Title of Proposal - Kaban Green Power Hub

Section 1 - Summary of your proposed action

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

1.1 Project Industry Type

Energy Generation and Supply (renewable)

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

Neoen Australia Pty Ltd (Neoen) is a renewable energy development company that proposes to develop the Kaban Green Power Hub (the Project), in Kaban, Queensland. The Project is located in Far North Queensland approximately 80 kilometres (km) south-west of Cairns and 6 km north-west of Ravenshoe.
The Project will involve the construction and operation of a wind farm utilising up to 29 wind turbines that will generate a maximum of 160 MW of clean, renewable electricity from the power of the wind resource at the site. Ancillary infrastructure includes:
• Substation
• Battery storage facility
• Four permanent meteorology masts
• Four temporary meteorology masts
• Up to two construction compounds
• Up to three laydown areas
• Up to two operational and maintenance facilities
• Wind turbine foundations
• Access tracks
• Underground cabling.
The Project will connect to the National Energy Market (NEM) into a 275 kilovolt (kV) transmission line, which crosses the western extent of the Study Area. Each wind turbine and the battery storage system will be connected by underground cables to a purpose built substation that will be constructed directly adjacent to the existing transmission line.

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

Area	Point	Latitude	Longitude
Study Area	1	-17.549021788408	145.39204196451
Study Area	2	-17.561624104757	145.39092616556
Study Area	3	-17.561951425964	145.39453105447
Study Area	4	-17.556796048225	145.39487437723
Study Area	5	-17.559741996335	145.41521625039

Area	Point	Latitude	Longitude
Study Area	6	-17.561378613464	145.41538791177
Study Area	7	-17.563178875217	145.41676120279
Study Area	8	-17.571770786924	145.41607455728
Study Area	9	-17.581916900086	145.41701869485
Study Area	10	-17.583880598176	145.43358401773
Study Area	11	-17.590753373519	145.43298320291
Study Area	12	-17.589198840061	145.42096690652
Study Area	13	-17.585353357748	145.39238528726
Study Area	14	-17.580689577949	145.39272861001
Study Area	15	-17.574961964512	145.39702014444
Study Area	16	-17.571688961118	145.39633349893
Study Area	17	-17.571198005502	145.38157062051
Study Area	18	-17.571034353334	145.37684993265
Study Area	19	-17.550331160794	145.37890986917
Study Area	20	-17.550249325297	145.38062648294
Study Area	21	-17.547385059617	145.38105563638
Study Area	22	-17.546812201047	145.38328723428
Study Area	23	-17.548612607596	145.38766459939
Study Area	24	-17.551149513731	145.3883512449
Study Area	25	-17.549349132391	145.39032535074
Study Area	26	-17.549021788408	145.39041118143
Study Area	27	-17.549021788408	145.39195613382
Study Area	28	-17.548939952319	145.39195613382
Study Area	29	-17.549103624459	145.39195613382
Study Area	30	-17.548939952319	145.39178447244
Study Area	31	-17.549021788408	145.39204196451

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 approximately 80 km south-west of Cairns near Kaban and Tumoulin which falls within the Tablelands Regional Council Local Government Area (LGA). The Study Area is bounded by Hollands Road the east and Perrot Road to the north. The closest township to the Project is Ravenshoe, located approximately 6 km to the south-east and a small settlement, Tumoulin, located approximately 3 km to the east.

The existing land use within the Tablelands Regional Council LGA is predominantly rural, characterised largely by agriculture, both livestock and crops and production forestry.

The Study Area and surrounding region is predominantly remnant *Eucalyptus* woodland on basalt or granitic rock hills. The land is managed as freehold land and mostly used for grazing. There is limited clearing of vegetation across the Study Area for access tracks, most of which

occur in proximity to Holland Road, and a power transmission line easement in the west of the Study Area.

Surrounding land uses include:

- Freehold land abuts the Study Area to the east and Lands Lease to the north. More extensive clearing and some cropping is evident on these properties.- State Forest abuts the Study Area on the southern and western boundaries.

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

172 hectares

1.7 Is the proposed action a street address or lot?

Lot

1.7.2 Describe the lot number and title.• Lot 1 on Plan RP735194 – freehold • Lot 2 on Plan RP735194 – freehold • Lot 33 on Plan CWL374 – fr

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?

No

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

No

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

Start date 06/2019

End date 06/2054

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

State

The Project has been assessed under the Queensland *Planning Act 2016* (Planning Act), specifically State Code 23 – Wind Farm Development which is contained in the State Development Assessment Provisions of the Planning Act.

In support of this application, specialised flora and fauna, landscape and visual impact, noise and vibration, transport, stormwater, cultural heritage, electromagnetic interference, aviation advisory and shadow flicker assessments were undertaken to determine the likely impacts of the Project and how these impacts can be managed.

A Development Permit for a Material Change of Use (Wind Farm) application was granted on 18 May 2018.

Refer to Kaban Green Power Hub Matters of Environmental Significance Report, Section 1.3.

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

The Project undertook numerous one-on-one, face-to-face meetings with all landholders approached to take part in the Project, as well as group meetings with all participating landholders.

During the feasibility stage, Project representatives undertook a number of presentations and participated in Q&A sessions with the Tablelands. This included a public community information session was held in Ravenshoe on the 25 October 2017. The Neoen Project team shared details of the proposed Project and answered questions from the public. All members of the public were encouraged to attend.

Further, a Project website, a Project enquiry telephone hotline and email address have been established. Further details of public consultation which has been conducted or is to be conducted can be found in the Draft Community Consultation Report (Attachment 3).

To date, the Project has received broad community support due to the significant time and resources invested by the Project team to provide open and transparent communication. The Project team will continue to conduct best industry practice information, consultation, involvement, collaboration and empowerment throughout the development, construction and operation phases of the Project. A Community Engagement Plan has been developed and will be kept updated as a live document to ensure a flexible and adaptive approach to consultation.

As a long-term owner and operator of their assets, it is important to Neoen to build strong relationships with Indigenous stakeholders. Neoen has been consulting with the Jirrbal People in relation to the Project since early 2018. A preliminary meeting was held with the Aboriginal Cultural Heritage Body, the Wabubadda Aboriginal Corporation, in February 2018. In May 2018, Neoen commenced the statutory process to develop a Cultural Heritage Management Plan (CHMP) under the Aboriginal Cultural Heritage Act (Qld) 2003. Further meetings will be held with Indigenous stakeholders in the coming months to develop a plan to manage and protect cultural heritage within the Study Area.

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 environmental studies that have been conducted to inform this referral include:

Fauna Technical Report, Kaban Green Power Hub, AECOM 2017.

