



Scoping Requirements for Golden Beach Gas Project Environment Effects Statement

Environment Effects Act 1978

APRIL 2020

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List of abbreviations

DELWP	Department of Environment, Land, Water and Planning
EE Act	<i>Environment Effects Act 1978</i>
EES	Environment effects statement
EMF	Environmental management framework
EP Act	<i>Environment Protection Act 2017</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i>
km	Kilometres
m	Metres
MNES	Matters of national environmental significance
SEPP	State environment protection policy
TRG	Technical reference group
UCH Act	<i>Underwater Cultural Heritage Act 2018</i>

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1. Introduction

In light of the potential for significant environmental effects, on 8 September 2019 the Minister for Planning determined under the *Environment Effects Act 1978* (EE Act) that GB Energy (Vic) Pty Ltd is to prepare an environment effects statement (EES) for the proposed Golden Beach Gas Project. The purpose of the EES is to provide a detailed description of the project, assess its potential effects on the environment¹ and assess alternative project designs and approaches to avoid and mitigate effects. The EES will inform and seek feedback from the public and stakeholders and enable the Minister to issue an assessment of the project's environmental effects at the conclusion of the EES process. The Minister's assessment of the project's effects will inform statutory approval decision-makers.

Scoping requirements set out specific matters to be investigated and documented in an EES. The Minister issued the scoping requirements for the EES following consideration of public comments received on a draft exhibited for three weeks in March 2020.

While the scoping requirements are intended to cover all relevant matters, the EES will need to address other issues that emerge during the EES investigations, especially those relevant to statutory decisions that will be informed by the assessment.

1.1 The project and setting

The project encompasses construction and operation of two sub-sea well heads, a gas pipeline and a gas compressor station. The project will produce gas from the Golden Beach Gas Field (in Victorian waters), for provision to the Victorian Transmission System (Figure 1). The gas pipeline would be designed to be bi-directional, allowing for the Golden Beach Gas Field, when depleted after 2 to 4 years, to be used for storing gas over a design life of 40 years.

The project includes:

- offshore drilling, testing and completion of two sub-sea wells;
- laying of a sub-sea pipeline and sub-sea infrastructure;
- a 1.5km shoreline crossing, approximately 3.8km south-west of Golden Beach;
- construction of an 18.5km buried pipeline generally in a 30m right of way; and
- associated apparatus and works including a compressor station, metering facility and shore crossing facility.

The project will be constructed within shallow marine environments within Bass Strait; beach and coastal dunes of Ninety Mile Beach; coastal lakes, including seasonal wetlands, which form part of the Gippsland Lakes system; native forest, woodland and grasslands; and agricultural land used for cropping, grazing and plantation forestry. The project traverses private property (farming and industry) and public land, including roadside reserves, public utilities, conservation areas and agricultural land. Sensitive environmental areas within the project extent and surrounds are the Gippsland Lakes Coastal Park and the Gippsland Lakes Ramsar Site, specifically Lake Reeve.

¹ For assessment of environmental effects under the EE Act, the meaning of 'environment' includes physical, biological, heritage, cultural, social, health, safety and economic aspects (Ministerial Guidelines, p. 2).

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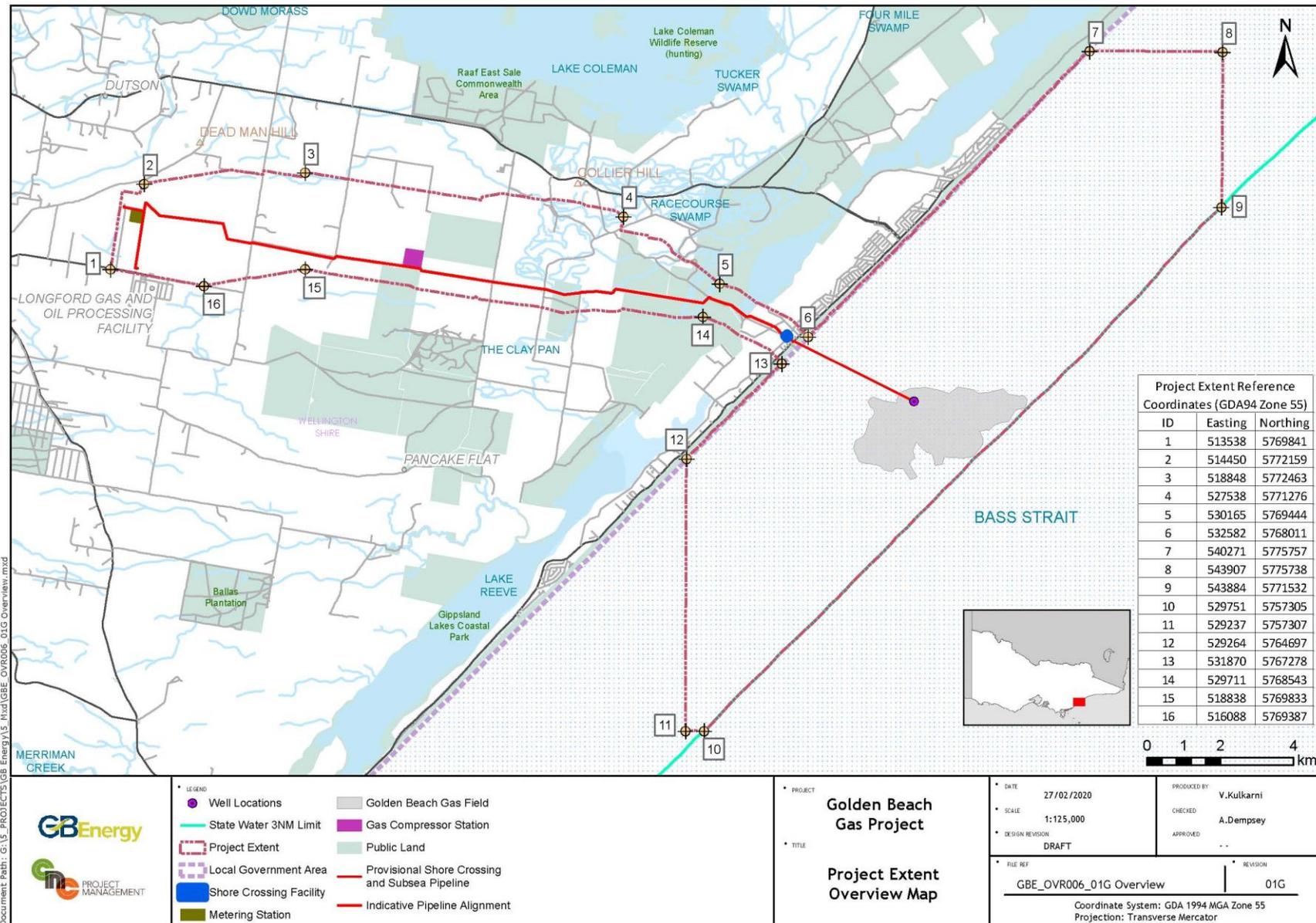


Figure 1: Location of the project (source: GB Energy).

