EPBC Act referral

Australian Government
Department of Agriculture, Water and the Environment

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Title of proposal	2021/9140 - Big-T Pumped Hydropower Energy Storage Project

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 proposed action is a pumped hydropower energy storage scheme (hereafter referred to as 'Big-T PHES') with a planned generating capacity of up to 400 megawatts (MW) and the ability to provide up to 10 hours of continuous energy generation. The proposed action is located adjacent to Lake Cressbrook approximately 45 km northeast of Toowoomba in Queensland.

The Big-T PHES requires an upper and lower reservoir. The existing Lake Cressbrook is proposed as the lower reservoir for the Project. The lake is owned and operated by Toowoomba Regional Council, and access to and use of the lake for the proposed action would be granted through the Council's New Energy Generation Project. The upper reservoir is proposed as a new off-stream storage constructed in an elevated area on Mount Sevastapol, on a private property to be owned by the proponent and located adjacent to Lake Cressbrook. The upper reservoir will be fully enclosed only capturing direct rainfall.

Water will be recirculated between Lake Cressbrook and the upper reservoir via a new underground power station and associated headrace and tailrace tunnels (underground) or penstocks (aboveground). The power station will house two reversable turbines that generate energy from water released from the upper reservoir as well as pump water from the Lake Cressbrook. Electricity from the Big-T PHES will be supplied to the National Electricity Market (NEM) via a new underground transmission line located along Sebastapool and Three Mile Roads.

Construction of the Big-T PHES is expected to take up to five years including rehabilitation work. Construction activities include site establishment and preliminary works, import of turbines, transformers and other electrical infrastructure, as well as excavation of underground works. The construction of the upper reservoir forms majority of the aboveground construction activities. Shafts will be excavated using raise boring method, while tunnels are proposed to be excavated using conventional drill and blast method and lined with concrete, with spoil to be used for respective portals and the upper reservoir. Some explosives may be required during tunnel excavation, stripping the dam's foundation, and quarrying aggregate for concrete and road paving. Construction of the intake/outlet may require a secant pile and rockfill cofferdam to be built between Lake Cressbrook and lower intake/outlet location to block water entering the construction area. The cofferdam will be removed after construction of the intake/outlet structure and when the gates are installed and functioning.

The proposed action consists of the following permanent components:

- New off stream turkey's nest style dam impounding a reservoir with a capacity of approximately 7 GL (active storage volume of approximately 6.4 GL) and a footprint of up to 70 ha to provide an upper storage.
- Lake Cressbrook that will form the lower reservoir,
- Approximately 2 km of water conveyances including headrace and tailrace tunnels or penstocks,
- Intake and outlet infrastructure connecting the water conveyances to the upper and lower storages,
- Underground power station with two reversible turbines and a total generating capacity of up to 400MW,
- Underground gas-insulated switchyard located next to the power station,
- Power station access portal and tunnel,
- Approximately 900 m of power, evacuation and ventilation portal and tunnel(s),
- Approximately 2km of new access road,
- Approximately 15km of new underground 275 kV double circuit transmission line located beneath Sebastapool Road and Three Mile Road connecting the power station to the Tarong to Middle Ridge transmission line connection (Feeder 831).
- Upgrade, widening and partial realignment of approximately 15 km of Sebastapool Road and Three Mile Road,
- New 275 kV switching station located on the existing easement of the Tarong-Middle Ridge transmission line at its intersection with Three Mile Road on privately-land owned by BE Power, and
- Permanent spoil storage for excess material excavated for the power station cavern and tunnels and not utilised for construction.

Other temporary works will also be required to support the proposed action and may include:

- Site office, workshops and associated parking
- Construction laydown areas
- Cofferdam to facilitate construction of intake/outlet on Lake Cressbrook

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- Crushing and concrete batching plants
- Haul roads (will be used as permanent access roads post construction).

Temporary disturbance areas will be progressively rehabilitated during construction.

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 located within the rural localities of Biarra and Crows Nest. The nearest township is Crows Nest, located 15 km to the west and set among hilly terrain approximately 543m above sea level. Toowoomba, located approximately 45km northeast of the Big T PHES site, is the nearest large commercial centre.

The upper reservoir is located on Mount Sevastapol, northeast of Lake Cressbrook, in a mixed grazing setting with isolated residential properties. Other infrastructure is situated across freehold land parcels and the road reserves of Sebastapool and Three Mile Roads.

The Big T PHES site adjoins the Deongwar State Forest to the south and east, as well as Pine Cliff Nature Refuge to the northeast.

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 entire proposed project site is 1,003.65 ha. Of that, works will only be undertaken within the permanent disturbance footprint of 156 ha, and an additional temporary disturbance footprint of 24 ha. The remainder of the 823.65 ha will not be disturbed and no construction activities will be undertaken within it. Attachment 8 outlines the area where works will be undertaken over the entire proposed project site.

1.7 Proposed action location

Other - 58/CSH2241 (Lot58), 2/SP300942 (Lot2), Lot 10 RP223812, Sebastapool and Three Mile Road Reserves

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

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

☐ Yes ☑ No

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

Start Date 01/01/2023
End Date 31/12/2106

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

The proposed action will be subject to a range of statutory approvals involving a number of Commonwealth and State departments. The proposed action is being considered for declaration as a ‘coordinated project’ under Queensland’s State Development and Public Works Organisation Act 1971 and, if declared, will be subject to assessment by the Coordinator-General.

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Approval under a number of other legislation may be required, including but may not be limited to the below Commonwealth and Queensland state legislation:

- Commonwealth Environment Protection and Biodiversity Conservation Act 1999
- Planning Act 2016 and Planning Regulation 2017
- Vegetation Management Act 1999
- Water Act 2000
- Water Supply (Safety and Reliability) Act 2008
- Aboriginal Cultural Heritage Act 2003
- Electricity Act 1994
- Environmental Offsets Act 2014
- Environmental Protection Act 1994
- Nature Conservation Act 1992, and
- Transport Infrastructure Act 1994.

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

Public consultation will be undertaken as part of, and in parallel with, the project approval process. To ensure a local point of contact and to facilitate local engagement and management, the proponent has appointed a community engagement officer who will reside on the project site. Along with the project team, they will assist with community and stakeholder engagement activities, including but not limited to development of a project website, newsletters, flyers; hosting public meetings, targeted landowner meetings, targeted First Nations people engagement, targeted community interest group meetings, keeping relevant stakeholders informed of project progress; and establishing a project office, project hotline and email address.

