Environmental Resources Management Australia Pty Ltd

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3 November, 2015

Goldwind Australia Pty Ltd
Level 23 – 201 Elizabeth Street
Sydney, NSW, 2000
By email to: jeffbembrick@goldwindaustralia.com

Our Reference: *0295776 PROJECT MODIFICATION HERITAGE SURVEY_FINAL.DOCX*

Attention: Jeff Bembrick

Dear Jeff

RE: HERITAGE SURVEY FOR MODIFICATION AREAS – WHITE ROCK WIND FARM

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned by Goldwind Australia Pty Ltd (Goldwind) on behalf of White Rock Wind Farm Pty Ltd (WRWFPL) to undertake an additional heritage assessment for proposed variations to the Stage 1 development. The scope of additional assessment involved survey of areas where minor changes to the project layout are proposed but were not specifically assessed in the Epuron Environmental Assessment, April 2011. These layout changes are shown in mapping presented as *Annex A* with ERM survey transects presented in *Annex B*. It is understood that this assessment will support a Modification Application to be lodged by WRWFPL in respect of minor layout changes that may be considered outside of the micro-sitting allowances provided in the Project Approval.

This letter report outlines the aims, methodology and results of this survey as well as assessment of impact of the proposed modifications and management recommendations for identified sites.

2. BACKGROUND

An Aboriginal Heritage Impact Assessment was prepared by RPS in 2010 for the White Rock Wind Farm development. The assessment comprised an appendix of the Epuron Environmental Assessment, April 2011. This assessment identified three Aboriginal scarred trees RPS WR01A, RPS WR01B and RPS WR04 and two artefact scatters RPS WR02 and RPS WR03 (see *Table 1*).

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Management Australia Pty Ltd
A.C.N. 002 773 248
A.B.N. 12 002 773 248

Offices worldwide

The Aboriginal Heritage Impact Assessment (RPS 2010) included the following recommendations for the management of Aboriginal heritage values within the project area:

- temporary fencing of all sites during construction;
- locations of sites to be stored within the Proponents' environmental management system;
- all relevant staff and contractors should be made aware of their statutory obligations; and
- an incidental finds protocol.

Table 1 Aboriginal Heritage Sites (RPS 2010).

No.	Site Code	Site Name	Site Types	Coordinates	AHIMS No.
1	RPS WR01A	RPS White Rock 01A	Scarred Tree	361321, 6696937	12-4-0028
2	RPS WR01B	RPS White Rock 01B	Scarred Tree	361340, 6696925	12-4-0029
3	RPS WR02	RPS White Rock 02	Artefact Scatter and PAD	361207, 6703892	12-4-0030
4	RPS WR03	RPS White Rock 03	Artefact Scatter and PAD	361374, 6704084	12-4-0031
5	RPS WR04	RPS White Rock 04	Scarred Tree	362843, 6701107	12-4-0032

ERM subsequently prepared a Construction Heritage Management Plan (CHMP) (*Annex F* of the WRWF Stage 1 Construction Environmental Management Plan [CEMP]) to manage Aboriginal heritage values prior to and during construction works (ERM 2015a). The following recommendations were provided in this CHMP:

- Avoidance – including the establishment of protective fencing around sites and storage of their locations within environmental management systems;
- Chance finds procedure;
- Procedures in the event that human remains are discovered; and
- Cultural heritage awareness training.

As part of the preparation of the CHMP, ERM undertook a site inspection of the previously recorded Aboriginal heritage sites at White Rock Wind Farm to confirm the location and current status of these registered sites. This inspection re-identified scarred tree sites RPS WR01A and RPS WR01B however these trees, located close to a property boundary fence have been cleared. The clearing is understood to have been undertaken by the landowner to prevent damage to the boundary fence by falling branches as is part of farm management activities (ERM 2015b). The landowner appears to have been unaware of the significance of these scarred trees. The NSW Office of Environment and Heritage (OEH) has been notified of the impact and OEH has investigated this incident.

Despite targeted survey efforts, stone artefact sites RPS WR02 and RPS WR03 could not be re-identified. RPS WR04 was not surveyed due to access limitations and as the site is not within an area that will be impacted by the Stage 1 Project. In addition to the recommendations provided in the Aboriginal Heritage Impact Assessment (RPS 2010), ERM (2015b) further recommended that:

To avoid any damage to the remaining three sites located within the Project boundary it is further recommended that the landowners are informed of the location and nature of sites RPS WR02, RPS WR03 and RPS WR04. They should also be made aware of their responsibilities in regards to the ongoing protection of the sites. The landowner should also be advised that RPS WR01A and RPS WR01B should be left on the ground and not impacted any further. Despite the scarred trees having been damaged, a 30m exclusion zone is still required for the project layout in this area.

In the event that the proposed development footprint changes from that already assessed by RPS (2010), the presence of an archaeologist on site during the micro siting of the turbines and access tracks (prior to construction) should be considered to ensure that any previously unidentified scarred trees or areas of archaeological sensitivity can be avoided where possible.

In accordance with previous recommendations by RPS (2010) and ERM (2015a; 2015b) this recent survey was undertaken of micro sited turbine and access track areas and facility locations to ensure that any previously unidentified heritage sites or areas of archaeological sensitivity are avoided.

3. FIELD SURVEY

ERM Archaeologist, Janene May, undertook the survey on 8 and 9 October 2015, accompanied by Goldwind's Development Compliance Manager, Jeff Bembrick.

Aboriginal stakeholder representatives were invited to attend the site survey and were scheduled to attend but withdrew the day before the survey, due to other commitments. The representatives agreed to review the findings of the survey.

3.1.1 Methodology

The archaeological survey aimed to assess micro sited areas that varied from the original impact area surveyed by RPS (2010). Areas of impact were examined and soil exposures and other areas of increased visibility such as tracks or paths were particularly targeted. ERM was directed over the site and proposed modification areas by Goldwind during the field survey and transects were recorded using a Garmin Oregon GPS. Proposed modification areas were examined, however where visibility was poor transects were walked within areas of exposure or to gain an understanding of the landform.

Where Aboriginal cultural heritage sites were identified they were mapped and recorded by the survey team for content, GPS location, landscape features and digitally photographed. Notes were made of soil conditions, evidence of ground disturbance and possible spatial extent of sites.

Visibility refers to the amount of ground upon which artefacts can be seen. The presence of vegetation, leaf litter and other variables can obscure visibility, which is expressed as a percentage.

