

Our ref: AU213017403.001 Tilt Renewables targeted *Drosera macropetala* search

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Date: 29 November 2024

Peta Brunel
Senior Environment and Development Planner
Tilt Renewables
Level 24 / 600 Bourke Street
Melbourne VIC 3000

Dear Peta,

Waddi Wind Farm: Targeted *Drosera macropetala* search 2024

Background

Waddi Wind Farm Pty Ltd, a subsidiary of a portfolio of companies that are trading as Tilt Renewables, is proposing to construct and operate the Waddi wind farm. The Waddi wind farm will consist of up to 18 wind turbines and generate enough combined renewable energy to power 68,000 homes per year. The 10,491-hectare (ha) Project Area, within which the Waddi wind farm will be constructed and operated, is located approximately 12 kilometres (km) north-west of Dandaragan in Cooljarloo, Western Australia.

A clearing permit application to clear up to 5.5 ha of native vegetation to facilitate construction of the Waddi wind farm was submitted to the state Department of Water and Environmental Regulation (DWER) on 17 November 2023. The previously approved clearing permit (CPS 8449/1) for the windfarm was subsequently surrendered.

The application was amended on 13 March 2024 to 5.43 ha of native vegetation and three trees. On 12 June 2024, DWER requested additional information and revisions to the offset strategy and additional information on potential impacts to the recently rediscovered *Drosera macropetala* Priority 1 (P1) species. The information requirements were set out in Schedules 1 and 2 (respectively) of the DWER letter (enclosed).

Additional negotiation with the Shire of Dandaragan was undertaken by Tilt Renewables. This resulted in a reduction of native vegetation clearing from 5.43 ha to 5.34 ha and a 0.09 ha reduction in the clearing of Carnaby's cockatoo foraging habitat. The location of the viewing platform was removed from the proposed clearing area by DWER on 08 July 2024, with a revised figure showing the updated survey areas requiring a targeted search for *Drosera macropetala* provided (Figure 1).