Flora Technical Report, Kaban Green Power Hub, AECOM 2017.

Protected Plants Survey, Kaban Green Power Hub, AECOM 2017.

Protected Plants Impact Management Plan, AECOM 2017.

Storm Water Assessment, Kaban Green Power Hub, AECOM 2017.

Noise and Vibration Impact Assessment, Kaban Green Power Hub, AECOM, 2017.

Kaban Green Power Hub Matters of National Environmental Significance Report, AECOM. 2018.

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

No

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

No

Section 2 - Matters of National Environmental Significance

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

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

• Profiles of relevant species/communities (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;

• Significant Impact Guidelines 1.1 – Matters of National Environmental Significance;

• Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies.

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

No

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

No

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

No

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

Yes

2.4.1 Impact table

Species	Impact
• Aponogeton bullosus: endangered. • Cajanus mareebensis: endangered. • Corymbia rhodops: vulnerable. • Euphorbia carissoides:	Potential impacts to the flora and fauna species identified include: • Removal of native vegetation and fauna habitat comprised of both

Species	Impact
vulnerable. • Grevillea glossadenia: vulnerable. • Homoranthus porteri: vulnerable. • Prostanthera clotteniana: critically endangered. • Triplarina nitchaga: vulnerable. • Ghost bat (Macroderma gigas): vulnerable. • Greater glider (Petauroides volans): vulnerable. • Spectacled flying-fox (Pteropus conspicillatus): vulnerable. • Magnificent brood frog (Pseudophryne covacevichae): vulnerable. • Red goshawk (Erythrotriorchis radiatus): vulnerable. • Squatter pigeon (southern) (Geophaps scripta scripta): vulnerable. • Northern quoll (Dasyurus hallucatus): endangered. • Black-footed tree-rat (north Queensland) (Mesembriomys gouldii rattoides): vulnerable. • Yellow-bellied glider (wet tropics) (Petaurus australis Wet Tropics subspecies): vulnerable. • Masked owl (northern) (Tyto novaehollandiae kimberli): vulnerable. • Koala (Phascolarctos cinereus): vulnerable. • Atherton delma (Delma mitella): vulnerable. The completed likelihood of occurrence assessments is provided in Appendix B of Attachment 2.	remnant and regrowth elements • Noise and vibration impacts to fauna species from construction and operational activities • Sedimentation and erosion from exposed and excavated areas • The introduction or exacerbation of pests and weeds • Mortality to birds and bats through wind turbine collision • Habitat fragmentation and barriers to gene flow • Dust impacts during construction • Edge effects. Further information on the potential impacts of the Project is detailed in Section 5.0 of Attachment 2.

2.4.2 Do you consider this impact to be significant?

No

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

Yes

2.5.1 Impact table

Species	Impact
• Fork-tailed swift (Apus pacificus). • White-throated needletail (Hirundapus caudacutus). • Oriental cuckoo (Cuculus optatus). • Satin flycatcher (Myiagra cyanoleuca). • Latham’s snipe (Gallinago hardwickii). The completed likelihood of occurrence assessments is provided in Appendix B of Attachment 2.	Potential impacts to migratory species identified include: • Removal of habitat comprised of both remnant and regrowth elements • Noise and vibration impacts from construction and operational activities • Sedimentation and erosion of waterways and wetlands from exposed and excavated areas • The introduction or exacerbation of pests and weeds

Species	Impact
	• Mortality through wind turbine collision • Habitat fragmentation and barriers to gene flow Further information on the potential impacts of the Project is detailed in Section 5.0 of Attachment 2.

2.5.2 Do you consider this impact to be significant?

No

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

No

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

No

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

No

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

No

2.10 Is the proposed action a nuclear action?

No

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

No

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

No

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

No

Section 3 - Description of the project area

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

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

The Study Area is dominated by remnant *Eucalyptus* woodland and open forests on uplands and highlands with hilly terrain and rocky outcrops present in some areas. Dominant canopy species include *Eucalyptus portuensis* (white mahogany), *Corymbia leichhardtii* (rusty jacket), *Eucalyptus cullenii* (Cullen's ironbark), *Corymbia citriodora* (lemon-scented gum) and *Syncarpia glomulifera* (turpentine tree). A patch of *Melaleuca viridiflora* (broad-leaved paperbark) open woodland exists in the south-east portion of the Study Area and a *Corymbia clarksoniana* (Clarkson’s bloodwood) forest was noted in the north-west. Some exotic flora species were detected during the survey; however the Study Area is largely dominated by native species. The geology is dominated by shallow granitic and rhyolitic soils. The primary land use is cattle grazing which has had varying impacts to the ground and shrub layers of the vegetation communities predominantly dependent on the accessibility to cattle due to the terrain.

A total of 117 flora species were recorded during the survey from 42 families and 86 genera. Families represented by three or more genera included Asteraceae (8), Fabaceae (10), Mimosaceae (3), Myrtaceae (5), Poaceae (14) and Proteaceae (3).

One state-listed threatened flora species was identified within the Study Area; a population of 34 *Plectranthus amoenus* specimens was identified in open woodland on rocky hillslopes, mapped by AECOM as RE 9.12.30a. This species is listed as vulnerable under the Queensland *Nature Conservation Act 1992*. The Project design originally included underground cables in the location of the *Plectranthus amoenus* population, and as such the population would have been disturbed during the construction phase. The design has since been modified to adjust the location of this cabling such that the population of *Plectranthus amoenus* can be avoided. However, large areas of suitable habitat for this species were observed during the field surveys. Therefore, once the detailed design of the Project is completed and areas of impact are confirmed, an Impact Management Plan will be prepared to manage the impacts to this species.

The field survey recorded 125 fauna species comprising 81 bird, 24 mammal, 9 amphibian and 11 reptile species. Habitat connectivity across the Study Area is high, with large portions comprising mature vegetation. Natural corridors and flyways are centralised around drainage lines and creeks, with Evelyn Creek likely affording significant fauna movement in the east-west direction. Vegetation within the Study Area provides dispersal opportunities to surrounding habitat areas, such as those contained within Baldy Hills and the Millstream. The entire Study Area is mapped within a State significant fauna corridor.

Refer to Kaban Green Power Hub Matters of Environmental Significance Report, Section 4.0 and Section 4.1.4.

