



NORTH NOWRA LINK ROAD
Aboriginal Archaeological Assessment – Stage 2

Prepared for Shoalhaven City Council

July 2010

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1 Introduction

Kelleher Nightingale Consulting Pty Ltd (KNC) was commissioned (in 2007) by GHD on behalf of Shoalhaven City Council to undertake an Aboriginal heritage assessment as part of the Environmental Assessment for the proposed North Nowra Link Road. The project represented an opportunity for a positive approach to selecting a preferred road alignment, which considers Aboriginal heritage. A comprehensive survey report of the three route options and the Bomaderry Creek Gorge (see Figure 1) was generated (KNC 2008) during the first stage of assessment.¹ Following on from this first stage, Shoalhaven City Council took over the management of the Environmental Assessment. It was determined that a second stage of assessment was required, including an integrated Aboriginal consultation section and background assessment to bring the project in line with Department of Environment, Climate Change and Water (DECCW) recommendations. The current stage 2 report presents a holistic assessment of the Aboriginal cultural heritage within Bomaderry Creek Gorge.

1.1 Background

The link road project is being assessed as a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). A number of specialist studies were required to input into the Environmental Assessment. The Department of Planning (DoP) Director General's Requirements (DGR) have identified Aboriginal heritage as a key issue for the Environmental Assessment. The assessment should also take into consideration the draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation for projects being assessed under Part 3a (DEC 2005).

The North Nowra Link Road Concept Plan project involved the assessment of three route options (see Figure 2):

- ♦ Option 1 – Pitt Street to Narang Road (central option);
- ♦ Option 2 – Illaroo Road to West Bunberra Street (south option); and
- ♦ Option 3 – West Cambewarra Road (north option).

As part of this process, the Environmental Assessment must include an assessment of Aboriginal heritage of the three route options, including the Bomaderry Creek Gorge (see also Stage 1 report, KNC 2008). A number of Aboriginal archaeological sites were identified during inspection. The assessment provided an understanding of the Aboriginal archaeological and cultural heritage sites and values of the proposed link road.

Further investigations led Council to full consultation with identified Aboriginal stakeholders to provide specific management and mitigation advice regarding Aboriginal cultural heritage (Stage 2). The further detailed assessment is provided in this report to assess the impacts of the proposed link road and identify appropriate mitigation measures.

1.2 Scope of Work

The Aboriginal heritage assessment in this report (Stage 2) provides an understanding of the Aboriginal archaeological heritage sites and value of the three route options. An impact assessment has been undertaken for the three route options, which also takes into account the Commonwealth's detailed examination and recent determination of a Controlled Action being determined under the EPBC Act for Option 1, the central route. Aboriginal community consultation has also been undertaken at this stage in accordance with DECCW guidelines. This study has undertaken the following tasks:

- Consultation with relevant members of the Aboriginal community including an advertising process to identify Aboriginal stakeholders in line with DECCW guidelines.
- A search of the DECCW Aboriginal Heritage Information Management System (AHIMS) sites database for registered (known) sites within/in the vicinity of the study area.
- Background review.
- Survey of the road alignment options and Bomaderry Creek Gorge between the road options.
- Assess Aboriginal archaeological heritage in relation to road options and impacts.
- Recommendations and management strategies.

¹ KNC were instructed by Shoalhaven City Council to finalise the archaeological assessment without consulting with the local Aboriginal community or selecting a preferred option. Council was advised that consultation with the local Aboriginal community by KNC is required before considering the findings of the stage 1 report.



Figure 1. Locality map



Figure 2. North Nowra Link Road – study area – Options 1, 2 and 3 shown in red

2 Aboriginal Stakeholder Consultation and Participation

Shoalhaven City Council is committed to effective consultation with Aboriginal communities regarding activities which may impact on Aboriginal cultural heritage. The council has endeavoured to identify and consult with all Aboriginal community members who have an interest in the link road project.

2.1 Stakeholder Identification and Consultation

The Council advertised for Aboriginal stakeholders following the DECCW Interim Community Consultation Requirements for Applicants (DEC 2004, DEC 2005).

No Aboriginal stakeholders responded to the advertisement (Appendix A). The Nowra Local Aboriginal Land Council did express an interest in the project during previous discussions and correspondence with Council.

Adell Hyslop, Chief Executive Officer of the Nowra Local Aboriginal Land Council (NLALC), was contacted by phone to discuss the scope of the project and to arrange a date for an on-site meeting with a representative of the NLALC.

An on-site meeting was conducted on Tuesday, 1st December 2009, with Jason Davison, representative of the NLALC. The meeting consisted of a discussion of the three proposed road alignment options in relation to identified Aboriginal heritage values. An inspection of the area was undertaken as part of the consultation process. Jason noted Option 1 was his preferred road alignment option, based on the existing disturbance in the area. The existing disturbance included a weir across Bomaderry Creek, a transmission line easement and a large underground water pipeline. Option 2 was his least preferred option, based on the relatively undisturbed nature of the Bomaderry Creek gorge in that area.

The formal consultation process has included:

- advertising for registered stakeholders in local and Indigenous media (refer Appendix A);
- notification of closing date for registration;
- site inspections;
- on site meeting to discuss the archaeological and Aboriginal cultural heritage assessments and potential impacts;
- ongoing consultation with the local Aboriginal community; and
- ongoing compilation of Aboriginal registrants list, through continuing to register individuals and groups for consultation on the project.

A copy of the draft report was provided to Aboriginal stakeholders for review and comment (May 2010). Over 21 days was provided to receive comments. No comments were received within the 21 day period or by the issue date of this report (July 2010).

3 Aboriginal Cultural Assessment

As part of the cultural assessment, registered Aboriginal stakeholders (NLALC) have been invited to identify individuals they regarded as knowledge holders for the area. Identified knowledge holders will be invited to participate in the cultural assessment process. To date no specific knowledge holders have been identified for the study area although Land Council representatives have identified cultural heritage values for the study area.

3.1 Aboriginal Cultural Values

It has been clearly identified that the study area has cultural heritage value to the local Aboriginal community. Some of the Aboriginal cultural heritage values expressed by Land Council representatives include:

- strong association with the land;
- responsibility to look after the land, including the heritage sites, plants and animals, creeks and the land itself;
- rock art;
- artefact sites and landscape features;
- creek lines;
- Indigenous plants and animals; and
- general concern for burials, as their locations are not always known and they can be found anywhere.

4 Background

4.1 Environmental Context

The study area covered a gentle to moderately steep area incorporating an incised section of Bomaderry Creek. The area was covered by moderate to dense vegetation, and was bounded by West Cambewarra Road to the north, Illaroo Road to the west, the Princes Highway to the east and residential subdivision to the south. A large portion of the study area formed part of the Bomaderry Creek Regional Park.

The study area was located in a region of greatly varying geographical landscapes. The lower, tidally influenced portion of the Shoalhaven River was located approximately 1.2 km to the south, whilst extensive low-lying creek flats and tributaries were located approximately 3 km to the east. The South Pacific Ocean was located 15 km west of the study area. Approximately 3 km north and 7 km west of the study area was the eastern edge of the Great Dividing Range, typified by moderate to steep gradients and exposed sandstone escarpments.

The geology of the study area consisted predominantly of Permian sedimentary units. These included an undifferentiated member of the Berry Formation underlain by the older Nowra Sandstone. The undifferentiated unit comprised of siltstone, shale and sandstone. Bomaderry Creek has incised through the upper undifferentiated unit, exposing the Nowra Sandstone along the steep sides of the creekline.

Archaeologically, weathering of the incised section of Nowra Sandstone associated with Bomaderry Creek was likely to have formed sandstone overhangs suitable for occupation, whilst the location of the area in a well drained, raised location in close proximity to estuarine and hinterland resources would have made it a suitable location for repeated visitation. In short the gorge is likely to be an archaeologically significant location.

4.2 Ethnohistoric Background

Ethnohistoric information can be valuable in understanding the nature and extent of Aboriginal cultural heritage. A synthesis review of the ethnohistoric material is found in the *Lower Shoalhaven River Valley: Aboriginal Heritage and Cultural Mapping Project Stage* by Goulding and Schell (2002). Although no direct ethnographic recordings relate to the Bomaderry Creek area, it is evident that Aboriginal people and families occupied the extended Shoalhaven River region. Boot's (2002) extensive research also underscores the ethnographic material culture of South Coast Aboriginal people and highlights the importance of places like Bomaderry Creek. These places are likely very significant to Aboriginal people as they are high biodiversity areas exhibiting multiple resource zones. From this it is possible to extrapolate that the Aboriginal families described by Throsby in 1818 (see Organ 1990) along the Lower Shoalhaven River could be descriptive of Aboriginal families near Bomaderry Creek. Based on the survey results (section 5) and general ethnographic information Bomaderry Creek and Gorge clearly have value to past and current Aboriginal people.

4.3 Archaeological Context

Two searches of the DECCW Aboriginal Heritage Information Management System (AHIMS) were conducted on 8th October 2007 (stage 1 assessment) and 14th October 2009 (stage 2 assessment). The AHIMS searches were conducted in order to identify any registered (known) Aboriginal sites within or adjacent to the study area, as well as to determine the type and distribution of recorded site in the area. The AHIMS search of 14th October 2009 was conducted after the stage 1 field survey, and includes those sites identified during the field survey. The respective AHIMS database searches were conducted within the following coordinates:

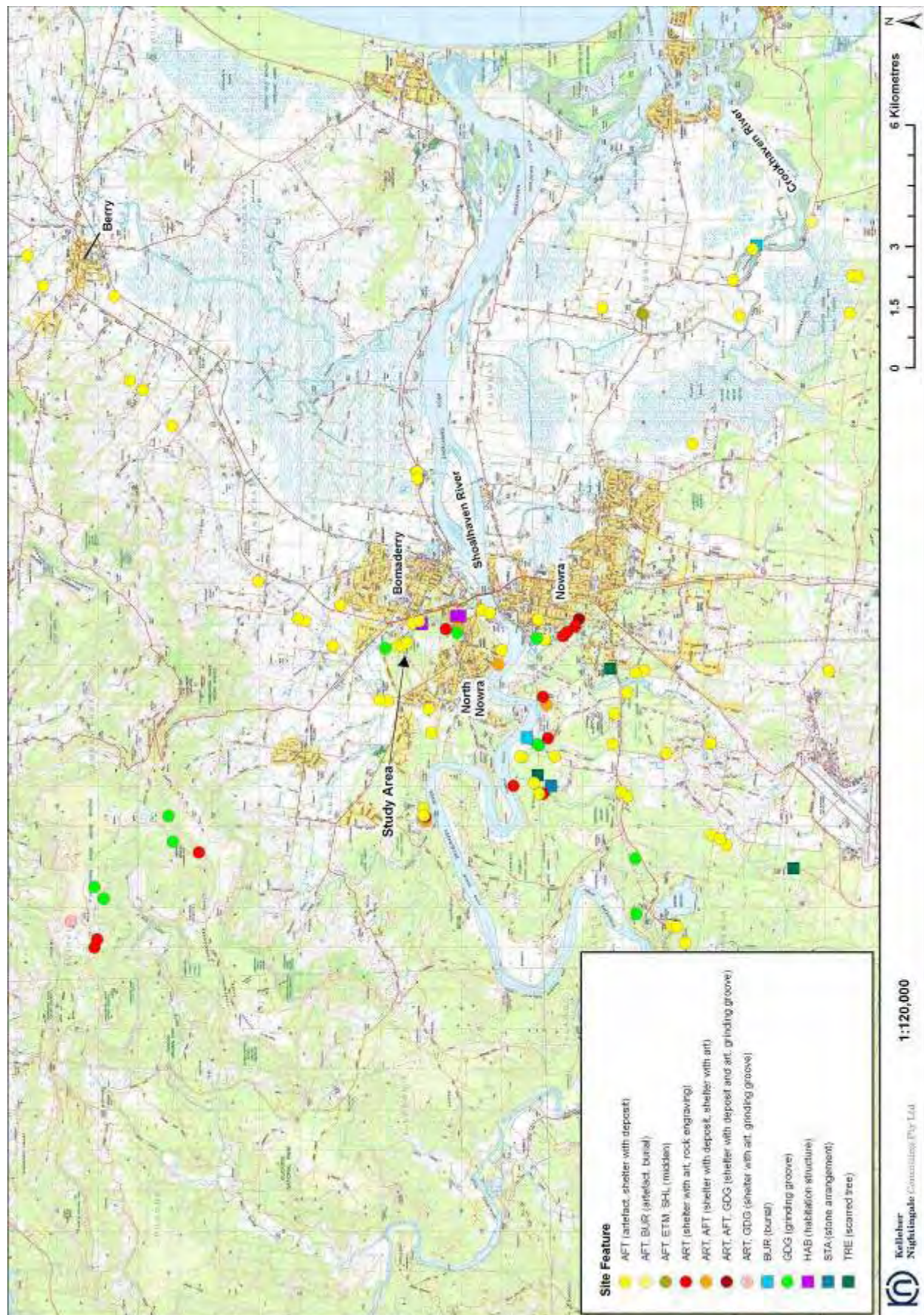
8th October 2007
268000E to 290000E
613000N to 615200N
Number of sites within the AHIMS database: 105

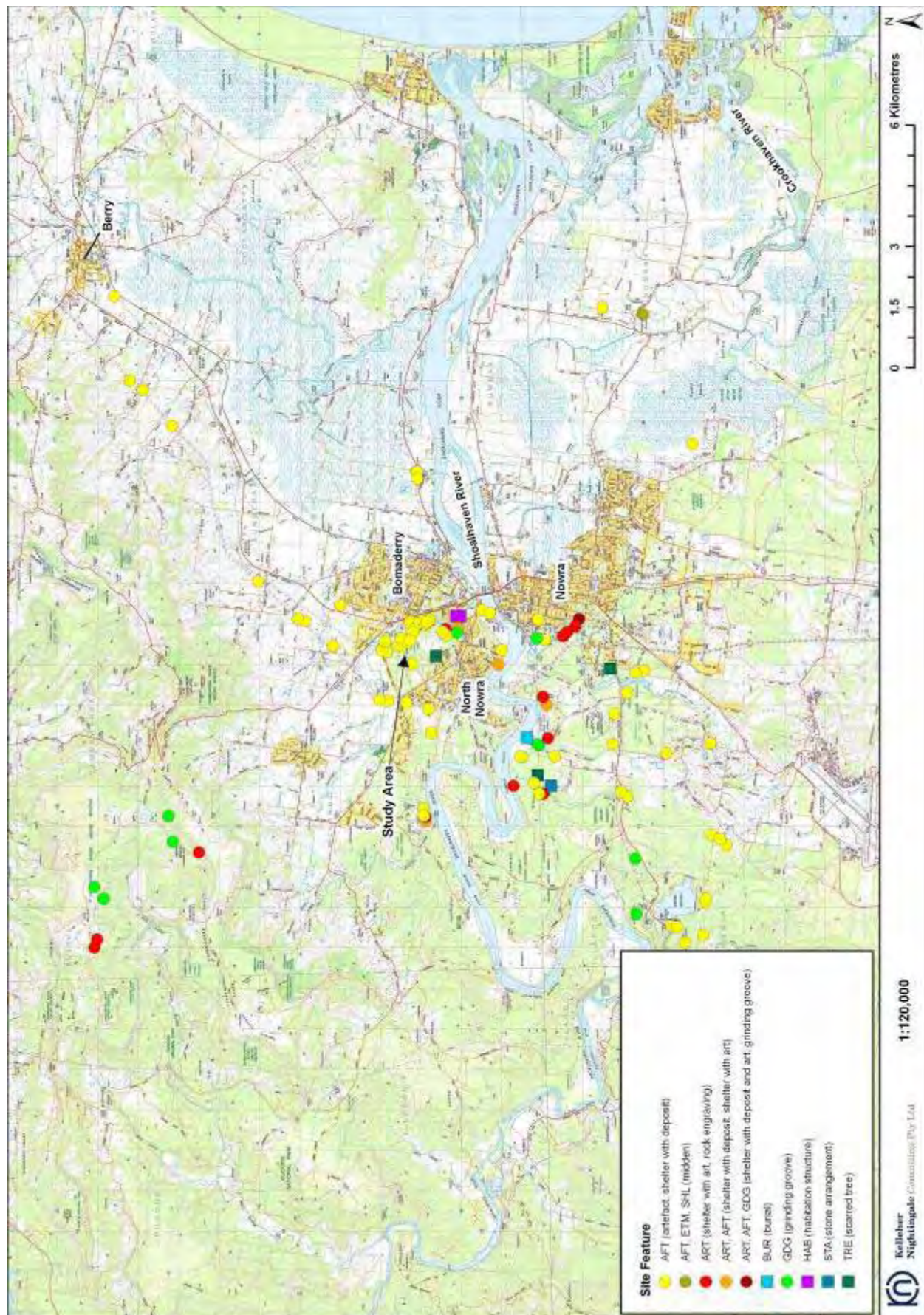
14th October 2009
271000E to 288000E
613300N to 614900N
Number of sites within the AHIMS database: 118

The type and distribution of recorded Aboriginal sites within the coordinates of the AHIMS search of 8th October 2007 are shown in Figure 3a. The more recent search results are shown in Figure 3b and the frequencies of site types are listed in Table 1 below.

Table 1. Frequency of recorded site types

Site Type	Frequency	(%)
AFT (artefact)	79	67
ART (shelter with art, rock engraving)	13	11
GDG (grinding groove)	11	9
ART, AFT (shelter with art, shelter with deposit)	4	3
HAB (habitation structure)	3	3
TRE (modified tree)	3	3
ART, AFT, GDG (shelter with art, shelter with deposit, axe grinding groove)	2	2
AFT, ETM, SHL (midden)	1	1
BUR (burial)	1	1
STA (stone arrangement)	1	1

Figure 3a. Registered Aboriginal sites from AHIMS register search 8th October 2007

Figure 3b. Registered Aboriginal sites from AHIMS register search 14th October 2009

4.4 Previous Archaeological Investigations

The AHIMS results show a wide range of site types, including artefact, grinding groove, rock engraving, shelter with art and deposit, shell midden and scarred tree. The variety of site types reflects the varying geographical environments of the region. Artefact sites (AFT) were by far the predominant recorded site type in the vicinity of the study area (see Table 1). Sites associated with outcropping sandstone, including shelter sites and grinding grooves, were the second most common recorded site type in the area, comprising 28% of the recorded sites in the AHIMS register search.

Sites associated with outcropping sandstone were the predominant site type in the vicinity of the study area. From the AHIMS site search results (8th October 2007), there were 14 recorded sites within 100 m of Bomaderry Creek, stretching from Option 3 in the north to a point approximately 650 m southeast of Option 2 (see Figure 3c). The details of these sites are summarised in Table 2 below.

