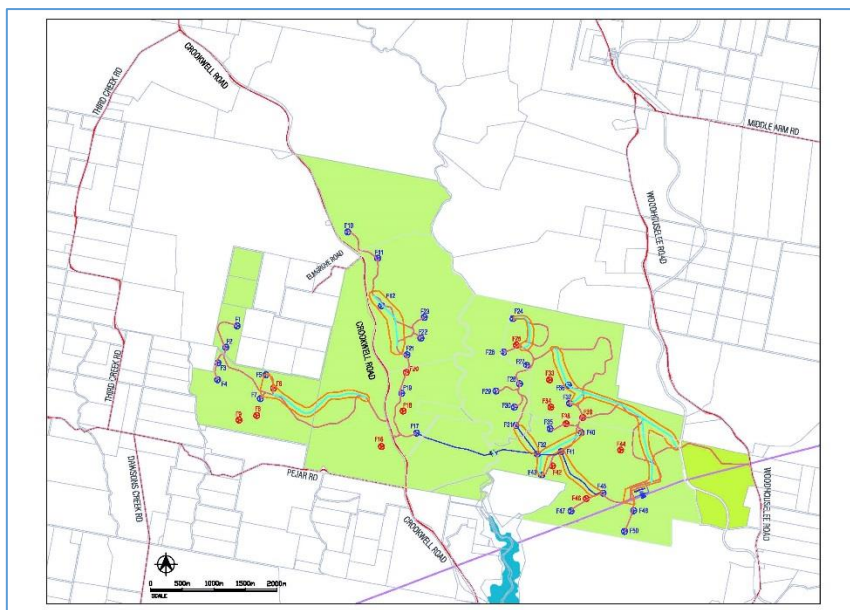


# Crookwell 2 Wind Farm

## Response submission to DPE comments- Heritage Modification 2 Amendment to Development Consent DA 176-8-2004i

16 May 2017



Prepared for Crookwell Development Pty Ltd

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# 1. INTRODUCTION

Bowen Heritage Management Pty Ltd (BHM) was commissioned by Crookwell Development Pty Ltd (CDPL) (the Proponent) to prepare a supplementary report to assess the implications for Aboriginal cultural heritage associated with modifications to the approved Crookwell 2 Wind Farm development. The Crookwell 2 Wind Farm project (the study area) is located on Crookwell Road, approximately 14 km south-east of Crookwell, 30 km north-west of Goulburn in New South Wales and covers an area of approximately 2,088 hectares (5,160 acres).

The Crookwell 2 Wind Farm project received its original Development Consent (DA-176-8-2004-i) on 10 June 2005 for 46 wind turbines and associated infrastructure. The development consent was modified in 2009 (Mod-1) to change the size of the turbines and relocate 20 of 46 turbine locations and associated access tracks. The Proponent is now seeking a modification (Mod-2) to modify the turbine technology to a larger size with larger foundations and assembly areas, and remove 14 of the 46 turbine locations. The original development and Mod-1 were approved under Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act), and the Mod-2 application will be assessed in accordance with section 75W of the EP&A Act. Provision 75W allows existing consents granted by the Minister to be modified.

The report by BHM (2015) summarises the heritage assessments previously completed for the Crookwell 2 Wind Farm and addresses the heritage implications of the proposed changes as part of Mod-2. The report concludes that:

- No further archaeological assessment is required for the proposed 33 wind turbine locations – as long as micro siting is confined to within a 50 metre radius of the original turbine location
- Assessment of new sections of access roads will be required.

This report was submitted as supporting documentation with the Modification 2 amendment to DA 176-8-2004i to Department of Planning and Environment. After referral to the NSW Office of Environment and Heritage (OEH) further information was requested, consisting of:

- A map showing the location of the remaining turbines, cabling, laydown areas and access tracks in relation to the known archaeological sites.
- Clarification as to whether archaeological sites were actually impacted under previous permits. If not, AHIPs would need to be applied for, supported by a current Aboriginal Cultural Heritage Assessment, including an archaeological report.
- Advised recommencement of a process of consultation with Aboriginal stakeholders as required to support an AHIP application.
- Advised that an Aboriginal Heritage Management Plan (AHMP) should be developed prior to construction.
- Advised that field survey of the new sections of re-alignment should be undertaken.

