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NSW Department of Planning, Housing and Infrastructure
Via email
Attn: Cameron Ashe

Dear Cameron

Thank you for the opportunity to respond to the exhibition of the Richmond Valley Solar Farm (project SSD-41020244) application documents. Henribark Pty Ltd is the immediate northern neighbour to the project (Lots 50 and 51, DP755706) and fully supports the development proceeding, mindful of the matters that we have included later in this response. We support the development of renewable energy projects recognising that there are imperatives both in terms of environmental harm reduction and establishment of sufficient generating capacity to address the reductions as fossil-fuelled plants reach (or exceed) their operational lifespans. We also note that we have not been identified in the mapping as a 'private receptor', only as we have no permanent residence on the property, which we believe the department should allow consideration for.

As an ecologist accredited under both the NSW Biodiversity Offsets Scheme (until September 2024 when I will be letting it lapse) and the Accounting for Nature process, I have paid close attention to the environmental impacts of this project and the effect it may have on both the local environment and more broadly. As a declaration, we advise that the property mentioned above is also the site for the Ermelo Biodiversity Stewardship (BA449), which generates biodiversity credits to offset the impacts of developments. We have held this site since 2017 – predating the current project's scoping and assessment phases. As the purpose of our site is to provide for offsets to development impacts, we identify that there is a clear commercial / financial interest in our response. However, I also respond as a person who has a multi-decadal relationship with the region to bring my observations and response to this development. In the late 1990s I developed the Clarence Regional Vegetation Plan with NSW Department of Land and Water Conservation in Grafton.

I also declare that I have been an occasional correspondent with the project managers that have shepherded this project to this point. In that correspondence I have previously declared my interest in being a supplier for the biodiversity offsets the project will be requiring.

We look forward to the outcomes of the exhibition phase and assisting the developer in their forward plans.

Yours sincerely

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Detailed response to the EIS

I support the view that the project should have an overall positive social impact in the locality. Along with the other solar farms being proposed, this will enable the development and retention of a highly-skilled workforce in the area, along with the social and economic benefits this generally provides. The opportunities to get an improved telecommunications infrastructure into the area – particularly better mobile phone coverage – will be beneficial and provide for greater public safety outcomes than the current situation, which can be a bit patchy (especially on the northern part of our property though that is also unlikely to be altered by this project).

The negative environmental impacts are very limited in their extent, with the reduction in environmental assets relatively minor (and detailed more later in the response to the BDAR). A reduction in available grazing land will occur, but this land has seen several iterations of land-cover in the time I have been familiar with it, from grazing to plantation and back to grazing. As cattle grazing and solar farms are typically difficult to undertake together, this will also result in an opportunity to see how the ecology in the groundcover (albeit in a poor state to begin with) develops over the future of the project and leads to the potential for valuable research, given the proximity to Southern Cross University. In particular, I have an interest in the change in small mammal usage and recovery of native herbs in the space under the panels, particularly as being security fenced, there is the potential for introduction or maintenance of populations of rufous bettong that are recorded in the area (and were abundant on our site prior to the wildfire) in the effective absence of predators.

The consideration of wildfire / bushfire on the development, and how that plans to manage it, is of strong personal interest. The area burnt fiercely on the afternoon of 8 October 2019 and resulted in significant impact to the natural vegetation of our own property and that of the northern landholder involved in the project (although this landholding has changed hands since the fire). I recommend that the project consider also the opportunity to provide a suitable north-western exit from the site (gravelling and maintaining the existing roads is likely sufficient), along the powerline-servicing road that joins our common corner to the Ellangowan – Myrtle Creek Road and then on to Summerland Way to the west and north towards Ellangowan. On that day in 2019, the fire came to our property through the project lands from the south when a wind change pushed the fire front that had previously been coming from the west-northwest. This is a local opportunity that would have distinct safety and social outcomes.

We recommend a traffic-slowing structure at the point where the biodiversity corridor will meet Avenue Road. As this is very near the section to be sealed (and therefore promote higher traffic speeds) this would not be a suitable place at which to have ground-traversing fauna intersecting with high-speed traffic. Additionally, given koalas and squirrel gliders are regularly travelling through this area (we have many instances of sightings on our land which is contiguous), both a fauna underpass and rope-bridge crossing with glider poles would be valuable additions to the biodiversity corridor concept. While traffic loads are not high, this will limit the impacts still further for a very modest outlay. Additionally, there will be a further widening break in the corridor close to the road, unless the existing powerline immediately adjacent is to be decommissioned or removed.

In describing the landholdings surrounding the project, it is notable that the Biodiversity Stewardship Site on the neighbour to the immediate north is not mentioned (EIS 2.5.2.1). Additional information on rainfall relevant to the actual site (EIS 2.5.2.1) is accessible from the Myrtle Creek (Rappville) WaterNSW gauging station (number 203030) which is where Summerland Way crosses Myrtle Creek, a few hundred metres from the project (and is referenced in EIS 6.6.2.1). While it doesn't have

temperature, it provides a long-running record of the rainfall as well as flood / flow conditions of Myrtle Creek. Additionally, the author of the documents seem to have a problem with the direction of features, such as identifying the New England REZ as being to the south-east of the project, not the south-west as it actually is (EIS 2.6) – an error also repeated in several points in the BDAR.

As a neighbour to the project (though not identified as such in Figure 6.14), we flag that the benefit sharing opportunities (EIS 2.7.3) have not been extended to ourselves. We would appreciate the developer extending to us the courtesy to benefit also, through whatever opportunities may exist to improve our amenity, access and income from the land through opportunities such as providing biodiversity offsets and safer access. Being an absentee landholder and living a considerable distance from the site meant attendance at the public community events was not possible. Correspondence with the project team has consisted of the newsletter, sporadic emails and telephone calls.

