EPBC Act referral

Australian Government
Department of Agriculture, Water and the Environment

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Title of proposal	2020/8706 - Bowen Renewable Energy Hub Pumped Hydro-electric Scheme

Section 1

Summary of your proposed action

1.1 Project industry type Energy Generation and Supply (renewable)

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

The Bowen Renewable Energy Hub (BREH) Pumped Hydro-electric Scheme (PHES) (the project) comprises the proposed construction and operation of a PHES along the Broken River, Central Queensland. This PHES will be connected into the National Electricity Grid (NEG) and be a participant in the National Electricity Market (NEM), providing on-demand variable, firm power.

Key project components include:

— 1.5 GW+/7GWh+ of pumped hydro-electric storage and power generation infrastructure including power stations (surface and underground), dams and reservoirs, waterways and power transmission infrastructure.

— Ancillary works and infrastructure to support the development of the project including road and access development and upgrades, site establishment areas, laydowns, site amenities and accommodation, services and utilities (including electricity, telecommunications).

Four locations are currently identified for a PHES. Each option comprises of an upper and lower storage reservoir and power generation infrastructure including power stations (surface and underground), dams and reservoirs, waterways and power transmission infrastructure.

Connection to the NEM is most likely achieved via a ~20 km, 275kV line to a switching station at Turrawula or Blenheim to the west, joining one of the Nebo to Strathmore circuits.

Further feasibility studies and options analysis (including environmental constraints and opportunities) is currently underway to determine a preferred option. The action area within which PHES options, and supporting grid connections are located is shown in Attachment A, Figure 1.

The project will utilise the water storage infrastructure related to the separate Urannah Dam and Pipelines Project, which includes the construction and operation of a dam at Urannah, on the Broken River, Central Queensland, and water distribution pipelines to Proserpine in the north and Moranbah via Eungella in the south. The Urannah Dam and Pipelines Project is subject to separate assessment under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). However the projects, including the BREH PHES, the Urannah Dam and Pipelines Project and an additional Collinsville Irrigation Scheme, will progress in parallel as these projects have been collectively declared a ‘coordinated project’ under the State Development and Public Works Organisation Act 1971 (SDPWO Act) (Qld).

The locality of the project in relation to related infrastructure is shown in Attachment A, Figure 2.

1.3 What is the extent and location of your proposed action?

See Appendix B

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 project is situated within the Eungella Hinterland, about 40 kilometres north-east of Glenden and 70 kilometres south-west of Collinsville. The PHES options are situated at a number of locations in this area, including near the confluence of Broken River and Massey Creek and further to south near the confluences of Broken River and Furious Creek, and Broken River and Bee Creek, toward Eungella Dam. The project is within the Bowen River sub-catchment of the Burdekin River Basin, with Clarke Range situated to the east and Broken River Range situated to the west. The project is located within the Mackay Regional Council local government area. Further information on the location of the project is provided in the mapping in Attachment A. The land parcel details of the location of the project are discussed in section 1.7.

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

The indicative footprints for the upper and lower storage reservoirs for each PHES option are provided below. These indicative footprints do not include ancillary infrastructure and are subject to change as a result of changes to the project design, avoidance of sensitive environmental areas, landholder and stakeholder considerations, and so on, and will confirmed as part of the environmental impact assessment. The total disturbance footprint would depend on which PHES option, or combination of options, is selected.

— Option A
Upper storage — 159.66 ha
Lower storage — 88.58 ha

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— Option B —
Upper storage — 77.80 ha
Lower storage — 63.00 ha

— Option C —
Upper storage — 98.44 ha
Lower storage — 35.49 ha

— Option D —
Upper storage — 103.99 ha
Lower storage — 189.25 ha

1.7 Proposed action location

Lot - The PHES options intersect land parcels as shown in Attachment B.

1.8 Primary jurisdiction Queensland

1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?

☑ Yes ☐ No

1.9.1 Provide detail

The project is being investigated as part of a broader pre-feasibility study for the proposed BREH, comprising 1.5 GW+/7GWhr+ PHES, 1300MW of solar PV, 500MW of wind, and a 200MW hydrogen electrolyser. Blue Hydro Project Pty Ltd has successfully secured $2 million from the Australian Government to complete its pre-feasibility study.

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

☑ Yes ☐ No

1.10.1 Is there a local government area and council contact for the proposal?

☐ Yes ☑ No

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

Start Date 01/04/2022
End Date 01/04/2024

1.12 Provide details of the context, planning framework and state and/or local Government requirements

The BREH PHES together with the proposed Urannah Dam and Pipelines Project and Collinsville Irrigation Scheme Project was declared a 'coordinated project' under section 26 of the State Development and Public Works Organisation Act 1971 (Qld) (SDPWO Act) on 7th May 2020. An Initial Advice Statement (IAS) was prepared to provide information, as required under section 27AB of the SDPWO Act, to inform the Coordinator-General in the decision making process on the basis that the project is characterised by:

— Complex approval requirements, including Commonwealth government, state government and local government area involvement

— Strategic significance to the region and state, including water security and related infrastructure, economic and social benefits, and capital investment

— Potential significant environmental effects on matters of national environmental significance, including the Great Barrier Reef World Heritage Area, threatened species and threatened ecological communities and migratory species

— Potential significant environmental effects on matters of state environmental significance, including regulated vegetation, connectivity, wetlands and watercourses, protected wildlife habitat.

Assessment through an Environmental Impact Statement (EIS) is required to quantify the level of impact on relevant environmental values, propose avoidance and mitigation measures for the project, and where avoidance is not possible propose appropriate offsets.

