



18 January 2023

The Hon. Tanya Plibersek MP
Minister for the Environment and Water
Department of Climate Change, Energy, the Environment and Water

Attention: [REDACTED]

Dear Minister,

Request for formal variation to the Chalumbin Wind Farm Project (EPBC 2021/8983)

1.0 Introduction

Chalumbin Wind Farm Pty Ltd (CWF) seeks a formal variation to the Chalumbin Wind Farm Project (the Project) (reference EPBC 2021/8983), in accordance with the provisions of s156 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

This request is made due to the changes to the Project layout and design between the original referral of the Project under the EPBC Act in 2021, and the preparation of the Draft Public Environment Report (PER) in November 2022. CWF notes that a request for a variation under s156 of the EPBC Act can be made if the variation is not substantially different from the original referral, and the impacts to MNES are not substantially greater.

Under s5.08 of the EPBC Act Regulations, the following information is required to support a proposal to vary an action under the EPBC Act:

- Details of the proposed variation to the action;
- The reasons for the proposed variation;
- How the impacts of the proposed variation on matters of national environmental significance compare with those of the original proposal;
- If applicable, the impacts of the proposed variation on matters of national environmental significance not considered in the referral or assessment of the original proposal; and
- If applicable, alternatives, mitigation measures and offsets to compensate for additional impacts on matters of national environmental significance.

This letter presents the proposed variation to the Project and seeks to address the five information requirements identified within the EPBC Act Regulations.



2.0 Details of the proposed variation to the action

2.1 Differences between the proposed action at the Referral Stage and the Draft PER Stage

The Project is described within the EPBC Act Referral as a proposed wind farm that consists of up to 95 wind turbine generators (WTGs) and associated infrastructure with a maximum nameplate wind farm generation capacity of 665 MW. The Project footprint described within the EPBC Act Referral is a total of 1,250.26 ha.

The current version of the Project as described within the Draft PER is overall a reduced size and scale that consists of up to 86 WTGs and associated infrastructure with a maximum nameplate wind farm generation capacity of 602 MW. The revised Project footprint as described within the Draft PER is 1,071.1 ha. Furthermore, the Project is presented as two separate stages within the Draft PER – Stage 1 (Wooroora) and Stage 2 (Glen Gordon), with the Project footprint within each stage being broken down into an operational footprint and a temporary disturbance that is subject to rehabilitation post construction (see **Table 2-1**).

Table 2-1 Key Metrics for Stage 1 and Stage 2

PROJECT METRIC	STAGE 1	STAGE 2
Project footprint	606.9 ha	464.2 ha
Operational footprint	65.7 ha	41.5 ha
Temporary disturbance	541.2 ha	422.7 ha

The differences between the Project footprints at the Referral stage and the Draft PER stage are presented spatially in **Figure 2-1**. Spatial files of both Project footprints are also provided with this letter.

The Project has been designed taking into account site constraints and opportunities, and community and stakeholder input. From an original development concept of 200 wind turbines capable of harnessing the economic wind resource, the Project was refined to 95 wind turbines for the referral in July 2021 under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) considerate of constraints and opportunities on the site such as the ecology and cultural heritage values. The Project (in a 94 wind turbine arrangement) received a Development Permit under the *Planning Act 2016* (Qld) from the Department of State Development, Infrastructure, Local Government and Planning (DSDILGP) on 30 June 2022.

Following further studies and stakeholder engagement since that time, the following significant changes have been made:

- Removal of 9 wind turbines (from the Referral's 95), reduction in access tracks by 27 km and relocation of the southern sub-station, which reduces the internal overhead transmission line by 4 km. These changes reduce clearing overall by 5%, and importantly the potential impacts to wet sclerophyll forest are reduced by 31%;
- A significant increase in biodiversity offsets to ensure a net positive impact, including three large areas totalling more than 7,400 ha, primarily located immediately adjacent to the Wet Tropics of Queensland World Heritage Area (WTQWHA). This includes the largest patch of intact wet sclerophyll forest adjacent to the Tully Falls National Park and creates connectivity between Koombaloo National Park and Yourka Reserve Nature Refuge;
- Commitment to avoid ground-disturbing works in the highest rainfall months of January, February and March;



- Consideration of an alternate access via Innot Hot Springs for heavy vehicles in response to concerns from residents along the existing proposed access via Wooroora Road. The feasibility of this alternate access is dependent on ongoing investigations into the load rating of the Herbert River bridge to accommodate heavy vehicles; and
- Consideration of a construction camp in response to concerns from residents in Ravenshoe about potential displacement of the community from affordable housing stock as a consequence of the construction workforce.