1.2 Minister's requirements for this EES

When the Minister decided an EES was required, he published procedures and requirements applicable to the preparation of the EES, in accordance with section 8B(5) of the EE Act (see Appendix A). In the procedures and requirements, the Minister identified key matters for the EES to examine, namely the effects on:

- the offshore marine environment and ecology;
- Aboriginal cultural heritage values;
- biodiversity values within and close to the site footprint including the Gippsland Lakes Ramsar Site, native vegetation, listed threatened ecological communities and flora and fauna species and other habitats values;
- landscapes and soils;
- air quality (including greenhouse gas emissions);
- visual and sound amenity of nearby sensitive receptors (particularly residences);
- land-use and socio-economic values; and
- surface water environments, including local waterways and the broader catchment, as well as groundwater (hydrology, quality, uses and dependent ecosystems).

These scoping requirements provide further detail on the specific matters to be investigated in the EES in the context of the *Ministerial Guidelines for Assessment of Environmental Effects under the EE Act* (Ministerial Guidelines).

2. Assessment process and required approvals

2.1 What is an EES?

An EES describes a project and its potential environmental effects. It should enable stakeholders and decision-makers to understand how the project is proposed to be implemented and the likely environmental effects of doing so. An EES has two main components.

1. The EES main report – an integrated, plain English document that assesses the potential impacts of the project and examines avoidance, mitigation or other measures to reduce the environmental effects. The main report draws on technical studies, data and statutory requirements such as specific limits for surface water and groundwater quality and waste discharge to the environment and should clearly identify which components of the scope are being addressed throughout.
2. The EES technical reports – specialist studies, investigations and analyses that provide the basis for the EES main report. These reports will be exhibited in full, as appendices to the main report.

2.2 The EES process

The proponent is responsible for preparing the EES, including conducting technical studies and undertaking EES stakeholder consultation. The Department of Environment, Land, Water and Planning (DELWP) is responsible for managing the EES process.² The EES process has the following steps:

- preparation of a draft study program and draft schedule by the proponent (completed);
- establishment of an inter-agency technical reference group (TRG) convened by DELWP (completed);
- preparation and exhibition of draft scoping requirements by DELWP on behalf of the Minister (completed);
- finalisation of the scoping requirements (this document) after considering public comments received during the advertised exhibition period, for issue by the Minister;
- review of the proponent's EES studies and draft documentation by DELWP and the TRG;³
- completion of the EES by the proponent;
- review of the complete EES by DELWP to establish its adequacy for public exhibition;
- exhibition of the proponent's EES and invitation for public comment by DELWP on behalf of the Minister;
- appointment of an inquiry by the Minister to review the EES and public submissions received, and provide a report to the Minister; and finally
- following receipt of the inquiry report, an assessment of the project's environmental effects by the Minister for the consideration of statutory decision-makers.

Technical reference group

DELWP has convened an agency-based TRG of state government agencies and the Wellington Shire Council. The TRG will advise DELWP and the proponent on:

- applicable policies, strategies and statutory provisions;
- the scoping requirements for the EES;
- the design and adequacy of technical studies for the EES;
- the proponent's public information and stakeholder consultation program for the EES;
- responses to issues arising from the EES investigations;
- the technical adequacy of draft EES documentation; and
- coordination of statutory processes.

Consultation plan

The proponent is responsible for informing and engaging the public and stakeholders during the EES process to identify and respond to their issues in conjunction with the EES studies. Stakeholders include potentially affected parties and interested organisations and individuals, as well as government bodies.

² Further information on the EES process can be found at planning.vic.gov.au/environment-assessment/what-is-the-ees-process-in-victoria.

³ For critical components of the EES studies, peer review may be required. Peer review managed by DELWP may also be appropriate.

Under its EES consultation plan, the proponent will inform the public and stakeholders about the EES process and associated investigations and will provide opportunities for input and engagement during the EES investigations. The EES consultation plan is reviewed by DELWP and the TRG before it is finalised. The consultation plan will be published on the DELWP website.⁴ The EES consultation plan will:

- identify stakeholders;
- characterise the stakeholder groups in terms of their interests, concerns and consultation needs and potential to provide local knowledge;
- describe the consultation methods to be used and outline a schedule of consultation activities during the EES investigations and development of the EES; and
- outline how inputs from stakeholders will be recorded, considered and/or addressed in the EES.

Statutory approvals and the EES process

The project will require a range of approvals under Victorian legislation. DELWP coordinates the EES process as closely as practicable with approvals procedures, consultation and public notice requirements.

The key approvals known to be required under Victorian legislation are: an approved environment plan and safety case under the *Offshore Petroleum and Greenhouse Gas Storage Act 2010*; a pipeline licence under the *Pipelines Act 2005*; an approved cultural heritage management plan under the *Aboriginal Heritage Act 2006*; and *Marine and Coastal Management Act 2018* consent.

Other approvals are likely to be required and will be determined throughout the course of the EES.

2.3 Accreditation of the EES process under the EPBC Act

The project was also referred to the Commonwealth under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). A delegate for the Commonwealth Minister for the Environment determined on 22 November 2019 that the project is a controlled action⁵ and requires assessment and approval under the EPBC Act. The provisions for the Commonwealth's controlled action decision under the EPBC Act are Ramsar wetlands (sections 16 and 17B), listed threatened species and communities (sections 18 and 18A) and listed migratory species (sections 20 and 20A).

The EES process is accredited to assess impacts on matters of national environmental significance (MNES) under the EPBC Act through the Bilateral Assessment Agreement between the Commonwealth and the State of Victoria. Note that what are generally termed 'effects' in the EES process correspond to 'impacts' defined in section 82 of the EPBC Act.