An exposure is defined as an area in which ground surface disturbance (usually in the form of erosion) results in the removal of ground cover and soils and permits the detection of archaeological material that was formerly contained within a surface or subsurface context. The level of exposure is determined as a percentage.

Archaeological assessments must employ appropriate methods for prediction to reliably define an area's archaeological content. Frequently, only the eroded component of a larger subsurface deposit is detected and recorded as a site. Where soils are soft, sandy or in boggy conditions, artefacts can occur at greater depths below surface level. Therefore, it is crucial that the nature of an area's soils, sands and geomorphology are defined correctly in an archaeological assessment and the resulting archaeological implications identified. An understanding of these factors, linked further to the notions of site integrity and condition, results in an understanding of an area or site's archaeological potential.

Areas inspected were assessed according to the definitions provided in *Table 2*.

Table 2 Definitions of Archaeological Potential.

Rank	Definition	Example
Very Low potential	Artefacts are very unlikely to occur in situ.	Eroded landforms, reconstructed landscapes, hazardous landscape, developed areas.
Low potential	Artefacts are not normally found in comparable contexts but could occur in low densities making detection unlikely.	Landforms with no specific focus for use, ie with no water source or undifferentiated slopes.
Moderate potential	Artefacts are known to occur in comparable landforms in detectable densities (~1artefact/m^2) and there is possibility for detection.	Landforms with an environmental focus which may have seen seasonal Aboriginal visitation.
High potential	Artefacts are consistently found in comparable landforms or similar environmental contexts and will very likely be found if soil excavation occurs.	Landforms with known environmental focus areas encouraging repeat visitation to specific locale, ie margins of swamp or near high order creeks.

4. RESULTS AND ASSESSMENT

4.1 OVERVIEW OF RESULTS

Several locations where layout modifications are proposed were examined within the Stage 1 Project Area. Transects walked at these locations are shown in *Annex B* and described below in *Table 3*.

Table 3 Survey Unit Descriptions

Survey Unit	Landform	Description	Photograph
1	Gentle Slopes	Survey Unit 1 traverses proposed modification to access track from Kelleys Road to turbine 109 along western boundary of property and then to turbines 110 and 111 and towards 112 and 113. Comprises grazing paddocks with disturbance evident through ploughing, collection and stockpiling of basalt boulders, access tracks and farm dams, planting of pine tree shelter belts and various other farming activities. Generally a very poor level of ground surface visibility but some visibility within exposures along fences and access tracks, near farm dams and in areas of soil erosion. Scattered trees are present in some locations.	
2	Slopes	Survey Unit 2 traverses area adjacent to Kelleys road where construction facilities are proposed and for a modified track route to the north on moderately inclining slopes south of turbine 83. Comprises grazing paddocks with disturbance evidence through ploughing, construction of dams and fences and other farming activities. Some basalt outcropping present on slopes south of turbine 83. Generally a very poor level of ground surface visibility but some visibility within exposures around dams and on access tracks. In some places rock outcrops have no soil cover.	

Survey Unit	Landform	Description	Photograph
3	Slopes	Survey Unit 3 traverses existing vehicle track within moderately inclining upper and mid slope landforms at turbine between turbines 76 and 79. Some ground surface visibility is available along an existing vehicle access track and within proximity to fence lines in areas of soil erosion. Disturbance was observed from farming activities such as clearance of woodland vegetation and the development of vehicle tracks and fences.	

4	Gentle slopes	Survey Unit 4 traverses site options for proposed ancillary facilities and access track options north east of turbine 51 close to the potential site entry points from Ilparran Road. Areas assessed included:
		• A northern access route option (Cameron property) had not previously been surveyed and is outside the current project boundary. A Modification Approval is required for this route to form part of the WRWF Stage 1 project. This survey provides the assessment of that option
		• Two options for a Construction Compound were surveyed on the Dulhunty property
		  • One between a farm dam and shed near property entrance
		  • Second further to the west
		• a single laydown area was surveyed on the Dulhunty property.
		The landform is comprised of gentle slopes within a wider rolling hills landscape. Some scattered trees are present around the proposed facility location. Disturbance was observed due to land clearance, the installation of fences, stockyards, farm dams, sheds, contour drains and vehicle access tracks as well as other farming activities. Some ground surface visibility was present along the existing vehicle access track and in watercourses and a farm dam.
		One stone artefact (ERM WR01) was identified adjacent to the track on Cameron Property. No other artefacts or areas of archaeological sensitivity were identified.
		A map of the assessed area for Survey Unit 4 is included in *Figure 1* following this table.
			

Survey Unit	Landform	Description	Photograph
5	Slopes	Survey Unit 5 traverses proposed access tracks around turbines 28 to 29 and from turbine 28 to 30. This Survey Unit traverses upper, middle and lower slopes within a wider rolling hills landscape. Some scattered trees are present. The area has been disturbed by land clearance, access tracks, ploughing and other farming activities. Some areas of erosion of an existing farm access track were evident on steep slope between T28 and T30.	
6	Upper Slope	Survey Unit 6 traverses area around turbine 19 comprised of a bench area on an upper slope landform. Extensive basalt outcropping was observed in this area. Ground surface visibility was generally poor away from areas of rock outcrop. Disturbance in this area was observed including land clearance and other farming activities.	
7	Slope	Survey Unit 7 traverses moderately inclining slope (proposed landowner access track) at turbine 9. It represents the farmer's preferred access route between Turbine s 9 and 10. Ground surface visibility was generally poor. Disturbance in this area was observed including land clearance and other farming activities.	

Survey Unit	Landform	Description	Photograph
8	Gentle Slopes	Survey Unit 8 traverses gentle slopes south of Gwydir Highway – the proposed location of facilities and the proposed site entrance at the Gwydir Highway. Locations surveyed included: • a modified O&M Facilities Building location • Areas adjacent access track for Gwydir Highway to northern site office area • Roadside area of Gwydir Highway in the vicinity of the Site Entrance and particularly to the east where some road upgrades to provide a turning lane may be undertaken. A creek was identified within proximity to the location of the proposed facilities. Some soil exposures were present along the creek and examined. The area proposed for the site entrance comprises a very highly disturbed road corridor area with very poor ground surface visibility due to dense grass coverage. No areas of archaeological sensitivity were identified.	

Figure 1 Detail of assessed areas at Survey Unit 4 showing previously approved tracks (blue), current survey transects (green) and proposed ancillary facilities (yellow and pink).

