

Title of Proposal - Golden Beach Gas Project

Section 1 - Summary of your proposed action

Provide a summary of your proposed action, including any consultations undertaken.

1.1 Project Industry Type

Energy Generation and Supply (non-renewable)

1.2 Provide a detailed description of the proposed action, including all proposed activities.

GB Energy (VIC) Pty Ltd (GBE), as operator of retention lease VIC/RL1(V), is developing the Golden Beach gas field in the Gippsland Basin, 4km offshore from Ninety Mile Beach. GBE have commenced consultation with landholders, community groups, the Gunaikurnai Land and Waters Aboriginal Corporation, local and State government agencies, DoEE and other stakeholders.

The main components of the Project are:

1. Offshore drilling by jack-up rig (est. 90 days)

- Drill a pilot hole for 1st well.
- Plug back and drill the well as a horizontal production well with subsea completions.
- Drill 2nd horizontal development well.
- Drilling, completion and testing program;
 - o Well depths of ~650m total vertical depth/~1500m measured depth.
 - o Wells drilled to suit both drawdown and storage activities.
- Installation of wellheads and tie in of subsea Christmas trees.

2. Pipelaying (est. 60 days)

- a 3.8 km subsea pipeline and control umbilical connecting to shore. The options for offshore pipeline installation are:
 - o Constructed onshore (onsite) loaded onto rollers and then towed out (preferred option)
 - o Constructed onshore (off site) and then towed out (possible option)
- The offshore pipeline will most likely be trenched and/or rock will be used to secure the pipeline.

3. Subsea Infrastructure Installation (est. 20 days)

- Subsea infrastructure will be installed at the end of the offshore pipeline.
- All equipment will be fabricated offsite and installed from a construction vessel.
- The connection of the subsea equipment, subsea pipeline and HDD will be executed using remotely operated vehicles and diving services from support vessels.

4. Shore crossing (est. 120 days)

- The 1.3km -1.5 km shore crossing adjacent to the Gippsland Water Ocean Outfall pipeline will be performed by either Horizontal Directional Drilling (HDD) or Micro-tunnelling, with either a single, or parallel drills for the gas pipeline and umbilical.

- The crossing design methodology will be subject to the actual geological conditions along the shore crossing route and the most suitable drilling technology will be used.
- The techniques to be considered for the shore crossing would include:
 - o Traditional HDD using a small-bore hole and a forward or back reaming run.
 - o Miro-tunnelling or direct pipe techniques to provide a cased hole immediately behind the drill bit.
- A shore crossing area of 100m x 75m will be constructed and located behind the shoreline sand dune and the exit point will be in approximately 10m-12m of water depth, at approximately 750m offshore.
- The gas pipeline will be welded onshore, loaded onto rollers and inserted through the shore entry (hole) to emerge onto the seabed with a combination of pushing from onshore and pulling from offshore, the full length 3.5-4km of pipe pulled through the drilled hole.

5. Onshore Pipeline (est. 6 - 9 mnths)

- The onshore pipeline extends from the shore crossing HDD entry point and travels adjacent to the existing Gippsland Water Ocean Outfall pipeline, then on to the new gas plant.
- The distance of the onshore pipeline is 18.5km which will be constructed in typical 30-metre-wide construction ROW, which will connect to the offshore pipeline and tie into existing assets in Longford to enable access to the Victorian Transmission Network (VTN) and/or the Eastern Gas Pipeline (EGP).
- The pipeline operates bi-directionally to allow for the future withdrawal and injection of gas into the reservoir to supply storage services to customers. As identified above, the construction footprint will typically comprise a 30m wide pipeline construction ROW, as well as extra workspace for temporary facilities to support construction. Extra workspace and temporary facilities will include:
 - o Access tracks (upgrade of existing);
 - o Additional work areas (e.g. vehicle turn-around points, additional workspace for crossings, stockpiling and storage areas); and
 - o Water supply tanks and temporary dams for storing water required for dust suppression and hydrostatic testing of the pipeline.

The width of the construction ROW may be reduced in areas such as sensitive environments and/or watercourses to minimise disturbance to these features. In some cases, due to the presence of areas of high ecological significance or other constraint, GBE will utilise alternate construction techniques, such as Horizontal Directional Drilling (HDD) or boring, which will negate the need for construction disturbance within the area of the alternate method.

The requirement for additional construction access tracks and working space will also be confirmed through discussions with owners and occupiers of land and engineering design. The construction ROW and all temporary facilities, temporary access tracks and extra work areas will be progressively decommissioned and reinstated on completion of the construction.

Onshore Pipeline construction will occur as follows:

- Surveying of the construction ROW
- Installation of temporary fencing and gateways
- Clearing of vegetation from the construction ROW
- Pipe stringing and bending
- Welding and coating
- Trench excavation
- Lowering in and backfilling

- Testing and commissioning
- Rehabilitation of the ROW

Special Crossing: (est. 2-3 days)

The crossing of Lake Reeve (Ramsar Wetland) will only proceed when lake is visibly dry, and no substantial rain has occurred in the previous 4 weeks. Lake Reeve is expected to be dry over summer, with the water table just below the surface. Construction will be limited to between November and March (inclusive).

The construction method is as follows:

- Prefabricate and preliminary hydrotest a 300m long pipe string on the North side of the lake.
- Excavate across the Lake using low ground pressure excavators.
- Stockpile spoil on the East side of route across the lake (and lime treat if acid sulfate).
- Set up pipeline roller assemblies and lift the pipeline string onto the rollers.
- Attach buoyancy to the pipeline string and pull into the groundwater-flooded trench.
- Recover buoyancy and backfill the trench.
- If the water table is too low to float the pipe across, the contingency would be conventional pipeline construction on a temporary road across the Lake made from excavated spoil.
- If the lake contains surface water, HDD may be adopted.

6. Gas Plant Construction (est. 12 mnths)

- The gas plant is to comprise modular dehydration and compression equipment, with export metering and connections to existing transmission pipelines.
- located either near the EGP Compressor Station or near Dutson Downs.

7. Production Operations – Gas Extraction (est. 2-4 yrs)

- gas production for sale into the VTN, with partial extraction of the gas currently within the reservoir and then blown down.

8. Transition to gas storage

- transition of the field into a gas storage facility, providing injection and withdrawal capacity.
- the installation of additional compression and dehydration equipment within the existing plant site.

9. Gas storage

- subsea reservoir used as a storage facility, allowing customers to fill the reservoir during low demand periods and withdraw gas during high-demand periods.
- monitoring the condition and integrity of the pipeline and other infrastructure.

10. Decommissioning of the infrastructure and abandonment of the wells.

1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.

Area

Point

Latitude

Longitude

Area	Point	Latitude	Longitude
General area	1	-38.195578282471	147.15063785026
General area	2	-38.226331144437	147.38203738639
General area	3	-38.271357925283	147.48057101676
General area	4	-38.313932428768	147.44417880485
General area	5	-38.262193057748	147.34118197868
General area	6	-38.232534093836	147.14548800895
General area	7	-38.195308463034	147.15029452751
General area	8	-38.195578282471	147.15063785026

1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland).