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

The Study Area is located within the Herbert River Catchment. Waterways within the Study Area include:

- Diddleluma Creek – Headwater drainage features of Diddleluma Creek drain the south east of the Study Area towards the east, joining Diddleluma Creek approximately 2 km downstream. Diddleluma Creek itself enters the Study Area in the north east in the exclusion zone where no Project works will take place. Diddleluma Creek joins Evelyn Creek at the northern boundary.- Evelyn Creek – enters the Study Area briefly to the north in the exclusion zone, and follows the boundary to the west. Downstream, Evelyn Creek joins the Wild River approximately 10 km downstream of the site, and eventually the Herbert River about 35 km downstream of the site.- Oaky Creek – The headwaters to Oaky Creek are in the west of the Study Area, and these drainage features drain to the west. Oaky Creek joins Whelan Creek about 5 km downstream of the site, before joining the Wild River about 13 km downstream of the site.- Archer Creek - The headwaters are in the south of the Study Area, and these drainage features drain to the south, joining Archer Creek several kilometres downstream. Archer Creek joins the Millstream about 14 km downstream of the site, and at the confluence with the Wild River, it becomes the Herbert River.

Stormwater drainage from the Study Area will enter tributaries of Diddleluma, Evelyn, Oaky Creeks to flow to the Wild River, and via Archer Creek to the Millstream. The Study Area is not traversed by the main channels of these creeks but rather many minor drainage features. The Study Area is located on a ridgeline and hence some concentrated flow may occur within these drainage features. Given the location on the ridgeline, flow in the drainage features will typically be restricted to periods of high rainfall and subject to relatively rapid recession once rainfall has ceased.

The catchments in the Study Area are:

- Diddleluma and Evelyn Creeks within the Flaggy Creek catchment- Oaky Creek within the Lower Wild River catchment- Archer Creek within The Millstream catchment.

Due to the rural location of the Study Area, limited existing flood data is available. A high level desktop flood review was conducted utilising data from the DNRM’s Floodcheck web service. This mapping and associated report estimates the potential extent of flooding from a 1% Annual Exceedance Probability (AEP) event and an extreme event that approximates the probable maximum flood. The flood mapping and hydrodynamic modelling is primarily intended for emergency management planning and response purposes but may also be suitable to inform land use planning where existing mapping is limited or non-existent and if the relevant Council or Authority deems it appropriate.

Review of the flood mapping indicates that some parts of the Study Area lie within areas potentially subject to inundation; for example the northeast corner of the site in proximity to Diddleluma Creek. Most of the Project infrastructure is located on or adjacent to a ridgeline, and hence is not likely to be subject to regional flooding. Based on the information presented on Floodcheck, the infrastructure proposed for the site is not likely to be inundated in the 1 % AEP event.

Refer to Kaban Green Power Hub Matters of Environmental Significance Report, Appendix G.

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

Four soil types are mapped within the Study Area:

Friable non-cracking clay or clay loam soils - Dermosols, Ferrosols

Shallow stony soils - Rudosols, Tenosols

Krasnozems of the basalt lava plains

Lithosols (podzolic) of the steep hills and mountains on acid volcanic rocks.

Land zones are categories that describe the major geologies and associated landforms and geomorphic processes of the State of Queensland. The differences between land zones result in marked differences in the function of ecosystems and their associated biodiversity and this is due in part to the effects that geology (lithology, structure, alteration) has on landform, hydrology and landscape processes (geomorphology and soil formation).

The identity and relationship of the geological units to Land Zones (Wilson & Taylor, 2012) is as follows:

Atherton Basalt dominates the north eastern portions of the Study Area. This geology is defined as Land Zone 8: Cainozoic igneous rocks (basalt plains and hills) under the regional ecosystem framework.

Glen Gordon Volcanics dominates the southern and western portions of the Study Area. This geology is analogous with Land Zone 12: Mesozoic to Proterozoic igneous rocks forming ranges, hills and lowlands, under the regional ecosystem framework.

Fifteen vegetation communities were described within the Study Area. These have been classified based on Queensland’s Regional Ecosystems (REs) and area described below:

Riverine wetland or fringing riverine wetland. Casuarina cunninghamiana, Eucalyptus tereticornis, Lophostemon suaveolens, Melaleuca leucadendra, M. fluviatilis, Buckinghamia celsissima, Mallotus philippensis woodland and forest (RE 7.3.26a)

Eucalyptus tereticornis and +/- Casuarina cunninghamiana +/- Melaleuca spp. fringing woodland on channels and levees (RE 9.3.15)

Eucalyptus tereticornis (forest red gum) open forest to tall open forest and woodland. May also include Corymbia intermedia, E. drepanophylla, Lophostemon suaveolens and Allocasuarina torulosa (RE 7.8.7a)

Eucalyptus tereticornis, Corymbia intermedia, E. reducta, Angophora floribunda tall open forest and tall woodland with Allocasuarina torulosa. Uplands and highlands on basalt, of the moist rainfall zone (RE 7.8.8a)

Eucalyptus reducta open forest to woodland. Uplands and highlands on basalt, of the moist rainfall zone (RE 7.8.8b)

Eucalyptus moluccana woodland to open forest. Uplands and highlands on basalt, of the dry rainfall zone (RE 7.8.10b)

Corymbia clarksoniana open forest to woodland on basalt (RE 7.8.19)

Eucalyptus reducta medium open forest and woodland. Uplands and highlands on shallow granitic and rhyolitic soils, of the moist rainfall zone (RE 7.12.27a)

Eucalyptus resinifera and Syncarpia glomulifera open woodland. Uplands and highlands on shallow granitic and rhyolitic soils of the moist rainfall zone (RE 7.12.27c)

Corymbia citriodora, Eucalyptus portuensis, C. intermedia, Syncarpia glomulifera woodland to low woodland top open forest with Callitris intratropica, Acacia calyculata and Xanthorrhoea johnsonii (RE 7.12.30a)

Eucalyptus portuensis and/or E. drepanophylla, +/- C. intermedia +/- C. citriodora, +/- E. granitica open woodland to open forest on uplands on granite (RE 7.12.34)

Floodplain (other than floodplain wetlands). Melaleuca viridiflora woodland. Granite and rhyolite (7.12.60a)

Rock pavement communities of dry rainfall zone with Acacia leptostachya, Eucalyptus lockyeri subsp. exuta, Lophostemon confertus, L. suaveolens, Persoonia falcata, Ficus rubiginosa and Allocasuarina inophloia (RE 7.12.65a)

Eucalyptus shirleyi and/or E. melanophloia and/or Corymbia peltata and/or Callitris intratropica low open woodland on igneous rocks (RE 9.12.4)

Woodland to open forest of Corymbia leichhardtii (yellowjacket) and Eucalyptus cloeziana (Gympie messmate) +/- E. portuensis (white mahogany) +/- C. citriodora subsp. citriodora (lemon-scented gum) +/- E. cullenii (Cullen’s ironbark) +/- Callitris intratropoica (cypress pine) (RE 9.12.30a)

Non-remnant vegetation.

