Suite 1, Lvl 1 79 Market Street Mudgee NSW 2850
t: (02) 4302 1228

9 April 2019

Our ref: 13035

Ed Mounsey
CWP Renewables

Attention: CWP Renewables

Dear Ed,

Crudine Ridge Wine Farm – Modification 1 – BDAR Clarification

Eco Logical Australia (ELA) were engaged by CWP Renewables (CWPR) on behalf of CRWF Nominees Pty Ltd to respond to a request for additional information from the NSW Office of Environment and Heritage (OEH) (via the NSW Department of Planning and Environment (DP&E)) in relation to Modification 1 of the Crudine Ridge Wind Farm (CRWF).

The request for additional information to be supplied by CWPR included:

- plot data
- site integrity scores, and
- photos

to validate the mapping of exotic/cleared vegetation within the Aarons Pass Road reserve (the development site).

Through discussion between ELA and OEH (Samantha Wynn (OEH), David Geering (OEH) and Rachel Murray (ELA)), it was confirmed that the additional information was requested to address discrepancies between the Plant Community Types (PCTs) mapped in the Biodiversity Development Assessment Report (BDAR) prepared for Modification 1 (ELA 2019) and the vegetation visible on the aerial imagery used in the BDAR mapping. The aerial imagery (SIX Maps, 2016) used in the BDAR maps appears to show tree canopy and vegetation present in areas that are mapped as exotic/cleared vegetation (not assigned to a PCT) by ELA.

This discrepancy is attributable to the narrow configuration of the Aarons Pass Road reserve, being less than 10 m along most of its length. Much of the vegetation visible on the aerial imagery is canopy from overhanging mature trees located outside of the Aarons Pass Road reserve or along the boundary fence line. Groundcover and mid-storey vegetation present underneath the tree canopy is either non-existent (cleared) or dominated by exotic species. In addition, the extent of vegetation shown on the aerial imagery used in the BDAR is outdated. The aerial imagery is dated 2016 and does not show the vegetation clearance associated with the CRWF to date, council road maintenance works undertaken, or loss of vegetation to wind/weather events since 2016.

In compliance with the Biodiversity Assessment Methodology (BAM) (OEH 2017), native vegetation mapping was undertaken to reflect the current situation of native vegetation extent, as confirmed by field survey (Clause 5.1.1.6 of the BAM provides for changes to the mapped native vegetation extent). Whilst the BAM recognises that canopy areas of trees are to be included within the mapping of native vegetation (Clause 5.1.1.3), given that the trees will not be cleared by the development outside of the development site the groundcover and midstorey vegetation was mapped as a true reflection of the vegetation to be removed as a result of the proposed development. Clause 5.1.1.7 requires that the assessor identify any areas of native vegetation extent that are different to the aerial image on the Site Map and describe the changes in the extent of native vegetation in the BDAR. This was undertaken, with the changes described in Section 1.3.2 of the BDAR.

Clause 3.1.1.2 of the BAM requires that the assessor must undertake an assessment of biodiversity values by assessment of the b) presence of Threatened Ecological Communities (TECs), PCTs and the condition (vegetation integrity) of native vegetation on the subject land in accordance with Chapter 5. Therefore, in areas where native vegetation was not present (mapped exotic/cleared), ELA did not undertake further assessment in accordance with Chapter 5 of the BAM as the methodology does not require this to be undertaken. Therefore, plot data was not collected for areas of mapped exotic/cleared vegetation and site integrity scores were not required to be calculated.

However, floristic data in the form of species lists was collected for the areas mapped as exotic/cleared and is provided in **Attachment 1** to this letter. The species lists demonstrate the lack of native species and dominant exotic species present within the areas survey further supporting the exotic/cleared vegetation mapping. Further, supporting photographs have been taken of the areas mapped as exotic/cleared with a reference map showing photo locations provided in **Attachment 2** and photographs provided in **Attachment 3** to this letter.