This response to submissions report addresses and provides clarification on these heritage concerns and outlines the process that has been undertaken to address the outstanding heritage issues in relation to Modification 2. Field surveys and site visits have now been undertaken for the project and an Aboriginal Cultural Heritage Assessment Report (ACHAR) has been completed for the Modification 2 application (BHM 2017). The results of this assessment are summarised in the following sections.

## 2. HERITAGE IMPACTS OF PROPOSED MODIFICATION 2

Under the approved Modification 1, approval had been granted for impacts to heritage sites in the vicinity of the proposed turbines, access tracks and cabling lay down areas. Aboriginal Heritage Impact Permits (AHIPS) were applied for and granted by NSW OEH for the heritage impacts (AHIP 1101268 and 1122895). These Permits have now lapsed. Re-application for the AHIPs is currently being undertaken with development of a current Aboriginal Cultural Heritage Assessment Report (ACHAR) and AHIP application. To date, none of the heritage sites have been impacted by the preliminary works completed for the project, and no preliminary works are occurring in the vicinity of any heritage sites.

### 2.1 TURBINE LOCATIONS

Under Modification 2 no additional heritage sites will be impacted at turbine locations, only sites that were granted approval under Modification 1. The Aboriginal heritage sites for which impacts were approved under DA-176-8-2004i (and associated AHIPS) are detailed in Table 1 below. The current Modification 2 reduces the number of turbines and areas of access road that could impact on Aboriginal heritage within the project area. Mitigations measures consisting of salvage excavations at PJ37 and PJ55 were completed in 2009 and 2010, and surface collection of PJ33 was completed in 2010 under AHIP 1101268 and 1122895.

Where, due to Modification 2 amendments, construction will not occur (thus decreasing heritage impacts) the relevant impact has been marked as removed. Shading shows mitigation measures that require AHIPs and completion prior to construction impacts. Where placement of the road alignment within the proposed corridor has been sited under Mod-2 to avoid impacts, these impacts are noted as no longer required.

**Table 1. Turbine Locations**

Turbine	Archaeological Site	Approval under Mod-1	Mitigation Measures Taken
F1	No known sites in location	None	None required
F2	No known sites in location	None	None required
F3	No known sites in location	None	None required

Turbine	Archaeological Site	Approval under Mod-1	Mitigation Measures Taken
F4	No known sites in location	None	None required
F5	PJ 10 (AHIMS 51-6-0218)	Consent and Permit given for unmitigated destruction	To be completed
F6 <b>(REMOVED)</b>	PJ 29 (AHIMS 51-6-0217)	Consent and Permit given for unmitigated destruction	None required
F7	PJ 54 (AHIMS 51-6-0682)	Consent and Permit given for unmitigated destruction (AHIP 1122895)	Completed
F8 <b>(REMOVED)</b>	PJ 09 (AHIMS 51-6-0217)	Consent and Permit given for salvage excavation	None required
F9 <b>(REMOVED)</b>	PJ 30 (AHIMS 51-6-0325)	Consent and Permit given for unmitigated destruction	None required
F10	PJ 40 (AHIMS 51-6-334)	Consent and Permit given for unmitigated destruction	To be completed
F11	No known sites in location	None	None required
F12	PJ 28 (AHIMS 51-6-0323)	Consent and Permit given for unmitigated destruction	To be completed
F13	No known sites in location	None	None required
F14	No known sites in location	None	None required
F15	No known sites in location	None	None required
F16 <b>(REMOVED)</b>	PJ 33 (AHIMS 51-6-328)	Consent and Permit for monitoring and collection of Aboriginal objects	Monitoring of top soil removal and collection of artefacts in 2009 under AHIP 1101268
F17	PJ 21 (AHIMS 51-6-0229)	Consent and Permit for monitoring, collection of Aboriginal objects and build-up of road base	To be completed
F18 <b>(REMOVED)</b>	PJ 34 (AHIMS 51-6-0329)	Consent and Permit given for unmitigated destruction	None required
F19	No known sites in location	None	None required
F20 <b>(REMOVED)</b>	PJ 35 (AHIMS 51-6-0330)	Consent and Permit for monitoring and collection of Aboriginal objects	To be completed
F21	PJ 36 (AHIMS 51-6-0331)	Consent and Permit given for unmitigated destruction	To be completed
F22	PJ 37 (AHIMS 51-6-0348)	Consent and Permit given for salvage excavation	Salvage completed 2009 under AHIP 1101268