Detailed descriptions of each vegetation community including mapping and calculations for areas of potential impact are presented in Kaban Green Power Hub Matters of Environmental Significance Report, Section 4.2.1.

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

Beyond the conservation significant values identified in Kaban Green Power Hub Matters of Environmental Significance Report, no outstanding natural features occur within the Study Area or in its immediate vicinity.

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

The Study Area covers approximately 1,331 ha, within which 445.9 ha of remnant and non-remnant vegetation may be disturbed. Of this, 348.2 ha is remnant vegetation.

Field surveys recorded one ‘Endangered’ RE and five ‘Of Concern’ REs listed under the Queensland *Vegetation Management Act 1999*, including:

- RE 7.8.19: *Corymbia clarksoniana* open forest to woodland on basalt (Endangered)- RE 7.3.26a: *Casuarina cunninghamiana*, *Eucalyptus tereticornis*, *Lophostemon suaveolens*, *Melaleuca leucadendra*, *Melaleuca fluviatilis*, *Buckinghamia celsissima*, *Mallotus philippensis* riverine wetland or fringing riverine wetland (Of Concern)- RE 7.8.7a: *Eucalyptus tereticornis* open forest, tall open forest and woodland (Of Concern)- RE 7.8.8a: *Eucalyptus tereticornis*, *Corymbia intermedia*, *Eucalyptus reducta*, *Angophora floribunda* tall open forest and tall woodland with *Allocasuarina torulosa*, on basalt (Of Concern)- RE 7.8.8b: *Eucalyptus reducta* open forest to woodland on basalt (Of Concern)- RE 7.12.60a: *Melaleuca viridiflora* woodland on a floodplain (other than floodplain wetlands) (Of Concern).

The ‘Endangered’ RE 7.8.19 has been avoided in the Project design. No EPBC Act-listed ecological communities were identified within the Study Area or are considered likely to occur. Refer to Kaban Green Power Hub Matters of Environmental Significance Report, Section 4.2.1.

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 within the Atherton Tableland, a fertile plateau which is part of the Great Dividing Range in Queensland. The highest point in the vicinity of the Study Area is Mount Fisher (1,385 m Australian Height Datum (AHD)), which is located approximately 15 km east of the Project, in the Malaan Nation Park.

The Study Area is characterised by a number of ridgelines. Generally, the proposed wind turbines are located along these ridgelines to maximise exposure to the wind resource within the area. These ridgelines range in height from 950 m AHD to 1080 m AHD.

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

The Study Area and surrounding region is predominantly remnant Eucalyptus woodland on basalt or granitic rock hills. The primary land use is cattle grazing which has impacted the ground and shrub layer of these communities, however large-scale clearing has not been recently employed.

Detailed assessment of the ecological values within the Study Area can be found in Kaban Green Power Hub Matters of Environmental Significance Report.

3.8 Describe any Commonwealth Heritage Places or other places recognised as having

heritage values relevant to the project area.

In 2017, Neoen engaged the expert cultural heritage consultancy Converge to prepare a Cultural Heritage Assessment for the project site. For the purpose of this study, searches were conducted of the various registers and databases for Aboriginal cultural heritage and historic heritage in or near the Study Area. The study found that there were no registered historic heritage places located in the study area.

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

A search of the Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP) Cultural Heritage Database and Register in August 2018 returned the following Aboriginal Parties for the Study Area:

Jirrbal People #2Jirrbal People #3Jirrbal People #4.

The DATSIP register identified six Indigenous cultural heritage finds within a 1 km buffer of the Study Area (Table 1).

Table 1 Cultural heritage sites for the area

Site ID

Latitude

Longitude

Attribute

Record Date

EM:A45

-17.5825

145.3888

Artefact scatter

Dec 8, 1984

EM:A46

-17.5662

145.3842

Artefact scatter

Marc 15, 1985

EM:A46

-17.5662

145.3842

Artefact scatter

Dec 8, 1984

EM:A47

-17.5472

145.3769

Artefact scatter

Dec 8, 1984

Two registered Aboriginal cultural heritage sites were found within the Study Area. The approved project layout has been designed to avoid this cultural heritage site.

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

The land tenure of the Study Area is freehold. Exceptions to this are:

Road reserves throughout the Study AreaEasement for high voltage electricity transmission line intersecting the Study Area.Surrounding land uses include:Freehold land abuts the site to the north and east. More extensive clearing and some cropping is evident on these properties.State Forest abuts the site on the southern and western boundaries.

The cultural heritage body for the Study Area is the Wabubadda Aboriginal Corporation Registered Native Title Body Corporate. The Study Area is currently subject to one Native Title claim (refer to Table 2).

Table 2 Native Title claim

Claimant

Date

Status

Tribunal Number

Federal Court Number

Jirrbal People #4

9 Feb 2016

Active

QC2015/014

QUD983/2015

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

The Study Area is currently mostly used for grazing.

Section 4 - Measures to avoid or reduce impacts

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

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

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

Noise and vibration

It is noted that there exists the potential for noise impacts to surrounding residents during the construction of the project. Appropriate techniques need to be implemented to minimise these impacts.

Noise mitigation measures

To minimise the impacts of construction noise, the Contractor will prepare a Construction Noise and Vibration Management Plan which outlines the proposed methodology and monitoring procedures to be put in place for the duration of the works. The Construction Noise and Vibration Management Plan may incorporate the following noise mitigations:

Community Noise ConsultationRegular consultation with noise sensitive receptors to provide details of the construction plan and duration of predicted construction noise. For example advising noise sensitive receptors of the duration and activities they can expect (e.g. which turbine locations in their vicinity are having the concrete pads laid, expected time until the construction crews will return to commence installing towers, etc.)Advanced notice of road worksAdvise local councils of planned construction works to assist in complaint managementPreparation of a noise complaints procedure and registerLetterbox drops.Site ManagementLimit construction hours to Monday to Saturday, 6.30am to 6.30pm, where it is practicable to do so. Construction activities undertaken outside of these hours are to be minimised, particularly those that are likely to have some noise impact such as earthworks activitiesThe contractor should keep residents informed of when any noisy construction works will occurWhere practicable, upgrade local roads both before and after the construction of the Project to minimise the effect of heavy vehicle movementsSelection and location of site access roads as far away from noise-sensitive receptors as possible. The contractor shall work closely with landowners who are affected by site roads and ensure minimal disruption to their operationsCareful selection of the main site office and turbine component stockpile to minimize disruption to sensitive receptors.Vehicles and plant should not be left idling unnecessarilyAll engine exhausts should be fitted with suitable and well maintained mufflers/silencersAny noisy fixed plant should be located in a suitable acoustic enclosure away from residential locationsCare should be taken not to drop materials to cause peak noise events, including