Table 2. Recorded sites in the vicinity of Options 1, 2 and 3

Site ID	Site Name	Site Type	Recorded by	Description
52-2-1797	West Cambewarra Road, Bomaderry Creek	Grinding Grooves	Barratt, 1995	10 axe grinding grooves located adjacent to Bomaderry Creek. Some destruction from construction of neighbouring road bridge.
52-5-0035	Nowra (Bomaderry)	Shelter with Deposit	Lampert, Manyard, 1970	Shelter approximately 30 m long and 20 m high. A small 0.5 m ² test pit was excavated at the site in 1970. The excavation revealed occupation horizons with limited evidence of estuarine resource use. Stone artefacts, including backed blades, were also recovered from the excavation.
52-5-0036	BC1	Shelter with Art	Bindon, 1978	Shelter located approximately 100 m south of Bomaderry Creek. Artwork consisted of dry charcoal drawings.
52-5-0084	Nowra	Grinding Grooves	Unknown, possibly Bindon	Approximately 12 grinding grooves located approximately 30 m south of Bomaderry Creek.
52-5-0262	BC5 / BC1A	Shelter with Deposit	Navin, 1991; Clarke, 2006	Shelter measuring approximately 10 x 4 m on the western side of Bomaderry Creek. Five artefacts were identified below the drip line at the southern end of the shelter.
52-5-0263	BC4	Shelter with Deposit	Navin and Officer, 1991	Shelter measuring approximately 20 m long, 4 m high and maximum depth of 4 m. Three artefacts were identified below the drip line of the shelter. Site was located approximately 10 m west of Bomaderry Creek.
52-5-0386	Big Bend	Shelter with Art, Shelter with Deposit	Barratt, 2000	Shelter measured 44 m long, 4 m high and maximum depth of 17 m. Artwork consisted of charcoal, white clay and red (ochre?) figures. There was some charcoal graffiti over the figures. 19 artefacts were identified beneath the drip line of the shelter, whilst two artefacts were identified within the shelter. Site was located less than 20 m south of Bomaderry Creek.
52-5-0387	Big Bend 2	Shelter with Deposit	Barratt, 2000	Shelter measured 14 m long with a maximum depth of 4.5 m. Six artefacts were identified within the shelter. The site was located approximately 25 m east of Bomaderry Creek.
52-5-0388	Big Bend 3	Shelter with Deposit	Barratt, 2000	Shelter measured 4 m long, 2.75 m high and maximum depth of 2.5 m. Three artefacts were identified within the shelter. The site was located less than 10 m east of Bomaderry Creek.

Site ID	Site Name	Site Type	Recorded by	Description
52-5-0389	Shelter Cave	Shelter with Deposit	Barratt, 2000	Shelter measured 16 m long with a maximum depth of 6 m. Some indistinct re colouring, charcoal graffiti and scratches on the back wall. 24 artefacts and seven indeterminate pieces of quartz were identified within the shelter. Site was located approximately 25 m northwest of Bomaderry Creek.
52-5-0390	Bomaderry Site	Artefact Scatter	Barratt, 2000	Artefacts identified on an eroded transmission line access trail. Four artefacts were initially identified at the site in 1998 and were subsequently buried with blue metal in the following year. Barratt returned to the site location in 2000 and identified a further 20 artefacts down slope of the blue metal deposit. Site was located approximately 85 m northwest of Bomaderry Creek.
52-5-0453	BC1/E	Shelter with Deposit	Clarke, 2006	Shelter measured 12 m x 4 m adjacent to Bomaderry Creek. Six artefacts were identified within the shelter, mostly below the drip line.
52-5-0454	BC1/B	Shelter with Deposit	Clarke, 2006	Shelter measured 10 m x 3 m adjacent to Bomaderry Creek. Eight artefacts were identified on a track adjacent to the shelter.
52-5-0455	BC1/F	Shelter with Deposit	Clarke, 2006	Cavernous north facing rock shelter adjacent to Bomaderry Creek. One artefact identified immediately outside drip line of shelter.

A number of archaeological investigations have been conducted within the vicinity of the three road options. The first recorded site in the vicinity of the study area was site # 52-5-0035, a shelter site recorded as part of archaeological investigations of the Shoalhaven area during the 1960's and early 1970's. Site # 52-5-0035 was located adjacent to Bomaderry Creek and approximately 550 m southeast of Option 3 and 650 m northwest of the Shoalhaven River.

An excavation at site # 52-5-0035 was conducted in December 1970 and consisted of a single 0.5 m² test pit into the floor of the shelter. The results suggested a shallow deposit with a number of occupation horizons visible in section as dark brown bands. Faunal remains largely consisted of land mammals, with very few estuarine shells recovered. Stone artefacts, including backed artefacts, were also recovered from the excavation.

Navin (1991) conducted an archaeological investigation for an earlier study of the proposed North Nowra Link Road. Navin only conducted an archaeological investigation of Option 2, referring to the central link road option. This was on request from their client Mitchell McCotter and Associates Pty Ltd, who advised Navin that Option 2 was the preferred alignment. (Confusingly the Navin assessed Option 2 is now known as Option 1 in this report, the central link, shown as Option 1 in Figure 2.)

Within Option 2, Navin investigated three possible bridge options over Bomaderry Creek. The central option, Line 2, followed the existing transmission line and underground water pipeline services easement. The northern, Line 1, and southern, Line 3, bridge options were located approximately 180 m to the north and south respectively.

Navin (1991) identified previous surface disturbances within the Line 2 option, including the transmission line and underground water services easement, a large disused gravel pit near the western end of proposed link road easement, an old sandstone quarry now used as a carpark for the Bomaderry Creek walking track at the eastern end of the proposed easement, and a weir constructed in 1938 across Bomaderry Creek immediately downstream of the Line 2 option.

Two shelter sites were recorded by Navin (1991) during the field survey. These include Bomaderry Creek 4 (site # 52-5-0263) and Bomaderry Creek 5 (site # 52-5-0262), both located on the western side of Bomaderry Creek. Artefacts were identified within both of the shelters. Navin concluded that the central bridge option, Line 2, was the preferred option archaeologically, as it followed existing surface and subsurface disturbance and did not impact on any identified Aboriginal sites. Line 1, to the north, passed within 40 m of site # 52-5-0263, whilst Line 3, to the south, passed directly over site #52-5-0262.

Boot and Barratt (2001) compiled an assessment for National Parks and Wildlife Service (NPWS) on previous archaeological investigations in the Bomaderry Creek area. Barratt had recorded several sites over the previous five years within the Bomaderry Creek area, including shelter sites #52-5-0386, 52-5-0387, 52-5-0388 and 52-5-0389, grinding groove site #52-2-1797 and artefact scatter site #52-5-0390.

Clarke and Kuskie (2006) completed a study for then Department of Environment and Conservation (DEC), south coast region. The study involved the archaeological predictive modelling for Aboriginal heritage sites within the Lower Shoalhaven Region, specifically referring to areas managed by DEC. These areas included Nature Reserves and Regional Parks. The process involved for the study included a discussion of the archaeological and environmental background of the area, followed by predictive modelling and field inspections. Fifteen sites were recorded during the inspections, including three shelters with deposit (site BC1/B, 52-5-0454; BC1/E, 52-5-0453; and BC1/F, 52-5-0455), two shelters with Potential Archaeological Deposit (PAD) (sites BC1/C and BC1/D) and one previously recorded shelter with deposit (site BC5 / BC1/A, 52-5-0262) with the Bomaderry Creek Regional Park (see Clarke and Kuskie 2006: Table 12).

The culmination of the predictive modelling and field inspections was the suggestion by Clarke and Kuskie (2006: 91) the lower Shoalhaven area could be divided into two main resource zones, with the range of occupation types within each of the zones expected to differ. The zones were called 'Primary' and 'Secondary', and were described as:

Primary: 'Primary resource zones were defined in terrain units in close proximity to the major Shoalhaven and Crookhaven Rivers. These zones have higher probability of containing evidence for a wide range of occupation types including congregations of large groups of people, community base camps, nuclear / extended family base camps, camping by small hunting and/or gathering (without camping) and transitory movement. Occupation is likely to have been regular and potentially longer in duration in the primary zones' (Clarke and Kuskie 2006: ii).

Secondary: 'Secondary resource zones were defined in terrain units in close proximity to higher order creeks and/or wetlands, including Bomaderry, Mundamia, Calymea, Flat Rock, Bengalee and Sandy Creeks and their associated flats, slopes and terraces. These secondary zones have a high probability of containing evidence of nuclear / extended family base camps, camping by small and/or gathering parties, hunting and/or gathering (without camping) and transitory movement. Occupation is likely to have been sporadic and relatively short in duration in secondary zones' (Clarke and Kuskie 2006: ii).

Areas outside Primary and Secondary zones: 'Areas outside the primary and secondary resource zones included terrain units distant from higher order creeks and/or wetlands, such as lower order drainage depressions and associated slopes and crests. Occupation in these areas is likely to have involved hunting and/or gathering (without camping) and transitory movement and is likely to have been sporadic and very short in duration' (Clarke and Kuskie 2006: ii).

Clarke and Kuskie (2006) designated Bomaderry Creek and bordering areas as part of the Secondary Resource Zones, noting that 'large rockshelters in close proximity to a wide variety of resources may well have served as base camps, with smaller less hospitable shelters being utilised on an "as needed" or casual basis' (Clarke and Kuskie 2006: 92).

Following the predictive modelling and field inspection component of the study (Clarke and Kuskie 2006), Clarke (2007) also conducted a presentation of the results to the local Aboriginal community during a two-day workshop, along with a field inspection of sites and site management recommendations formulated by the Aboriginal stakeholders.

4.5 Summary – Archaeological Implications

It is evident from previous archaeological investigations and general ethnographic information that the outcropping sandstone bordering Bomaderry Creek/Gorge was readily used for a variety of purposes. This includes frequent habitation, artwork and grinding grooves. However, the area does not seem to have been used as a base for exploitation of the estuarine environment associated with Shoalhaven River, approximately 1.2 km to the south.

Surveys (section 5) undertaken for the purposes of the current study support the findings of previous assessments. No major occupation sites were identified within or near Bomaderry Creek, although several archaeologically significant rockshelter sites are found along the sandstone outcrops. The Bomaderry Creek Gorge was clearly a significant part of the Aboriginal cultural landscape. One interesting finding in the new survey results is the relatively high number of rock art sites (in relation to previous assessments). A sociocultural reason for an increase in rock art relating to the gorge is unclear based on current levels of information; alternatively the increase may simply reflect an increase in available sandstone medium.

Bomaderry Creek Gorge is part of an extensive Aboriginal cultural landscape (compare Clarke and Kuskie 2006), it is a secondary resource zone in terms of the exploitation of natural resources, but the relatively high concentration of rock art suggests the area was socially important at some level to Aboriginal people. In this regard, any potential impacts to rock art are potentially significant and should be avoided.

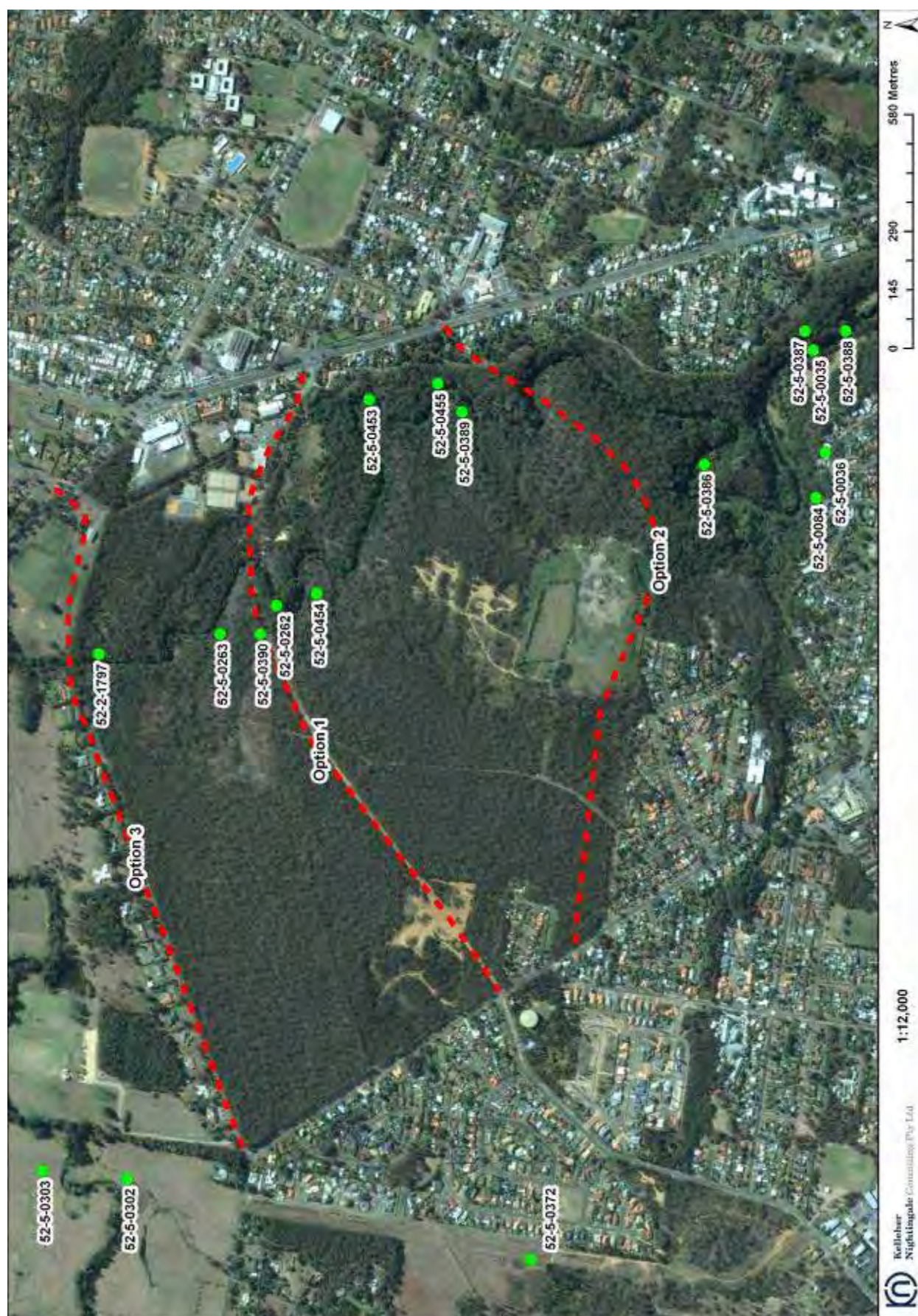


Figure 3c. Registered Aboriginal sites within the vicinity of the North Nowra Link Road prior to field survey

5 Survey Methodology

The archaeological survey focused on the three road alignment options identified by Shoalhaven City Council as potential routes for a link road between Illaroo Road in North Nowra and the Princes Highway at Bomaderry. The route options are:

- Option 1 (Central Route) - Pitt Street to Narang Road,
- Option 2 (Southern Route) - near Falcon Crescent - Illaroo Road to West Bunberra Street, and
- Option 3 (Northern Route) - near West Camberwarra Road.

The survey was conducted along each route and within at least a 50 metre corridor on either side of each route. In accordance with the DGR, both the eastern and western sides of Bomaderry Creek Gorge were also surveyed from the northernmost route, West Cambewarra Road, to the southernmost route, Illaroo Road to West Bunberra Street. Each site was recorded and assessed using archaeological recording techniques for sites of Aboriginal heritage (NPWS 1997). This included site descriptions, site locations, scaled site plans and profiles, as well as inventories and photos of cultural features located at sites. All site locations were recorded using handheld GPS (WGS 84).

5.1 Condition Rating

The assessment of site conditions included an archaeological assessment of the integrity and intactness of each cultural feature type. An overall site condition summary was then allocated to each site as either being in **Good**, **Moderate** or **Poor** condition.

- **Good Condition:** Sites with this rating demonstrated high integrity and intactness of the cultural features observed.
- **Moderate Condition:** Sites with this rating showed damage from human impacts or natural weathering to many or all of the cultural features but the features are still discernible. Sites with these criteria may include sites that have one or more cultural features intact but other features weathered or degraded.
- **Poor Condition:** Sites with this rating demonstrated low integrity and intactness of the cultural features observed. The cultural features may be highly disturbed by natural or non-natural agents. Many of the sites assessed as being in poor condition showed a high degree of human impact in the form of rubbish, graffiti, disturbance to deposits and other acts of direct or indirect site vandalism.

5.2 Research Potential

A rating of **High**, **Moderate** or **Low** research potential was assigned to each site based on the archaeological criteria for site: representativeness, rarity, intactness and integrity (see also section 4.1).

- **High Research Potential:** Sites accorded this rating showed highly rare or representative cultural features, e.g. pigment art sites with highly intact motifs, rare or difficult to determine subject matter, representative images, method of pigment application or style. Other features such as intact cultural deposits have a greater research potential accorded to them than disturbed deposits.
- **Moderate Research Potential:** Sites accorded a moderate research potential rating usually had evidence of disturbance to some aspect of the site contents. This may include sites impacted by erosion, graffiti and from recent use but with only slightly disturbed cultural features (e.g. intact archaeological deposit). This may also include sites in moderately good condition that are not considered highly rare or representative for their cultural features.
- **Low Research Potential:** Sites accorded a low research potential had highly disturbed and degraded cultural features from either natural or non-Indigenous impacts or a combination of both. These sites may also have had little observable cultural features or cultural features in disturbed contexts.

5.3 Non-Indigenous Site Usage

Sites appear to be used for a variety of reasons by non-indigenous people.

- **Vandalistic Site Usage:** Shelter sites are used as places to visit on an ephemeral basis to engage in activities such as the drinking of alcohol, drug taking and for graffiti. This type of site usage may have a moderate impact on the integrity and condition of sites.

- **Semi-Permanent Site Usage:** Shelter sites have mattresses, carpet and other evidence of camping or a semi-lived in appearance. This type of site usage may have a heavy impact on the integrity and condition of sites.
- **Other Usage:** Sites have evidence of other usage such as chalk marks and metal rings embedded in sandstone walls for rock climbing, bushwalking and bike riding thoroughfares. This type of site usage can also have a heavy impact on the integrity and condition of sites.

5.4 Natural Weathering Processes

Natural weathering processes are impacting upon the integrity and condition of many of the sites located during the survey.

Natural threats include:

- Erosion of archaeological deposit (e.g. stone tools, shell midden) from natural deflation, running water or soil/rock slides.
- Extreme weathering of rock art panels from exposure to natural elements such as high winds and bush fire.
- Water seepage through sandstone and subsequent lichen and other mineral salt staining over art panels.
- Ground water evaporation promoting lichen and other mineral salt growth on rock art panels.

5.5 Potential Impact Rating

An assessment of the likelihood of impact by the various road options was made based on the indicative plans. Consideration was given to the estimated proximity of the proposed road option and the probability of indirect impacts (such as vibration or increased visitation).

- **Very High:** Road option will have a direct impact.
- **High:** Road option is likely to have a potentially direct impact.
- **Moderate:** Road option will potentially have a direct or indirect impact.
- **Low:** Road option is unlikely to have a direct or indirect impact.

6 Results

A total of 28 sites were identified within the study area (Figure 3d) (Detailed site locations are shown on maps in the appendix.). The site types included shelters with art, occupation shelters with artefacts, shelters with shell middens, axe grinding grooves and open scatters of midden and artefacts. Eight of these sites have been previously identified and are registered on AHIMS. Twenty additional sites were found during the current survey. Updated recordings were made of 28 of the sites. All current recordings were given a project ID (e.g. BCRP001, Bomaderry Creek Recording Project 001).