The Commonwealth Minister or delegate will decide whether the project is approved, approved with conditions or refused under the EPBC Act, after having considered the Minister for Planning's assessment under the EE Act.

⁴ planning.vic.gov.au/environment-assessment/browse-projects/projects/golden-beach-gas-project

⁵ Under the EPBC Act, projects are considered as 'actions'. For the purposes of this document the term 'project' also means 'the action'.

3. Matters to be addressed in the EES

3.1 General approach

Preparation of the EES should be consistent with the principles of a systems approach and a risk-based approach,⁶ so that a greater level of effort is directed at investigating and addressing those matters that pose a relatively higher risk of adverse effects. The EES should put forward a sound rationale for the level of assessment and analysis undertaken for any environmental effect or combination of environmental effects⁷ arising from construction, operational and decommissioning stages of the project.

In the case of potentially significant effects, analyses documented within the EES should be detailed enough to provide a good understanding of the nature of the effects including:

- the potential effects on individual environmental assets —magnitude, extent and duration of change in the values of each asset— having regard to intended avoidance and mitigation measures;
- the likelihood of adverse effects, including those caused indirectly or during non-routine or emergency events, as a result of proposed activities, and associated uncertainty of available predictions or estimates;
- further management measures that are proposed where avoidance and mitigation measures do not adequately address effects on environmental assets, including specific details of how the measures address relevant policies;
- likely residual effects, including significant residual impacts on MNES, that are likely to occur assuming the proposed measures to avoid and mitigate environmental effects are implemented;
- potential cumulative impacts (arising in conjunction with the impacts of other projects or actions that may affect the same environmental asset or assets);
- an analysis of the acceptability of impacts on all MNES; and
- proposed approach to managing and monitoring environmental performance and contingency planning.

3.2 Content and style

Together with the Minister's reasons for decision, the published procedures and requirements and the Ministerial Guidelines, the content of the EES and related investigations is to be guided by these scoping requirements. It is the proponent's responsibility to ensure that adequate studies are undertaken to support the assessment of environmental effects, focusing primarily on significant effects (including those that might emerge during the investigations). The EES should demonstrate how the project will achieve a balance of economic, social and environmental outcomes that contribute to ecologically sustainable development and provide a net community benefit. The EES should address statutory requirements associated with approvals that will be informed by the Minister's assessment including decision-making under the EPBC Act (matters specified in Part 9 of the EPBC Act). The EES should also address any other significant issues that emerge during the investigations.

The EES should provide a clear, objective and well-integrated analysis of the potential effects of the proposed project, including proposed avoidance, mitigation and management measures, as well as feasible alternatives. To facilitate decisions on required approvals, the EES should also address statutory requirements associated with approvals that will be informed by the Minister's assessment. Overall, the main report should include:

- an executive summary of the potential environmental effects of the project, including potential effects on identified MNES;
- a description of the entire project, including its objectives, rationale and key elements;
- a description of the relationship of the project to public policies and plans;
- an outline of the primary approvals required for the project to proceed;
- descriptions of the existing environment and future climate change scenarios, where these are relevant to the assessment of potential effects;
- assessment methods that rely, to the extent possible, on published standards and guidelines;
- appropriately detailed assessments of potential effects of the project on environmental values, relative to the 'no project' scenario, together with an estimate of the uncertainty associated with predictions;
- intended measures for avoiding, minimising, managing and monitoring effects;

⁶ Ministerial Guidelines (p. 14).

⁷ Effects include direct, indirect, combined, facilitated, short and long-term, beneficial, adverse and cumulative effects.

- any proposed offset measures where avoidance and mitigation measures will not adequately address effects on environmental values, including the identified MNES, and discussion of how any offset package proposed meets the requirements of the Victorian Guidelines for the Removal, Destruction or Lopping of Native Vegetation and the EPBC Act Environmental Offsets Policy as it relates to MNES;
- predictions of residual effects, including residual significant impacts on MNES, of the project assuming implementation of proposed management measures;
- responses to issues raised through public and stakeholder consultation;
- evaluation of the implications for the project from the implementation of legislation and policy; and
- conclusions on the significance of impacts on regional, state and federal matters.

The proponent may choose to prepare a website with interactive functionality to provide an alternative form of access to EES information, which may compliment the conventional EES chapters and technical documents. Such an approach should be discussed with DELWP and should be integrated with the preparation of the EES package, including review by the TRG.

The EES should also include an outline of a program for community consultation, stakeholder engagement and communications proposed for implementation during the construction, operation and decommissioning of the project, including opportunities for local stakeholders to engage with the proponent to seek responses to issues that might arise during project implementation.

The proponent must also prepare a concise, graphical-based non-technical summary document (hard copy A4, no more than 25 pages) for free distribution to interested parties. The EES summary document should include details of the EES exhibition, public submission process and availability of the EES documentation.

3.3 Project description

The EES is to describe the project in sufficient detail to allow an understanding of all components, processes and development stages, and to enable assessment of their likely potential environmental effects. The project description should canvass the following:

- an overview of the proponent's environmental performance and track record, including experience in delivering similar projects, as well as organisation health, safety and environmental policies, and whether the proponent has been subject to any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources;
- contextual information on the project, including its objectives and rationale, its relationship to statutory policies, plans and strategies, including the justification for need and selection of the project and implications of the project not proceeding;
- existing and planned land and marine uses within, and near, the project area, supported by plans and maps;
- the proposed operational life of the project, and any decommissioning and rehabilitation arrangements; and
- other necessary works proposed for the project, such as road upgrades and/or connections, and infrastructure and services relocation.

The EES should detail the project's components:

- location, footprint, layout and access arrangements during construction, operation and decommissioning;
- design and expected construction staging and scheduling;
- proposed construction methods, and extent of areas to be disturbed during construction;
- solid waste, wastewater and hazardous material generation and management during construction, operation and decommissioning;
- water resource requirements during construction, operation and decommissioning;
- lighting, safety, security, dust and noise requirements during construction, operation and decommissioning;
- workforce requirements for project construction, operation and decommissioning
- hours of construction work and a description of the expected duration of project components, including which components are temporary and which are permanent; and
- operational requirements including maintenance activities, decommissioning and rehabilitation.