Two pre-referral meetings were held with the Commonwealth Department of Agriculture, Water and Environment (DAWE) to discuss the proposed action and its impact on Matters of National Environmental Significance. The first meeting was held on 30 September 2021, with a subsequent follow-up meeting on 26 October 2021. The first meeting aimed to provide project context and background while the second meeting focused on matters relevant to the department's assessment.

It is the intention of the proponent to seek declaration of the proposed action as a 'coordinated project' by the Queensland Coordinator-General. The proponent has engaged with the Office of the Coordinator-General for pre-lodgement advice and intends to submit an application for declaration by the Coordinator-General. The proponent has also engaged with other relevant Queensland government agencies, including the Department of Regional Development, Manufacturing and Water as well as Queensland Treasury.

It is also the intention of the proponent to invoke the bilateral agreement between the Commonwealth and Queensland governments for assessment of impacts to Matters of National Environmental Significance.

The project team has completed a stakeholder engagement plan that is currently being implemented. The plan identifies the challenges and opportunities presented by the present, stakeholders that will be engaged, as well as the key project messaging.

It is the proponent's understanding that there are no native title holders or applicants nor any cultural heritage bodies or parties. The closest groups are the Western Wakka Wakka People west of Crows Nest, and the Jagera People and Yuggera Ugarapul People to the south of the Project site. Indigenous stakeholders will be engaged and consulted during the approvals process.

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

A comprehensive baseline ecological survey program was carried out over the project area, including baseline surveys in February and March 2021, targeted autumn surveys in April 2021 and spring surveys in November 2021, as well as flora surveys in December 2021.

A baseline water quality monitoring program began in September 2021 and is expected to continue for a minimum of 12 months unless otherwise directed by relevant regulators.

A preliminary Aboriginal and cultural heritage due diligence assessment, including site inspection of Lot 58, was undertaken in March 2021 to confirm that there are no heritage values over the Project site or in the immediate Project area. The assessment is included in Attachment 4 but is withheld from publication for cultural sensitivity reasons. Further surveys will be undertaken during the EIS stage.

Other technical studies will be completed when a Terms of Reference for the EIS is received from the Coordinator-General.

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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

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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

Koala (Phascolarctos cinereus)

Impact

The species will be directly impacted primarily through habitat loss, fragmentation and degradation. Assessment of significance of this species has determined that there will be a significant residual impact on the koala as a result of the proposed action.

The proposed action will remove up to 122 ha of habitat that is assessed as critical to the survival of the koala. Evidence of koalas was recorded from across the accessible parts of the eucalypt woodlands of the surveyed area, mostly in Queensland blue gum (E. tereticornis) or narrow-leaved ironbark (E. crebra). Scratches and/or scats were detected at the base of Queensland blue gum, grey gum (E. biturbinata), narrow-leaved ironbark, silver-leaved ironbark (E. melanophloia), grey box (E. moluccana) and thin-leaved stringybark (E. eugenioides).

Although there are no ‘important populations’ identified for koala in the Approved Conservation Advice and the area of the proposed action is not on the edge of the species’ distribution and therefore no evidence to suggest that koalas within the project area are a key source for breeding or dispersal, the greatest concentration of koalas is in Southeast Queensland, within which the project lies.

Assessment using the ‘koala assessment tool’ identified that the site of the proposed action scores 10/10 and is characterised as critical koala habitat based on koala occurrence, vegetation competition, habitat connectivity, key existing threats and its recovery values. Subsequently on this basis, it is considered that the koalas within the study area are considered to form part of an ‘important population’ for the purpose of assessment of significance and impact.

The replacement of koala habitat by built infrastructure will result in direct impacts to approximately 122 ha of habitat. This will reduce the area of occupancy of a deemed important population of koalas.

The habitat is connective with known koala habitat of the broader area and therefore the proposed action is considered unlikely to fragment an existing important population into two or more populations. Furthermore, given the abundant suitable habitat for the koala within the area, it is unlikely that the proposed action would impact on the availability of quality of habitat to the extent that the species will decline.

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A detailed assessment of significance for the koala is provided in Attachment 2, Section 1.1.1, pp.5.

Species or threatened ecological community

Greater glider (Petauroides volans)

Impact

The species will be impacted primarily through habitat loss, fragmentation and degradation. The proposed action will result in direct impact of approximately 92 ha of potential greater glider habitat, of which includes 78 ha of potential foraging/denning habitat as well as 14 ha of potential foraging regrowth habitat. However, the assessment of significance of this species has determined that the impact is not considered to be significant.

The greater glider population within the area of the proposed action is likely to occur more widely in the surrounding locality, and the availability of potential habitat surrounding the project area extends in all directions. Therefore, there is extensive identical habitat remaining in the immediate surrounds.

The proposed action has sought to minimise the clearing of remnant vegetation (including denning habitat for the species) by positioning infrastructure within regrowth vegetation where possible. Subsequently it is considered unlikely that the proposed action would result in a long-term decrease in the size of an important population of the species. Furthermore, there is no evidence that an 'important population' occurs within the project area. Therefore, it is considered unlikely that the proposed action will reduce the area of occupancy of an important population of this species, adversely affect habitat critical to the survival of the species, or fragment an existing important population into two or more populations.

A detailed assessment of significance for the greater glider is provided Attachment 2, Section 1.1.2, pp.10.

Species or threatened ecological community

Brush-tailed rock-wallaby (Petrogale penicillata)

Impact

he species will be impacted primarily through habitat loss, however the assessment of significance of this species has determined that the impact is not considered to be significant.

The proposed action may impact up to approximately 2.5 ha of known and potential refuge habitat, and approximately 141.7 ha of potential foraging and dispersal habitat for the species. However, it is important to note that no suitable habitat has been identified in the vicinity of the footprint of the proposed action.

No 'important populations' of the species has been identified in Queensland. Furthermore, the Project footprint is well removed from 'known and potential refuge habitat' and 'potential foraging and dispersal habitat' mapping within the survey area. As such the proposed action is not expected to have any direct or indirect impacts on habitats for the species.

A detailed assessment of significance for the brush-tailed rock wallaby is provided in Attachment 2, Section 1.1.3, pp.15.

Species or threatened ecological community

Grey-headed flying fox (Pteropus poliocephalus)

Impact

The species will be impacted primarily through loss of foraging habitat. Assessment of significance of this species has determined that there will be a significant residual impact on the grey-headed flying fox as a result of the proposed action.