Table 3. Summary of Aboriginal sites within survey area

Report ID	AHIMS	Site Type
BCRP 001	52-5-0538	Occupation Shelter with Art
BCRP 002	52-5-0539	Occupation Shelter
BCRP 003	52-5-0540	Open Site Midden
BCRP 004	52-5-0453	Occupation Shelter/Art
BCRP 005	52-5-0541	Occupation Shelter
BCRP 006	52-5-0542	Occupation Shelter/Midden
BCRP 007	52-5-0543	Open Site Artefact Scatter
BCRP 008	52-5-0454	Occupation Shelter/Art
BCRP 009	52-5-0262	Occupation Shelter
BCRP 010	52-5-0263	Occupation Shelter
BCRP 011	52-5-0390	Open Site Artefact Scatter
BCRP 012	52-5-0544	Isolated Find
BCRP 013	52-5-0545	Open Site Artefact Scatter
BCRP 014	52-5-0546	Open Site Artefact Scatter
BCRP 015	52-5-0547	Isolated Find
BCRP 016	52-5-0548	Not Aboriginal Heritage Site (Recent Scar Tree)
BCRP 017	52-5-0549	Occupation Shelter
BCRP 018	52-5-0386	Occupation Shelter
BCRP 019	52-5-0551	Occupation Shelter
BCRP 020	52-5-0552	Occupation Shelter
BCRP 021	52-5-0389	Occupation Shelter
BCRP 022	52-5-0552	Occupation Shelter
BCRP 023	52-5-0554	Occupation Shelter/Art
BCRP 024	52-5-0554	Occupation Shelter
BCRP 025	52-5-0556	Occupation Shelter
BCRP 026	52-5-0557	Occupation Shelter
BCRP 027	52-5-0558	Occupation Shelter
BCRP 028	52-2-1797	Axe Grinding Groove



Figure 3d. Route options – recorded sites

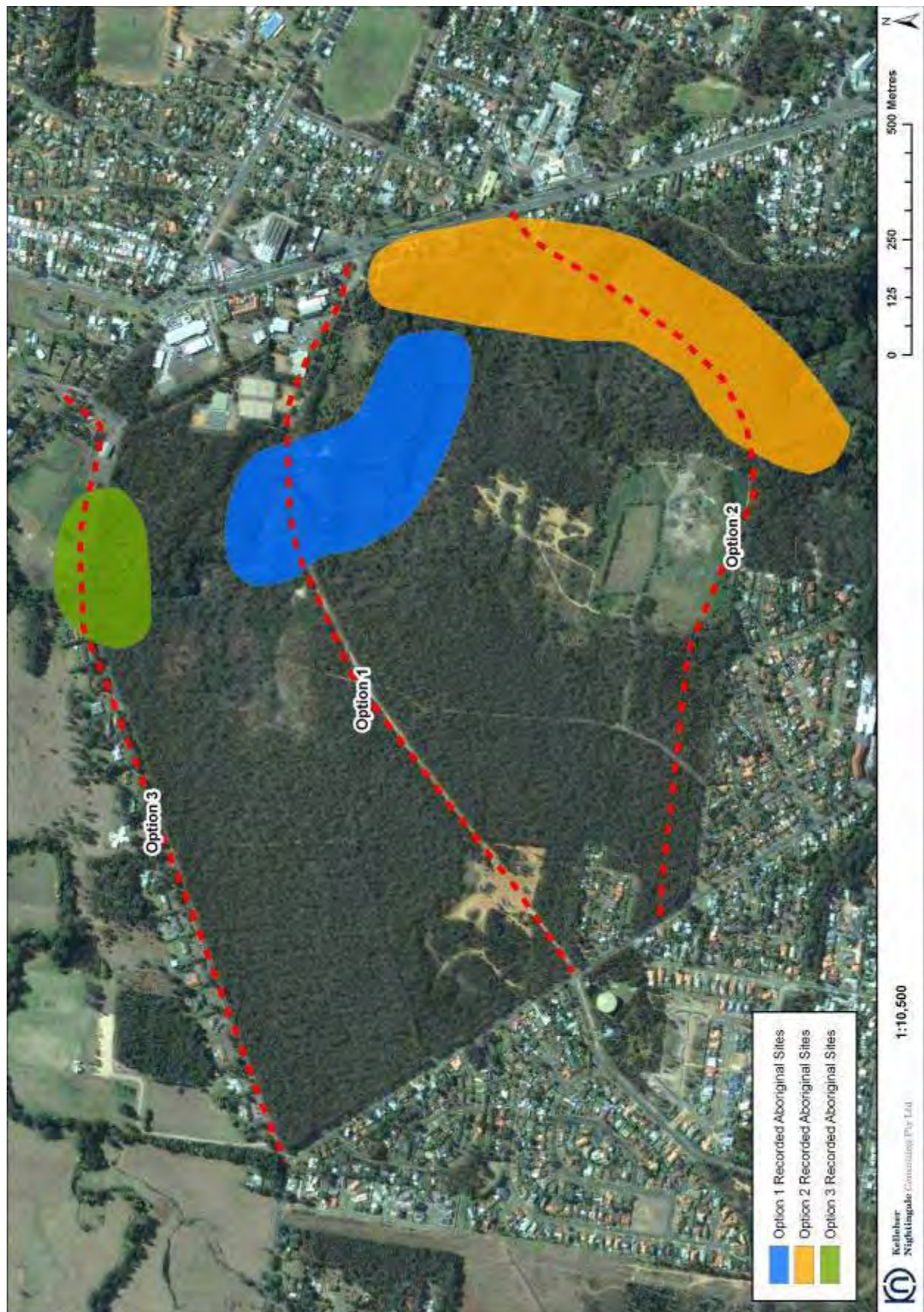


Figure 3e. Route options summary

BCRP 001 - Mosquito Shelter

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Shelter with Art. Site recorded 15/09/07

Road Option: Option 1 (Central Route)

Aspect: 117° M (east-south/east).

Site Description: Large sandstone shelter approximately five metres above Bomaderry Creek [Plate 1 and Figure 4]. The shelter is 16.5 metres long x 4 metres deep x 6-7 metres tall and is located in closed-forest of turpentine and coach-wood trees. Bomaderry Creek Reserve walking track runs through the shelter which is approximately 250 metres downstream from the northern metal bridge over Bomaderry Creek. The shelter deposit is dark brown sand with dark charcoal stained patches on the upstream entrance to the shelter. There is faint charcoal art in the northern half of the shelter consisting of 12 faint diagonal/parallel charcoal lines [Plate 2]. There are two possible quartz artefacts, one core and one flake piece located in the southern half of the shelter towards the walking track [Plate 3]. This shelter was difficult to record due to the large amount of mosquitoes along the creek line.

Site Condition: Poor.

Human Impacts: Minor erosion of the deposit from the walking track going through the shelter.

Natural Impacts/Weathering: There is a heavy staining of mineral salt over the back wall of the shelter which possibly obscures other art and threatens the existing motif. The deposit has a drainage channel flowing from the north to the south part of shelter after heavy rain.

Potential Impact Rating: Low. The site is not located close to the proposed routes for the North Nowra link road alignment.

Research Potential: Moderate.



Plate 1: Shelter.



Plate 2: Indeterminate Charcoal Art.



Plate 3: Artefacts.

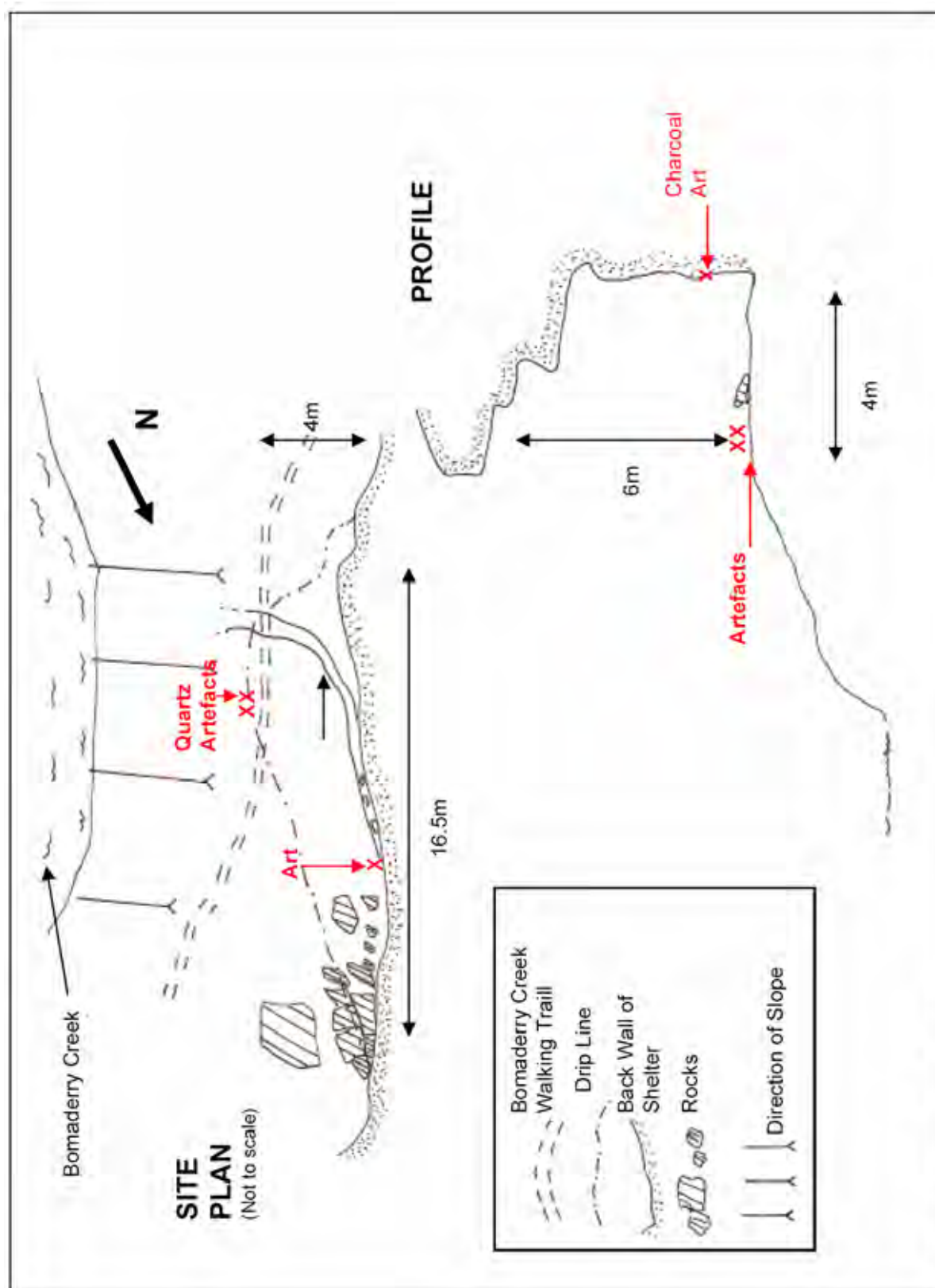


Figure 4: Site Plan & Profile

BCRP 002 - The Blacks Cave

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Occupation Shelter. Site recorded on the 15/09/07.

Road Option: Option 1 (Central Route)

Aspect: 200° M.

Site Description: Sandstone shelter located approximately 20-30 metres above Bomaderry Creek [Plate 4 and Figure 5]. The shelter is 25 metres long x 4.2 metres deep x 3.7 metres tall. The shelter has a rocky floor from past roof falls, particularly in the north-west section. The north-west section has a quartz flake, core and very fine grained red material flake piece. The north-east section has a dark, volcanic fine-grained flake piece and one quartz flake [Plate 5]. The deposit is dark, charcoal stained and only visible towards the back wall of the shelter.

Site Condition: Poor.

Human Impacts: In the north-west side of the shelter there is yellow/green spray paint graffiti that says, 'This is the Blacks Cave' [Plate 6]. Other recent human impacts to the shelter include magazines, decaying mattress and foam rubbish.

Natural Impacts/Weathering: Possible rock fall damage.

Potential Impact Rating: Low. The site is not located close to the proposed routes for the North Nowra link road alignment.

Research Potential: Low.



Plate 4: Shelter.



Plate 5: Artefacts.



Plate 6: Graffiti.

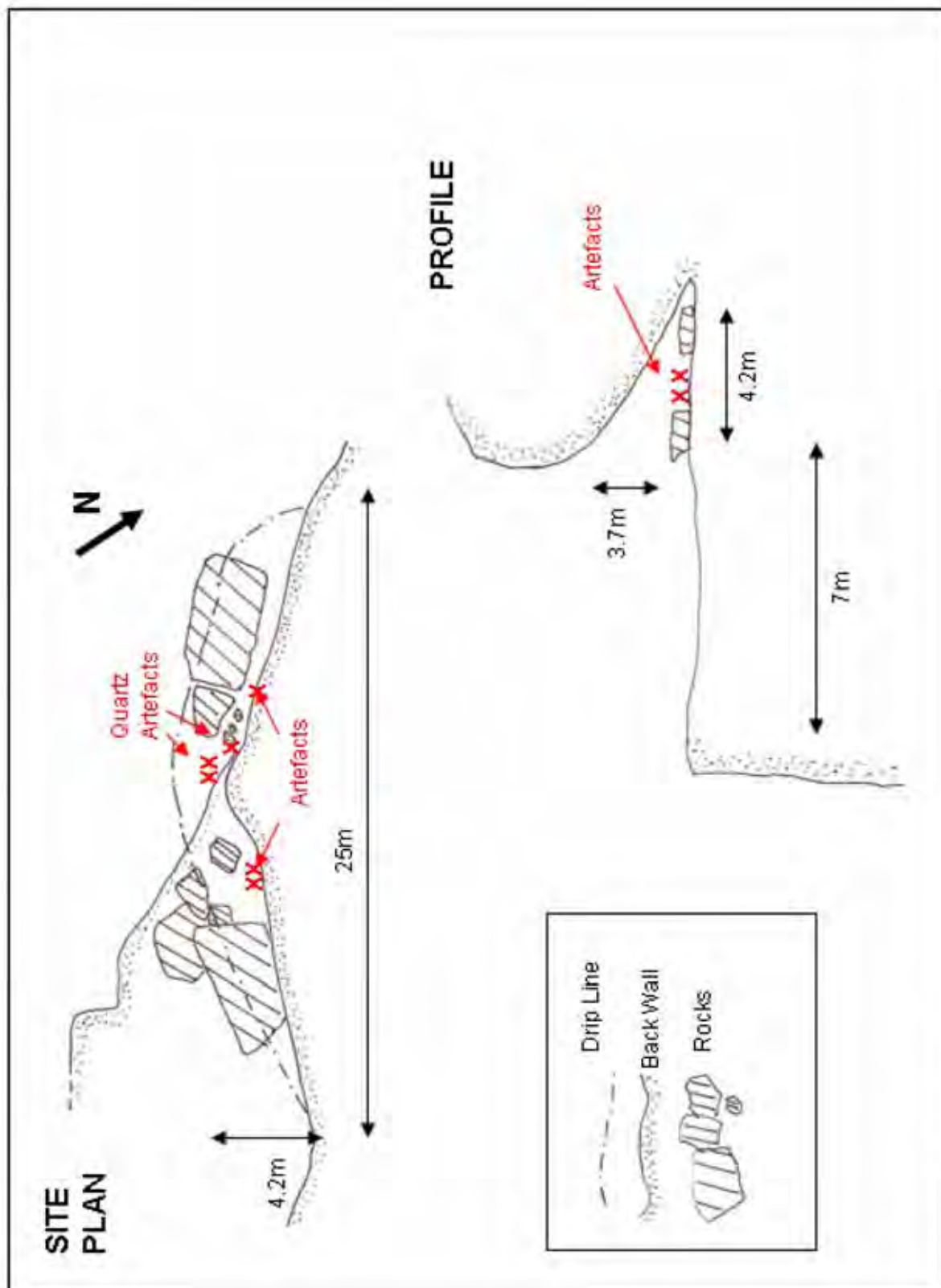


Figure 5: Site Plan & Profile

BCRP 003 - The Blue Metal Site

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Open Site. Site recorded on the 15/09/07.

Road Option: Option 2 (Southern Route)

Aspect: 227° M (south-south-west).

Site Description: Shell midden exposure scattered over 40 metres along eastern side of Bomaderry Creek [Plate 7 and Figure 6]. The midden is greatest at the north-west or upstream extent of the exposure and extends 20 metres from the creek. At this point there are a number of large rocks extending up the creek bank through which the Bomaderry Creek walking track runs. The rocks have numerous shells on top of them [Plate 8].

10 to 15 metres above the south-east section of the site there is a forested rock bench with a small overhang shelter that has a large amount of rubbish eroding from above the cliff-line including garden refuse from urban back yards, PVC pipes, bricks, cans, plastic, wire fencing, canvas, clothes, concrete and the jaw bone of a horse [Plate 9]. There are also large shells and shell fragments amongst the rubbish.

Site Condition: Poor.

Human Impacts: Bomaderry Creek walking trail cuts through the site causing some erosion of the site contents into the creek. Rubbish from urban area above the gorge with associated weeds and road base [Plate 9].

Natural Impacts/Weathering: Possible rock fall damage.

Potential Impact Rating: Low. The site is not located close to the proposed routes for the North Nowra link road alignment.

Research Potential: Low.



Plate 7: Shelter.



Plate 8: Midden shells.



Plate 9: Rubbish eroding from above the cliff-line.