The Golden Beach gas field is located in Victorian state waters approximately 4km off Ninety Mile Beach, Victoria.

The preferred pipeline route runs from the Golden Beach gas field directly to shore, crossing underneath the shoreline and crossing Lake Reeve approximately 1.5 km southwest of the developed portion of Golden Beach. The pipeline will then run west for 18.5km to terminate near the existing gas infrastructure at Longford. A new gas processing facility will be built near Longford or on privately owned land near Dutson Downs.

The onshore pipeline traverse's private property (farming and industry) and public land, including roadside reserves, public utilities, conservation areas and agricultural land.

1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?

Gas plant: up to 25 ha; onshore pipeline: 54.3 ha (to be reinstated post-construction); offshore pipeline: 3.8 km (area not calcu

1.7 Is the proposed action a street address or lot?

Lot

1.7.2 Describe the lot number and title. multiple - See Attachement 1.7.2

1.8 Primary Jurisdiction.

Victoria

1.9 Has the person proposing to take the action received any Australian Government

grant funding to undertake this project?

No

1.10 Is the proposed action subject to local government planning approval?

No

1.11 Provide an estimated start and estimated end date for the proposed action.

Start date 07/2020

End date 10/2021

1.12 Provide details of the context, planning framework and State and/or Local government requirements.

The development proposal will require a range of planning and environmental approvals. The key relevant approvals are listed in Table 1 below. Permit and licencing arrangements under these Acts will require evidence of the proponent's assessment of the environmental impacts from the project, continued community engagement and submission and approval of Environment Plans and other planning documents.

In Victoria offshore petroleum developments and high-pressure gas pipelines are administered principally under the Offshore Petroleum and Greenhouse Gas Storage Act 2010 and the Pipelines Act 2005, respectively. Each of these Acts requires the environmental assessment of proposals in support of applications for consent.

The project has been referred to the Victorian Minister for Planning for a determination on whether an Environment Effects Statement (EES) is required to be prepared under the provisions of the Environment Effects Act 1978. If required, the EES will be lodged in support of applications for project development consent under the various statutory controls and exhibited for public comment.

Table 1 - Applicable legislative approvals

Legislation

Scope and Relevance to the Activity

Commonwealth Legislation

Environment Protection and Biodiversity Conservation Act 1999.

The EPBC Act (1999) provides a legal framework to protect and manage nationally and internationally important flora, fauna and ecological communities defined as matters of national environmental significance. The project was previously referred under the EPBC Act in 2003 and determined that, subject to conditions, it was not a controlled (EPBC2003/1031). This referral has been submitted to determine whether the project as currently proposed will require formal assessment and approval under the EPBC Act.

Native Title Act 1993.

Native Title in the wider Gippsland Region, in which the study area sits, has been determined and granted to the Gunaikurnai people (Federal Court decision 22/10/2010). The project is likely to be considered a 'future act' and require agreement of the native title holder, in accordance with the procedures set out in the Act.

Navigation Act 2012.

This Act provides for the regulation of the maritime industry. Vessels (for example, pipe lay vessels, barges) operating in the activity area/project extent will be required to meet the requirements of this Act.

Civil Aviation Act 1988.

The Civil Aviation (Buildings Control) Regulations 1988 control the construction of buildings, structures or objects that constitute or may constitute obstructions, hazards or potential hazards to aircraft in the vicinity of an aerodrome. CASA will be consulted to determine whether planning approvals are required for any construction activities in the vicinity of Esso's Longford Heliport.

Victorian Legislation

Aboriginal Heritage Act 2006.

This Act provides for the protection and management of Victoria's Aboriginal heritage. It establishes a system of management plans and permits which proponents need to comply with when carrying out specified activities that may impact on Aboriginal cultural heritage. The project will require the development of a Cultural Heritage Management Plan.

Catchment and Land Protection Act 1994.

The CaLP Act provides a framework for the regulation and control of pests, weeds and diseases within Victorian catchments. The management requirements of the Act will be incorporated into the CEMP and OEMP.

Climate Change Act 2017

This Act provides a policy framework for the management of climate change risks by establishing objectives and action plans for climate change targets and introduces a system of climate change reporting.

Infrastructure resilience will be considered in the project design.

Country Fire Authority Act 1958.

This Act establishes the Country Fire Authority (CFA) as the fire safety regulator in the country area of Victoria. It sets out the powers, duties and responsibilities of the CFA and its officers. It includes prohibitions and provisions for the prevention of fires. This Act provides for the management of fires, and road accident investigation and extrication. The project may require a Fire Danger Period Permit for hot work and/or a Total Fire Ban Permit for hot work.

Crown Land (Reserves) Act 1978.

The Crown Land (Reserves) Act 1978 enables reservation of land for public purposes, stipulates how reserved land is to be managed, including the leasing provisions for commercial and non-commercial purposes on reserved Crown land. This Act provides for the reservation of Crown Lands for certain purposes and for the management of such reserved lands. This project will require Temporary lease to use reserved Crown land (construction) and Leases for pipeline easements.

Environment Effects Act 1978.

This Act establishes a process for assessing the potential environmental impacts or effects of a proposed development and enables statutory decision-makers (Ministers, local government and statutory authorities) to make decisions about whether a project with potentially significant environmental effects should proceed, based on an Assessment by the Minister for Planning. The EE Act provides a legal framework for the assessment and management of potential impacts to the environment as a result of development projects. A referral under the EE Act has

been submitted to DELWP and the Minister may require the development of an Environmental Effects Statement.

Environment Protection Act 1970.

The Environmental Protection Act (1970) provides a legal framework for the systematic and strategic management of potential and realised environmental impacts.

This is the key Victorian legislation that controls discharges and emissions (air, water) to the environment within Victoria (including state and territorial waters).

Triggered in the event of a marine diesel oil spill and where vessels need to discharge domestic ballast water into State waters.

The Acts provide the framework to protect the environment in the State of Victoria. It applies to noise emissions and the air, water and land. They also set out EPA's objectives, powers, duties and functions. The project may require EPA Works Approval and EPA licence to operate a scheduled premise.

Flora and Fauna Guarantee Act 1988.

This Act legislates for the conservation of threatened species and communities and for the management of potentially threatening processes. It includes requirements for:

- listing threatened species, communities and threats to native species
- an overarching strategy for Victoria's biodiversity
- the declaration of habitat critical to the survival of native plants and animals
- a duty on public authorities to have regard to the objectives of the Act in their operations
- permits for activities that could harm threatened plants and fish and communities.

The project may require a Permit to Take Protected Flora/Fauna.

Gas Safety Act 1997.

This Act regulates the safety of gas supply and use in Victoria, providing for the safe conveyance (transmission and distribution), sale, supply, measurement, control and use of gas. It is administered by Energy Safe Victoria. The project may require Safety Cases.

Heritage Act 1995.

The Act identifies and protects heritage places and objects that are of state - level cultural heritage significance to Victoria, including: archaeological sites and artefacts. historic buildings, structures and precincts. This project is unlikely to require a Heritage Permit to undertake works to a Heritage Place or Object.

Land Act 1958.