materials from a height into a truckMachines that are used intermittently should be shut down in the intervening periods between works, or throttled down to a minimumIt is noted that the construction of the Project will involve progressively moving through the area as various construction activities are undertaken. Regularly moving particularly noisy pieces of equipment through the area during construction where practical can reduce the noise impact duration on surrounding residencesThe reversing of vehicles should be minimised to reduce the noise from reversing signalsTruck operators should ensure that tailgates are cleared and locked at the point of unloadingVehicle warning devices such as horns should not be used as signalling devicesWorksite induction training should be implemented, educating staff on noise sensitive issues and the need to make as little noise as possibleWorkers should avoid shouting and whistlingWhen work is complete, the noise of packing up plant and equipment and departing from the site should be minimised.Equipment ManagementSelection of low noise plant and equipmentEquipment should be well maintained and fitted with adequately maintained silencers which meet the design specificationsSilencers and enclosures should be kept intact, rotating plants should be balanced, loose bolts tightened, frictional noise reduced through lubrication and cutting noise reduced by keeping equipment sharpOnly necessary power should be used to complete the taskOnly necessary equipment should be on siteLoaders and bobcats fitted with articulated buckets should be rubber lined at the contact points to ensure that noise levels are minimised during the release of materials, where practicableResonance should be avoided where possible e.g. changing the speed of machines; andTraffic practice controllers should be used to prevent vehicles and equipment queuing, idling or reversing near noise sensitive receptors.Noise MonitoringMonitoring of construction noise levels should be undertaken in response to complaints where this is considered an appropriate response. Noise measurements are to be conducted in accordance with the requirements of the *Noise Measurement Manual* (DERM 2013) or other equivalent guideline.

Vibration mitigation measures

Based on typical levels of vibration from construction activities, it is expected that dwelling occupants at distances of 200 metres and greater from the works area would not be able to perceive construction vibration; much less the buildings themselves experience vibration levels resulting in damage. Where adverse comment specifically arising from vibration is received after the commencement of construction it is recommended that the following measures be considered:

Vibration levels be measuredIf high levels are recorded:Increasing the distance between offending plant equipmentReplacing offending plant equipment with equipment that does not produce large levels of vibrationBuilding structure surveys

Operational noise and vibration

A Noise and Vibration Impact Assessment (NVIA) was conducted for the construction and operation of the project in general accordance with the requirements of the Queensland Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP) *State Code 23: Wind farm development Planning guideline*.

An environmental noise model of the site was created to predict noise levels at the nearest

sensitive receptors to the project. The noise predictions comply with the project noise limits at all receptors with the conservative baseline night-time noise limits.

It will be required that the wind turbines are properly maintained by the wind farm operator to ensure that the noise emission of the turbines is not adversely affected by turbine wear, resulting in audible tonality. Similarly, should amplitude modulation be detected upon commissioning, the wind farm operator would be required to alter the operating parameters of some turbines to remove this effect.

Compliance measurements will be undertaken at a select number of potentially most affected sensitive receptors following the commissioning of the project. It has been identified that a Noise Management Plan (NMP) will need to be prepared and submitted to DSDMIP prior to construction as part of the conditions of approval should the development be approved. Testing should be undertaken once all noise sources associated with the project are in operating mode, i.e. all turbines have been commissioned and are operating correctly.

Surface Water

Site activities and water-related discharges have the potential to impact on identified surface water environmental values. Potential risks and mitigation measures include:

Potential impact to surface water

Mitigation measures

Discharge of sediments (both air and water-borne) from exposed ground during construction and decommissioning phases resulting in adverse impacts on receiving environment surface water quality.

A construction management plan will be developed for the project which will detail methods for minimising sediment-laden runoff in accordance with Best Practice Erosion and Sediment (BPESC) guidelines International Erosion Control Association (IECA). Water will be used for dust suppression in order to minimise airborne contaminants.

Clearing of riparian vegetation leading to reduced aquatic habitat quality.

The project requires some vegetation clearing. The exact area of vegetation to be cleared will be determined during detailed design of the project however based on the current layout is 98 ha. Placement of infrastructure in vegetated areas will be avoided where possible. Where clearance of vegetation is required, clearance activities would be undertaken in accordance with the site-specific Erosion and Sediment Control Plan (ESCP), which will be prepared as part of an overarching CEMP prior to the commencement of construction.

Discharge of stormwater from the Study Area during operational phase resulting in adverse impacts on receiving environment surface water quality.

Operation phase mitigation measures will be guided by an operational management plan

developed for the project, which will detail methods for minimising sediment loss from the site in accordance with best practice guidelines. Stormwater runoff from the Study Area will be discharged diffusely across the site via vegetated surfaces wherever practical. Post-construction, disturbed areas will be stabilised by the establishment and maintenance of a vegetated groundcover consisting of low-growing grasses. A weed control program will be implemented for the Study Area to remove noxious weeds and reduce further weed invasion. In order to reduce the potential impact of pesticide use, glyphosate-based products, or similar non-residual and non-persistent herbicides, will be used to manage vegetation on-site. This groundcover is expected to both significantly reduce the incidence of impact erosion as well as provide for the additional filtering of suspended solids and biological uptake of nutrients. Consequently, the likelihood that stormwater generated from the Study Area will contain levels of suspended solids significantly greater than baseline existing conditions is low. Stormwater discharging from the Study Area post-development is anticipated to be of a quality that will not impact the surface water receiving environment, which is currently considered to be ‘Moderately Disturbed’ (DEHP, 2013). Specific treatment and/or detention of stormwater for the removal of sediments and gross pollutants prior to the release to the environment are not considered necessary.

Discharge of stormwater from the Study Area during operational phase resulting in adverse impacts on receiving environment surface water geomorphology (e.g. stream bank erosion and scouring) or hydro ecology.

Site drainage works will aim to minimise potential impacts on the existing overland flow paths and stormwater will be discharged diffusely across the site via vegetated surfaces wherever practical. Site drainage works will aim to minimise potential impacts on the existing overland flow paths. Waterway crossings will be built in accordance with the code for accepted development for waterway barrier works. Erosion controls (e.g. rip rap) will be installed where considered necessary.

Although peak flows of stormwater runoff from the project are expected to increase slightly post-development at locations where surfaces are made impervious or less pervious, these increases are not expected to impact the downstream environment for the following reasons:

A very small proportion of the catchment will be subject to development and this runoff is expected to form a very small percentage of peak flow in each receiving watercourse.

The project areas to be developed are spread across the site, and any increases in runoff will be dissipated across the site area.