The results of the surveys for the eight (8) survey units described in *Table 3* are provided below. Only one additional site, ERM WR01, was recorded during the site survey within Survey Unit 4. All other Survey Units were assessed as having Low to Very Low Archaeological Potential and the modifications are not expected to impact Aboriginal Heritage subject to implementation of the Stage 1 Project in accordance with the Cultural Heritage Management Plan, updated to address ERM WR01.

Table 4 Field Survey Results

Survey Unit	Details of sites or Aboriginal Heritage identified	Archaeological Potential	Management
1	No heritage sites identified.	Low	Manage in accordance with CMHP.
2	No heritage sites identified.	Low	Manage in accordance with CMHP.
3	No heritage sites identified.	Low	Manage in accordance with CMHP.
4	ERM WR01	Low	Avoid site and fence site prior to and during construction works in accordance with the CHMP (ERM 2015a). If site cannot be avoided, salvage will be required in accordance with the CHMP (ERM 2015a).
5	No heritage sites identified.	Low	Manage in accordance with CMHP.
6	No heritage sites identified.	Low	Manage in accordance with CMHP.
7	No heritage sites identified.	Low	Manage in accordance with CMHP.
8	No heritage sites identified.	Very Low	Manage in accordance with CMHP.

4.2 DETAILS OF SITE ERM WR01

The field survey identified one new Aboriginal heritage site (refer to *Photograph 1* and *Annex B*). No historic heritage sites or areas of archaeological sensitivity were identified. The new site, ERM WR01 is described below with completed site card attached in *Annex C*:

Location (GDA94 MGA Zone 56): Easting 362631 Northing: 6704300

ERM WR01 consists of one grey silcrete core artefact. Three flake scars and overhang removal were present on the artefact. The artefact was identified adjacent to a vehicle access track within an area of soil erosion under a tree. The surrounding area comprises a paddock with dense grass coverage. No other artefacts were found within the area. Soils at this location comprise highly disturbed (ploughed) medium brown loose silt. The area has been disturbed by land clearance and farming activities.

Photograph 1 View towards ERM WR01 (left) and detail of artefact found at ERM WR01 (right) (ERM 2015).

4.3 ASSESSMENT OF MODIFICATIONS AGAINST SURVEY RESULTS

All the proposed layout modifications identified with the 8 Survey Units were assessed in respect of potential impacts on Aboriginal Heritage values. Only one site ERM WR01 requires specific avoidance or alternative management measures such as salvage. All other areas of modification do not increase impacts on Aboriginal heritage.

Nevertheless, it is noted that aretefacts and/or sites may be identified during construction works and the 'Chance Finds Procedure' in the CHMP (ERM 2015a) should be followed in this instance.

5. RECOMMENDATIONS

In line with the recommendations provided by the original Aboriginal Heritage Impact Assessment report (RPS 2010) and the CHMP (ERM 2015a), it is recommended that:

- the newly recorded site ERM WR01 should be avoided;
- a fence with a 30m buffer should be established around ERM WR01 during construction works to ensure its protection;

- the landowner should be informed of the location and nature of the newly recorded site, ERM WR01; and

- if the Project Approval is modified in respect of the proposed layout modifications that have been assessed in this report, then the Stage 1 Construction Heritage Management Plan is to be updated to reflect the changes and the additional recorded site ERM WR01.

In the event that the proposed development footprint further changes from the areas assessed by RPS (2010) and ERM (2015), the presence of an archaeologist on-site during the micro siting of the turbines and access tracks (prior to construction) should be considered to ensure that any previously unidentified scarred trees or areas of archaeological sensitivity can be avoided where possible.

We trust that this information meets the requirements of Goldwind and OEH. Should you have any queries please do not hesitate to contact Janene May on 02 8584 8888 or via e-mail at Janene.may@erm.com.

Yours sincerely,

for Environmental Resources Management Australia Pty Ltd

Janene May
Heritage Consultant

Murray Curtis
Partner

REFERENCES

ERM. 2015a. *White Rock Wind Farm Stage 1 – CEMP Annex F – Construction Heritage Management Plan*. Report to White Rock Wind Farm Pty Ltd.

ERM. 2015b. *Confirmation of the Status of Registered Heritage Sites*. Letter report to Goldwind Australia Pty Ltd.

RPS. 2010. *Aboriginal Heritage Impact Assessment – White Rock Wind Farm*. Report to Epuron Pty Ltd.

Annex A

PROJECT LAYOUT CHANGES

Annex B

SURVEY UNITS AND HERITAGE SITES IDENTIFIED

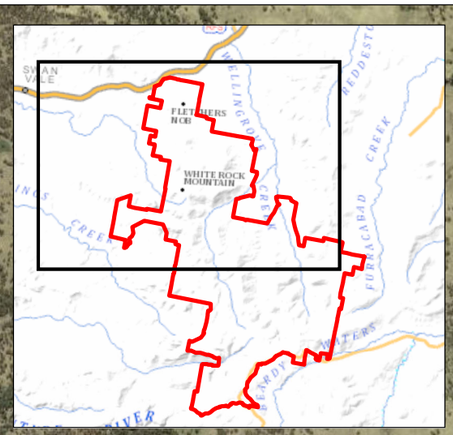
Survey Unit 8

Survey Unit 4

Survey Unit 7

Survey Unit 6

Survey Unit 5



Legend

- Turbine Layout 66
- SurveyUnit4
- SurveyUnit5
- SurveyUnit6
- SurveyUnit7
- Access Track
- Potential Micrositing
- ERM WR01

Source:
Goldwind Wind Farm Layout
Imagery : LPI Imagery WMS (2015)
Inset : LPI Basemap WMS Service

N

0 200 400 600 800 1,000m

Client:	Goldwind	
Drawing No:	0295776b_SU_G001_R00.mxd	
Date:	16/10/2015	Drawing Size: A3
Drawn By:	JC	Reviewed By: JM