The connecting corridor for the 330 kV connection (EIS 3.3.6.2) is noted as 'approximately 60 m in width. However, this is actually a minimum allowed for this voltage in the applicable standards and where the feed line diverges into two separate parts (northern end of the connection near the existing easement) the width is much greater and combines with the existing >100 m easement for the parallel 330 kV and 132 kV lines that are already present. Describing the vegetation as historically disturbed is problematic also, as the disturbance has primarily been for selective logging (red gum, spotted gum and ironbark in particular) and the disturbance is relatively light in terms of the local context of land-use impacts, with the October 2019 wildfire causing most current damage.

In regard to the viewpoints, again, our property has not been identified in EIS Figure 6.12 as being a private receptor even though the land has moderate to high visibility of the solar arrays along the southern boundary and from our north-western parts (EIS Figure 6.14).

In regard to bringing materials from Port of Brisbane (EIS 6.10.6.6 and Figures 6.21 and 6.22), has the project considered the opportunity to utilise the existing rail infrastructure? This links Port of Brisbane to both Casino and Grafton, where facility to offload rail-freight to trucks would allow for a greatly-reduced carbon footprint for the transport components and the employment of more local trucking contractors. There are certainly opportunities adjacent to Casino station and at Grafton freightyards (near Pound St) where offloading by specialised (but commonly-seen) vehicles would be possible, and Grafton Sleepers, Koolkhan has handling equipment required for weighty transfer, though only a shortened rail siding. Saving 250 km of each-way heavy vehicle movements on the highways (and 6 hours of travel at best-time conditions) will be more than adequately offset through the handling processes, as the offloading of the panels (identified as containerised imports) can be done straight to rail, and from flat-bed railcar to the delivery vehicles through standard container handling equipment.

The decisions on threatened species presence (EIS 6.11.1.7) do not get borne out in evidence on the property to the immediate north, and also on the Summerville Solar Farm Site immediately to the north-west. In both of these sites, threatened plants (including *Eucalyptus glaucina*, *Rotala tripartita*, *Thesium australe*, *Polygala linariifolia*, *Cyperus aquatilis* and *Centranthera cochinchinensis*) have been found in disturbed (and sometimes quite degraded) lands. The assumption on lack of presence (supported by a lack of on-ground survey at an appropriate density) is problematic to myself, having found *Polygala linariifolia* rather likes disturbed lands and soon disappears from view once disturbance is reduced. The lack of presence of *Eucalyptus glaucina* I find particularly concerning, given the abundance of this species on both the Summerville project and our own property (on which we have recorded in excess of 3,300) and seeing it clearly evident on the roadside of Avenue Road only a very short distance north of the project boundary and wildlife corridor. Of the species

omitted from survey in the Category 1 lands, I believe that *Cyperus aquatilis* (high likelihood), *Rotala tripartita* (high likelihood) and *Centranthera cochinchinensis* (though not on the list) are all good candidates for presence, particularly in the large wetland area at the southern end of Lot 29 that was never subject to plantation activity as well as a wetland nearer the junction with Physics Creek. In the Threatened Fauna category of the same section, koala (*Phascolarctos cinereus*) is noted as only being listed as Vulnerable in NSW. This is not the case – the species is now endangered at both NSW and national levels (NSW since May 2022). Additionally, given the prevalence with which we have identified the presence of koalas on the property to the immediate north (13 sightings so far from spotlighting and cameras), their frequent recording in Ellangowan SF, and the fact that they happily use more open forest types (including a sighting in the line of trees along Summerland Way in the vicinity of Summerville Solar Farm), the powerline linkage corridor cannot be excluded from being habitat for the species. That the species is heard calling, and has been seen with young, means that the determination of 'optimal habitat' is being set too high. Additionally, some very good (optimal) quality habitat is being affected at the northern end of the powerline connection and along its eastern edge, even if part of the corridor itself is not optimal. The existing cleared section is only 20 to 30 metres wide, so at least half of the corridor must be carved into very good (and sporadically occupied) habitat for koala. The area on the neighbouring property that is to the west of the corridor was in very good condition prior to the Busbys Flat wildfire (8 October 2019) in imagery available online, suggesting that the condition of the site now is only a post-fire recovery phase and is not indicative of the actual quality of that habitat. Koalas are known to browse on very small saplings of trees they favour as forage.

EIS Table 6.39 fails to identify that PCT 4046 is an element of the Subtropical Coastal Floodplain Forest Threatened Ecological Community (TEC) for NSW BC Act and the similar TEC for the EPBC Act and PCT 3428 and PCT 3420 (in part) represent both the BC Act and EPBC Act-listed versions of that same TEC.

The 116.29 ha of adjacent vegetation identified in EIS Table 6.42 is not clearly identified. It is much larger than the timbered area of Lot 32 and less than Lot 34. How it will be monitored, and how it will be 'enhanced' are not clearly identified. Table 6.43 identifies that there is a low likelihood of vehicle strike, yet the project develops a vegetated corridor that has to cross over the Avenue Road, enhancing the likelihood of causing wildlife impact at this meeting point. This is flagged earlier in this document and there needs to be a suitable fauna underpass installed as well as rope crossing and glider poles.

In regards the EPBC impacts (EIS 6.11.3.8) I still am quite sure that koala and *Eucalyptus glaucina* occur in the development footprint, having them abundantly on the property to the north and seeing plenty of evidence of them from there through the adjacent Lot 34 and down to Main Camp Road. However, I also do agree that the impact to these entities – in the numbers likely to be impacted – is still negligible in regards to the MNES given the area of habitat and frequency with which the species are recorded in the area. Two species not identified in the Migratory species list (EIS Table 6.44) – rufous fantail (*Rhipidura rufifrons*) and rainbow bee-eater (*Merops ornatus*) – are both known from observations on the Ermelo BSA to the immediate north, and on Lot 34 of the associated lands, and are both likely to be in the development footprint – especially along the transmission linkage corridor.