3.4 Project alternatives

The EES should document the proponent's design development process leading to the project design presented in the EES. The EES should canvass the proponent's consideration of feasible alternatives and include an explanation of how specific alternatives were shortlisted for evaluation within the EES. The EES should document the likely environmental effects of the alternatives, particularly where these offer a potential to minimise and/or avoid environmental effects whilst meeting the objectives of the project. The discussion of feasible alternatives and their effects should include:

- site selection process and extent of footprint;
- methods for accessing the gas reserves including offshore and onshore drilling methods;
- methods for sub-sea pipeline installation / construction;
- pipeline construction methods including methods for crossing the shoreline and Lake Reeve;
- an explanation of selection process for the proposed pipeline route;
- identification and evaluation of design alternatives for any components of the project;
- methods for decommissioning;
- discussion and evaluation of technical feasibility of alternatives for any components of the project;

Where appropriate, the assessment of environmental effects of relevant layout, route and design alternatives is to address the matters set out in the subsequent sections of this document. The depth of investigation of alternatives should be proportionate to their potential to minimise potentially significant adverse effects as well as meet project objectives.

3.5 Applicable legislation, policies and strategies

In addition to the EE Act and the EPBC Act, the EES will need to identify relevant legislation, policies, guidelines and standards, and assess their specific requirements or implications for the project, particularly in relation to required approvals. Particular attention is drawn to the *Environment Protection Act 2017* (EP Act) which will come into effect on 1 July 2020. The EES must identify and address all relevant subordinate legislation, planning processes and management plans, including but not limited to Gippsland lakes Ramsar Site Management Plan (East Gippsland Catchment Management Authority, 2015) and Gippsland Lakes Coastal Park Joint Management Plan.

3.6 Environmental management framework

Inadequate management of environmental effects during project design, construction, operation, decommissioning and rehabilitation could result in a failure to achieve necessary environmental outcomes and statutory requirements or sustain stakeholder confidence. Hence, the proposed environmental management framework (EMF) in the EES should describe a transparent framework with clear accountabilities for managing and monitoring the environmental effects and risks associated with the construction, operations and decommissioning phases.⁸ The entity responsible for approval of environmental plans should be identified.

The EMF should describe the baseline environmental conditions to allow evaluation of the residual environmental effects of the project, as well as the efficacy of applied environmental management and contingency measures. The framework should include:

- the context of required approvals and consents;
- the proposed environmental management system to be adopted;
- organisational responsibilities and accountabilities for environmental management;
- an environmental risk register that is maintained during project implementation; and
- the environmental management measures proposed in the EES to address specific issues, including commitments to mitigate adverse effects and enhance environmental outcomes.

An important aspect of the EMF is community consultation, stakeholder engagement and communications during the construction, operation and decommissioning of the project. As the project proceeds it will largely be the EMF that outlines opportunities for local stakeholders to engage with the proponent to seek responses to issues that might arise during construction, operation or decommissioning. To this end the EMF will set out procedures for:

- complaints recording and resolution;

⁸ Ministerial Guidelines (p. 20).

- auditing and reporting of performance including compliance with relevant statutory conditions and standards; and
- review of the effectiveness of the EMF for continuous improvement.

Management measures proposed in the EES to address specific issues, including commitments to mitigate adverse effects and enhance environmental outcomes should be clearly described in the EMF. The EMF should describe proposed objectives, indicators and monitoring requirements, including for (but not limited to) managing or addressing:

- marine, aquatic and terrestrial biodiversity values (including MNES);
- wetland values (including Ramsar listed wetlands);
- Aboriginal cultural heritage values;
- contaminated and acid sulfate soils;
- groundwater and surface water values;
- landscape and visual;
- noise and vibration;
- greenhouse gases;
- air quality;
- socioeconomic and land use values, such as for neighbouring residents and visitors to neighbouring coastal parks and holiday towns;
- recreational and tourism values of the coastal parks;
- historic heritage;
- traffic and transport during construction, including managing temporary disruption and changed accessibility; and
- emergency management.

3.7 Draft evaluation objectives

Draft evaluation objectives are provided in Section 4 for each of the topics to be addressed in the EES. The draft evaluation objectives identify desired outcomes in the context of key legislative and statutory policies, as well as the principles and objectives of ecologically sustainable development and environment protection, including net community benefit. They provide a framework to guide an integrated assessment of environmental effects, in accordance with the Ministerial Guidelines, and for evaluating the overall implications of the project.

4. Assessment of specific environmental effects

Preparation of the EES document and the necessary investigation of effects should be proportional to the project risk, as outlined in the Ministerial Guidelines (p. 14). The risk-based approach should be adopted during the EES studies prior to the assessment of potential impacts, so that a greater level of effort is directed at investigating and managing those matters that pose relatively higher risk of adverse effects.

The following sections set out specific requirements for the assessment of effects. The sections are listed in order of apparent environmental risk (from most significant to least). The significance of risk may change as the assessment is progressed but it remains incumbent on the proponent, in consultation with the TRG, to assess risk and direct assessment effort accordingly. Each of the sections below use the following structure.

1. Identify **key issues** or risks that the project poses to achieve the draft evaluation objective.
2. Characterise the **existing environment** to underpin impact assessments having regard to the level of risk.
3. Assess the **likely effects** of the project on the existing environment and evaluate their significance.
4. Present design and **mitigation measures** that could substantially reduce and/or mitigate the risk of significant effects. All design and mitigation measures must apply the following mitigation hierarchy with justification of why higher order measures cannot be applied.
 - a. Avoidance: measures taken to avoid creating adverse effects on native vegetation and biodiversity values from the outset, such as careful spatial or temporal placement of infrastructure or disturbance.
 - b. Minimisation: measures taken to reduce the duration, intensity and extent of impacts that cannot be completely avoided.
 - c. Rehabilitation/restoration: measures taken to improve degraded or removed ecosystems following exposure to impacts that cannot be completely avoided or minimised.
 - d. Offsets: measures taken to compensate for any residual, adverse impacts after full implementation of the previous three steps of the mitigation hierarchy.An assessment of residual effects (post mitigation) and their significance will be required to illustrate the effectiveness of the proposed mitigation measures.
5. Propose **performance objectives** and management measures to evaluate whether the project's effects are maintained within permissible levels and propose contingency approaches if they are not.