2.2 Project Components

The current Project layout and main components are illustrated in **Figure 2-2**, with the proposed Stage 1 and Stage 2 also delineated.

Key project components will include:

- 86 wind turbines are proposed, comprising turbines each up to 7 MW with a total potential total nameplate wind farm generating capacity of 602 MW or 1,985 GWh/annum. Turbine towers will be up to 160 m tall and turbine blades may be as long as 90 m (maximum tip height of 250 m). Each turbine will require a handstand area of 1.5 ha to 2 ha to allow for the turbine foundation, laydown of components and area for crane use. This area will also encompass firebreaks around the turbine foundation. Foundations for turbines such as those proposed typically consist of a large, reinforced concrete slab which is shallow-buried. Piles or anchors may also be adopted depending on the ground conditions at each turbine location. Final foundation design will depend on the turbines selected and detailed geotechnical assessment of each site.
 - Stage 1 consists of 52 wind turbines
 - Stage 2 consists of 34 wind turbines
- A new Stage 1 Powerlink switching station adjacent to the existing 275 kV Powerlink line in the central portion of the Project area, within Wooroora. Stage 2 also contains a potential Powerlink connection substation within Glen Gordon. There will likely be minor storage of oils for components and electrical spares, and the area will be suitably bunded if required. The substation consists of a large “bench” area with an earth grid buried underneath, and high specification drainage and clearances. All the electrical equipment can be installed on this bench. For the transformer, the heaviest infrastructure on the Project, special foundations are installed to ensure the safety and durability of the substation. These areas will be approximately 2 ha.
- Two separate battery energy storage systems (BESS) are proposed proximal to the Powerlink switching stations. A BESS is used to store advanced battery technology linked to inverters and the wider Project. A BESS is used to manage Project output, provide system support and strength capabilities and allow the Project to participate in Frequency Control Ancillary Services (FCAS) and other market services. Depending on the battery technology used, the BESS and associated infrastructure may be mounted on a concrete pad. Underground cables will connect the BESS to the substation. Suitable security fencing will be installed around both the substation and BESS. Subject to the final connection agreement, additional grid support equipment may be required at the Powerlink connection substation and BESS location. This may be in the form of synchronous condensers or reactive plant (statcom, cap banks, etc.). Such equipment would be contained in housing similar to that required for the BESS and substation infrastructure. Collectively, the footprint of these items is expected to be approximately (but not limited to) 2 ha, and included in the broader bench area designated for the switching station and supporting infrastructure.



- Two wind farm collector substations (adjoining the proposed Powerlink switching stations) which will bring together the ≤ 66 kV powerlines from the surrounding wind turbine locations. Here, main transformers will convert the electricity to high voltage (≤ 275 kV). For the transformers, the heaviest infrastructure on the Project, special foundations are installed to ensure the safety and durability of the substation.
- Medium-voltage (≤ 66 kV) overhead and underground powerlines – wind turbines generate at low voltage (approx. 3 kV) and have a transformer to convert into medium voltage (≤ 66 kV). The turbines are then connected in strings of 4-5 turbines per string, and the string is typically buried alongside wind farm access tracks. In order to reduce electrical losses, and to simplify construction, once a few strings are running in parallel they are converted to overhead and run toward the central collector substation where the power is collected and converted to high voltage (≤ 275 kV). These ≤ 66 kV cables are predominantly buried underground next to the wind farm access track alignment.
- High voltage (≤ 275 kV) overhead powerlines – an approximately 13 km overhead line is proposed to connect the collector substations between Stages 1 and 2. This high voltage powerline corridor is proposed to be 80 m wide, accounting for easement width requirements and incorporating firebreaks around poles (once detailed design is undertaken).
- Permanent wind monitoring masts – up to 5 are expected to be installed. These masts are proposed to be located within the supplied Project footprint and require clearing of approximately 2 ha per mast. The base of each mast will consist of a concrete foundation and will be installed for approximately 30 years (for the operational life of the Project).
- Unsealed access tracks – Unsealed access tracks are required to each turbine and supporting infrastructure such as the substation. Initial road design estimates approximately 122 km of access tracks are required, with approximately 20 km of these to be established in areas of existing tracks/roads within the Project area. Where practical existing cleared tracks will be used and upgraded where needed to minimise vegetation clearing and fragmentation. New tracks will also be placed in cleared areas where practical and clearing widths minimised. Watercourse crossings may be of bed level, culvert or bridge type design. Due to the steep terrain across the Project area clearing widths will vary based on earthworks required at key locations. For a track width of 5.5 m, the temporary road construction may extend from less than 25 m to over 100 m depending on the complexity of the terrain and ability to safely construct the required earthworks. The width of an access track corridor is determined due to a combination of:
 - the steepness of the terrain requiring a level of cut and fill to optimise the road layout and minimise slopes to 15 % maximum;
 - inclusion of construction space, and space to bury electrical feeders next to the roads (if practical to do so¹). This minimises clearance for the wider Project, and is undertaken where burying cables does not lead to significant losses;
 - requirement to allow for a large swept path for long components being transported on steep bends;
 - erosion and sediment control infrastructure;
 - paths for construction vehicle movements to achieve safety and operational efficiency;