Regards,

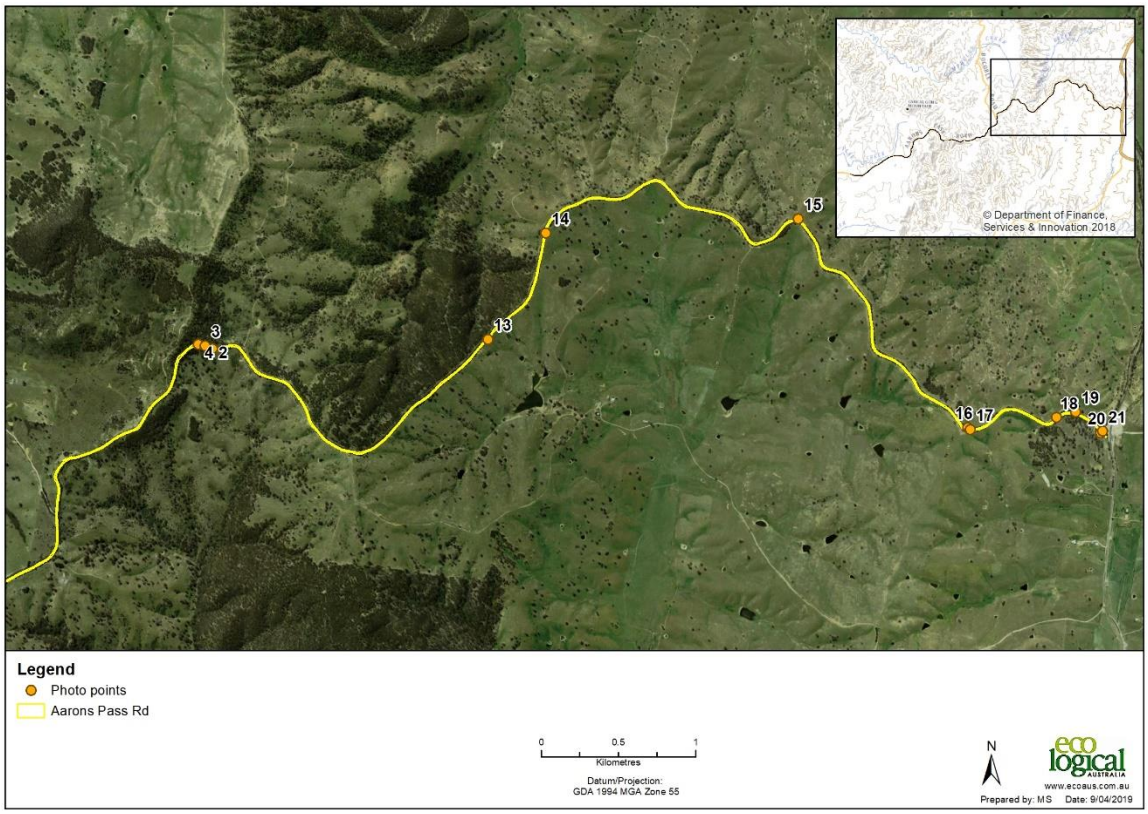
Rachel Murray
Senior Environmental Consultant

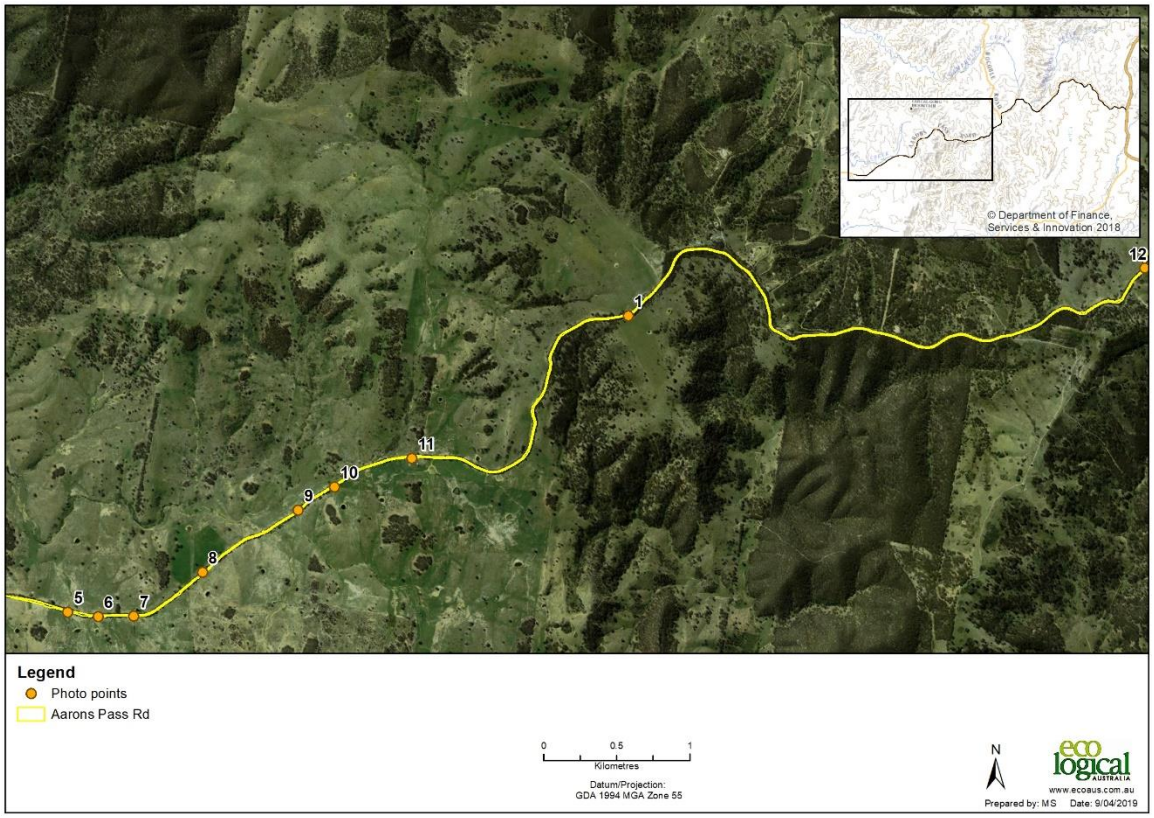
Attachment 1 – Exotic species present in areas mapped as exotic/cleared along Aaron's Pass Road

