm at or beyond the site boundary, as defined in the provided Project Description as the Project Area. This may include but not be limited to watering or sealing of roads, covering of truck loads, reduced vehicle speed, road surfacing/maintenance details, enclosures, water sprays, windbreaks, and revegetation/stabilisation.

5.5 Noise emissions

5.5.1 Existing Environment

- Provide a map showing the location of all major sources of noise and the closest noise sensitive premises in the vicinity of the boundary of the activity.
- Provide a list of nearby identified residences and other noise-sensitive premises in the vicinity of the boundary of the activity.

5.5.2 Assessment

- Describe all major sources of construction noise, including associated:
 - sizes and power ratings
 - 1/3 octave source noise data (linear/C-weighted and A-weighted) to assess for low frequency and tonal noise
 - noise attenuation features
 - hours of operation.
- Analyse the potential for noise emissions (during construction) to cause nuisance for nearby land uses, particularly at noise sensitive premises²⁸. When assessing nuisance at noise-sensitive premises, discuss the [Environment Protection Policy \(Noise\) 2009](#)²⁹ and the existing acoustic environment.
- Discuss noise-related environmental impacts associated with current and altered traffic flows on other road users and on residences adjacent to roads.

²⁸ Noise-sensitive premises are defined as ‘residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.’

²⁹ See https://epa.tas.gov.au/Documents/EPP_Noise_2009.pdf

- Provide details on blasting, such as the likely blast charge, frequency of blast events (per year) and discussion of potential blast effects (ground vibration and air-blast overpressure) to impact sensitive receptors.
- Evaluate the potential for the activity to create a noise nuisance, taking into consideration the:
 - distance to nearest residences and other noise sensitive premises
 - acceptable standards described in section 7 of the Quarry Code of Practice
 - hours of operation
 - method of excavation and processing/handling on site
 - topography.
- Discuss the potential for noise emissions and blast impact to affect terrestrial, marine and freshwater wildlife.

5.5.3 Avoidance and mitigation measures

- Describe attenuation measures that will be implemented to avoid or mitigate impacts of noise emitted by the proposal (as relevant).
- Demonstrate that the proposal is consistent with environmental performance requirements, including any identified in the [Environment Protection Policy \(Noise\) 2009](#). **Error! Bookmark not defined.**

5.6 Waste management

Discuss the impacts of waste generated by the proposal, during construction.

5.6.1 Existing Environment

- Describe the existing environment in relation to the impact of waste generated by the activity.

5.6.2 Assessment

- Describe the source, nature and quantities of all general wastes likely to be generated by the proposal (liquid, gaseous, solid or other), including general refuse and by-products from the various stages of the process.
- Describe the methods and facilities proposed to collect, store, reuse, treat or dispose of each general waste stream. Describe collection or other maintenance requirements where relevant.
- Describe the source, nature, quantity, and method of treatment, storage and disposal for each controlled waste arising from the proposal.³⁰ Describe collection or other maintenance requirements where relevant.

5.6.3 Avoidance and mitigation measures

- Demonstrate that any waste management measures follow the following hierarchy of waste management, arranged in decreasing order of desirability:
 - Avoidance
 - Reuse
 - Treatment/stabilisation for reuse
 - Recycling
 - Energy recovery

³⁰ Controlled waste is defined in EMPCA and associated regulations. A non-exhaustive listing of categories of controlled waste can be found at <https://epa.tas.gov.au/business-industry/regulation/waste-management/controlled-waste>

- Repository storage (for future treatment/recovery)
- Treatment/stabilisation for disposal
- Disposal/permanent containment.