This Act deals with sale, grants and occupation of Crown land in Victoria including leases for community, commercial and industrial purposes. Project may require a Temporary lease to use Crown land (construction) and Lease for pipeline easement under this Act.

Land Acquisition and Compensation Act 1986.

This Act establishes the procedure for the acquisition of land for public purposes; and provides for the determination of the compensation payable in respect of land so acquired. The project may require consideration of Compulsory acquisition of land.

Local Government Act 1989.

The Act establishes and regulates the operation of local councils, including provisions for councils' powers to make and enforce local laws. The project may require Traffic Management Plan and permits for works on local roads.

Marine and Coastal Act 2018.

The Marine and Coastal Act (2018) is a piece of legislation that has been implemented to better manage Victorian marine and coastal environments. All works on marine and coastal Crown land will require consent under the Act.

National Parks Act 1982

Victoria has 24 marine national parks and sanctuaries that were established and are protected and managed under the National Parks Act 1982 (Vic) by Parks Victoria. There is one marine protected area located in the vicinity of the project area, Ninety Mile Beach Marine National Park (MNP), 22 km southwest of the activity area. This MNP is outside the Project area and no approvals are required under this Act.

Occupational Health and Safety Act 2004.

This Act is the main workplace health and safety law in Victoria. It sets out key principles, duties and rights about OHS. It protects the health, safety and welfare of employees and other people at work and ensures that the health and safety of the public is not put at risk by work activities. This project is unlikely to require a Major Hazard Facility licence.

Offshore Petroleum and Greenhouse Gas Storage Act 2010.

Addresses all licensing, health, safety and environmental issues for offshore GHG activities in Victorian coastal waters (between the low water mark and the 3 nm limit).

This Act and its Regulations are similar to the Commonwealth Act and Regulations of the same name. Section 61 of the Act (Principles of sustainable development) states that the administration of the Act should take into account the principles of sustainable development. These principles include involving the community in issues that affect them.

This project may require:

- Production Licence
- Licence to construct and operate a pipeline
- Consent to operate a pipeline
- Environment Plans
- Safety cases
- Field development plan
- Well Operations Management Plan
- Pipeline Management Plan
- Diving safety management plan and diving project plan.

Pipelines Act 2005.

The Pipelines Act 2005 applies to pipelines for the conveyance of petroleum and any petroleum product, including gas (Sections 7 and 9).

A licence is required under the Pipelines Act to construct and operate a pipeline (Part 3).

Alteration of a pipeline requires the amendment of the pipeline licence (Division 6). If the alteration will not affect the rights or

interests of any other person it is considered minor (Section 66), otherwise it is considered significant (Section 68).

Under the Act (Section 5), "pipeline" includes, but is not limited to:

- apparatus for inducing or facilitating the flow or movement of anything through the pipe or system of pipes
- apparatus or facilities permitting the addition of anything to or removal of anything from the pipe or system of pipes to facilitate flow.

Schedule 1 Part 2(c) is an exclusion from the application of the Act for

"a pipeline entirely on land the freehold of which is owned or leased by a licensee and which is controlled by that licensee".

Pipeline licence/ licence amendment. In addition to a written application for a pipeline licence or a significant licence amendment, the proponent is likely to be required to prepare and submit for approval:

- a Consultation Plan
- a Construction Environment Management Plan
- an Operation Environment Management Plan

- a Safety Management Plan

Traditional Owner Settlement Act 2010.

This Act provides for an out-of-court settlement of native title, allowing the Victorian Government to recognise traditional owners and certain rights on Crown land. The project may require negotiation of an agreement for access to crown land where traditional ownership has been recognised and the settlement agreement bestows the traditional owner's rights with regard to control of land use.

Water Act 1989.

The Water Act (1989) provides a legal framework for the management of Victoria's water resources.

The Water Act provides for the integrated management of surface and groundwater, including the use, conservation and management of water resources and the protection and enhancement of the environmental qualities of waterways and catchments. The project may require a Works on Waterways permit.

Wildlife Act 1975.

This Act establishes procedures to protect and conserve wildlife, allows for the sustainable use of and access to wildlife; and regulates the conduct of persons engaged in wildlife related activities. This project may require management authorization for fauna handling.

1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders.

GB Energy is committed to an open and transparent consultation process with stakeholders, providing accurate and timely information as it progresses through the various phases of the Project's regulatory approval. This process commenced in late October 2018, with GB Energy starting its engagement program to advise and inform the local community, and other key stakeholders, about the Project.

Initial focus of the consultation program was on the development of an Environmental Plan (Approved) to support a proposed offshore geo-physical-geotechnical program on the Golden Beach field. This plan was approved by the Regulator in January 2019 and was revised to include works associated with the near shore pipeline route.

In January 2019 the Project also secured ministerial approval for its Pipeline Consultation Plan for the 18.5 km pipeline from the beach through to Longford.

All landowners along the route were provided with copies of the Plan and Notice of Intent and Consent documentation.

Briefings were also held with key regulatory and other agencies including DELWP, Parks Victoria, Wellington Shire, GLaWAC and other key land holders.

In both initial engagement programs, face-to-face meetings with key stakeholders and the provision of project information were the primary form of interface. Updates and an 1800 community information line are used to deal with inquiry.

Media interviews with ABC radio and Gippsland Newspapers were undertaken. Advertisements of the planned community meetings were included in the Gippsland Times. Project information and community meeting flyers were also distributed to community organisations (Rate Payers) and interest groups.

Community meetings:

Following the initial December 8th, 2018, meeting a further meeting was held at Golden Beach on March 2nd, 2019 and then another meeting on the May 25th, 2019.

The Project is committed to hold community meetings on an 8-10-week cycle or prior to major work-program activities. We continue to monitor the frequency of the meetings with community leaders.

Gunaikurnai Land & Waters Aboriginal Corporation (GLaWAC) have been actively consulted in the planning of the Project. In November 2018, GLaWAC was one of the first groups of stakeholders advised of the project. Since then further information has been supplied on a regular basis, including provision of copies of the Pipeline Consultation plan and maps of the pipeline routes and options. This information was also provided to GLaWAC's Native Title legal representative.

Recent face-to-face communications with GLaWAC's RAP manager has included information on upcoming heritage survey involvement.

GLaWAC will continue to be engaged in their capacity as Registered Aboriginal Party as the Project progresses through cultural heritage assessment in accordance with the Aboriginal Heritage Act 2006.

1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.

EES referral

On the 30th July 2019 GB Energy submitted an EES referral, for the Victorian Minister for

Planning to determine if an EES is required for the project. The assigned Referral Number 2019-R06.

Past EES & EPBC referrals

In 2003 Santos referred the proposed Golden Beach project (Santos Project) to the Commonwealth Minister for the Environment (Cth Minister) who determined that the Santos Project was not a 'controlled action', provided the construction of the pipeline will take place when Lake Reeves is not inundated. The Santos Project did not require further assessment and approval under the EPBC Act.