EIS Table 6.46 (and also Table 6.75) identifies that the author has an issue with geographic direction descriptions. Summerville Solar farm is to the west (not the east), the Pacific Highway is to the east (not the west), and Lismore to Mullumbimby transmission upgrade is to the north-east (not the

north-west). Additionally, there is Newman Quarry to the south-east at Mororo and an Inghams chicken-raising facility about 10 km to the north at Coombell which is expanding.

Specific comments on the BDAR (Appendix 14)

As mentioned at the start, I am currently an accredited assessor (BAAS17029) and have a multi-decadal experience with the region and with the NSW legislation through my experience (and expertise) with the NSW Government in various roles prior to leaving NSW DPE / OEH in 2021. I have an experience with the BAM that relates to my role in helping to design the Method and the Scheme and am also an author of one of the supporting documents on the assignment of growth forms. I had a role as a senior threatened species officer and am still regarded highly by the department for my experience and expertise with threatened plant species across NSW, being a member of various technical panels. I am the sole director of the company Henribark Pty Ltd which owns and operates the Ermelo Biodiversity Stewardship Site (BA449) on the property to the immediate north of the project site. This site was acquired for biodiversity offsetting in 2017, put under an agreement in January 2019 and generates biodiversity credits for five PCTs (now three in the new vegetation types including those on the development site), five threatened fauna species (Squirrel Glider, Koala, Brush-tailed Phascogale, red-backed button-quail, rufous bettong) and six threatened plant species (*Eucalyptus glaucina*, *Indigofera baileyi*, *Rotala tripartita*, *Persicaria elatior*, *Polygala linariifolia* and *Cyperus aquatilis*). Of these, all of the credits of PCT 1211 (now part of PCT 3420), squirrel glider, rufous bettong and *Polygala linariifolia* have been sold. The other credit types have sold a few to none.

Section 1.4 notes other sources of information, however the authors were either unaware of (or did not wish to see) the two BSSAR reports for the Ermelo site (the initial assessment undertaken by Eco Logical Australia in 2018 and the variation report prepared in 2022). These would have provided a good amount of very local and highly useful information about the species present, their habitats and the observations we have made (see previous paragraph for list of credits generated), which now exceeds 50 threatened species on this site alone. All of the observation data would have been made available for the assessors' review and use, including the extensive point-location data for the *Eucalyptus glaucina* records.

In Section 2.1.3 it notes Myrtle Creek as being 1.3 km to the southwest. In fact, the project site comes to the intersection of Main Camp Road and Summerland Way, which means that Main Camp Road is only 260 metres to the north of Myrtle Creek at the closest point. Later in this same section the author notes the lack of a defined bed and bank in the streams of Physics Creek (and elsewhere of other unnamed streams also). The local landform – a stagnant alluvial plain – does not form any discrete bed structure unless there is erosion happening from a downstream point. The same Strahler Order of streams on Ermelo BSA – in the subcatchment immediately to the north – flows across a melonhole gilgai floodplain 150 m in width, with no clear streamlines forming except where previous timber harvesting tracks resulted in a forced channelisation and local erosion channel. The broad, flattened landform of the streams in the development site would show similar character and should only express a channel when degraded. There are wetlands (section 2.1.4) in the southern end of Lot 29 that show well the natural wetland form of this floodplain landscape and extend in a discontinuous manner until that streamline joins Physics Creek. All of the streams through here would show similar wetland form, and the wetland can also be seen in aerial imagery of the area of the existing powerline easement where the project's connector will join. A similar landscape position on Ermelo has an abundance of the endangered annual waterplant *Cyperus gracilis* and the endangered (and SAII) species *Rotala tripartita*. The separation to Little Llangothlin Lagoon (the nearest Ramsar Wetland) is also hydraulic – it drains into the Clarence River Catchment.

In section 2.1.5 the author suggests that the aquatic corridors across the subject land would occur in 'significant rainfall' events. My experience is that these start being important soon after runoff commences, which may be any size of event and generally relates to the prevailing conditions immediately prior.

The assessment of what is described as 'extremely low condition' land in the Category 1-mapped parts of the site seems to lead to poor levels of field assessment of the streamlines in particular. As mentioned above, there is a wetland in the southern end of Lot 29 which has only ever been grazed and was not part of the plantations. This is also a suitable habitat for *Cyperus aquatilis*, *Rotala tripartita* and *Centranthera cochinchinensis* (which is not included in any list despite being found in the immediate vicinity on the Summerville Solar Farm site) and appears to be just dismissed in regard to a thorough assessment for threatened species presence and in particular the consideration of Prescribed Impacts in the BC Regulation 6.1(1)(b), (c) and (d).

The description of 'native vegetation' used for the purposes of mapping the surrounding area in Figure 4 does not take into account the definition of 'native vegetation' used by the BC Act ('a plant native to NSW') and relies on using 'apparently intact structure' to define areas as included or excluded. Large areas of the surrounding land is mapped as not having native vegetation, yet there are plantations of native species (tea tree) and pastures dominated by native grasses throughout these areas.