5.7 Dangerous goods and environmentally hazardous materials

Dangerous goods and environmentally hazardous materials are any substance or mixture of substances of a nature or held in quantities which present a reasonably foreseeable risk of causing serious or material environmental harm if released to the environment. This includes fuels, oils, waste and chemicals. Discuss the potential impacts of dangerous goods and environmentally hazardous substances used in or generated by the proposal. The discussion should:

- Describe the nature, quantity and storage location of all environmentally hazardous materials including Dangerous Goods (as defined in the [Australian Code for the Transport of Dangerous Goods by Road and Rail](#))³¹ that will be used during the construction of the proposal.
- Provide a map showing the location of temporary and permanent storage areas for fuels, oils, and other dangerous goods or chemicals.
- Detail measures to be adopted to prevent or control any accidental releases of dangerous goods and environmentally hazardous materials. Examples include bunding or spill trays.
- Provide contingency plans for when control measures fail, equipment breaks down or accidental releases to the environment otherwise occur. Include detail on proposed emergency and clean-up measures and notification procedures. Identify any safety management requirements for the protection of human health and safety where incidents may affect the community.

5.8 Greenhouse gas emissions, ozone depleting substances and climate change

Discuss potential impacts of the proposal in relation to greenhouse gases, ozone-depleting substances and climate change. The discussion should be proportionate to the significance of the potential impacts.

- Describe the direct and indirect effects of the proposal on greenhouse gas production and ozone-depleting substances, as well as any associated benefits of the proposal.
- Estimate construction-related greenhouse gas emissions for the proposed development. Include details of the methodology used.
- Demonstrate that the development will use cost-effective, best practice measures to minimise future greenhouse gas emissions.
- Detail measures proposed to minimise emissions and describe the anticipated effectiveness of these measures. Where less emissions-intensive options are not adopted, provide sufficient justification and/or mechanisms to offset greenhouse gas emissions.
- Describe the potential impacts of climate change upon the proposal. For example, it may be appropriate to plan for more intense storm events and more severe fire weather.
- Discuss impacts of the proposal in terms of the evolving national response to climate change and greenhouse gas emissions and the targets set in the [Climate Change \(State Action\) Act 2008](#) (Tas),³² [Tasmania's Climate Change Action Plan 2023-25](#)³³ and the [Climate Change Act 2022](#) (Commonwealth).³⁴

³¹ See <https://www.ntc.gov.au/codes-and-guidelines/australian-dangerous-goods-code>

³³ See https://recfit.tas.gov.au/climate/climate_change_action_plan

³⁴ See <https://www.legislation.gov.au/Details/C2022A00037>

Note: Proponents must determine whether they are required to report to the Commonwealth under the [National Greenhouse and Energy Reporting Act 2007](#).³⁵

5.9 Socio-economic issues

Discuss the social and economic impacts of the proposal. This discussion may:

- Include an estimate of total capital investment for the proposal and where that capital will be expended (particularly in relation to the source of large capital items of processing equipment).
- Describe impacts on local and state labour markets of the proposal. The number and nature of direct and indirect jobs arising from the proposal must be detailed. Skills and training opportunities should also be discussed.
- Describe impacts on upstream/downstream industries, both locally and for the State.
- Detail the extent to which raw materials, equipment, goods and services will be sourced locally.
- Describe impacts on the local, regional, state and national economies.

The extent to which socio-economic considerations need to be described depends on the nature and extent of any negative impacts or risks to the environment from the proposal.

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

Proposals with higher-level or broader-scale environmental impacts need more comprehensive analysis of economic and social benefits, to allow the Board to evaluate both the benefits and adverse impacts of the proposal. Methods used to model social and economic impacts should be described where relevant. A description of how the local community has been consulted to determine its needs and aspirations in relation to the proposal should also be included. A social impact assessment and/or economic impact assessment may be required.

5.10 Fire risk

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

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

5.11 Infrastructure and off-site ancillary facilities

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

Identify roads and other infrastructure to be used by vehicles for the proposal. Potential environmental impacts associated with construction and use of such infrastructure should be assessed. Cross-reference to other sections where relevant.

³⁵ See <https://www.legislation.gov.au/Details/C2007A00175>

6. Monitoring and Review

Outline any proposed monitoring, review and reporting programs for the proposal. Include a table of proposed monitoring locations, parameters and frequencies, and a map showing the location of all monitoring sites.