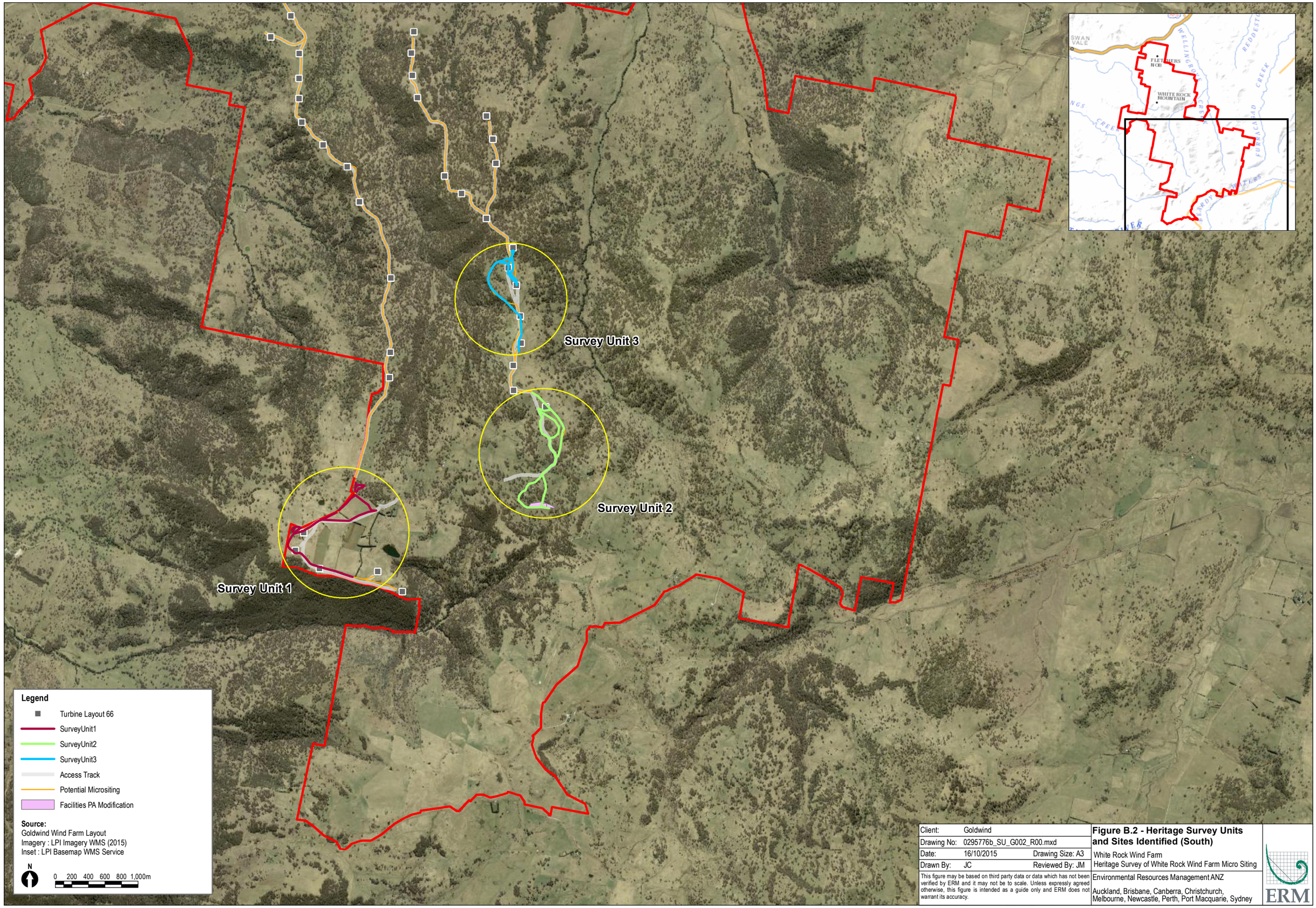
Figure B.1 - Heritage Survey Units and Sites Identified (North)

White Rock Wind Farm
Heritage Survey of White Rock Wind Farm Micro Siting

Environmental Resources Management ANZ

Auckland, Brisbane, Canberra, Christchurch, Melbourne, Newcastle, Perth, Port Macquarie, Sydney

ERM



Client:	Goldwind		
Drawing No:	0295776b_SU_G002_R00.mxd		
Date:	16/10/2015	Drawing Size: A3	
Drawn By:	JC	Reviewed By: JM	

Figure B.2 - Heritage Survey Units and Sites Identified (South)

White Rock Wind Farm
Heritage Survey of White Rock Wind Farm Micro Siting

Environmental Resources Management ANZ

Auckland, Brisbane, Canberra, Christchurch, Melbourne, Newcastle, Perth, Port Macquarie, Sydney

ERM

Annex C

ERM WR01 SITE CARD

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___

Date received / / Date entered into system / / Date catalogued / /

Entered by (I.D.)

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Client on system ☐

☐ **Knowledge Holder**

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name ERM WR01

Easting 362631 Northing 6704300 AGD/GDA GDA

Mapsheet Glen Innes

Zone 55 Location Method Non-Differential GPS

Other Registration

Primary Recorder

Title | Surname | First Name | Initials

Organisation ERM

Address Level 15 309 Kent Street Syd

Phone number 85848888 Fax 85848800

Date recorded 09/10/2015

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [x] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [ ] Grasslands
- [x] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [x] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] Residential

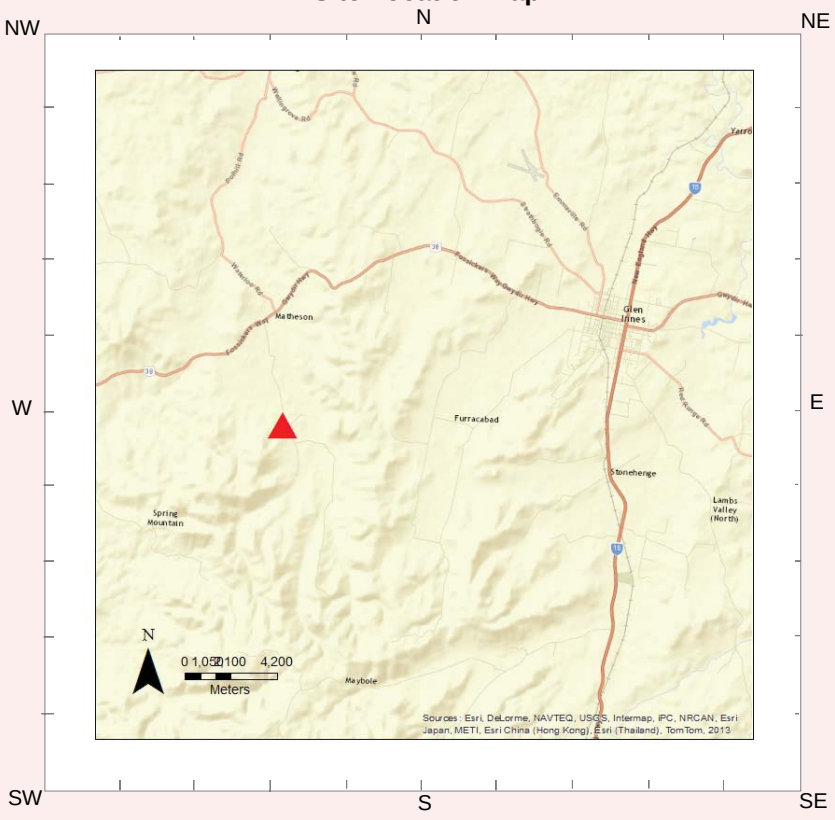
Water

Distance to permanent water source	960 metres
Distance to temporary water source	200 metres
Name of nearest permanent water source	Wellingrove Creek
Name of nearest temporary water	Unnamed

Directions for Relocation

From Glen Innes drive west along the Gwydir Highway for approximately 19km. After passing Wellingrove Creek, turn left on to Ilparran Road. Drive south along Ilparran Road for approximately 13km. Turn right at the track before Camerons Road on to the dirt track. Site is located under tree west of a dam and just off the vehicle track.