CPS 10418/1 - *Drosera* survey

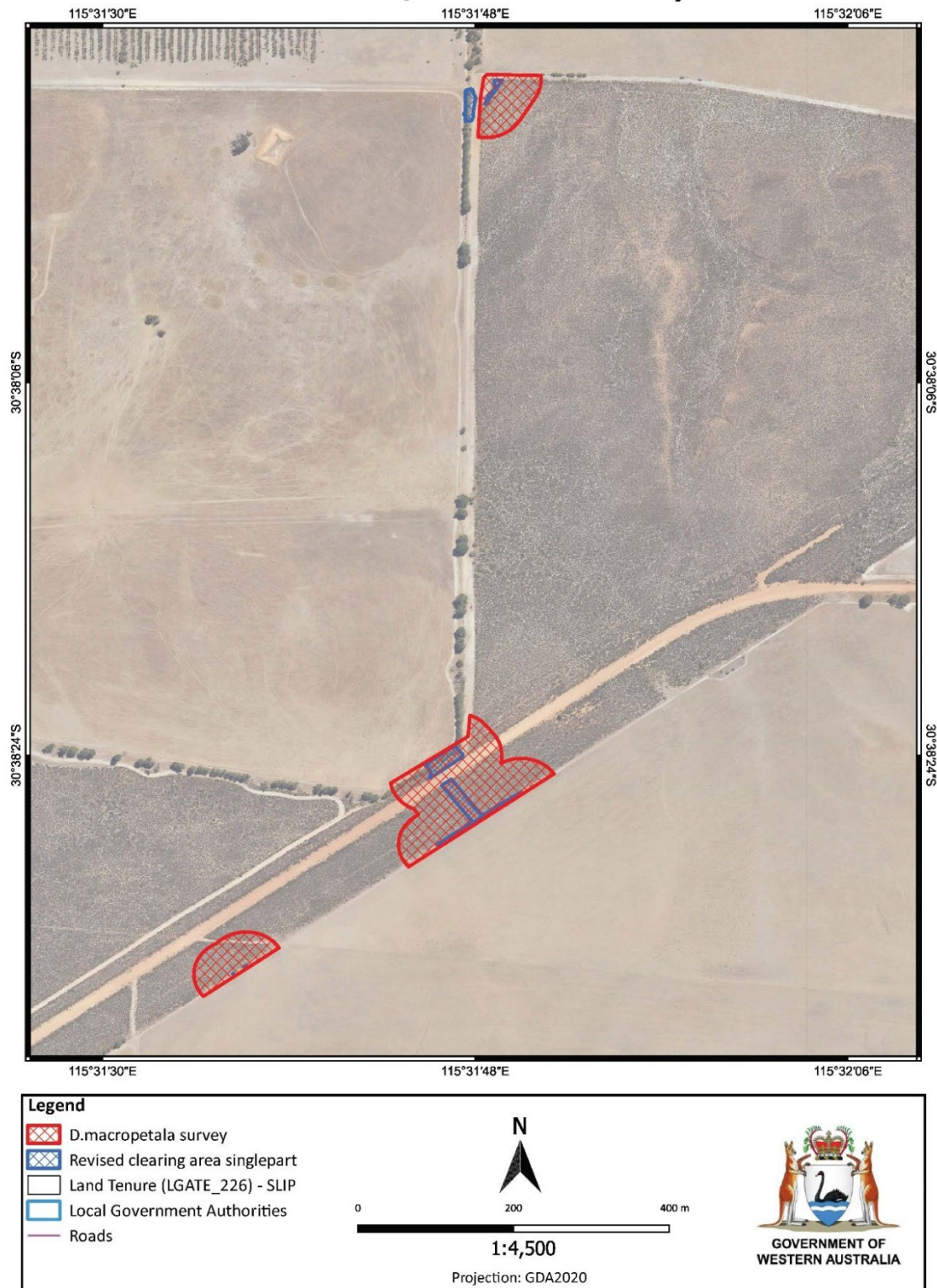


Figure 1: *Drosera macropetala* survey areas

RPS AAP Consulting Pty Ltd (RPS) was engaged by Tilt Renewables to conduct a targeted search of the DWER identified survey areas as presented in Figure 1 for *Drosera macropetala*.

Species description and habitat requirements

Drosera macropetala is listed as a Priority 1 (P1) species by the Department of Biodiversity, Conservation and Attractions (DBCA). P1 species are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, for example, agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation¹.

Drosera macropetala is a tuberous perennial herb, between 15 to 44 centimetres tall above ground including a 2 to 8 flowered inflorescence. The sepals are equalling or exceeding the petals in length. The petals are deeply concave and are white with a distinctive deep red base (Plate 1), corolla 13 to 22 millimetres (mm) in diameter. This species is easily distinguished from all other members of the *D. microphylla* complex, even in herbarium material, by its distinctive flower colour.



Plate 1: Photographs of *Drosera macropetala*. (A) flowers of a single plant in diffuse light, this species often has 3 to 5 flowers open simultaneously; (B) habit of a relatively small individual; (C) upper leaf exhibiting two smaller axillary leaves emerging from the leaf axil; (D) flower in bright sunlight; (E) lamina; (F) flower with observed pollinator (a beetle of the family Scarabaeidae); and (G) stamens and styles. All from near Dandaragan, Western Australia, 16 August 2021. Images: T. Krueger²

¹ Conservation Category Definitions – For Western Australian fauna and flora. 2023.

<https://www.dbca.wa.gov.au/management/threatened-species-and-communities/nominations-listing>. Accessed 16 September 2024.

² Krueger, Thilo, Alastair Robinson, Greg Bourke, and Andreas Fleischmann. 2023. "Small Leaves, Big Diversity: Citizen Science and Taxonomic Revision Triples Species Number in the Carnivorous *Drosera microphylla* Complex (*D. Section Ergaleium*, Droseraceae)" *Biology* 12, no. 1: 141. <https://doi.org/10.3390/biology12010141>

Drosera macropetala is currently only known from a single August 2021 herbarium collection from a very localised area about 1 km from the proposed native vegetation clearing area. A recent report indicates that 196 individuals were identified within a 2,000 m² area of the Mullering Road reserve by a survey conducted by Curtin University researchers on 24 August 2023.

A targeted search during the late August flowering time of the species is required to identify its presence.

Methodology

Prior to the commencement of the targeted search, a brief reconnaissance search was undertaken of the known Mullering Road reserve population (as recorded by Florabase) to ascertain the emergence and flowering status of a known population. The known *Drosera macropetala* population was located and used as a reference point for the targeted search. While the population was flowering, the overcast nature of the day of survey meant that the flowers had not opened by the time the surveyors had finished the survey.

The targeted *Drosera macropetala* search of the native vegetation clearing areas and their nominal buffers was undertaken on Thursday 29 August by RPS senior botanist Martin Henson and graduate environmental consultant Richard Storey in accordance with Technical Guidance - Terrestrial flora and vegetation surveys for environmental impact assessment (Environmental Protection Authority (EPA) 2016)³.

The targeted search involved:

- systematic grid-based foot-traverses at 5 metre spacings across the native vegetation clearing area and the nominal buffer areas
- survey track logs of the foot traverses were recorded on a hand-held GPS
- weather and climate conditions were recorded for, prior to, and specifically for each day of the targeted searches (Table 1)
- the area in the immediate vicinity of any recorded plants was searched to identify any additional individuals and determine the species' local size and distribution (Figures 2 to 4).

For any plants identified during the search the following information was recorded:

- location – UTM GDA94 datum coordinates on a hand-held GPS
- number of individuals
- health of population (senesced / alive; flowering stage)
- sample individual was taken for taxonomic determination.

The area in the immediate vicinity of any recorded plants was also searched to identify any additional individuals and determine the species' local size and distribution (Figures 2 to 4).

Results

Climate and weather

Climate data retrieved from the Bureau of Meteorology⁴ shows that 2024 was a below average rainfall year (with 292.7 mm of rain received for the 12-month period prior to the search, representing approximately 61.5% of the annual average of 476.0 mm since 1930). It should be noted also that around 10% more rain than the long-term average was recorded for July 2024, while May and June 2024 experienced 50% and 24% less rain than the long-term average.

