NSW GOVERNMENT | Office of Environment & Heritage

DOC17/646767-1
SSD6698

Ms Diana Mitchell
Senior Planning Officer
Department of Planning and Environment
diana.mitchell@planning.nsw.gov.au

Dear Ms Mitchell

Coppabella Wind Farm – Site visit outcomes

This letter is to update you on the outcomes of the site visit conducted at Coppabella wind farm site on 15 January 2018. The site visit was attended by Goldwind Australia staff (Jeff Bembrick, Tom Nielsen, Medard Boutry), NGH environmental staff (Dave Maynard) and our staff (Allison Treweek and Suzie Lamb).

The intent of the site visit was to investigate and clarify some of the vegetation mapping discrepancies that Office of Environment and Heritage (OEH) staff identified during their review of the Coppabella wind farm modification application. The outcomes of the site visit have been described in attachment one, and include detail on the locations visited during the site visit, and what actions were agreed at each location.

During the site visit we found that several of the areas were incorrectly mapped in the environmental assessment, including areas that were mapped as exotic that were native. These errors are likely to extend beyond the areas we inspected during the site visit and are discussed in the attachment.

Please note, this letter is an update to our initial response to the Coppabella wind farm modification application letter dated 23 October 2017. These matters are in addition to those matters raised previously.

If you have any questions about this matter, please contact Allison Treweek, Senior Team Leader for South East Planning, on 6229 7082.

Yours sincerely

25.1.2017

MICHAEL SAXON
Regional Director – South East
Regional Operations Division

PO Box 733 Queanbeyan NSW 2620
11 Farrer Place Queanbeyan NSW 2620
Tel: (02) 6229 7188 Fax: (02) 6229 7001
ABN 30 841 387 271
www.environment.nsw.gov.au

NSW GOVERNMENT | Office of Environment & Heritage

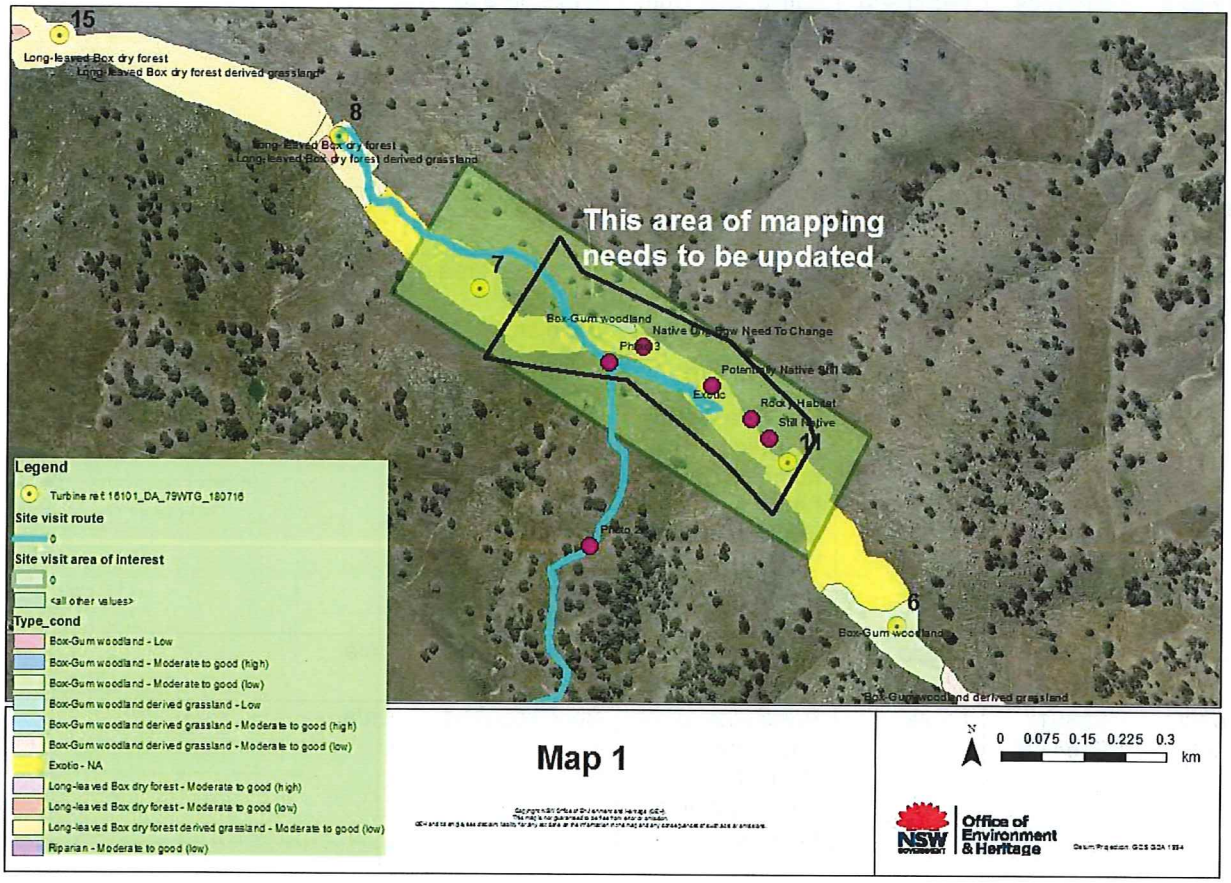
Attachment 1: OEH site visit findings from 15 January 2018