There are a number of planning instruments and government policies applicable to the collective project, including:

— Queensland's State Planning Policy
— North Queensland Regional Plan
— Mackay, Isaac, Whitsunday Regional Plan
— Burdekin Region Water Quality Improvement Plan 2016
— Local government area planning schemes
— Relevant state codes under the State Development Assessment Provisions:
– State Code 10: Taking or Interfering with Water
– State Code 15: Removal of Quarry Material from a Watercourse or Lake
– State Code 16: Native Vegetation Clearing
– State Code 18: Constructing or Raising Waterway Barrier Works in Fish Habitats
– State Code 22: Environmentally Relevant Activities.
— Northern Australia Infrastructure Facility
— Our North, Our Future: White Paper
— Australian Infrastructure Plan
— State Infrastructure Plan
— Queensland's Agricultural Strategy
— Queensland Climate Transition Strategy
— Australian Government Renewable Energy Target
— Powering Queensland Plan.

The project is generally consistent with the outcomes, strategies and policies of the above mentioned planning instruments. Further assessment will be undertaken as part of the EIS process.

The potential approvals under state and local government legislation are detailed in Attachment C Approval requirements and include:

— Application for 'coordinated project' determination under the State Development and Public Works Organisation Act 1971
— Operational works for construction of a waterway barrier work
— Operational works for taking or interfering with water in a watercourse or a dam constructed on a watercourse
— Operational works for removing quarry material from a watercourse
— Operational works for clearing native vegetation
— Material change of use for an environmentally relevant activity
— Material change of use of premises (change in land use) and Operational Work for reconfiguration of a lot (inundation area and irrigation area) assessable under a local government planning scheme.

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

Community and stakeholder consultation has been targeted and conducted at a regional level as part of feasibility studies for the project. The focus of stakeholder engagement, to date, has been on water infrastructure and potential customers of a large-scale water solution.

Consultation with the following stakeholders has been undertaken as part of the draft Preliminary Business Case (PBC):

• Coal miners, including:
- Rio Tinto
- Glencore
- QCoal
- New Hope
- BMA
- Peabody
- Anglo American
- Stanmore
- Fitzroy Resources
• Indigenous leaseholders, Urannah Property Association
• Agriculturists and irrigators
• Large scale contractors
• Financiers
• Sunwater
• Government departments in Brisbane and other regions.

Consultation was aligned with the Queensland Government's Project Assessment Framework guidelines and focused on water infrastructure and potential customers of a large-scale water solution. There was strong support for improving water security through long-term and large-scale solutions to support diversifying the economy.

Since the engagement during the PBC, additional consultation has occurred with:

• Coal miners
• Landholders, including with regard to access and acquisition
• Traditional owners, including Native Title claimants (specifically the Widi People of the Nebo Estate, Birriah People

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and Barada Barna People)
- Sunwater and Powerlink
- Bowen Chamber of Commerce
- North Queensland Gas Pipeline (AGL)
- Indigenous Land Corp
- Applicable local, state and federal government departments, government owned corporations and agencies.

Two virtual public consultation sessions have taken place and four more are scheduled over the coming months. The sessions have been widely advertised in the community and sixty local residents have participated in the two sessions. As COVID-19 restrictions ease, it is expected that there will be a hybrid of virtual and in-person public consultation sessions.

Targeted community and stakeholder consultation is ongoing and will be undertaken as part of the EIS, incorporating engagement as part of the Social Impact Assessment and development of cultural heritage management plans and/or agreements, in accordance with the requirements under State and Commonwealth legislation.

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

The Queensland Coordinator-General has declared the development of a PHES and associated and ancillary infrastructure to be part of a 'coordinated project' requiring assessment by EIS.

On the basis of preliminary desktop reviews and assessments undertaken it is predicted that the project has potential to impact on MNES under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and will require approval from the Commonwealth Minister for Environment.

As a controlled action it is expected that assessment by EIS is likely to be required. Assessment of the project under the bilateral agreement with the State of Queensland is considered to provide a streamlined approach and alignment of Commonwealth and State interests for MNES and matters of State environmental significance, respectively.

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

☐ Yes ☑ No

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

☑ Yes ☐ No

1.16.1 Identify the nature/scope and location of the related action (Including under the relevant legislation)

The PHES is related to the Collinsville Irrigation Scheme and the Urannah Dam and Pipelines Project being proposed by Collinsville Irrigation Scheme Pty Ltd and Urannah Water Scheme Pty Ltd, respectively. Separate EPBC Act Referrals are being prepared for the Urannah Dam and Pipelines Project and the Collinsville Irrigation Scheme Project.

The co-location of the PHES with Urannah Dam provides a unique opportunity to support a large scale, multifaceted water supply and renewable energy project that combined delivers water security for North Queensland and reliable supply during the transition of Queensland's economy from fossil fueled powered generation to renewables. The Queensland Coordinator-General has declared the proposed actions collectively as a 'coordinated project' under the SDPWO Act and for which an EIS will be prepared.

The proposed project locations are shown in Attachment A, Figure 2.

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Section 2

Matters of national environmental significance

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

☐ Yes ☑ No

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

☐ Yes ☑ No

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

☐ Yes ☑ 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 ☐ No

Species or threatened ecological community

Geophaps scripta scripta (squatter pigeon(southern))

Impact

The species occurs in open-forests to sparse, open-woodlands and scrub that are dominated by Eucalyptus, Corymbia and Acacia or Callitris species, remnant and regrowth within 3 km of water (DAWE 2020). The species has been historically recorded within the project area.

The composition and condition of squatter pigeon habitat will be investigated as part of the EIS and the extent to which it is likely to be impacted determined based on the ability to avoid impacts through project design and/or minimise through the adoption of appropriate management actions. A significance in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance will be undertaken as part of the EIS.

Notwithstanding assessment to be undertaken as part of an EIS, potential impacts include:

— Vegetation clearing (loss of habitat) and associated habitat fragmentation
— Injury and mortality as a result of increased traffic and people movements within habitat areas
— Dispersion of weeds and invasive species leading to changes in abundance and availability of foraging habitat and restriction of ground-level movement
— Increased predation through increased activity from pest animals such as dogs, foxes, cats and other predatory species due to artificial water sources and increased waste material presence
— Air, noise, vibration and dust pollution resulted in disturbance and degradation of habitat.