Mitigation measures such as grassy buffer strips and vegetated table drains will attenuate peak flows.

Additional specific mitigation measures to control stormwater discharge from the site are not considered necessary given the small volume discharged in the context of each receiving catchment. The proposed mitigation measures are considered sufficient to reduce any impacts to stream water quality and geomorphology.

Spills/leaks from chemical (e.g. fuel and oil) storage areas into surface water bodies during construction and decommissioning phases resulting in adverse impacts on receiving

environment surface water quality.

Chemicals such as hydrocarbon materials will be stored in accordance with relevant Australian Standards to ensure that any spillages are contained.

Untreated discharges from on-site waste water treatment facilities during operational phase into surface water environment.

The operations and maintenance facility will have an on-site effluent disposal system in accordance with the Tablelands Regional Council Planning Scheme (TRC 2016) and relevant Australian Standards and statutory requirements. Effluent will be removed from site and disposed in a suitable facility by a licenced operator.

Discharge of stormwater from the Study Area following the decommissioning phase resulting in adverse impacts on receiving environment surface water quality and/or quantity.

Following the decommissioning phase of the project, it is assumed that land use will return to a similar use to pre-development (likely to be grazing).

Mitigation measures are therefore not considered necessary post decommissioning.

Ecology

Vegetation Clearing

While the extent of infrastructure required will mean that impacts on remnant vegetation communities (including potential habitat for MNES flora and fauna species) are unavoidable, there are a range of measures that will be taken to minimise the level of impact from clearing and manage associated impacts. These include:

Pre-clearance surveys will be conducted to identify the presence of threatened flora species and inform detailed design.Following the outcome of pre-clearance, micro-siting will be undertaken during detailed design to avoid or further minimise impacts to ecologically sensitive areas or species.Infrastructure will be designed and constructed to minimise disturbance to riparian zones including avoiding placement of turbines within 50 m of waterways wherever possible.Any specific offsets that are required will be determined subsequent to finalisation of detailed design.A vegetation management plan will be prepared to provide clear guidance on areas to be cleared and retained; methods for clearing; and other relevant environmental protection measures.Areas for clearing will be clearly delineated to avoid inadvertent clearing.Outside of areas that must be disturbed for wind farm activities, where habitat trees can be retained without compromising safety, these will be identified and clearly marked.Habitat features such as felled trees and logs will be considered for relocation to other areas where practical to provide microhabitat.Workers will be made aware of management requirements in induction training and through work instructions.Clearing will be undertaken towards the direction of any adjacent contiguous vegetation that is not to be cleared to ensure connectivity of habitat is not disrupted.Erosion and sediment control measures will be installed and maintained.Dust suppression measures will be utilised to minimise deposition of dust on

adjacent vegetation.

Edge Effects

To minimise edge effects and reduce the potential for fragmentation, the following measures will be implemented:

Clear demarcation of remnant vegetation at the boundary of the clearing footprint that must not be disturbed, to avoid inadvertent clearing and disturbance.Measures associated with weed management (Section 0).

Weed Control

Weed management strategies will be implemented for controlling the spread of weeds. Weed management measures will be incorporated into the site and construction management plans, and will include:

identification of the origin of construction materials, machinery and equipmentvehicle and machinery wash down for materials, machinery and equipment that may be brought on to the sitestaff / operator education programs.A weed management plan will be developed and implemented which will cover the construction and operation periods and will include:management methods to control spread of weed species (including aquatic and semi-aquatic weed species) considered to be Restricted Matters in keeping with regional management practice or Queensland Department of Agriculture and Fisheries pest control prescriptionsprovision of information for Project staff on the identification of Restricted Matters weed species and their dispersal methodsensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on threatened plant species within the Project Site if they are identified (i.e. *Homoranthus porteri*)wash down protocols for any external vehicles or machinery entering and leaving sitemethods for weed eradication from the Study Area in accordance with local best management practice and/or the Queensland Government Pest Fact sheets (DAF, 2016b)promotion of awareness of weed management, by inclusion of weed issues, pictures and procedures into the project’s site induction programmonitoring of the site to identify any new incidence of weeds and pests.

Fauna and Fauna Habitat

Further to mitigation measures which have been developed to reduce impacts from vegetation clearing, the following mitigation measures will be undertaken to minimise the potential impact on fauna.

Micro-siting will be undertaken during detailed design to minimise the potential impact on sensitive fauna habitat including areas of ‘Primary Habitat Known’ for MNES.A fauna management plan will be prepared to provide clear guidance on areas to be cleared and retained; methods for clearing; role of the spotter catcher; and other relevant environmental protection measures.Targeted surveys for magnificent brood frog (*Pseudophryne covacevichae*) will be conducted during optimal conditions between December to May to further detail the extent of habitat and populations on site.The findings from targeted surveys for magnificent brood frog (*Pseudophryne covacevichae*) will be used to inform micro-siting to ensure areas where populations of the species exist are avoided.An erosion and sediment control plan will be

developed to control practices along roads and around infrastructure, which will minimise potential for sedimentation within adjoining conserved habitats. This plan will need to be sufficiently robust to ensure that highly sensitive magnificent brood frog (*Pseudophryne covacevichae*) habitat is not impacted by sedimentation.Any turbine lighting will be minimised, and red lights used to prevent the attraction of insects.Clear no-go zones within the Study Area will be identified and mapped to avoid areas of sensitive vegetation and habitat. This will include areas where magnificent brood frog (*Pseudophryne covacevichae*) is known to occurA suitable clearing buffer will be established around creeks and tributaries to conserve high value fauna habitat and maintain connectivity throughout the Study AreaAn experience ecologist will be engaged to conduct a pre-clearance survey prior to vegetation clearing to identify threatened fauna species and their habitat, and to minimise disturbances to sensitive environmental areas where possibleA database will be created to record injured, sick and dead vertebrate fauna before, during and after construction, and operationA Significant Species Management Program (SSMP) will be prepared where potential breeding habitat for conservation significant fauna is identified and needs to be removed as part of the vegetation clearing processA protocol will be implemented which will involve qualified fauna spotters to be present during vegetation clearing to ensure fauna is not harmed during clearing activitiesA fauna welfare plan will be prepared to address issues arising from bird and bat strike at turbines and overhead powerlines.An adaptive management monitoring program will be developed to document bird and bat mortalities, remove carcasses and assess the effectiveness of controls.

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.

Based on the assessment in Attachement 2, the Project is considered to potentially impact on one MNES, the magnificent brood frog (Pseudophryne covacevichae).

The magnificent brood frog was detected on site and essential habitat for the species is mapped. As such the population on site is considered to be an important population. The loss of habitat and potential sedimentation of seeps and drainage lines may lead to a long-term decrease in the size of this population.