The description and assessment of effects (direct and indirect) must not be confined to the immediate area of the project but must also consider the potential of the project to impact on nearby environmental values, including areas impacted through transport route upgrades.

4.1 Energy efficiency, security, affordability and safety

Draft evaluation objective

Provide for safe and cost-effective augmentation of Victoria's natural gas supply in the medium to longer term.

Key issues

- Nearby operations and public safety risks associated with the construction, operation or decommissioning of the project, including risks associated with or compounded by potential external threats (e.g. bushfire).
- The rationale for the project in the context of energy security, efficiency and affordability.
- The capacity of the project to exert a beneficial influence on Victoria's energy security and costs over the anticipated life of the project, relative to established legislative and policy imperatives.

Existing environment

- Characterise the human environment near the project relative to safety buffer standards for surrounding current land uses and reasonably foreseeable land uses.
- Characterise Victoria's existing and anticipated demand for natural gas relative to existing anticipated and emerging supply scenarios.

Likely effects

- Assess the level of residual risk relative to standards applicable to the project.

Mitigation measures

- Describe proposed measures to minimise risk and ensure safety for nearby operations and the public during construction, operation and decommissioning of the project.
- Describe proposed measures to ensure the security and affordability of gas supply.
- Describe proposed measures to manage the potential impacts of treating the gas to meet applicable standards.

Performance objectives

- Describe the monitoring program to form part of the EMF to identify any potential hazards in time for corrective action to be taken.
- Describe the framework for emergency response, including contingency planning for foreseeable possible public safety or environmental emergencies.
- Outline an operational monitoring regime to enable the project's contribution to gas supply security and affordability, to be measured relative to forecasts.

4.2 Biodiversity and habitat

Draft evaluation objective

Avoid or minimise potential adverse effects on terrestrial, aquatic and marine biodiversity values within the project site and its environs, including native vegetation, listed species and ecological communities, other protected species and habitat for these species.

Key issues

- Direct loss of, or degradation to, habitat for flora and fauna species listed as threatened or migratory under the EPBC Act, FFG Act and/or DELWP advisory lists, including but not limited to the following species identified by the Department of Agriculture, Water and the Environment:
 - Dwarf Kerraung (*Commersonia prostrata*) – Endangered;
 - Trailing Hop-bush (*Dodonaea procumbens*) – Vulnerable;
 - Wellington Mintbush (*Prostanthera galbraithiae*) – Vulnerable;
 - Maroon Leek-orchid (*Prasophyllum frenchii*) – Endangered;
 - Curlew Sandpiper (*Calidris ferruginea*) – Critically Endangered;
 - Eastern Curlew (*Numenius madagascariensis*) – Critically Endangered;
 - Australasian Bittern (*Botaurus poiciloptilus*) – Endangered;
 - Red Knot (*Calidris canutus*) – Endangered;
 - Australian Painted-snipe (*Rostratula australis*) – Endangered;
 - Metallic Sun-orchid (*Thelymitra epipactoides*) – Endangered;
 - Loggerhead Turtle (*Caretta caretta*) – Endangered;
 - Southern Brown Bandicoot (*Isodon obesulus obesulus*) – Endangered;
 - Fairy Prion (southern) (*Pachyptila turtur subantarctica*) – Vulnerable;
 - Australian Fairy Tern (*Sternula nereis nereis*) – Vulnerable;
 - Hooded Plover (*Thinornis rubricollis rubricollis*) – Vulnerable;
 - Australian Grayling (*Prototroctes maraena*) – Vulnerable;
 - Green and Golden Bell Frog (*Litoria aurea*) – Vulnerable;
 - Growling Grass Frog (*Litoria raniformis*) – Vulnerable;
 - New Holland Mouse (*Pseudomys novaehollandiae*) – Vulnerable;
 - River Swamp Wallaby-grass (*Amphibromus fluitans*) – Vulnerable;
 - Thick-lipped Spider-orchid (*Caladenia tessellata*) – Vulnerable;
 - Swamp Everlasting (*Xerochrysum palustre*) – Vulnerable;
 - Great White Shark (*Carcharodon carcharias*) – Vulnerable;
 - Green Turtle (*Chelonia mydas*) – Vulnerable; and
 - Humpback Whale (*Megaptera novaeangliae*) – Vulnerable.
- Loss of native vegetation and any associated listed threatened flora and fauna species and communities known or likely to occur in or adjacent to the project works.
- Potential for adverse effects on the ecological character and biodiversity values of the Gippsland Lakes Ramsar site, as described in the Ramsar listing.

- Potential for cumulative effects on biodiversity values from the project in combination with other adjoining projects.
- Potential for indirect effects on biodiversity values including but not limited to those effects associated with impacts on habitat features due to changes in hydrology (including surface water, groundwater and marine changes), water quality (i.e. on water dependent ecosystems), contaminants and pollutants, edge effects, habitat fragmentation, loss of connectivity, dust, noise, environmental weeds, pathogens and pest animals including, but not limited to declared weeds, pathogens and pest animals under the *Catchment and Land Protection Act 1994*.
- Potential for sources of disturbance, such as noise, light, vibration and visual intrusion of people and machinery, to cause significant short and long-term impacts on terrestrial and marine biodiversity values.
- Potential for significant short and long-term impacts on marine biota and habitat due to drilling (shore crossing and well drilling), construction/installation, operation and decommissioning of sub-sea infrastructure including wells and pipelines.
- Potential for impacts resulting from drilling or construction activity, project operational infrastructure and decommissioning activity on cetaceans and other large marine animals, including acoustic impacts and potential collisions.
- Potential for impacts on dune stabilisation affecting dune biodiversity, which could be exacerbated by climate change rising sea levels and storm surge events.
- Potential for significant impacts on the marine environment resulting from accidental or unintended leaks or spills arising from construction works, operational or decommissioning activities, including unintended introduction of exotic species (e.g. through ballast water of vessels during construction).
- The availability of suitable offsets in accordance with guidelines for the loss of native vegetation and habitat for threatened species, ecological communities and migratory species which are listed under the EPBC Act and/or the FFG Act.