In 2005, Cape Energy referred the proposed Golden Beach project (Cape Energy Project) to the Victorian Minister for Planning (Victorian Minister) who advised that assessment under the EE Act is not necessary, however an Environmental Report should be prepared to support necessary applications for statutory approval. The Environmental Report is to describe the potential impacts of the proposal, as well as the proposed environment management and rehabilitation measures and is to be prepared to the satisfaction of the now Department of Environment, Land, Water and Planning (DELWP). We understand that Cape Energy subsequently prepared an Environment Report in 2007 in response to previous environmental studies with the intention to provide several reports to support the submission of an application for a pipeline licence under the Pipelines Act 2005 (Vic).

There are no fundamental differences in the impacts between the current GBE Project and the Santos and Cape Energy Projects. Specifically, the following information in respect of the comparison of the previous referred projects with the GBE Project is highlighted below:

Santos and Cape Energy had project descriptions that included Extended Reach Drilling; (e.g. drilling from onshore to offshore) as well as offshore drilling. GBE is focused on offshore drilling; All proponents are building pipelines and a gas processing plant; GBE will be building a larger diameter pipeline for gas storage (being a bi-directional pipeline which will allow gas to be injected back into the field for storage purposes). We understand that the pipeline will be approximately 700mm in diameter in an approximately 30m right of way/ easement but post construction the pipeline will be buried so have no impact; and Cape Energy did not include the gas storage component in their referral, but it has no material change on the environmental impacts

1.15 Is this action part of a staged development (or a component of a larger project)?

No

1.16 Is the proposed action related to other actions or proposals in the region?

No

Section 2 - Matters of National Environmental Significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The [interactive map tool](#) can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest. Consideration of likely impacts should include both direct and indirect impacts.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

- [Profiles of relevant species/communities](#) (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;
- [Significant Impact Guidelines 1.1 – Matters of National Environmental Significance](#);
- [Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies](#).

2.1 Is the proposed action likely to have ANY direct or indirect impact on the values of any World Heritage properties?

No

2.2 Is the proposed action likely to have ANY direct or indirect impact on the values of any National Heritage places?

No

2.3 Is the proposed action likely to have ANY direct or indirect impact on the ecological character of a Ramsar wetland?

Yes

2.3.1 Impact table

Wetlands	Impact
Gippsland Lakes (Lake Reeve)	Pipeline construction - A small area of the wetland (est. 0.6 ha) will be temporarily disturbed for pipeline installation. Work will only be undertaken when the wetland is dry. Trenching, pipe installation and backfill is expected to take 2-3 days, followed immediately by reinstatement of the site. No areas of the wetland will be permanently

Wetlands	Impact
	destroyed or substantially modified.

2.3.2 Do you consider this impact to be significant?

No

2.4 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

Yes

2.4.1 Impact table

Species	Impact
Temperate Coastal Saltmarsh	Pipeline construction (as per Ramsar site - section 2.3.1) - Impacts to Temperate Coastal Saltmarsh will be small (~0.6 ha) and temporary, with reinstatement immediately following construction across Lake Reeve. There may be a localised, medium term change in the species composition and extent of the occurrence of this ecological community within the project footprint. However, this impact is unlikely to be a substantial reduction in the viability, quality or integrity of the ecological community within Lake Reeve, affecting less than 1% of the saltmarsh in the area. Natural regrowth and colonisation is expected to occur from adjacent undisturbed areas.
Threatened wetland birds/shorebirds associated with Gippsland Lakes Ramsar site, in particular: Botaurus poiciloptilus Australasian Bittern Calidris ferruginea, Curlew Sandpiper Numenius madagascariensis, Eastern Curlew Thinornis cucullatus, Hooded Plover	Pipeline construction - Trenching, pipe installation and backfill is expected to take 2-3 days, followed immediately by reinstatement of the site. A small area of the wetland (est. 0.6 ha) will be temporarily disturbed for pipeline installation. Construction noise may temporarily disturb birds adjacent to the project area. Work will only be undertaken when the wetland is dry and therefore less utilised by shorebirds. No areas of habitat will be permanently destroyed or substantially modified.

2.4.2 Do you consider this impact to be significant?

No

2.5 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed migratory species, or their habitat?

Yes

2.5.1 Impact table

Species	Impact
Migratory wetland birds associated with Gippsland Lakes Ramsar site, in particular: Actitis hypoleucos, Common Sandpiper Calidris acuminata, Sharp-tailed Sandpiper Calidris canutus, Red Knot, Knot Calidris ferruginea, Curlew Sandpiper Calidris melanotos, Pectoral Sandpiper Calidris ruficollis, Red-necked Stint Gallinago hardwickii, Latham's Snipe Limosa lapponica, Bar-tailed Godwit Numenius madagascariensis, Eastern Curlew Pandion haliaetus, Osprey Tringa nebularia, Common Greenshank,	Pipeline construction - Trenching, pipe installation and backfill is expected to take 2-3 days, followed immediately by reinstatement of the site. A small area of the wetland (est. 0.6 ha) will be temporarily disturbed for pipeline installation. Construction noise may temporarily disturb birds outside the project area. Work will only be undertaken when the wetland is dry and therefore less utilised by shorebirds. No areas of habitat will be permanently destroyed or substantially modified.

2.5.2 Do you consider this impact to be significant?

No

2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?

Yes

2.6.1 Is the proposed action likely to have ANY direct or indirect impact on the Commonwealth marine environment?

No

2.6.2 Describe the nature and extent of the likely impact on the whole of the environment.

Activities in State waters include:

1. Offshore drilling of two wells by jack-up rig (est. 90 days) with a completion and testing program potentially including Vertical seismic profiling (VSP);
2. Pipelaying (est. 60 days) of a 3.8 km subsea pipeline and control umbilical connecting to shore. The offshore pipeline will most likely be trenched and/or rock will be used to secure the

pipeline.

3. Subsea Infrastructure Installation (est. 20 days)

Refer to attachment 2.14.b for a detailed assessment on the potential impacts on the marine environment.

2.6.3 Do you consider this impact to be significant?

No

2.7 Is the proposed action to be taken on or near Commonwealth land?

No

2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?

No

2.9 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?

No

2.10 Is the proposed action a nuclear action?

No

2.11 Is the proposed action to be taken by the Commonwealth agency?

No

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?

No

2.13 Is the proposed action likely to have ANY direct or indirect impact on any part of the environment in the Commonwealth marine area?

No

Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

3.1 Describe the flora and fauna relevant to the project area.

The relevant flora and fauna values identified through database searches, literature reviews and field surveys of the project area and vicinity are presented below:

Ecological communities

Three threatened ecological communities listed under the EPBC Act have been recorded within 5km of the project area :

- Gippsland Red Gum Grassy Woodland and Associated Native Grassland (Critically Endangered);
- Natural Damp Grassland of the Victorian Coastal Plains (Critically Endangered); and
- Subtropical and Temperate Coastal Saltmarsh (Vulnerable).

Of these, only Temperate Coastal Saltmarsh was recorded in the study area during field surveys in April-June 2019, Attachment 3.1.1.b.

Native flora

24 nationally significant flora species were recorded in the Victorian Biodiversity Atlas and Protected Matters Search Tool (PMST) as occurring within a 5 km radius of the project area. Table 3.1.3 (identifies listed native flora that are considered likely to occur within the project area.