The proposed action will result in the removal of approximately 122 ha of habitat critical to the survival of the species. The proposed action would remove (that is,. adversely affect) habitat which meets the definition of 'Critical Habitat' for the grey-headed flying-fox as defined in the National Recovery Plan for the Grey-headed Flying-fox (DAWE 2021).

The National Flying-fox Monitoring Viewer indicates that the nearest known grey-headed flying fox camp is located at Esk, approximately 18km east of the study area. The nearest known 'Nationally Important Flying-fox Camp' is at Lake Atkinson, approximately 30km southeast of the study area.

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The replacement of the flying fox foraging habitat by built infrastructure will result in direct impacts to 122 ha of habitat. However, it is noted that this habitat is connected to similar habitat within the study area, and the broader areas would remain throughout the following development of the proposed action. The species is highly mobile and as such the proposed action is unlikely to fragment the grey-headed flying fox.

A detailed assessment of significance for the grey-headed flying fox is provided in Attachment 2, Section 1.1.4, pp.20.

Species or threatened ecological community

Silver perch (Bidyanus bidyanus)

Impact

The silver perch could be impacted through more severe fluctuations in water levels of Lake Cressbrook, however the assessment of significance of this species has determined that the impact is not considered to be significant.

Silver perch are stocked in Lake Cressbrook by the Toowoomba and District Fish Stocking Association, representing a stocked population outside of its natural distribution. Although individuals may attempt to breed, stocked silver perch seemingly fail to reproduce, and there is no evidence of recruitment within this stocked population.

Lake Cressbrook is an impoundment that does not provide suitable conditions to trigger or support spawning, and subsequent recruitment of new generations of the species. Therefore the lake is not considered to be habitat critical to the survival of the species.

A detailed assessment of significance for the greater glider is provided in Attachment 2, Section 1.1.5, pp.26.

Species or threatened ecological community

Mary River cod (Maccullochella mariensis)

Impact

The Mary River cod could be impacted through more severe fluctuations in water levels of Lake Cressbrook, however the assessment of significant for this species has determined that the impact is not considered to be significant.

The Mary River cod occurs in southeast Queensland in the Mary River system, and have been stocked in impoundments both within and outside of the Mary River system. The species is stocked in Lake Cressbrook by the Toowoomba and District Fish Stocking Association, representing a stocked population potentially within its historical distribution. Although individuals may attempt to breed, there is no evidence of recruitment within this stocked population.

Habitat critical to the survival of the species is not specifically identified in the Approved Conservation Advice, however is likely to include waterways within its natural distribution that provide suitable conditions to trigger and support spawning and subsequent recruitment of new generations. However, there is no evidence to suggest that the population stocked in Lake Cressbrook can produce self-sustaining populations.

A detailed assessment of significance for the greater glider is provided in Attachment 2, Section 1.1.6, pp.29.

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

Spectacled monarch (Symposiachrus trivirgatus)

Impact

The spectacled monarch may be impacted through the clearance of habitat, including remnant and regrowth eucalypt woodlands, open forests, wet eucalypt forest, and rainforest and scrubs. The proposed action would remove approximately 106 ha of potential habitat for the species. However, potential habitat for the species is abundant outside of the area of the proposed action. Further, the clearance for the proposed action is below the threshold of 210 ha as defined by DotE as likely to result in a significant impact for this migratory bird.

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It is considered that the proposed action will not result in a significant residual impact on the spectacled monarch. A detailed assessment of significance for the spectacled monarch is provided in Attachment 2, Section 1.2.1, pp.32.

Migratory species

Satin flycatcher (Myiagra cyanoleuca)

Impact

The stain flycatcher may be impacted through the clearance of habitat, including remnant and regrowth eucalypt woodlands, open forests, wet eucalypt forest, and rainforest and scrubs. The proposed action would remove approximately 106 ha of potential habitat for the species. Further, the clearance for the proposed action is below the threshold of 440 ha as defined by DotE as likely to result in a significant impact for this migratory bird.

It is considered that the proposed action will not result in a significant residual impact on the spectacled monarch. A detailed assessment of significance for the spectacled monarch is provided in Attachment 2, Section 1.2.2, pp.36.

Migratory species

Rufous fantail (Rhipidura rufifrons)

Impact

The rufous fantail may be impacted through the clearance of habitat, including remnant and regrowth eucalypt woodlands, open forests, and wet eucalypt forest. The proposed action would remove approximately 106 ha of potential habitat for the species. Further, the clearance for the proposed action is below the threshold of 340 ha as defined by DotE as likely to result in a significant impact for this migratory bird.

It is considered that the proposed action will not result in a significant residual impact on the rufous fantail. A detailed assessment of significance for the rufous fantail is provided in Attachment 2, Section 1.2.3, pp.38.

Migratory species

Sharp-tailed sandpiper (Calidris acuminata)

Impact

The sharp-tailed sandpiper may be impacted through the disturbance of small pockets of shallower, lower gradient habitats which occur at the edge of Lake Cressbrook, although it is noted that these areas of the lake are largely unimpacted by the project. Indirect impacts could arise from the more regular fluctuations in water levels once the project is operational, which at shallower profile habitats would be more pronounced. Assessment of the habitat has considered that Lake Cressbrook is however unlikely to constitute an important habitat for the sandpiper.

It is considered that the proposed action will not result in a significant residual impact on the sharp-tailed sandpiper. A detailed assessment of significance is provided in Attachment 2, Section 1.2.4, pp.40.

Migratory species

Red-necked stint (Calidris ruficollis)

Impact

The red-necked stint may be impacted through the disturbance of small pockets of shallower, lower gradient habitats which occur at the edge of Lake Cressbrook, although it is noted that these areas of the lake are largely unimpacted by the project. Indirect impacts could arise from the more regular fluctuations in water levels once the project is operational, which at shallower profile habitats would be more pronounced.

Lake Cressbrook is likely to provide some resting/dispersal opportunities for the bird, however is unlikely to offer substantial foraging or roosting habitats. More productive aquatic habitats such as shallower profile palustrine and estuarine wetlands in broader Southeast Queensland are more likely to represent important habitat for the red-necked stint. It is therefore considered that Lake Cressbrook is unlikely to constitute an important habitat for the sandpiper.

It is considered that the proposed action will not result in a significant residual impact on the red-necked stint. A detailed assessment of significance is provided in Attachment 2, Section 1.2.5, pp.42.