Turbine	Archaeological Site	Approval under Mod-1	Mitigation Measures Taken
F23	PJ 39 (AHIMS 51-6-0333)	Consent and Permit for monitoring and collection of Aboriginal objects	To be completed
F24	No known sites in location	None	None required
F25 <b>(REMOVED)</b>	No known sites in location	None	None required
F26	No known sites in location	None	None required
F27	No known sites in location	None	None required
F28	No known sites in location	None	None required
F29	PJ 44 (AHIMS 51-6-0338)	Consent and Permit given for unmitigated destruction	To be completed
F30	No known sites in location	None	None required
F31	PJ 46 (AHIMS 51-6-0340)	Consent and Permit given for unmitigated destruction	To be completed
F32	No known sites in location	None	None required
F33 <b>(REMOVED)</b>	No known sites in location	None	None required
F34 <b>(REMOVED)</b>	No known sites in location	None	None required
F35	No known sites in location	None	None required
F36	No known sites in location	None	None required
F37	PJ 49 (AHIMS 51-6-0343)	Consent and Permit given for unmitigated destruction	To be completed
F38 <b>(REMOVED)</b>	No known sites in location	None	None required
F39 <b>(REMOVED)</b>	PJ 51	Avoid high artefact density site, monitor, no impact allowed, build up of road base.	Build-up of road across area of sensitivity at time of construction
F40	No known sites in location	None	None required
F41	PJ 55 (AHIMS 51-6-0683)	Consent and Permit given for salvage excavation (AHIP 1122895)	Salvage excavation completed 2011 under AHIP 1122895- SIRC submitted
F42 <b>(REMOVED)</b>	PJ 48 (AHIMS 51-6-0342)	Consent and Permit given for unmitigated destruction	None required

Turbine	Archaeological Site	Approval under Mod-1	Mitigation Measures Taken
F43	No known sites in location	None	None required
F44 (REMOVED)	No known sites in location	None	None required
F45	No known sites in location	None	None required
F46 (REMOVED)	No known sites in location	None	None required
F47	No known sites in location	None	None required
F48	No known sites in location	None	None required
F49	No known sites in location	None	None required
F50	No known sites in location	None	None required

Twelve sites will therefore be impacted by turbine siting, two of which have been salvaged previously under AHIPs. The impacted site locations were examined as part of the ACHAR for the Modification 2 application and no impacts have occurred to any of the sites since their original recording.

## 2.2 MODIFICATION 2 – ACCESS TRACKS AND CABLE LOCATION

The majority of the access tracks and cable network has been previously approved under Mod-1. The removal of turbines has removed sections of access tracks and cables and realigned others to provide more direct access. Twelve additional sites were recorded as part of the current field survey, all of which except one can be avoided by design and road placement. The sites that will be impacted by the turbine and road alignments are listed in Table 2.

**Table 2. Impacted Heritage Sites.**

No	Site number	AHIMS No	Contents	Scientific Significance	Impacts under Mod 2
1	PJ10	51-6-0218	Isolated surface find	Low	Direct and Total
2	PJ21	51-6-0229	84 Subsurface artefacts along ridgeline,	High	Direct and Partial
3	PJ23	51-6-0231	8 artefacts on dam edge	Low	Nil impact – outside alignment
4	PJ26	51-6-0348	subsurface isolated find	Low	Nil impact – outside alignment
5	PJ27	51-6-0322	subsurface isolated find	Low	Nil impact – outside alignment
6	PJ28	51-6-0323	subsurface isolated find	Low	Direct and Total