Site Location Map



Current Land Tenure

- [ ] Public
- [x] Private

National Park / other Government Dept.

Primary report **I.D.** (I.D. Office Use only)

Letter report - ERM (2015) HERITAGE SURVEY FOR MODIFICATION AREAS – WHITE ROCK WIND FARM

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [x] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features

Site Dimensions

Closed Site Dimensions (m)

- [ ] Internal length
- [ ] Internal width
- [ ] Shelter height
- [ ] Shelter floor area

Open Site Dimensions (m)

- [1] Total length of visible site
- [1] Average width of visible site
- [1] Estimated area of visible site
- [50] Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

Site is not rare within a local or regional context and is within a disturbed context. Considered to have a low level of scientific significance.

Preliminary recommendations:

- the newly recorded site ERM WR01 should be avoided;
- a fence with a 30m buffer should be established around ERM WR01 during construction works to ensure its protection;
- the landowner should be informed of the location and nature of the newly recorded site, ERM WR01; and
- if the Project Approval is modified in respect of the proposed layout modifications that have been assessed in this report, then the Stage 1 Construction Heritage Management Plan is to be updated to reflect the changes and the additional recorded site ERM WR01.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

NPWS FEATURE RECORDING FORM - ARTEFACT

Site I.D.

Site Name ERM WR01

Importance

First recorded date 9/10/2015

No. of instances 1

Recorded by ERM

	Yes	No
Stone artefacts only	Yes	
Artefacts collected		No
Permit issued		No

Percentage of Non-stone Artefacts to Percentage of Stone Artefacts

0-9% 10-19% 20-29% 30-39% 40-49% 50-59% 60-69% 70-79% 80-89% 90-100%

0-9%

Feature Context & Condition

Scatter No. 1

Easting 3 6 2 6 3 1

Northing 6 7 0 4 3 0 0

Density (Artefact count per square metre) 1

Dimensions

Length (m) Width (m) Depth (m)

	Yes	No
In situ		No
Stratified		No

Feature Condition

- [ ] Very good
- [ ] Good
- [x] Poor

General Condition

- [ ] Weathered
- [x] Vehicle damage
- [x] Surface water wash
- [ ] Fire damage
- [x] Erosion
- [ ] Stock damage
- [x] Exposed archaeological material

Recommended Action

- [ ] Boardwalk
- [ ] Fencing
- [ ] Closure to public
- [ ] Continued inspection
- [ ] Fire hazard reduction
- [ ] Expert assessment
- [ ] Meeting with land manager
- [ ] Revegetation
- [ ] Signage
- [ ] Soil erosion control
- [ ] Track closure/re-routing
- [ ] Additional recording

Feature Plan (Indicate scale, location of instances)

Feature Environment

(Complete when *feature* environment differs to *site* environment, use attributes from cover card, p. 2)

Land form

Land form unit

Slope

Vegetation

Land use

Water

Distance to permanent water source metres

Distance to temporary water source metres

Name of nearest permanent water source

Name of nearest temporary water

NPWS FEATURE RECORDING TABLE - ARTEFACT

Stone Artefact

Instance No.	Recording Date	Artefact Material	Artefact Type	Platform Surface	Platform Type	Termination	Cross Section	Length (mm)	Width (mm)	Thickness (mm)
1	09/10/2015	Silcrete	Core	More than one f	Bipolar	NA	Irregular	4.1	2.3	1.6

Other Artefact Type

Instance No.	Recording Date	Artefact Material	Artefact Type	Description	Length (mm)	Width (mm)	Thickness (mm)

Material

Basalt
Chert
Fine grained siliceous
Granite
Quartz
Quartzite
Sandstone
Silcrete
Green glass
Amber glass
Amethyst glass
Clear glass
Ceramic
Porcelain
Tin can
Wire
Nail
Button
Shell
Bone
Wood
Resin

Artefact Description

Adze
Anvil
Axe
Backed blade
Blade
Core
Core tool
Cyclon
Distal fragment
Eloura
Flake
Flake tool
Flaked piece
Hammerstone
Manuport
Milling slab
Mortar
Muller
Nuclear tool
Pirri
Proximal fragment
Tula
Other diagnostic type
Modified
Unworked

Platform Surface

Cortex
Flake scar
More than one flake scar
Faceted
Ground
Indeterminate
Bipolar

Termination

Feather
Hinge
Step
Outrepasse
Bipolar

Platform Type

W
Focal
Shattered
Indeterminate
Bipolar

Cross Section

High/strong
High/weak
Low/weak
Irregular

Comments:

NPWS FEATURE RECORDING FORM - MODIFIED TREE

Site I.D. | Site Name

First recorded date | **Importance** | **Aboriginal Information Recorded?**

No. of instances

Recorded by

Feature description

Easting | Northing

No. of scars

No. of carved panels

Feature Condition

- Very good
- Good
- Poor

Condition

- Weathered
- Ringbarked
- Fire damage
- Vehicle damage
- Insects/termites
- Rot
- Limb fall
- Stock damage

Recommended Action

- Fencing
- Closure to public
- Continued inspection
- Expert assessment
- Fire hazard reduction
- Insect removal
- Meeting with land manager
- Rubbish removal
- Signage
- Tree health assessment
- Track closure/re-routing
- Additional recording

Feature environment

(Complete when *feature* environment differs to *site* environment, use attributes from cover card, page 2)