³ Environmental Protection Authority. 2016. Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment, EPA, Western Australia.

⁴ Bureau of Meteorology. Monthly rainfall – Chelsea (closest BoM station with available data approximately 24 km east of the search sites). http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=139&p_display_type=dataFile&p_stn_num=009014. Accessed 16 September 2024.

Technical Guidance - Terrestrial flora and vegetation surveys for environmental impact assessment (EPA 2016) identifies that in periods of below average rainfall, supplementary sampling in succeeding years (with suitable rainfall) may be necessary to compensate for low diversity recorded during a survey (especially ephemeral species). This will be highly desirable in cases where drought is prolonged or in the absence of a range of species that might normally be expected in the environment.

Environmental conditions for the year were generally considered favourable for the emergence and detectability of terrestrial flora species, hence supplementary sampling in succeeding years is not considered to be required.

The weather and climate conditions specific to the day of the targeted search are shown in Table 1.

Table 1: Weather and climate conditions

Day	Minimum temperature (°C)	Maximum temperature (°C)	Rainfall (mm)	Wind (km/hr)	Cloud cover
29/8/2024	13.1	18.6	3.2	SW approximately 26 – 30	Approximately 75%

The overcast conditions at the time of the survey meant flowers were not open during the survey, including within the known Mullering Road reserve population. This limitation which contributed to survey team's taxonomic uncertainty in the field was overcome through the vouchering of specimens with Thilo Krueger (subject matter specialist) of Curtin University for confirmation of identity.

Targeted search

No records considered to represent *Drosera macropetala* were identified within the survey areas (Figures 2 to 4). Specimens suspected to represent *Drosera macropetala* were collected by RPS and vouchered with Thilo Kreuger for taxonomic identification. Thilo Kreuger confirmed that the specimens collected by RPS did not represent *Drosera macropetala*.