In the description of PCT 3420 (Table 6) and in particular the consideration of the TEC status paragraph which comments on the sporadic occurrences of forest red gum (*Eucalyptus tereticornis*), our experience from the Ermelo BSA site is that, in this locality at least, the presence of Forest Red Gum is very much inferior to the presence of Slaty Red Gum, which does look very similar and can be distinguished readily only by the new juvenile foliage and/or the extent of glaucousness displayed on the flower buds, although the mature canopy of the species also tends to be blue-grey toned, distinguishing it from the clearly-green forest red gum. As this site was assessed at a point about 4 years after the massive wildfire, there is very little of the juvenile foliage still evident and most have not yet returned to a sufficient condition to be flowering. I believe that the assessor may have failed to correctly identify the presence of *Euc. glaucina* throughout development site, in particular in the powerline corridor given pre-fire imagery shows bluish tree crowns in this alignment. Further to the consideration of the TEC status, the BDAR identifies that 5.6 hectares of this PCT is meeting the definition of Subtropical Coastal Floodplain Forest (section 6.1, dot point 3), yet this is dismissed as being present in Table 6 and again in Table 9 and Table 10 and Table 43. Something is therefore amiss with the assessment.

Section 3.2.4 (Scattered Trees assessment) identifies two types of red gum (forest and narrow-leaved) as being present. However, none of the species listed in Table 17 is narrow-leaved red gum (presumably *Eucalyptus seeana* as seen on Ermelo) and I fear that *Eucalyptus glaucina* has been mis-identified in the site as *E. tereticornis* (both are present). The two species appear similar at first glance, but distinguishable by the greyish-toned mature foliage of *E. glaucina* (as opposed to green of both *E. tereticornis* and *E. seeana*) and fruit characters, as well as significantly different juvenile foliage. I suspect that the trees had not yet flowered since the impacts of the fire, the fruit may not have been able to be found under every single individual tree to distinguish them, and sufficient time had passed for juvenile foliage to no longer be evident on the post-fire regenerating crowns.

The assessment plot map (Figure 8) suggests that there is not an adherence to the requirements for plot placement with some appearing overlapping (07 and 08) and most in the scattered remnant

windbreaks being oriented into the adjacent cleared land and therefore not compliant with the principles outlined in 4.3.4.4 of BAM 2020.

The first paragraph of 4.1 describes semi-permanent wetland habitats, yet there is no evidence that these were assessed for the presence of threatened plants in Figure 12.1 where targeted flora survey assessment traces are shown. In fact, these show that the survey was undertaken in a manner that avoided most of this land as the area had been deemed to be Category 1 land but little to no effort was made to determine threatened species presence, including of species reasonably tolerant of disturbance in wetland areas such as *Arthraxon hispidus* and *Cyperus aquatilis*. The assessor has further decided that threatened plants are unlikely within disturbed native vegetation, despite this being a favoured situation for *Polygala linariifolia* and *Cyperus aquatilis*, let alone *Eucalyptus glaucina* which also happily tolerates disturbed sites in this locality. The targeted surveys I fear were undertaken at a suitable time, but not in suitable conditions, as they followed an extended dry spell as shown in the hydSys data from WaterNSW. In addition, it would appear that the plant survey at least has not complied entirely to the guidelines, determining that the minimum distance between transects was 5 or 10 metres (depending on density of midstorey), when in fact the guideline specifies that this is a maximum, and narrower / closer distances should be used when plants are cryptic or likely to be concealed under groundcover (such as the 20 cm tall *Cyperus aquatilis* or the 10 cm tall – 20 cm at most – *Polygala linariifolia*). I continue to be surprised at the lack of *Eucalyptus glaucina*, given its abundance on the Ermelo site and on Lot 34 of the affected lands, as well as the frequency with which it was detected on the Summerville Solar Farm site.

As mentioned previously, koalas are resident on the Ermelo site, being recorded on cameras regularly and also heard bellowing on warmer nights. Their recently-recorded presence in and around the property (including in Ellangowan SF) – including since the wildfires – is supportive of their ongoing use of the site and therefore leads to a query as to their lack of consideration for impacts.

Section 4.2 on ecosystem credit species lacks a number of identified occurrences from nearby of Eastern Grass Owl (*Tyto longimembris*) and surprisingly has no records of Dusky Woodswallow and Little Lorikeet, despite both being on Ermelo in good numbers. The latter does follow the flowering of eucalypts around the landscape and this may be the reason this species was not observed.

Table 20 appears to lack species which are recorded nearby and were published in the Summerville Solar Farm documents – *Centranthera cochinchinensis* and *Thesium australe*, and the frequent local finds published of *Cyperus aquatilis* which should also have appeared in the list (see below). While they may not have been associated with the communities (owing to the matching process undertaken by the staff of the former OEH), they should have been added to the list in the correct application of the BAM assessment tools. As mentioned above, I fear that the assessment was undertaken during a time when *E. glaucina* would not have been clearly distinguishable (unless the assessors did not consider the grey-toned canopy as being any different). Also, the immediate few months prior to survey would have been important to the ability to locate *Indigofera baileyi* (it was being hesitant to grow that year owing to an extended dry period – and then can only be identified from the fruit anyway) which is abundant on the Ermelo BSA site, and *Melaleuca irbyana* is possibly still too immature to be clearly distinguishable. In a recent (July 2024) visit to Ermelo I found one plant of *Melaleuca irbyana*, 5 metres from a track and 10 metres from a camera monitoring point, as it was finally tall enough to get above the groundcover and be evident. This is not a fast-growing species and appears to be susceptible to high-intensity fires. It is also more likely to be up off the floodplain as is seen both at the Coombell population and also with the plant found on Ermelo.

Cyperus aquatilis has been dismissed from presence on the reading of a descriptive section of the Threatened Biodiversity Data Collection (TBDC) but not by reference to the table of limiting habitat constraints where 'cliffs' is not ticked. In fact, no habitat constraints are applied for this species ('n/a' is ticked) so it should have been surveyed. The habitat and ecology section of the TBDC is misleading.

Rotala tripartita needs a good wet period to be growing well, otherwise it can appear to be a very poorly plant with reddish foliage and small in stature (generally prostrate).