Field surveys have confirmed the presence of eight vegetation classes in the Project area. These are summarised in **tables 3.1.1** and **3.1.2** (See attachment - Section 3 Tables; mapping in Attachment 3.1.1.b)

Native fauna

The onshore project area includes potentially suitable habitat for listed fauna species. Desktop

studies identified 72 state or nationally significant fauna species were recorded in the Victorian Biodiversity Atlas and PMST as occurring within a 5 km radius of the project. A total of 33 birds, five fish species, two frog species, four terrestrial mammals, three whale species, three marine turtle species and eleven flora species are predicted to occur in the project area. A further suite of migratory and listed marine birds and other marine fauna species, and five migratory terrestrial bird species, are also predicted to occur. In total, there are 63 listed threatened species, 45 listed migratory species, and 80 listed marine species predicted to occur within 5 km of the project area. These are described in further detail in the preliminary pipeline options analysis ecology study in Attachment 3.1.1.a.

To date, targeted fauna surveys have been completed, by Practical Ecology in accordance with relevant survey guidelines, for:

- Galaxiella pusilla Eastern Dwarf Galaxias
- Isoodon obesulus obesulus Southern Brown Bandicoot
- Lissolepis coventryi Swamp Skink
- Litoria aurea Green and Golden Bell Frog
- Litoria raniformis Growling Grass Frog
- Pseudemoia rawlinsoni Glossy Grass Skink
- Pseudomys novaehollandiae New Holland Mouse
- Pseudophryne semimarmorata Southern Toadlet
- Uperoleia martini Martin's Toadlet

These surveys have not identified any individuals within the project area (report preparation in progress). **Table 3.1.3** (See attachment - Section 3 Tables) identifies listed native terrestrial fauna that are considered likely to occur within the project area.

Marine Species

Fish - There are 34 fish species (28 of which are seahorses and pipefish) recorded in the EPBC Act PMST as potentially occurring in the activity area (G&G Investigations EP, April 2019). A search of the VBA database reveals no recordings of fish species in the EMBA.

Cetaceans - The PMST indicates that eight whale species and six dolphin species may reside within or migrate through the activity area. A description of species is listed in Table 5.8 of the related G&G Investigations EP. A search of the VBA database indicates that the southern right whale, humpback whale, killer whale, common dolphin and bottlenose dolphin have been recorded in the greater offshore marine environment.

Pinnipeds - There are two pinniped species recorded under the EPBC Act PMST as potentially occurring within the activity area [New Zealand fur-seal; Australian fur-seal]. These species are not listed as threatened under the FFG Act. The VBA database contains no records for pinnipeds in the EMBA.

Turtles - Three species of marine turtle are listed under the EPBC Act as potentially occurring in the activity area [loggerhead, green and leatherback]. No turtles are listed as threatened under the FFG Act 1988 (Vic), except for the leatherback turtle. The VBA database does not include any recordings of turtles within the greater offshore area however the eastern snake-necked turtle (*Chelodina longicollis*) is identified in association with freshwater habitat.

Avifauna - Seventy (70) bird species (seabirds and shorebirds) are listed under the EPBC Act as potentially occurring in the activity area and greater offshore area. The majority of these are listed as migratory and marine species. The VBA database records 11 seabirds and 31 shorebirds from the EMBA, with another 140 terrestrial birds also recorded.

3.2 Describe the hydrology relevant to the project area (including water flows).

Refer to **Figure 5** (see attachment) for a map of waterways and wetlands in the project area.

Coastal Lagoons

- Lake Reeve is an extensive intermittent saline wetland providing a highly significant habitat for large numbers of migratory waders. Lake Reeve forms part of the Ramsar listed Gippsland Lakes, a group of coastal lagoons in eastern Victoria, separated from the sea by sand dunes and fringed on the seaward side by the Ninety Mile Beach.

Waterways and wetlands

- Waterways and wetland habitats within the project extent include farm dams, waste water channels and treatment lagoons, drainage lines and low land depressions. There are no rivers or permanent watercourses intersected by the proposed pipeline route or either of the proposed gas plant locations.
- Waterways that depend on natural waters sources are predominantly ephemeral. The waste water treatment lagoons in Dutson Downs provide permanent, deep and well vegetated wetland habitat and are adjacent to, but not directly on, the proposed pipeline alignments.

3.3 Describe the soil and vegetation characteristics relevant to the project area.

Topography/Landform

The pipeline will cross beneath the shore at Ninety Mile Beach, a sandy, exposed ocean beach.

The onshore landforms, as classified under the Victorian Geomorphology Framework, include

coastal barrier dunes (Ninety Mile Beach), wetlands (primarily the coastal lagoons of the Gippsland Lakes) and plains with dunes (Eastern Plains).

Soil types

A desktop assessment of the Australian Soil Classifications within the study area is presented in **Figure 4** and **Table 3.3.1** (see attachments - 'Figure 4' and 'Section 3 Tables'). The majority of the project extent (~86%) is comprised of Podosols, agricultural use of these soils is limited because of extremely low fertility, poor water retention and the seasonal waterlogging in some forms.

Seasonally saturated hydrosols are associated with the margins of Lake Reeve and the Dutson Downs water treatment pondage. Further unclassified soils underlying Lake Reeve are also considered likely to be hydrosols. These soils may be potentially acid sulphate soils. Sodosols or dispersive soils make up a small portion (~5%) of the project extent. If sodic soils are intercepted by the pipeline alignment, well established management measures will be implemented through the project CEMP and rehabilitation management plans.

A summary of the soil types and their extent within the study area is presented in Table 3.3.1.

Vegetation cover

The majority of the vegetation cover within the project extent is used for agricultural activities including grazing and forestry plantation.

The coastal dunes between Ninety Mile Beach and Lake Reeve are dominated by coastal scrub and dense burghan (*Kunzea* sp.) regrowth following earlier land clearing.

Areas of Coastal Banksia Woodland occur on the secondary and tertiary dunes behind the beach and adjacent to Lake Reeve. Coastal Saltmarsh is also associated Lake Reeve. The plains behind the coast support remnant patches of woodland and lowland forest.

See section 3.1 for further detail regarding the native vegetation present.

3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area.

The Project extent includes a wide range of environments, including:

- Shallow marine environments within Bass Strait;
- Beach and coastal dunes of Ninety Mile Beach;

- Coastal lakes, including seasonal wetlands, which part of the Gippsland Lakes system;
- Native forest, woodland and grasslands; and
- Agricultural land used for cropping, grazing and forestry.

The most significant natural feature relevant to the Project area is Lake Reeve. Lake Reeve forms part of the Gippsland Lakes, a group of coastal lagoons in eastern Victoria, separated from the sea by sand dunes and fringed on the seaward side by the Ninety Mile Beach. Lake Reeve is part of the Gippsland Lakes Coastal Park and the Gippsland Lakes Ramsar site.

Lake Reeve contains extensive salt marshes and differs from the other lagoons in the Gippsland Lakes in its ecology and geomorphology. It is an extensive intermittent saline wetland. It is usually dry, but provides significant habitat for large numbers of migratory waders when wet.