- Land form
- Land form unit
- Slope
- Vegetation
- Land use

Water

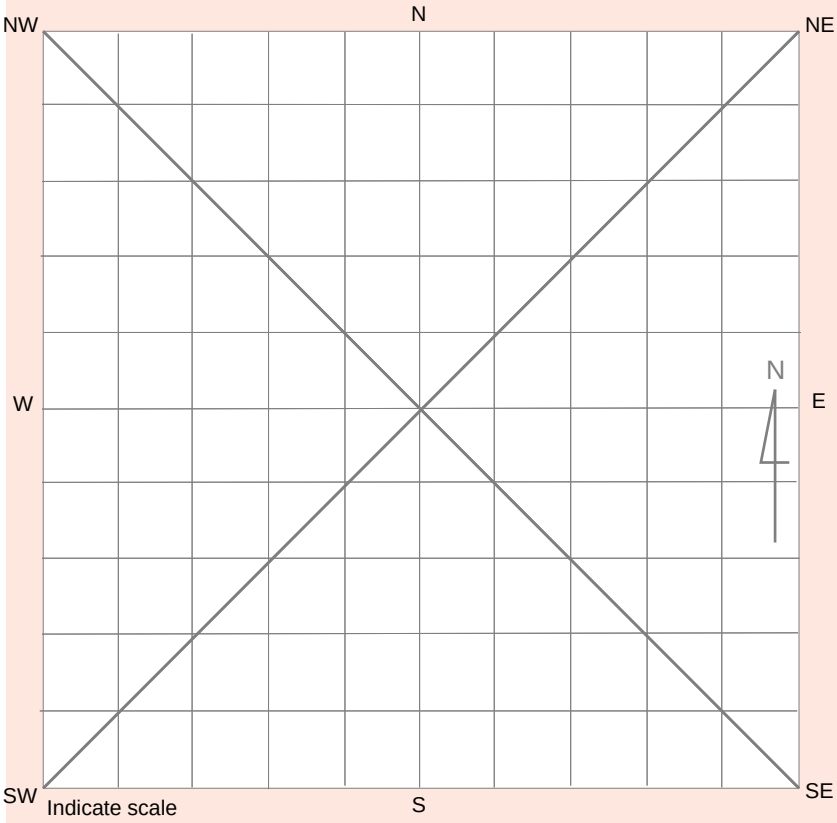
Distance to permanent water source ____ metres

Distance to temporary water source ____ metres

Name of nearest permanent water source

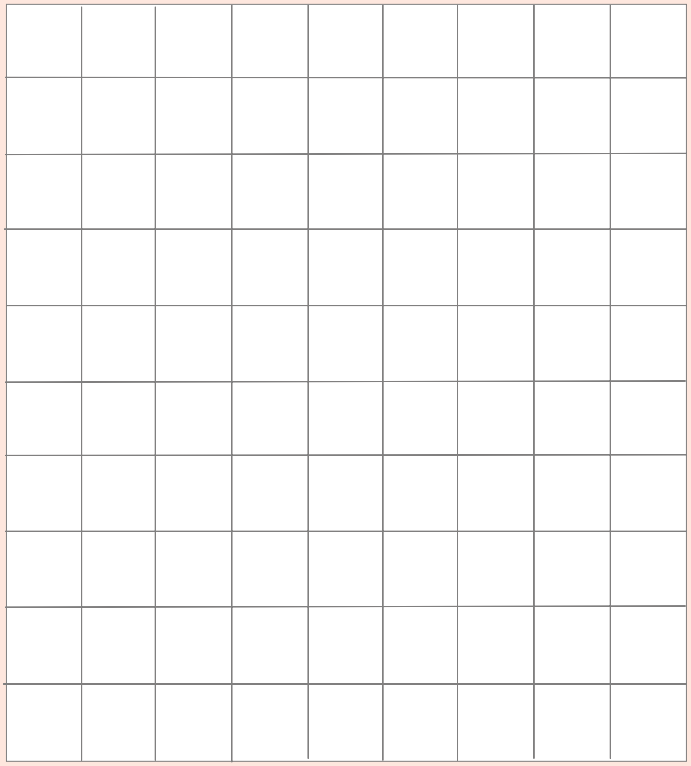
Name of nearest temporary water

Feature Location Plan



Indicate scale

Scar/Carved Panel Drawing



Attach additional drawings

NPWS FEATURE RECORDING TABLE - MODIFIED TREE

Instance No.	Recording Date	Type	Species	Living Status	Tree Status	Regrowth	Length of Scar	Width of Scar	Depth	Height Above Ground	No. of Scars	Shape	No. of Carved Panels	Carving Type	Orientation	Axe Marks

Type of Tree
Carved Tree
Scarred Tree
Carved/Scarred Tree

Tree Species
Eucalypt
Red Gum
Angotha

L iving Status
Dead
Alive
Dying

Tree Status
Standing
Lying down
Partially felled
Subject to salinity
Not *in situ*

Regrowth
Yes
No

Scar Shape
Oval
Rectangular
Square
Round
Other

Carving Type
Linear
Geometric
Pictorial

Axe Marks
Metal
Stone
Indeterminate

Orientation
North East
East
South East
South
South West
West
North West
North

Comments:

NPWS FEATURE RECORDING FORM - GROOVE

Site I.D. | Site Name | **Importance** | **Aboriginal Information Recorded?**

First recorded date

No. of instances

Recorded by

Feature Description

Type of Grinding Feature

- Broad
- Narrow/point
- Hollow
- Flat

Seed Species Present

Recording date

Groove Function

Profile Shape

- 'U' shaped
- 'V' shaped
- Flat

Dimensions

	Smallest	Largest	
Length (mm)		Length (mm)	Groove count
Width (mm)		Width (mm)	Cluster count
Depth (mm)		Depth (mm)	

Feature Context & Condition

Easting | Northing

Dimensions of Whole Feature Length (m) | Width (m)