In regard to the threatened fauna, *Turnix maculosus* has only been seen on the Ermelo site in a brief period a year after the fires, between December and April. It is not crepuscular (extending into a wider daylight period) and does not appear to be nocturnal (all camera detections on Ermelo – 3 sites from 40 cameras – were daytime images of birds / pairs / family groups moving around) and birds were flushed from tracks while moving through the site. The assessment period (July, August and January) is only poorly overlapping when they are in the area (if that is at all regular).

The detail in 4.3.1 covers the time of survey, but does not use either the best rainfall station (the Myrtle Creek River Gauge – station 203030) nor provide any guidance of the conditions in the months leading up to survey to determine the soil moisture (and therefore plant growth) situation for the site. While not mandatory, it is good to know if the failure to detect a species was because of a preceding dry period. The 4 months until April 2023 had received less than 400 mm (in comparison to the same period in 2024 when it received over 600 mm of rainfall and 2022 when it got 1300 mm), and in all of 2023 only 800 mm (450 mm until the end of October), suggesting that the opportunity to see threatened herbs would have been unlikely as they would be in drought condition for much of the times of survey.

The ecologists undertook parallel surveys at the maximum (not the minimum as suggested in the methods description) allowed for in the Threatened Flora Survey guidelines (Table 1 of that document), and certainly too far apart for the detection of small herbaceous species such as *Indigofera*, *Polygala* and *Oldenlandia* which can be missed by only a couple of metres separation, let alone the species not included in the survey list that are found in the local area. The expertise of the ecologists is also troubling, with their ability to distinguish these plants being concerning if they have not seen them previously. These are mainly cryptic species and can be easily missed – I know all too well after decades of searching for them!

Table 29 of the BDAR does not identify *Turnix maculosus* in the list, despite the methods listing them as one of the target species.

In regard to the mammal survey, I believe that 10 baited cameras is too few. I have 20 cameras regularly on the 155 ha of Ermelo BSA and still only see a broad spectrum of common species in almost every camera deployment. On occasion I get lucky, and generally have had a koala walk through one of the camera traps on each repeated deployment.

Figure 12.2 has a paucity of recorded threatened species on the Ermelo site to the north. The data needs to be re-examined as it shows only Squirrel Gliders, but there are 10 records of koalas, and a number of other records including bats, phascogale and bettongs, as well as threatened plants. There is no recognition of the threatened plant records on Ermelo or in the surrounding areas shown on any map.

The indirect impacts section (particularly Table 46) identifies that 116.29 ha of adjacent vegetation will be subject to monitoring and enhancement, but this is not shown or described anywhere. Nor is the monitoring nor the enhancement described. This is therefore unable to be quantified or

justified. As mentioned above, the prevailing seasonal conditions probably reveal why threatened plants were not found. The comment on wild dogs is interesting, as all dog observations on Ermelo have been of dingoes. The opportunity for vehicle strike extends to not just planigale, but also to koala, reptiles and frogs, which are susceptible to vehicle strike.

Section 6.3.2 identifies a minor impact to connectivity, although there is a new 60 metre-minimum width corridor separating the bushland in the project area into two parts, one of which will now be constrained between two easements and cleared farmland. This will likely have some impacts on the movement of animals, including koalas which are recorded on both sides of this. The fencing impact is also harder for animals to traverse and effectively funnels them onto the Avenue Road corridor to move through the site. This is concerning as it will likely lead to higher potential (if not actual) vehicle strike, particularly for smaller and mid-size animals such as bandicoots and bettongs.

The avoidance of water bodies (6.3.3) is hard to reconcile when the connection point to the main 330 kV transmission line is situated immediately above a 3rd order stream crossing of the existing easement. While it states drainage lines and wetland areas have largely been avoided, there are extensive areas of ephemeral and seasonal wetlands in the Category 1 lands, including areas (such as the southern part of Lot 29) which maybe should not have been identified as Category 1 as they had no development of plantation at that site in the available imagery. There is a similar small floodplain wetland just north of the confluence with Physics Creek which has also not been subject to plantation.

The author of Table 48 appears to have confusion about the direction of projects, with Summerville being to the west (not the east) and the Pacific Highway to the east (not the west). The Lismore – Mullumbimby Transmission Upgrade is also north-east, not north-west, and the Newman Quarry at Jackybulbin is not listed, nor is the Ingham Chicken development 10 km to the north at Coombell.

In regard to the planting of the biodiversity corridor, the species planting lists should also specify the source for the material to be planted, with it ideally coming from either the same subregion or at most one adjacent. The species lists are including species that may be sourced some distance away.

Table 53 (MNES) fails to include in the migratory species Rufous Fantail (*Rhipidura rufifrons*) and rainbow bee-eater (*Merops ornatus*) despite them being recorded on the northern edge of Lot 34 and frequently in Ermelo BSA. In Table 54, I raise again *Eucalyptus glaucina* is likely present. Glossy Black Cockatoo foraging was largely wiped out by the fires and is yet to recover (some regrowth of *Allocasuarina* is occurring on Ermelo). The species has been sighted on occasion moving through.

Section 10.1 provides the option of purchasing from the market. The Ermelo site has a good number of the credits needed for some of the threatened species as well as the habitats / PCTs. As a neighbouring property, it would be a good opportunity to acquire the required offset in a hyper-local manner. In regard to the purchase from the Biodiversity Offset Fund, it is worth noting that both the Independent Review (done by Ken Henry) and the IPART recommendations are that this option be discontinued as soon as possible. In regard to establishing a site on the residual land, this option also comes with a requirement to confirm the species presence, and the time taken to undertake the assessment and securing of the stewardship assessment on the identified land (which can be well over 12 months). The cost then to fill the Total Fund Deposit (likely to be in the order of $3 million as most are now) and make the site active (so the offsets are actually delivered) is going to mean a likely credit price above of $5,000 per PCT credit and $500 per species credit – if the credits can be created locally, given at least three species have 'assumed presence' and the residual land is still

recovering from the impact of the wildfires so may not yet have good habitat for some of the species.