Scientific Name*	Common Name
Phalaris aquatica	Phalaris
Marrubium vulgare	White horehound
Trifolium arvense	Haresfoot Clover
Hypochaeris radicata	Catsear / Flatweed
Dactylis glomerata	Cocksfoot
Echium plantagineum	Paterson's Curse
Verbena bonariensis	Purpletop
Plantago lanceolata	Plantain
Eragrostis curvula	African Lovegrass
Paspalum dilatatum	Paspalum
Cirsium vulgare	Spear thistle
Tribulus terrestris	Caltrop
Senecio spp.	
Rubus spp.	Blackberry

*The above listed species are those that dominated the areas that were mapped as exotic based on rapid vegetation assessments taken at various locations along Aarons Pass Road.

Attachment 2 – Map of photo locations





Attachment 2 – Photos of areas mapped as exotic/cleared relating to Tile 15 (photo point 1)

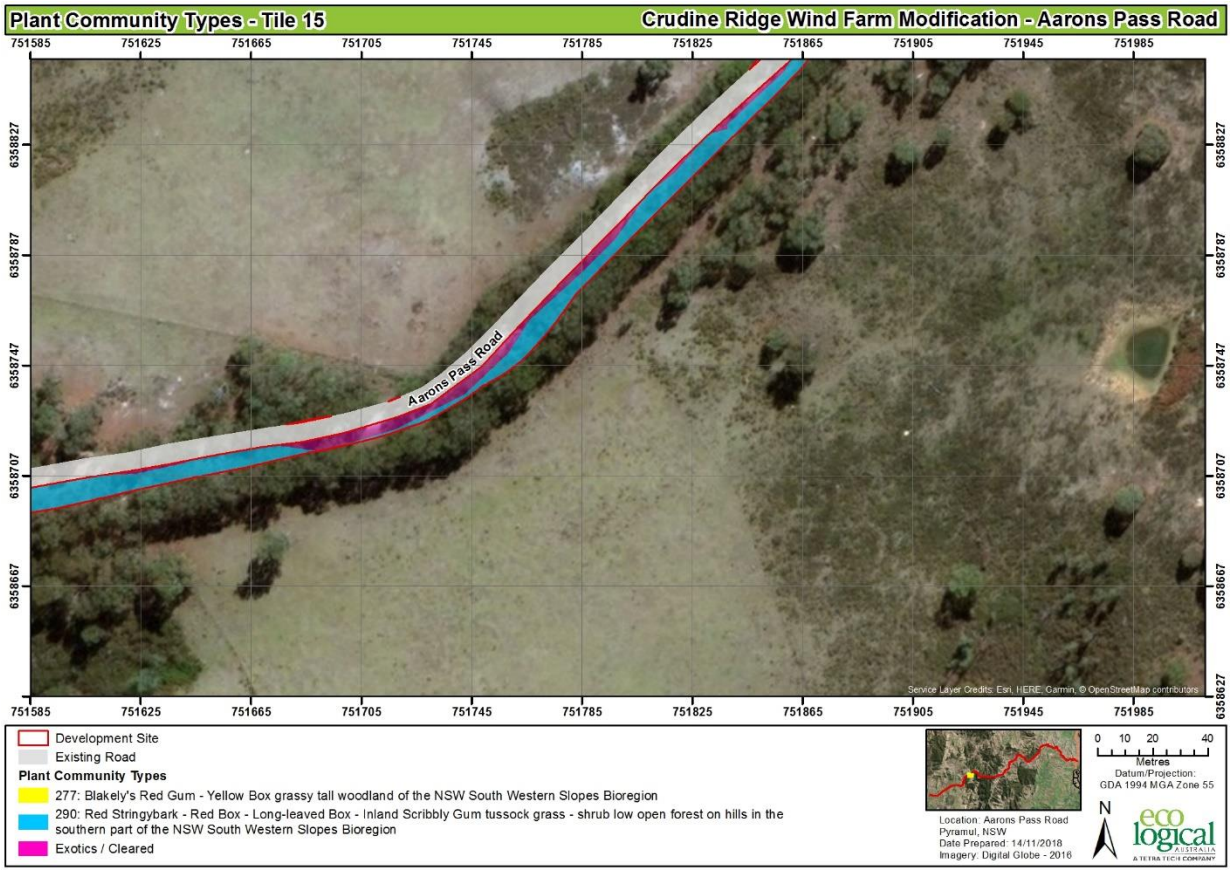


Plate 1: Exotic or cleared vegetation within tile 15. PCT 290 along the boundary fence.

Plate 2: Exotic or cleared vegetation within tile 15. PCT 290 along the boundary fence.

Plate 3: Exotic or cleared vegetation within tile 15. PCT 290 along the boundary fence

Plate 4: Exotic or cleared vegetation within tile 15. PCT 290 along the boundary fence.

Photos of areas mapped as cleared or exotic relating to Tile 34 (photo point 2,3 and 4)

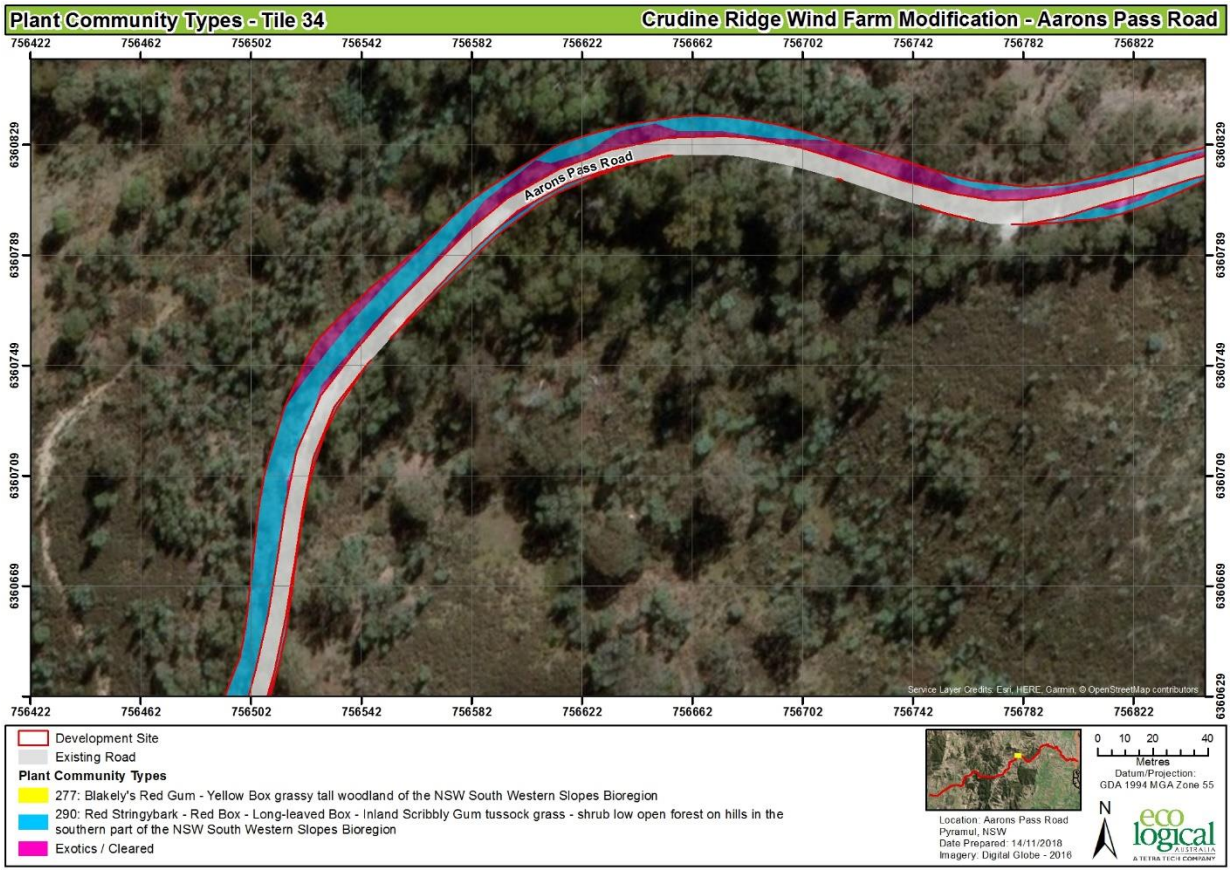


Plate 5: Exotic or cleared vegetation along section within tile 34. PCT 290 located along the boundary fence.

Plate 6: Cleared vegetation within tile 34.

Photos of areas mapped as cleared or exotic relating to Tile 1.

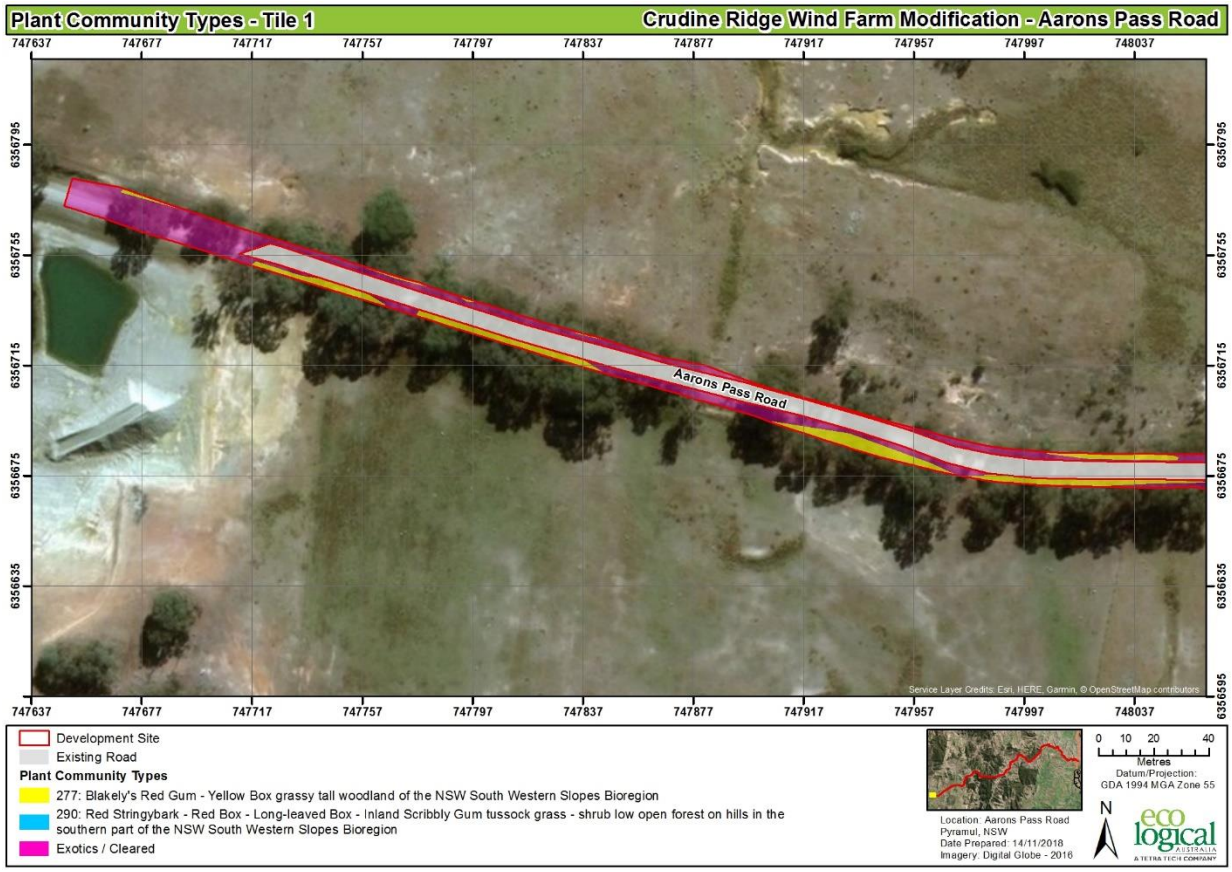


Plate 7: Areas mapped as exotic or cleared vegetation

Plate 8: Areas mapped as exotic vegetation within tile 1

Plate 9: Areas mapped as exotic within tile 1. PCT 277 is along the fence line.