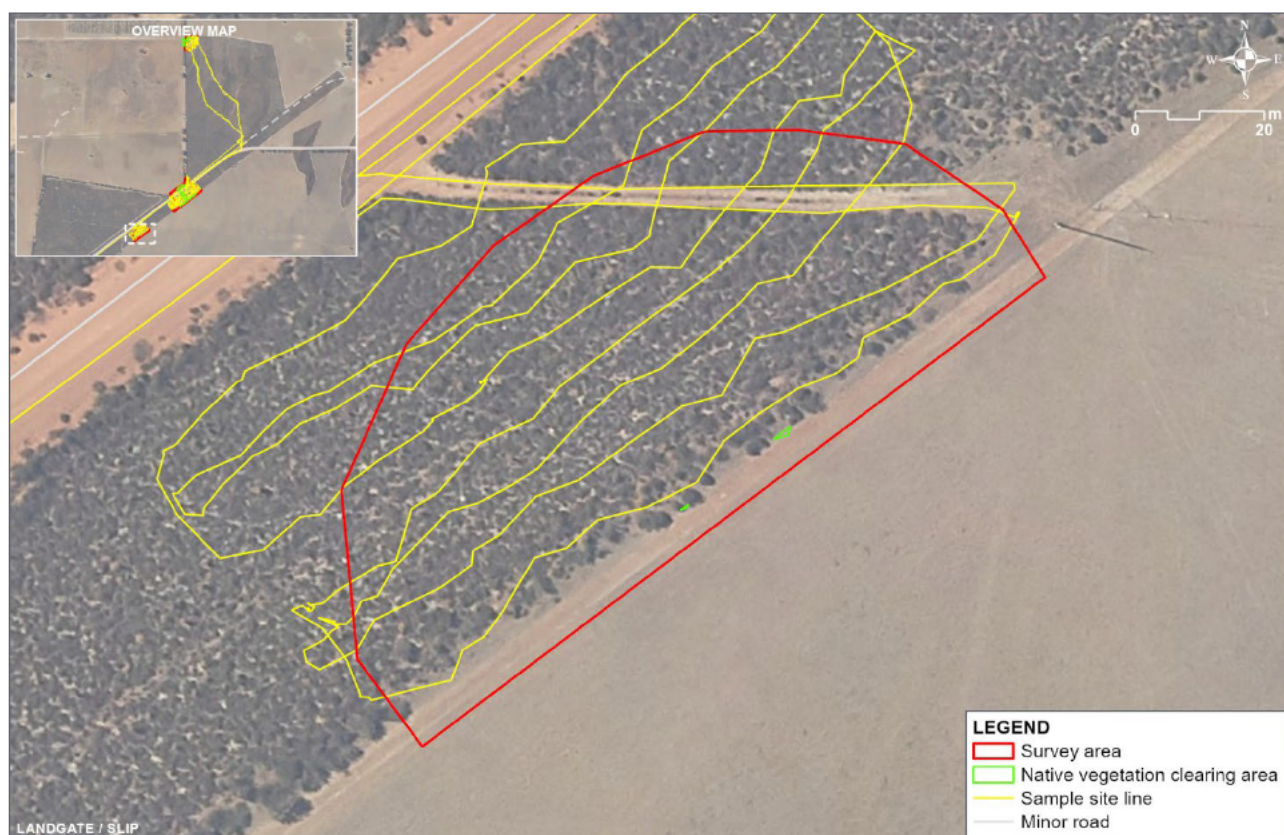


Figure 2: Native vegetation clearing area (south-western) and track logs

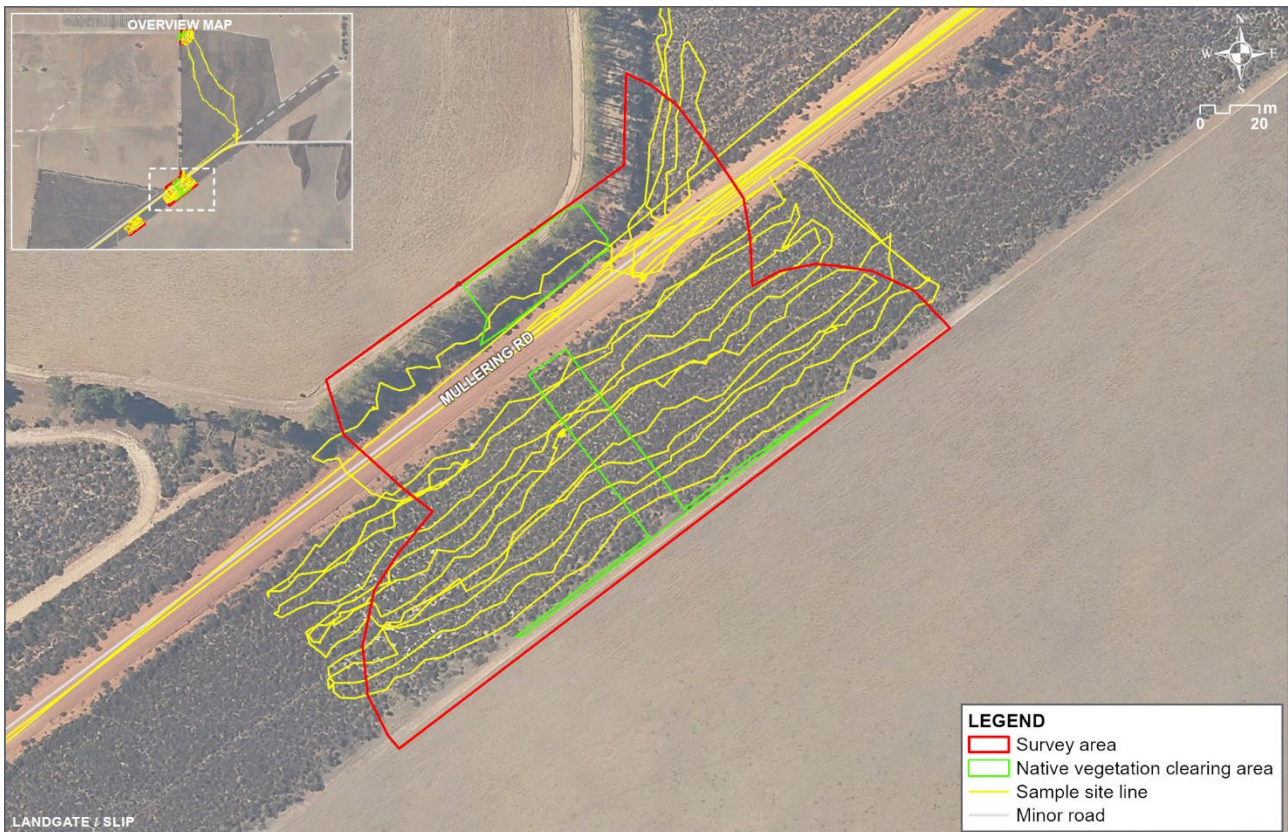


Figure 3: Native vegetation clearing area (central) and track logs

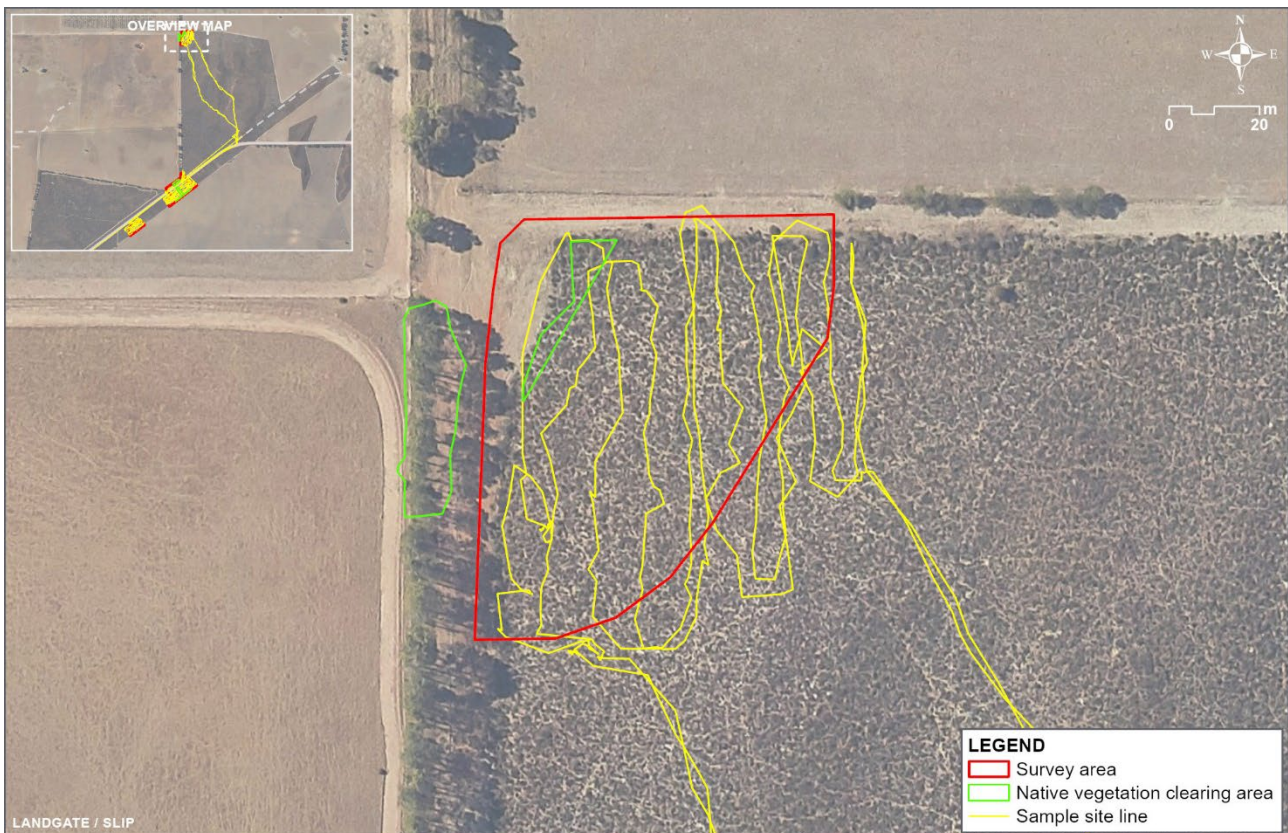


Figure 4: Native vegetation clearing area (northern) and track logs

Conclusions

The targeted *Drosera macropetala* search was conducted by RPS in accordance with the Technical Guidance - Terrestrial flora and vegetation surveys for environmental impact assessment (EPA 2016) during the known late August flowering time of the species.

The search identified no records of *Drosera macropetala* within any native vegetation clearing areas or the survey buffers (Figures 2 to 4). Specimens suspected to represent *Drosera macropetala* were collected by RPS and vouchered with Thilo Kreuger for taxonomic identification. Thilo Kreuger confirmed that the specimens collected by RPS did not represent *Drosera macropetala*.

Should you require further details or clarification, please do not hesitate to contact the undersigned.

Yours sincerely,
for RPS AAP Consulting Pty Ltd



Richard Storey
Graduate Environmental Consultant



enc: CPS 10418 – 1 Request for Further Information

Appendix A: **CPS 10418-1 Request for Further Information**



James Beckett
Manager, Planning and Environment
Tilt Renewables Australia Pty Ltd
PO Box 16080
MELBOURNE VIC 8007

Attn: Peta Brunel

via email: Peta.Brunel@tiltrenewables.com; james.beckett@tiltrenewables.com;