Appendix 2 lists the Threatened species assessments. There are some concerning statements in here which need to be addressed.

- *Cyperus aquatilis* is not associated to cliffs. The description text in the TBDC identifies that in a specific instance this is the case, but on Ermelo the species is widely found in the ephemeral and seasonal wetlands of the floodplain. Therefore, this species has not been adequately assessed and been dismissed despite good records found on the adjacent property (which also lacks cliffs). The assessor is meant to identify only those factors which are identified in the TBDC as habitat constraints (not anything elsewhere in the text) and cliffs is not a 'ticked' option for this species so should not be considered as a limitation.
- The records count for *Eucalyptus glaucina* is merely the existing site points from Bionet. At each point there is a descriptor for the number of plants found in and around that site, ranging from a few up to dozens, as in the case of one of the nearest points in Ellangowan State Forest. The data from Ermelo is yet to be uploaded to Bionet, but will display approximately 3,300 datapoints, each being a confirmed plant of *Eucalyptus glaucina*.
- *Indigofera baileyi* is likely to be a moderate for impact as the species is widely dispersed throughout PCT 3420 on Ermelo BSA with in excess of 1500 plants observed. It is also noted that the ideal time to survey for this species is 3-4 months after good rainfall in late summer / early autumn, when the distinguishing characteristics of a cylindrical fruit are clearly evident. The species persists as an underground rootstock and only resprouts in good conditions. At most the plants are only 20 – 30 cm tall on Ermelo.
- *Melaleuca irbyana* is only occasionally associated to waterways and is more frequently found on lower slope positions, such as is seen very near the Camira State Forest access gate just north of Whiporie and the patch adjacent to Summerland Way in Coombell. It is in that position on Ermelo also and being slow growing may not have been evident at the time of survey.
- *Owenia cepiodora* was planted at that location (an arboretum) more than 70 years ago according to a former State Forests NSW ecologist.
- *Persicaria elatior* is recorded in several places on Ermelo, so there are local records.
- *Phaius australis* reaches its southern limit at Lake Cathie (according to PlantNet).
- *Polygala linariifolia* survey was ineffectual, with the survey transects too far apart and the prevailing seasonal conditions too dry for the species to be growing vigorously. This is a herb 5 to 10 cm tall most of the time, and loves disturbance, such as in the existing power line easement on Ermelo.
- A *Pterostylis* species is mentioned, but not named. Which one – there's dozens to choose from. One particularly interesting, undescribed species occurs in the powerline easement on Ermelo.
- There are many more records of *Rotala tripartita* just beyond the 1500 m buffer, with about 20 ha of occupied habitat on Ermelo BSA and the rest of the property. It is also found at more than five sites across the northern rivers now, including south of Grafton, Yamba, Coombell, Ellangowan and Rappville. It grows in ephemeral wetlands and shallow water wetlands (although it is in water over a metre deep in some places on Ermelo BSA) and was originally found in a very narrow flood-runner, before being found

in just about every gilgai hollow and stream channel on the floodplain as its identity was made more obvious by familiarity.

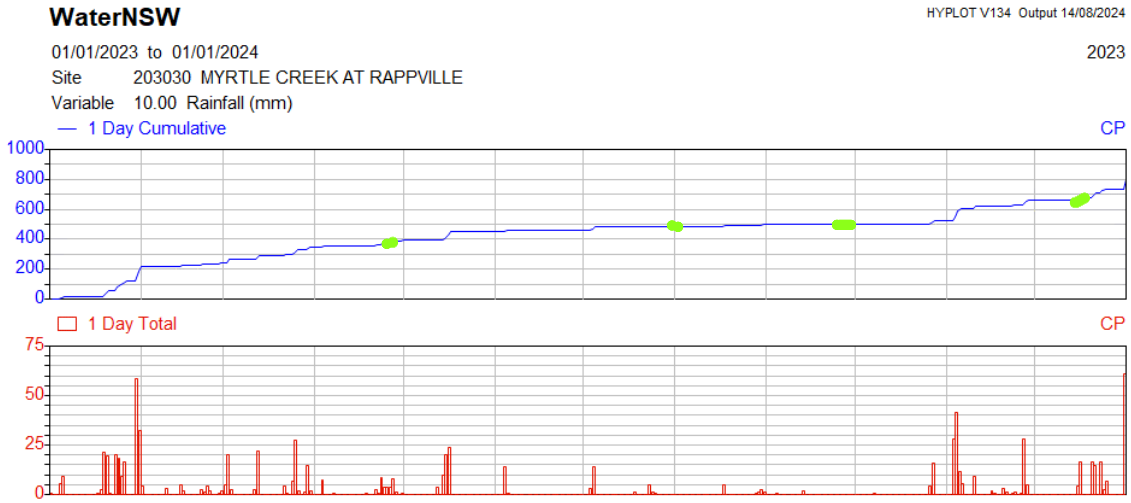
- The information for *Ancistrachne maidenii* lists Sydney Basin features, not those relating to the Clarence Moreton Basin (where it is mainly associated to the Kangaroo Creek Sandstone). This differs in composition (being quartz rich) from the lithic sandstone in this locality. It is also worth noting that this species was delisted in December 2023.
- *Centranthera cochinchinensis* was reported in the Summerville Solar Farm report, which was supposedly referenced. Saying it was not in the locality is therefore very erroneous.
- *Eucalyptus tetrapleura* is virtually unknown north of Lawrence on the Clarence, so it is very unlikely to be found this far north.
- *Circus assimilis* (spotted harrier) is missing, despite being observed as a breeding pair at the rest area nearby.
- *Petalura litorea* is not out of the question as the subject land is in reality only 5 km from the coast – being defined by the coastal zone map, which is 1 km buffer around the tidal limit of coastal waterways. This would also apply for *Argynnis hyperbius* (Laced Fritillary) which has suitable habitat on Ermelo (coastal floodplain with lots of *Viola betonicifolia*). It was being looked for prior to the wildfires of 2019, which probably ensured it became locally extinct were it present prior.
- *Pandion cristatus* (eastern osprey) has been observed on Ermelo, about 100 m north of Lot 34 of the subject land.
- *Turnix maculosus* has been recorded on at least 6 occasions on Ermelo BSA, and therefore is definitely recorded within the locality. It also occurs quite high up on ridges (they nested about 50 m from the boundary with Lot 34) and also on the floodplain and ephemeral stream areas, so the habitat fidelity is not as tight as references suggest. As mentioned above, they are also active during daylight hours and less so at night – in this locality at least.
- *Rhipidura rufifrons* has been seen on Lot 34 (across the fence observations) and is often seen on Ermelo on camera.
- *Hirundapus caudacutus* (white-throated needletail) was added to the NSW BC list (as vulnerable) in April 2024