Existing environment

- Characterise the distribution and quality of native vegetation and terrestrial, aquatic, intertidal and marine habitat and any wildlife movement in the area that could be impacted by the project or associated works. This must include the quality and type of habitat impacted and quantification of the total impact area and areas indirectly impacted from the proposed action and must be informed as appropriate by targeted surveys undertaken in accordance with the appropriate Commonwealth and/or DELWP survey guidelines.
- Identify the existing or likely presence of any protected species, and especially species listed under the EPBC Act, FFG Act and DELWP advisory lists, as well as environmental weeds, pathogens and pest animals.
- Characterise the local status, within regional and national contexts, of listed threatened and migratory species, other protected species, ecological communities and potentially threatening processes that are likely to be present, in the Gippsland Lakes Ramsar site.
- Identify and characterise any groundwater dependant ecosystems that may be affected by the project works.
- Characterise the marine environment of the project area and surrounds that could be directly or indirectly impacted by the project.
- Identify the marine fauna and flora that could be affected directly or indirectly by the project.
- Identify exotic marine organisms that are already present or established near the project.
- Describe the existing threats to biodiversity values, including:
 - removal of individuals or destruction of habitat;
 - disturbance or alteration of habitat conditions (e.g. habitat fragmentation, changes to water quantity or quality, fire hazards, etc.);
 - threats of mortality of listed threatened fauna;
 - pressures from overbrowsing and overgrazing by native and exotic fauna;
 - presence of or risk of introduction of any declared weeds, pathogens and pest animals within and near the project area; and
 - initiating or exacerbating potentially threatening processes under the EPBC Act or FFG Act.
- Characterisation of the existing environment is to be consistent with Commonwealth and state survey guidelines, conservation advices and threatened species recovery plans. Where surveys do not identify a listed species or community, but past records and/or habitat analysis suggest that it may occur, a precautionary approach to the further investigation and assessment of its occurrence should be applied.

Likely effects

- Assess the direct and indirect effects of the project and feasible alternatives on terrestrial and aquatic native vegetation, listed ecological communities, and listed threatened and other protected flora species.
- Assess the direct and indirect effects of the project and feasible alternatives, on listed threatened, migratory and other protected fauna species under the EPBC Act, FFG Act and/or DELWP advisory lists.
- Assess the direct and indirect effects of the project and feasible alternatives, on the ecological character of the Gippsland Lakes Ramsar site.
- Assess the direct and indirect effects of the project and feasible alternatives, on the marine environment including marine biota and potential habitat.
- Assess the direct and indirect effects of the project, on biodiversity values, including:
 - disturbance or alteration of habitat conditions (e.g. habitat fragmentation, severance of wildlife corridors or habitat linkages, displacement due to avoidance of project infrastructure, changes to water quantity or quality, hydrological changes to wetland function, fire hazards, etc.);
 - the ability of wetlands, including Gippsland Lakes Ramsar site, to support listed species and communities;
 - direct removal of individuals or destruction of habitat;
 - threats of mortality of listed threatened fauna (including site and species specific risk-factors); and
 - the presence and potential spread of any declared weeds, pathogens and pest animals within and in the vicinity of the project area.
- Assess the potential cumulative effects on biodiversity related values from the project in combination with other nearby existing or proposed projects.

Mitigation measures

- Identify and describe potential alternatives, proposed design options and mitigation measures and their effectiveness in avoidance or reduction of significant effects on any flora, fauna (including terrestrial, aquatic and marine) and/or ecological communities listed on the EPBC Act, FFG Act or DELWP advisory lists, other protected species or ecological character of the Ramsar site. Provide clear statements noting which avoidance or mitigation measure will be committed to.
- Justify and describe the assumptions and level of uncertainty associated with the proposed measures achieving their desired outcomes.
- Describe the application of the three-step approach to avoiding the removal of native vegetation, minimising impacts from removal of native vegetation that cannot be avoided and providing offsets to compensate for the biodiversity impact from the removal of native vegetation.

Performance objectives

- Describe and evaluate proposed commitments to manage residual effects of the project on biodiversity values and MNES, including an outline of an offset strategy and offset management plan to secure appropriate offsets to satisfy both Commonwealth and state offset policy requirements.
- Describe how the offset/s will be secured, managed and monitored, including management actions, responsibility, timing, performance measures and the specific environmental outcomes to be achieved.
- Outline the key commitments and management actions for delivering and implementing a proposed offset through an offset management plan.
- Develop contingency measures to be implemented in the event of adverse residual effects (including ineffective mitigation) on flora and fauna values requiring further management.
- Proposed EPBC Act offsets must meet the requirements of the EPBC Act Environmental Offsets Policy (October 2012) available at: www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy

4.3 Cultural heritage

Draft evaluation objective

Avoid or minimise adverse effects on Aboriginal and historic cultural heritage and associated values.

Key issues

- Destruction or disturbance of sites or places of Aboriginal or historical cultural heritage significance within or in the vicinity of the project area.

Existing environment

- Review land use history, previous studies and relevant registers to identify areas with Aboriginal cultural heritage value or potential Aboriginal cultural heritage value.
- Identify and characterise Aboriginal cultural heritage sites or areas of sensitivity potentially impacted by the project through consultation and investigations to the satisfaction of the Gunaikurnai Land and Waters Aboriginal Corporation, the registered Aboriginal party.
- Identify and document known, and previously unidentified places and sites of historic cultural heritage significance potentially impacted by the project, including any areas of significant archaeological interest, in accordance with the *Heritage Act 2017*, Heritage Victoria's *Guidelines for Conducting Archaeological Surveys* (Jan 2015).
- Identify and document known and previously unidentified sites of underwater cultural heritage potentially impacted by the project, including any areas of significant archaeological interest in accordance with the Commonwealth *Underwater Cultural Heritage Act 2018* (UCH Act).
- Identify and characterise landscape-based cultural heritage values in the vicinity of the study area.
- Submit heritage inventory site cards to Heritage Victoria where archaeological sites are discovered.
- Acknowledge that the Gippsland Lakes Coastal Park is a jointly managed park and identify and document how this will be addressed through consultation and assessment of impacts.

Likely effects

- Assess potential effects, both direct and indirect, of the project on:
 - known and previously unidentified sites, places or values of Aboriginal cultural heritage significance;
 - Victorian Heritage Register places and Victorian Heritage Inventory sites that intersect with or are near the project area;
 - previously unidentified sites and places of historic cultural heritage significance as assessed through desktop assessment, heritage impact statements and surveys; and
 - known and previously unidentified sites and places of underwater cultural heritage significance having regard to the UCH Act.