¹ In some of the more rugged terrain, cabling presents issues through much larger batter requirements. In such locations, the collector systems are proposed as an overhead alignment.



- firebreaks beyond above-ground infrastructure; and
- stockpile areas beyond the working hardstands.
- Areas disturbed for road construction outside of the 5.5 m track width will be rehabilitated following construction in order to ensure a suitably stable profile is maintained. This rehabilitation will include stabilisation of landform, re-spreading of topsoil, and implementation of the Preliminary Rehabilitation Plan (Appendix K of the Draft PER) which will include hydro-seeding, direct seeding and planting out of tube stock.
- Permanent site entrance – the proposed main access to the Project is from the north off Wooroora Road, south of Ravenshoe, where it enters the Wooroora property. Upgrade works within Wooroora Road are likely to be required; this will be subject to further engagement with Tablelands Regional Council to inform the final design and specification of any required upgrades. Any required upgrades are considered to be minor in the context of the broader action, and will be assessed separately at the detailed design stage for their potential to impact any MNES.
 - An alternative optional site entrance is presently being investigated by Ark Energy for the transport of wind turbine component and potentially some or all construction and operational light vehicles movements. This alternative access is via Innot Hot Springs and is currently being investigated for engineering feasibility associated with the existing bridge structure crossing the Herbert River. This alternative option is being investigated following receipt of feedback from Tablelands Regional Council and other stakeholders concerned with potential impacts to the rural-residential community along Wooroora Road.
- Fencing will be installed including required grids and gates in order to appropriately secure access to the wind farm. All fencing will be designed in consultation with the relevant landholder to minimise impact to the operation of their property where practical, and to provide relevant security to both their landholdings and to the wind farm overall (all such fencing is to be within the nominated Project footprint). The Project will have security appropriate for the infrastructure; the final details of which will be discussed and agreed with Tablelands Regional Council;
- Two temporary concrete batching plants are proposed to be established on sites within the Project footprint. These areas will either be rehabilitated post-construction;
- A temporary construction compound/laydown and stockpile area will be located in the north of the Project area near the site entrance in an existing cleared area. This area will be rehabilitated post-construction. Additional laydown is provided for at each turbine location (included in the 1.5 ha-2 ha pad described above). Satellite construction compounds are also proposed in the east, west and south of the Project area to facilitate construction;
- Temporary site offices, workshops, warehouses and amenities (located in the construction compound/laydown areas); and
- Permanent site offices for asset management and operation and maintenance facilities are proposed to be collocated with the northern collector substation and the Powerlink connection substation.

The proposed coordinates for these components are provided in **Table 2-2**. It should be noted that these are subject to feasibility studies and final locations may vary.

Table 2-2 Coordinates of Project Components²

² WTG numbering is from 1 to 109. This is due to various WTGs being removed from the proposed action prior to preparation of the Draft PER. There are 86 proposed WTGs associated with the Project.