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Migratory species

Latham's snipe (Gallinago hardwickii)

Impact

The Latham's snipe may be impacted through the disturbance of small pockets of shallower, lower gradient habitats which occur at the edge of Lake Cressbrook, although it is noted that these areas of the lake are largely unimpacted by the project. Indirect impacts could arise from the more regular fluctuations in water levels once the project is operational, which at shallower profile habitats would be more pronounced.

Lake Cressbrook is likely to provide some resting/dispersal opportunities for the bird, however is unlikely to offer substantial foraging or roosting habitats to the extent it could be considered important habitat. More productive aquatic habitats such as shallower profile palustrine and estuarine wetlands in the broader area are more likely to represent important habitat for the Latham's snipe.

It is considered that the proposed action will not result in a significant residual impact on the Latham's snipe. A detailed assessment of significance is provided in Attachment 2, Section 1.2.6, pp.44.

Migratory species

White-throated needletail (Hirundapus caudacutus)

Impact

The white-throated needletail may be impacted through the clearance of habitat, including remnant and regrowth eucalypt woodlands, open forests, and wet eucalypt forest. No significant impact thresholds have been determined for this bird.

The proposed action would remove approximately 106 ha of potential roosting and foraging habitat for the white-throated needletail. While it is conceivable that the Toowoomba, Somerset and broader Southeast Queensland regions form part of an ecologically significant proportion of this species' population, it is considered that foraging airspace and potential roosting habitat for the species is abundant outside of the impact area as a result of the proposed area. Furthermore, there is contiguous habitat for this species in all directions of the project area.

It is considered unlikely that there will be significant residual impact on the white-throated needletail. A detailed assessment of significance for the spectacled monarch is provided in Attachment 2, Section 1.2.7, pp.46.

Migratory species

Black-faced monarch (Monarcha melanopsis)

Impact

The black-faced monarch may be impacted through the clearance of habitat, including remnant and regrowth eucalypt woodlands, open forests, wet eucalypt forest, and rainforests and scrubs.

The proposed action would remove approximately 106 ha of potential foraging habitat, however will not interfere with potential breeding habitat for the bird. While it is likely that the Toowoomba, Somerset and broader Southeast Queensland regions form part of an ecologically significant proportion of this species' population, there is no important habitat (namely rainforest and wet sclerophyll forest especially in sheltered gullies and slopes with a dense understorey of ferns and/or scrubs) within the area of the proposed area.

It is considered unlikely that there will be significant residual impact on the black-faced monarch. A detailed assessment of significance for the spectacled monarch is provided in Attachment 2, Section 1.2.8, pp.49.

Migratory species

Eastern osprey (Pandion cristatus)

Impact

The eastern osprey may be impacted through disturbance of roosting and breeding habitat along the wetted perimeter of Lake Cressbrook, as well as the potential roosting and breeding habitat in adjoining vegetation. Foraging habitat is expected to remain largely unimpacted by the project, though potential indirect impacts remains with the more regular fluctuations in water levels once the project is operational. It is noted though that the foraging and roosting habitat, as well as the potential

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breeding habitat is considered marginal and therefore the project is not expected to impact on important habitat for the eastern osprey.

It is considered unlikely that there will be significant residual impact on the eastern osprey. A detailed assessment of significance for the species is provided in Attachment 2, Section 1.2.9, pp.51.

Migratory species

Marsh sandpiper (Tringa stagnatilis)

Impact

The marsh sandpiper may be impacted through the disturbance of small pockets of shallower, lower gradient habitats which occur at the edge of Lake Cressbrook, although it is noted that these areas of the lake are largely unimpacted by the project. Indirect impacts could arise from the more regular fluctuations in water levels once the project is operational, which at shallower profile habitats would be more pronounced.

Lake Cressbrook is likely to provide some resting/dispersal opportunities for the bird, however is unlikely to offer substantial foraging or roosting habitats to the extent it could be considered important habitat. More productive aquatic habitats such as shallower profile palustrine and estuarine wetlands in the broader area are more likely to represent important habitat for the marsh sandpiper.

It is considered that the proposed action will not result in a significant residual impact on the marsh sandpiper. A detailed assessment of significance is provided in Attachment 2, Section 1.2.10, pp.53.

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

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

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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

Searches of the EPBC Act Protected Matters database (DAWE 2021), Queensland WildNet database (DES 2021) and Atlas of Living Australia (ALA 2021) identified the potential occurrence of 30 Endangered, Vulnerable or Near Threatened (EVNT) flora species and 51 ENVT fauna species in the vicinity of the Big T PHES project site.

Based on the habitat available and species records in proximity to the project site 15 species listed under the EPBC Act have potential to occur within the project area:

- hairy-joint grass (Arthraxon hispidus) – Vulnerable;
- three-leaved Bosistoa (Bosistoa transversa) – Vulnerable;
- stream clematis (Clematis fawcettii) – Vulnerable;
- cockspur flower (Coleus torrenticola) – Endangered;
- leafless tongue-orchid (Cryptostylis hunteriana) – Vulnerable;
- Grevillea quadricauda – Vulnerable;
- tall velvet sea-berry (Haloragis exalata subsp. velutina) – Vulnerable;
- Leionema obtusifolium – Vulnerable;
- wandering pepper-cress (Lepidium peregrinum) – Endangered;
- macadamia nut (Macadamia integrifolia) – Vulnerable;
- Paspalidium grandispiculatum – Vulnerable;
- Mt Berryman Phebalium (Phebalium distans) – Critically Endangered;
- Austral cornflower (Rhaponticum australe) – Vulnerable;
- scrub turpentine (Rhodamnia rubescens) – Critically Endangered;
- native guava (Rhodomyrtus psidioides) – Critically Endangered; and
- blotched sarcochilus (Sarcochilus weinthalii) – Vulnerable.

None of the above species were recorded during vegetation surveys or targeted flora surveys of the project area.

Sixteen Weeds of National Significance (WoNS) were recorded from the project area.

Four fauna species listed under the EPBC Act were recorded from the project site:

- koala (Phascolarctos cinereus) – Vulnerable;
- greater glider (Petauroides volans) – Vulnerable;
- brush-tailed rock-wallaby (Petrogale penicillata) – Vulnerable; and
- white-throated needletail (Hirundapus caudacutus) – Vulnerable.

In addition, the grey-headed flying-fox (Pteropus poliocephalus), listed as Vulnerable under the EPBC Act, is likely to utilise the project area on occasion (during mass flowering events), despite not being detected during the seasonal surveys.