No	Site number	AHIMS No	Contents	Scientific Significance	Impacts under Mod 2
7	PJ29	51-6-0324	Isolated surface find	Low	Direct and Total
8	PJ35	51-6-0330	23 subsurface artefacts in 50 x 50m area	Medium	Direct and Partial
9	PJ36	51-6-0331	subsurface isolated find	Low	Direct and Total
10	PJ37	51-6-0349	1002 subsurface artefacts in single square	High	Nil - salvaged by excavation (AHIP 1101268)
11	PJ38	51-6-0332	38 subsurface artefacts on 230 m linear length	Medium	Direct and Partial - extends beyond impact area. Recorded area of site to be avoided - nil impacts. Area of PAD to be built up rather than impacted.
12	PJ39	51-6-0333	19 subsurface artefacts in 50 x 50 m area	Medium	Direct and Total
13	PJ40	51-6-0331	3 subsurface artefacts in 50 x 50m area	Low	Direct and Total
14	PJ41	51-6-0335	6 subsurface artefacts in 50 x 50m area	Low	Direct and Partial - extends beyond impact area
15	PJ42	51-6-0336	10 subsurface artefacts along 300m linear length	Medium	Direct and Partial - extends beyond impact area.
16	PJ44	51-6-0338	2 subsurface artefacts	Low	Direct and Total
17	PJ45	51-6-0339	24 subsurface artefacts in 250 x 250m area	Medium	Direct and Partial - extends beyond impact area
18	PJ46	51-6-0340	3 subsurface artefacts in 50 x 50m area	Low	Direct and Total
19	PJ48	51-6-0342	2 subsurface artefacts	Low	Nil impacts
20	PJ49	51-6-0343	16 subsurface artefacts along 200m transect	Medium	Direct and partial as site extends out of impact area.
21	PJ50	51-6-0344	subsurface isolated find	Low	Direct and Total
22	PJ51	51-6-0345	323 artefacts in one test pit only	High	Nil impacts
23	PJ52	51-6-0346	2 subsurface artefacts	Low	Direct and Total
24	PJ53	51-6-0347	2 subsurface artefacts in 42m transect	Low	Direct and Total
25	PJ54	51-6-0682	4 subsurface artefacts	Low	Direct and Total
26	PJ55	51-6-0683	76 artefacts in one test pit	High	Nil - salvaged by excavation (AHIP 1122895)
27	PJ56	pending	50+artefacts and PAD	High	Direct and Partial
28	PJ57	pending	2 artefacts	Low	Nil - On edge of road alignment

No	Site number	AHIMS No	Contents	Scientific Significance	Impacts under Mod 2
29	PJ58	pending	3 artefacts	Low	Nil Outside of impact area. Avoid impacts.
30	PJ59	pending	5 artefacts and PAD	Medium	Nil - On edge of road corridor
31	PJ60	pending	30+ artefacts and PAD	High	Nil- can be avoided by placement.
32	PJ61	pending	30+ artefacts and PAD	High	Nil - On edge of cable alignment.
33	PJ62	pending	Isolated find	Low	Nil - can be avoided by placement of road alignment.
34	PJ63	pending	5+ artefacts and Pad	Medium	Nil - On edge of road alignment.
35	PJ64	pending	2 artefacts	Low	Nil - On edge of Dam - this is outside of road impacts. Nil impact to site
36	PJ65	pending	3 artefacts	Low	Nil - On southern edge of road corridor.
37	PJ66	pending	3 artefacts	Low	Nil - On southern edge of road corridor.
38	PJ67	pending	30+ artefacts and PAD	High	Nil. Outside of alignment and proposed work.

## 2.3 SUMMARY OF IMPACTS

In summary, a total of 38 sites are within the vicinity of the current Modification 2 application. Of these 38 sites, 15 can be avoided by the works, and 2 have been salvaged under AHIPs, leaving 21 sites to be impacted. Of these 21 sites, 20 have been tested in the 2005 program with a representative sample collected. One newly recorded site requires further assessment to quantify impacts.

Of these 38 sites, 21 (as shown in Table 2) are proposed for impact under an AHIP. 12 have no further mitigation measure, due to their small, subsurface nature. Five are considered to hold moderate significance and should be subject to cultural monitoring of topsoil removals and collection of any artefacts. The remaining three areas of PAD are considered to be high in scientific values should be subject to cultural monitoring and build-up of the road construction area (limited to 6m in width) as they have been subject to subsurface investigation previously.