Dear Mr Beckett,

APPLICATION TO CLEAR NATIVE VEGETATION UNDER THE ENVIRONMENTAL PROTECTION ACT 1986 – REQUEST FOR FURTHER INFORMATION

I refer to the Tilt Renewables Australia Pty Ltd (Tilt Renewables) application (CPS 10418/1) for a clearing permit under section 51E(1) of the *Environmental Protection Act 1986* (the EP Act) for the proposed clearing of 5.5 hectares of native vegetation within a 1,227 hectare footprint across various lots within Cataby, Cooljarloo and Badgingarra, for the purpose of constructing the Waddi Wind Farm and associated transmission infrastructure. The application was received by the Department of Water and Environmental Regulation (the Department) on 17 November 2023.

The application was subsequently amended on 13 March 2024 to the proposed clearing of 5.43 hectares of native vegetation and three trees within a 5.43 hectare footprint. After consideration of Tilt Renewables' avoidance and minimisation measures, the significant residual impacts of the proposed clearing include:

- the loss of approximately 5.24 hectares of native vegetation comprising significant foraging habitat for Carnaby's cockatoos, the majority of which is *Banksia* woodland (3.95 hectares). The remainder comprises 1.07 hectares of Proteaceous heathland and 0.22 hectares of Marri over cleared pasture.

Thank you for the email from Peta Brunel on 12 April 2024, providing your proposed Offsets Strategy, and on 21 May 2024 providing the associated vegetation shapefiles for the offset site.

