Andrew Durran

From: Andrew Durran
Sent: Friday, 14 November 2014 4:46 PM
To: 'Chris Wilson (Chris.Wilson@planning.nsw.gov.au)'
Cc: Martin Poole; Donna Bolton; Karen Jones (karen.jones@planning.nsw.gov.au); Andrew Wilson
Subject: Yass Valley WInd Farm - CONFIDENTIAL
Attachments: Response to Chris Wilson 14Nov2014 FINAL.pdf

Chris,

Please find attached our draft response to the issues raised in our previous meeting.

As outlined we are keen to discuss this with you and Karen to ensure we have adequately understood and addressed the issues raised. We believe all issues raised can be dealt with via additional clarification (where required) and consent conditions, in line with standard practice. Following our proposed meeting we can the finalise any outstanding requirements and reissue any documentation you require.

At this stage we have focussed on the key issues identified in your email and in tour previous meeting, being:

- Aviation impacts in particular the impacts on the operation of the Mt Majura and Mt Bobbara radars
- Lack of clarity around the final turbine locations and subsequent visual impacts
- Landowner status – this information is highly confidential and not to be disclosed to 3rd parties
- OEH response – hollow bearing trees and biodiversity offsets package

We have included in our response a number of photomontages, full size versions of these documents have been provided to DPE previously.

I will send under separate cover an updated map of the site showing aircraft landing areas and the adjusted layout taking into account the removal of the J Garry property. Unfortunately this map was too big to attach to this email.

A number of issues were raised in the reports provided which we can further address if this is required. We note that the Department has held these reports for many weeks without requesting further information, therefore we expect that the only issues of concern to the Department are those outlined above.

I will liaise with your secretary to find a suitable time to meet, hopefully in the next two weeks.

Cheers,
Andrew.

ANDREW DURRAN, Executive Director

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Yass Valley Wind Farm

Response to questions raised - Nov 14

1. Land status.

The details of the landholdings have been provided in the PP&SR. We provide the additional information below to give a background to the project.

We hold, or have held, written land agreements with all landowners outlined in the PP&SR except Mr Shaw who has previously consented verbally to our development on his land. At no point have we carried out development on a property without the consent of the landowner.

Please see the attached map which shows the landowners signed (dark green) and in negotiation (light green), as well as the J Garry (grey and dark grey), Shaw (blue) and Eccles (light blue) properties which are addressed separately. Also shown on this map (pale green) are additional land holdings of the involved landowners.

In particular we note:

- **Current agreements** are in place with 16 out of 21 landholders.
- **Agreements are imminent** with 1 additional landholder where we have been advised by the landholder's solicitor that they are now ready to sign.
- **Ongoing commercial negotiations** are underway with 4 landholders. All negotiations are at an advanced stage, although in some cases are being impacted by the delay in planning consent as any changes to the infrastructure layout will likely affect commercial terms.

Three additional properties areincluded in the DA:

- **J Garry** – We have written on 13 November 2014 to Mrs Garry to advise we are removing the Myrana property from the development as it appears unlikely we will achieve a land agreement. All infrastructure from this property shall be removed. The removal of this infrastucture does not affect the surrounding layout as alternate access has already been provided for.
- **Shaw** – Mr Shaw has recently advised that while he is not opposed to the project, he is not currently interested in entering into an option agreement for infrastructure on his land. We anticipate once the timing of the project is clear he may reconsider his position and we continue to liaise with Mr Shaw around alternate arrangements. We therefore wish to retain this property in the DA to provide Mr Shaw with an option to proceed in the future. Any future removal of this infrastructure does not affect the surrounding layout as alternate access has already been provided for.
- **Eccles** – provides an alternate powerline corridor access and we are awaiting the outcome of the DA process prior to finalising an agreement with Mr Eccles.

The existing agreements are sufficient to build the majority of the wind farm infrastructure including a grid connection to the north west and south east. Epuron will continue to manage land agreements in accordance with its normal commercial practice.