Species or threatened ecological community

Hirundapus caudacutus (white-throated needletail)

Impact

In the coastal regions of Queensland, the species is almost exclusively aerial however they are most often seen above woodlands, open forests and rainforests. Preferred species habitat, such as open woodlands and cleared areas, is present within the project area. Species is highly nomadic and occurs over a wide range of environments. This species is likely to forage within the project area.

A significance in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance will be undertaken as part of the EIS.

Notwithstanding assessment to be undertaken as part of an EIS, potential impacts include:

— Vegetation clearing (loss of habitat and associated habitat fragmentation
— Injury and mortality as a result of increased traffic and people movements within habitat areas
— Dispersion of weeds and invasive species leading to changes in abundance and availability of foraging habitat and restriction of ground-level movement
— Increased predation during through increased activity from pest animals such as dogs, foxes, cats and other predatory species due to artificial water sources and increased waste material presence
— Air, noise, vibration and dust pollution resulting disturbance and degradation of habitat.

Species or threatened ecological community

Dasyurus hallucatus (northern quoll)

Impact

The species occurs in a range of habitats, including open dry sclerophyll forest and woodland, riparian woodland, low dry vine thicket, the margins of notophyll vineforest, mangroves, sugarcane farms and in urban areas. They are most abundant in hilly or rocky areas close to permanent water. The species has been historically recorded within the project area. The composition and condition of the habitat will be investigated as part of the EIS and the extent to which it is likely to be impacted determined based on the ability to avoid impacts through project design and/or minimise through the adoption of appropriate management actions. A significance of impact assessment in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance will be undertaken as part of the EIS.

The potential project impact on this species includes:
— Vegetation clearing (loss of habitat) and associated habitat fragmentation
— Injury and mortality as a result of clearing, entanglement on fences and increased traffic and people movements within habitat areas
— Increased predation through increased activity from pest animals such as dogs, foxes, cats and other predatory species due to artificial water sources and increased waste presence.

Species or threatened ecological community

Phascolarctos cinereus (koala)

Impact

Within the region, koalas occur in sub-humid Eucalyptus dominated forests and woodlands in riparian and non-riparian environments, and some Acacia dominated forests and woodlands in non-riparian environments (DAWE 2020). The koala is historically recorded for the project area and habitat exists within the project extents.

The composition and condition of the habitat will be investigated as part of the EIS and the extent to which it is likely to be impacted determined based on the ability to avoid impacts through project design and/or minimise through the adoption of appropriate management actions. A significance of impact assessment in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance will be undertaken as part of the EIS.

The potential project impact on this species includes:
— Vegetation clearing (loss of habitat) and associated habitat fragmentation
— Injury and mortality as a result of clearing, entanglement on fences and increased traffic and people movements within habitat areas
— Increased predation through increased activity from pest animals such as dogs, foxes, cats and other predatory species due to artificial water sources and increased waste presence.

Species or threatened ecological community

Petauroides Volans minor (northern greater glider)

Impact

This species is largely restricted to eucalypt forests and woodlands and is typically found in taller, montane, moist eucalypt forests with relatively old trees and abundant hollows (DEE, 2016, DAWE 2020). Modelling suggests that they require native forest patches of at least 160 km2 to maintain viable populations (Eyre 2002).

Essential habitat for the species is mapped within the project area and the species has historically been recorded within the project area.

The composition and condition of the habitat will be investigated as part of the EIS and the extent to which it is likely to be impacted determined based on the ability to avoid impacts through project design and/or minimise through the adoption of appropriate management actions. A significance assessment in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance will be undertaken as part of the EIS.

Notwithstanding assessment to be undertaken as part of an EIS, potential impacts include:

— Vegetation clearing (loss of habitat) and associated habitat fragmentation
— Injury and mortality as a result of clearing, entanglement on fences and increased traffic and people movements within habitat areas
— Dispersion or control of weeds and invasive species leading to changes in abundance and availability of foraging habitat
— Increased predation through increased activity from pest animals such as dogs, foxes, cats and other predatory species due to artificial water sources and increased waste presence
— Air, noise, vibration and dust pollution resulting in disturbance and degradation of habitat.

Species or threatened ecological community

Pteropus poliocephalus (grey-headed flying-fox)

Impact

The species roosts in rainforest patches, stands of Melaleuca, mangroves and riparian vegetation and forages widely in rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands (DAWE 2020). The closest recorded flying-fox camps are located at Eungella State School (304), Finch Hatton Gorge (343) and Collinsville (316). These would contain a mix of flying-fox species. However, as none are considered nationally important roosts, they are likely to be dominated by common species. The grey-headed flying fox has been historically recorded within the desktop search extent. All nearby records are known from the Clarke Range. However suitable foraging habitat is present in the project area.

The composition and condition of the habitat will be investigated as part of the EIS and the extent to which it is likely to be impacted determined based on the ability to avoid impacts through project design and/or minimise through the adoption of appropriate management actions. A significance assessment in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance will be undertaken as part of the EIS.

Notwithstanding assessment to be undertaken as part of an EIS, potential impacts include:
— Vegetation clearing (loss of habitat) and associated habitat fragmentation
— Injury and mortality as a result of clearing, entanglement on fences and increased traffic and people movements within habitat areas
— Dispersion or control of weeds and invasive species leading to changes in abundance and availability of foraging habitat
— Increased predation through increased activity from pest animals such as dogs, foxes, cats and other predatory species due to artificial water sources and increased waste presence
— Air, noise, vibration and dust pollution resulting in disturbance and degradation of habitat.