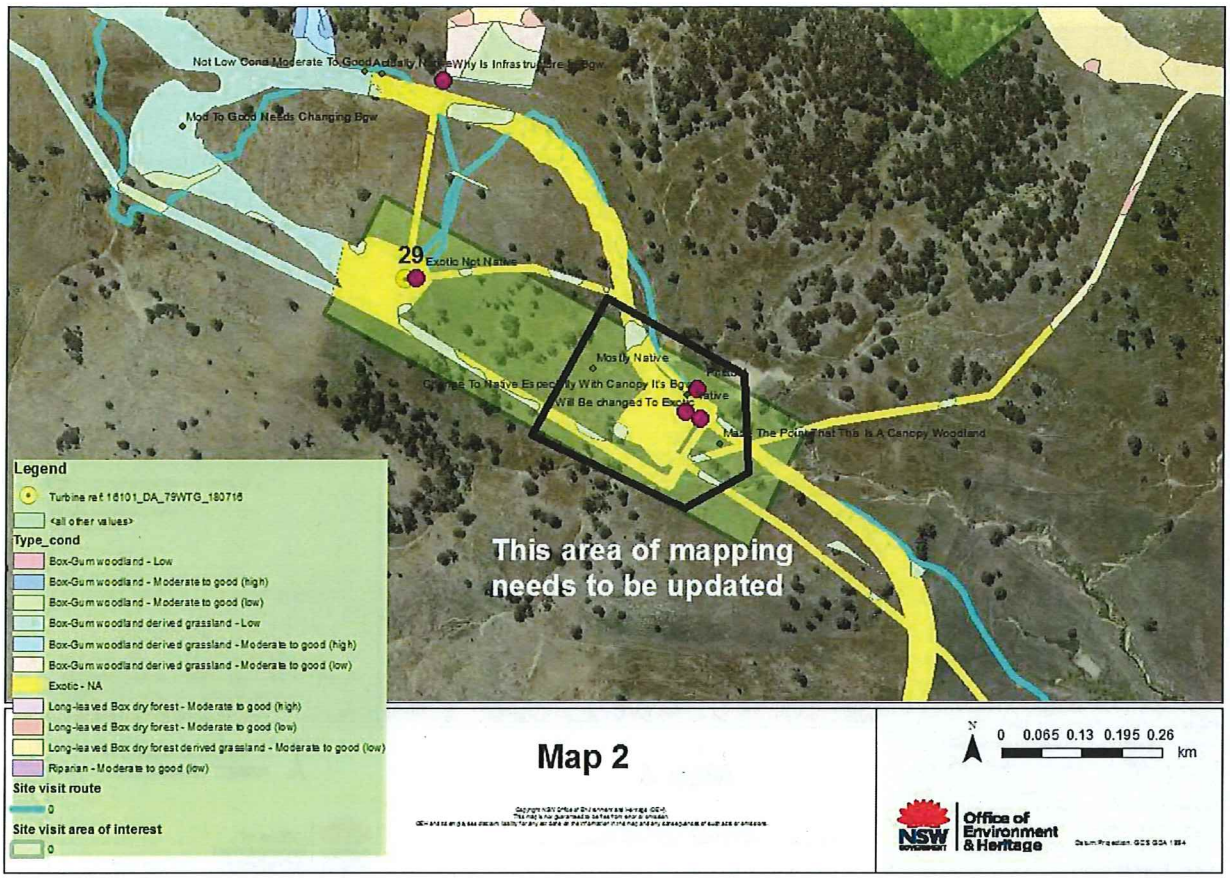
OEH's internal Reference	Easting and Northing GDA94	What the area is currently mapped as	Site inspection finding	OEH's recommended action	Map or photo reference
Photo point FID 3	643560 6151889	Exotic	Confirmed exotic.	None required	n/a
Photo point FID 4	643630 6152117	Exotic	Confirmed exotic.	None required	n/a
Photo point FID 7 – to FID 10	644242 6154023 *To* 644470 6153861	Exotic	This area is the Box Gum Woodland derived native grassland. NGH agreed on site.	change mapping in this area to Box Gum Woodland derived native grassland (EEC).	Area mapped on **Map 1** below.
Photo point FID 13	642206 6154029	This area is mostly mapped as exotic, with small sections of Box Gum woodland - Moderate to good (low) mapped where the trees are.	The trees are close enough to mean the whole area should be mapped as the Box Gum Woodland vegetation moderate to good – the groundcover is also native (not exotic). There is a substantial Yellow Box tree with hollows in this area that should be protected during construction and operation.	Update mapping of this area to Box Gum Woodland (EEC) - moderate to good condition. Move infrastructure into the more degraded areas.	Area mapped on **Map 2** below.
Photo point FID 15	641768 6154245	Exotic	Confirmed exotic.	None required	n/a
Photo point FID 16	641811 6154561	Box Gum woodland - Moderate to good (low) and mix of other.	Infrastructure placed in an area mapped Box Gum woodland - Moderate to good – when there are exotic	Suggest avoiding impact to the Box Gum woodland – EEC and situating the infrastructure in a cleared area.	Area mapped on **Map 3** below.

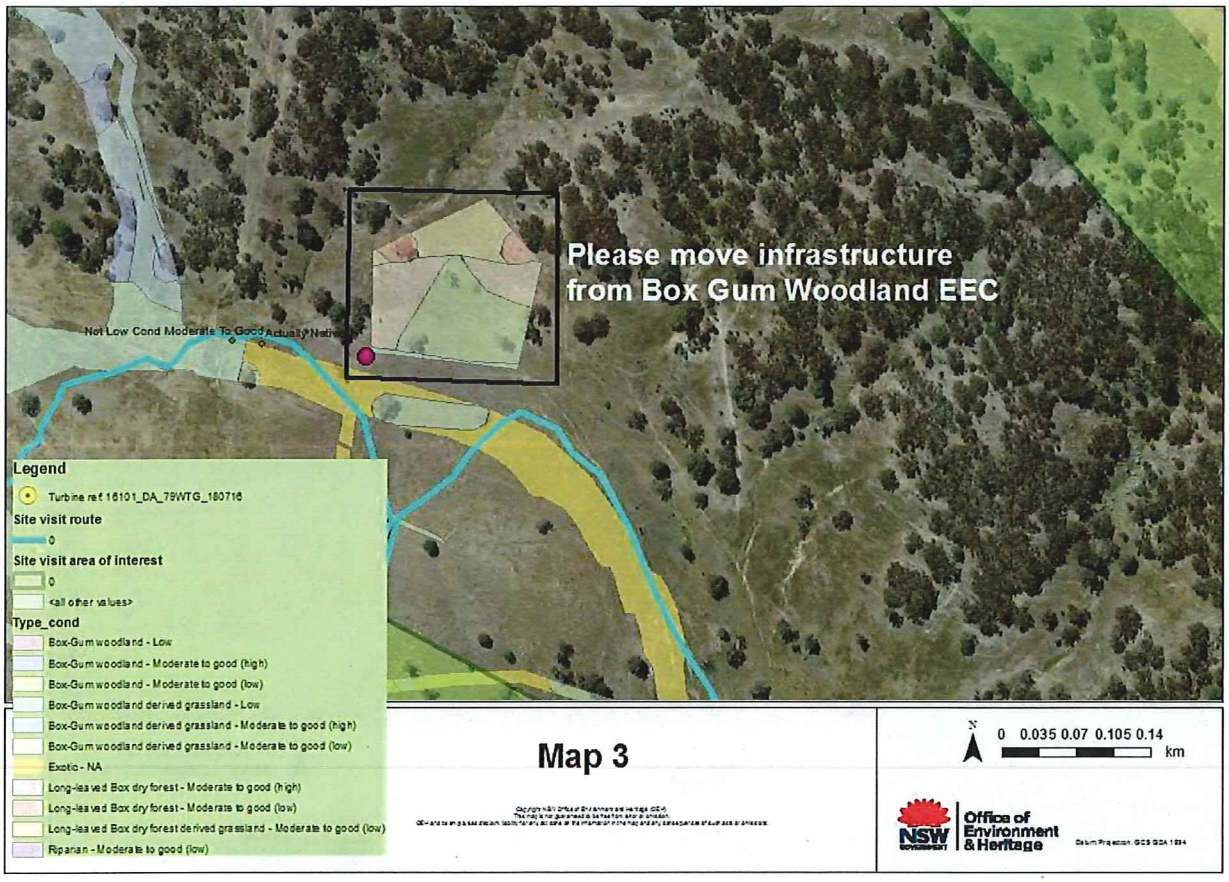
PO Box 733 Queanbeyan NSW 2620
11 Farrer Place Queanbeyan NSW 2620
Tel: (02) 6229 7188 Fax: (02) 6229 7001
ABN 30 841 387 271
www.environment.nsw.gov.au