Mitigation measures

- Describe and evaluate proposed design, management or site protection measures that could avoid or mitigate potential adverse effects (direct and indirect) on known or potential Aboriginal or historical cultural heritage values.
- Develop management and contingency measures in accordance with the requirements for a cultural heritage management plan under the *Aboriginal Heritage Act 2006*.
- Develop management and contingency measures for underwater cultural heritage in accordance with the UCH Act.

Performance objectives

- Outline any proposed commitments to mitigate and manage residual effects on sites, places or values of Aboriginal cultural heritage significance (within the framework of a draft cultural heritage management plan as appropriate).
- Outline any proposed commitments to mitigate and manage residual effects on sites, places or values of historical heritage significance, including site investigation and recording procedures.
- Outline any proposed commitments to mitigate and manage residual effects on underwater cultural heritage including site investigation and recording procedures.

4.4 Catchment values and hydrology

Draft evaluation objective

Maintain the functions and values of aquatic environments, groundwater, stream flows and water quality and prevent adverse effects on protected beneficial uses including the ecological character of the Gippsland Lakes Ramsar site.

Key issues

- Potential for occurrence and disturbance of acid sulfate soils.
- The potential for adverse effects on the functions, values and beneficial uses of groundwater due to the project's activities, including gas extraction, interception or diversion of flows, or discharges or seepage from other construction, operational areas or decommissioning activities.

- Potential for the project to have an adverse impact on wetland systems, in particular the Gippsland Lakes Ramsar site, and their ability to support habitat for protected flora and fauna species.
- The potential for adverse effects on nearby water environments (including Gippsland Lakes Ramsar site) due to changed water quality, impacts on groundwater, flow regimes or waterway conditions during construction, operations and decommissioning.
- The potential for shoreline or other erosion or landform stability impacts during construction,

Existing environment

- Characterise the groundwater (including depth, quality and availability to licence/use) and surface water environments and drainage features in the project area and its environs.
- Characterise soil types and structures in the study area and identify the potential location and disturbance of acid sulfate soils, dispersive, erodible or contaminated soils.
- Characterise the wetland systems in the project area and its environs including the extent, types and condition of wetlands that could be impacted by the project, having regard to terrestrial and aquatic habitat, including as habitat corridors or linkages.
- Characterise hydrological requirements for wetlands in the project area and its environs and their acceptable limits for change.

Likely effects

- Assess the potential effects, including cumulative effects, of the project on groundwater and surface water environments and beneficial uses, including on wetland systems in the project area and its environs and downstream, considering appropriate climate change scenarios.
- Identify and assess potential effects of the project on soil stability, erosion and the exposure and disposal of any waste or hazardous soils (e.g. acid sulfate soils).
- Assess and address risk of exposure of acid sulfate soils impacting on wetland systems in the project area and downstream.
- Assess the potential effects on the ecological character of the Gippsland Lakes Ramsar Site, due for example to changed water quality, flow regimes, impacts on groundwater or waterway conditions during construction, operations and decommissioning considering appropriate climate change scenarios.

Mitigation measures

- Identify proposed measures to mitigate any potential effects, including any relevant design features or preventative techniques to be employed during construction, operation and decommissioning.

Performance objectives

- Describe monitoring programs to be implemented to ensure prompt detection of acid sulfate soils, water availability or quality issues with respect to soils, groundwater and surface water effects associated with the project.
- Identify possible contingency actions to respond to foreseeable changes that may be identified through the monitoring program.

4.5 Community amenity and greenhouse gas emissions

Draft evaluation objective

Avoid and minimise adverse effects for community amenity and well-being, with regard to project noise, vibration, air quality (including greenhouse gas emissions) and landscape and visual effects.

Key issues

- Potential for emissions of greenhouse gases to result from the project, including embedded emissions due to construction materials and processes, importation of supplies as well as direct and indirect emissions from construction, operation and decommissioning.
- Potential for dust emissions resulting from construction works and activities, including dust from potentially contaminated soil.
- Potential for increases in noise, lighting and vibration levels during project construction, operation and decommissioning to affect amenity adversely in adjacent residential, parkland and marine areas.
- Potential for project construction, operation or decommissioning to adversely affect local air quality.
- Potential for adverse impacts on visual or landscape values.

Existing environment

- Identify dwellings and any other potentially sensitive receptors (e.g. community centres, open spaces, etc.) that could be affected by the project's potential effects on air quality, noise, lighting or vibration levels, especially vulnerable receptors including children and the elderly.
- Characterise background levels of air quality (e.g. dust and other relevant air emissions), noise and vibration near the project, including established residential areas and other sensitive receptors.
- Identify visual and landscape values near the project, including public and private vantage points from which elements of the project may be visible.

Likely effects

- Quantify anticipated greenhouse gas emissions from the project for the different project phases.
- Predict likely atmospheric concentrations of dust and other air pollution indicators at sensitive receptors near the gas compressor station, metering facility or along the pipeline corridor, during project construction, operation and decommissioning, using an air quality impact assessment undertaken in accordance with the EP Act and underlying regulations.
- Assess likely noise, lighting and vibration impacts at sensitive receptors in the vicinity during project construction and operation (both with and in the absence of the proposed mitigation measures), relative to standards.
- Assess the effects of the project on the landscape and visual amenity values of the project area and vicinity, from nearby residences, public lookouts, roads and key vantage points in the vicinity.

Mitigation measures

- Identify options for reducing direct and indirect greenhouse gas emissions resulting from the construction, operation and decommissioning of the project.
- Describe and propose siting, design, mitigation and management measures to control emissions to air from construction, operation and decommissioning activities.
- Describe and evaluate both potential and proposed design responses and/or other mitigation measures (e.g. staging/scheduling of works) which could minimise noise and vibration during construction, operation and decommissioning.
- Identify options for mitigating or managing visual or landscape impacts of the project.

Performance objectives

- Describe proposed measures to reduce, monitor and audit greenhouse gas emissions from the project.
- Describe proposed measures to manage and monitor effects on amenity values and identify likely residual effects, including compliance with standards and proposed trigger levels for initiating contingency measures.
- Describe contingency measures for responding to unexpected impacts to amenity values resulting from the project during construction, operation and decommissioning.