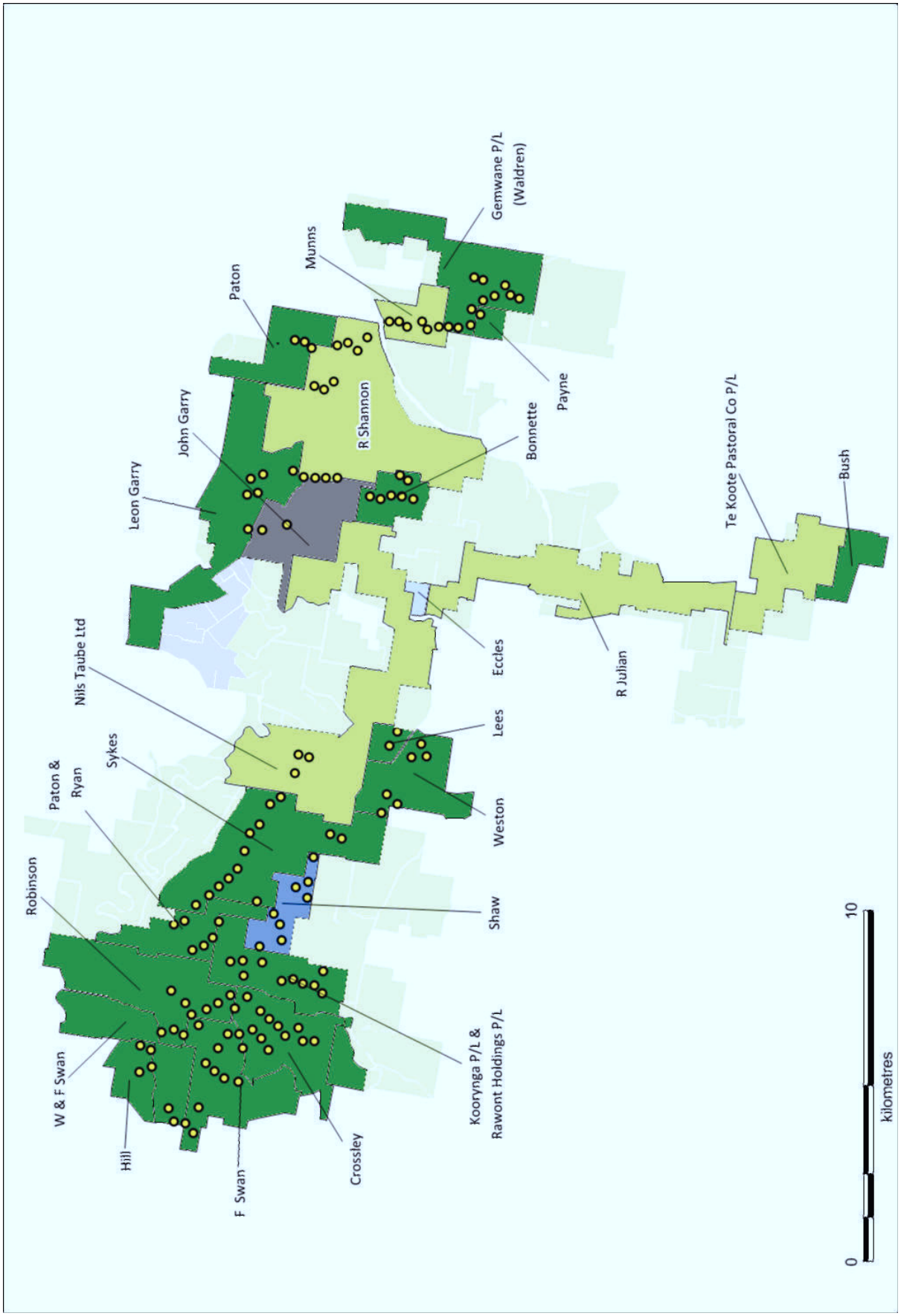


Figure 1 - Land agreement status Nov14

2. Aviation impacts

Mt Majura and Mt Bobbara radars

The radar investigations to date have indicated that it is possible for wind turbines to have an impact on the operation of Mt Bobbara and Mt Majura air traffic control radars. These investigations also indicate that mitigation options are available should they be required (including modifications to radar software or hardware; modification to operating procedures; or removal or relocation of specific wind turbines), and have confirmed that these methods would appear commercially feasible.

A more detailed design investigation is recommended prior to construction of the wind farm. Due to the level of detail and specialist skill required this design investigation is very costly. Further, to carry out the design study to Airservices' satisfaction requires the final turbine location, height, design and materials to be known. These details can only be determined once the final wind turbine model is chosen.

Epuron has actively engaged with Airservices in this respect and through these discussions have arrived at the following position:

- Airservices have clearly indicated a number of times that they do not wish to carry out an assessment until the layout and specific turbine model have been finalised (ie they only want to do it once).
- Epuron is not in a position to finalise the selection of the turbine model until after the DA is determined due to the need for competitive tendering processes for wind turbines.
- Accordingly the appropriate time to carry out the design study is post development consent and prior to construction.
- As part of its consent conditions (see SOC 28) , the proponent has committed to:
    - conducting and funding, prior to construction and in consultation with Airservices, a detailed radar design investigation which is based on the final wind turbine layout and model; and
    - implementing in consultation with Airservices any required mitigation measures to Airservices' satisfaction and at the proponent's cost.

Managing potential impacts on radar operation through an appropriate consent condition is consistent with other wind farm approvals such as Bodangora, Collector and Flyers Creek wind farms.

Aerial Agriculture

Aerial agriculture issues have been assessed by Epuron in consultation with its independent experts. This investigation included discussions with landowners and local operators and site visits to nearby landing strips.

The National Airports Safeguarding Advisory Group (NASAG), comprising of Commonwealth, State and Territory Government planning and transport officials, the Australian Government Department of Defence, the Civil Aviation Safety Authority (CASA), Airservices Australia and the Australian Local Government Association (ALGA), has developed the National Airports Safeguarding Framework (the Framework). Guideline D of this Framework–***'Managing The Risk To Aviation Safety Of Wind Turbine Installations (Wind Farms)/Wind Monitoring Towers'*** addresses turbulence caused by wind farms and states:

Wind farm operators should be aware that wind turbines may create turbulence which [is] noticeable up to 16 rotor diameters from the turbine. In the case of one of the larger wind turbines with a diameter of 125 metres, turbulence may be present two kilometres downstream.

There are no active airstrips within 2km of a wind turbine. There is one airstrip 2km from the nearest wind turbine (identified as #9 in Attachment 12 and as noted in Section 7.9 Private Airstrips Used for Aerial Agriculture of the PP&SR) and the orientation of this landing strip is such that it is ~3.2km to the nearest turbine in the direction of take-off or landing.

The maximum proposed tip height for our project is 150m and typical rotor diameters in Australia are 80 – 112m. Based on the Framework, a rotor diameter of 112m would not cause turbulence noticeable at any landing strip. Epuron would not be opposed to a consent condition which required nearby turbines (those within 16 rotor diameters) to be switched off while local airstrips are in use.

Based on the above expert guidance there will not be any material impact from the wind farm on the use of any of the identified Aeroplane Landing Areas (agricultural airstrips) in the vicinity of the wind farm.

The Proponent acknowledges that it is possible some adjacent landowners may experience additional costs of aerial agricultural operations (e.g. costs incurred due to minor changes in flight paths or flying times). The majority of landowners potentially affected are involved landowners. The proponent has included a Statement of Commitment – SOC79 (in line with the NSW Planning Guidelines Wind Farms 2011 - page 23) stating it will pay any increased cost incurred by any landowner (involved or non-involved) as a result of the wind farm's impact on the use of any airstrip or aerial agricultural operations (including for any additional flying time from alternate airstrips or using alternate methods to aerial spreading/spraying).

3. Biodiversity offsets package and response to any outstanding OEH issues

<u>OEH consent conditions</u>

We have worked cooperatively with OEH through the development of the project and note that, while OEH has raised a number of issues in their latest response, they indicate that these issues can be addressed via minor amendments to the proposal and appropriate consent conditions / statements of commitment. OEH has also provided proposed amendments to the Statements of Commitment that they would find acceptable.

We note OEH's statement that "Most of the matters were subsequently resolved" and indicating the outstanding issues being:

- Proximity of some turbines to HBTs (4 turbines indicated)
- Approach to offset strategy
- Reliability of infrastructure mapping

These are addressed below.

Epuron has reviewed OEH's proposed amended wording for the Statements of Commitment. The revised wording addresses all of the outstanding areas of concern. In particular, OEH has provided recommended wording on:

- Development of an offset plan (item 21)
- Bird and Bat Adaptive Management Program (item 22)

- Loss or modification of habitat (items 12, 15)
- Biodiversity Management Plan (item23)
- Cultural Heritage Management Plan (item29) and pre-construction archaeological surveys in areas which have not previously been surveyed (item 28)

We are happy to revise the wording of our Statements of Commitment in line with OEH's suggestions in their letter of 22 August 2014, and to clarify the questions also raised by OEH.