Feature Condition

- Very good
- Good
- Poor

General Condition

- Weathered
- Vandalised

General Condition ctd

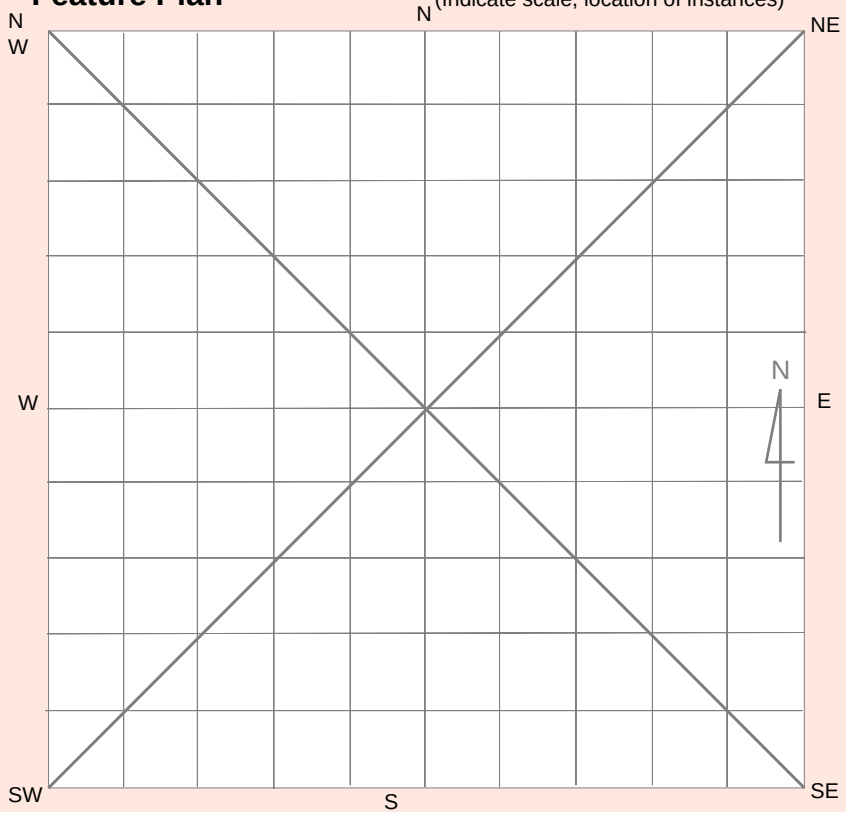
- Fire damage
- Surface water wash
- Graffiti
- Vehicle damage
- Erosion
- Stock damage

Recommended Action

- Boardwalk
- Cage/barrier/fencing
- Closure to public
- Continued inspection
- Expert assessment
- Graffiti removal
- Meeting with land manager
- Revegetation
- Rubbish removal
- Signage
- Erosion control
- Track closure/re-routing
- Additional recording

Feature Plan

(Indicate scale, location of instances)



Feature Environment

(Complete when *feature* environment differs to *site* environment, use attributes from cover card, p. 2)

- Land form
- Land form unit
- Slope
- Vegetation
- Land use

Water

Distance to permanent water source metres

Distance to temporary water source metres

Name of nearest permanent water source

Name of nearest temporary water

NPWS FEATURE RECORDING FORM - ART

Site I.D. ____ Site Name ____

First recorded date ____/____/____ **Importance** ____ **Aboriginal Information Recorded?** ____

No. of instances ____

Recorded by ____

Feature Context & Condition

Easting ____ Northing ____

Pigment ☐ Engraved ☐ Super-impositioning ☐

Artwork Condition

- ☐ Very good
- ☐ Good
- ☐ Poor

General Condition

- ☐ Weathered
- ☐ Vandalised
- ☐ Surface water wash
- ☐ Mineralisation
- ☐ Graffiti
- ☐ Fire damage
- ☐ Insects/termites
- ☐ Erosion
- ☐ Stock
- ☐ Unstable structure

Recommended Action

- ☐ Boardwalk
- ☐ Cage/barrier/fencing
- ☐ Closure to public
- ☐ Continued inspection
- ☐ Dripline
- ☐ Expert assessment
- ☐ Fire hazard removal
- ☐ Graffiti removal
- ☐ Insect/bird nest removal
- ☐ Meeting with land manager
- ☐ Rubbish removal
- ☐ Signage
- ☐ Erosion control
- ☐ Track closure/re-routing
- ☐ Additional recording

Feature Environment

(Complete when *feature* environment differs to *site* environment, use attributes from cover card, p. 2)

- ____ Land form
- ____ Land form unit
- ____ Slope
- ____ Vegetation
- ____ Land use

Water

Distance to permanent water source ____ metres

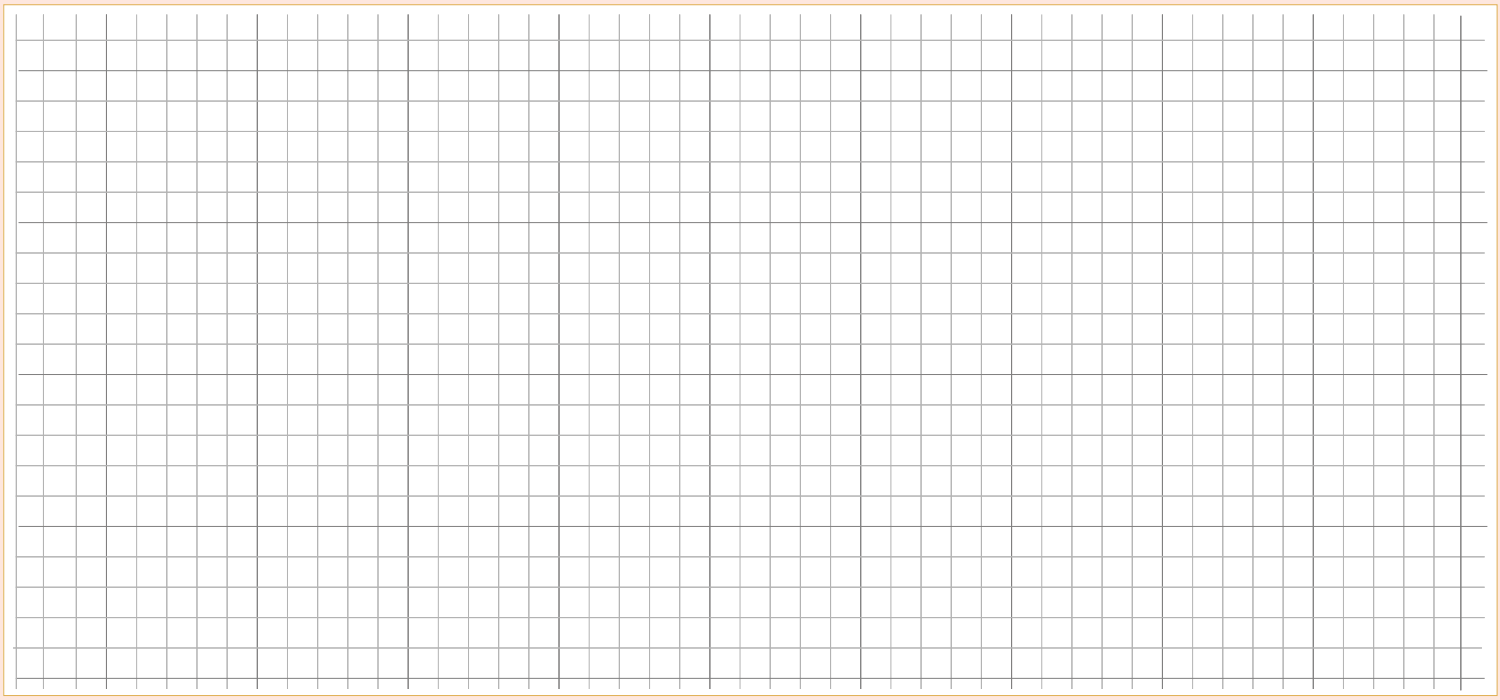
Distance to temporary water source ____ metres