4.6 Land use, socioeconomic, roads and transport

Draft evaluation objective

Avoid and minimise adverse effects on land use, social fabric of the community, traffic and road infrastructure, local infrastructure and to neighbouring landowners during construction, operation and decommissioning of the project.

Key issues

- Potential for project works and operations to affect business (including fisheries, farming and tourism), operations or other existing or approved facilities or land uses.
- Potential for temporary or permanent changes to use of or access to existing infrastructure in the project area and in its vicinity.
- Potential for impacts on reasonably foreseeable upgrades to public infrastructure.
- Managing traffic disruptions for residents, businesses and travellers during the construction of the project.
- Potential damage to local and regional road surfaces from construction activity.

Existing environment

- Describe the demographic and social character of residential communities near the project.
- Identify fisheries within and near the project area.

- Identify existing and reasonably foreseeable land uses and businesses occupying land to be traversed by, adjacent to, or otherwise affected by impacts from the project.
- Identify tourism and recreation use within or nearby the project.
- Identify strategic plans specifying or encouraging land use outcomes for land to be occupied by the project.
- Describe the existing road network surrounding the project area in terms of capacity, condition, accessibility and potentially sensitive users.

Likely effects

- Identify implications for communities, current land uses, recreation and businesses, including fisheries and tourism, and immediately foreseeable changes in land use.
- Assess the potential effects of construction activities on existing traffic and road conditions, including amenity and accessibility impacts.
- Identify potential long and short-term effects of the project on existing public infrastructure and fire and emergency management.
- Identify potential long and short-term economic effects of the project, considering direct and indirect consequences on employment and local and regional economy, including fisheries, agriculture, business and tourism.

Mitigation measures

- Describe and evaluate the proposed traffic management and safety principles to address changed traffic conditions during construction of the project, covering (where appropriate) road safety, temporary or permanent road diversions, different traffic routes, hours of use, vehicle operating speeds, types of vehicles and emergency services provisions.
- Demonstrate whether the project is consistent with relevant planning scheme provisions and other relevant policies (including approved management plans for adjacent public land/ reserves).
- Outline measures to minimise potential adverse effects of the project and enhance benefits to the community and local businesses, including fisheries and tourism.

Performance objectives

- Outline and evaluate proposed measures designed to manage and monitor residual effects on road users and describe contingency measures for responding to unexpected impacts.
- Describe proposed measures to mitigate, offset or manage social, land use, marine use and economic outcomes for communities living within and visiting the project area and its environs as well as proposed measures to enhance beneficial outcomes.

Appendix A

Procedures and requirements under section 8B(5) of the *Environment Effects Act 1978*

The procedures and requirements applying to the EES process, in accordance with both section 8B(5) and the *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Ministerial Guidelines), are as follows:

- (i) The EES is to document the investigation and avoidance of potential environmental effects of the proposed project, including for any relevant alternatives, as well as associated environmental avoidance, mitigation and management measures. In particular the EES should address:
 - a. effects on the offshore marine environment and ecology;
 - b. effects on Aboriginal cultural heritage values;
 - c. effects on biodiversity and ecological values within and close to the site footprint including: the Gippsland Lakes Ramsar site; native vegetation; listed threatened ecological communities and flora and fauna species; and other habitats values;
 - d. effects on landscapes and soils;
 - e. effects of project construction and operation on air quality (including greenhouse gas emissions), noise and visual amenity of nearby sensitive receptors (particularly residences);
 - f. both positive and adverse socio-economic effects and land-use effects; and
 - g. effects on surface water environments, including local waterways and the broader catchment, as well as groundwater (hydrology, quality, uses and dependent ecosystems).
- (ii) The matters to be investigated and documented in the EES will be set out in detail in scoping requirements prepared by the Department of Environment, Land, Water and Planning (the department). Draft scoping requirements will be exhibited for 15 business days for public comment, before being finalised and then issued by the Minister for Planning.
- (iii) The level of detail of investigation for the EES studies should be consistent with the scoping requirements issued for this project and be adequate to inform an assessment of the potential environmental effects (and their acceptability) of the project and any relevant alternatives, in the context of the Ministerial Guidelines.
- (iv) The proponent is to prepare and submit to the department a draft EES study program to inform the preparation of scoping requirements.
- (v) The department is to convene an inter-agency Technical Reference Group (TRG) to advise the proponent and the department, as appropriate, on scoping and adequacy of the EES studies during the preparation of the EES, as well as coordination with statutory approval processes.
- (vi) The proponent is to prepare and submit to the department its' proposed EES Consultation Plan for consulting the public and engaging with stakeholders during the preparation of the EES. Once completed to the satisfaction of the department, the EES Consultation Plan is to be implemented by the proponent, having regard to advice from the department and the TRG.
- (vii) The proponent is also to prepare and submit to the department its proposed schedule for the studies, preparation and exhibition of the EES, following confirmation of draft scoping requirements. This is to enable effective management of the EES process on the basis of an agreed alignment of the proponent's and department's schedules, including for TRG review of technical investigations and the EES documentation.
- (viii) The proponent is to apply appropriate peer review and quality management procedures to enable the completion of EES studies and documentation to an acceptable standard.
- (ix) The EES is to be exhibited for a period of 30 business days for public comment, unless the exhibition period spans the Christmas–New Year period, in which case 40 business days will apply.
- (x) An inquiry will be appointed under the *Environment Effects Act 1978* to consider and report on the environmental effects of the proposal.

Notification

The following parties (proponent and relevant decision-makers) are to be notified of this decision in accordance with sections 8A and 8B(4)(a) of the *Environment Effects Act 1978*:

- GB Energy (Vic) Pty Ltd (proponent);
- Minister for Resources;
- Minister for Energy, Environment and Climate Change;
- Minister for Planning;
- Secretary of Department of Jobs, Precincts and Regions;
- Secretary of Department of Environment, Land, Water and Planning;
- Executive Director of Aboriginal Victoria;
- Gunaikurnai Traditional Owner Land Management Board;
- Executive Director of Heritage Victoria;
- Wellington Shire Council;
- Environment Protection Authority; and
- West Gippsland Catchment Management Authority.

RICHARD WYNNE MP
Minister for Planning

Date: 8 September 2019