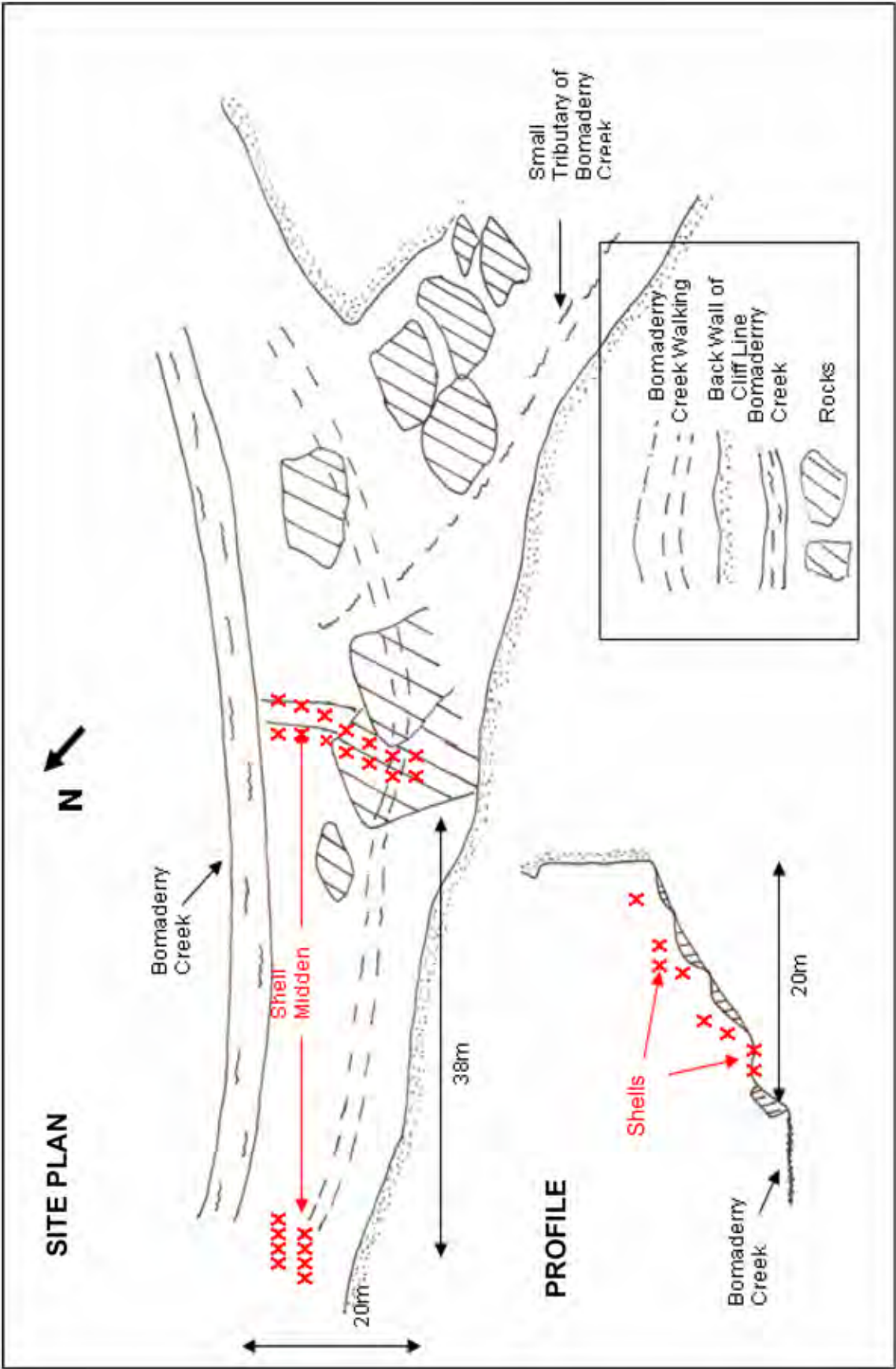


Figure 6: Site Plan & Profile

BCRP 004 - Dingoes Shelter

AHIMS Number and Name: 52-5-0453. BC1/E.

Site Type: Open Site. Site recorded 15/09/07.

Road Option: Option 2 (Southern Route)

Aspect: 280° M (west).

Site Description: Long sandstone shelter in Bomaderry Creek gorge with art and artefacts [Plate 10 and Figure 7]. The shelter is 20 metres from Bomaderry Creek and is 43 metres long x 7.7 metres deep x 6 metres high. More than 10 artefacts were located in the shelter drip line at 16.5 metres from the south end. The main material is a deep red fine grained siliceous material of which flakes, flake pieces and cores were observed. Two of the cores have pot lid scars from heat treatment. Also at this location a river pebble was observed towards the shelter back wall with one side slightly flattened and polished looking. The pebble is 85mm long x 66mm wide x 56mm tall and has a reddish stain on the flattened area. There are more artefacts approximately 32 metres from the southern end of the shelter towards the north including at least five quartz cores. Four faint charcoal drawings were located in the southern end of the shelter. Two partial dingo motifs are located directly behind the southern artefact and polished river pebble area [Plate 11]. They are on a back wall panel that faces towards the south of the shelter. Two other indeterminate figures including one possible bird figure are located 4.5 metres north from the two dingo motifs [Plate 12]. These two motifs are on a back wall panel that faces towards the north of the shelter.

Site Condition: Moderate.

Human Impacts: Stone wall at seven metres from the south (downstream) side of the shelter and sawn wood.

Natural Impacts/Weathering: Erosion of the deposit at the shelter drip-line is exposing artefacts. The art is faded from water seepage through the shelter back wall and associated mineral salt staining.

Potential Impact Rating: Low. The site is not located close to the proposed routes for the North Nowra link road alignment.

Research Potential: Moderate. The deposit appears relatively intact for sub-surface investigation.



Plate 10: Shelter.



Plate 11: Two x partial dingo charcoal motifs.



Plate 12: Other indeterminate charcoal figure.

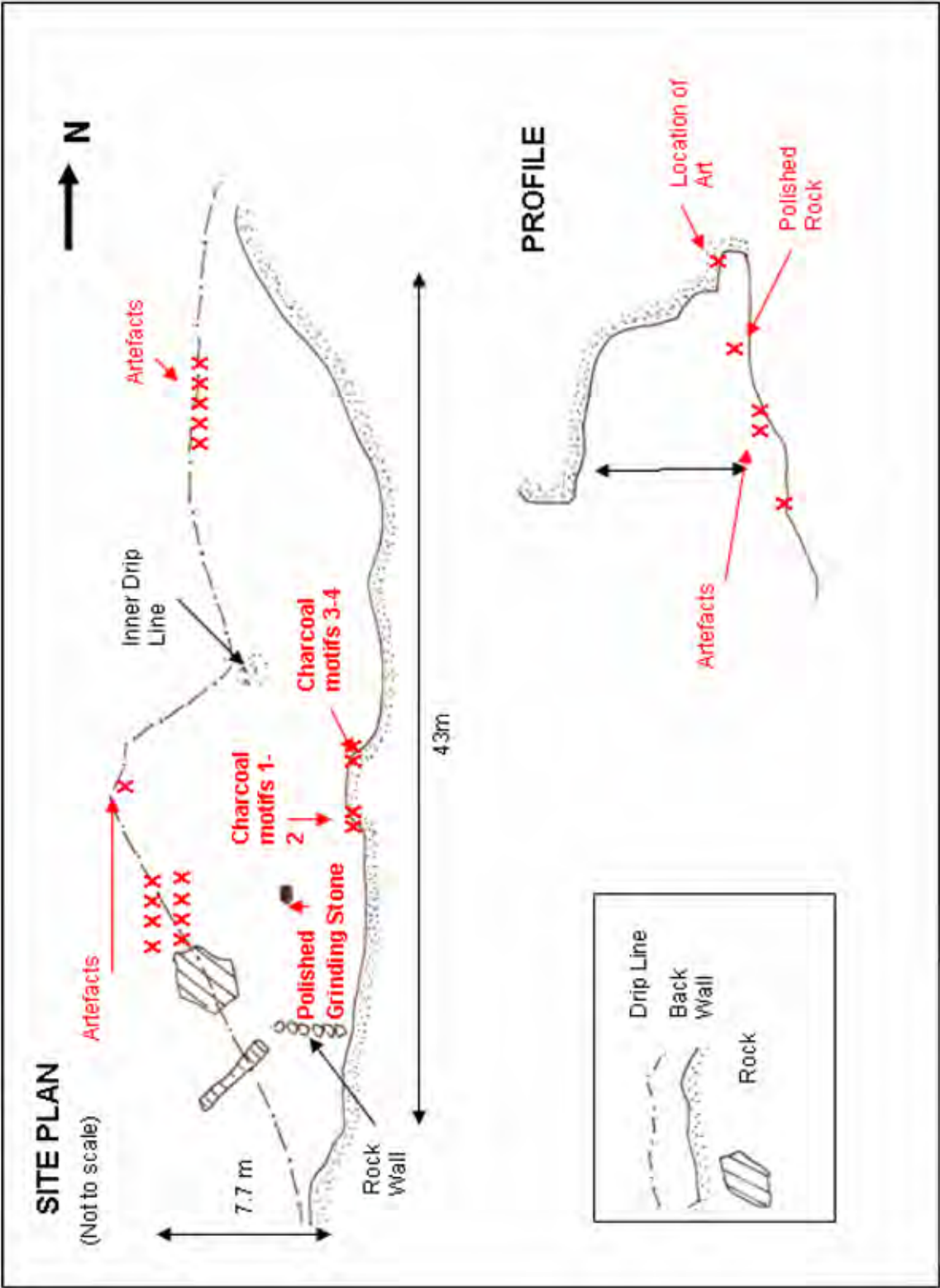


Figure 7: Site Plan & Profile

BCRP 005 - Leaning Cliff-line site

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Open Site. Site recorded 15/09/07

Road Option: Option 2 (Southern Route)

Aspect: 280° M (west).

Site Description: Very shallow shelter formed by leaning cliff line along the eastern side of Bomaderry Creek walking track [Plate 13 and Figure 8]. The shelter is 27 metres long x 0.90 metres deep x approximately 8 metres high and is approximately 30 metres from Bomaderry Creek. The walking trail runs along the drip line at the base of the cliff-line and has exposed two very fine grained red stone flakes [Plate 14].

Site Condition: Moderate.

Human Impacts: Bomaderry Creek walking trail has caused minor erosion of the shelter deposit.

Natural Impacts/Weathering: Drip-line erosion of the shelter deposit.

Potential Impact Rating: Low. The site is not located close to the proposed routes for the North Nowra link road alignment.

Research Potential: Low.



Plate 13: Shelter.



Plate 14: Artefacts.

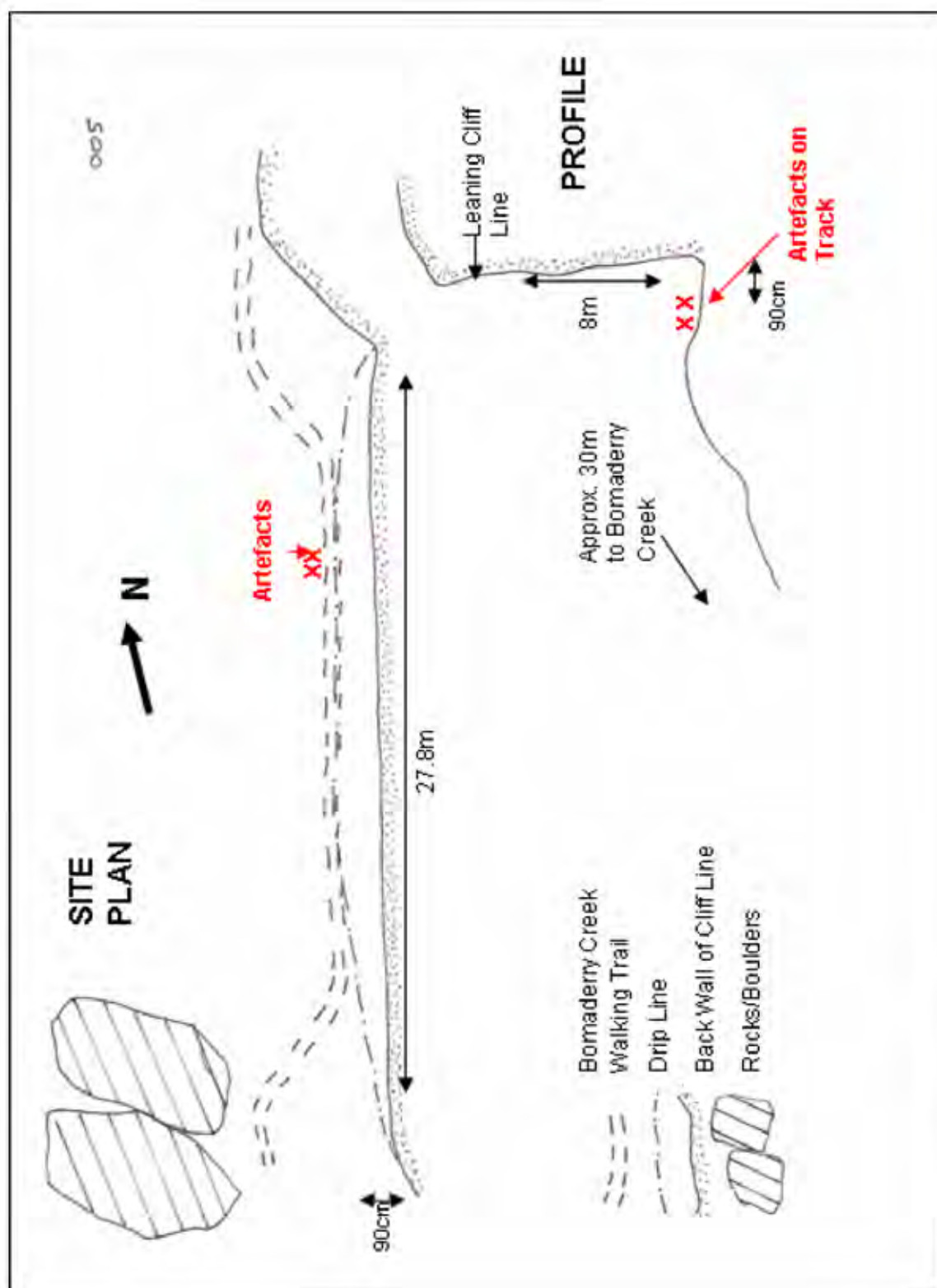


Figure 8: Site Plan & Profile

BCRP 006 - Pipe Line Shelter

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Occupation Shelter. Site recorded 16/09/07

Road Option: Option 1 (Central Route)

Aspect: 287° M (west).

Site Description: Sandstone shelter with bedrock floor 30 metres south (downstream) of the water pipe and power lines that traverse Bomaderry Creek gorge [Plate 15 and Figure 9]. The shelter is 20.8 metres long x 4.4 metres deep x 3.4 metres high. It has a sloping bench rock floor with very little deposit except towards the back wall of the shelter. The small area of deposit consists of fine grey sand with small charcoal and shell fragments [Plate 16]. There is a lookout directly above the southern end of the shelter and Bomaderry Creek Reserve walking trail runs close to the north side of the shelter.

Site Condition: Poor.

Human Impacts: A recent campfire at about 7.5 metres from the south end of the shelter has been lit against the back wall causing a blackened stain and some exfoliation of the back wall. There is a large amount of graffiti including red, black, white, orange and silver spray paint as well as graffiti in natural pigments [Plate 17]. There are at least two phases of graffiti with the first being in charcoal and the more recent spray paint graffiti superimposed over this layer.

Natural Impacts/Weathering: Erosion of the small deposit is occurring in the north half of the shelter.

Potential Impact Rating: Medium-high. This site is located within 30 metres of the central (Narang Road) option for the North Nowra link road alignment.

Research Potential: Low.



Plate 15: Shelter.



Plate 16: Shells.



Plate 17: Graffiti.

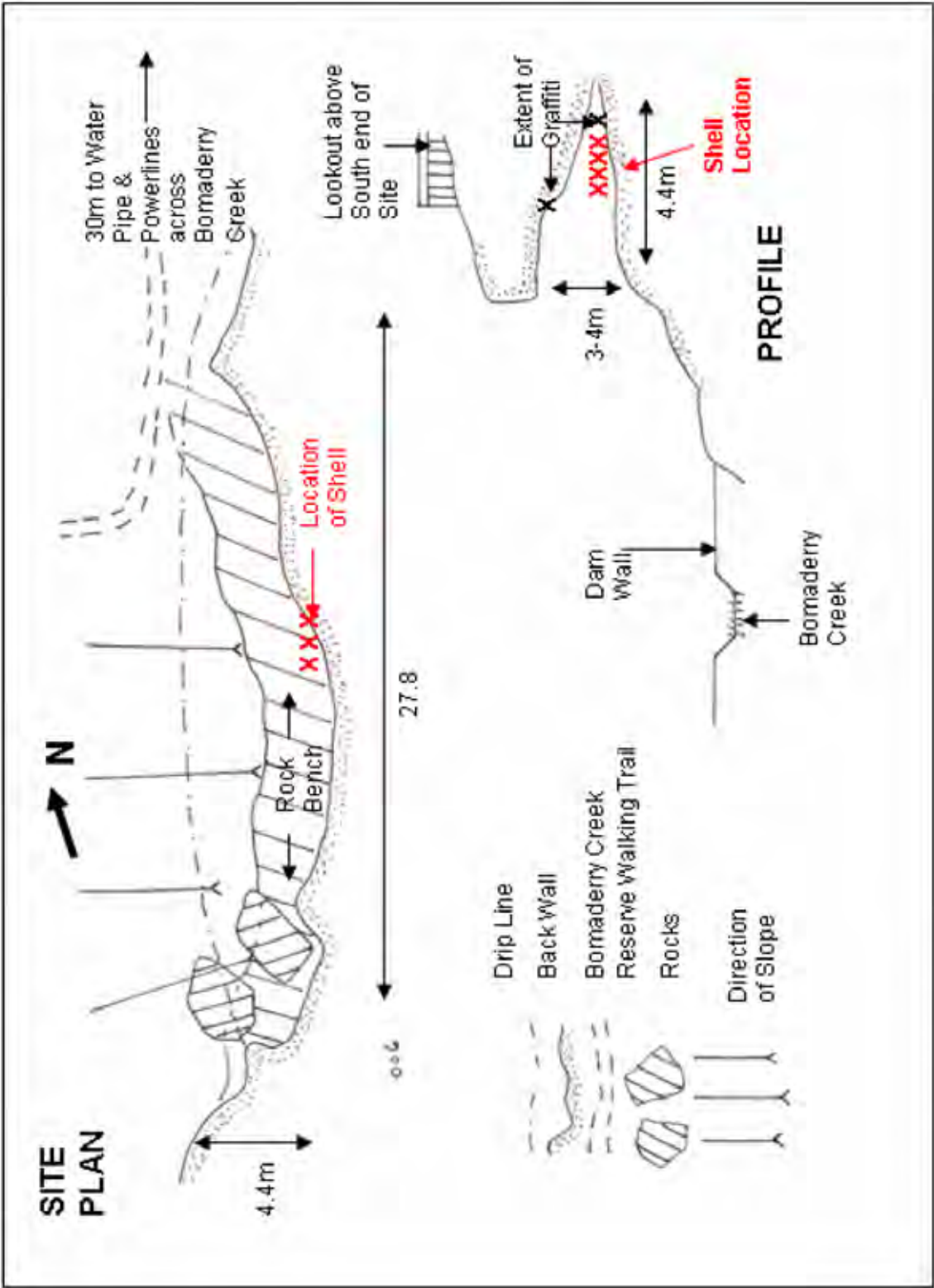


Figure 9: Site Plan & Profile

BCRP 007 - Stone Circle Open Site

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Open Site. Site recorded 16/09/07.

Road Option: Option 1 (Central Route)

Aspect: 43° M (north-east).

Site Description: This site consists of a small scattering of shell fragments and artefacts on a sandy terrace two metres above Bomaderry Creek [Plate 18 and Figure 10]. The site area is approximately 26 metres long (south/east-north/west) x 10 metres wide. The terrace is located within the flood zone of Bomaderry Creek and shells and shell fragments may originate from flood events. A small rock shelter is located 15 metres west-north/west (upstream) of the open site [Figure 4] and has a fine white sandy deposit suggesting periodic flooding of the shelter floor. The drip line of the shelter revealed shell fragments and one erillure scar flake from a very fine grained red stone material [Plate 20]. Artefacts in the open area include one red fine grained flake and one red fine grained core that has three flake scars and one pot lid scar suggesting heat treatment of the material occurred. A grey, pebbular core was located next to the other artefacts, with three flake scars at one end of the core [Plate 19].