The Department has undertaken a review of the Offset Strategy and selected offset site referred to as Option 1 (part of Lot 101 on Diagram 72336, Mullering Road, Cooljarloo). Based on the information provided and using the Western Australian State Metric offset calculator, the Department has determined that the proposed Offset Strategy may not fully counterbalance the significant residual impacts of the proposed clearing on Carnaby's cockatoo foraging habitat. This is due to:

- the proposed Option 1 site may not provide a fully like-for-like offset for Carnaby's cockatoo foraging habitat, as it does not comprise any of the *Banksia* woodland habitat attributes that make up the majority of the significant residual impact. Carnaby's cockatoo's most important natural food resources are considered to be *Banksia* species (predominantly *B. attenuata*, *B. menziesii* and *B. sessilis*), and also Marri;
- further information being required to support the type of offset and chosen site in the Offset Strategy.

To ensure that an appropriate offset is provided for the significant residual impacts of the proposed clearing, the Department considers that the additional information and revisions to the Offset Strategy set out in Schedule 1 are required.

Further information is also required regarding potential impacts to the recently rediscovered *Drosera macropetala* Priority 1 species. This information is set out in Schedule 2.

Please provide the revised Offset Strategy inclusive of the information set out in Schedule 1 and the information requested in Schedule 2 within 30 days from the date of this letter. You may request an extension (in writing), should you require additional time.

Until this information has been received, the department has suspended the assessment timeframe for your application ('stop the clock'). Please note, applications will remain in 'stop the clock' where surveys are not submitted in accordance with the Environmental Protection Authority's (EPA) *Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)*. This timeframe will recommence upon receipt of the required information.

If the required information is not received by the date set out above (or other date as agreed), the assessment process will recommence, and a determination will be made based on the information available. This is likely to result in the refusal of the application.

If you have any queries regarding the above information, please contact the Environmental Officer, as listed above.

Yours sincerely



Meenu Vitarana
MANAGER
NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

12 June 2024

Att: Schedules 1 and 2
Indicative offsets calculation

Schedule 1 – Additional offset information requested

Information requirements	Rationale
<p>Further justification as to why each of the following preferred offset options are not able to be achieved before consideration of a conservation covenant on existing local high quality foraging habitat:</p> <ol style="list-style-type: none"> 1. Local revegetation and/or rehabilitation 2. Regional revegetation and/or rehabilitation 3. Acquisition and change in tenure to conservation estate 	<p>Revegetation and/or rehabilitation of foraging habitat in the local area, followed by regional area, are the most preferred offset options. This is to prevent or reduce the net loss of foraging habitat for Carnaby's cockatoo populations from what is currently available to the species. The protection of existing high quality foraging habitat to offset the loss of another, needs to demonstrate that the habitat is under clear and imminent threat or there are significant reasons that would prevent revegetation and/or rehabilitation options from being explored in the local or regional area.</p> <p>At a minimum, the strategy should evaluate the availability and feasibility of revegetation or rehabilitation opportunities in:</p> <ol style="list-style-type: none"> 1. the Department of Biodiversity, Conservation and Attractions (DBCA) estate; 2. Local Government Authority (LGA) reserves; and 3. freehold land (existing holdings as well as new holdings acquired specifically for the purpose of offset delivery, with security provided via the application of a conservation covenant). <p>DWER notes that the Department of Biodiversity, Conservation and Attractions (DBCA) have not been consulted regarding the proposed site, as based on information from a third-party they were considered unlikely to support the site being ceded for conservation purposes. Given the site is located in close proximity to Minyulo Nature Reserve, is connected to the reserve via roadside vegetation, and threatened and priority flora have been recorded in very close proximity or potentially within the vegetation block, it should be confirmed with DBCA if they have an interest in the site.</p>
<p>Further justification as to why areas containing <i>Banksia</i> woodland were not considered as an offset site</p>	<p>The <i>WA Environmental Offsets Guidelines</i> states that offsets should be 'like-for-like' and need to be relevant not only to the environmental value being impacted, but also to the associated attributes which may be lost.</p> <p>Vegetation descriptions from the field surveys of the <i>Banksia</i> woodland areas proposed to be cleared are noted to contain the key species <i>B. attenuata</i> and <i>B. menziesii</i>, while the corresponding description inferred for the heathland vegetation of the Option 1 offset site is lacking these key foraging species.</p>
<p>Security of the offset site</p>	<p>To ensure the security of the proposed offset site, the Department requires further information regarding the proposed security mechanism for the conservation of the offset area in perpetuity, confirming that effected landowners and parties with a registered interest will support a conservation covenant under the <i>Soil and Land Conservation Act 1945</i> being placed over the site.</p> <p>Please see attached revised calculation for context on the proposed land acquisition offset. Please note it is a preliminary calculation and will be further refined once the final offset is provided, which is preferred to be a combination of revegetation/rehabilitation and land acquisition, as outlined above.</p>
<p>Further details of the on-ground land management measures to be undertaken at the offset site.</p>	<p>Justification for the future quality of the offset includes weed monitoring and land management over the next five years. However, the strategy does not discuss what land management actions will be undertaken other than weed management.</p>
<p>Shapefiles of the indicative area that will be subject to the conservation covenant.</p>	<p>The accurate areas (in hectares) are required for use in the WA offsets metric.</p>