Monitoring, review and reporting programs should be designed to assess:

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

7. Construction decommissioning and rehabilitation

Describe any proposed decommissioning or rehabilitation of disturbed areas that will follow construction activities. Outline a preliminary Construction Phase Decommissioning and Rehabilitation Plan for the proposal. If applicable, describe the stages of site decommissioning and rehabilitation, including any proposed seed collection and progressive rehabilitation.

8. Management Measures Table

Provide a summary table listing all management measures detailed throughout the EIS. Each measure must include a reference number, must be an unambiguous statement of intent, must specify when it is to be implemented (including whether it is to be implemented during construction, operation, maintenance or other phases) and must include a cross-reference to where the measure is described in the EIS.

9. Conclusion

Summarise the proposal and present a balanced overview of its net impacts. Draw together the critical environmental, social and economic impacts. Evaluate the extent to which negative impacts can be avoided, mitigated, remediated or compensated and positive impacts promoted and sustained.

Describe how the proposal meets and furthers the objectives of relevant legislation, policies, plans and strategies. Itemise the RMPS and EMPCS objectives and comment on how the proposal addresses each of the objectives.

10. References

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

11. Appendices

Detailed technical information which supports the EIS should be included as appendices. The salient features of the appendices should be included in the main body of the EIS. Technical content of appendices must be consistent with information presented in the EIS itself, unless inconsistencies are carefully explained. The EIS may not be accepted where unexplained inconsistencies exist.

Appendix A: General principles for assessing environmental impacts

This Appendix summarises general principles for assessing environmental impacts in EIS documents prepared in accordance with EMPCA.

General Approach

When assessing environmental impacts in an EIS, the proponent should:

- Present information in a clear, well-structured manner appropriate to the audience of the EIS.
- Avoid duplication.
- Base assessments and evaluations on scientifically supportable, referenced data.
- Describe methodologies used and provide supporting research and information wherever relevant.
- State any scientific assumptions, simplifications, or judgements, and define uncertainties.
- Describe impacts and their mitigation to a level of detail that is proportionate to potential consequences and to what extent they can be controlled.

Impact assessment

Impact assessment involves the identification and characterization of the effects of a proposal. When undertaking impact assessment, the proponent should:

- Explain methodologies used to identify and characterise impacts.
- Clearly state the impacts that are expected to result from the development in terms of the aspect of the proposal involved and the environmental receptor affected.
- Characterise those impacts in terms of:
 - the magnitude of impacts, quantified where possible, including spatial extent and timeframe
 - the vulnerability of the affected environmental receptors to harm or nuisance
 - sources of the impacts and pathways by which the impact may occur
 - probability of occurrence (if not 100%)
 - the range of scenarios in which the impact may occur, including plausible worst-case consequences
 - reversibility of impacts
 - any predicted indirect effects
 - any aspects of other proposals examined cumulatively.
- With reference to the project description and alternatives described in the EIS, state what measures to avoid or reduce impacts have been considered as part of this assessment, and which of these have been incorporated into the proposal.

Impact evaluation

Impact evaluation is the determination of the significance of impacts. Proponents should support conclusions about the significance of impacts using a structured argument that clearly describes the magnitude of the impact, the sensitivity of the affected receptors, and how they relate.

Mitigation and Monitoring

Mitigation (planning and design considerations, pollution control technology and management practices) and monitoring are measures additional to those considered during the impact assessment to reduce the impact of the proposal. In presenting mitigation and monitoring the proponent should:

- Describe the measures proposed.

- Describe how mitigation measures function to avoid or reduce the impacts.
- Explain how measures accord with existing guidance, accepted practice or best practice environmental management as defined in EMPCA.
- Discuss contingencies for the breakdown/malfunction of equipment or processes.
- Describe any anticipated impacts resulting from the mitigation actions and how these will be addressed.
- Identify where control measures are to be carried out, operated and/or maintained by a third party, and how this will be achieved.