Site Condition: Moderate.

Human Impacts: The shelter 15 metres upstream from the open site has a fire place ring of stones [Figure 4], cans (alcohol), plastic coke bottles, smashed glass, asbestos fibro fragments and a plastic bottle modified for smoking marijuana. There is graffiti in what appears to be white liquid paper, white, red and silver spray paint, as well as natural charcoal pigment.

A circular ring of stones, 3 metres x 3metres, is located between the open site area and the rock shelter [Figure 4]. It is likely to be non-Indigenous in origin. There are axe marks in a turpentine tree on the creek terrace as well as the remains of an old sawn tree.

Natural Impacts/Weathering: Erosion of the creek terrace from flood events. Flood events may remove occupation evidence and or deposit silt and sand over occupation evidence. Land clearance above Bomaderry Creek Reserve may have increased the rate of water flow and frequency of flash flooding in Bomaderry Creek gorge.

Potential Impact Rating: Low. The site is not located close to the proposed routes for the North Nowra link road alignment.

Research Potential: Low.



Plate 18: Open terrace site - pointing to location of artefacts.



Plate 19: Grey fine-grained core.



Plate 20: Possible erillure scar flake.

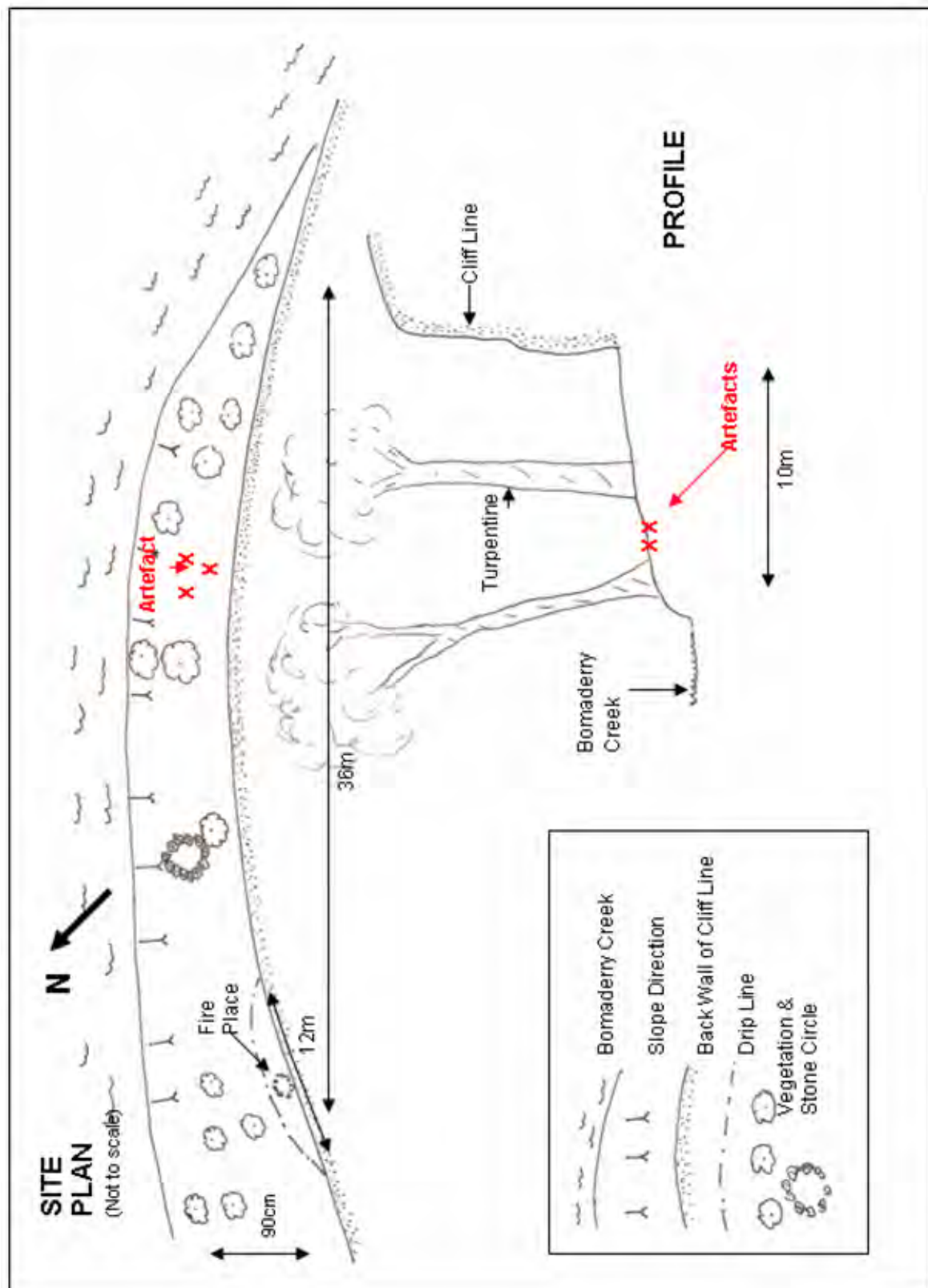


Figure 10: Site Plan & Profile

BCRP 008 - Walking Track Art Site

AHIMS Number and Name: 52-5-0454. BC1/B.

Site Type: Shelter with Art. Site re-assessed 16/09/07.

Road Option: Option 1 (Central Route)

Aspect: 10° M (north).

Site Description: Sandstone shelter located on western side of Bomaderry Creek approximately 150-200 metres downstream from the central option (Narang Road) for the north Nowra link road alignment [Plate 21 and Figure 11]. The shelter is 29 metres long. Bomaderry Creek Reserve walking trail descends from above the eastern end of the shelter and runs for approximately 20 metres in front of the shelter. The deposit is fine yellow-light brown sand and is partially covered by native vegetation including a fig tree in the centre of the shelter. The east end of the shelter has more than 20 stone artefacts located in the drip line and along the walking track [Plate 22]. Most of the artefacts are of a very fine grained red material with many showing evidence of heat treatment in the form of pot lid scars. Other artefact material includes quartz and a purple, mottled white fine grained material. There is one faint indeterminate charcoal drawing at the east end of the shelter behind the artefact area consisting of seven vertical parallel lines [Plate 23].

Site Condition: Poor.

Human Impacts: Bomaderry Creek Reserve walking trail has caused minor erosion of the drip line of the shelter at the eastern end.

Natural Impacts/Weathering: Lichen and mineral salt staining of the shelter wall.

Potential Impact Rating: Low. The site is not located close to the proposed routes for the North Nowra link road alignment.

Research Potential: Low.



Plate 21: Shelter.



Plate 22: Artefacts.

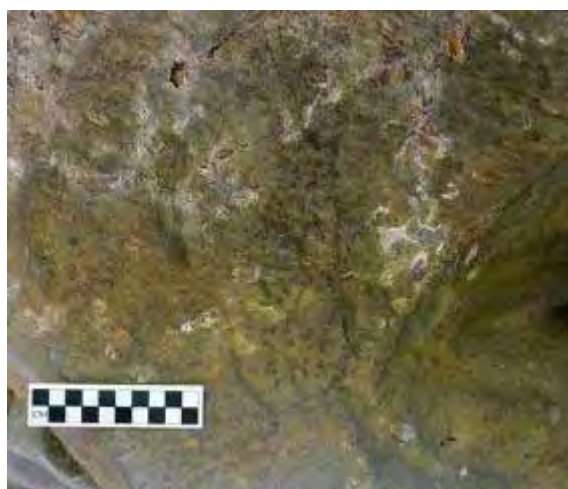


Plate 23: Charcoal Art.

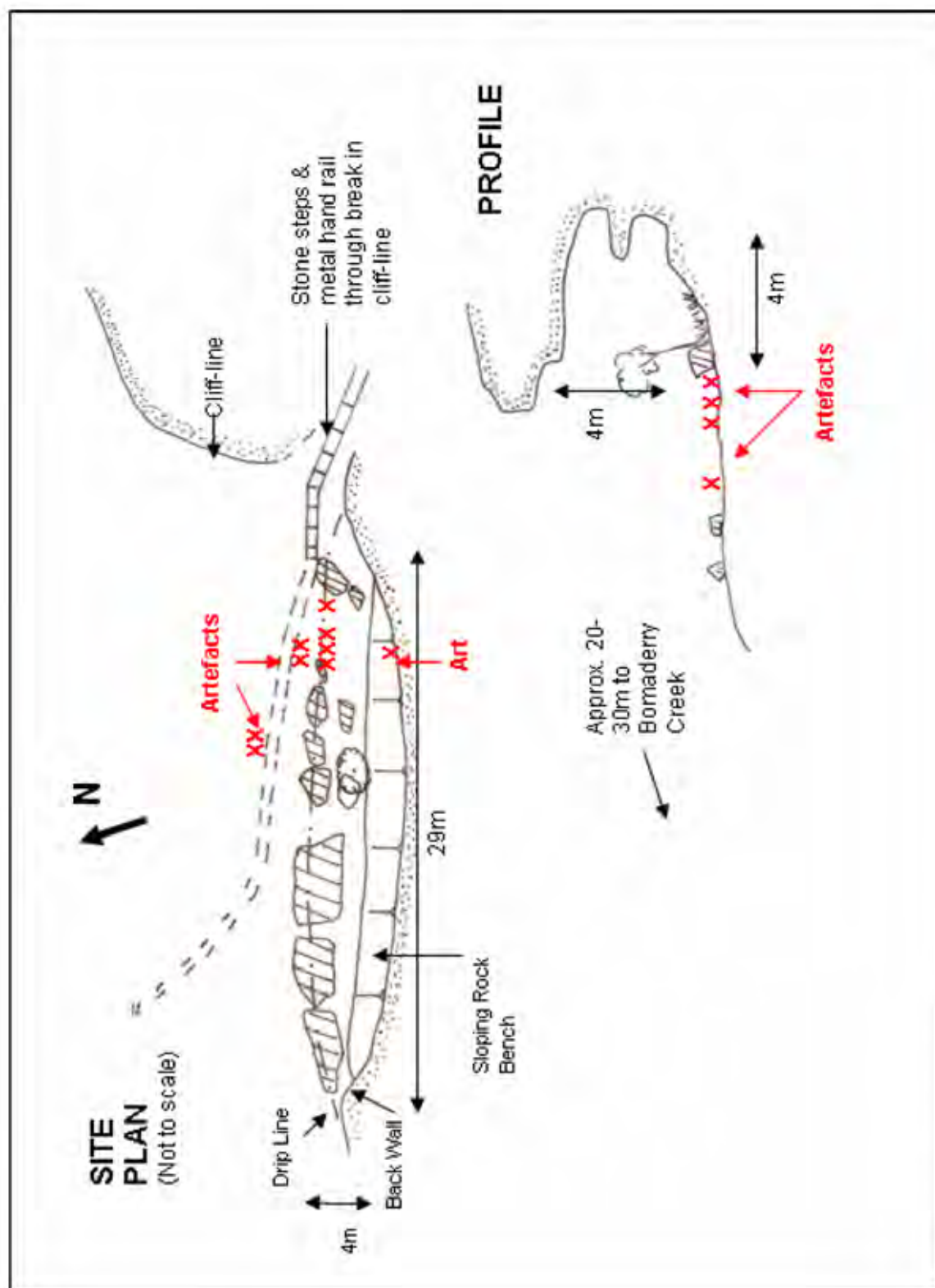


Figure 11: Site Plan & Profile

BCRP 009 - Drift wood Shelter

AHIMS Number and Name: 52-5-0262. Bomaderry Creek; Bomaderry Creek, Nowra.

Site Type: Occupation Shelter. Site re-assessed 16/09/07.

Road Option: Option 1 (Central Route)

Aspect: 137° M (south-east).

Site Description: Sandstone shelter located on western side of Bomaderry Creek approximately 50-75 metres downstream from the central option (Narang Road) for the north Nowra link road alignment [Plate 24 and Figure 12]. The shelter is 56 metres long x 6 metres deep x 5 metres tall. Bomaderry Creek Reserve walking trail runs through the shelter. The track has cut into the creek bank at the shelter drip-line making the deposit slope upwards towards the drip line for approximately 50 centimetres before it dips downwards towards Bomaderry Creek. Artefacts were observed from the north-east to the central part of the shelter consisting of four red fine grained siliceous flakes and one core. Observed also were two yellow coloured fine grained flakes [Plate 25]. The south-west end of the shelter has a pile of large rocks from a past roof collapse. There is drift wood close to the shelter entrance at the north-east end of the shelter [Plate 26]. Approximately 18 metres to the north-east of the shelter there is a small shelter with a raised flat rock floor. One red fine grained flake piece was observed in this shelter.

Site Condition: Poor.

Human Impacts: Bomaderry Creek Reserve walking trail has cut into the drip-line. There is some erosion of the creek bank facing the shelter back wall as a result.

Natural Impacts/Weathering: Natural erosion and weathering of the shelter wall and deposit.

Potential Impact Rating: Moderate. The site is located within 100 metres of one of the proposed routes for the North Nowra link road alignment.

Research Potential: Low.



Plate 24: Shelter.



Plate 25: Artefacts.



Plate 26: Large piles of drift wood close to the shelter entrance.

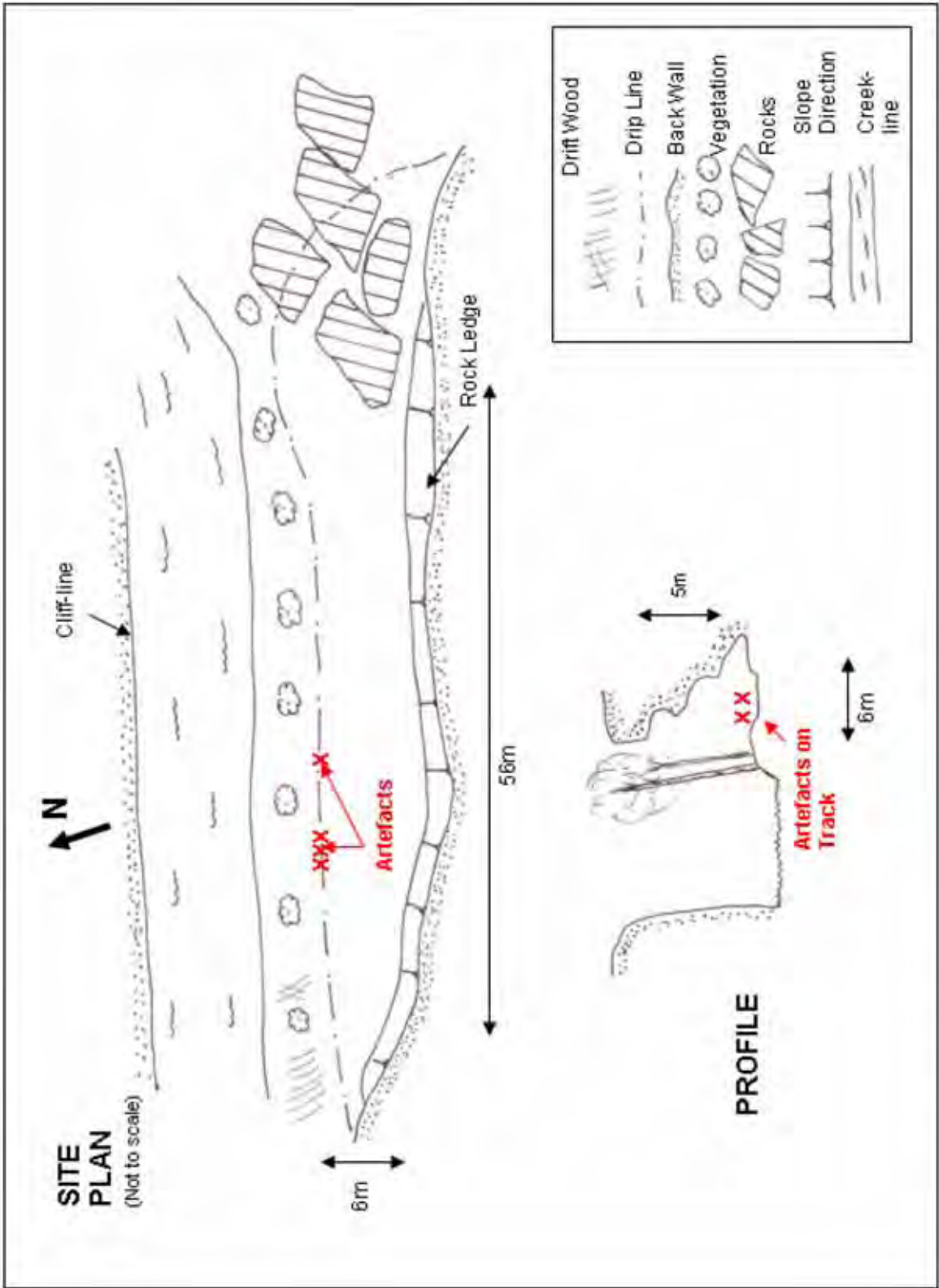


Figure 12: Site Plan & Profile

BCRP 010 - Tree Stump Shelter

AHIMS Number and Name: 52-5-0263. Bomaderry Creek Nowra.

Site Type: Occupation Shelter. Site recorded 16/09/07.

Road Option: Option 1 (Central Route)

Aspect: 42° M (north-east).

Site Description: Sandstone shelter located on western side of Bomaderry Creek approximately 150-200 metres upstream from the central option (Narang Road) for the north Nowra link road alignment [Plate 27 and Figure 13]. The shelter is 10 metres long x 2.7 metres deep x 2 metres tall. The deposit area is 2 metres long x 1 metre wide in the north-west side of the shelter. Four red fine grained siliceous flakes [Plate 28] and one silcrete flake with a very coarse grain [Plate 29] were observed in the drip line as it extends into the deposit area. The south-east section of the shelter has a collapsed roof. 100 metres upstream on the eastern side of the creek is a lookout above a rocky canyon section of Bomaderry Creek.

Site Condition: Poor.

Human Impacts: Magazine located in the south-east section of the shelter.

Natural Impacts/Weathering: Drip line erosion of the deposit and past roof collapsed in the south-east section.

Potential Impact Rating: Low. The site is not located near the proposed routes for the North Nowra link road alignment.

Research Potential: Low.



Plate 27: Shelter.



Plate 28: Fine grained siliceous flakes.



Plate 29: Coarse grain silcrete flake.