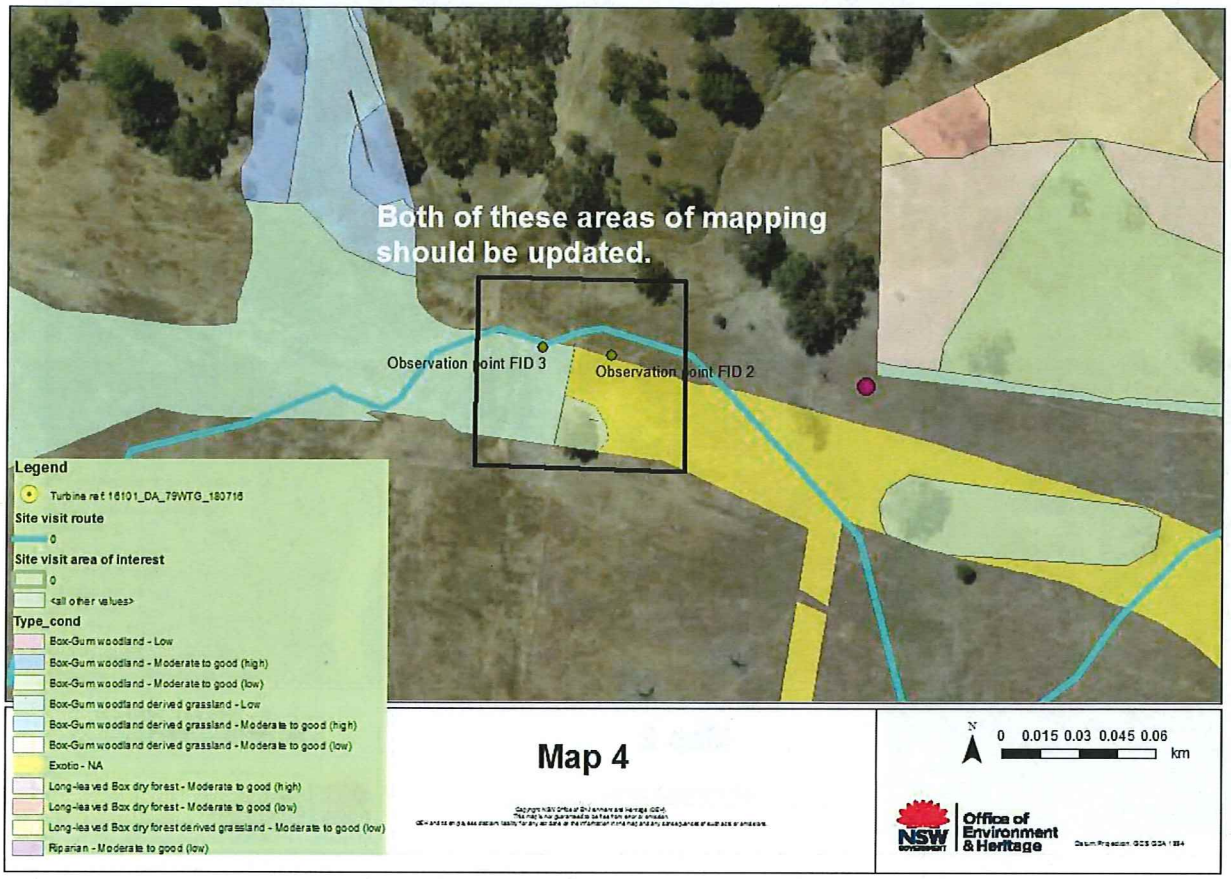
			cleared areas surrounding it.		
Observation point FID 2	641712 6154573	Exotic	Over 50% native. This area is the Box Gum Woodland derived native grassland. NGH agreed on site.	Update mapping in this area to Box Gum Woodland derived native grassland (EEC) - Moderate to good condition	Area mapped on **Map 4** below.
Observation point FID 3	641685 6154576	Box Gum Woodland derived native grassland - low (exotic)	Over 50% native. Box Gum Woodland derived native grassland - Moderate to good	Update mapping in this area to Box Gum Woodland derived native grassland (EEC) - Moderate to good condition	Area mapped on **Map 4** below.
Observation point FID 4	641390 6154488	Box Gum Woodland derived native grassland - low (exotic)	Over 50% native. Box Gum Woodland derived native grassland - Moderate to good	Update mapping in this area to Box Gum Woodland derived native grassland (EEC) - Moderate to good.	Area mapped on **Map 5** below.
Observation point FID 5	641271 6154734	Box Gum Woodland derived native grassland - low (exotic)	Over 50% native. Box Gum Woodland derived native grassland - Moderate to good	Update mapping in this area to Box Gum Woodland derived native grassland (EEC) - Moderate to good	Area mapped on **Map 6** below.
Observation point FID 6	642170 6155321	Exotic	Confirmed exotic.	None required	n/a
Observation point FID 7	640898 6155370	Box Gum woodland - Moderate to good (low)	Likely to meet a higher quality class – very good quality vegetation in this area with a very high number of tree hollows. Sighting of two Wedged-tail Eagles foraging in this area.	Avoid this area of important woodland – moving infrastructure to areas of degraded vegetation surrounding this patch.	Area mapped on **Map 7** below.
Photo FID 18	636829 6155380	Exotic	Confirmed exotic.	None required	n/a
Photo FID 19 & 20	638515 6154116	Exotic	Borderline exotic and native. Difficult to tell due to grazing pressure.	None required	n/a

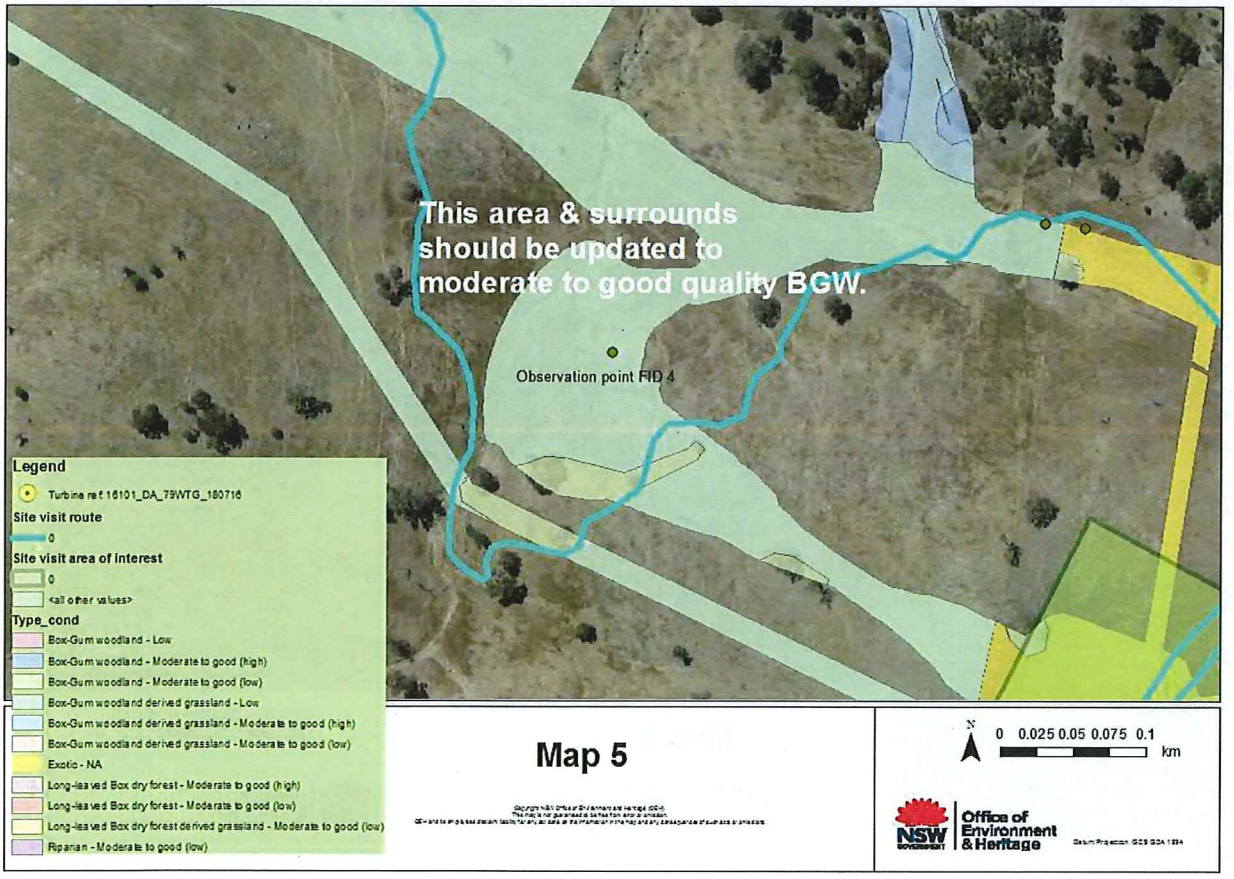
Whitefield's Road	644625 6147433	Box Gum Woodland moderate to good (low)	The site inspection confirmed this area is of very high-quality vegetation with an intact grassy understory and a canopy with a high density of tree hollows.	Agreed that this was probably one of the highest ecological areas of the whole site. Avoid any disturbance to roadside vegetation	
Red point FID 0	644889 6150055	Box Gum Woodland Derived native grassland moderate to good (low)	This area is good quality habitat, surrounded by lots of seemingly degraded pasture to the south. Yet the road goes through the quality habitat area.	Move road to the south to avoid impacts on this area.	

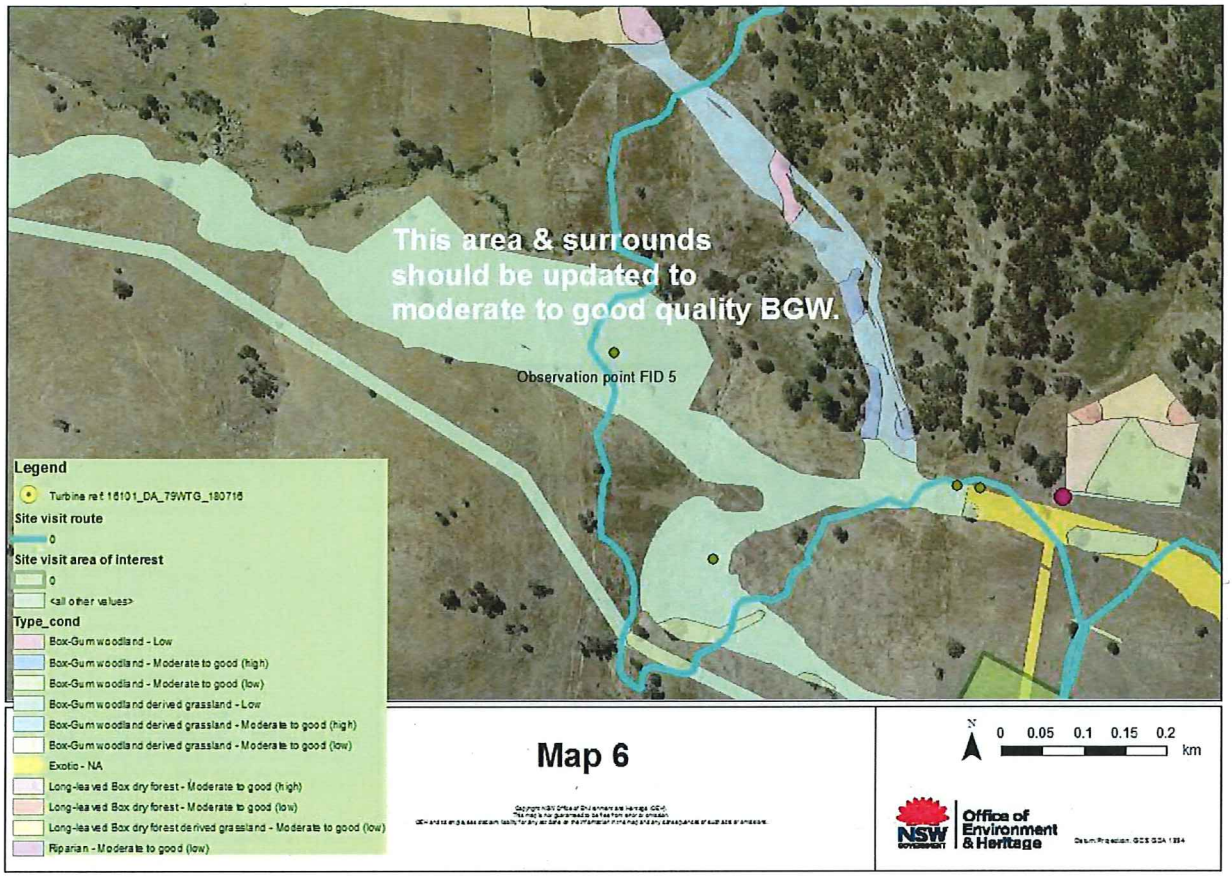


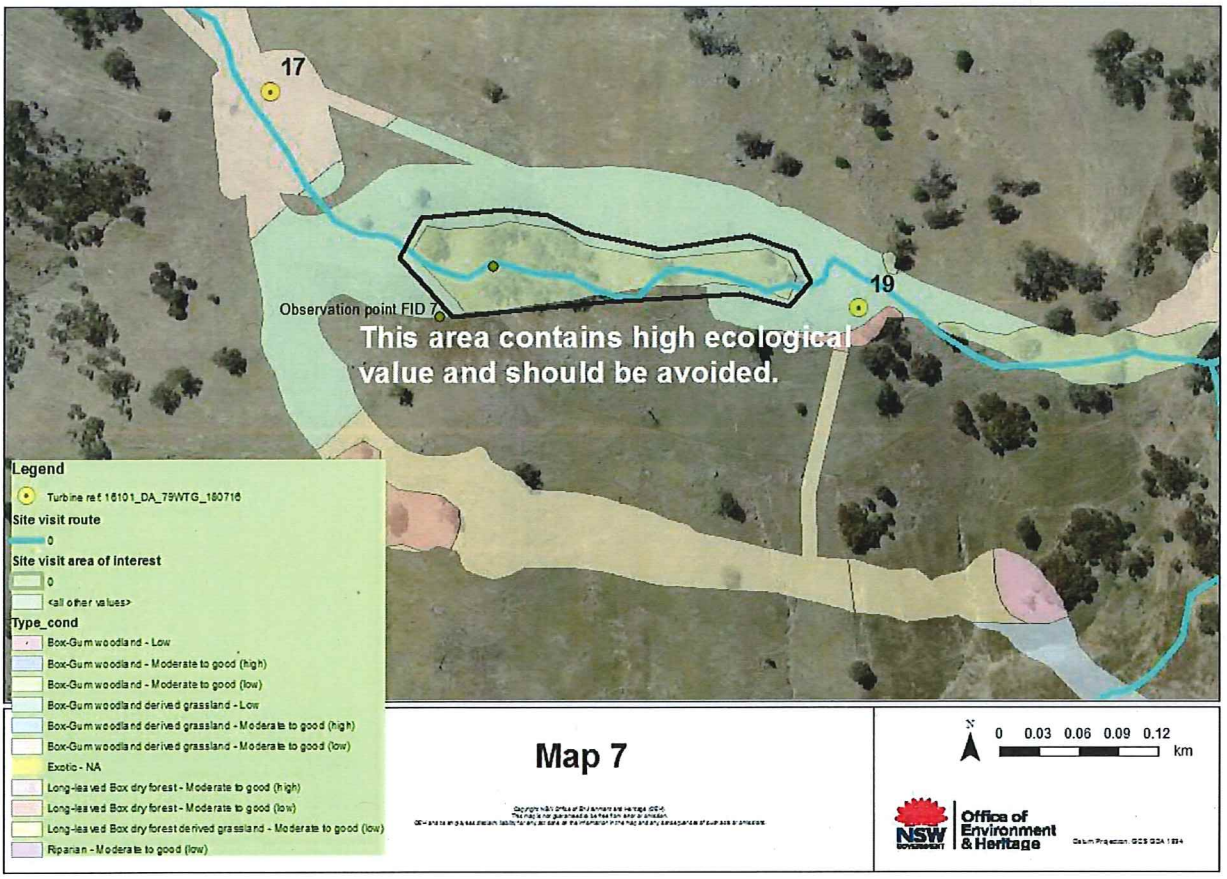

Not Low Cond Moderate To Good Actually Native
Why Is Infrastructure In Bgw
Mod To Good Needs Changing Bgw
29
Exotic Not Native
Mostly Native
Will Be changed To Exotic Native
Mass The Point That This Is A Canopy Woodland
This area of mapping needs to be updated
Legend
Turbine ref 16101_DA_79WTG_160716
<all other values>
Type_cond
Box-Gum woodland - Low
Box-Gum woodland - Moderate to good (high)
Box-Gum woodland - Moderate to good (low)
Box-Gum woodland derived grassland - Low
Box-Gum woodland derived grassland - Moderate to good (high)
Box-Gum woodland derived grassland - Moderate to good (low)
Exotic - NA
Long-leaved Box dry forest - Moderate to good (high)
Long-leaved Box dry forest - Moderate to good (low)
Long-leaved Box dry forest derived grassland - Moderate to good (low)
Riparian - Moderate to good (low)
Site visit route
0
Site visit area of interest
0
Map 2
N
0 0.065 0.13 0.195 0.26
km
NSW ENVIRONMENT
Office of Environment & Heritage

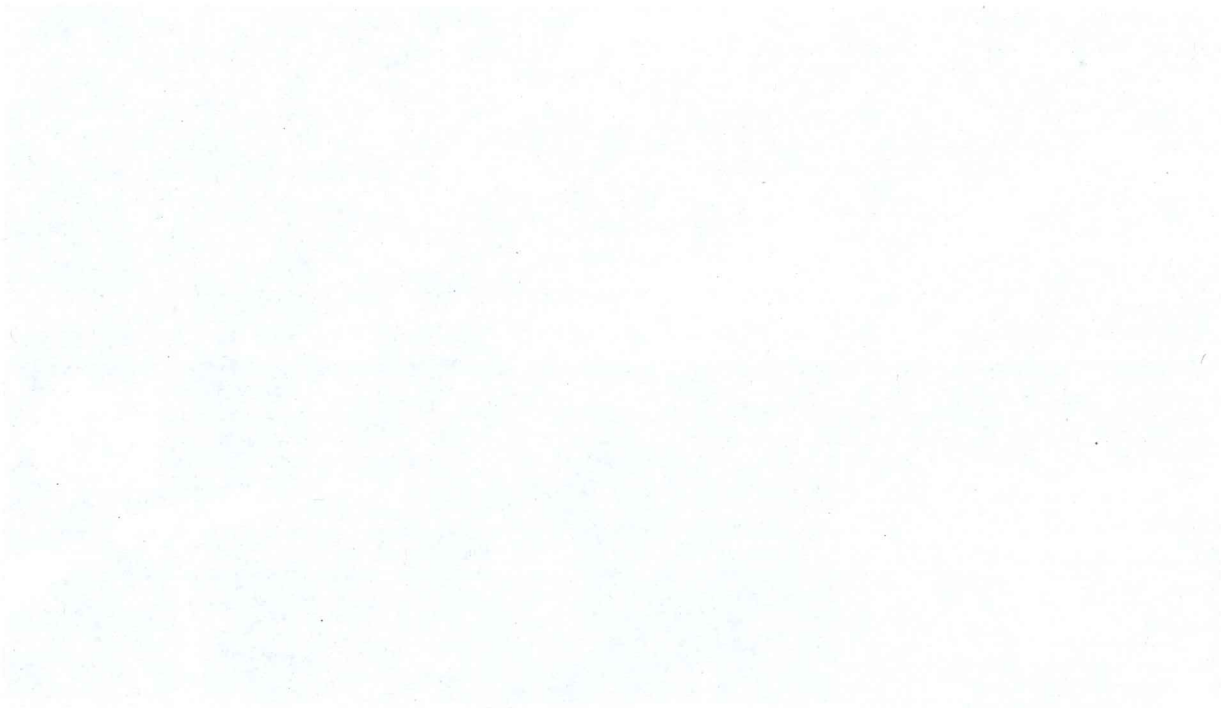

Please move infrastructure from Box Gum Woodland EEC
Not Low Cond Moderate To Good Actually Native
Legend
Turbine ref 16101_DA_79WTG_160716
Site visit route
0
Site visit area of interest
0
<all other values>
Type_cond
Box-Gum woodland - Low
Box-Gum woodland - Moderate to good (high)
Box-Gum woodland - Moderate to good (low)
Box-Gum woodland derived grassland - Low
Box-Gum woodland derived grassland - Moderate to good (high)
Box-Gum woodland derived grassland - Moderate to good (low)
Exotic - NA
Long-leaved Box dry forest - Moderate to good (high)
Long-leaved Box dry forest - Moderate to good (low)
Long-leaved Box dry forest derived grassland - Moderate to good (low)
Riparian - Moderate to good (low)
Map 3
N
0 0.035 0.07 0.105 0.14
km
NSW ENVIRONMENT
Office of Environment & Heritage


Both of these areas of mapping should be updated.
Observation point FID 3
Observation point FID 2
Legend
Turbine ref 16101_DA_79WTG_160716
Site visit route
0
Site visit area of interest
0
<all other values>
Type_cond
Box-Gum woodland - Low
Box-Gum woodland - Moderate to good (high)
Box-Gum woodland - Moderate to good (low)
Box-Gum woodland derived grassland - Low
Box-Gum woodland derived grassland - Moderate to good (high)
Box-Gum woodland derived grassland - Moderate to good (low)
Exotic - NA
Long-leaved Box dry forest - Moderate to good (high)
Long-leaved Box dry forest - Moderate to good (low)
Long-leaved Box dry forest derived grassland - Moderate to good (low)
Riparian - Moderate to good (low)
Map 4
N
0 0.015 0.03 0.045 0.06
km
NSW GOVERNMENT
Office of Environment & Heritage


This area & surrounds should be updated to moderate to good quality BGW.
Observation point FID 4
Legend
Turbine ref 16101_DA_79WTG_160716
Site visit route
0
Site visit area of interest
0
<all other values>
Type_cond
Box-Gum woodland - Low
Box-Gum woodland - Moderate to good (high)
Box-Gum woodland - Moderate to good (low)
Box-Gum woodland derived grassland - Low
Box-Gum woodland derived grassland - Moderate to good (high)
Box-Gum woodland derived grassland - Moderate to good (low)
Exotic - NA
Long-leaved Box dry forest - Moderate to good (high)
Long-leaved Box dry forest - Moderate to good (low)
Long-leaved Box dry forest derived grassland - Moderate to good (low)
Riparian - Moderate to good (low)
Map 5
N
0 0.025 0.05 0.075 0.1
km
NSW GOVERNMENT
Office of Environment & Heritage


This area & surrounds should be updated to moderate to good quality BGW.
Observation point FID 5
Legend
Turbine ref 16101_DA_79WTG_180716
Site visit route
0
Site visit area of interest
0
<all other values>
Type_cond
Box-Gum woodland - Low
Box-Gum woodland - Moderate to good (high)
Box-Gum woodland - Moderate to good (low)
Box-Gum woodland derived grassland - Low
Box-Gum woodland derived grassland - Moderate to good (high)
Box-Gum woodland derived grassland - Moderate to good (low)
Exotic - NA
Long-leaved Box dry forest - Moderate to good (high)
Long-leaved Box dry forest - Moderate to good (low)
Long-leaved Box dry forest derived grassland - Moderate to good (low)
Riparian - Moderate to good (low)
Map 6
N
0 0.05 0.1 0.15 0.2
km
NSW GOVERNMENT
Office of Environment & Heritage


17
19
Observation point FID 7
This area contains high ecological value and should be avoided.
Legend
Turbine ref 16101_DA_79WTG_180716
Site visit route
0
Site visit area of interest
0
<all other values>
Type_cond
Box-Gum woodland - Low
Box-Gum woodland - Moderate to good (high)
Box-Gum woodland - Moderate to good (low)
Box-Gum woodland derived grassland - Low
Box-Gum woodland derived grassland - Moderate to good (high)
Box-Gum woodland derived grassland - Moderate to good (low)
Exotic - NA
Long-leaved Box dry forest - Moderate to good (high)
Long-leaved Box dry forest - Moderate to good (low)
Long-leaved Box dry forest derived grassland - Moderate to good (low)
Riparian - Moderate to good (low)
Map 7
N
0 0.03 0.06 0.09 0.12
km
NSW GOVERNMENT
Office of Environment & Heritage



DOC17/488334-7
SSD6698

Ms Diana Mitchell
Senior Planning Officer
Department of Planning and Environment
diana.mitchell@planning.nsw.gov.au

Dear Ms Mitchell

Coppabella Wind Farm - Environmental Assessment for Modification One

Thank you referring this project to the Office of Environment and Heritage (OEH) for our assessment. OEH has reviewed the components of this project that relate to biodiversity and Aboriginal cultural heritage, listed in attachment 1.

OEH has significant concerns with the design and information provided for this modification. The key issues are:

- The proponent has not followed the Framework Biodiversity Assessment method. The FBA sets out a format for the Biodiversity Assessment Report to ensure all the information is included. This format has not been followed therefore making it difficult to assess the document against the FBA. Appendix 7 and Table 20 clearly outline the reporting requirements, however these have not been followed.
- The current design is not likely to be the final design for this project. OEH recommends that the design is finalised as part of this modification process.
- The biodiversity assessment does not accurately reflect all the potential impacts of this project, nor do the offsets correctly compensate for the impacts (according to NSW policy).
- Further Aboriginal cultural heritage information is required on the level of archaeological survey and/or assessment and the assessment of cumulative impact.
- The updated Heritage Management Plan (HMP) should be reviewed by OEH prior to this modification being determined.

Further detail on this points is provided for biodiversity in attachment 2 and for Aboriginal cultural heritage in attachment 3.

If you have any questions about this matter, please contact Allison Treweek, Senior Team Leader for South East Planning, on 6229 7082.

Yours sincerely

MICHAEL SAXON **23/10/17**
Regional Director – South East

PO Box 733 Queanbeyan NSW 2620
11 Farrer Place Queanbeyan NSW 2620
Tel: (02) 6229 7188 Fax: (02) 6229 7001
ABN 30 841 387 271
www.environment.nsw.gov.au

Regional Operations Division

Attachment 1: Documents included in OEH's assessment of this project

OEH has reviewed the components of this project that relate to biodiversity and Aboriginal cultural heritage, including:

Coppabella Wind Farm modification application – environmental assessment report, SSD 6698, NGH environmental, September 2017 and the following attachments:

- Attachment B4 Hollow-bearing tree survey July 2017
- Attachment B5 Operational bird and bat impact assessment
- Attachment B6 Biodiversity offset calculations
- Attachment B7 Revised Yass Valley Wind Farm - The Coppabella Hills, Aboriginal Cultural Heritage Assessment Report, dated 2 August 2017 by Dr Julie Dibden (NSW Archaeology Pty Ltd).
- Draft #1, Yass Valley Wind Farm – Heritage Management Plan, dated July 2016 by Dr Julie Dibden (NSW Archaeology Pty Ltd). (Sent to us previously and not provided with this referral).

Attachment 2: OEH's comments on biodiversity

1. What is the final design for this project?

OEH understands that a key reason for this modification is that a realistic design footprint was not approved in the original approval. As a scale of the original design's inaccuracy, this modification's impacts are increasing 4-fold for native vegetation and 3-fold for Box Gum Woodland endangered ecological community (EEC). OEH considers this a significant change in design. However, through reviewing the environmental assessment report, and discussions with NGH and Jeff Bembrick, it's clear that the design in Modification 1 is still not final.

The environmental assessment (EA) briefly discusses factors that may affect the final design. These include future turbine micro-siting, future surveys and their results, capacity of the transmission line and other limitations, like flight risks, that may result in fewer turbines being built and a different design.

OEH's recommends that the design is finalised as part of this modification process.

Once the final design is organised, then the assessment should be updated to include more detail about the impacts that will occur. For example, OEH considers that there is insufficient information in the EA to assess the impacts that may result from:

a. upgrading Whitefield's road,
b. the micro-siting process,
c. to threatened species and hollow-bearing trees after the full suite of surveys have been done.

2. Staging

The proponent intends 'to stage' the development, which will give them flexibility in the final design and what they deem realistic to build. However, the detail of this future design has not been provided in the EA. Nor has information been provided in the EA detailing what the future staging may involve in terms of impacts, timeframes, guarantees and other implications. If the proponent wishes to apply for a staged development then a detailed staging plan should be provided.

3. The modification does not fully comply with the NSW Framework for Biodiversity Assessment (FBA)

OEH had the understanding, that the FBA would apply for this modification. Although some components roughly follow the FBA, important components have been omitted. Considering the

substantial increase of impacts with this modification, the FBA should be followed, which is likely to result in an increase of survey effort.

Components that OEH considers are omitted are (compared to the reporting requirements for a FBA project are listed in Appendix 7 of the FBA):

a) A full threatened species assessment; identifying the ecosystem and species credit species which are aligned with each plant community type (PCT), i.e. the candidate species list. This should then include an assessment as to whether surveys are required based on habitat features, and a justification for inclusions and exclusions. Species polygons also need to be provided for species that cannot withstand a loss (chapter 6 of FBA). The EA only briefly assesses the impacts to the regent honeyeater, superb parrot and golden sun moth.

b) It is not sufficient for the EA to state that the proponent is minimising and avoiding impacts of a project (as per table 8-3 in the EA), when the impacts of the proposal are increasing 4-fold for native vegetation and 3-fold for Box Gum Woodland endangered ecological community (EEC). As a second example, there will be an increase in the number of hollow-bearing trees to be impacted on, particularly around certain turbines. However, those higher risk turbines have not been moved or removed to minimise impacts.

   The EA needs to convincingly demonstrate the efforts to avoid and minimise impacts on biodiversity values in accordance with Section 8.3 of the FBA. The EA should also include a statement of onsite measures proposed to avoid and minimise direct and indirect impacts of the project.

c) All impacts to EEC vegetation must be offset in line with section 9.4.1.1, even if they are below a site score of <17. This means:
   - the 95 ha of 'Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion – Low condition' will need to be offset.
   - The 141.83 ha of 'Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion – Moderate to good (low diversity)' will need to be offset.
   - Additionally, if the14.63 ha of 'Long-leaved Box Dry Grass Forest Derived grassland' is predicted to provide habitat for threatened species, it will also need to be offset.

d) The EA must also respond to section 9.2 of the FBA, which are 'impacts on biodiversity that require further consideration'. These are impacts that are considered to be complicated or severe. A decision will be made by the consent authority on whether it is appropriate for these impacts to occur.

4. <u>Vegetation Mapping queries</u>

OEH has reviewed the plot data and GIS mapping for this project and has concerns about the accuracy of the vegetation mapping.

OEH has compared OEH mapping to the NGH vegetation mapping files for this project. The mapping shows discrepancies between some of NGH's exotic mapped areas and areas expected to comprise of native vegetation. Additionally, the OEH mapping indicates that some areas currently mapped as 'low condition' may in fact be 'moderate-good' quality.

The locations of the vegetation plots have been reviewed. There are several locations where the location of the plots is on the edge of an exotic area and a low condition area, which may explain larger areas being considered as low condition. Although the total sum of plots appears to comply with the FBA, OEH could only find two plot locations in the Box gum woodland – derived native grassland – low condition community. This zone comprises of 95 ha and should have five plot locations. It is difficult to determine from the data provided, which data sheets/plot data correspond to which points. Some plot locations are missing data sheets in the information provided to OEH.

On page 78 of the EA, it states that plots were averaged for the 'Long-leaved Box Dry Grass Forest and derived grassland (moderate to good – low)' community: "*for both of these zones an additional plot has been created based on the average of the site attributes from the other two plots to meet the minimum plot requirements of the BBAM until such time as additional plots can be completed (spring)*." This is not an appropriate method or application of the FBA, and the plots should be done to inform the environmental assessment.

Given these issues above, and the importance of accurate vegetation mapping, OEH proposes the following way forward:

- NGH allocate the BBAM/FBA calculations within the calculator to OEH for review. This will help assess and verify the low condition site scores in the EA.
- A site visit to allow DPE, NGH and OEH to inspect and discuss the vegetation mapping on site.

5. Surveying for threatened species

When the FBA is applied correctly, a list of "candidate threatened species" is developed for each project. If the habitat exists on the development site, then surveys are required for the candidate species, to determine if they are present on site and whether they will require avoidance measures and/or offsets. It is not clear from the Modification Report what species are in the candidate list and whether all the candidate species have been surveyed for across this site. OEH requires this information to be able to finalise the assessment.

Regardless of the FBA, OEH is concerned that the entirety of the new development footprint has not been surveyed for threatened species. For example, the EA makes a commitment "*to survey all areas of threatened flora habitat outside of the consented Development Corridor for threatened flora species prior to ….*". However, this information is important, and should be known and used as part of this assessment process. The same concern applies to extrapolated or deferred surveys for hollow-bearing trees, nest tree surveys, and surveys for the bird and bat strike assessment.

Regarding the Golden Sun Moth (GSM), the EA states "*These surveys identified Golden Sun Moth to occur broadly across the Marilba precinct, east and west, with a small number of sightings at the Conroys Gap Extension Precinct*". The species is known to occur in the region. The Coppabella vegetation plot data also confirms the presence of Wallaby Grass, which is GSM habitat. Given the large increase in impacts to native vegetation in the Coppabella precinct, OEH considers surveys for the GSM should be re-done in this precinct, as part of this modification. Alternatively, the species can be assumed to be present as per the FBA method and the species can be offset using species credits.

The EA refers to 'Targeted Superb Parrot Survey Breeding Season 2016' - OEH requests this information in the EA to determine whether the species has been appropriately assessed.

6. The impacts to hollow-bearing trees are large

Impacts to hollow-bearing trees are one of the largest impacts that will stem from this development. These trees provide vital resources for wildlife (including threatened species) for foraging, shelter, roosting and nesting.

OEH acknowledges that some additional work was done to document the extent of this impact. However, there are still reasonably large areas that were not inspected and where extrapolation was used. The extrapolation method was used to identify 148/548 hollow-bearing trees in this assessment.

A key part of the environmental surveys is to identify the constraints of the site and then avoid them. However, this project is still expected to impact on 548 hollow-bearing trees, which is significant. There are some turbines with an excessive number of hollow-bearing trees around them – for example turbines 36 and 41. As stated in previous responses to the original proposal, the close proximity of turbines to hollow-bearing trees is expected to affect their use by aerial species and

basically quarantine the habitat and/or increase the strike rate of the turbines. The turbines should be removed, or moved, to reduce the high level of impact on birds and bats that is likely to result.

OEH recommends that the EA be updated to include:

- Survey and verification of the hollow-bearing trees across the site (instead of the extrapolation of 148)
- a table with the turbine reference and the number of hollow-bearing trees around each turbine (similar to in the original EA)
- a more detailed assessment about which species will be impacted and to what extent with the removal of this many hollow-bearing trees
- a demonstration of how the impact to hollow-bearing trees has been minimised through moving high risk turbines and infrastructure (e.g. along Whitefield's Road).

7. Offsets

As discussed above in the FBA section (point 3), the offsets tabled in the EA are not accurate. OEH recommends the offsets be recalculated to include offsets for all the EEC and threatened species habitat area, regardless of whether some of the site scores are low.

The results of the vegetation mapping exercises may affect the offset requirements. Additionally, OEH does not recommend the use of staging offsets – the impacts should be clearly committed to in this modification, and offset in full for this project. This allows a clear and transparent pathway for compensating for the significant loss of biodiversity of this project.

8. Operational bird and bat impact assessment – Attachment B5 – and the implications of the increase Rotor Sweep Area (RSA)

The bird and bat strike assessment that formed part of the original approval was not ideal and is not on-par with other bird and bat assessments for other wind farms. Although an updated assessment was provided with the modification, it only involved conducting new surveys for the Superb Parrot. Additionally, it states that "*There have been no previous formal bird utilisation surveys (BUS) at CWF collecting data on flight heights of recorded birds. Therefore, this assessment is informed by the results of BUS from eleven other proposed and operational wind farms".* This is not appropriate, especially as OEH has found that the impacts can vary greatly from site to site.

The PAC determination report indicates that the current approval covers wind turbine blade lengths between 45 - 60.5m, or an RSA of **6,362** - **11,500**m^2. The Modification Environmental Assessment confirms these dimensions. The new turbine dimensions proposed in the modification include a blade length of 70.15m and an RSA of **15,460**m^2.

The calculations of RSA, blade length and rotor diameter used throughout the bird and bat assessment report are inconsistent and incorrect. For example, Table 1 and Table 3 incorrectly state that the approved RSA is **13,478** m^2, apparently using a blade length of 65.5m. This is clearly outside the approved dimensions and disturbingly this figure has been used to estimate the total extent of change as 1,982 m^2 (15%), whereas it is in fact a change of between 3,896 and 9,098m^2 (34% - 143% larger).

The calculations in Table 3 are in correct. The diagram from the Mod EA clearly show the dimensions of the approved and proposed turbines. OEH considers that this table and incorrect analysis should be recalculated using correct dimensions and comparing all turbine configurations.

Further, section 3.1.4 refers to different figures again, indicating that the "approved turbine specification" had a blade length of 64m (diameter 128m). It states that this is the specification "against which change is assessed", however, analysis in this bird and bat assessment report appears to be based on the blade length of 65.5m (diameter 131m), as in Tables 1 and 3. Section 9.2 Risk Assessment in the Mod EA incorrectly uses the figures of 13,478m^2 and 15% increase as well,

thus downplaying the actual high increase discussed above. This section also bases the conclusion of “negligible additional risk” on the incorrect analyses provided in BLA’s bird and bat assessment.

Further calculations using the correct RSA need to be undertaken to enable an adequate assessment of the bird and bat strike risk.

As stated above, the assessment needs to be based on current surveys of species utilising the CWF site within accurate rotor sweep areas and any nest tress across the site for high risk species. It is also important that the assessment include practical mitigation measures and adaptive management techniques to minimise the impacts of the wind farm on wildlife (for example turning turbines off for periods if threatened species are impacted).

Attachment 3: OEH’s comments on Aboriginal cultural heritage

Summary of Aboriginal cultural heritage advice

We broadly support the recommendations presented by NSW Archaeology (Dibden 2017, p.106) in relation to developing salvage and mitigation measures for sites that will be impacted by the Coppabella Wind Farm project. However, we require further information on the level of archaeological survey and/or assessment and the assessment of cumulative impact. We also recommend that the updated Heritage Management Plan (HMP) is reviewed by OEH prior to this modification being determined.

More detailed comments are provided below.

Archaeological assessment

Some sections of the modification footprint have not been archaeologically surveyed. We recommend the proponent demonstratez that the modification footprint has been properly assessed by overlaying the Dibden survey transects with the modification footprint shown in NGH Maps 1-7.

Mapping provided to us with this modification application shows dot point data only for site locations, rather than the site extent. The level of impact to sites (especially those that will be partially impacted) cannot therefore be accurately understood.

Impact assessment

The assertion that less sites will be impacted under the proposed modification (NGH 2017, pp.87-88) needs to be supported by clear documentation indicating that the modification footprint has been adequately assessed (as above). More detail is also needed of the proposal to limit impacts to Aboriginal objects and how this will be achieved (NGH 2017, p.89, and Dibden 2017, p.88).

Replacement of the 33kV overhead lines by 33kV underground cables as proposed is likely to have a substantially higher impact on Aboriginal heritage sites because there will be an increased level of ground disturbance. The impact assessment (NGH 2017, p.88) should provide further explanation of these impacts.

Cumulative impact to Aboriginal heritage of both the proposed modification and of the overall project needs to be assessed. This should consider the impact of the project on both a local and regional scale. The proposed mitigation measures must reflect the impact assessment.

Road upgrades

The proposed upgrade of the south eastern portion of Whitefields Road do not appear to have been archaeologically surveyed or assessed. We recommend that this occur before the modification is determined.

The proposed upgrade of Coppabella Road has been surveyed (Dibden, 2017, p.60). However, the recorded sites on this road and the proposed upgrades are not shown in the NGH Biodiversity and Aboriginal Heritage Overview Maps.

One section of concern that has not been surveyed is the proposed access road west of the 132kV powerline in NGH map #7. This crosses Stony Creek in an area of likely archaeological potential. This road is proposed as additional access, although no road upgrade work is currently proposed (NGH, 2017, pp.20-21). However, we note that the change in the level of use would increase impact on any Aboriginal objects present along that road.

Heritage Management Plan

An updated Heritage Management Plan (HMP) has not been provided to us to review. The most recent HMP we have received is dated July 2016.

In addition to the requirements of Condition 25 of the project consent, the HMP should include:

- Archaeological salvage excavation methodology as proposed by Dibden (2017).
- Long-term management provisions for excavated Aboriginal objects.
- Detail of the mitigation and site protection works required for sites that are adjacent to the construction footprint.

We request that OEH is provided with the opportunity to review the salvage excavation methodology prior to approval.

Consent

- The map in Appendix 6 of the consent needs to be updated to reflect the Aboriginal objects recorded in 2016 – 2017 surveys and the changed survey areas and footprint.

Summary of OEH recommendations on the Aboriginal Cultural Heritage assessment

- Update the HMP in accordance with the above comments.
- Develop the archaeological salvage methodology within the HMP before project approval and in consultation with OEH.
- Provide an overlay of the Dibden (2017) survey transects with the impact footprint as changed by the proposed Mod 1.
- Provide archaeological assessment of the proposed upgrades of Whitefields Road and the access road at Stony Creek, west of the 132kV powerline in NGH map #7.
- Provide an assessment of cumulative impact of the proposed Modification on Aboriginal cultural heritage.