PROJECT COMPONENT	LONGITUDE (GDA2020)	LATITUDE (GDA2020)
Wind Turbines		
Stage 1		
WTG 30	145.4444	-17.75221
WTG 31	145.4405	-17.75658
WTG 32	145.4449	-17.75878
WTG 33	145.4485	-17.72829
WTG 34	145.452	-17.73084
WTG 35	145.4546	-17.73485
WTG 36	145.4575	-17.74175
WTG 37	145.4725	-17.72292
WTG 38	145.4718	-17.73156
WTG 39	145.4713	-17.73639
WTG 40	145.4764	-17.74045
WTG 43	145.4646	-17.777
WTG 45	145.471	-17.78559
WTG 47	145.4757	-17.79046
WTG 48	145.4804	-17.79355
WTG 50	145.4865	-17.78562
WTG 51	145.487	-17.77529
WTG 52	145.4955	-17.77979
WTG 53	145.5045	-17.78642
WTG 54	145.5101	-17.79044
WTG 55	145.4866	-17.75974
WTG 56	145.4935	-17.75857
WTG 57	145.4969	-17.76476
WTG 58	145.4978	-17.76957
WTG 59	145.4797	-17.8065



PROJECT COMPONENT	LONGITUDE (GDA2020)	LATITUDE (GDA2020)
WTG 62	145.5054	-17.81662
WTG 63	145.5036	-17.82199
WTG 64	145.5024	-17.82557
WTG 65	145.5138	-17.82937
WTG 66	145.5141	-17.83411
WTG 67	145.5153	-17.839
WTG 68	145.5148	-17.84679
WTG 69	145.501	-17.83997
WTG 70	145.5131	-17.8498
WTG 71	145.5079	-17.85679
WTG 72	145.5037	-17.85899
WTG 73	145.4878	-17.85733
WTG 74	145.4932	-17.86517
WTG 75	145.5091	-17.88635
WTG 76	145.4953	-17.89349
WTG 77	145.4877	-17.89729
WTG 78	145.4963	-17.90667
WTG 80	145.5091	-17.91375
WTG 81	145.5113	-17.92045
WTG 82	145.5081	-17.92779
WTG 83	145.5085	-17.93285
WTG 84	145.5094	-17.93888
WTG 101	145.4685	-17.72836
WTG 102	145.4858	-17.79077
WTG 103	145.494	-17.86172
WTG 106	145.5116	-17.9168
WTG 109	145.5111	-17.94332



PROJECT COMPONENT	LONGITUDE (GDA2020)	LATITUDE (GDA2020)
Stage 2		
WTG 1	145.345	-17.68522
WTG 2	145.3482	-17.69257
WTG 3	145.3533	-17.70073
WTG 4	145.3607	-17.70291
WTG 5	145.3636	-17.69572
WTG 6	145.3675	-17.70483
WTG 7	145.3749	-17.71238
WTG 8	145.3816	-17.7227
WTG 9	145.3495	-17.71083
WTG 10	145.34	-17.71687
WTG 11	145.3324	-17.72518
WTG 12	145.3268	-17.72895
WTG 13	145.3259	-17.73558
WTG 14	145.325	-17.73924
WTG 15	145.3391	-17.74304
WTG 16	145.3303	-17.74721
WTG 17	145.3268	-17.75182
WTG 18	145.3377	-17.75115
WTG 19	145.3392	-17.7566
WTG 21	145.3832	-17.68445
WTG 22	145.3814	-17.69219
WTG 23	145.3873	-17.71134
WTG 24	145.3895	-17.71465
WTG 25	145.3925	-17.71894
WTG 26	145.3898	-17.75923
WTG 27	145.3872	-17.76703



PROJECT COMPONENT	LONGITUDE (GDA2020)	LATITUDE (GDA2020)
WTG 28	145.3914	-17.77144
WTG 29	145.3959	-17.77487
WTG 90	145.4066	-17.70414
WTG 91	145.4024	-17.71478
WTG 92	145.404	-17.71918
WTG 93	145.4074	-17.72409
WTG 94	145.409	-17.72774
WTG 95	145.4079	-17.73426
Meteorological Monitoring Masts		
Stage 1		
MM 1	145.5176	-17.84468
MM 2	145.5099	-17.79391
MM 3	145.5005	-17.76667
Stage 2		
MM 4	145.3931	-17.75722
MM 5	145.3867	-17.68647
Additional Site Facilities		
Stage 1		
Batch Plant	145.4639	-17.75654
Batch Plant	145.5135	-17.84325
Construction Compound	145.4301	-17.73001
Laydown Area	145.4306	-17.72899
O & M Facility	145.4396	-17.72708
PLQ Compound	145.501	-17.80563
Satellite Construction Camp	145.5066	-17.83548
Satellite Construction Camp	145.5087	-17.91997
Sub-station	145.504	-17.80692