3.5 Describe the status of native vegetation relevant to the project area.

The extent of vegetation classes proposed to be cleared, and their conservation status, is presented in Section 3.1.

Of the native vegetation to be cleared, 0.89 Ha is of a bioregionally endangered EVC and 6.9 Ha of very high conservation significance, as referenced in the Victorian Ministerial guidelines for assessment of environmental effects (DSE 2006).

Table 3.5.1. summarises the potential clearance of vegetation that is endangered or of Very High Conservation Significance (see attachment - Section 3 Tables).

As project planning progresses, further options for avoiding and minimising vegetation losses will be identified to ensure minimal impact to native vegetation.

The locations of ancillary works, such as installation of Cathodic Protection bed(s) and site access/ egress, have not yet been confirmed. Where practicable, these will be located to avoid areas of native vegetation. Where any additional small areas of native vegetation removal are required, these areas will be assessed in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017) and included in calculations for offset requirements.

3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The offshore project area comprises shallow sandy plains of the inner continental shelf (Eastern Bass Strait). The seafloor is very flat, ranging from 0 m at the shoreline to 20 m at its deepest

point over 4.8 km from the coast.

The wellhead location is approximately 3.8 km from shore.

Much of the seafloor is sandy sediment, with narrow, intermittent areas of low-profile calcarenite reef occurring through the nearshore area along the Ninety Mile Beach.

3.7 Describe the current condition of the environment relevant to the project area.

Coastal dune vegetation in the Project area has previously been cleared, either for prospective housing developments that never proceeded or for the construction of Gippsland Water's Outfall Pipeline. The regrowth is well established and dense, but distinctly different from surrounding undisturbed vegetation.

The Gippsland Lakes were originally connected to Bass Strait by an intermittent entrance, which closed over during times of rainfall, until high river flows caused the entrance barrier to be breached (Parks Victoria, 1998). The Gippsland Lakes were primarily a freshwater system but the construction of a permanent entrance in the 1880's ultimately changed the hydrological regime and led to a gradual salinisation of the system with consequences for the ecological functioning of the lakes (Parks Victoria 2002). This resulted in disruptions in the lakes natural fluctuations, and ultimately lowered water levels in the lakes and increased salinity. The increasingly saline environment caused extensive degradation of common reed beds along the banks of the lakes, allowing widespread shoreline erosion (Parks Victoria, 1998). The Seaspray Flood Mitigation Scheme came into effect in 1987, which has modified the natural behaviour of the sandbar at the mouth of Merriman Creek, and has largely contributed to the decline of natural water inflow from the creek to Lake Reeve. The lowered water levels in the lake are thought to have caused a reduction in the wetland habitat desirability (Parks Victoria, 1998).

The coastal areas have a large feral deer population and a high abundance of kangaroos. This has led to both a degradation of coastal vegetation, due to overgrazing, and illegal hunting. Access tracks and portions of Lake Reeve are often deeply rutted/eroded by off-road vehicle tracks and illegal waste dumping is occurring in some places.

The RAAF has previously used Lake Reeve for target practice, with craters still evident adjacent to the Project area.

Gippsland Water's Outfall Pipeline from Dutson Downs and an associated access road cross Lake Reeve directly adjacent to the project area. This pipeline was installed by open trenching.

Agricultural land is generally well managed, although the condition of some properties has declined due to extended periods of low rainfall. Weeds and pests are present as typical of agricultural lands.

Inland areas of native forest and woodland have been assessed as relatively undisturbed.

3.8 Describe any Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area.

Not applicable

3.9 Describe any Indigenous heritage values relevant to the project area.

Aboriginal and cultural heritage – 21 registered Aboriginal cultural heritage places were located within one kilometre of the activity area. These places are predominantly made up of shell middens in proximity to the coast and Lake Reeve immediately inland (See Attachment 3.90 – Cultural Heritage Desktop Assessment).

The remaining places comprise stone artefact scatters of relatively low density, in one instance associated with a midden. Ancestral remains were identified in association with a midden on the western shore of Lake Reeve.

The majority of places known in the region are concentrated towards the eastern end of the activity area with only very limited quantities having been identified in the hinterland. This may reflect patterns of occupation and land use or alternatively may in some part be an artefact of survey coverage to date.

Four registered places are situated within the activity area, again at its eastern extremity:

- 8321-0124 Dutson Downs 4
- 8321-0148 Delray Beach 6
- 8321-0149 Delray Beach 7
- 8321-0150 Delray Beach 8

These places comprise three shell middens situated between the coast and Lake Reeve and a single artefact scatter on the west side of Lake Reeve. The three shell middens were originally recorded as being a poor state of preservation and subsequent inspections by Aboriginal Victoria staff have failed to re-identify these places and as such it is unclear what the current state of preservation of these places is. Similarly, the artefact scatter, a single quartz artefact was not able to be re-located.

Gunaikurnai Land & Waters Aboriginal Corporation (GLaWAC) have been actively consulted in the planning of the Project. A Cultural Heritage Management Plan (CHMP), to be approved by GLaWAC, will be prepared to manage potential impacts to any cultural heritage sites within the project footprint.

3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area.

The project construction footprint is primarily proposed within freehold land (owned by private persons) with the remaining land tenure similar areas of public land and Crown land. A summary of the different land tenure intersected by the pipeline route is presented in **Table 3.10.1.** (see attachment - Section 3 Tables)

The pipeline survey extent has been selected to avoid any areas of Low-Density Residential zoning, favouring areas of Public Use zoned land where possible.

3.11 Describe any existing or any proposed uses relevant to the project area.

There are four land use types across the project extent.

- Privately owned land including farming (forestry, cropping, grazing and/or market garden) and industry (petroleum);
- Gippsland Water owned land (waste management and farming);
- Other Shire, State or Federally owned land (conservation reserves, road reserves);
- An undeveloped residential subdivision that is currently subject to a review by the State Ombudsman.

Section 4 - Measures to avoid or reduce impacts

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.

Lake Reeve crossing

In accordance with the 2003/1031 EPBC Referral, GBE proposes to conduct activities across Lake Reeve only when Lake Reeve is not inundated. Lake Reeve is expected to be dry over summer, with the water table just below the surface.

Construction will be limited to between the months of November and March (inclusive) and when the bed along the route is largely dry.

Construction will only proceed when lake is visibly dry and no substantial rain has occurred in the previous 4-6 weeks.

The construction method is as follows:

- The pipeline crossing will be 250 metres long [pipe of DN700, HW (15.88mm), CWC (40mm)].
- The water table is expected to be at 0.5 to 1 metres below surface (average).
- Prefabricate and preliminary hydrotest 300m long (approx) concrete coated pipe string for the lake crossing in the pipeline easement on the North side of the lake.
- Excavate across the Lake using low ground pressure excavators.
- Stockpile spoil on the East side of route across the lake (and lime treat if acid sulfate).
- Set up pipeline roller assemblies on the North side of the lake and lift the pipeline string onto the rollers.
- Attach buoyancy tubes to the pipeline string and pull into the flooded trench across the lake.
- Cut loose and recover buoyancy tubes and then backfill the trench.

- If the lake water table is too low to float the pipe across, the lake surface will be harder and the trench required will be narrower.

Contingency would be:

- If the water table is low and the lake surface very firm, conventional pipeline construction on a temporary road across the Lake made from excavated spoil.
- Roller assemblies could also be used to assist pull of strings across the lake.
- If the lake contains surface water, trenchless installation (HDD) may be adopted. Otherwise construction will be delayed until the bed is dry.
- Following construction across the lake, the pipeline will tied-in to the conventionally laid sections on the north and south sides of the lake crossing. Above ground tie-ins may be required if bell hole construction intercepts water table.
- The crossing section will be subject to hydrostatic testing with the mainline section.

Onshore pipeline route selection - Native vegetation

Multiple options for the pipeline route have been considered in the development of the project.

The preferred pipeline route has been selected to minimise the need for clearance of native vegetation. Where practicable the pipeline has been located in cleared agricultural land. Where native vegetation cannot be avoided the pipeline has been located at the edge of the patch, or adjacent to existing cleared corridors to minimise habitat fragmentation.

Selection of an alternative route has avoided impact to ~4 ha of high condition Lowland Forest (EVC0016).

Onshore pipeline route selection - Land use impacts

The Project has commenced ongoing consultation with affected landholders to identify potential land use impacts and avoid these during route selection.

To date the route has been realigned to:

avoid areas of known or potential soil contamination
avoid existing buried assets
avoid a pivot irrigation system
reduce the impact of easement on plantations

Further surveys

Further targeted field surveys of the Project area for nationally threatened species and ecological communities will be undertaken in accordance with EPBC guidelines. Where any further threatened species and ecological communities are identified, an environmental management subplan will be developed for that species including mitigation measures to avoid significant impacts.

4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.

Wetlands of International Importance

- Temporary disturbance only of the Lake Reeve wetland within the Project's defined construction footprint.
- No permanent destruction or substantial modification of any area of the Lake Reeve wetland.
- No measurable impact on the hydrological regime of the Lake Reeve wetland.
- No substantial impact on the habitat or lifecycle of native species in the Lake Reeve wetland.
- No measurable change to the water quality of the Lake Reeve wetland.
- No introduction or spread of an invasive species that is harmful to the character of the Ramsar site.

Listed threatened species and communities

- No mortality of a listed threatened species as a result of the project.
- No loss of threatened species habitat or ecological communities outside of the Project's defined construction footprint.
- All necessary clearance of native vegetation, including threatened species habitat, is to be offset in accordance with the Victorian Guidelines for the removal, destruction or lopping of native vegetation.
- No mobilisation of fertilisers, herbicides or other chemicals or pollutants into an ecological community which kill or inhibit the growth of species in the ecological community.
- No introduction or spread of a disease or invasive species that is harmful to threatened species or communities.

Listed migratory species

- No mortality of a listed migratory species as a result of the project.
- No change in utilisation of the Lake Reeve Ramsar site by migratory waterbirds as a result of the project.

- No introduction or spread of an invasive species that is harmful to migratory waterbirds.

Section 5 – Conclusion on the likelihood of significant impacts

A checkbox tick identifies each of the matters of National Environmental Significance you identified in section 2 of this application as likely to be a significant impact.

Review the matters you have identified below. If a matter ticked below has been incorrectly identified you will need to return to Section 2 to edit.

5.1.1 World Heritage Properties

No

5.1.2 National Heritage Places

No

5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)

No

5.1.4 Listed threatened species or any threatened ecological community

No

5.1.5 Listed migratory species

No

5.1.6 Commonwealth marine environment

No

5.1.7 Protection of the environment from actions involving Commonwealth land

No

5.1.8 Great Barrier Reef Marine Park

No

5.1.9 A water resource, in relation to coal/gas/mining

No

5.1.10 Protection of the environment from nuclear actions

No

5.1.11 Protection of the environment from Commonwealth actions

No

5.1.12 Commonwealth Heritage places overseas

No

5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.

The following matters of national environmental significance do not occur in the vicinity of, or are not applicable to, the Project:

- world heritage properties
- national heritage places
- 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.

The following matters of national environmental significance do occur in the vicinity of the Project, but significant impacts are not likely to occur:

Wetlands of international importance (Ramsar)

The Project is not expected to have a significant impact on the ecological character of the Lake Reeve Ramsar wetland.

- A small area of the wetland (est. 0.6 ha) will be temporarily disturbed for pipeline installation. Work will only be undertaken when the wetland is dry. Trenching, pipe installation and backfill is expected to take 2-3 days, followed immediately by reinstatement of the site. No areas of the wetland will be permanently destroyed or substantially modified.
- Pipeline construction is not expected to have any measurable impact on the hydrological regime of the wetland.

- Pipeline construction when the wetland is dry, followed immediately by reinstatement of the site, will avoid or minimise impacts to wetland dependant species and the Project is not expected to substantially impact the habitat or lifecycle of native species in the RAMSAR site.
- Pipeline construction when the wetland is dry will avoid measurable change in the water quality of the wetland.
- With industry standard biosecurity and vehicle hygiene procedures in place, the project is unlikely to introduce or spread an invasive species that is harmful to the ecological character of the wetland.

Nationally threatened species and ecological communities

The Project is not expected to have a significant impact on nationally threatened species and ecological communities.

- Targeted field surveys for nationally threatened species and ecological communities in the project footprint have to date only identified Temperate Coastal Saltmarsh as present.
- Impacts to Temperate Coastal Saltmarsh will be small (est. 0.6 ha) and temporary, with reinstatement immediately following construction across Lake Reeve. There may be a localised, medium term change in the species composition and extent of the occurrence of this ecological community, with natural regrowth and colonisation expected to occur from adjacent undisturbed areas.
- This impact is unlikely to be a substantial reduction in the viability, quality or integrity of the ecological community within Lake Reeve, affecting less than 1% of the saltmarsh in the area.
- Further targeted field surveys will be undertaken in accordance with EPBC guidelines. Where any further threatened species and ecological communities are identified, an environmental management subplan will be developed for that species including mitigation measures to avoid significant impacts.
- With industry standard biosecurity and vehicle hygiene procedures in place, the project is unlikely to introduce or spread a disease or an invasive species that is harmful to a threatened species or ecological community.
- The Project construction and operation is unlikely to cause the regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into a threatened ecological community.

Migratory species

The Project is not expected to have a significant impact on listed migratory species.

- Offshore Project activities in the marine environment will be managed to minimise impacts to migratory marine species (cetaceans), including EPBC Act Policy Statement 2.1 (Part A Standard Management Procedures, Section A.3) during VSP operations.
- The migratory species most relevant to the project are migratory waterbirds associated with the Lake Reeve Ramsar site. The potential impacts to this site are summarised above.
- Although a small area of the wetland (est. 0.6 ha) will be disturbed for pipeline installation, the area will be reinstated immediately following construction and impacts to habitat for migratory waterbirds are expected to be localised and temporary.
- Construction of the pipeline will not alter fire regimes, nutrient cycles or hydrological cycles within migratory waterbirds' habitat.
- Construction of the pipeline across Lake Reeve will occur when the wetland is dry and therefore not/less utilised by waterbirds. Consequently, the Project is unlikely to seriously disrupt the lifecycle of any migratory waterbirds.
- With industry standard biosecurity and vehicle hygiene procedures in place, the project is unlikely to introduce or spread an invasive species that is harmful to a migratory species.