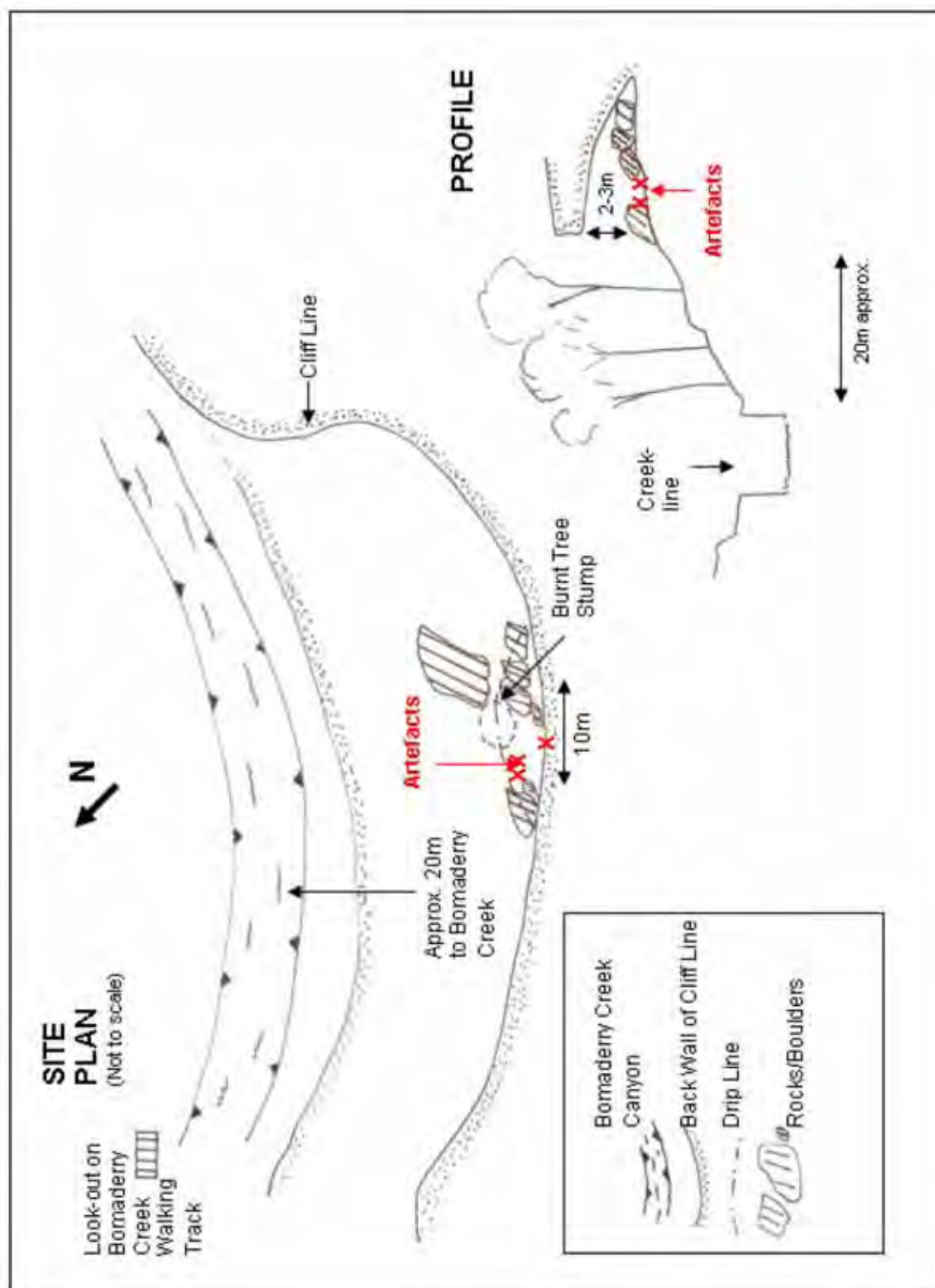


Figure 13: Site Plan & Profile

BCRP 011 - Pitt Street-Narang Road Open Site 01

AHIMS Number: 52-5-0390. Bomaderry Site.

Site Type: Open Site. Site re-assessed 16/09/07.

Road Option: Option 1 (Central Route)

Aspect: North/east-south/west.

Site Description: Two isolated flake pieces on the service road that runs along the power lines through Bomaderry Creek reserve [Plate 30 and Figure 14]. One of the flakes is grey with a pitted, cork-like cortex, possibly petrified wood [Plate 31 and Plate 32]. The artefacts are located approximately 50 metres apart and approximately 150-200 metres west of Bomaderry Creek gorge.

Site Condition: Poor.

Human Impacts: Power line service trail has created exposure on which artefacts were observed.

Natural Impacts/Weathering: Wind and water erosion of the road.

Potential Impact Rating: Very high. The site is located on the Pitt Street to Narang Road option for the North Nowra link road alignment.

Research Potential: Low.



Plate 30: Open site.



Plate 31: Artefacts.



Plate 32: Artefacts.

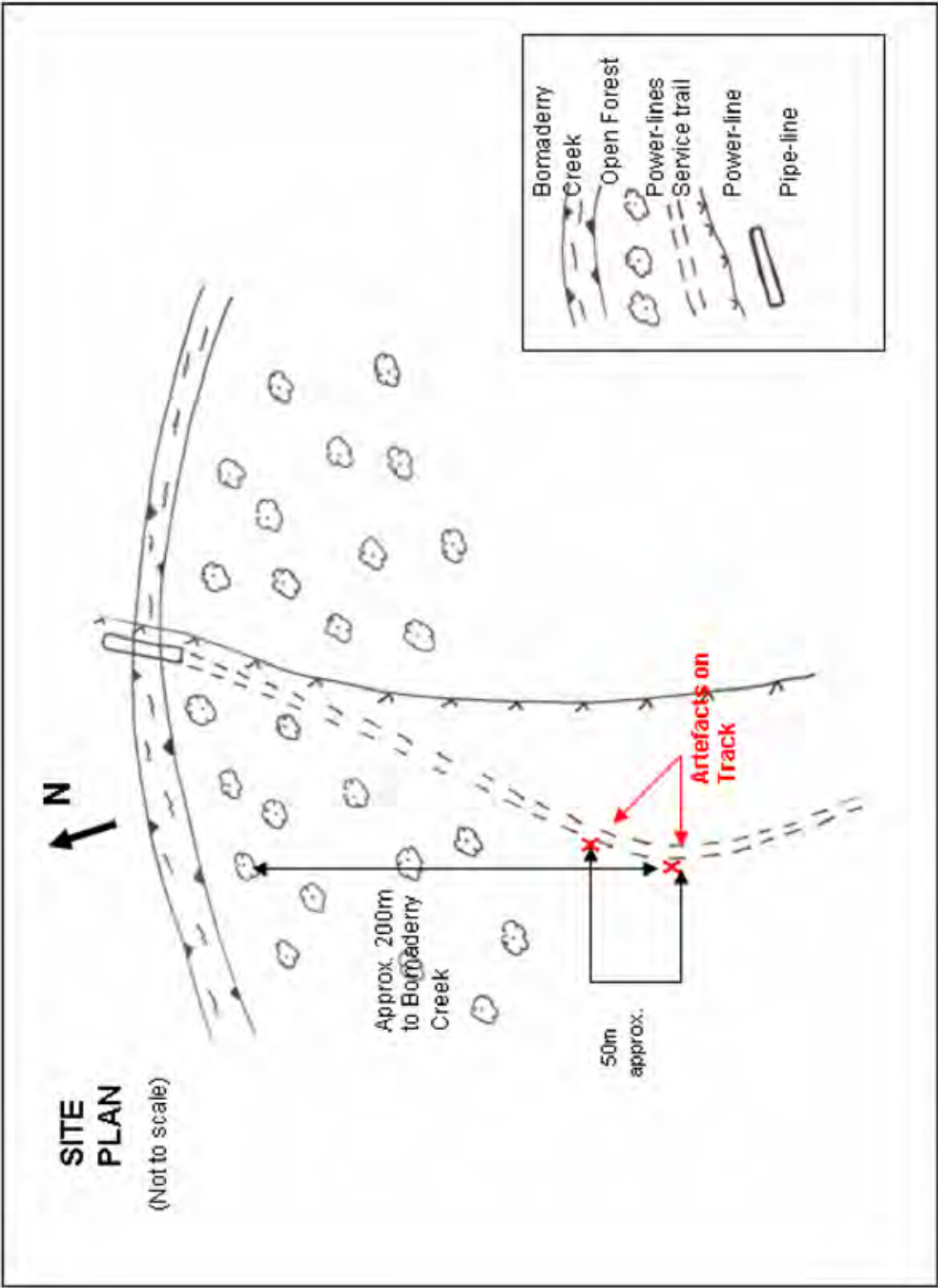


Figure 14: Site Plan & Profile

BCRP 012 - Pitt Street-Narang Road Open Site 02

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Open Site. Site recorded 16/09/07.

Road Option: Option 1 (Central Route)

Aspect: North/east-south/west.

Site Description: One isolated red fine grained siliceous core located on the service road that runs along the power lines through Bomaderry Creek Reserve [Plate 33 and Figure 15]. The core is located on the west edge of the unsealed road directly under the power lines. The site is approximately 150 metres south-west of cross roads and approximately 500-600 metres north-east of Illaroo Road. The material is similar to the red fine grained material located in Bomaderry Creek gorge and unlike other road base on the service trail. The core has yellowish stained and pebbular cortex with one flake scar [Plate 34 and Plate 35].

Site Condition: Poor.

Human Impacts: Power line service trail has created exposure on which artefact was observed.

Natural Impacts/Weathering: Wind and water erosion of the road.

Potential Impact Rating: Very high. The site is located on the Pitt Street to Narang Road option for the North Nowra link road alignment.

Research Potential: Low.



Plate 33: Open site.



Plate 34: Artefact.

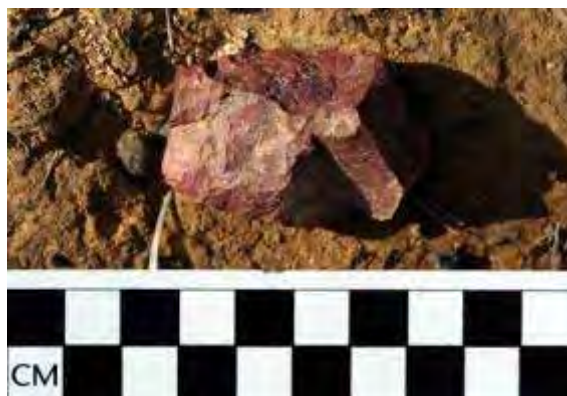


Plate 35: Artefact.

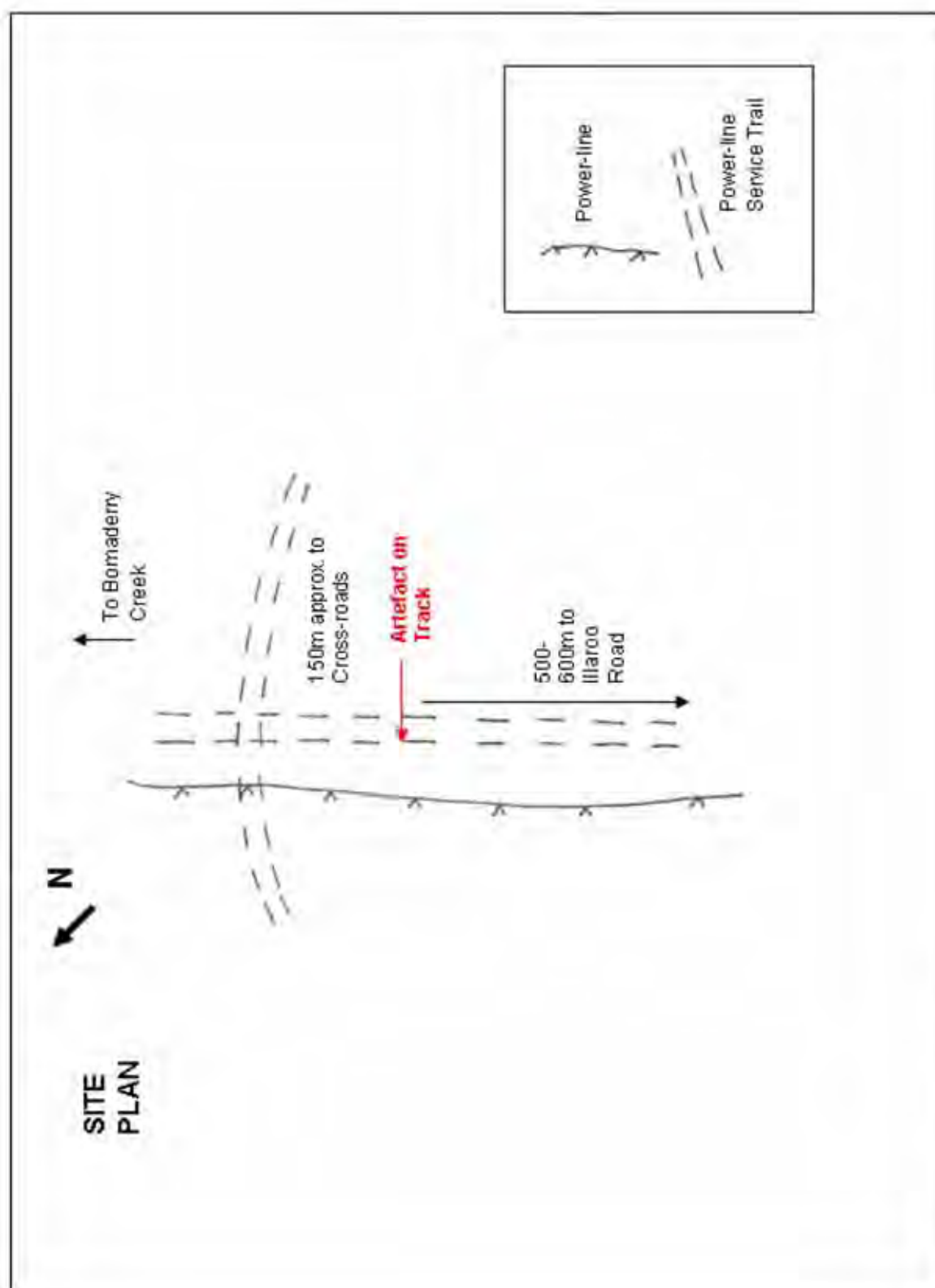


Figure 15: Site Plan & Profile

BCRP 013 - West Cambewarra Open Site 01

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Open Site. Site recorded 16/09/07.

Road Option: Option 3 (Northern Route)

Aspect: 47°M towards the Bomaderry Creek.

Site Description: This site is located on a foot track that runs off the south-east end of West Cambewarra Road [Plate 36 and Figure 16]. One red fine grained flake piece was discovered 20 metres along the foot track. 75 metres along the track there are some small rock exposures and a recently fallen dead eucalyptus trees over the track. Small shell fragments were observed on the track exposure and one red, fine grained medial flake with a pot lid scar on the dorsal surface [Plate 37 and Plate 38].

Site Condition: Poor.

Human Impacts: Track exposure is possibly the reason why the shells and artefacts have been exposed.

Natural Impacts/Weathering: Wind and water erosion of the foot track.

Potential Impact Rating: High. The site is located within 50 metres of the West Cambewarra option for the North Nowra link road alignment.

Research Potential: Low.



Plate 36: Open site.



Plate 37: Artefacts and shell fragments



Plate 38: Artefacts and shell fragments.

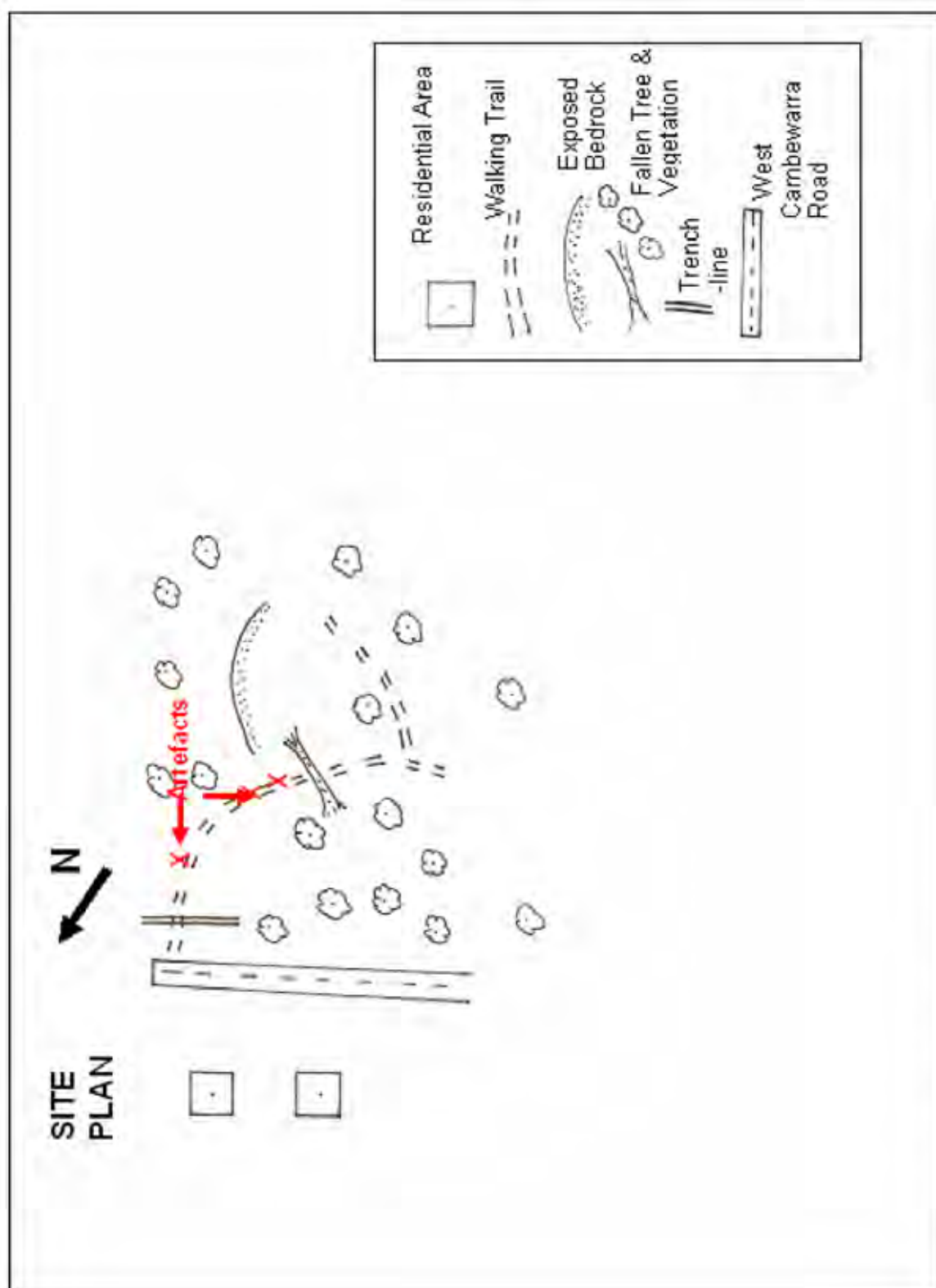


Figure 16: Site Plan & Profile

BCRP 014 - West Cambewarra Open Site 02

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Open Site. Site recorded 16/09/07.

Road Option: Option 3 (Northern Route)

Aspect: 47°M towards the Bomaderry Creek.

Site Description: This site is located on the foot track that runs off the end of West Cambewarra Road to Bomaderry Creek [Plate 39 and Figure 17]. Bomaderry Creek Reserve is located on the south side of the track. North of the track is cleared land. The foot track cuts approximately 50 centimetres into a creek terrace one-two metres above Bomaderry Creek. Artefacts are exposed in the sides of the erosion banks on the track up to 20 metres along the terrace. More than 20 artefacts were observed including artefacts made from red fine grained material, grey silcrete, and a pale white fine grained material [Plate 40 and Plate 41].

Site Condition: Moderate to Poor.

Human Impacts: Erosion of the creek terrace is displacing artefacts onto the foot track. During the recording of this site teenagers with trail bikes rode along the track over the artefact area.

Natural Impacts/Weathering: Wind and water erosion of the foot track.

Potential Impact Rating: Very high. The site is located on the West Cambewarra option for the North Nowra link road alignment.

Research Potential: Moderate.



Plate 39: Open site.



Plate 40: Artefacts.



Plate 41: Silcrete Artefact

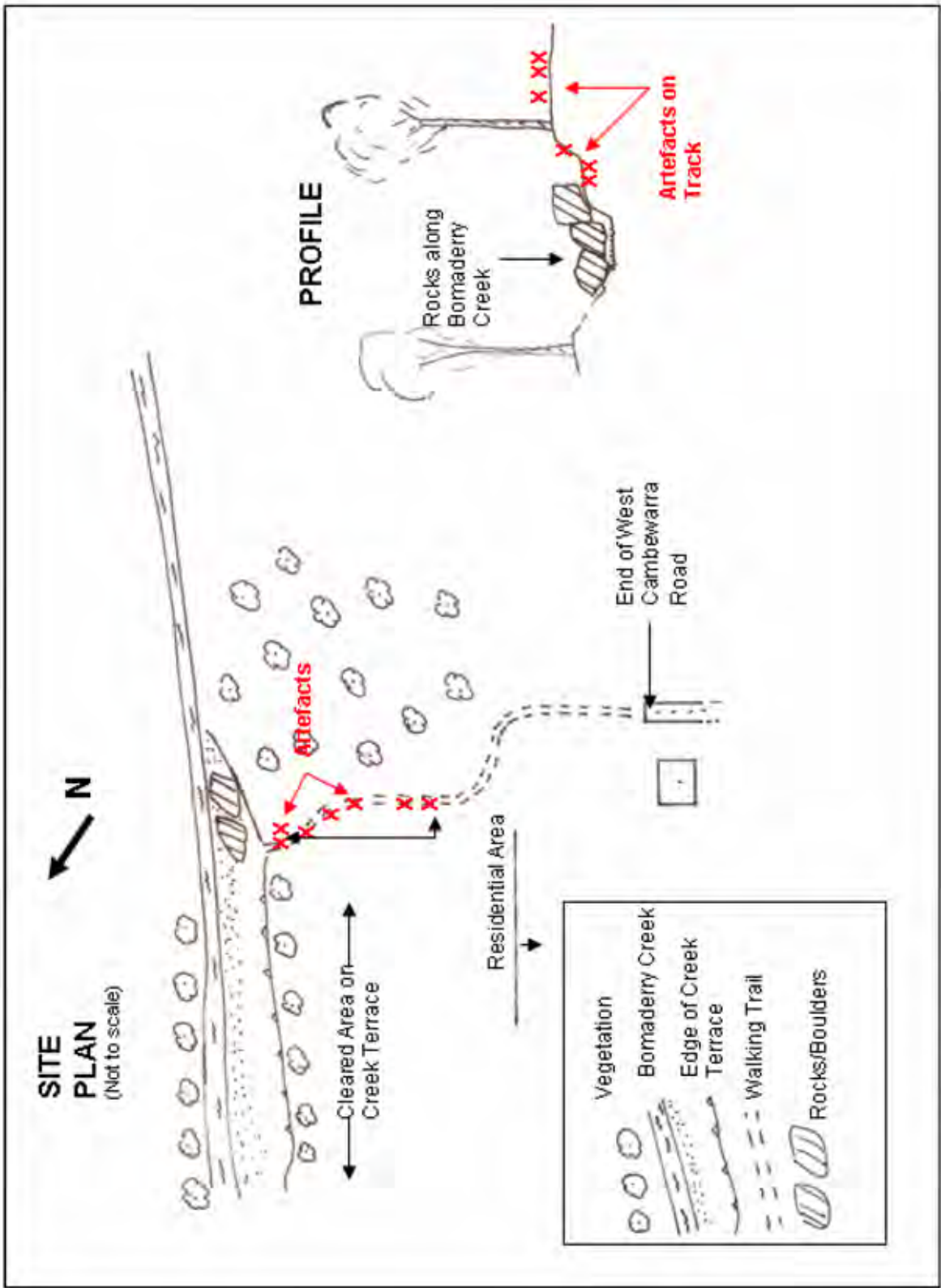


Figure 17: Site Plan & Profile

BCRP 015 - West Cambewarra Open Site 03

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Isolated Find. Site recorded 16/09/07

Road Option: Option 3 (Northern Route)

Aspect: East-west along track exposure.

Site Description: This site is located on the foot track in Bomaderry Creek Reserve adjacent to the North Nowra Sale Yards [Plate 42]. The Sale Yards are approximately 200 metres east of the site. Bomaderry Creek is approximately 300 metres to the west. One red, fine grained siliceous core was located on the south edge of the foot track exposure. The core has at least two flake scars [Plate 43 and Plate 44]. No other artefacts were observed at the site.

Site Condition: Poor.

Human Impacts: Erosion of the foot track has possibly exposed the artefact.

Natural Impacts/Weathering: Wind and water erosion of the foot track.

Potential Impact Rating: Very high. The site is located on the West Cambewarra option for the North Nowra link road alignment.

Research Potential: Low.



Plate 42: Open site.



Plate 43: Flake scar on core.



Plate 44: Fine grain siliceous core.

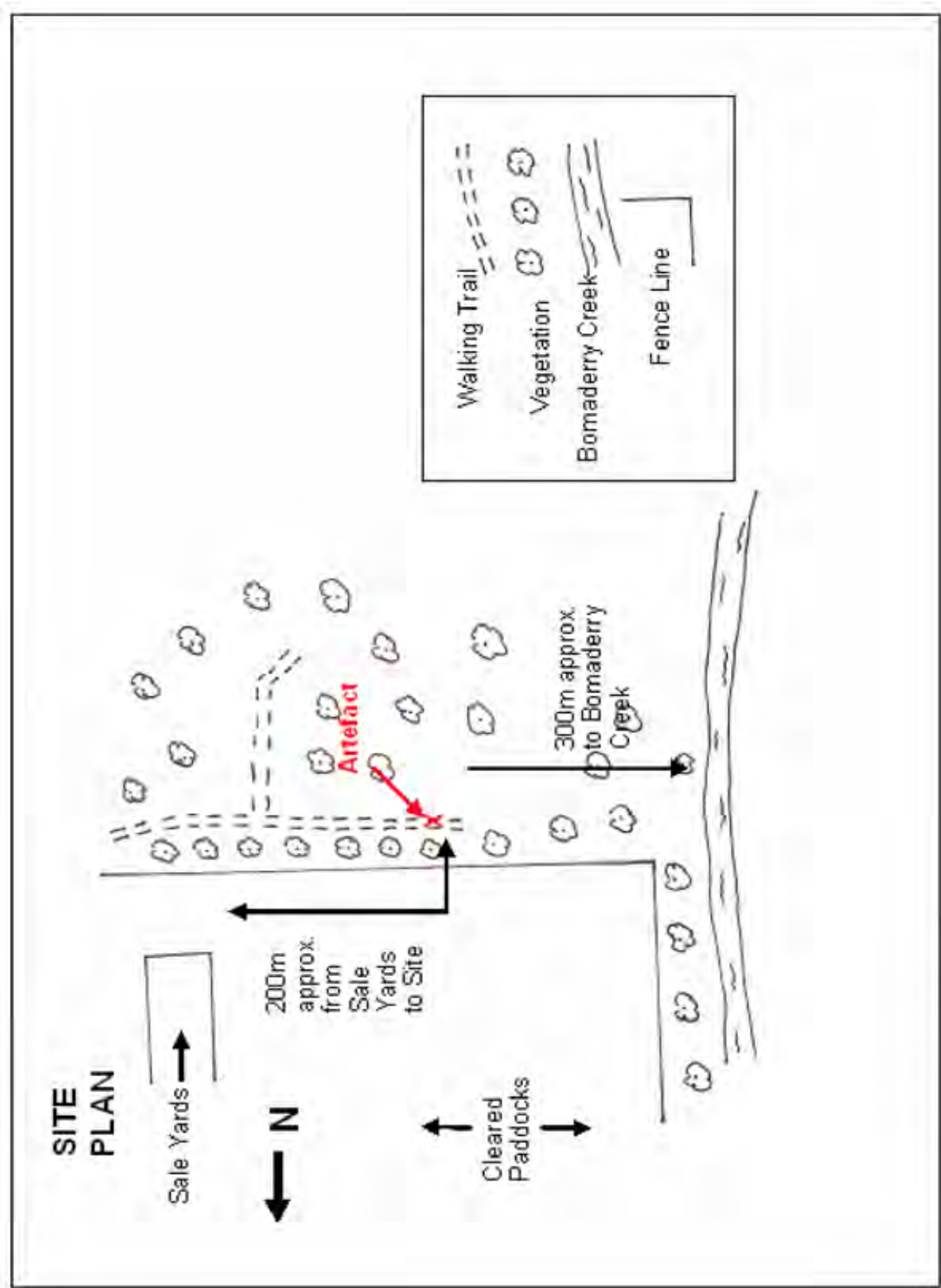


Figure 18: Site Plan & Profile

BCRP 016 - Scar Tree Site

Site Type: Not an Aboriginal heritage site. Recent scar tree. Site recorded 17/09/07.

Road Option: Option 2 (Southern Route)

Aspect: 193° M (south).

Site Description: Recently completed scar tree in Bomaderry Creek Reserve, approximately 5 metres south of the Illaroo Road-West Bunberra Street option for the North Nowra Road Alignment [Plate 45 and Figure 19]. The tree was recorded so that it would not be confused with a genuine Aboriginal scarred tree at a later date. (Although it is possible that the scar is the result of recent cultural activity from the local Aboriginal community.)

The tree is approximately 300 metres east of the gate on Falcon Crescent on the east side of a minor drainage area. The scar is 1.2 metres from the ground and is 1.25 metres tall x 30 centimetres wide x 4.5 centimetres deep. The scar has metal axe marks along it [Plate 46 and Plate 47]. The tree is a Stringy Bark, *Eucalyptus* sp. and has burnt recently. It is likely that the scar was completed in the last decade. There is rubbish on site including broken glass. There are axe marks in another small stringy bark tree 10 metre to the east of the scar tree, and also the remains of two small sawn trees.

Site Condition: N/A.

Human Impacts: Recent scar.

Natural Impacts/Weathering: Recent bush fire has burnt the tree.

Potential Impact Rating: High. The site is located within 10 metres of the West Cambewarra route for the North Nowra link road alignment.

Research Potential: N/A.



Plate 45: Scar tree.



Plate 46: Scar – lower end.



Plate 47: Scar – upper end.

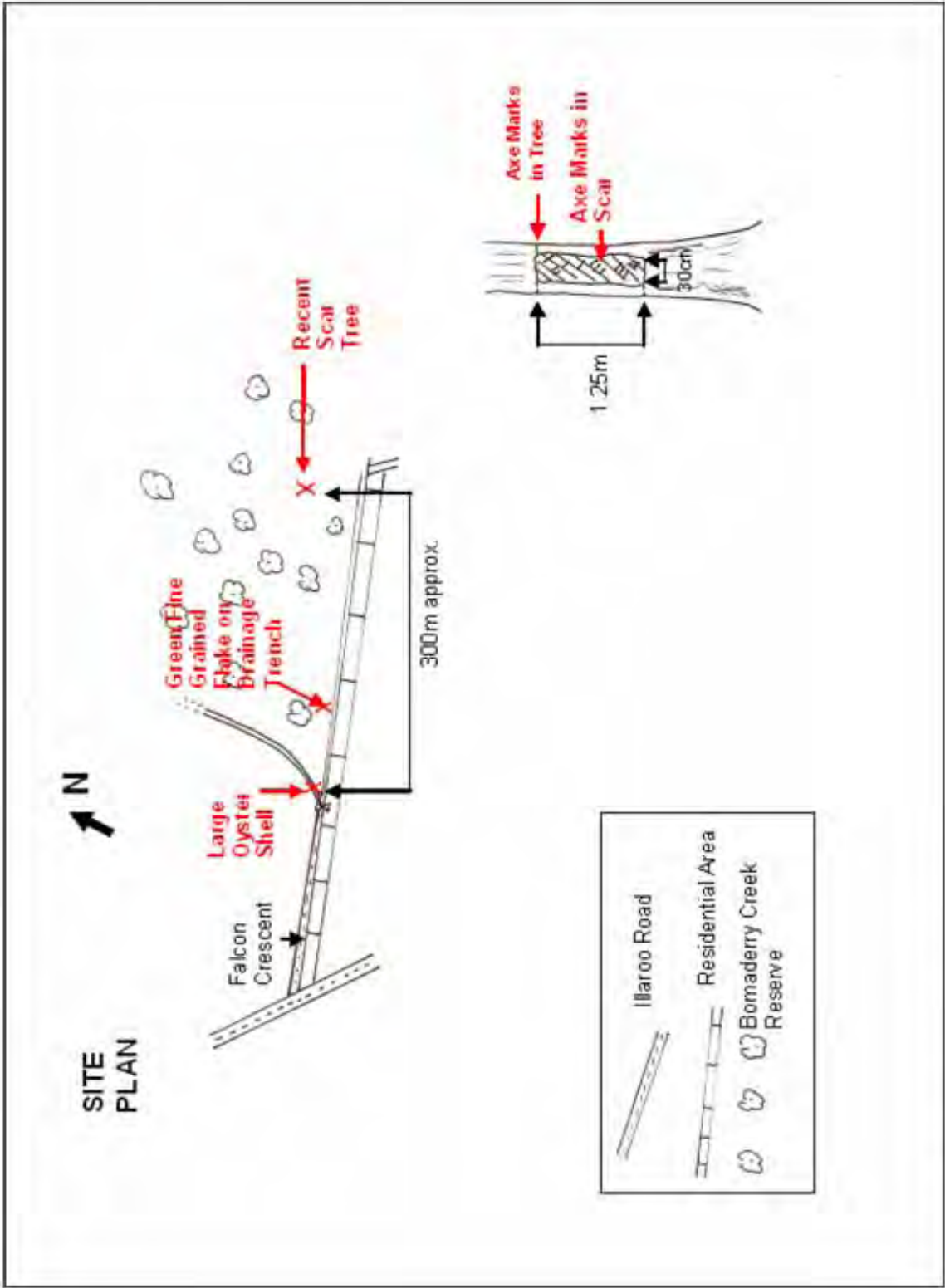


Figure 19: Site Plan & Profile

BCRP 017 - Stained Flake Shelter

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Occupation Shelter. Site recorded 17/09/07.

Road Option: Option 2 (Southern Route)

Aspect: 130° M (south-east).

Site Description: Sandstone shelter located approximately 300 metres east of the end point of Warren Avenue, North Nowra [Plate 48 and Figure 20]. The shelter is 21 metres long x 6 metres deep x 10-15 metres high. One charcoal stained, red fine grained siliceous flake was located in north-east part of the shelter towards the drip line [Plate 49]. The shelter deposit is charcoal stained fine sand apart from the northeast area where pale sand from fresh exfoliation of the shelter back wall is occurring. Outside the north-east part of the shelter is a sawn stump of turpentine.

Site Condition: Moderate.

Human Impacts: None.

Natural Impacts/Weathering: Exfoliation of the shelter back wall is occurring.

Potential Impact Rating: Low. The site is located approximately 250-300 metres from the West Cambewarra route for the North Nowra link road alignment.

Research Potential: Low.



Plate 48: Shelter.



Plate 49: Artefact.

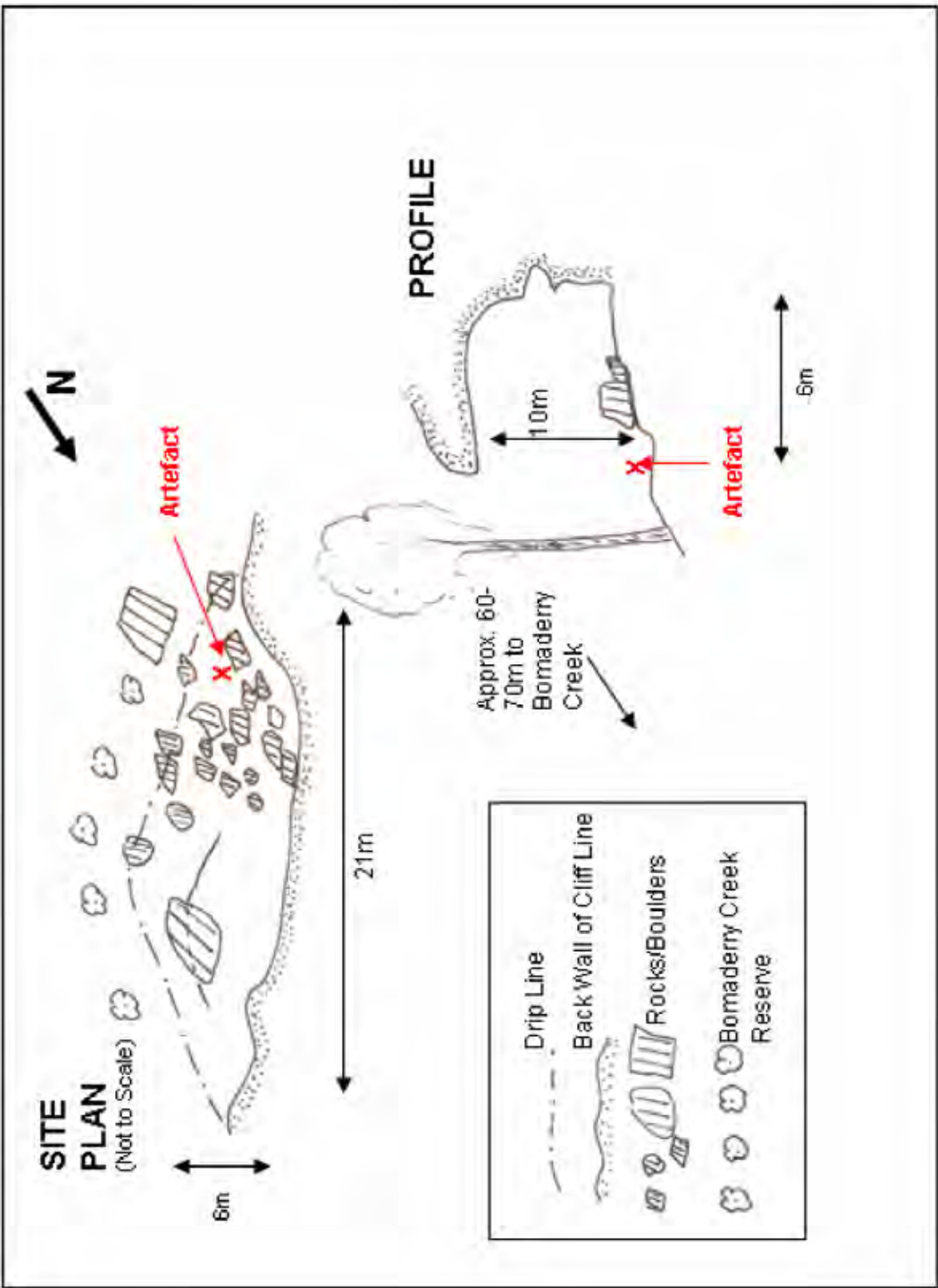


Figure 20: Site Plan & Profile

BCRP 018 - The Largest Shelter

AHIMS Number and Name: Possibly site 52-5-0386. The Big Bend.