Mitigation measures have been proposed to reduce impacts to populations on site. These include targeted wet season surveys to confirm known locations which may be impacted by the Project. This data will be used during detailed design to ensure infrastructure avoids important populations and clear no-go zones are demarcated. Erosion and sediment controls will also be designed which are sufficiently robust to avoid impacting seeps and drainage lines where the species persists.

Site specific mitigation measures will be documented in a Significant Species Management Plan.

Following the evaluation of MNES against the proposed Project activities, it is considered that the Project has the potential to have a significant impact on one MNES, the threatened magnificent brood frog (Pseudophryne covacevichae). Following the initial development of the layout based on wind resource, the Project has been refined on a number of occasions through an iterative process that has been influenced by a combination of factors including ecological considerations. Through on going micro-siting during the detailed design process, the use of the

mitigation hierarchy and offsets the impact on the magnificent brood frog (Pseudophryne covacevichae) is likely to be reduced such that the Project will not have a significant impact on the species.

Section 5 – Conclusion on the likelihood of significant impacts

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

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

5.1.1 World Heritage Properties

No

5.1.2 National Heritage Places

No

5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)

No

5.1.4 Listed threatened species or any threatened ecological community

No

5.1.5 Listed migratory species

No

5.1.6 Commonwealth marine environment

No

5.1.7 Protection of the environment from actions involving Commonwealth land

No

5.1.8 Great Barrier Reef Marine Park

No

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

No

5.1.10 Protection of the environment from nuclear actions

No

5.1.11 Protection of the environment from Commonwealth actions

No

5.1.12 Commonwealth Heritage places overseas

No

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

Listed threatened species or any threatened ecological communities

The significant impact assessment determined that the Project is unlikely to have a significant impact on all threatened flora species. The Project is considered to potentially impact on one threatened fauna species, the magnificent brood frog (Pseudophryne covacevichae).
The magnificent brood frog was detected within the Study Area and essential habitat for the species is mapped by the Queensland Department of Environment and Science. As such the population on the site is considered to be an important population. The loss of habitat and potential sedimentation of seeps and drainage lines may lead to a long-term decrease in the size of this population.
Mitigation measures have been proposed to reduce impacts to populations on-site. These include targeted wet season surveys to confirm known locations which may be impacted by the Project. This data will be used during detailed design to ensure infrastructure avoids important populations and clear no-go zones are demarcated. Erosion and sediment controls will also be designed which are sufficiently robust to avoid impacting seeps and drainage lines where the species persists. Site specific mitigation measures will be documented in a Significant Species Management Plan.
Through ongoing micro-siting during the detailed design process and the use of the mitigation hierarchy, the impact on the magnificent brood frog (Pseudophryne covacevichae) is likely to be reduced such that the Project will not have a significant impact on the species.

For details on these assessments refer to Kaban Green Power Hub Matters of Environmental Significance Report, Section 5.

Listed migratory species

Significant impact assessments were conducted on five listed migratory species which were considered as potentially occurring within the Study Area. These species are listed below:

- fork-tailed swift (Apus pacificus)

- white-throated needletail (Hirundapus caudacutus)

- oriental cuckoo (Cuculus optatus)

- satin flycatcher (Myiagra cyanoleuca)

- Latham’s snipe (Gallinago hardwickii).

These assessments determined that no significant impacts are expected as a result of Project activities. These assessments can be found in Attachment 2, Section 5.2.

There are no other MNES likely to be impacted by the project. Refer to Kaban Green Power Hub Matters of Environmental Significance Report, Section 5.0, 6.0 and 7.0.

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

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

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

Neoen's aim is to develop environmentally sound projects that produce clean, green energy. Neoen actively takes into account the modification of the surrounding environment and the preservation of local species in developing projects. In Portugal, during the construction of the Seixal power plant, more than a thousand local species of trees and bushes were planted around the project to promote its integration into the local landscape. On the Hornsdale Wind Farm in South Australia, Neoen committed to managing an offset area of 75 hectares to preserve and improve the habitat of the pygmy blue-tongue lizard. Environmental stewardship occurs throughout the development, construction and operation phases of a project's lifecycle. During the design phase, projects are developed to avoid impacts on local flora and fauna as much as possible through careful location selection. Where avoidance of impacts is not possible, a range of mitigation measures are adopted to minimise impacts including micro-siting infrastructure away from areas of high conservation significance, conducting pre-clearance surveys and spotting to protect local fauna, and monitoring impacts through a suite of Management Plans. Neoen takes its environmental responsibilities seriously and conscientiously adheres to conditions of planning and environmental approvals.

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.

Hornsdale Wind Farm, South Australia

In 2013, EPBC approval was granted for the Hornsdale Wind Farm to Investec Bank (Australia) Ltd (Investec) in relation to EPBC referral 2012/6573. In June 2014, Neoen International SAS together with Megawatt Capital Investments Pty Ltd purchased the Hornsdale Wind Farm. On 20 May 2014, consent was granted for the EPBC approval to be transferred to Hornsdale Wind Farm Pty Ltd, and subsequently to Hornsdale Asset Co Pty Ltd in 2015. All three stages of the Hornsdale Wind Farm are now operational.

Bulgana Green Power Hub, Victoria

In June 2015, a decision was made under section 75 of the EPBC Act with respect to EPBC referral 2015/7460 lodged by Enerfin Sociedad de Energia S.L. The referral concerned the

construction and operation of wind turbines and associated infrastructure comprising the Bulgana Wind Farm Pty Ltd. It was determined that this proposed action was not a controlled action. Neoen purchased this project in 2017 and the Bulgana Green Power Hub is currently under construction.

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

Yes

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

Neoen's aim is to develop environmentally and economically sound projects. We recognise that a crucial part of reducing greenhouse gas emissions is to replace fossil fuels with natural, renewable sources of energy such as wind and solar. The addition of batteries to renewable projects helps to mitigate the intermittent nature of renewable sources by allowing excess power generated to be stored and dispatched into the grid during times of peak demand.

Neoen adopts a whole-of-life-cycle approach to managing environmental impacts on our projects. Neoen's Project Management Plan (PMP) summarizes the main tasks and deliverables that are expected from Project Managers for the successful achievement of projects across the development, construction and operations phases. This includes the framework for ensuring that all permits and approvals are complied with at all times.

Managing environmental impacts starts during the design phase of a project. Environmental surveys are conducted to identify any fauna and flora that may be impacted by the project. Neoen's primary aim is to avoid adverse environmental impacts. Where impacts cannot be avoided, mitigation measures are developed to minimise the impact on relevant species. These can include micro-siting infrastructure away from areas of high conservation significance, creating "no-go zones" or implementing monitoring programs for particular species.