The BAM data presented in the table of Appendix 3 often lacks abundance values which is concerning. The method identifies that cover and abundance is captured. Other concerns in this table include:

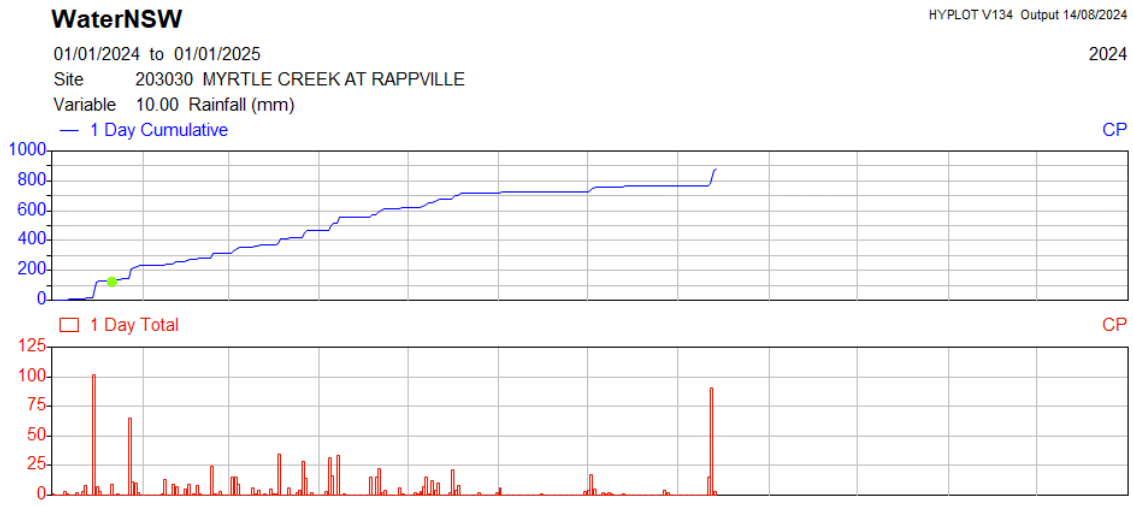
- Identification of *Dianella* only to genus level. There are only 3 species likely to occur here, and all can be distinguished on the extent of occlusion of the leaf base (*D. longifolia, D. revoluta, D. caerulea*). There is another, much smaller species which is also in the area (*D. brevipedunculata*) despite PlantNet notes, that can be distinguished by the length of inflorescence (being shorter than the foliage).
- *Cyanthillium cinereum* is generally considered to be an exotic, not a native, for the forms likely to be found here.
- *Isotoma armstrongii* is not recognised for NSW (in Plantnet) and the observations are more likely of *Lobelia stenophylla* or *L. anceps* as per the Atlas of Living Australia assignment of observations.
- *Carex* species (and then only to genus level) only getting one record is concerning, given the frequency with which *C. inversa* is seen in PCT 3420.
- *Glycine cyrtoloba* is very unlikely – it is a classic quartz-sandstone species found nearer to Grafton. The one here is likely *G. tabacina*.

- *Acacia disparrima* is common on Ermelo, and often difficult to distinguish from *A. leiocalyx. Acacia concurrens* is also commonly seen on the BSA site and is distinguished by the concurrent nature of basal veins in the phyllode (the main veins of other species all separate at the pulvinus).
- *Corymbia gummifera* is not going to be found here. It is found closer to the coast and westwards on the sandstone areas (favouring quartz-rich soils), but not in this locality where all rough-barked *Corymbia* individuals seen are *C. intermedia*. The two local records from 1997 are likely errors.
- *Entolasia stricta* (favouring drier slopes and crests) was more common on Ermelo than *E. marginata* (favouring damper areas) but is not included here.
- *Dichanthium* sp is *D. sericeum*, there being no others in the locality.
- *Imperata cylindrica* is the only species in that genus in NSW, yet the species, and as a genus only record, are both listed in the table.
- The *Setaria* listed in the natives section is likely not native with that level of cover. The local native is a slender, small-habit species.
- How surprising to find the Kosciusko-region *Rananculus acrophilus* about 900 km north of where it should be and a good 2 km altitude lower.
- All *Lantana* records in this area are *L. camara*.
- Appendix 4, table A 5 suggests that *Antaresia maculosa* occurred on the site. I would imagine that it was *Morelia spilota*, not *Antaresia*, as that species has been seen on Ermelo several times but never an *Antaresia*.