Information requirements	Rationale
<p>A black cockatoo foraging habitat assessment of the Option 1 vegetation block to provide further justification of the Carnaby's foraging habitat quality values used to quantify the suitability of the site. This should include a survey report and shapefiles of vegetation type and condition.</p>	<p>As Principle 4 of the offsets policy requires environmental offsets to be based on sound environmental information and knowledge, the field survey information used to justify the WA offsets metrics will require validation.</p> <p>The Department notes that there is currently discrepancy regarding the type of vegetation present at the Option 1 site and its suitability as high quality Carnaby's cockatoo foraging habitat. The discrepancy is due to:</p> <ul style="list-style-type: none"> • The Offset Strategy document, in addition to the shapefiles provided on 21 May 2024, consider the whole of the Option 1 site to comprise <i>Proteaceous Heathland</i> vegetation. This appears to be inferred from relevé data on the margins of the vegetation block, associated with the <i>Reconnaissance Flora and Vegetation Assessment</i> (RPS, 2023) conducted across 2022 and 2023. • The <i>Spring Flora and Vegetation Survey and Black Cockatoo Habitat Survey</i> (Outback Ecology, 2014) considered the Option 1 site to also contain <i>Myrtaceous Scrub in Swales and Drainage Depressions</i> in addition to <i>Proteaceous Heathland</i> vegetation. The survey boundary of the Outback Ecology 2014 assessment included a larger portion of the Option 1 site in comparison to the RPS survey boundary. • It has not been established what proportion of the Option 1 site comprises the <i>Myrtaceous Scrub in Swales and Drainage Depressions</i> vegetation. The department may not consider these areas to provide high quality Carnaby's cockatoo foraging habitat, however further information is required to ascertain this.
<p>IBSA numbers for the survey of the offset site</p>	<p>The IBSA website notes that "IBSA data packages are required for field surveys that have generated new data" and that "any time a biodiversity survey report is submitted to DWER for assessment, post-assessment or compliance purposes, it must be accompanied by an IBSA data package".</p>

Schedule 2 – Additional targeted survey information requested

Information requirements	Specifications	Rationale
<p>A targeted flora survey for <i>Drosera macropetala</i> undertaken at the end of August is required for the areas shown in Figure 1 below.</p> <p>Please note that should <i>D. macropetala</i> be identified, additional surveys of surrounding areas will also be required to determine the species' local population size and distribution.</p> <p>Or</p> <p>Confirmation on the applicability of a pre-clearance flora survey condition</p>	<p>The survey is to be carried out by a <i>botanist</i> (see below for relevant definitions) and survey methodology must be consistent with the Environmental Protection Authority's (EPA) <i>Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment</i> (December 2016), copies of which are available at the EPA's website.</p> <p>All surveys must be submitted in accordance with the EPA's <i>Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)</i>, and submitted via the department's IBSA Submissions Portal. Please provide the corresponding IBSA Submissions Reference Number to the assessing officer, using the contact details located on the top right of the attached letter, once the survey has been submitted.</p> <p>NOTE: The department defines a "botanist" as a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of 2 years work experience in identification and surveys of flora native to the bioregion being inspected or surveyed, or who is approved by the CEO as a suitable botanist for the bioregion.</p>	<p><i>Drosera macropetala</i> (Priority 1) is a recent nomenclatural recombination which is currently only known from a single August 2021 herbarium collection from a very localised area within one kilometre of the proposed clearing footprint on Mullering Rd, and an historical record last documented by Alexander Morrison in 1904 from the Mogumber area which is likely to no longer persist. A recent report of the Mullering Rd subpopulation indicates there were 196 individuals within a 2000 square metre area when it was resurveyed by researchers from Curtin University on 24 August 2023. This sub-population is located in close proximity to the proposed clearing areas along Mullering Rd.</p> <p>Due to previous survey limitations, it is not possible to rule out potential undetected <i>D. macropetala</i> within the application area and adequately assess potential risks to the species. These limitations include <i>D. macropetala</i> not being specifically targeted during the surveys, the surveys not including the vegetation surrounding the clearing area and the field surveys taking place during 29 September – 7 October 2021 and 7 – 12 September 2022, which is outside of the only recorded flowering times of 22 August and 24 August. The Department has received technical advice that it's likely that any plants present may have finished flowering when the previous surveys were completed and detection would have been difficult outside the flowering period, as the plants quickly go dormant.</p> <p>Clearing of or within close proximity to the only known extant subpopulation of this species could result in direct and indirect impacts that are significant at the species level.</p> <p>Alternatively, in place of requiring the targeted survey prior to granting the clearing permit, a pre-clearance flora survey condition can be imposed on the permit that would also include a requirement to avoid any clearing within a 50-metre buffer of any individuals /populations found through the survey.</p> <p>Please advise whether Tilt Renewables prefers the pre-clearance flora survey requirement over the submission of the surveys prior to finalising the assessment of the application. Please note the following when considering the preferred option:</p> <ul style="list-style-type: none"> The Department is not likely to authorise the clearing of any <i>D. macropetala</i> individuals or any clearing within 50 metres of the location of any <i>D. macropetala</i> individuals. This means that if <i>D. macropetala</i> is found through the pre-clearance