Species or threatened ecological community

Eucalyptus raveretiana (black ironbox)

Impact

This species has a wide distribution in coastal and sub-coastal areas of Queensland, from south of Townsville to Nebo. Grows along watercourses and occasionally river flats or open woodland. It does not occur in pure stands, but is co-dominant with species such as Melaleuca leucadendra, M. fluviatilis, Eucalyptus tereticornis, Corymbia tessellaris (DAWE 2020).

Habitat for the species exists within the project area and individuals have been recorded for area along the Broken River downstream of the proposed PHES locations. The composition and condition of the habitat will be investigated as part of the EIS and the extent to which it is likely to be impacted determined based on the ability to avoid impacts through project design and/or minimise through the adoption of appropriate management actions. A significance assessment in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance will be undertaken as part of the EIS.

Notwithstanding assessment to be undertaken as part of an EIS, potential impacts include:
— Vegetation clearing (loss of habitat) and associated habitat fragmentation
— Dispersion of weeds and invasive species
— Land management practices increasing stream bank erosion.

Species or threatened ecological community

Ozothamnus eriocephalus

Impact

The species is a shrub which grows to approximately 1 m high. Its range is restricted to east-central Queensland between Bowen and Mackay. The species occurs in a range of habitat types including the margins of disturbed notophyll vine forest, margins of gallery forest, microphyll vine forest. It is also known from the edge of creek banks and in crevices on steep granite slopes, often in sunny situations. It is known from moderate to high elevations ranging from 380–950 m. It occurs on skeletal,

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sandy or gravelly soils or occasionally deeper red-brown clay loams derived from granites and sandstones (DAWE 2020). Habitat for the species exists within the project area with the nearest species record located 11 km to the east. The composition and condition of the habitat will be investigated as part of the EIS and the extent to which it is likely to be impacted determined based on the ability to avoid impacts through project design and/or minimise through the adoption of appropriate management actions. A significance assessment in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance will be undertaken as part of the EIS.

Notwithstanding assessment to be undertaken as part of an EIS, potential impacts include:

— Vegetation clearing (loss of habitat) and associated habitat fragmentation
— Dispersion of weeds and invasive species
— Land management practices increasing stream bank erosion.

2.4.2 Do you consider this impact to be significant?

☑ Yes ☐ 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 ☐ No

Migratory species

Monarcha trivirgatus (spectacled monarch)

Impact

In the coastal north-eastern and eastern Australia, the species is found in broadleaf thicket/shrub land, subtropical rainforests, tropical rainforests and wet sclerophyll forests. The species has been previously recorded within the region and potential habitat occurs in riparian fringes throughout the project area. The species has been historically recorded in high numbers within Eungella National Park.

A significance in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance will be undertaken as part of the EIS.

Notwithstanding assessment to be undertaken as part of an EIS, potential impacts include:

— Vegetation clearing (loss of habitat and associated habitat fragmentation
— Injury and mortality as a result of increased traffic and people movements within habitat areas
— Dispersion of weeds and invasive species leading to changes in abundance and availability of foraging habitat and restriction of ground-level movement
— Increased predation during through increased activity from pest animals such as dogs, foxes, cats and other predatory species due to artificial water sources and increased waste material presence
— Air, noise, vibration and dust pollution resulting disturbance and degradation of habitat.

2.5.2 Do you consider this impact to be significant?

☐ Yes ☑ No

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

☐ Yes ☑ No

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

☐ Yes ☑ No

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

☐ Yes ☑ No

2.9 Is the proposed action likely to have any direct or indirect impact on a water resource from coal seam gas or large coal mining development?

☐ Yes ☑ No

2.10 Is the proposed action a nuclear action?

☐ Yes ☑ No

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

☐ Yes ☑ No

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage place overseas?

☐ Yes ☑ 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?

☐ Yes ☑ No

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Section 3

Description of the project area

3.1 Describe the flora and fauna relevant to the project area

A desktop review was undertaken using publically and freely available State and Commonwealth databases together with a preliminary site walkover to identify flora and fauna values present within the project area. A preliminary likelihood of occurrence assessment has been undertaken for the project (Attachment D Likelihood of occurrence assessment, with the species listed below identified as likely or known to occur.

Flora and fauna

- Mammals
  - Northern quoll (endangered)
  - Koala (vulnerable)
  - Northern greater glider (vulnerable)
  - Grey-headed flying fox (vulnerable)
- Plants
  - Black ironbox (vulnerable)
  - Ozothamnus eriocephalus (vulnerable)
- Birds
  - Squatter pigeon (vulnerable)
  - White-throated needletail (vulnerable)

The preliminary likelihood of occurrence assessment (Attachment D Likelihood of occurrence assessment) undertaken indicates that no conservation significant aquatic species are likely to occur within the project area.

Attachment A, Figure 3 shows relevant information related to MNES.

Migratory

- Monarcha trivirgatus (spectacled monarch Restricted invasive species

Weeds of national significance known and/or predicted to occur within the project area include:

- Cryposternum grandiflora (rubber vine)
- Parkinsonia aculeate (parkinsonian)
- Parthenium hysterophorus (parthenium weed)
- Vachellia nilotica (prickly acacia).

Feral animals predicted and/or known and likely to occur include: Rhinella marinma (cane toad), Canis lupus (domestic dog), Felis catus (domestic cat), Cervus timoriensis (rusa deer), Oryctolagus cuniculus (European rabbit), Sus scrofa (feral pig), Vulpes vulpes (red fox) and Canis lupus familiaris (wild dog).

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

The Burdekin Basin is the second-largest river basin in Australia; it has the largest mean annual discharge (8,327,681 ML mean annual flow at Clare gauge 1976–2016) and is tributary to the GBRWHA. The waterways in the basin vary from largely sandy, dry ephemeral creek systems to permanently flowing clear-water rivers and creeks originating in mountain rainforest.

The Burdekin drainage basin covers an area of approximately 130,109 km² and comprises four major sub-basins:

- Upper Burdekin 36,244.7 km²
- Suttor 73,935.8 km²
- Bowen 9,451.6 km²
- Lower Burdekin 10,477.4 km².

The project is located within the Broken River sub-catchment of the Bowen sub-basin. Past assessment of groundwater in the Bowen sub-basin is generally localised to irrigation, mining, or domestic use areas The Broken River, which is the main river that will be utilised for the project, joins the Bowen River at Bowen Weir, downstream of the project area, 35 km southeast of Collinsville. The Bowen River joins the Burdekin River at Blue Valley Weir and the Burdekin River then flows north and east into the GBR. There are five water storages along the Bowen/Broken River, with a total storage capacity of approximately 230,000 ML. The largest of the storages is Eungella Dam, which has a capacity of 112,400 ML and is on the Broken River upstream of the Pumped Hydro-electric Scheme Project.

The Broken River and its tributaries are major contributors to the flow of water and water quality into the Bowen and lower Burdekin Rivers. There is a substantial rainfall gradient in the sub-catchment, from more than 4,000 mm a year at the top of Clarke Range (which encompasses Eungella National Park and is upstream of project), to less than 600 mm a year near the junction of the Bowen and Broken Rivers. The mean annual rainfall at Urannah is 690 mm.

The Burdekin Basin is heavily influenced by variable inter-annual rainfall, with droughts and tropical cyclones (and associated flooding) approximately once every four years (SMEC, 2019a).

The mean annual discharge of the Bowen River upstream of its confluence with the Broken River is 105,278 ML, but downstream of the confluence at the Pump Station Gauge the mean annual discharge is 797,566 ML. The mean discharge of the Broken River at Urannah is 355,712 ML. No months with zero discharge have been recorded at Urannah. The highest monthly discharge recorded at Urannah is 729,948 ML in February 1991 (records from 1962- 1998).

There are four major watercourses (Broken River, Bowen River, Exe Creek and Hail/Bee Creek) and a variety of minor

waterways which intersect with the project as shown in Attachment A, Figure 4.

Hydrological and hydraulic assessments will be undertaken as part of the EIS to determine existing flows of the waterways within the project area.

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

Soils

The soils in the Burdekin region are varied, with extensive areas of moderately productive but fairly erodible red duplex soils, widespread highly productive black and red clays derived from basalt, and large areas of poor to moderately fertile sands and earths.

Large areas also have highly erodible dispersive soils. The Bowen sub-catchments have the highest rate of erosion due to exposed subsoils, indicating a significant loss of topsoil into the waterways as indicated by tracing data (Lewis et al., 2015).

Key soil information for the project includes the dominance of clay-heavy, cracking or non-structured soils in all project areas.

Vegetation

The predominant vegetation characteristics of the region are typical of grazed native vegetation, with some conservation areas bordering proposed project areas maintaining more established vegetation. Large areas of land have also been cleared within the proposed irrigation precinct.

Investigations of landscape vegetation will be undertaken within the EIS as relevant and across targeted areas to identify vegetation characteristics within the project area.

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

Eungella National Park is classified as a protected area (estate) under the Nature Conservation Act 1999 (NC Act) and is located south and east of the proposed action area. The national park was first gazetted in 1936 and is managed by the Queensland Parks and Wildlife Service under the management objectives to “preserve and present its remarkable natural and cultural values for all time”.

The lower PHES reservoirs along Urannah Creek, Dicks Creek, Ernest Creek and Massey Creek are mapped under the NC Act as being of very high riverine conservation significance. These creeks and rivers form part of the Broken River, Urannah Creek and Massey Creek Aggregation, which is currently listed in the directory of nationally important wetlands and includes some of the least disturbed examples of riverine wetland in Central Queensland.

Other nationally important wetlands mapped within the vicinity of the project include:

— Eungella Dam (upstream of the action)

— Bowen River: Birralee Aggregation - Pelican Creek in the vicinity of the proposed Collinsville Irrigation Scheme Project

— Burdekin-Bowen Junction and Blue Valley Weir Aggregation (downstream of the proposed Collinsville Irrigation Scheme Project).

Nationally important wetlands within the project area are shown on Attachment A, Figure 5.

No wetlands of high ecological significance are mapped for the project. No wetlands or watercourses in high ecological value waters are mapped for the project area.

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

Threatened ecological communities

There are no threatened ecological communities (TECs) listed under the EPBC Act predicted to occur within the project area, based on the likelihood of occurrence assessment shown in Attachment D Likelihood of occurrence assessment.

Ecology surveys will be undertaken as part of the EIS to confirm presence or absence of TECs within the project area.

Remnant vegetation/regional ecosystems

Mapping indicates that the PHES upper and lower reservoirs are located in areas containing predominantly remnant vegetation (Category B Least Concern and Of Concern REs).

REs located in the project area are shown in Attachment A, Figure 6. Ecology surveys will be undertaken as part of the EIS to verify regulated vegetation in the project area.

Reliable rainfall in the project area provides high quality water and a range of aquatic habitat types, supporting high aquatic flora and fauna diversity. Sections of the Broken River have wide, high banks that are formed from high volumes of water during peak flow periods. The riparian zone is often within the river bed and adjacent to the low flow channel, rather than starting from the higher riverbanks. The condition of the riparian vegetation varies within the Broken sub-catchment from good to very poor.

Riparian communities are generally dominated by Melaleuca fluviatilis, but include other melaleuca, eucalyptus, casuarina, and callistemon species. Riparian vegetation close to permanent waterholes or sections of year-round river flow provides important dry season refuge for various fauna, including species more widely dispersed at other times of the year (e.g. woodland birds and/ butterflies).

Eucalyptus raveretiana is a prominent riparian vegetation species throughout the Broken River, Urannah Creek and Massey Creek Aggregation, particularly on larger streams. A number of aquatic or semi-aquatic plant species, including

wetland indicator species, are known to or may occur in the Bowen River basin and/or the Broken River, Urannah Creek and Massey Creek Aggregation.

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

The topography of the Burdekin region is highly variable including mountain ranges, low lying hills and flood plains. The Clarke Range, which forms part of the Great Dividing Range, is situated to the east of the project area with the project located within the steep valley on the Clarke Range periphery.

The existing topography and landform in the project area will be investigated further within the EIS.

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

The dominant land use for the area has been identified as cattle grazing in native vegetation with the remaining area comprised of nature conservation areas. This suggests that the vegetation within the vicinity of the action is predominantly remnant (limited disturbance), with densely vegetated areas of conservation. The region has established agriculture and mining activities located to the west and tourism associated with the Eungella National Park to the south-east and is sparsely populated.

Top soil is limited in many regions of the project area, with high levels of soil erosion due to hill slope and gully erosion. This also influences water quality with large amounts of fine sediment, primarily from grazing lands, affecting aquatic environments within the Burdekin Basin.

Within the Burdekin Basin, major sources of sediment appear to be affecting water quality; originating from hill slope erosion along with gully and stream bank erosion. The Burdekin Region Water Quality Improvement Plan 2016 notes that the bulk of fine sediment delivered from the Burdekin Basin to the Great Barrier Reef is derived from a small portion of the basin, primarily the Bowen, Broken, Bogie and Upper Burdekin catchments, with a large proportion of this load from grazing lands.

The Burdekin Falls Dam traps a large portion of the course particles and some of the fine particles, however the Bowen Broken Bogie catchments contribute the highest loads of fine material due to gully erosion.

Water quality assessments, including water quality monitoring necessary, will be undertaken as part of the EIS to determine existing water quality characteristics to inform the assessment undertaken as part of the EIS.

Invasive fauna is abundant throughout the route including the cane toad, wild dog, feral cat, brown hare, rabbit, feral pig, red fox and other species.

Site investigations and data analysis will be undertaken within the EIS to confirm relevant environmental conditions.

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

According to the National Heritage Register, no areas or objects are identified within 5 km of the project. European cultural heritage sites, as relevant, will be investigated as part of the EIS to determine areas of importance within the project area.

3.9 Describe any Indigenous heritage values relevant to the project area

A search of the Queensland DATSIP cultural heritage database identified no records of Aboriginal cultural heritage sites or registered places within the project area. While no registered places or Aboriginal cultural heritage sites have been identified, high risk landscape features such as ephemeral water sources are commonly identified as places of importance to Aboriginal people and may include the Broken River and Massey Creek. As such, there is a high chance of unidentified Indigenous cultural heritage being present.

To date the following Aboriginal parties have been identified as potentially having an interest in the project area, subject to the final project footprint being determined:

— Widi People of the Nebo Estate #1
— Birriah People

Aboriginal cultural heritage assessments will be undertaken within the EIS to identify cultural heritage values within the project area. Unless cultural heritage is included in a relevant native title agreement, a Cultural Heritage Management Plan will be developed in accordance with the provisions of the Aboriginal Cultural Heritage Act 2003.

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

Potentially impacted properties are held under lands lease tenure arrangements.

There are a number of exploration permits which exist over the broader area around the project area, with exploration permits for minerals within close proximity to the proposed PHES.

Tenure types and extents within the project boundary are shown in Attachment A, Figure 7 with a list of all tenure types within each project component shown in Attachment B Tenure.

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

Land use

The project area is typical of a rural setting in terms of existing infrastructure, including homesteads, local roads and agricultural properties with associated peri-urban development within small towns. Mining activity is concentrated around

Collinsville to the north and northwest of the project area and further south towards Moranbah. Tourism activities are associated with the Eungella National Park located to the south-east.

The land within the project area is currently used for grazing in dense, native vegetation. Land uses within the project area are shown Attachment A, Figure 8.

Urban areas

There are several small towns within the wider area, which have largely been established to support resource and tourism activities that occur within these areas. These include:

— Eungella
— Glenden

Infrastructure

As shown in Attachment A, Figure 9, there is an extensive network of Ergon lower voltage pole mounted distribution substations scattered around the project area as well as fewer higher voltage ones.

Powerlink's 275KV transmission line between Strathmore and Nebo runs north to south and is located to the west of the project.

There are four other water storages within proximity to the project area, including:

— Eungella Dam
— Gattonvale Offstream Storage
— Bowen River Weir
— Peter Faust Dam.

Key infrastructure networks within the project area are shown Attachment A, Figure 9 and will be detailed further in the EIS with consideration of the utility providers and local government guidelines and policies.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 4

Measures to avoid or reduce impacts

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

The environmental management and mitigation measures required for the project will be determined during the EIS stage and developed in consultation with relevant authorities and in accordance with legislative, policy and industry guidelines.

A number of tools will be developed and implemented, including:

— Environmental management framework
— Environmental management plans
— Environmental, social and cultural values specific management plans (sub-plans).

The project has adopted the principles of the mitigation hierarchy, whereby impacts are addressed through the preferential order of avoidance, minimisation and compensated (offset). For the impacts identified within Section 2, the following mitigation strategies are proposed:

Vegetation clearing, associated habitat fragmentation and habitat loss

The project will require vegetation clearing and associated habitat fragmentation and loss. Design aspects to minimise environmental impacts are under consideration. Water pipeline alignments have sought to avoid impacts on vegetation and habitat areas, where possible, through co-location within previously cleared or degraded areas and existing road reserves and easements.

An Environmental Management Plan (EMP), including a Flora and Fauna Management Plan (FFMP), Vegetation Management Plan (VMP) and Bushfire Management Plan, will be prepared and implemented to detail protective actions and procedures of terrestrial environments. The EMP will include actions to minimise unnecessary clearing, including limiting clearing to the smallest area practicable, and prioritising existing cleared and disturbed areas for infrastructure and temporary works.

Fauna injury and mortality

Clearing of vegetation and fauna habitat and increased traffic and people movements as a result of the project have the potential to injure or result in fauna mortality.

An EMP will be developed, including a FFMP, Traffic Management Plan (TMP) and Workforce Management Plan, and implemented to detail actions and procedures for the protection of the terrestrial environments. Impacts to fauna species as a result of construction activities will be managed in accordance with conditions of an approved Recovery Plan under the EPBC Act and a qualified fauna spotter catcher will be onsite during construction to relocate individuals, where necessary. Sequential clearing will be undertaken allowing fauna time to move away from the area. Enforcing speed limits and restricting night works will be considered.

Design options are being considered to minimise fauna injury and mortality during operation.

Dispersion or control of weeds and invasive species

An EMP will be developed, including a Weed and Pest Management Plan (WPMP), and implemented to detail actions and procedures for the protection of the terrestrial environments. The EMP will include actions to minimise the spread of weeds and invasive species through both human and vehicle controls. Ongoing implementation of weed and pest control will be required and undertaken to ensure any outbreaks are controlled into operations.

Increased predation during construction and operation

An EMP will be developed, including a WPMP, VMP and Waste Management Plan, and implemented to detail actions and procedures for the protection of the terrestrial environments. The EMP will include actions to minimise the attraction of predator species and limit impact to MNES species habitat.

Air, noise, vibration and dust pollution

An EMP will be developed, including an Air Quality (dust) Management Plan, Noise and Vibration Management Plan and TMP, and implemented to detail actions and procedures for the protection of the terrestrial environments. The EMP will include actions to minimise risks of unnecessary air, noise, vibration and dust pollution, where possible.

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

Environmental outcomes sought for the project include:

— Avoid as far as practicable impacts on MNES and MSES
— Where avoidance is not possible, minimise and mitigate impacts through the development and implementation of management actions, including development of management plans and undertaking monitoring programs
— Promote the use of best management practices for agricultural activities that conserve water and minimise environmental harm
— Protect and restore habitat, including riparian areas and wetlands, where necessary.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Management plans for MNES will be prepared as mentioned in Section 4.1 to manage impacts during construction and operation of the project. The project is expected to comply with reef protection regulations without exemption

Desktop reviews of environmental constraints and opportunities are being used to inform project design and route and site selection. This will be further supported by outcomes of a site survey and field campaign. The hierarchy approach of avoid, minimise and/or mitigate and manage will be utilised. Where impacts cannot be avoided and significant residual impacts are predicted offsets will be proposed.

Based on currently available information it is possible that residual impacts on MNES will persist after avoidance, mitigation and management measures are applied. Offsets will be proposed in accordance with the Australian Government's EPBC Act Environmental Offsets Policy.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 5

Conclusion on the likelihood of significant impacts

5.1 You indicated the below ticked items to be of significant impact and therefore you consider the action to be a controlled action

- ☐ World Heritage properties
- ☐ National Heritage places
- ☐ Wetlands of international importance (declared Ramsar wetlands)
- ☑ Listed threatened species or any threatened ecological community
- ☐ Listed migratory species
- ☐ Marine environment outside Commonwealth marine areas
- ☐ Protection of the environment from actions involving Commonwealth land
- ☐ Great Barrier Reef Marine Park
- ☐ A water resource, in relation to coal seam gas development and large coal mining development
- ☐ Protection of the environment from nuclear actions
- ☐ Protection of the environment from Commonwealth actions
- ☐ Commonwealth Heritage places overseas
- ☐ Commonwealth marine areas

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

Not applicable.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 6

Environmental record of the person proposing to take the action

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

Blue Hydro Project Pty Ltd (or its subsidiaries) has not had any prosecutions for environmental harm under either Commonwealth or State legislation.

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

There are no proceedings against Blue Hydro Project Pty Ltd under either Commonwealth or State legislation.

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 ☐ No

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

Blue Hydro Project Pty Ltd as project developer operates under a Project Delivery Management Plan, and maintains a Risk Management Plan and a comprehensive risk register for the project. The risk assessment process will evolve as the project moves from planning and design into construction, commissioning and operations. Environmental hazards and risks will be included and updates adopted. Construction and operational management plans will be incorporated into project delivery programs. Further, the project has adopted a Corridor and Land Access Management Plan as part of its corporate compliance framework.

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?

☐ Yes ☑ No

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 7

Information sources

Reference source

BCE (2018). Urannah Water Scheme Draft Preliminary Business Case. Queensland Government, Brisbane.

Reliability

High

Uncertainties

None

Reference source

BCE (2019). Urannah Water Scheme Final Preliminary Business Case. Queensland Government, Brisbane.

Reliability

High

Uncertainties

None

Reference source

Department of the Environment and Energy. (2019). EPBC Act Protected Matters Search Tool. Australian Government, Canberra. Available from: http://www.environment.gov.au/epbc/pmst/index.html

Reliability

High

Uncertainties

None

Reference source

Department of the Environment. (2019). SPRAT EPBC Migratory Lists in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat.

Reliability

High

Uncertainties

This work was used to provide background information and is fit for purpose.

Reference source

GHD (2020) Bowen River Utilities Draft Initial Advice Statement. Prepared for Bowen River Utilities.

Reliability

High

Uncertainties

Desktop assessment using Government and public datasets and previous technical reports.

Reference source

Lewis, S., Bartley, R., Bainbridge, Z., Wilkinson, S., Burton, J. and Bui, E. (2015). Burdekin sediment story. Report No. 1 for NQ Dry Tropics NRM, Centre for Tropical Water & Aquatic Ecosystem Research (TropWATER) Publication. James Cook University, Townsville.

Reliability

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

High

Uncertainties

This work was used to provide background information and is fit for purpose.

Reference source

NQ Dry Tropics 2016, Burdekin Dry Tropics Natural Resource Management Plan 2016-2026, NQ Dry Tropics, Townsville.