The recommendations and requirements in the environmental studies are integrated into the Development Permit for a project. Neoen takes our environmental responsibilities extremely seriously and works with our head contractor to ensure that the roles and responsibilities for fulfilling the conditions of approval are clearly defined. To date, Neoen has not been involved in any proceedings for breach of conditions of an approval or permit.

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

6.4.1 EPBC Act No and/or Name of Proposal.

Hornsdale Wind Farm, South Australia

In 2013, EPBC approval was granted for the Hornsdale Wind Farm to Investec Bank (Australia) Ltd (Investec) in relation to EPBC referral 2012/6573. In June 2014, Neoen International SAS together with Megawatt Capital Investments Pty Ltd purchased the Hornsdale Wind Farm. On 20 May 2014, consent was granted for the EPBC approval to be transferred to Hornsdale Wind Farm Pty Ltd, and subsequently to Hornsdale Asset Co Pty Ltd in 2015. All three stages of the Hornsdale Wind Farm are now operational.

Bulgana Green Power Hub, Victoria

In June 2015, a decision was made under section 75 of the EPBC Act with respect to EPBC referral 2015/7460 lodged by Enerfin Sociedad de Energia S.L. The referral concerned the construction and operation of wind turbines and associated infrastructure comprising the Bulgana Wind Farm Pty Ltd. It was determined that this proposed action was not a controlled action. Neoen purchased this project in 2017 and the Bulgana Green Power Hub is currently under construction.

Section 7 – Information sources

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

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

Reference Source	Reliability	Uncertainties
See Kaban Green Power Hub Matters of Environmental Significance Report, Section 8.	All information relied on in the complication of this document has been sourced from reliable, established sources, such as universities, government agencies, research institutes and consulting firms.	As documented in the relevant reports.

Section 8 – Proposed alternatives

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

8.0 Provide a description of the feasible alternative?

Neoen has undertaken extensive assessments which have determined the Study Area is an ideal location for a wind farm. The assessments concluded the following:

Resource strength: wind mapping techniques were utilised to identify ideal sites for potential wind farms and the Kaban site was identified as one of the best prospects in Queensland.Topography of the site: to better capture stronger winds, wind turbines are placed at elevated heights. The site is ideal for a wind farm development, containing areas of higher terrain.Proximity to existing power infrastructure: ideal wind farm locations have existing power infrastructure in close proximity. The western portion of the site is traversed by high voltage transmission lines, connecting into the National Energy Market (NEM).Proximity to existing access infrastructure: for both construction and operation of a wind farm, site access is an important characteristic for efficiency. The Project site directly adjoins Hollands Road which will allow ease of access for the Project.Separation distances to sensitive receptors: the surrounding area is sparsely populated with the nearest residential dwelling being located approximately 1.2 km from the closest turbine. The closest town of Ravenshoe is located approximately 5 km South-East of the Study Area.Environmental considerations: Following the initial development of the layout based on wind resource, the Project has been refined on a number of occasions through an iterative process that has been influenced by a combination of wind resource, economic, constructability and environmental considerations. The initial layout presented a much larger Project Site area and a key part of refining and reducing the layout was consideration of remnant vegetation and fauna habitat. The layout was then further refined to bring access tracks and collector cables together producing the current Project Site area of 446 ha (formerly 546 ha). This has been undertaken to further demonstrate that impacts to vegetation have been avoided and minimised where possible.

There are no feasible alternatives to the proposed Project.

8.1 Select the relevant alternatives related to your proposed action.

8.27 Do you have another alternative?

No

Section 9 – Contacts, signatures and declarations

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

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

Organisation

9.2 Organisation

9.2.1 Job Title

Project Manager

9.2.2 First Name

Clara

9.2.3 Last Name

Wilson

9.2.4 E-mail

Clara.Wilson@neoen.com

9.2.5 Postal Address

Level 6, 16 Marcus Clarke St
Canberra ACT 2601
Australia

9.2.6 ABN/ACN

ABN

57160905706 - NEOEN AUSTRALIA PTY. LTD.

9.2.7 Organisation Telephone

02 9267 7203

9.2.8 Organisation E-mail

contact@kabangreenpowerhub.com.au

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

Not applicable

Small Business Declaration

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

Signature:..... Date: .....

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

No

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

Person proposing the action - Declaration

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

Signature: cwilson Date: 17/10/2018

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

Signature:..... Date: .....

9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Organisation

9.5 Organisation

9.5.1 Job Title

Project Manager

9.5.2 First Name

Clara

9.5.3 Last Name

Wilson

9.5.4 E-mail

Clara.Wilson@neoen.com

9.5.5 Postal Address

Level 6, 16 Marcus Clarke St
Canberra ACT 2601
Australia

9.5.6 ABN/ACN

ABN

57160905706 - NEOEN AUSTRALIA PTY. LTD.

9.5.7 Organisation Telephone

02 9267 7203

9.5.8 Organisation E-mail

contact@kabangreenpowerhub.com.au

Proposed designated proponent - Declaration

I, Clara Wilson, 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: cwilson Date: 17/10/2018

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

Project Manager

9.8.2 First Name

Clara

9.8.3 Last Name

Wilson

9.8.4 E-mail

Clara.Wilson@neoen.com

9.8.5 Postal Address

Level 6, 16 Marcus Clarke St
Canberra ACT 2601
Australia

9.8.6 ABN/ACN

ABN

57160905706 - NEOEN AUSTRALIA PTY. LTD.

9.8.7 Organisation Telephone

02 9267 7203

9.8.8 Organisation E-mail

contact@kabangreenpowerhub.com.au

Referring Party - Declaration

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

Signature: cwilson Date: 17/10/2018

Appendix A - Attachments

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

1. 60528526_Kaban_MNES report_Final_AppA-E_Optimized.pdf
2. 60528526_kaban_mnes_report_180824_rev_2_final_for_issue_appa-e.pdf
3. 60528526_kaban_mnes_report_180824_rev_2_final_for_issue_appf_part1.pdf
4. 60528526_kaban_mnes_report_180824_rev_2_final_for_issue_appf_part2.pdf
5. 60528526_kaban_mnes_report_180824_rev_2_final_for_issue_appf_part3.pdf
6. 60528526_kaban_mnes_report_180824_rev_2_final_for_issue_appg.pdf
7. 60528526_kaban_mnes_report_180824_rev_2_final_for_issue_part1.pdf
8. 60528526_kaban_mnes_report_180824_rev_2_final_for_issue_part2.pdf
9. am21-n_negotiated_decision_notice.pdf
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