Name of nearest permanent water source ____

Name of nearest temporary water ____

Art Sketch Plan

Sketch and number motif groups



NPWS FEATURE RECORDING TABLE - ART MOTIF

Instance	Recording Date	Motif	Application Technique	Form	Main Colour	Location	Condition

Motif

Anthropomorphic
Bird
Bird Track
Canoe
Circle
Contact material culture
Duck
Eel
Emu
Emu track
European figure
Female
Fish
Foot
Hand
Jellyfish
Kangaroo
Line
Lizard
Macropod
Macropod Track
Male
Marine-Other
Other
Pattern
Quadruped
Reptile
Rifle
Shield
Ship
Snake
Spear
Wallaby

Application Technique

Abraded
Drawn
Other
Painted
Pecked
Pigment & Engraved
Stencilled

Form

Fill
Line
Line+ Fill
Other
Pattern

Main Colour

Black
Mauve *
N/A
Orange *
Other
Red *
White *
Yellow *

Art Location

All over shelter surfaces
ceiling
Floor
Mostly near largest sheltered space
Mostly on out of the way surfaces
Other
Wall

Condition

Faded
Stained
Mineralisation Evident
V brant Colours
Unweathered
Weathered

Comments:

NPWS FEATURE RECORDING FORM - SHELL

Site I.D. | Site Name

First recorded date / / | **Importance** | **Aboriginal Information Recorded?**

No. of instances

Recorded by

Feature Context & Condition

Easting | Northing

Dimensions of Whole Feature

Length (m) | Width (m) | Depth (m)

Shell Distribution

- ☐ Surface scatter
- ☐ Stratified deposit
- ☐ Mounded

Distance to high water mark (m)

Feature Condition

- ☐ Very good
- ☐ Good
- ☐ Poor

General Condition

- ☐ Weathered
- ☐ Vandalised
- ☐ Surface water wash
- ☐ Mineralisation
- ☐ Graffiti

General Condition ctd

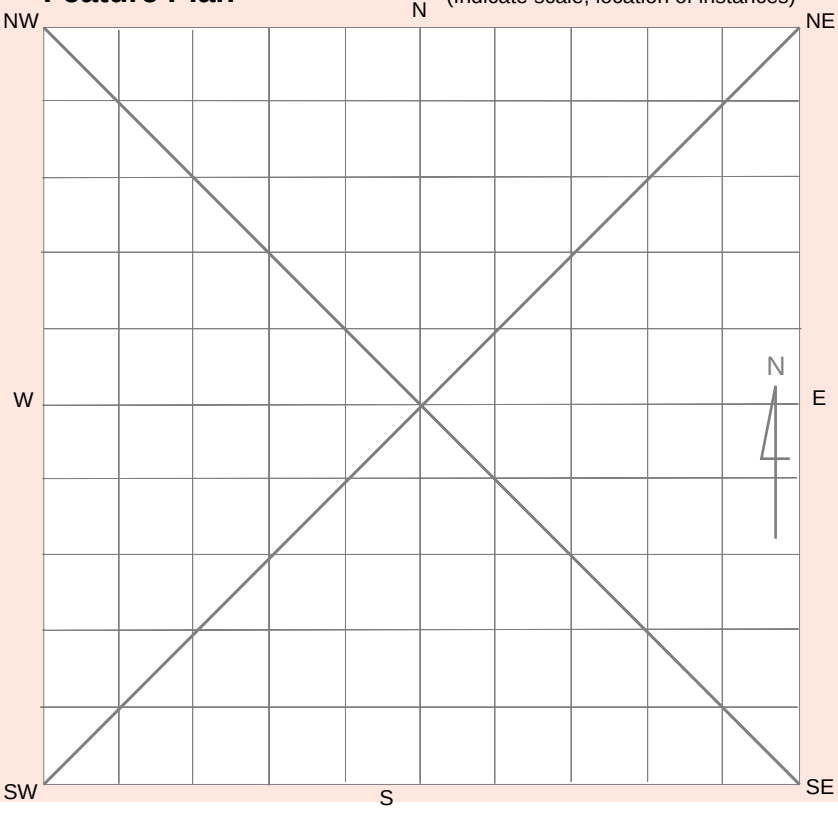
- ☐ Fire damage
- ☐ Vehicle damage
- ☐ Insects/termites
- ☐ Erosion
- ☐ Stock damage
- ☐ Unstable structure
- ☐ Exposed bone material
- ☐ Exposed archaeological material

Recommended Action

- ☐ Boardwalk
- ☐ Cage/barrier/fencing
- ☐ Closure to public
- ☐ Continued inspection
- ☐ Expert assessment
- ☐ Fire hazard removal
- ☐ Graffiti removal
- ☐ Meeting with land manager
- ☐ Insect/bird nest removal
- ☐ Revegetation
- ☐ Rubbish removal
- ☐ Signage
- ☐ Erosion control
- ☐ Track closure/re-routing
- ☐ Additional recording

Feature Plan

(Indicate scale, location of instances)



Feature Environment

(Complete when *feature* environment differs to *site* environment, use attributes from cover card, p. 2)

- Land form
- Land form unit
- Slope
- Vegetation
- Land use

Water

Distance to permanent water source metres

Distance to temporary water source metres

Name of nearest permanent water source

Name of nearest temporary water

NPWS FEATURE RECORDING TABLE - SHELL

Instance No.	Recording Date	Shell Species	% of this species shell to % total of other shell

Species

Anadara	Nerita
Bimbala	Ocean Snail
Chiton	Periwinkle
Cowrie	P
Dog Cockle	Ribbed Cockle
Duck Bill	Rock Oyster
Limpit	Whiad
Mud oyster	Triton
Mutton Fish	Turban (large)

Percentage of this Species Shell to Percentage Total of other Shell

0 – 9%
10 – 19%
20 – 29%
30 – 39%
40 – 49%
50 – 59%
60 – 69%
70 – 79%
80 – 89%
90 – 100%

Comments: