

Uungula Wind Farm

Appendix G

Impact Assessment: Twelve Mile Road Western End Realignment and New Goolma Road Intersection

3 November 2020

Our ref: Uungula Wind Farm

CWP Renewables Pty Ltd
Level 2, 2 Market Street,
Newcastle NSW 2300

Attention: Matthew Flower

Dear Matthew,

Memorandum – Assessment of the proposed road upgrade design at the corner of Goolma Road and Twelve Mile Road

This memorandum provides an assessment of the proposed road upgrade design for the Twelve Mile Road western end realignment and new Goolma Road intersection to support the Uungula Wind Farm (the Project) Project Development Application and Environmental Impact Statement (EIS) Submissions Report.

Amended Project Description

The minor changes to the road upgrade design have been developed through consultation with Roads Authorities and minor adjustments by the Proponent. The road design used within the EIS (ELA 2020) was based upon upgrading the existing road alignment to allow for blade sweep and upgrades required for road user safety considering the increased traffic during the Project's construction period. The proposed changes outlined within the Submissions Report and assessed within this Memorandum allow for an additional area of earthworks required to develop the proposed road upgrade design for the Twelve Mile Road western end realignment and new Goolma Road intersection (using a blade length of 83.5 m).

The Twelve Mile Road intersection with Goolma Road is proposed in a location approximately 400m north of the current location (Figure 1) in order to satisfy the standards required by the Roads Authorities (Transport for NSW (TfNSW) and Dubbo Regional Council). The intersection will be upgraded generally in accordance with the layout shown in the preliminary intersection design which includes the realignment of the western end of Twelve Mile Road into the currently gazetted (but not formed) road reserve (refer to Figure 1 for the general layout plan and to Amendment Report Appendix F TMR/Goolma Road Intersection Preliminary Upgrade Design - Version 2 for the preliminary intersection design).

The turning radius of the over-size/over-mass (OSOM) and Heavy Vehicles as well as the acceleration and deceleration lanes required for additional safety requires the crossing of some freehold land lots to the north and south of the currently gazetted (but not formed) road reserve. Permissions and agreements have been obtained from relevant landowners along Twelve Mile Road and the additional lots potentially impacted have been included in Appendix I of the Submissions Report. It is anticipated that the existing Twelve Mile Road intersection with Goolma Road and the western end current alignment will be decommissioned and rehabilitated subject to the directions of the Roads Authorities.



Figure 1: Twelve Mile Road western end realignment and new Goolma Road intersection

An assessment of potential impacts from the proposed road upgrade design for the Twelve Mile Road western end realignment and new Goolma Road intersection are provided below for all environmental issues considered with the Project EIS (ELA 2020¹).

Environmental Assessment

Landscape and Visual

No additional landscape and visual impacts are expected to occur beyond those stated within the EIS (ELA 2020) for the Project, as the Twelve Mile Road western end realignment and new Goolma Road

¹ Eco Logical Australia (ELA). (2020). *Environmental Impact Statement – Ungula Wind Farm*. Prepared for CWP Renewables Pty Ltd.

intersection are likely to be homogenous with the existing landscape. Additionally, the section of Twelve Mile Road to be closed will be rehabilitated to be homogenous with the surrounding landscape.

Noise and Vibration

No additional noise and vibration impacts are expected to occur beyond those stated within the EIS (ELA 2020) for the Project. The noise and vibration impact assessment (Sonus Pty Ltd 2020²) assessed construction noise impacts based upon a worst case scenario for the Project, and included noise generated from road and hard stand construction (mobile crushing and screening plant, dozer, roller, low loader, tipper truck, excavator, scraper and transport truck), estimated to exceed 40 dB(A) at a distance of 1,000 m. However, noise levels will remain significantly below the 75 dB(A) upper limit outlined within the Interim Construction Noise Guidelines (DECC 2009³). The Statement of Commitments for noise and vibration outlined in Table 9-1; Section 9.2 of the EIS (ELA 2020) will therefore continue to apply for the Project with the inclusion of construction works associated with the Twelve Mile Road western end realignment and new Goolma Road intersection.

Biodiversity

To assess the potential impacts upon biodiversity within the Twelve Mile Road western end realignment and new Goolma Road intersection area, an additional field survey was undertaken on 7 October 2020 by ELA ecologist Tomas Kelly. The field survey identified no native vegetation present within the proposed impact area, with the area consisting of cleared areas with exotic dominated vegetation.

An updated Biodiversity Assessment Report (BAR) and Biodiversity Offset Strategy (BOS) has been prepared and attached as Appendix B of the Submissions Report. The updated BAR / BOS has incorporated the additional impact area associated with the Twelve Mile Road western end realignment and new Goolma Road intersection.

Traffic and Transport

Traffic and transport impacts considered within the EIS (ELA 2020) included initial site set-up and access construction during the pre-construction phase of the Project; construction staff movements, wind farm component deliveries (including OSOM transport), concrete material deliveries and other general deliveries during construction works; operational staff movements during operation and maintenance; and decommissioning and reinstatement construction activities. Associated impacts relating to the activities outlined above will not change as a result of the Twelve Mile Road western end realignment and new Goolma Road intersection and no additional traffic and transport impacts are expected to occur beyond those stated within the EIS (ELA 2020) for the Project.

Furthermore, the proposed route outlined within the EIS at the intersection of Twelve Mile Road and Goolma Road was raised as a concern by Dubbo Regional Council and TfNSW during the Public Exhibition of the Project EIS, due to construction traffic and safety issues for both light and heavy vehicles. The proposed Twelve Mile Road western end realignment and new Goolma Road intersection has been developed to allow for safe movement of light and heavy vehicle traffic from Twelve Mile Road onto

² Sonus Pty Ltd. (2020). *Noise and Vibration Impact Assessment for Ungula Wind Farm*. Prepared for CWP Renewables Pty Ltd.

³ NSW Department of Environment & Climate Change (DECC). (2009). *Interim Construction Noise Guideline*. Department of Environment & Climate Change, Sydney.

Goolma Road and will be designed in accordance with Austroads Guide to Road Design and relevant TfNSW supplements.

Hazards / Risks

No additional hazards and risk impacts (including aviation safety, telecommunications, health, battery storage, bushfire and blade throw) are expected to occur beyond those stated within the EIS (ELA 2020) the Project.

Aboriginal and Historic Heritage

To assess the potential impacts upon Aboriginal and historic heritage within the Twelve Mile Road western end realignment and new Goolma Road intersection area, an additional archaeological survey was undertaken on 8 October 2020 by Ricardo Servin (Archaeologist, Austral Archaeology). The survey was undertaken on foot and focused on the paper road section, as well as the two sections of Goolma Road and Twelve Mile Road. Additionally, the land reserve at the intersection between Goolma Road and Twelve Mile Road was surveyed.

The surface survey undertaken found no artefacts, and, although visibility and exposure were low due to dense vegetation growth, Austral Archaeology concluded that the landform has low potential for archaeological objects and therefore it is unlikely for artefacts to exist (Attachment A). The Statement of Commitments for Aboriginal and historic heritage outlined in Table 9-1; Section 9.2 of the EIS (ELA 2020) and the updates within the Submissions Report should be applied for the construction works associated with the Twelve Mile Road western end realignment and new Goolma Road intersection.

Water and Soils

No additional water and soil impacts are expected to occur beyond those stated within the EIS (ELA 2020) for the Project.

The Twelve Mile Road western end realignment and new Goolma Road intersection is not expected to change the hydrology and flood behavior within the disturbance area and will not directly impact any aquatic ecosystems. However, the Statement of Commitments for water and soils outlined in Table 9-1; Section 9.2 of the EIS (ELA 2020), as well as the updated Statement of Commitments within the Submissions Report should be applied for the construction works associated with the Twelve Mile Road western end realignment and new Goolma Road intersection to prevent any indirect impacts that may occur as a result of ground disturbance for Twelve Mile Road western end realignment and new Goolma Road intersection, including sediment and erosion control measures in accordance with the Blue Book (Landcom 2004⁴) and dust suppression if required.

Socio-Economic Factors

No additional socio-economic impacts are expected to occur beyond those stated within the EIS (ELA 2020) for the Project.

⁴ Landcom. (2004). Managing Urban Stormwater: Soils and Construction (Blue Book). New South Wales Government.

Conclusion

The potential impacts associated with the Twelve Mile Road western end realignment and new Goolma Road intersection have been considered and compared to the impacts assessed in the Project EIS (ELA 2020) and Submissions Report. The findings of the additional biodiversity and heritage site assessments and review of the visual, noise, traffic and transport, hazard and risk, water and soils and socio-economic impact assessments have concluded that impact will not increase beyond those assessed within the Project EIS (ELA 2020).

Furthermore, the Twelve Mile Road western end realignment and new Goolma Road intersection will provide a safer outcome for the traffic and transport movements associated with the Project. The Statement of Commitments outlined in Table 9-1; Section 9.2 of the EIS (ELA 2020) and updates within the Submissions Report will be applied for construction works associated with the Twelve Mile Road western end realignment and new Goolma Road intersection.

Regards,

A handwritten signature in black ink, appearing to read 'D. Magdi'.

Daniel Magdi
Principal Environmental Consultant

Attachment A: Archaeological Survey of additional intersection development footprint
(Austral Archaeology 2020)



Reference: 2053

3 November 2020

CWP Renewables Pty Ltd
Matthew Flower
Development Manager
Matthew.flower@cwprenewables.com.au

Dear Matthew,

RE: Uungula Wind Farm, NSW. Survey of additional intersection development footprint.

This letter provides the results of the archaeological survey of the additional intersection development footprint as part of the Uungula Wind Farm (the project) for CWP Renewables Pty Ltd (CWPR). This is an addendum survey of the Aboriginal Archaeological Survey Report (AASR) prepared by Austral Archaeology (March 2020). The Project is a State Significant Development (SSD 6687).

1. Archaeological Survey

Location

The additional development footprint is for the construction of the Twelve Mile Road western end realignment and new Goolma Road intersection. It includes widening of Goolma Road north and south of the new intersection location to add turning lanes, and a new road created in a currently gazetted but unformed public road reserve. There are also some small encroachments into adjacent freehold lots: Lot 1/DP1141897 and Lot 2/DP1141897 (Figure 1-6).

Survey Methodology

The specific survey methodology developed for this assessment was guided by the survey requirements as set out in the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010) (Code of Practice). The survey methodology was designed to optimise the investigation of areas where archaeological materials may be present and visible, as well as investigation of the broader archaeological potential of the study area. The field inspection of the study area therefore paid close attention to areas of favourable visibility conditions.

Survey Results

The archaeological survey of the additional intersection was undertaken on 8 October 2020 by Ricardo Servin (Archaeologist, Austral).

The paper road section as well as the two sections of Goolma Road and Twelve Mile Road of the additional intersection were surveyed on foot. Additionally, the land reserve at the intersection between Goolma Road and Twelve Mile Road was surveyed (Figure 1-7). The visibility and exposure were generally very low within the surveyed area as a result of dense vegetation growth (Figures 1-1 to 1-5). Indications of extensive ground erosion, consistent with other areas assessed within the region, were visible on small sections where the ground surface was visible (Figures 1-4).

No objects of archaeological interest were identified during the pedestrian survey.



Figure 1-1 Northern view towards Goolma Roads from area adjacent to Twelve Mile Road.



Figure 1-2 Western view towards junction of Twelve Mile Road and Goolma Road.



Figure 1-3 Northern view towards Goolma Road.

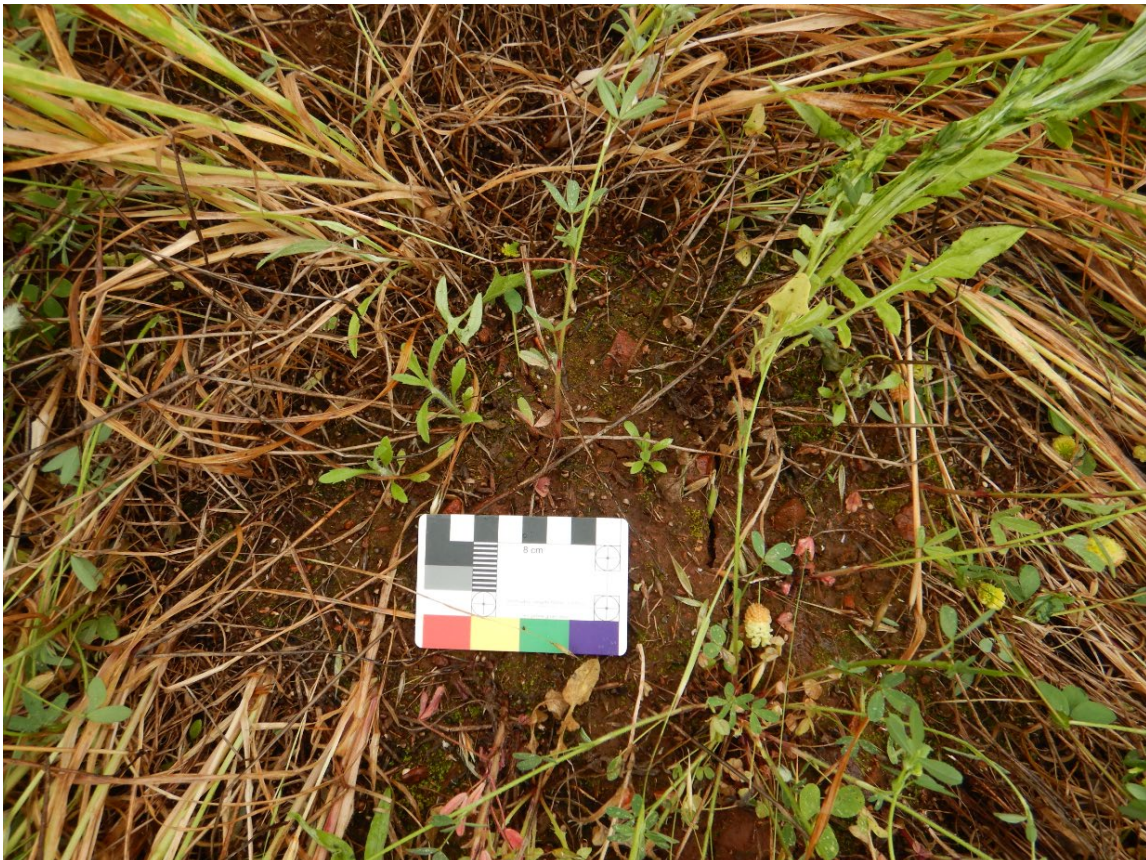


Figure 1-4 Ground visibility showing evidence of ground erosion.



Figure 1-5 Eastern view of Goolma Road.

Conclusion

No artefacts were identified during the surface survey and there is a low potential for artefacts to be present on the surface. Although visibility and exposure were low, the landform has low potential for archaeological objects and therefore it is unlikely for artefacts to exist.

Recommendations

It is recommended that if cultural heritage material is located during works that work stop immediately and a suitably qualified person is engaged to ascertain whether the material is of cultural origins and if so, they can then advise how to proceed.

Please do not hesitate to contact me on 0431 688 859 if you wish to discuss any aspect of this submission.

Yours sincerely,

Ricardo Servin

Archaeologist

Austral Archaeology Pty Ltd

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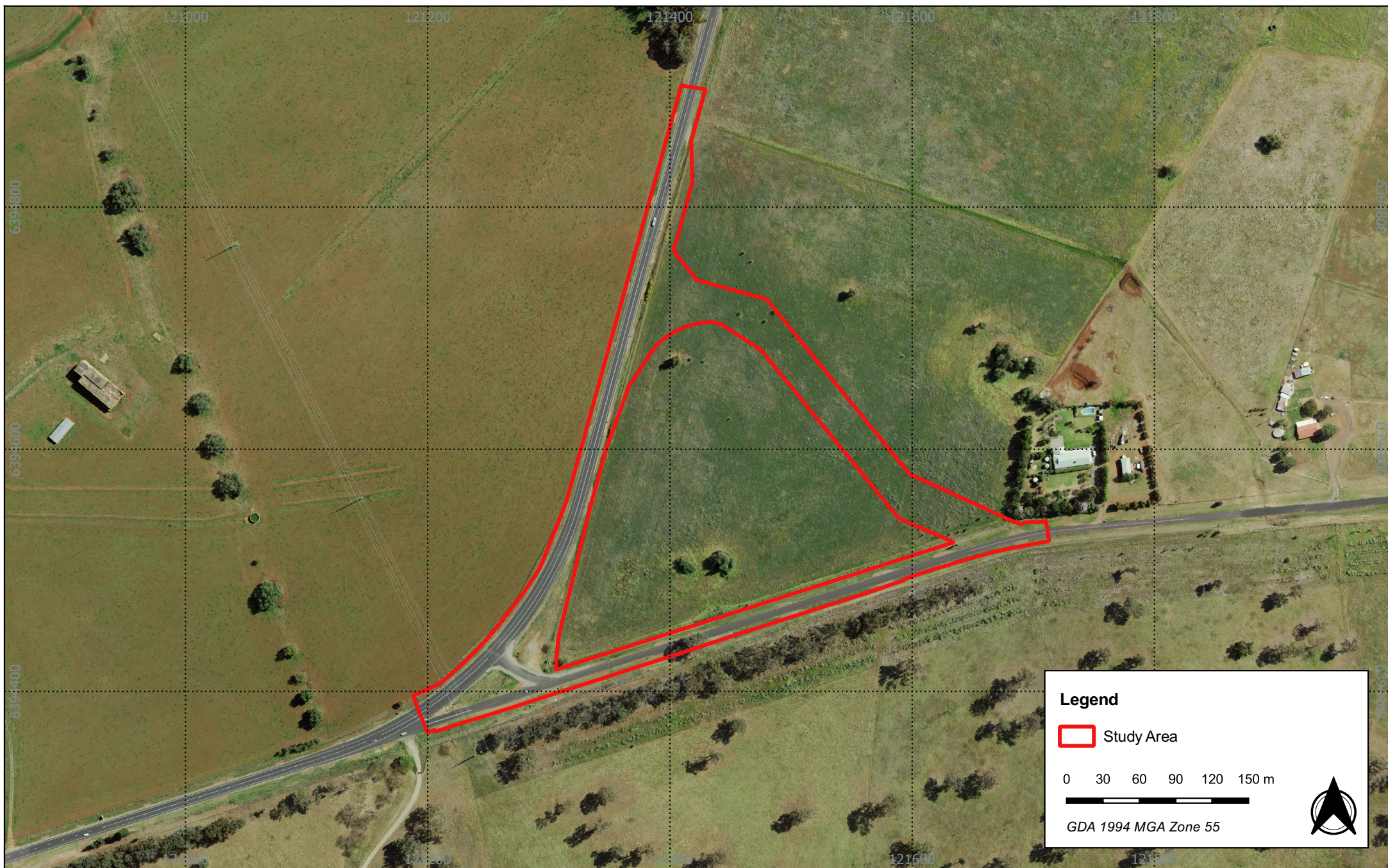


Figure 1-6 Location of Additional Intersection 2053 Ungula Wind Farm

Source: Bing

Drawn by: WA Date: 2020-11-03



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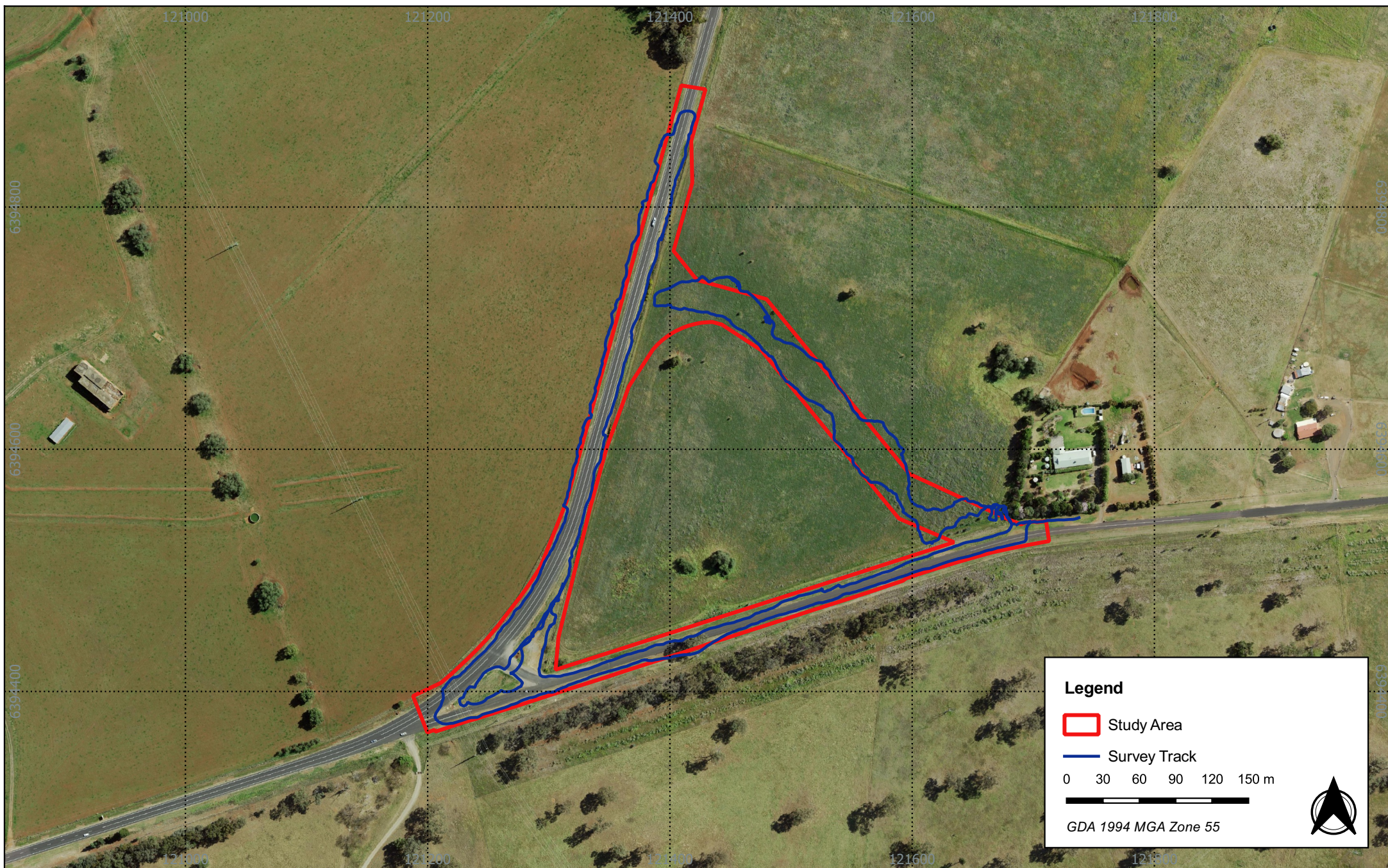


Figure 1-7 GPS track of pedestrian archaeological survey 2053 Ungula Wind Farm

Source: Bing

Drawn by: WA Date: 2020-11-03



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A R C H A E O L O G Y



REFERENCES

Austral Archaeology 2020, Uungula Wind Farm, Uungula New South Wales: Aboriginal Archaeological Survey Report (Addendum). Report for Uungula Winfd Farm Pty Ltd.

DECCW 2010a, 'Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010'.

DECCW 2010b, 'Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales'.

DECCW 2010c, 'Fact Sheet 2: What is an Aboriginal cultural landscape?'