The Endangered (EPBC Act) Mary River cod (Maccullochella mariensis) and Critically Endangered (EPBC Act) silver perch (Bidyanus bidyanus) are stocked in Lake Cressbrook by the Toowoomba and District Fish Stocking Association (DAF 2021), representing artificially sustained (completely reliant on stocking) populations outside of their natural distributions.

Potential impact from the Project to all MNES as identified through Protected Matters Search Tool is described in Attachment 3, pp.B1-B15. Further, an assessment of the likelihood of each species identified during desktop surveys occurring at the project site is included in Attachment 2, pp.5-54.

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

The proposed action is located within the Lower Cressbrook Creek, Oaky Creek, and Lake Cressbrook catchments, regulated by Water Plan (Moreton) 2007. According to the Queensland Wetlands Mapping Database, there are a number of waterways within the broader project area, with the majority occurring as (Strahler) stream order 1 and 2 waterways draining the surrounding slopes. The most notable waterways include:

- five waterways of stream order 3 (unnamed waterways),
- one waterway of stream order 4 (Little Oaky Creek), and
- two waterways of stream order 5 (Cressbrook Creek and Crows Nest Creek).

The proposed new upper reservoir is located on freehold land in an elevated area adjacent to Lake Cressbrook. The site partially intersects the Lake Cressbrook catchment as well as the catchments of intermittent headwaters of Oaky Creek.

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

Lake Cressbrook is impounded by Cressbrook dam, constructed in 1983. The lake has a surface area of 517 ha at full supply, with a total capacity of 81,842 ML. The storage has a catchment of 320 km2, which includes the Perseverance Dam located 10 km upstream. Lake Cressbrook has suffered from water quality issues including turbidity and algal blooms.

The Cressbrook Dam, along with Cooby and Perseverance Dams are the main water supplies for the Toowoomba region. Supplementary water is fed from Wivenhoe Dam (owned by SEQwater) into the Lake Cressbrook via a 38 km pipeline owned by TRC. The interconnection provides security of supply to TRC when the rainfall in the dam catchments is insufficient to maintain the region's needs.

Water balance modelling shows that the project will operate within the current water supply, meeting all downstream environmental flow objectives and will not increase current water abstractions under the Water Plan. An initial filling of up to 7 GL will be required at the commencement of the project's operation. During operation, it is expected that there will be minimal net water loss from the system as the upper reservoir would be lined and only capture direct rainfall. Water will be recirculated to and from Lake Cressbrook. It will cover small areas of the headwaters of a number of intermittent streamlines that ultimately contribute flood waters to the Wivenhoe catchment. The additional 7 GL capacity afforded by the upper reservoir has the potential to improve the security of water supply for the catchment that the dams currently service.

The project is proposed to be operated such that the water level stays within the current normal minimum operating level and full supply level of Lake Cressbrook. The operation of the project will result in more frequent water level changes in the lake, which may have the potential to cause erosion and resuspension of shoreline sediments leading to increased turbidity and decreased water quality. However, conceptual Computation Fluid Dynamics (CFD) modelling undertaken by Water Modelling Solutions in 2021 indicates that velocities within the reservoir are unlikely to be significant and operation of the proposed Big T PHES would result in destratification of temperature and dissolved oxygen in Lake Cressbrook. Destratification would disrupt the ability of algal blooms to form. Data collected during monthly water quality monitoring will be used to validate the model.

Whilst the Moreton Bay Ramsar Wetland lies downstream of the development site, it is unlikely that the proposal would affect these wetlands as it lies within a very small part of the Moreton Plan area; operates within the provisions of the current Water Plan; there are no additional water abstractions post initial filling; and operations may lead to improvements in water quality within and downstream of Lake Cressbrook.

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

SOILS

According to the State Regional Ecosystem framework in Queensland, the following Land Zones occur within the project area:

- Land Zone 3 – which includes (for the broader State) recent Quaternary alluvial systems, including closed depressions, paleo-estuarine deposits currently under freshwater influence, inland lakes and associated wave built lunettes;
- Landzone 11 – metamorphosed rocks, forming ranges, hills and lowlands;
- Landzone 12 – Mesozoic to Proterozoic igneous rocks, forming ranges, hills and lowlands;

Soils mapping at the 1:2 million scale by CSIRO (and various other groups) (BRS 1991) identifies tenosols and sodosols as the primary soil groups for the Project area.

VEGETATION

A search of the EPBC Act Protected Matters database (DAWE 2021) identified six Threatened Ecological Communities (TECs) listed as Endangered under the EPBC Act potentially occurring in the vicinity of the Big T PHES project area. Based on Queensland Regional Ecosystem (RE) mapping only the Lowland Rainforest of Subtropical Australia TEC has potential to occur within the project area. The Lowland Rainforest of Subtropical Australia TEC (Critically Endangered) is associated with RE 12.11.1 which State RE mapping recorded as part of a 0.1ha patch within the ecological survey study area. Field survey verified that the mapped RE 12.11.1 was RE 12.3.7 and RE 12.11.8 neither of which is not associated with the Lowland Rainforest of Subtropical Australia TEC.

The project area constitutes a range of vegetation communities which vary with position in the landscape and, to a lesser degree, soils, previous management, and fire. Due to broadscale clearing, fire history or heavy logging (in the more timbered country at higher elevations), all vegetation within the Study area originates from regrowth and there are few trees that could be considered old growth. Recent fires (November 2019) have caused significant damage to many areas within the Study area, with some locations having experienced a complete loss of canopy.

At lower elevations, on both granite and metamorphic derived soils, the dominant vegetation is Queensland blue-gum

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(Eucalyptus tereticornis) and narrow-leaved ironbark (E. crebra) dominated woodland. These ecosystems persist to the bottoms of the gullies, with brush box (Lophostemon confertus) dominating some areas. The communities range from sparse regrowth open woodland to sparse remnant woodland.

A riparian community dominated by Queensland blue-gum and river oak (Casuarina cunninghamiana) occurs on the minor alluvial creeks that have not been submerged by Cressbrook dam. These areas are in poor condition due to weed infestation and recent fire damage.

At higher elevations, spotted gum (Corymbia citriodora subsp. variegata) on metamorphic rises dominates and is in average to good condition, with a largely intact canopy, despite experiencing high fire disturbance. A considerable portion of the higher country is dominated by gum-topped box (Eucalyptus moluccana) open forest. This vegetation is in good to excellent condition with little canopy damage from the fires, likely due to the overall height of the canopy. This community contains few old growth trees and appears to have been heavily logged in past years.