PROJECT COMPONENT	LONGITUDE (GDA2020)	LATITUDE (GDA2020)
Switching Station	145.5036	-17.80486
Synchronous Plant	145.5027	-17.80666
Stage 2		
Batch Plant	145.4065	-17.74231
Laydown Area	145.4058	-17.74114
Sub-station	145.4104	-17.74341
Switching Station	145.4081	-17.74029

3.0 The reasons for the proposed variation

The primary drivers for the changes to the Project relate to the desire to avoid and minimise potential impacts to MNES and other environmental values. Since the preparation of the EPBC Act Referral, consultation with various stakeholders has assisted in the Project's ability to avoid, minimise and mitigate potential impacts. The key outcomes of this engagement are presented in **Table 3-1**.

Table 3-1 Summary of Project Changes & Commitments Made in Response to Stakeholder Feedback

ASPECT	PROJECT CHANGE/ COMMITMENT
Magnificent Brood Frog Habitat	The Project at the time of EPBC Act Referral would have resulted in a clearing area of approximately 123 ha of magnificent brood frog habitat. The current Project layout has been further refined to comprise only 7 turbines within 50 m of potential habitat for the magnificent brood frog with a total potential habitat clearing area of 120.5 ha.
Wet Sclerophyll Forest Vegetation	The Project design at the time of EPBC Act Referral included the proposed clearing of 170 ha of wet sclerophyll forest vegetation. Based on feedback from the Wet Tropics Management Authority (WTMA), the Project team has sought to avoid and minimise impacts to this vegetation (reorientation and reduction in size of the southern substation, removal of WTGs, redesign of access tracks, removal of the southernmost WTG string), achieving a reduction of 52.6 ha of proposed clearing of wet sclerophyll forest vegetation with the current proposed design.
Rehabilitation	The Project has made an industry-leading commitment to rehabilitate up to 70% of the temporary construction disturbances and to retain only the minimum footprint required for safe operations (e.g. 5.5 m wide access tracks). This operational footprint is 107.2 ha (0.3% of the Project area). This rehabilitation was not proposed within the EPBC Act Referral, and has been proposed by CWF after feedback from stakeholders concerned about the amount of the Project footprint required for construction purposes that would not be required for operational purposes.
Site Access	The feasibility of an alternative access route to site (from the west, via Innot Hot Springs) is under investigation by CWF and is considered an alternative access arrangement for the purposes of the Draft PER. This alternative access was identified by Tablelands Regional Council and certain stakeholders within the Wooroora Road community. The key determinant with this alternative access via Innot Hot Springs will be the results of a load rating investigation for the Herbert River bridge crossing for over-sized and over-mass vehicles.



ASPECT	PROJECT CHANGE/ COMMITMENT
Biodiversity Offsets	The Project proposes a substantial biodiversity offset package, including land-based offsets at a ratio of at least five times the significant residual impact, plus an additional voluntary contribution of \$250,000 towards scientific research on the Magnificent Brood Frog. This proposed offset package is a result of broad stakeholder consultation (including the Magnificent Brood Frog Working Group) and as a result of further impact assessment to determine potential significant residual impacts associated with the Project, and ongoing engagement with DCCEEW about the habitat definitions and impact calculations.
Erosion and Sediment Control	<p>The Project commits to avoiding ground-disturbing construction activities in the highest rainfall months of January, February and March. This reduces the risks associated with large rainfall events (both in terms of frequency and size) and adds 30% to the construction costs.</p> <p>The Project has located the clearing areas for the substation, office, construction compound and temporary laydown areas away from watercourses to the extent practicable; thereby minimising potential impacts to water quality and downstream impacts to the Great Barrier Reef World Heritage Area.</p>
Infrastructure Optimisation and Realignment	<p>The Project will co-locate underground electrical cabling with the Project's access tracks in order to minimise disturbance for this linear infrastructure as far as practicable.</p> <p>The Project design has sought to minimise the number and width of watercourse crossings. Not only does this minimise impacts to some of the higher value riparian areas within the Project area, this also minimises potential impacts to the Greater Glider and the Masked Owl.</p>
Accommodation Facility	In response to feedback from stakeholders regarding the potential for the Project to displace the currently limited affordable housing stock, the Project team is investigating the potential for an accommodation facility to support the construction of the Project on adjoining cleared agricultural land. This would also reduce potential impacts associated with construction traffic and nearby sensitive land uses.