Information requirements	Specifications	Rationale
		<p>survey, that the clearing permit is likely to require an amendment so that the species (including buffer distances) can be avoided. This may have implications on the design of the project.</p> <ul style="list-style-type: none">• If Tilt Renewables choses to submit flora surveys prior to finalising the assessment, it would allow the potential to discuss and determine alternatives to avoiding individuals/populations, including changing the proposed clearing area and other mitigation and/or offset options.• The targeted flora survey, whether undertaken before finalising the assessment or through a pre-clearance survey condition on the permit, is required to occur at the flowering timing for <i>D. macropetala</i> in mid to late August, which can be a timing limitation.• Uncertainty resulting from finalising the assessment prior to the targeted survey for <i>D. macropetala</i> being undertaken may increase the likelihood of the decision being appealed by third parties. A decision to grant a clearing permit is deemed not to have effect while the outcome of an appeal is still pending, which may impact on the timing of the project.

CPS 10418/1 - Figure 1

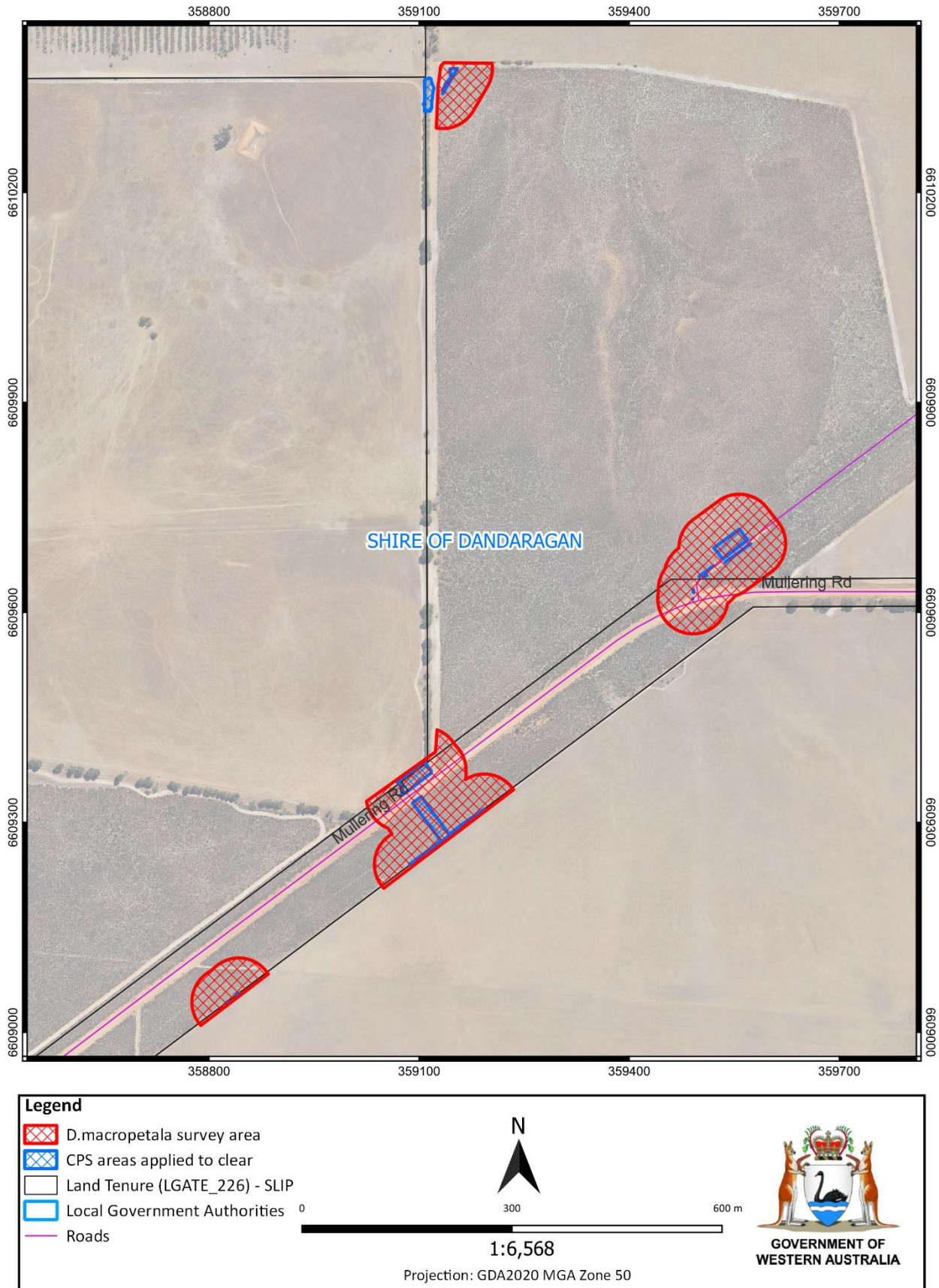


Figure 1: *Drosera macropetala* survey areas