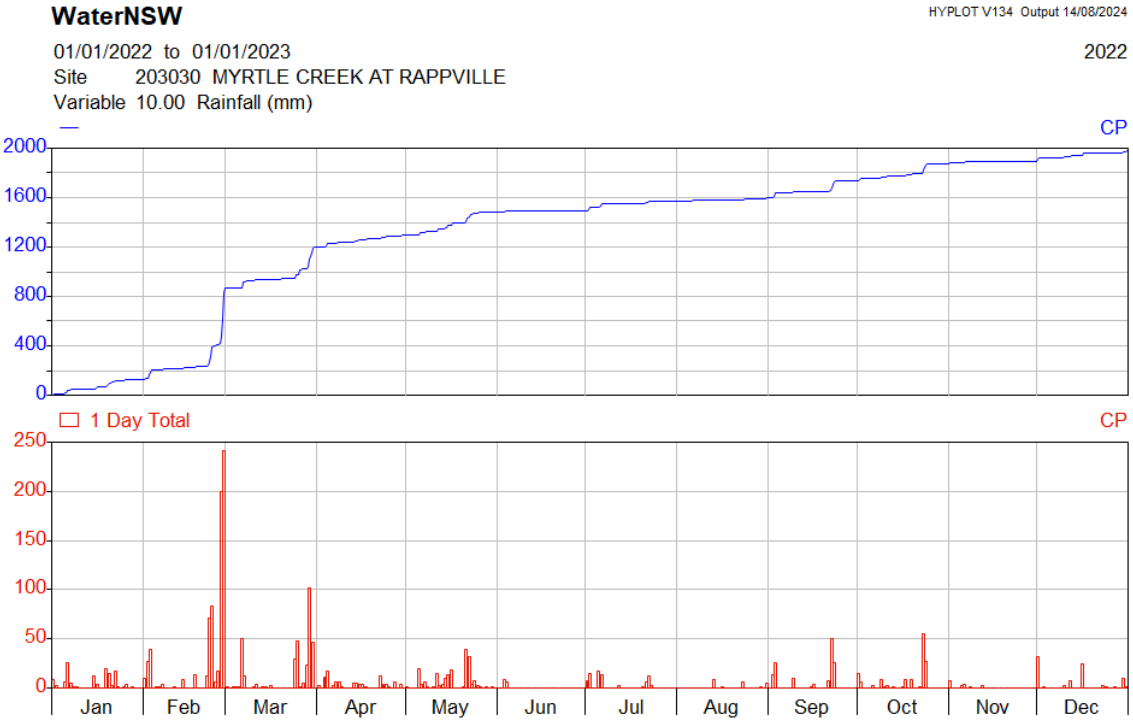
Supporting imagery



Hydsys (WaterNSW) data from Station 203030 (Myrtle Creek @ Rappville) for 2023 showing a single large rainfall event in late January 2023 and then small and sporadic falls for the rest of the year likely resulting in very poor herb growth and affecting detectability of cryptic species like most of those sought, given surveys were done in April, August, September, December and the following January. Green dots on the accumulation curve identify the times of survey.

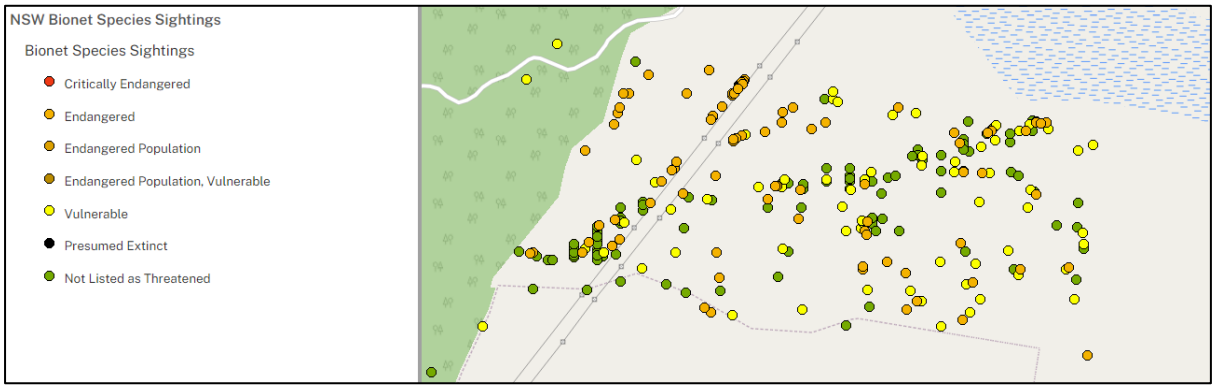


Hydsys (WaterNSW) data from Station 203030 (Myrtle Creek @ Rappville) for 2024 (to 13/8/24). Three days already exceed highest rainfall days of 2023. Green dot on the accumulation curve identifies the time of survey.



Hydsys (WaterNSW) data from Station 203030 (Myrtle Creek @ Rappville) for 2022 (year preceding survey) showing drying period commencing in June 2022 despite the year (especially to the end of March) being very wet. Note that on 5 days early in this year there are rainfalls more than the highest single-day values for 2023.

A typical plant of *Polygala linariifolia* from in the powerline easement about 250 m north of Lot 34 and a very large plant of *Polygala linariifolia* from April 2021 in the crown road easement immediately east of Ermelo (southeastern most orange dot in next image).



Data from Bionet (SEEDmap screen capture) for the Ermelo property (immediately north of the project lands as can be seen from the shape of the common boundary) showing distribution of current records and identifying observations of listed vulnerable (yellow) and endangered (orange) species.

Cyperus aquatilis in the 3rd order stream on Ermelo adjacent to the powerline easement.

Rotala tripartita as seen on Ermelo BSA during the site inspection of 27 July 2024.