The potential staging of the Project is proposed in response to global supply constraints and significant increases in the cost per installed megawatt.

4.0 How the impacts of the proposed variation on MNES compare with those of the original proposal

The potential impacts of the Project on actual or potential habitat for MNES that are assessed as being significant are reduced, with some minor increases for a subset of species that are assessed as not being significantly impacted (owing to the overall reduction in the Project footprint and the avoidance and minimisation of impacts on key values). These impacts are summarised in **Table 4-1**, with a comparison provided for impacts to MNES habitat for (a) the Project footprint proposed within the Referral, and (b) the Project footprint proposed within the Draft PER. Note that a consistent definition of MNES habitat is adopted for this assessment; this is the MNES habitat as defined within the Draft PER.



Table 4-1 Summary of Changes in MNES Impacts between Referral and Draft PER

MNES HABITAT	IMPACTS – REFERRAL	IMPACTS – DRAFT PER	NET CHANGE	COMMENTS
North Queensland Lace	2.7 ha	2.7 ha	0 ha	No change to impact
<i>Homoranthus porteri</i>	23.6 ha	23.9 ha	+0.3 ha	Minor changes to civil earthworks footprints in Wooroora. Not assessed as a significant impact in Section 8.3.2 of the Draft PER.
<i>Prosthantera clotteniana</i>	23.6 ha	23.9 ha	+0.3 ha	Minor changes to civil earthworks footprints in Wooroora. Not assessed as a significant impact in Section 8.3.3 of the Draft PER.
<i>Triplarina nitichaga</i>	23.6 ha	23.9 ha	+0.3 ha	Minor changes to civil earthworks footprints in Wooroora. Not assessed as a significant impact in Section 8.3.4 of the Draft PER.
Australian Lace-lid	0 ha	0 ha	0 ha	No impact
Magnificent Brood frog	123.3 ha	120.5 ha	-2.8 ha	Decrease in significant residual impact.
Mountain Mistfrog	0 ha	0 ha	0 ha	No impact
Buff-breasted Button-quail	0 ha	0 ha	0 ha	No impact
Masked Owl	1,080.2 ha	1,026.3 ha	-53.9 ha	Decrease in significant residual impact.
Red Goshawk	1,090.1 ha	1,031.7 ha	-58.4 ha	Decrease
Southern Cassowary	0 ha	0 ha	0 ha	No impact
White-throated Needle-tail	0 ha	0 ha	0 ha	No impact
Black-footed Tree Rat	181.3 ha	198.9 ha	+17.6 ha	Minor increase associated with widening of corridor along access to Glen Gordon. Not assessed as a significant impact in Section 8.6.1 of the Draft PER.
Ghost Bat	661 ha	655.6 ha	-5.4 ha	Decrease
Koala	884.3 ha	843.8 ha	-40.5 ha	Decrease in significant residual impact.
Large-eared Horseshoe Bat	16 ha	17.6 ha	+9.9 ha	Minor increase associated with widening of corridor along access to Glen Gordon. Not assessed as a significant impact in Section 8.6.4 of the Draft PER.
Mahogany Glider	0 ha	0 ha	0 ha	No impact



MNES HABITAT	IMPACTS – REFERRAL	IMPACTS – DRAFT PER	NET CHANGE	COMMENTS
Northern Bettong	143.5 ha	81.2 ha	-62.3 ha	Decrease
Northern Greater Glider	927.1 ha	887.9 ha	-39.2 ha	Decrease in significant residual impact.
Northern Quoll	343 ha	331 ha	-12 ha	Decrease
Semon's Leaf-nosed Bat	186.2 ha	154 ha	-32.2 ha	Decrease
Spectacled Flying-fox	1,071.3ha	976.1 ha	-95.2 ha	Decrease in significant residual impact.
Spotted-tailed Quoll	177 ha	124.7 ha	-52.3 ha	Decrease
Yellow-bellied Glider	3.5 ha	28.1 ha	+24.6 ha	Increase in foraging habitat impacts associated with the substation redesign. Not assessed as a significant impact in Section 8.6.12 of the Draft PER.
Atherton Delma	170.1 ha	117.5 ha	-52.6 ha	Decrease
Black-faced Monarch	83 ha	36 ha	-47 ha	Decrease. Impact calculation to be updated between Draft PER (83 ha) and Final PER.
Latham's Snipe	0 ha	0 ha	0 ha	No impact
Rufous Fantail	170.1 ha	117.6 ha	-52.5 ha	Decrease. Impact calculation to be updated between Draft PER (170 ha) and Final PER.
Satin Flycatcher	1,008 ha	958.5 ha	-49.5 ha	Decrease. Impact calculation to be updated between Draft PER (1,009 ha) and Final PER.
Spectacled Monarch	173 ha	122 ha	-51.0 ha	Decrease. Impact calculation to be updated between Draft PER (173 ha) and Final PER.
Green-eyed Tree Frog	19.5 ha	20.7 ha	+1.2ha	Minor increase at the proposed substation. Not assessed as a significant impact in Appendix T of the Draft PER.
Herbert River Ringtail Possum	170.1 ha	117.6 ha	-52.5 ha	Decrease
Macleay's Fig Parrot	170.1 ha	117.6 ha	-52.5 ha	Decrease
Lumholtz's Tree Kangaroo	172.73 ha	125.3 ha	-47.43 ha	Decrease
Rufous Owl	83.1 ha	41.02 ha	-42.1 ha	Decrease
Tube-nosed Insectivorous Bat	170.1 ha	117.6 ha	-52.5 ha	Decrease



MNES HABITAT	IMPACTS – REFERRAL	IMPACTS – DRAFT PER	NET CHANGE	COMMENTS
Wet Sclerophyll Forest	170.1 ha	117.6 ha	-52.5 ha	Decrease

5.0 The impacts of the proposed variation on MNES not considered in the referral or assessment of the original proposal

The potential impacts of the Project on MNES are described in **Section 4.0** of this letter, inclusive of those MNES considered in the Referral and those additional MNES considered in the Draft PER.

6.0 Alternatives, mitigation measures and offsets to compensate for additional impacts on MNES

The revised Project footprint does not lead to additional significant impacts on MNES. The Draft PER discusses the Project's avoidance, minimisation and mitigation measures to address potential MNES impacts. There are no increased significant residual impacts as a result of the revised Project footprint.

7.0 Conclusion

This letter presents a request for variation to the action that is formally described as the Chalumbin Wind Farm Project (EPBC 2021/8983). The variation presented herein demonstrates that all potential significant residual impacts to MNES as a result of the Project are reduced from that which was originally proposed as part of the EPBC Act Referral.

Should you have any queries in relation to the nature of the changes, or the material contained within this letter, please contact the undersigned. CWF appreciates DCCEE's prompt review of the material and determination of the variation application, in light of the broader assessment process and finalisation of the PER for the Project.

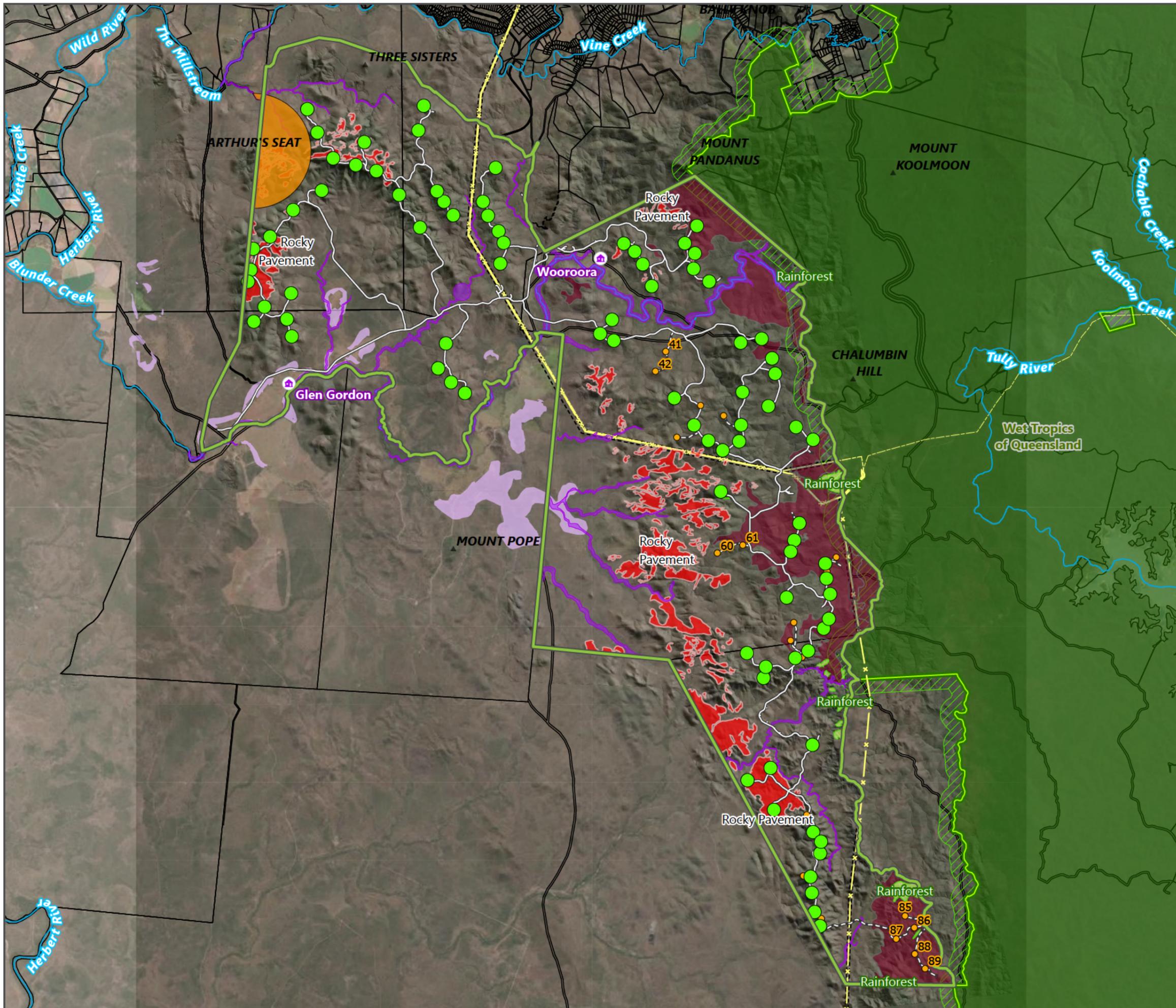
Yours sincerely,

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Partner and Principal Consultant

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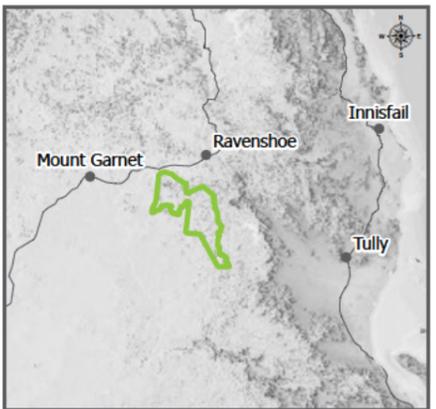


Chalumbin Wind Farm
 Notable MNES Constraints and Current Project Layout

Figure 1

- Project Area Boundary
- PER Turbine Layout
- EPBC Referral Turbine Layout
- PER Access Road
- EPBC Referral Access Road
- Watercourse
- Existing 275kV Powerline
- Existing 132kV Powerline
- WTQ Boundary
- WHA Buffer (500m)
- Cultural Heritage Constraint
- Potential Red Goshawk Nesting Habitat
- Wetland
- Rainforest Habitat
- Rocky Pavement Shrub Complex
- Wet Sclerophyll Forest
- Property Boundary
- Easement

Date: 17/02/2023 Author: TOD
 Project: EPU-004 Reviewed: NOD



Scale: 1:125,000@A3
 Data Source(s):
 Local Government Area - Department of Resources (2022)
 Earthstar Geographics, © State of Queensland (Department of Resources) 2022

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