Residual impacts

Residual impacts are those that remain after all proposed avoidance and mitigation measures have been taken into account. When assessing residual impacts, the proponent should:

- Revisit the first evaluation of impact, taking into account the effects of the measures to reduce the magnitude of the impacts and present a revised statement of significance.
- Where required, identify appropriate actions that will offset impacts, based on the relevant guidelines. Offset actions must present a measurable, relevant and ongoing net benefit which would not otherwise have been realised, and which is not accounted for by any other project or proposal.

Appendix B: Other issues and agency contacts

In addition to a permit under LUPAA and EMPCA, there may be other legal requirements to allow your proposal to proceed, including other permits, licences or landowner consent. You may also need to contact other Government agencies to obtain information for the purpose of assessment.

Your proposal may have been referred to other agencies by EPA. If assessments or approvals outside of the Board's responsibilities are required, you should engage with the respective agency to progress them. The following list identifies some of the agencies you may need to contact:

Conservation Assessments

Department of Natural Resources and Environment Tasmania

Telephone: (03) 6165 4396

Email: conservationassessments@nre.tas.gov.au

Website: www.nre.tas.gov.au/conservation

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

Heritage Tasmania

Department of Natural Resources and Environment Tasmania

Telephone: (03) 6165 3700

Email: enquiries@heritage.tas.gov.au

Website: www.heritage.tas.gov.au

Purpose: Historic cultural heritage, including State-level site listings, impacts and permits as required under the Historic Cultural Heritage Act 1995. Where works are proposed in or near a heritage place entered on the Tasmanian Heritage Register or likely to be of heritage significance to the whole of Tasmania, and a permit is required under the Land Use Planning and Approvals Act 1993, the proposal will be referred to Heritage Tasmania by the planning authority. There may also be additional sites listed under local planning schemes, impacts on which are assessed by the relevant planning authority.

Aboriginal Heritage Tasmania

Department of Premier and Cabinet

Telephone: 1300 487 045

Email: aboriginalheritage@dpac.tas.gov.au

Website: www.aboriginalheritage.tas.gov.au

Purpose: Aboriginal heritage, including desktop assessment, artefact survey requirements, permits and advice.

Agriculture and Water

Department of Natural Resources and Environment Tasmania

Telephone: 1300 368 550

Email: Water.Enquiries@nre.tas.gov.au

Website: www.nre.tas.gov.au/water

Purpose: Water licences and works impacting natural waterway flow (e.g. dams or fords).

Parks and Wildlife – Property Services

Parks and Wildlife Service – North-West Region
Department of Natural Resources and Environment Tasmania
Phone: 0457 133 585
Email: aimee.williams@parks.tas.gov.au
Website: www.parks.tas.gov.au/haveyoursay

Purpose: Impacts on Tarraleah Conservation Area, parks and reserves managed by Parks and Wildlife, or Crown land.

Transport Services

Department of State Growth
Telephone: (03) 6166 3369
Email: permits@stategrowth.tas.gov.au
Website: www.transport.tas.gov.au

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

Mineral Resources Tasmania

Department of State Growth
Telephone: (03) 6165 4800
Email: info@mrt.tas.gov.au
Website: www.mrt.tas.gov.au

Purpose: Mining Leases.

Appendix C: Example of project description summary table

Location and Planning Context

Location	State the address of the site, and CTs and PIDs (as applicable) for all titles on which the activity will take place.
Land zoning	Describe the land zoning of the site and surrounds. If rezoning of the site is required, provide details.
Land tenure	Provide the land tenure of the proposal.
Use Class and Permissibility	If a permit is required under LUPAA, provide the Use Class of the proposed activity and Permissibility of the activity with reference to the relevant Planning Scheme.

For extractive industries only, delete if not required

Mining lease	
Lease area	
Bond	State the amount of any bond required by MRT (for extractive industries)

Existing site

Land Use	Describe the existing land use of the site and surrounds.
Topography	Describe the topography of the site and surrounds.
Geology	Describe the geology of the site, including the likely presence of potentially acid forming (PAF) material. Describe any geoconservation values on or near the site, e.g. karst.
Soils	Describe the potential to encounter acid sulphate soils and or contaminated soil (from past activities, as relevant).
Hydrology	Describe groundwater and surface drainage (including waterways, lakes, wetlands and coastal areas) Describe the waterbodies and aquatic values on site and in the surrounding area. State the distance from the activity to the nearest waterbody.
Natural Values	List the threatened fauna, flora and vegetation communities, including potential habitat for any such species, that are known to occur on or near the site (use the Natural Values Atlas, TASVEG 4.0 or results of any relevant survey). State the vegetation types on and near the site.
Potential Hazards	Provide a brief assessment of the vulnerability of the site to natural hazards (e.g. flooding, seismic activity, fire, landslips or strong winds) or climate change.

Local Region

Climate	State the annual rainfall and predominant wind direction.
Surrounding land zoning, tenure and uses	Describe the surrounding land use, distance to the nearest residences in other ownership, note any conservation reserves or recreation areas in the area, and provide a coastal description if the coast is nearby.
Species, sites or areas of conservation significance	Provide information on species, sites or areas of landscape, aesthetic, wilderness, scientific or otherwise special conservation significance which may be affected by the proposal. Relevant information resources include the LIST (www.thelist.tas.gov.au) and the Natural Values Atlas (https://www.naturalvaluesatlas.tas.gov.au).

Proposed Infrastructure

Major equipment	List all existing and proposed plant, machinery, or other major equipment (distinguish between existing and proposed).
Other infrastructure	List the existing and proposed buildings, structures, access roads, internal haul roads (can refer to the Site Plan) (distinguish between existing and proposed).

Inputs

Water	Include quantities and characteristics.
Energy	Include quantities and characteristics.
Other raw materials	Include quantities and characteristics.

Wastes and Emissions

Liquid	Include quantities and characteristics.
Atmospheric	Include quantities and characteristics.
Solid	Include quantities and characteristics.
Controlled wastes	Include quantities and characteristics.
Noise	Include major sources of noise emissions.
Greenhouse gases	Provide a brief description of changes to greenhouse gas emissions that will be caused by the proposal.

Construction and Commissioning

Proposal timetable	Provide a brief timetable outlining the proposed timeframe(s) for construction and commissioning. Include significant milestones if applicable.
Construction hours	e.g. xx-xx Monday to Friday xx-xx Saturday

Other Key Characteristics

Other	Describe any additional characteristics relevant to the proposal/environment that are likely to provide important context as part of this summary.
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Attachment I: PWS additional requirements for RAA assessment

Please note these requirements are to be read in conjunction with the EIS Guidelines. If the proponent decides not to provide this information with the EIS, a separate set of documentation would need to be provided for a Reserve Activity Assessment process, and other RAA process steps may need to be undertaken separately, including advertising.

PWS response to EPA for developing Project Specific Guidelines (provided 22 August 2024)

Tarraleah Redevelopment Project, Western and upstream component

The Tasmania Parks and Wildlife Service (PWS) is the managing authority for the Tarraleah Conservation Area, within which Hydro Tasmania proposes to develop infrastructure related to the Tarraleah Redevelopment Project.

Single assessment process

The Environmental Impact Statement that will form the case for assessment under the *Environmental Management and Pollution Control Act 1994* (EMPCA) is likely to address most information requirements for a Reserve Activity Assessment process for consideration of authorisations under the *National Parks and Reserves Management Act 2002*. It is proposed the PWS conducts a parallel Reserve Activity Assessment (Level 3) alongside the EMPCA Environmental Impact Assessment process, including a

- single case for assessment,
- single public consultation period and
- opportunities for PWS review of information adequacy.

The Director of National Parks and Wildlife would provide written advice to the EPA for the:

- final Project Specific Guidelines (see following)
- draft Environmental Impact Statement - before EPA accept for release for public consultation; and
- review of the proponent's Submissions Report and Final EIS - before EPA informs proponent as adequate for assessment.

PWS information requirements (in addition to s2.4 page 12 of the draft guidelines)

I. Proposal description

The proposal description must include a site plan at a suitable scale detailing components within the Tarraleah Conservation Area.

- Site Plans at a suitable scale detailing:
 - Final location and dimensions of proposed infrastructure in relation to the Conservation Area boundaries. Also delineate distance from Surge Tower to the TWWHA.
 - Dimensions of vegetation clearance required for development footprint.
 - All works including lay-down areas, staging areas, all roads (temporary or permanent) to be constructed, road structures culverts/bridges/retaining walls.
 - Natural features or constraints that influenced the route planning;
 - Excavation areas required for temporary or permanent infrastructure;
 - Proposed timeline for works within the Conservation Area.
 - Areas requiring rehabilitation following construction works; and
 - Any other or similar activities associated with the proposal.

2. Project Alternatives (in addition to s13 page 13/14 of the draft guidelines)

This section should include a detailed discussion about the rationale for the proposed infrastructure and evaluation of alternatives to the proposed siting and design. The discussion should list the different options considered and outline why the proposed concept has been selected as the most suitable option. This discussion should include all matters relevant to PWS managed land including the Tarraleah Conservation Area and the TWWHA.

3. Management objectives (clarification of s 5.3.2)

Justification for how the proposal is not inconsistent with the purpose of reservation as specified in Schedule I of the *Nature Conservation Act 2002* as well as the management objectives for a Conservation Area as specified in Schedule I of the *National Parks and Reserves Management Act (2002)*.

The management objectives are equally important and there is no hierarchy in their application to reserve management. The proposal needs to demonstrate it is not inconsistent with each objective.

4. Biological diversity (clarification of s.5.3)

The proposal needs to demonstrate it is consistent with the management objective to conserve biological diversity. It is recommended the following information is provided:

- Provide a Natural Values Assessment specific to the proposed development footprint within the Tarraleah Conservation Area. The assessment should be consistent with the Guidelines for Natural Values Assessment issued by NRE Tas and undertaken by a suitably qualified person. The NVA should include:
 - A current survey of the site for natural values. Note the guidelines generally consider two years as the limit of currency, depending on circumstance. Any survey older than two years will only be accepted for assessment if it includes appropriate justification why it should be considered current.
 - Survey of potential threats to natural values, such as weeds, pests and diseases posed by the development.
- Estimated disturbance area of the proposal and description of any important conservation features that will be impacted (eg mature habitat values, highly sensitive species, primitive).
- Description of impact on Tasmania's Comprehensive, Adequate and Representative (CAR) Reserve Estate by proposed clearing for development.
- Indirect impacts to surrounding biological diversity values (eg increased access pathways into reserve for weeds, pests, disease, bushfire).

5. Bushfire Risk (clarification of s.5.10)

- Identify potential sources of ignition that could cause a bushfire during the construction and operation stages.
- Identify values at risk from bushfire, particularly given proximity of the TWWHA and risk mitigation strategies.

6. Water quality and catchments (in addition to s.5.1)

Demonstrate how the mitigation measures implemented lead to acceptable outcomes with regard to the management objective to preserve the quality of water and protect catchments.

7. Cultural significance (Extra additional information outside of draft EIS guidelines)

The proposal needs to demonstrate it is consistent with the management objective to conserve sites or areas of cultural significance. The EIS should summarise the findings of cultural heritage assessments without divulging sensitive information. A copy of the Aboriginal Heritage Assessment Report is requested to be forwarded to PWS.

It is noted that the planning report indicates no ground surveys with Aboriginal Heritage Officers and associated community consultation has been conducted on the River Derwent (Tarraleah Conservation Area) within the TWWHA. Further justification for this decision is required, including any associated advice from Aboriginal Heritage Tasmania.

8. Legal and illegal access

The proposal needs to demonstrate it can allow for compatible recreation while limiting activities that are prohibited under the *National Parks and Reserve Management Regulations 2019*. The following information is recommended:

- Identification of existing and new access points into land managed by the PWS and description of how access will be managed to limit illegal activities including wood cutting, hunting, recreational vehicle use and dumping of waste.



ENVIRONMENT PROTECTION AUTHORITY