One new site (PJ56) requires subsurface investigation to determine the degree of impact. Until this work has been undertaken no impacts can occur to the site.

Figure 1 shows the location of heritage sites that will be impacted under the current Mod-2 application with their recommended management actions.

The only heritage sites that have been impacted and for which mitigation strategies have been implemented under the issued AHIPs are:

- PJ37 – Salvage excavations completed in 2009 (Biosis 2011)
- PJ33 – Monitoring and collections completed in 2009 (Biosis 2011)
- PJ55 – Salvage excavations completed in 2010 (Biosis 2011)



For these works a Site Impact Recording Card was submitted to OEH in regards to PJ55. Site Impact Recording Forms need to be completed and submitted to OEH in regards to PJ37 and PJ33 for record keeping purposes.

The remaining heritage impacts to all the sites listed in Tables 1 and 2 cannot be completed until the ACHAR and subsequent AHIP with the mitigation actions has been issued by OEH.

## **2.4 ABORIGINAL CONSULTATION**

As requested by OEH the consultation process required for the production of an ACHAR (section 80D NSW National Parks and Wildlife Act) and detailed in *Guide to Aboriginal Consultation for Proponents* (DECCW 2010) has been undertaken. Registrations for consultation have been received from the following organisations:

- Pejar Local Aboriginal Land Council
- Buru Ngunawal Aboriginal Corporation
- Koomurri Ngunawal Aboriginal Corporation
- Gundungurra Aboriginal Heritage Association
- Thunderstone Aboriginal Cultural and Land Management Services
- Onerwal Local Aboriginal Land Council

These Registered Aboriginal Parties (RAPs) for the project have been consulted on matters of cultural significance of sites and culturally appropriate management actions for each of the sites. This information has been used in the development of the management actions in the ACHAR.

## **2.5 SITE INSPECTION**

As requested by OEH a site inspection of all the previously recorded sites that are in the vicinity of the Modification 2 proposed works has been undertaken as part of the development of an Aboriginal Cultural Heritage Assessment Report (ACHAR). This assessment (reported in the ACHAR for Mod-2) confirmed that no impacts had occurred to any of the recorded sites. The ACHAR is under review by the Registered Aboriginal Parties for the project and will be submitted to OEH for approvals and issuing of any required AHIPs at the end of the review period.

### 3. HERITAGE MANAGEMENT PLAN AND ABORIGINAL COMMUNITY CONSULTATION

The development of a Heritage Management Plan (HMP) was requested by OEH in their submission letter and advice dated 14/11/2016. A HMP has been developed and approved (3<sup>rd</sup> June 2009) for the project during the original Development Consent and approvals for Modification 1. This approved HMP will be applied to Modification 2, and will be updated from time to time as required and in consultation with the Aboriginal community and NSW OEH.