Reliability

High

Uncertainties

None

Reference source

SMEC. (2018). Urannah Dam Feasibility Study. Report on Yield Hydrology. Prepared for Huston International Consulting (HIC) Services Pty Ltd.

Reliability

High

Uncertainties

None

Reference source

SMEC. (2019a). Urannah Dam Feasibility Study. Report on Dam and Spillway Options. Prepared for Huston International Consulting (HIC) Services Pty Ltd.

Reliability

High

Uncertainties

None

Reference source

SMEC. (2019b). Urannah Dam Feasibility Study. Report on Final Geology. Prepared for Huston International Consulting (HIC) Services Pty Ltd.

Reliability

High

Uncertainties

None

Reference source

SMEC. (2019c). Urannah Dam Feasibility Study. Report on Flood Hydrology. Prepared for Huston International Consulting (HIC) Services Pty Ltd.

Reliability

High

Uncertainties

None

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Reference source

SMEC. (2019d). Urannah Dam Feasibility Study. Report on Hydropower and Pumped Storage Options. Prepared for Huston International Consulting (HIC) Services Pty Ltd.

Reliability

High

Uncertainties

None

Reference source

SMEC. (2019e). Urannah Dam Feasibility Study. Report on Water Distribution Options. Prepared for Huston International Consulting (HIC) Services Pty Ltd.

Reliability

High

Uncertainties

None

Reference source

SMEC. (2019f). Urannah Dam Feasibility Study. Review of Environmental Factors. Prepared for Huston International Consulting (HIC) Services Pty Ltd.

Reliability

High

Uncertainties

None

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 8

Proposed alternatives

Do you have any feasible alternatives to taking the proposed action?

Yes ☑ No

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 9

Person proposing the action

9.1.1 Is the person proposing the action a member of an organisation?

☑ Yes ☐ No

Organisation

Organisation name	BLUE HYDRO PROJECT PTY LTD
Business name	
ABN	98637347598
ACN	
Business address	145 Ann St, Brisbane City, 4000, QLD, Australia
Postal address	
Main Phone number	1800 269 368
Fax	
Primary email address	hydro@bluehydro.com.au
Secondary email address	

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

☐ Small business
☑ Not applicable

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

☐ Yes ☑ No

9.1.3 Contact

First name	Sebastian
Last name	Burgman
Job title	Managing Director
Phone	
Mobile	0410 188 407
Fax	
Email	hydro@bluehydro.com.au
Primary address	145 Ann St, Brisbane City, 4000, QLD, Australia
Address	

Declaration: Person proposing the action

I, SEBASTIAN BURGMAN **, 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 or for the benefit of any other person or entity.**

Signature: ..... **Date:** 10/07/2020

I, SEBASTIAN BURGMAN **, the person proposing the action, consent to the designation of** BLUE HYDRO PROJECT PTY LTD **as the proponent for the purposes of the action described in this EPBC Act Referral.**

Signature:.....**Date:** 10/07/2020

Australian Government
Department of Agriculture, Water and the Environment

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Proposed designated proponent

9.2.1 Is the proposed designated proponent a member of an organisation?

☑ Yes ☐ No

Organisation

Organisation name	BLUE HYDRO PROJECT PTY LTD
Business name	
ABN	98637347598
ACN	
Business address	145 Ann St, Brisbane City, 4000, QLD, Australia
Postal address	
Main Phone number	1800 269 368
Fax	
Primary email address	hydro@bluehydro.com.au
Secondary email address	

9.2.2 Contact

First name	Sebastian
Last name	Burgman
Job title	Managing Director
Phone	0410 188 407
Mobile	
Fax	
Email	hydro@bluehydro.com.au
Primary address	145 Ann St, Brisbane City, 4000, QLD, Australia
Address	

Declaration: Proposed Designated Proponent

I, SEBASTIAN BURGMAN **,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:** 10/07/2020

Australian Government
Department of Agriculture, Water and the Environment

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Referring party (person preparing the information)

9.3.1 Is the referring party (person preparing the information) a member of an organisation?

☑ Yes ☐ No

Organisation

Organisation name	GHD PTY LTD
Business name	
ABN	39008488373
ACN	
Business address	145 Ann St, Brisbane City, 4000, QLD, Australia
Postal address	
Main Phone number	07 3316 3000
Fax	
Primary email address	Geraldine.squires@ghd.com
Secondary email address	

9.3.2 Contact

First name	Geraldine
Last name	Squires
Job title	Technical Director – Environmental Assessment
Phone	07 3316 4396
Mobile	
Fax	
Email	Geraldine.squires@ghd.com
Primary address	145 Ann St, Brisbane City, 4000, QLD, Australia
Address	

Declaration: Referring party (person preparing the information)

I, Geraldine Squires **, 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:** 10/07/2020

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Appendix A

Attachment

Document Type	File Name
action_area_images	Attachment A_Figure 1_Project Location.pdf
action_area_images	Attachment A_Figure 2_Related Projects.pdf
action_area_images	Attachment A_Figure 3_MNES.pdf
action_area_images	Attachment A_ Figure 4 _Water Resources.pdf
action_area_images	Attachment A_Figure 5_Wetlands.pdf
action_area_images	Attachment A_Figure 6_ RE.pdf
action_area_images	Attachment A_ Figure 7_Tenure.pdf
action_area_images	Attachment A_Figure 8_LandUse.pdf
action_area_images	Attachment A_Figure 9_Infrastructure.pdf
action_area_images	Attachment A_Figure 10_ProtectedAreas.pdf
govt_approval_conditions	Attachment C Approval requirements.pdf
localgov_approval_consent	Attachment B Tenure.pdf
supporting_tech_reports	Attachment D Likelihood of occurrence assessment.pdf
flora_fauna_investigation	Attachment E Desktop searches.pdf

Appendix B

Coordinates

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