Hollow Bearing Tree (HBT) Update November 2014

OEH have raised concerns regarding HBTs in the vicinity of four particular turbine locations in their letter dated 22 August 2014 (and clarified by email from Susan Lamb of OEH on 10th November 2014). Subsequently, the proponent visited the wind farm site and undertook a field survey to confirm the HBT counts predicted by the desk top assessment at these locations. The predicted (purple) and confirmed (yellow) HBTs in the vicinity of these turbine locations are marked in the figures below.

While on site Epuron also reviewed the potential for micrositing to further reduce the potential impact on HBTs at these locations. The results of the verification and micrositing process are summarised in the table below.

Turbine #	HBT desktop prediction	HBT field survey	Proposed turbine micrositing	HBT's counted following micrositing
56	32	50	88m south west	15
102	25	6	Nil (previously relocated 84m north east to reduce impacts)	6
145	73	15	57m north west	7
148	27	12	148m north	0

Note:

1) The information provided by OEH in relation to turbine #102 is out of date as it was previously relocated as requested by OEH during their site visit in June 2014 (and as noted in their letter 22 Aug 2014). The correct information is indicated above.

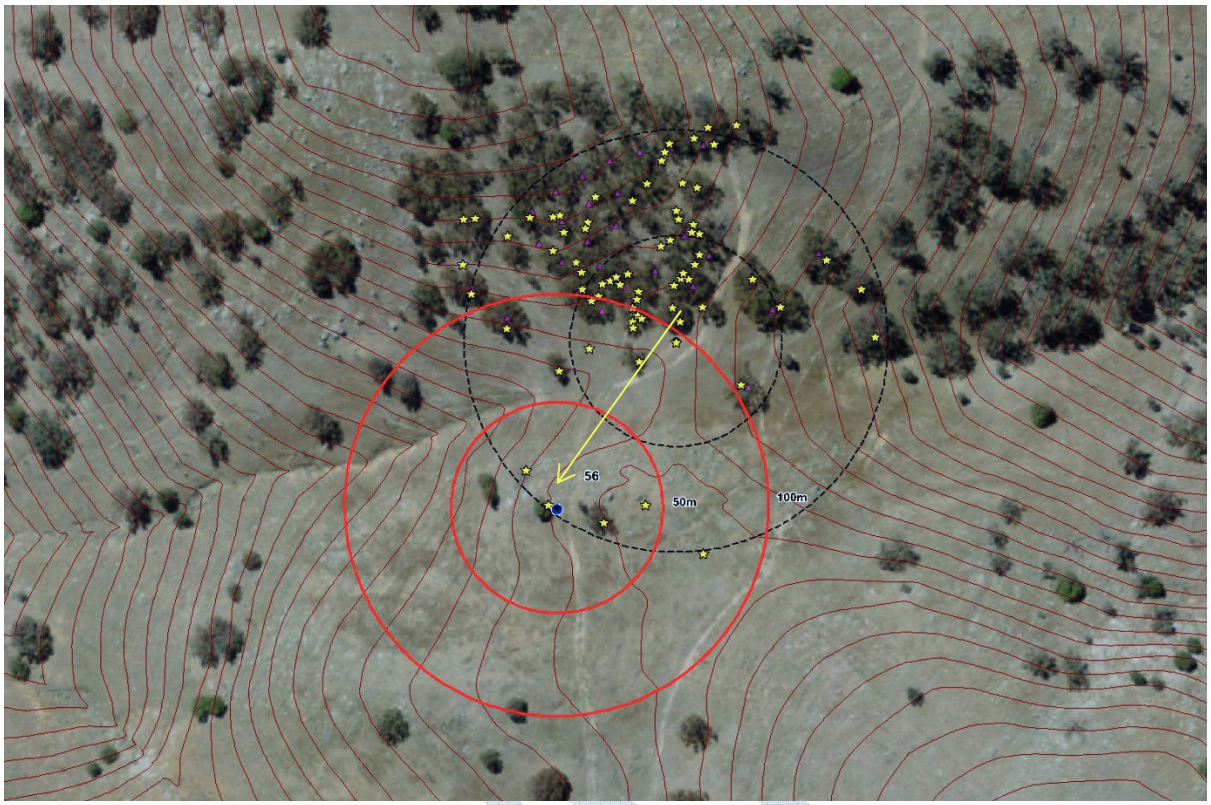
2) Any northward relocation of #148 requires a southward movement of turbine #144 by 330m for wind engineering reasons, this is indicated in the maps below.

We do not believe this micrositing materially affects noise or visual impacts however this would be confirmed in the final noise and visual impact assessments to be carried out prior to construction.

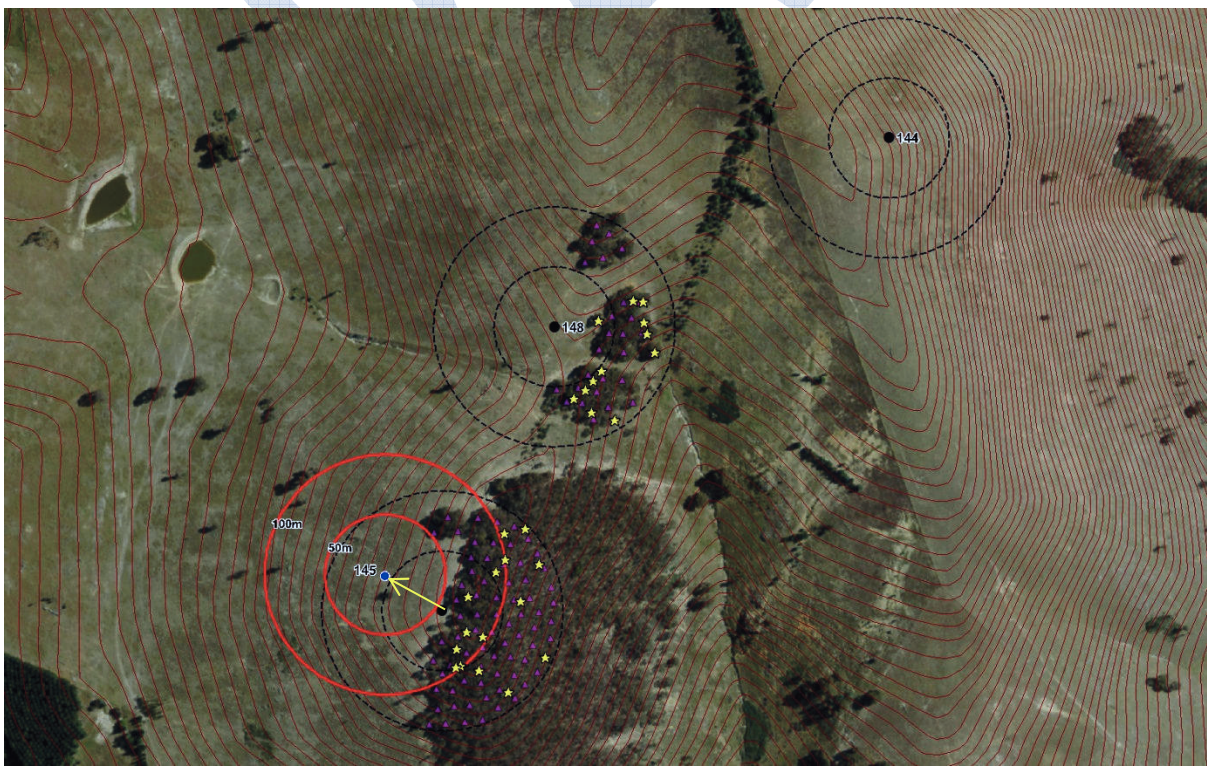
The proposed new locations are as follows:

ID	Easting	Northing
144	659291.6	6146573.0
148	658990.0	6146867.0
145	658822.4	6146536.3
56	637803.6	6155306.3

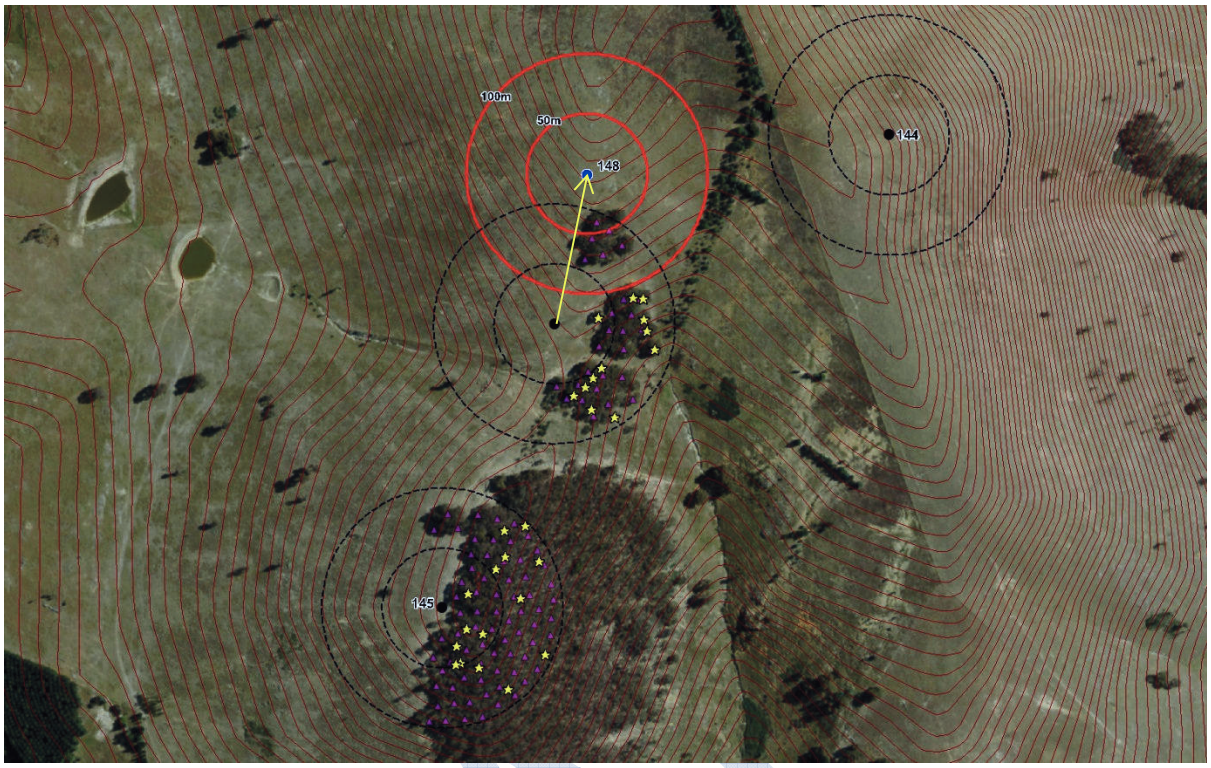
Relocated position for turbine #56:



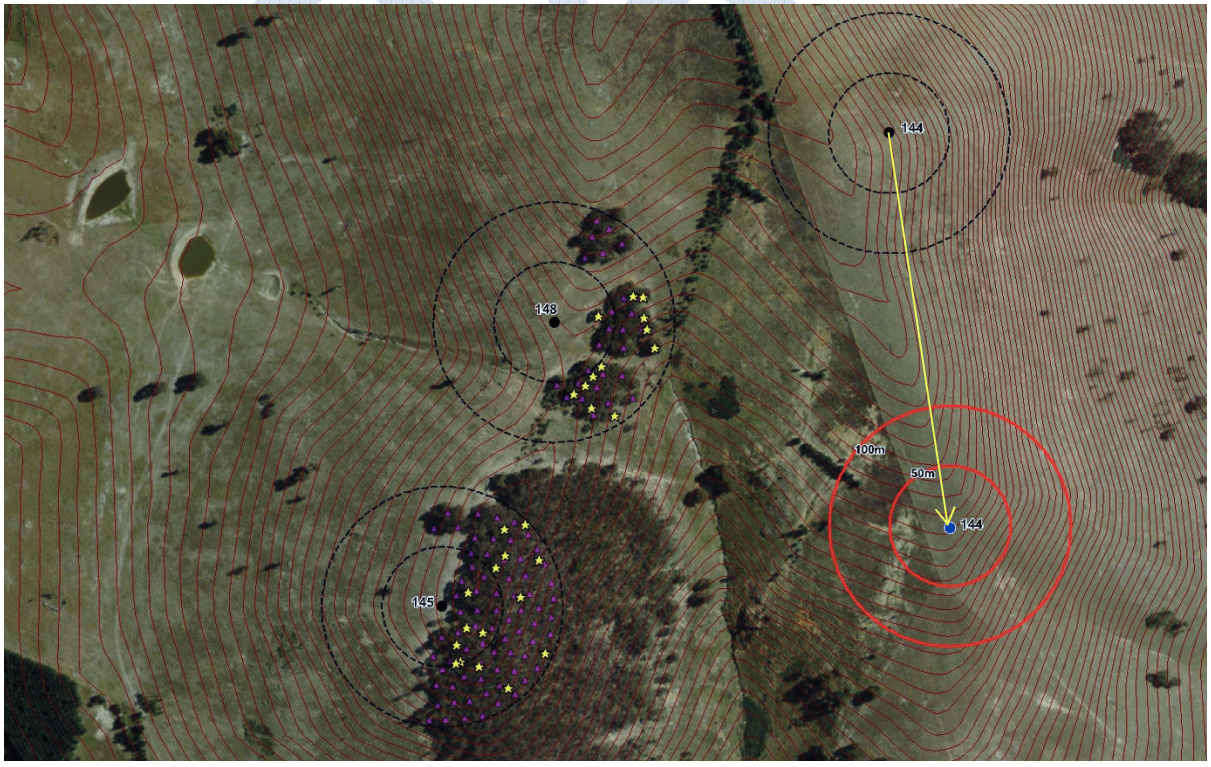
Relocated position for turbine #145:



Relocated position for turbine #148:



Consequential relocation of turbine #144:



Reliability of infrastructure mapping

This issue relates to the way indicative tracks have been marked and is not a material issue. Proposed tracks were mapped using GIS to the turbine locations when zoomed at normal site-wide mapping scale (10-20km scale). On zooming in to turbine locations (100-200m scale) it is clear that some tracks do not quite meet turbines or other track junctions. This application of the GIS data by OEH was not anticipated by Epuron and this effect is not normally apparent at standard mapping scales. Epuron has changed its procedure to ensure tracks meet at junctions and turbines to reduce any uncertainty caused by this. This is not considered to be a matter of assessment significance.

Final biodiversity offset package

As part of the assessment we have provided a high level offset strategy which includes sufficient information to demonstrate the approach that will be used to develop the final offset package as well as the availability of suitable offset sites within the wind farm site.

The detailed biodiversity offset package will be developed by the proponent post approvals and prior to the commencement of construction in conjunction with OEH. This package would then be provided to the Secretary of DPE for approval as is the normal practice. This allows the offset package to be determined with the final proposed infrastructure design in place, taking into consideration any changes through the determination process and any impacts resulting from detailed site design, micro-siting and turbine selection.

This approach is consistent with all recent wind farm approvals and the Department's standard model conditions for wind farms.

This approach is also consistent with the project's EPBC approvals and conditions dated 5 November 2014.

4. Lack of clarity around the final turbine locations; visual impacts

Turbine locations

We are not clear what is meant by the "lack of clarity around the final turbine locations" as the layout maps and turbine coordinates have been provided to DPE on a number of occasions. While there have been a number of improvements to the layout in response to issues raised, these have been discussed in detail with DPE and new maps provided on each occasion.

The visual impact assessments carried out were based on the turbine locations that were current at the time of the assessments:

- The original Landscape and Visual Assessment (Aug 2009) included in the EA was for 182 turbine locations, but included clarification that the project application was for 152 turbines and excluded 30 turbines in the Carrolls Ridge precinct.

- A supplementary Landscape and Visual Impact Assessment (Apr 2014) was prepared as part of the Preferred Project & Submissions Report for 144 wind turbine locations (reduced from 152).

- Since that time a small number of turbines were relocated and a further 10 turbines were removed from the south western part of the Marilba precinct in response to OEH concerns and in consultation with DPE resulting in the current layout of 134 wind turbine locations (refer letter to DPE dated 25 June 2014).

- Note, at the time of this reduction DPE agreed that a further update of the visual assessment was not justified as (i) the April 2014 assessment could be considered conservative as the

changes had a positive impact, and (ii) the most recent changes only affected a small number of viewpoints.

We note that further changes are proposed as a result of this response to issues recently raised by DPE, including:

- Removal of 2 turbines on Myrana (J Garry property – turbines #115, #122)
- Possible micrositing of 4 turbines to address issues raised by OEH (Hollow-bearing Trees – turbines #56, #144, #145, #148)) and forwarded to us last week by DPE (see above)
- Removal of 1 turbine in response to the visual impact assessment peer review carried out by RLA and forwarded to us last week by DPE (see below – turbine #136)

Once these and any other changes are agreed with DPE we propose to provide a final update of maps and undertake any other steps requested by DPE to clarify any outstanding issues.

The removal of these turbines will further reduce the visual impact from a level which our independent consultant has determined is acceptable. We note that the removal of additional turbines is contemplated in the peer review carried out by RLA, this is discussed further below.

We also intend to comply with the standard conditions of approval whereby the proponent must provide an updated noise and visual impact assessment prior to construction based on the turbine selected for the site.

RLA Peer Review

The RLA Review of Adequacy (10 Sep 2014 provided to us by DPE 5 Nov 2014) raised questions over both the methodology and findings of our visual impact assessment.

The author of the ERM visual impact assessment, Allan Wyatt, has completed visual impact assessments for more than 30 wind farms and has worked in this field for more than 25 years. ERM (and Allan Wyatt in particular) are considered preeminent experts in their field and have regularly appeared in court and tribunal proceedings in relation to visual impact assessment of wind farms, including as court appointed experts. The methodology used by ERM has evolved over time and been updated by incorporating ground-truthing to verify the methodologies used; re-visiting specific locations to reassess findings; and reviewing wind farm developments that have been constructed.

We consider the experience of ERM to be materially greater than RLA in the assessment of wind farms and we value their professional judgement highly. Some aspects of the RLA report (such as the recommendation that we paint the turbines grey or blue) demonstrate in our view a lack of experience on the part of RLA.

The methodology used by ERM for characterisation of the landscape relies on the professional view of the landscape architect as well as incorporating perception studies carried out in the region and many years of research from around Australia and from overseas. The suggestion that there was no public participation in establishing landscape values in the Yass Valley is not correct – in addition to this background survey work ERM attended open houses and undertook a number of site visits in relation to the development where the views of local residents were sought. Further, ERM reviewed the public submissions made with respect to the project which related to visual impact assessment.

The methodology adopted by ERM is in accordance with best practice for assessing the visual impact of wind farms, and consistent with the approach taken in relation to the majority of wind farm assessments in NSW.

Further, the visual impact assessment was accepted by DPE in its various adequacy reviews and we cannot see any justification for challenging the approach at this late stage.

We are happy to address any specific aspect of the RLA report in more detail if you require.

Recommended removal of particular turbines

The RLA report recommends the removal of a number of turbines but without any detailed analysis or visual assessment results to support those recommendations. It appears to rely on the premise that if the turbines can be seen it is bad, however, this fails to consider that many people like turbines or have no dislike of them. Their report also fails to take into account the various photomontages, existing screening etc at the various locations and in some cases is recommending removal of turbines on visual grounds where those turbines cannot be seen from the relevant residence.

We cannot accept unsupported recommendations to remove turbines where these have been carefully considered by a highly experienced visual impact consultant in a manner which is consistent with industry practice and which has been accepted by DPE.

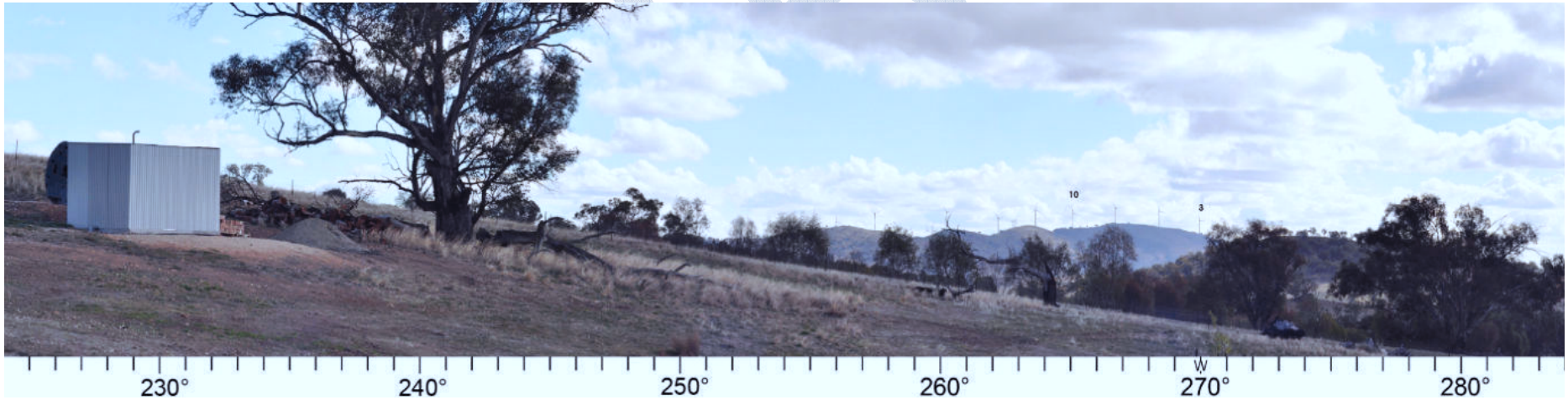
Our response on the specific recommendations is below.

RLA recommendation to remove turbines	Proponent response
Turbines 110, 111, 112, 114, 115, 116 and 122 should be removed … due to the proximity to residences M42 and C89 and to protect an area of higher scenic quality.	The overall visual impact on the living areas at M42 was assessed as "low to negligible". The scenery is typical for the area with no unique features. The majority of these turbines are not visible from the residence due to the location of a hill immediately behind (to the south of) the residence. See attached photomontages. C89 is not an existing residence and nor is there any planning approval for a residence in this location. Any future residence could be designed to take into consideration the location of turbines and the majority of views from this location could still be accessed without any turbines being visible if that is the wish of any future landowner. Screening would provide additional mitigation if required.
Remove the seven turbines in the immediate visual catchment of Gap Range at Crisp Galleries (M8) (Turbines 100 – 106)	M8 and Crisp Galleries is 2.4km from the nearest turbine location, well outside of the 2km zone indicated in the draft guidelines. ERM assessed the visual impact at this location as negligible due to the screening by existing vegetation adjacent to this residence. See aerial photo of property below. This was not taken into account in the RLA review. 

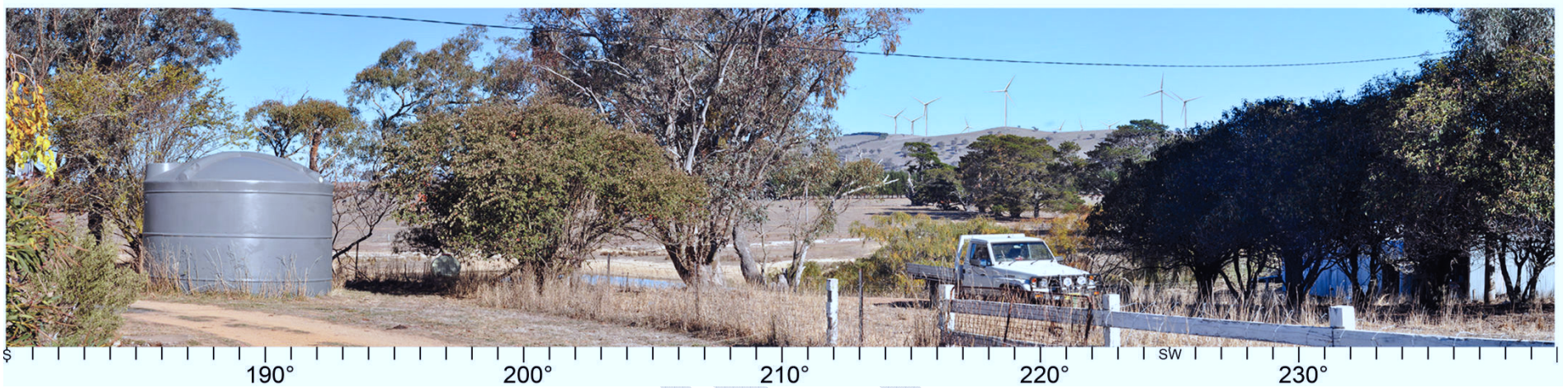
RLA recommendation to remove turbines	Proponent response
Turbines 131, 133, 134, 136 and 100, 101, 102, 103, 104, 105 and 106 should be removed due to the close proximity to existing residences G14, M20 and M24 and proposed residential and tourist expansions at Crisp Galleries and also in relation to the scenic value of Conroy's Gap and potential cumulative impacts on users of the Hume Highway.	• G14 is 1.4km to the nearest wind turbine. Turbines within 2km are 106, 131, 133, 134 and 136. Screening planting can reduce the visual impact to a low level. Epuron has contacted the landowner on a number of occasions in relation to visual and other amenity issues. To our understanding the landowner has not made any submission to DPE opposing the project. (Note final box below re turbine 136) • M20 is 1.9km to the nearest wind turbine. Only turbine #100 is within 2km. Screening could reduce the visual impact to medium to low. Epuron has spoken with the landowners who have not objected to the wind farm. • M24 is 1.9km to the nearest wind turbine. Only turbine #100 is within 2km. Due to boundary vegetation the visual impact is medium and would be low with screening planting. Epuron has spoken with the landowners who have not objected to the wind farm. • The proposed eco-village expansion at Crisp Galleries is more than 2km from the nearest wind turbine. The landowners have been aware of the wind farm for more than five years and the wind farm was proposed before any development plans commenced at the Crisp Galleries. The wind farm and proposed eco-village expansion are not inconsistent land uses. Given the wind farm was under development prior to the proposed eco-village expansion it is reasonable that the second development must consider the first development. The eco-village expansion can be designed taking into consideration the views to the wind farm. Screening would provide additional mitigation if required. • Removal of these 11 turbines will have limited impact on the cumulative visual impact on users of the Hume Highway. Cumulative impact was assessed as low from the locations identified in the Supplementary LVIA • There is a limited view of turbines north and south of the highway from Conroys Gap due to high embankments on either side of the highway – see photos attached • RMS (the relevant government authority) has not expressed any concern in relation to the views from the Hume Highway • One turbine (#136) is relatively close to the Hume Highway (175m to centreline). The next nearest turbines are ~470m to centreline which is consistent with the nearest turbines to the Hume Hwy at Cullerin Wind Farm (also ~470m). Epuron is not aware of any concerns of any road users in relation to these turbines. • Accordingly, we do not believe there is justification for removal of any turbines, however given its closer proximity to the Hume Highway Epuron would not object to removal of #136 if DPE considered this was justified.

Visual impact images:

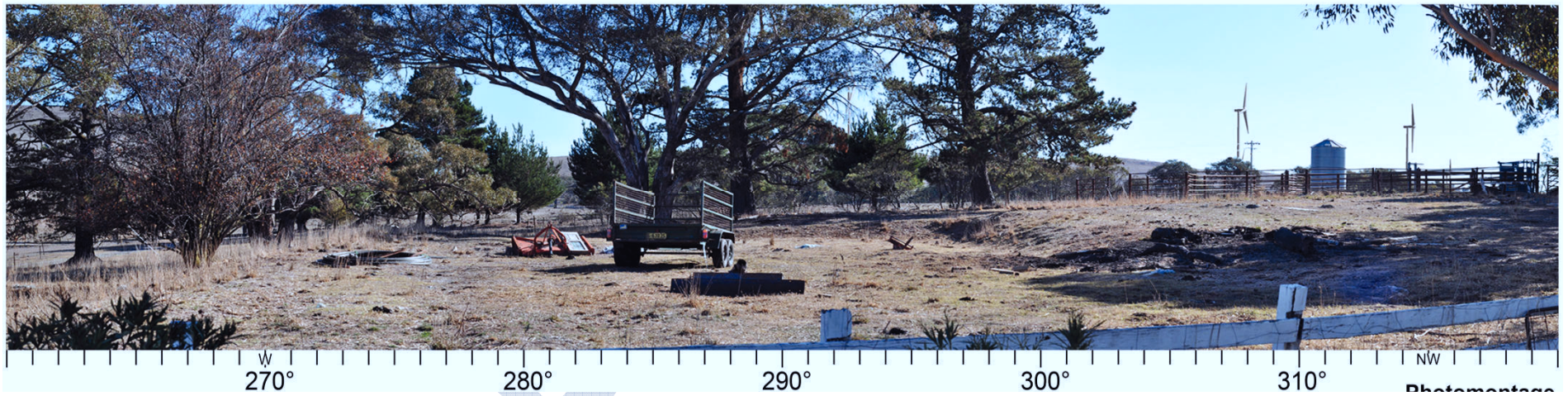
Photomontages from residence M42 showing closest turbines (#111 & #114) to the south west



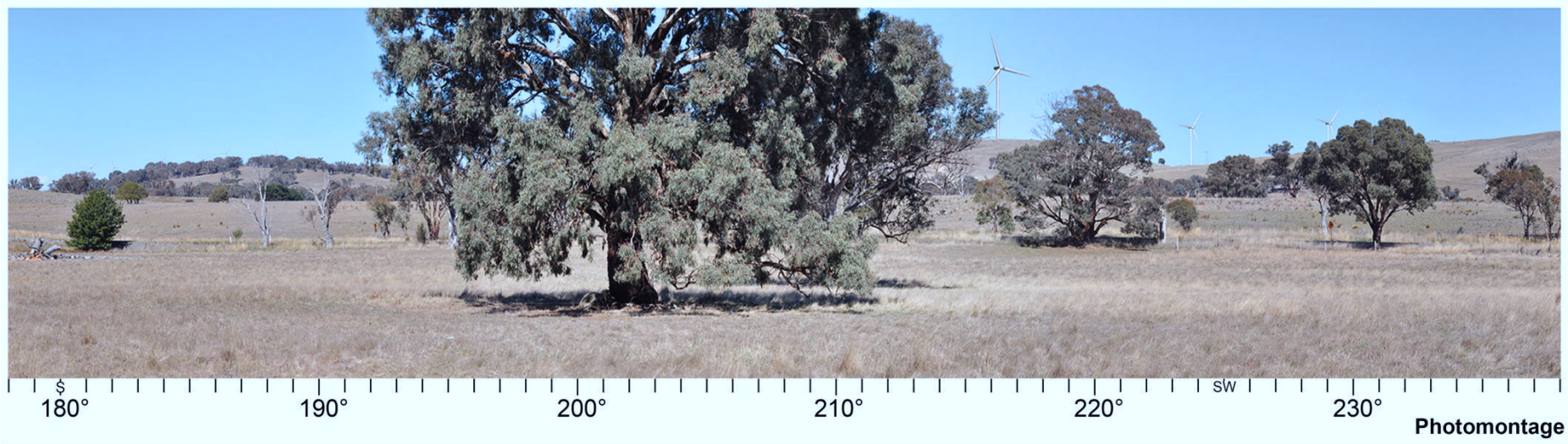
Photomontages from residence M42 showing distant turbines to the west



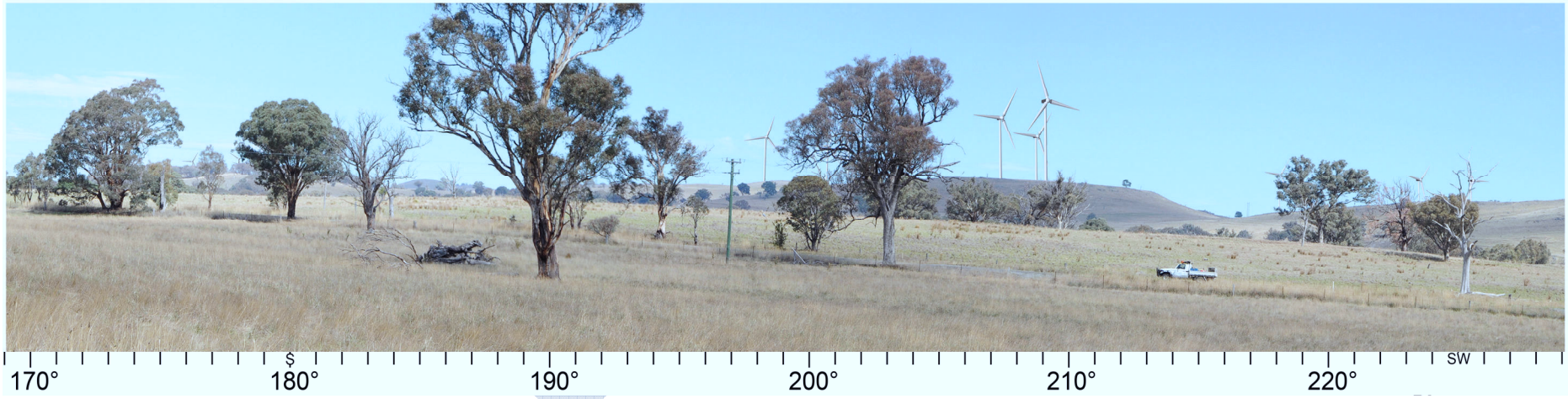
Photomontage A from G14 (looking south west)



Photomontage B from G14 (looking north west)



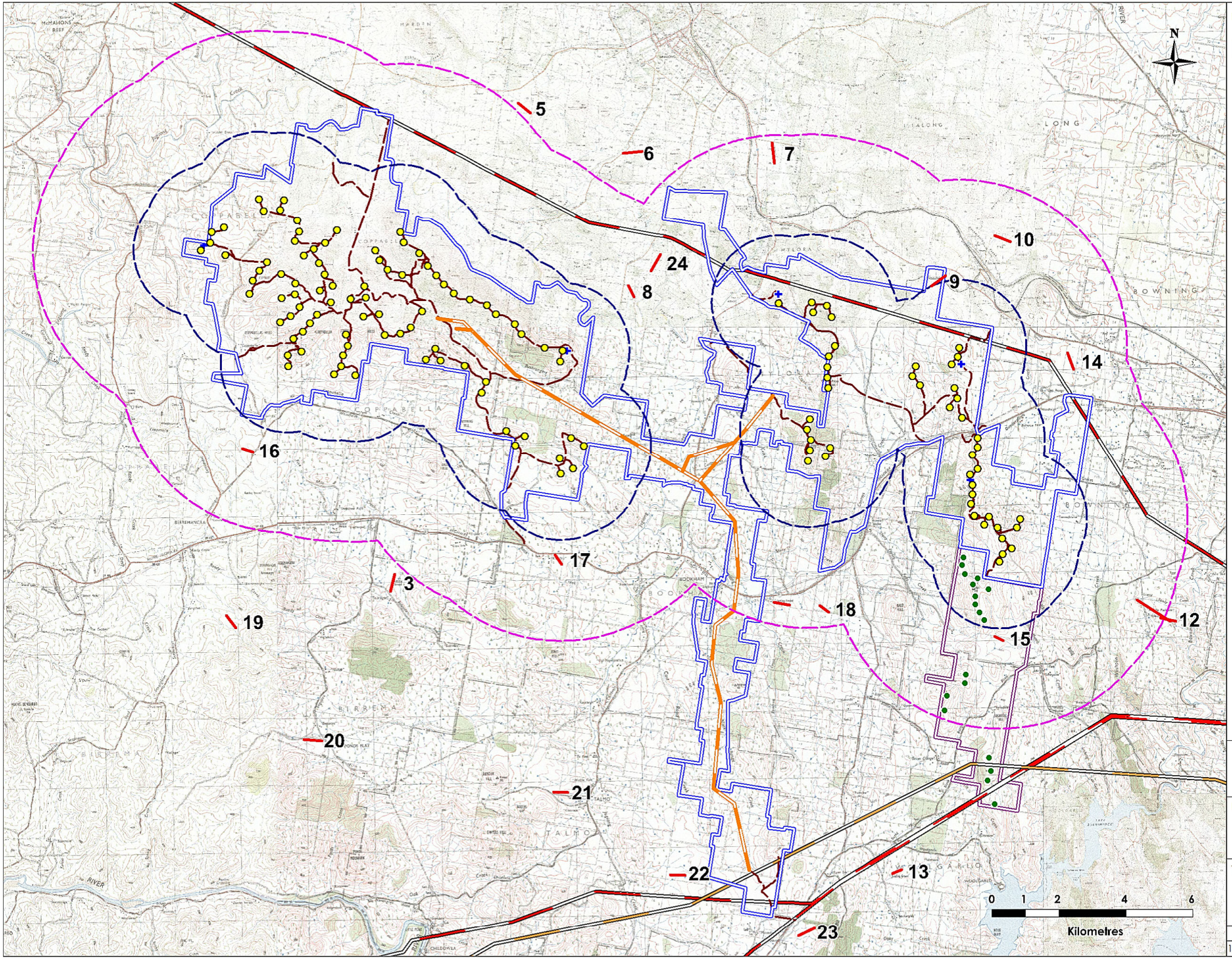
Photomontage from M20



Photomontage from M24

Looking south from Hume Highway at Conroys Gap

Looking north from Hume Highway at Conroys Gap



LEGEND

- Yass Valley project boundary
- Conroys Gap project boundary
- Agricultural Landing Area
- Proposed Yass Valley wind turbine
- Approved Conroys Gap wind farm
- 2 km Yass Valley wind turbine buffer
- 5 km Yass Valley wind turbine buffer
- Proposed permanent wind monitoring mast
- Proposed access track
- Proposed transmission line
- Existing 132 kV transmission line
- Existing 330 kV transmission line

EPURON

PROJECT

Yass Valley Wind Farm

TITLE

Agricultural Aircraft Landing Areas

SCALE	DATE	DRAWN
1:100,000 at A3	14/11/14	TL