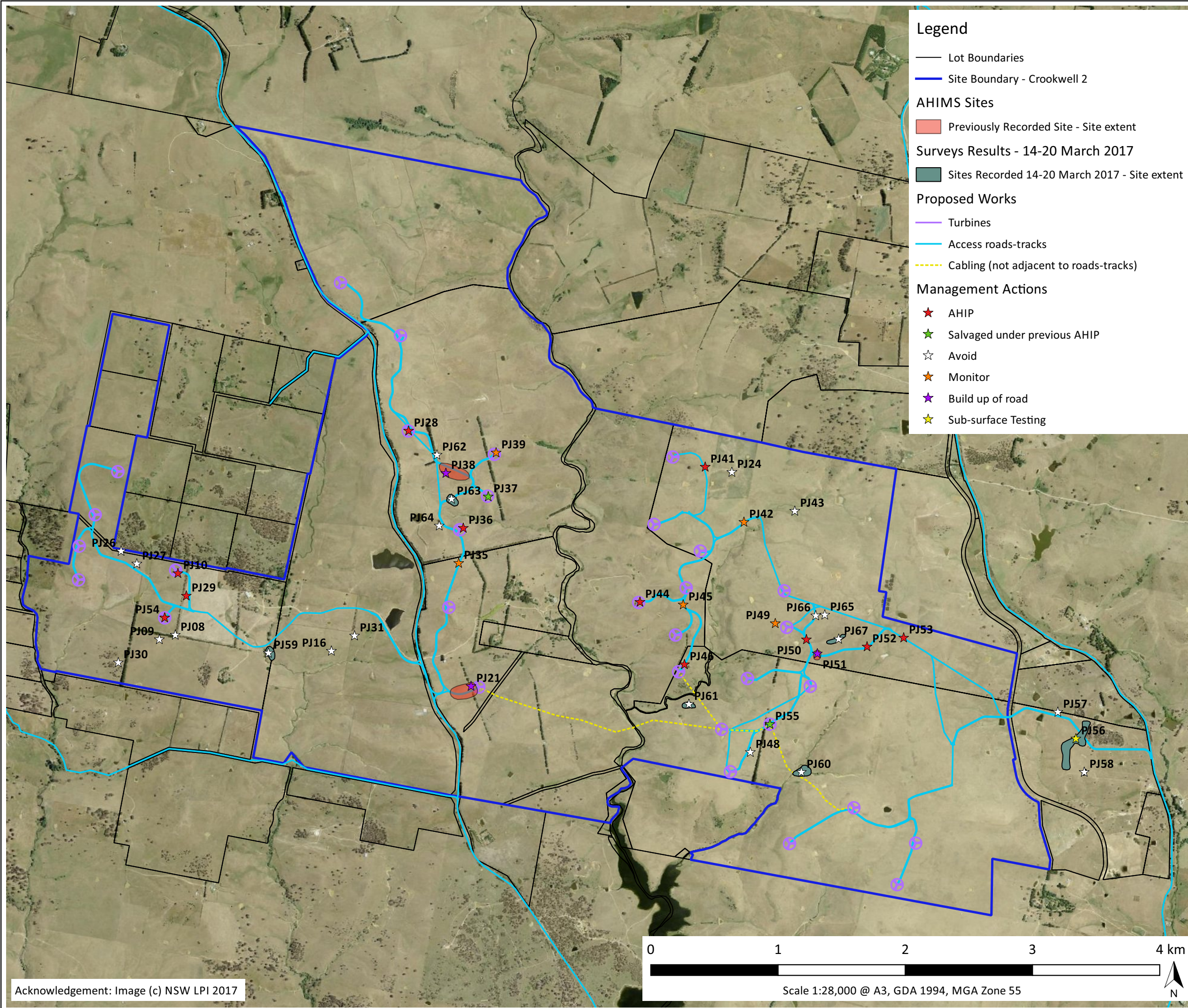
Relevant approval documentation is:

- Crookwell 2 Wind Farm has secured approval on 12<sup>th</sup> May 2009 for its Construction Environmental Management Plan (CEMP) dated 28<sup>th</sup> April 2009, as amended for revision to its sub-plan 1 the 'Community Information Plan 'dated 3<sup>rd</sup> June 2009, with subsequent approval on 10<sup>th</sup> June 2009.
- The CEMP document has provisions for various management plans and mitigation procedures including heritage, these can be found in:
  - CEMP - Appendix 4 - Management of Unrecorded Aboriginal and European Heritage Sites.
  - CEMP - SP1. Community Information Plan - Table 3.1 - reference to Pejar LALC and DEC (now OEH) for consultation on Heritage management matters.
  - CEMP - SP8. Heritage Management Plan

Following discussion with CDPL, although not required for Modification 2, consultation with the Aboriginal Community to update the HMP with the results of the ACHAR has commenced and a new version of the HMP is under development.

Information received through the consultation process will be incorporated into the production of the HMP, which will be completed and provided to NSW OEH for their endorsement as an appendix to the Modification 2 ACHAR.

Figure 1. Management Actions



Acknowledgement: Image (c) NSW LPI 2017



Capital Ecology Project No: 2740  
 Drawn by: R. Speirs  
 Date: 16 May 2017



## 4. REFERENCES

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