A detailed description of the vegetation occurring on the Big T PHES project area is contained in Attachment 1, Section 5.2, pp.76.

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

There are no outstanding natural features or other important/unique values relevant to the project site.

There are however four protected areas within proximity of (but not within) the project site, including:

- Pine Cliffs Nature Reserve, located adjacent to the north-east boundary of the project area;
- Crows Nest National Park, located 500 m to the south;
- Deongwar State Forest, directly to the east; and
- Pechey State Forest, 5 km to the south.

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

Regulated vegetation under the Vegetation Management Act 1999, and shown on the regulated vegetation map (version 5.03), is an MSES. The MSES State mapping identifies Category B (Endangered and Of Concern RE) and Category C (Endangered and Of Concern High Value Regrowth) regulated vegetation within the Study area.

Approximately 305.0 ha of Category B and 417.3 ha of Category C MSES regulated vegetation are mapped by the State within the Study area. The field survey refined the boundaries of remnant vegetation and has mapped 493.8 ha of Of Concern RE and 435.7 ha of Of Concern regrowth.

The project area constitutes a range of vegetation communities which vary with position in the landscape and, to a lesser degree, soils, previous management, and fire. Due to broadscale clearing, fire history or heavy logging (in the more timbered country at higher elevations), all vegetation within the Study area originates from regrowth and there are few trees that could be considered old growth. Recent fires (November 2019) have caused significant damage to many areas within the Study area, with some locations having experienced a complete loss of canopy.

A detailed description of the vegetation occurring on the Big T PHES project area is contained in Attachment 1, Section 5.2, pp.76.

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

The project is located across mixed topography. The proposed upper reservoir is situated on a comparatively flat area approximately 530m above sea level. The area forms a high node, with the hill face falling steeply in a southwest direction to Lake Cressbrook.

Cressbrook Dam is situated at an elevation of approximately 280m above sea level. The terrain in proximity to the dam and along the Sebastapool Road corridor to the west is generally flat or gently inclined. The area to the northeast rises sharply in some locations in association with Mount Sevastopol.

Broadly speaking, areas south of Sebastapool Road are generally steeper compared to areas north of the road. The steep terrain falls to Cressbrook Creek that sits within a valley, and runs in an east-west direction from Lake Cressbrook through the Valley of Diamonds within the Crows Nest National Park.

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

Much of the project area has been subject to broadscale clearing, fire history or heavy logging (in the more timbered country at higher elevations). Fires in November 2019 caused significant damage across the project area, particularly the properties hosting the upper reservoir as well as supporting infrastructure, with some locations having experienced a complete loss of canopy.

Parts of the riparian areas of Lake Cressbrook that are dominated by Queensland blue-gum and river oak which have not

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been submerged by Cressbrook Dam are in poor environmental condition due to weed infestation as well as fire damage. Eighteen Weeds of National Significance (WoNS) and numerous invasive fauna species were recorded from the project area during field surveys.

Some of the woodlands in the higher elevations of the project area are generally in good environmental condition, having mostly intact canopy despite high fire disturbance. A considerable portion of the vegetation in the higher country is also in good to excellent condition with little canopy damage from the fires, likely due to the overall height of the canopy. However, the community contains few old growth trees and has been heavily logged in the past years.

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

There are no Commonwealth Heritage Places or other places recognised as having heritage values that are relevant to the Project site or the immediate surrounds.

3.9 Describe any Indigenous heritage values relevant to the project area

A preliminary Aboriginal and cultural heritage due diligence assessment, including a site verification exercise, has been completed. As part of the assessment, review of the Aboriginal Cultural Heritage Database and Register of the Department of Aboriginal and Torres Strait Islander Partnerships was undertaken and confirmed that there are no previously recorded Aboriginal cultural heritage sites or registered places within 500m of the Project site. There is also no registered Aboriginal party, Cultural Heritage body, or cultural heritage management plans over the Project area. The due diligence assessment is included in Attachment 4. Attachment 4 is withheld from publication due to cultural sensitivity reasons.

Further to the initial due diligence assessment, further desktop screening was undertaken for the remainder of the project site. Database searches of the Queensland Department of Aboriginal and Torres Strait Islander Partnership's Cultural Heritage Database and Register reveal no previously recorded Aboriginal cultural heritage within the proposed transmission interconnection route corridor or switchyard area (Lot 10) for the Project (search results attached). The closest Aboriginal cultural heritage site is a stone artefact scatter near the shore of Lake Cressbrook approximately 1,000 m south of the proposed transmission interconnection route corridor and 6,750 m east of the proposed switchyard. The search report is contained in Attachment 5. Attachment 5 is withheld from publication due to cultural sensitivity reasons.

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

The Project is located across three parcels which are wholly freehold tenure, as well as the road reserves of Sebastapool and Three Mile Roads.

Three parcels which share a boundary with Lot 2 are of 'Profit a Prendre', indicating secondary interest on those three parcels. Land of 'state forest' tenureship, belonging to the Deongwar State Forest, adjoins the project parcels to the south and east. While it does not directly adjoin the Project area, the Crows Nest National Park is situated on tenure identified as 'nature park'.

An easement runs north-south along the western boundary of Lot 10 for the Feeder 831 transmission line. The remaining area of the lot is freehold.

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

The existing land use within the project site is mixed. The property that is proposed to host the upper reservoir is currently used as grazing land. The proposed action will result in permanent change in use of the areas which will be disturbed for construction of the infrastructure, however it is anticipated that during operation of the Project, some grazing activity can be re-introduced.

The proposed lower reservoir, Lake Cressbrook, is an urban water supply owned and managed by Toowoomba Regional Council. It is also a publicly accessible recreation facility. Access to Lake Cressbrook will continue during the construction and operation of the Project.

Some supporting infrastructure, such as tunnel access roads, will be situated on a property that is owned by Toowoomba Regional Council.

The transmission line will be located underground along the road reserves of Sebastapool and Three Mile Roads; subsequently the road will continue its present use during the operation of the Project. Some disturbance during construction is expected.

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 design, construction and operation of the Big T PHES will implement a hierarchy of avoid, minimise, restore and offset to mitigate impacts to MNES. This mitigation hierarchy has been applied to initial project design to support feasibility assessment (current project stage) and will continue to be applied to detailed design of the project as well as its construction and operation.