Commonwealth marine areas

Although the lease VIC/RL1(V), covering the Golden Beach gas field, is located adjacent to Commonwealth Waters, all proposed activities will be undertaken within Victorian waters, and will not impact on Commonwealth waters.

Conclusion

For the reasons summarised above, the Project is not likely to have a significant impact on any matter protected under the EPBC Act and is therefore not a controlled action.

Section 6 – Environmental record of the person proposing to take the action

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Please explain in further detail.

Yes, GB Energy is committed to responsible environmental management and complies with all relevant environmental regulatory requirements.

6.2 Provide details of 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 against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.

Not applicable

6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?

Yes

6.3.1 If the person taking the action is a corporation, please provide details of the corporation's environmental policy and planning framework.

GB Energy has a organisational Health, Safety and Environmental Policy which includes committments to the environment:

Our aim is to avoid harm to people, society and the environment within which we operate.

At GB Energy we are committed to:

- Providing a safe and healthy workplace, free of occupational injuries and illness
- Creating a culture that puts HSE first through leadership and accountability
- Conducting our business in a way that protects, or enhances, community, safety, local infrastructure and the natural environment
- Utilising trained, skilled and knowledgeable people who are provided with adequate resources to achieve our HSE objectives
- Measuring and continually striving to improve our HSE performance
- As a minimum requirement, complying with all laws and regulations for the protection of our people, society and the environment.

6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

No

Section 7 – Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
Practical Ecology (2019) Stage 1: Pipeline Options Analysis: Golden Beach Gas Project	reliable - prepared for the project by a reputable consultant with appropriate expertise - contains further references to source information	Primarily desktop based. Initial vegetation class mapping based on DEPI/DELWP modelling (low reliability). Since updated and remapped based on field survey data. Further targetted species surveys have been recently completed, with report preparation in progress and more are planned in the Spring 2019.
Brett Lane and Associates Pty Ltd (2006a) Golden Beach Gas Project - Pipeline and Gas Plant: Flora and Fauna Assessment. North Carlton.	moderately reliable - prepared by a reputable consultant with appropriate expertise, but more than 10 years old for an superceded pipeline route	Information may be outdated or not directly applicable for the current proposal
Brett Lane and Associates Pty Ltd (2006b) Golden Beach Gas Project: Wellsite Flora and Fauna Assessment. North Carlton	moderately reliable - prepared by a reputable consultant with appropriate expertise, but more than 10 years old for an superceded site	Information may be outdated or not directly applicable for the current proposal
McGukin J (2019) GB Energy Pipeline Targeted dwarf galaxias investigation. Streamline Reasearch Pty Ltd.	reliable - prepared for the project by a reputable consultant with appropriate expertise	nil
Andrew Long and Associates (2019) Golden Beach Gas Project, Pipeline Alignment Heritage Assessment.	reliable - prepared for the project by a reputable consultant with appropriate expertise	Desktop based. Further field work to be undertaken (Standard and Complex assessments) as part of preparation of a CHMP.

Section 8 – Proposed alternatives

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

8.0 Provide a description of the feasible alternative?

Not applicable

8.1 Select the relevant alternatives related to your proposed action.

8.27 Do you have another alternative?

Section 9 – Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

9.2 Organisation

9.2.1 Job Title

Chief Executive Officer

9.2.2 First Name

Tim

9.2.3 Last Name

Baldwin

9.2.4 E-mail

tb@gbenergy.com.au

9.2.5 Postal Address

110 Church Street
Hawthorn VIC 3122
Australia

9.2.6 ABN/ACN

ABN

63615553010 - GB ENERGY (VIC) PTY LIMITED

9.2.7 Organisation Telephone

1800 423 637

9.2.8 Organisation E-mail

info@gbenergy.com.au

9.2.9 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

Small business

9.2.9.1 You must provide the Date/Income Year that you became a small business entity:

Wed, 10/26/2016

Small Business Declaration

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption.

Signature:  Date: 14 AUG 2019

9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations

No

9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made

Person proposing the action - Declaration

I, TIMOTHY BALDWIN, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature:  Date: 14 AUG 2019

I, TIMOTHY BALDWIN, the person proposing the action, consent to the designation of CEO as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature:  Date: 14 AUG 2019

9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Organisation

9.5 Organisation

9.5.1 Job Title

Chief Executive Officer

9.5.2 First Name

Tim

9.5.3 Last Name

Baldwin

9.5.4 E-mail

tb@gbenergy.com.au

9.5.5 Postal Address

110 Church Street
Hawthorn VIC 3122
Australia

9.5.6 ABN/ACN

ABN

63615553010 - GB ENERGY (VIC) PTY LIMITED

9.5.7 Organisation Telephone

1800 423 637

9.5.8 Organisation E-mail

info@gbenergy.com.au

Proposed designated proponent - Declaration

I, Timothy Baldwin, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature:  Date: 14 Aug 2019

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

Regulatory and HSE Manager

9.8.2 First Name

Sean

9.8.3 Last Name

Dunn

9.8.4 E-mail

sd@gbenergy.com.au

9.8.5 Postal Address

110 Church Street
Hawthorn VIC 3122
Australia

9.8.6 ABN/ACN

ABN

63615553010 - GB ENERGY (VIC) PTY LIMITED

9.8.7 Organisation Telephone


0419560597

9.8.8 Organisation E-mail

sd@gbenergy.com.au

Referring Party - Declaration

I, Sean Dunn, I declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.

Signature:  Date: 14th August 2019

Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

1. 20190812_Shapefiles.zip
2. Attachment 1.7.2 - Land Tenure.pdf
3. Attachment 1.13.1.a-DELWP and Gov Agency Consultation.pdf
4. Attachment 1.13.1.b-Project Stakeholder Consultation.pdf
5. Attachment 1.13.1.c-Summary of Consultation with GLaWAC.pdf
6. Attachment 1.14.1 - Santos_EPBC_Referral_2003.pdf
7. Attachment 2.14.a - Onshore Environmental Risk Assessment.pdf
8. Attachment 2.14.b - Offshore Marine Environmental Risk Assessment.pdf
9. Attachment 2.14.c - Environmental Risk Assessment Matrices.pdf
10. Attachment 2.14.d - Likelihood of Occurrence.pdf
11. Attachment 3.1.1.a - Ecology-Pipeline_Analysis_June_19.pdf
12. Attachment 3.1.1.b - Native Vegetation Maps.pdf
13. Attachment 3.9 -CH desktop and predictive modelB.pdf
14. Figure 1 - Location and Extent.jpg
15. Figure 4 - Soils.jpg
16. Figure 5 - Wetlands and waterways.jpg
17. GBE005_GBE_HSE_Policy_2.0 (004) (1).pdf
18. Section 3 Tables.pdf