The transmission line will be undergrounded within existing disturbed road reserves from the project site to the substation avoiding the clearance of vegetation, flora and fauna habitat. Pending confirmation of suitable sub-ground conditions, the proponent also intends to underground water conveyances connecting the two reservoirs to avoid clearance associated with surface penstocks. Where it is not possible to underground all of the water conveyances, to minimise clearance the proponent will adopt a hybrid approach for the water conveyances, including an approach channel from the upper reservoir to a short section of surface penstocks, with the remaining located underground.

Where vegetation, flora and fauna habitat clearing cannot be avoided impacts will be offset in accordance with relevant policy and guidance including the EPBC Act Environmental Offsets Policy and Queensland Environmental Offsets Policy.

A construction environmental management plan (CEMP) will be prepared that will detail mitigation measures to avoid or minimise environmental impacts during construction of the Big T PHES. The CEMP will detail avoidance and minimisation measures for typical construction impacts such as well as including a range of subplans to provide detailed measures to mitigate key construction environmental risks.

Due to the anticipated impact on koalas, the project will adopt specific measures to avoid and reduce impact on koalas, which will be detailed in a koala management plan. The koala management plan will, at a minimum, include:

- Consider the translocation of koalas prior to commencement of construction by a qualified fauna spotter catcher.
- Retention of koala food trees where possible during vegetation clearing.
- Procedures for managing and reporting sick or injured koalas.
- Onsite traffic management to avoid collisions with koalas.
- Installation of koala proof fencing where required.

An operational environmental management plan (OEMP) will also be prepared and will include operational rules for the Big T PHES to avoid or minimise impacts to water quality in Lake Cressbrook.

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

While the proposed action is likely to have a significant impact on koalas and grey-headed flying fox, the proponent has sought to avoid impacts through the design the project and is committed to continuing to avoid or minimise impacts through detailed design, construction and operation of the proposed Big T PHES. Additionally, the proponent is committing to offsetting impacts to koala’s and grey-headed flying foxes which can’t be avoided, including but not limited to purchase of land in priority areas to rehabilitate and improve the vegetation condition to facilitate the koala. This may also include implementation of stocking regimes, or weed or feral animal control measures. Offsets will be developed in consultation with both Commonwealth and State regulators and in accordance with relevant policy and guidance.

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

The proposed action is likely to have a significant impact on the koala and grey-headed flying fox and is therefore a controlled action.

An assessment of the significance of the impact to all MNES potentially impacted by the project has been provided with this referral.

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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

Yes, the proponent has a satisfactory record of responsible environment management.

The proponent is committed to maintaining a strong environmental management track in line with the construction and operation of the company's other projects within its development portfolio. Specific environmental management frameworks and policies have been developed for the Project and will be revised as further environmental commitments are established during the approvals process. The preliminary Environmental, Social and Governance (ESG) framework for the Project is attached in Attachment 6.

For the design and approvals of this project, the proponent has engaged a number of consultants, including lead consultants which are ISO 14001 accredited and therefore ensuring that the project is designed, including designing of management measures, to best practice standards.

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. No previous proceedings under Commonwealth or State/Territory law.

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

The preliminary Environmental, Social and Governance (ESG) framework for the Project is attached in Attachment 6. BE Power is committed to developing the Project to meet or exceed current best practice environmental management.

A comprehensive environmental management and monitoring program will be developed and implemented for the Project. Management and monitoring measures will be documented in a Construction Environmental Management Plan (CEMP) and an Operational Environmental Management Plan (OEMP) or equivalent. It is anticipated that both plans will contain a range of sub-plans addressing specific requirements.

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

BRS Digital Atlas of Australian Soils 1991

Reliability

All reference sources utilised are considered sufficiently robust and reliable for the purpose of use, and in assisting the overall consideration of whether the action is likely to cause significant impacts to MNES.

Uncertainties

There is some uncertainty regarding mapping and species search tools. Site surveys were completed to provide data to inform determination of whether the project is likely to cause significant impacts to MNES.

Reference source

Big-T Pumped Hydropower Energy Storage – Baseline Ecological Surveys. Report by DPM Enviros ciences.

Reliability

All reference sources utilised are considered sufficiently robust and reliable for the purpose of use, and in assisting the overall consideration of whether the action is likely to cause significant impacts to MNES.

Uncertainties

There is some uncertainty regarding mapping and species search tools. Site surveys were completed to provide data to inform determination of whether the project is likely to cause significant impacts to MNES.

Reference source

Department of Agriculture, Water and the Environment (DAWE) 2021, Species Profile and Threats Database, viewed 1-9 October 2021, http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.

Department of Agriculture, Water and the Environment (DAWE) 2021, Register of Critical Habitat, Department of Agriculture, Water and the Environment, viewed 27 September 2021, https://www.environment.gov.au/cgi-bin/sprat/public/publicregisterofcriticalhabitat.pl.

Reliability

All reference sources utilised are considered sufficiently robust and reliable for the purpose of use, and in assisting the overall consideration of whether the action is likely to cause significant impacts to MNES.

Uncertainties

There is some uncertainty regarding mapping and species search tools. Site surveys were completed to provide data to inform determination of whether the project is likely to cause significant impacts to MNES.

Reference source

Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) 2012, Approved Conservation Advice for Phascolarctos cinereus (combined populations in Queensland, New South Wales and the Australian Capital Territory), DSEWPC, Canberra, http://www.environment.gov.au/biodiversity/threatened/species/pubs/197-conservation-advice.pdf. In effect under the EPBC Act from 02-May-2012.

Reliability

All reference sources utilised are considered sufficiently robust and reliable for the purpose of use, and in assisting the overall consideration of whether the action is likely to cause significant impacts to MNES.

Uncertainties

There is some uncertainty regarding mapping and species search tools. Site surveys were completed to provide data to inform determination of whether the project is likely to cause significant impacts to MNES.

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Reference source

Department of the Environment (DotE) 2013a, Matters of National Environmental Significance; Significant Impact Guidelines 1.1. Environment Protection and Biodiversity Act 1999, DotE, Canberra.

Reliability

All reference sources utilised are considered sufficiently robust and reliable for the purpose of use, and in assisting the overall consideration of whether the action is likely to cause significant impacts to MNES.

Uncertainties

There is some uncertainty regarding mapping and species search tools. Site surveys were completed to provide data to inform determination of whether the project is likely to cause significant impacts to MNES.

Reference source

Department of the Environment (DotE) 2013b, Conservation Advice Bidyanus bidyanus (silver perch). Department of the Environment, Canberra, http://www.environment.gov.au/biodiversity/threatened/species/pubs/76155-conservation-advice.pdf. In effect under the EPBC Act from 21-Dec-2013.

Department of the Environment (DotE) 2015a, Draft referral guideline for 14 birds listed as migratory species under the EPBC Act, DotE, Canberra.

Department of the Environment (DotE) 2015b, Wildlife Conservation Plan for Migratory Shorebirds. DotE, Canberra, http://www.environment.gov.au/biodiversity/publications/wildlife-conservation-plan-migratory-shorebirds-2016. In effect under the EPBC Act from 15-Jan-2016.

Department of the Environment (DotE) 2014, EPBC Act Referral Guidelines for the vulnerable koala (combined populations of Queensland, New South Wales and the Australian Capital Territory), DotE, Canberra.

Reliability

All reference sources utilised are considered sufficiently robust and reliable for the purpose of use, and in assisting the overall consideration of whether the action is likely to cause significant impacts to MNES.

Uncertainties

There is some uncertainty regarding mapping and species search tools. Site surveys were completed to provide data to inform determination of whether the project is likely to cause significant impacts to MNES.

Reference source

Threatened Species Scientific Committee (TSSC) 2016a, Conservation Advice Petauroides volans greater glider, Department of the Environment, Canberra, Available: http://www.environment.gov.au/biodiversity/threatened/species/pubs/254-conservation-advice-20160525.pdf. In effect under the EPBC Act from 25-May-2016.

Threatened Species Scientific Committee (TSSC) 2016b, Conservation Advice Maccullochella mariensis Mary River cod, Department of the Environment and Energy, Canberra. Available: http://www.environment.gov.au/biodiversity/threatened/species/pubs/83806-conservation-advice-16122016.pdf. In effect under the EPBC Act from 16-Dec-2016.

Reliability

All reference sources utilised are considered sufficiently robust and reliable for the purpose of use, and in assisting the overall consideration of whether the action is likely to cause significant impacts to MNES.

Uncertainties

There is some uncertainty regarding mapping and species search tools. Site surveys were completed to provide data to inform determination of whether the project is likely to cause significant impacts to MNES.

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Section 8

Proposed alternatives

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

Yes ☑ No

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.

Section 9

Person proposing the action

9.1.1 Is the person proposing the action an organisation or business?

☑ Yes ☐ No

Organisation

Organisation name (as registered for ABN/ACN)	The Trustee for BIG T Unit Trust
Business name	
ABN	24518234013
ACN	
Business address	Level 2, 387 Flinders Lane, Melbourne, 3000, VIC, Australia
Postal address	
Main Phone number	0449 056 060
Fax	
Primary email address	scottw@bepower.com.au
Secondary email address	

9.1.2 I qualify for exemption from fees under Regulation 5.23(1)(ii) of the EPBC Regulations 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 Regulation 5.21A of the EPBC Regulations

☐ Yes ☑ No

9.1.3 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

First name	Scott
Last name	Walkem
Job title	Managing Director
Phone	
Mobile	0449 056 060
Fax	
Email	scottw@bepower.com.au
Primary address	Level 2, 387 Flinders Lane, Melbourne, 3000, VIC, Australia
Address	

Declaration: Person proposing the action (To be signed by the person at 9.1.3)

I, SCOTT ALEXANDER WALKEM, 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: 24-12-2021

I, SCOTT ALEXANDER WALKEM, the person proposing the action, consent to the designation of The Trustee of the Big T Unit Trust as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature: ..... Date: 24-12-2021

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 an organisation or business?

☑ Yes ☐ No

Organisation

Organisation name (as registered for ABN/ACN)	The Trustee for BIG T Unit Trust
Business name	
ABN	24518234013
ACN	
Business address	Level 2, 387 Flinders Ln, Melbourne, 3000, VIC, Australia
Postal address	
Main Phone number	0449 056 060
Fax	
Primary email address	scottw@bepower.com.au
Secondary email address	

9.2.2 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

First name	Scott
Last name	Walkem
Job title	Managing Director
Phone	0449 056 060
Mobile	
Fax	
Email	scottw@bepower.com.au
Primary address	Level 2, 387 Flinders Lane, Melbourne, 3000, VIC, Australia
Address	

Declaration: Proposed Designated Proponent

I, SCOTT ALEXANDER WALKEM, 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: 24-12-2021

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 an organisation or a business?

☑ Yes ☐ No

Organisation

Organisation name (as registered for ABN/ACN)	HYDRO-ELECTRIC CORPORATION
Business name	ENTURA
ABN	48072377158
ACN	
Business address	89 Cambridge Park Drive, Cambridge, 7170, TAS, Australia
Postal address	
Main Phone number	03 6245 4500
Fax	
Primary email address	enquiry@entura.com.au
Secondary email address	

9.3.2 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

First name	David
Last name	Procter
Job title	Senior Environmental Consultant
Phone	03 6245 4500
Mobile	
Fax	
Email	david.procter@entura.com.au
Primary address	89 Cambridge Park Drive, Cambridge, 7170, TAS, Australia
Address	

Declaration: Referring party (person preparing the information)

I, David Procter, **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:** 23/12/2021

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.

Appendix A

Attachment

Document Type	File Name
action_area_images	*Footprint_aboveground_dslv_20220221.kmz
supporting_tech_reports	*BigT PHES_Baseline Ecology Report_compressed.pdf
supporting_tech_reports	*BigT PHES_Likelihood of Occurrence.pdf
supporting_tech_reports	*BigT PHES_Assessment of Significance.pdf
supporting_tech_reports	Attachment 1 - BigT PHES_Baseline Ecology Report.pdf
supporting_tech_reports	Attachment 2 - BigT PHES_Assessment of Significance.pdf
supporting_tech_reports	Attachment 3 - BigT PHES_Likelihood of Occurrence.pdf
supporting_tech_reports	**Attachment 4 - Big T_Draft Cultural Heritage Due Diligence_June2021.pdf
supporting_tech_reports	**Attachment 5 - Desktop heritage screens.pdf
supporting_tech_reports	Attachment 8 - Big T PHES - Above ground infrastructure.pdf
corp_env_policy_docs	Attachment 6 - BE Power_ESG Planning Framework.pdf

* NOT PUBLISHED - SUPERSEDED
** NOT PUBLISHED - SENSITIVE

Appendix B

Coordinates

Area 1
-27.243212689784,152.19071628667
-27.242064904794,152.19091195379
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Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

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

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