Site Type: Shelter with Art. Site recorded 17/09/07.

Road Option: Option 2 (Southern Route)

Aspect: 130° M (south-east).

Site Description: Very large row of sandstone shelters on a bend along the western side of lower Bomaderry Creek [Plate 50, Plate 52, Plate 54 and Figure 21]. The row of shelters is 115 metres long x up to 30 metres deep x 20-25 metres high approximately at the drip line. The site was recorded as two shelters, Shelter A and Shelter B. Shelter A is the southern most shelter and is 50.9 metres long [Plate 50]. The northern corner of this shelter has a partly collapsed roof and between roof fall and back wall there is a flat area four to five metres wide, with charcoal stained deposit. One red fine-grained proximal flake was located in this area [Plate 51]. Much of the shelter floor is steeply sloped apart from an area five–six metres wide towards the back wall. Shelter B is partly separated from Shelter A by six metres due to the past roof collapse. Shelter B is 65 metres long x 15-20 metres deep x 20-25 metres tall [Plate 52 and Plate 54]. The deposit is less pale than in shelter A and has more orange staining from ironstone leaching. Around 30 metres from the center of this shelter there is a partly collapsed roof fall. To the south of the roof fall, at 29 metres from the start of the shelter towards the north there is a one faint indeterminate charcoal drawing on the shelter back wall, consisting of three vertical charcoal lines [Plate 53]. Two quartz cores were located at 45-50 metres in the shelter drip-line and one part of a possible broken grinding palette was recorded at 55 metres in the shelter drip-line [Plate 55].

Site Condition: Moderate.

Human Impacts: Rock climbers use the shelters as is evident from chalk marks and metal climbing rings up the back wall of the shelter [Plate 52]. Shelter A has a small amount of faint charcoal graffiti. Shelter B has two fireplace rings of stone in the first 30 metres. Apart from this the shelters are in good condition.

Natural Impacts/Weathering: Natural shelter wall exfoliation has caused the large shelter deposit to

form. Mineral salt stain and lichen growth has occurred on the back wall of the shelter and obscures the art in Shelter B.

Potential Impact Rating: Moderate. The Illaroo Road-West Bunberra route option for the North Nowra link road alignment will be approximately 100 metres away from the top of the shelter. The shelter overhang is very large and possibly sensitive to an increase in ground vibration from traffic and road works.

Research Potential: Moderate. A large shelter such as this would need more time for examination of other possible cultural features.



Plate 50: Shelter A.

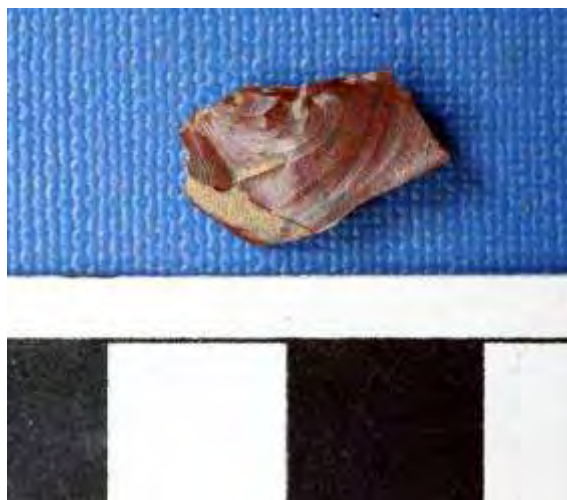


Plate 51: Artefact from shelter A.



Plate 52: Shelter B, section 1.



Plate 53: Charcoal art from shelter B, section 1.



Plate 54: Shelter B, section 2.



Plate 55: Grinding palette, shelter B, section 2.

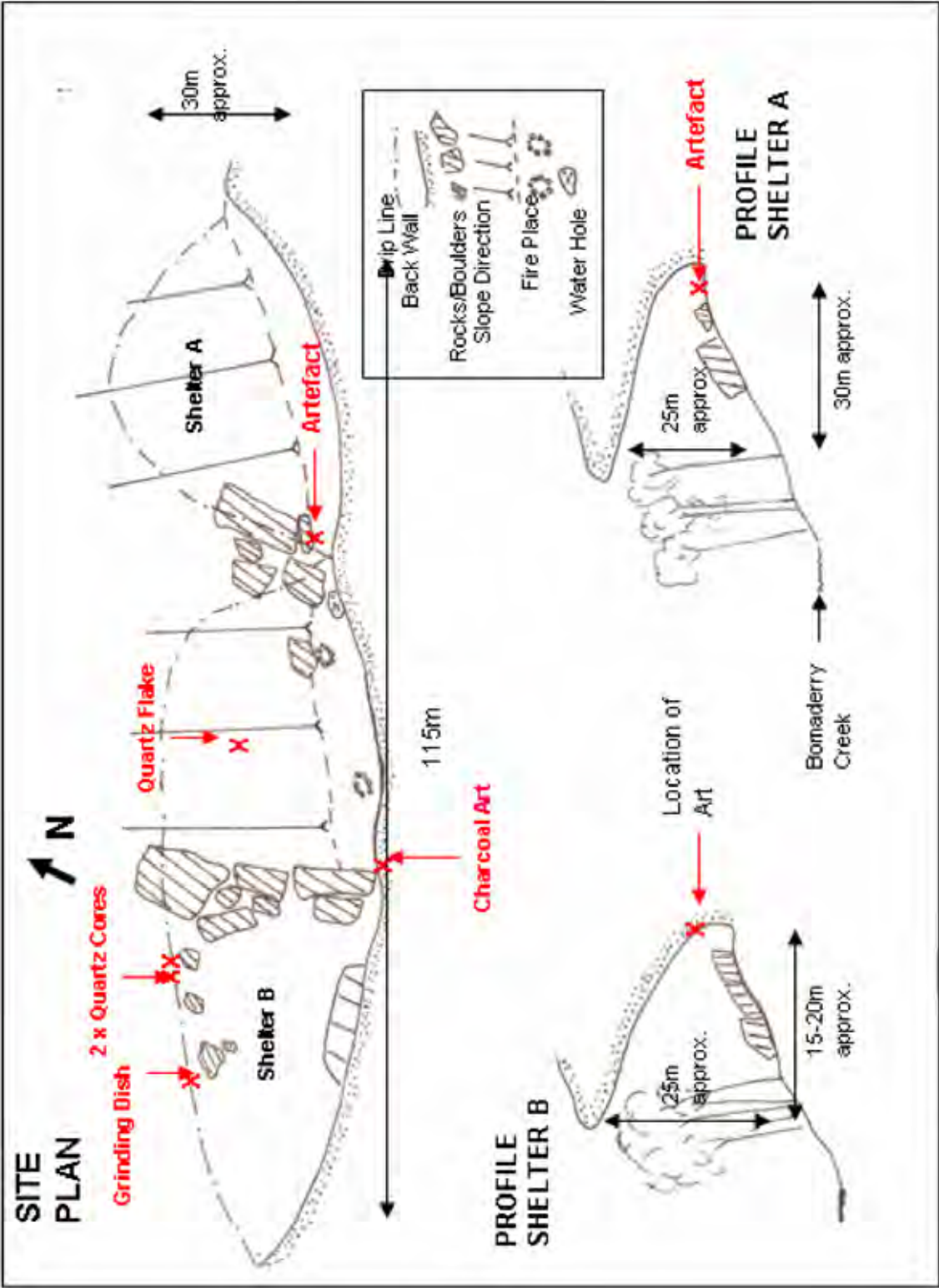


Figure 21: Site Plan & Profile

BCRP 019 - Boulder Shelter

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Occupation Shelter. Site recorded 17/09/07.

Road Option: Option 2 (Southern Route)

Aspect: 30° M (north-northeast).

Site Description: Small sandstone shelter on a detached boulder from the cliff line on the western side of Bomaderry Creek [Plate 56 and Figure 22]. The shelter is directly below (east of) the Illaroo Road-West Bunberra Street option for the North Nowra Road Alignment. The shelter is 18 metres long x 2.3 metres deep x 4-5 metres tall. The shelter is approximately 10 metres from Bomaderry Creek. One pale green flake, small shell fragments and one red fine-grained flake were located on the yellow/orange stained shelter deposit [Plate 57]. The fine-grained red flake has a possible pot-lid scar on the ventral surface towards the distal end. The Bomaderry Creek Reserve walking trail runs through the shelter.

Site Condition: Moderate.

Human Impacts: The Bomaderry Creek walking trail runs through the shelter and has caused minor erosion of the deposit.

Natural Impacts/Weathering: Natural shelter wall exfoliation is occurring. It is possible that the shelter is within a high flood zone.

Potential Impact Rating: Moderate-high. The Illaroo Road-West Bunberra Street option for the North Nowra Road Alignment would be located to the east and above the shelter.

Research Potential: Low.



Plate 56: Shelter.



Plate 57: Artefacts and shell fragments.

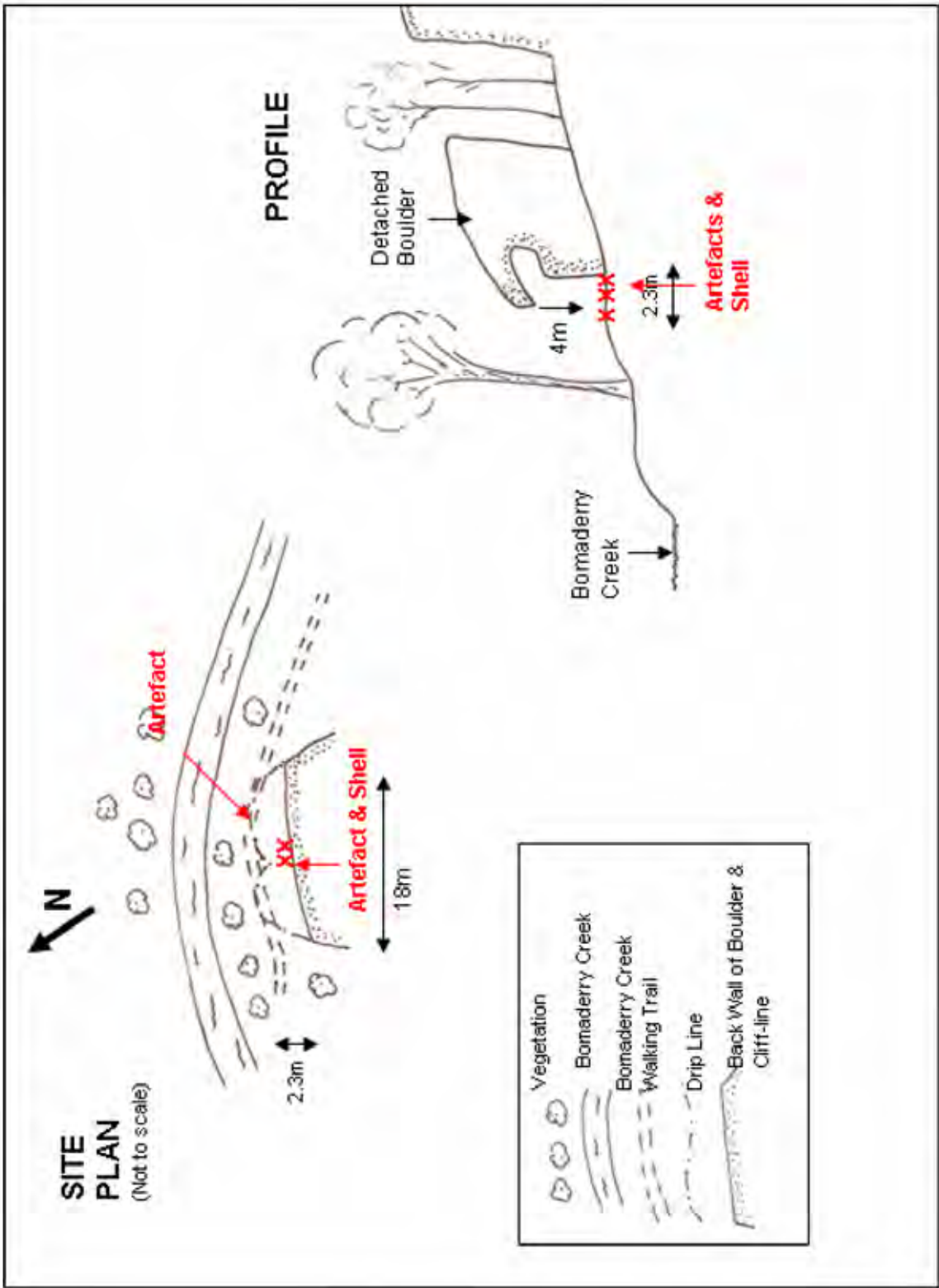


Figure 22: Site Plan & Profile

BCRP 020 - Spotted Gum Shelter

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Occupation Shelter. Site recorded 17/09/07.

Road Option: Option 2 (Southern Route)

Aspect: 76° M (east-north/east).

Site Description: Sandstone shelter formed by leaning cliff line on the western side of Bomaderry Creek gorge [Plate 58 and Figure 23]. The shelter is 25 metres long x 3 metres deep x 15-20 metres high approximately. 18 artefacts were observed at this site, mostly eroding from the Bomaderry Creek walking trail that runs through the central part of the shelter. The artefacts are predominately cores and flakes from a very fine-grained siliceous material, red in colour [Plate 59 and Plate 60]. Many of the artefacts have evidence of heat treatment in the form of pot-lid scars. There is also one dark green/grey flake with pale green/brown veins and very faint white flecks throughout. A very large spotted gum is growing at the front centre of the shelter.

Site Condition: Moderate.

Human Impacts: The Bomaderry Creek walking trail runs through the shelter and has caused minor erosion of the deposit [Plate 58].

Natural Impacts/Weathering: Natural shelter wall exfoliation is occurring. Drip-line erosion is exposing some artefacts.

Potential Impact Rating: Low. The Illaroo Road-West Bunberra Street option for the North Nowra Road Alignment would be located south of the shelter approximately 200 metres.

Research Potential: Low.



Plate 58: Shelter.



Plate 59: Artefacts.



Plate 60: Artefacts.

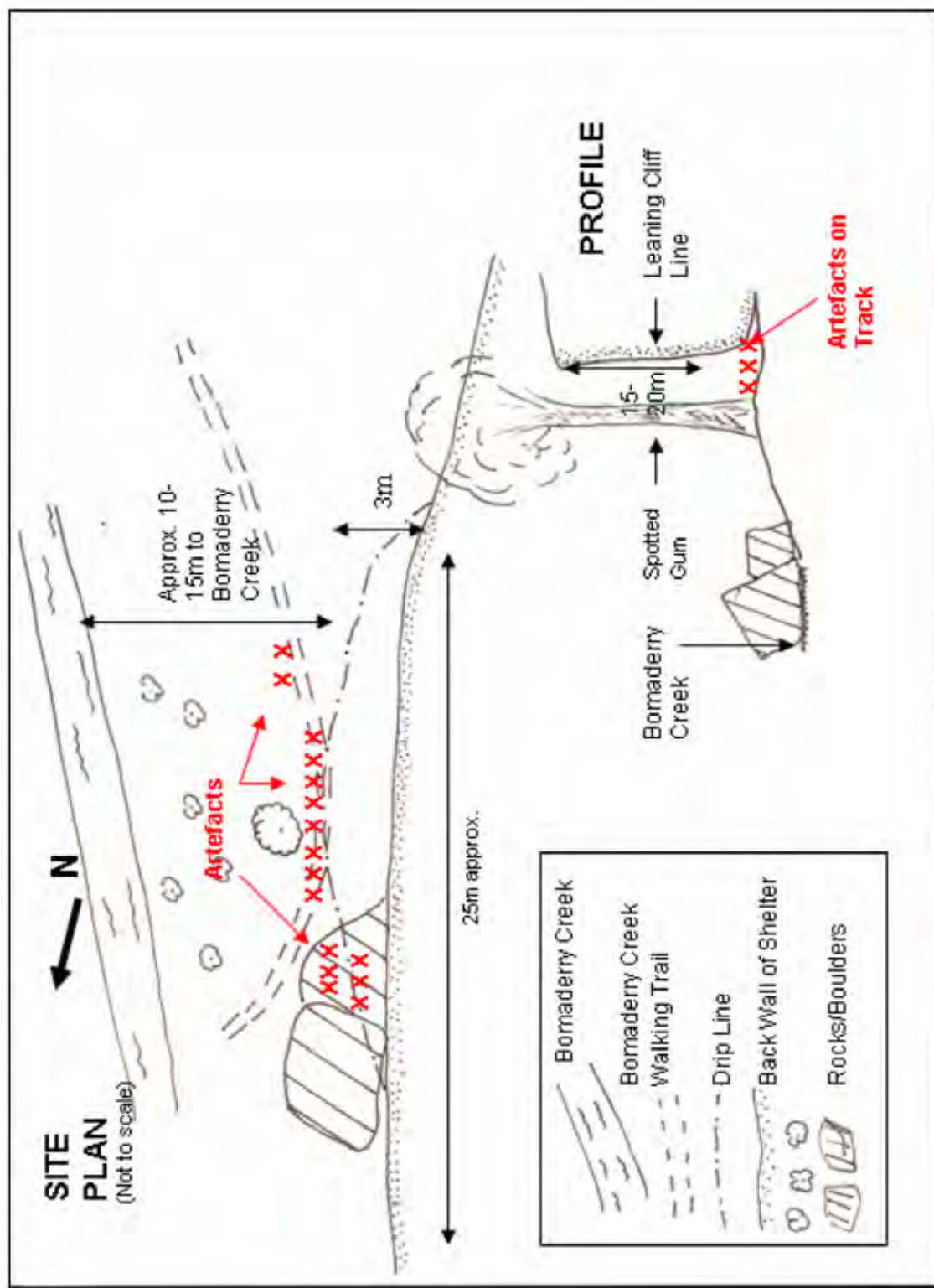


Figure 23: Site Plan & Profile

BCRP 021 - Sheltered Cave

AHIMS Number: 52-5-0389. Shelter Cave.

Site Type: Occupation Shelter. Site recorded 17/09/07.

Road Option: Option 2 (Southern Route)

Aspect: 80° M (east-north/east).

Site Description: Sandstone shelter on the western side of Bomaderry Creek gorge [Plate 61 and Figure 24]. The shelter is 19 metres long x 6.2 metres deep x approximately 4 metres high. The shelter is sign posted as the 'Sheltered Cave' at the entrance along Bomaderry Creek walking trail. More than 10 artefacts were located at the shelter consisting of six red fine-grained flakes and flake pieces, two quartz flakes and two black fine-grained flakes with pale veins and pebbular cortex [Plate 62 and Plate 63]. The deposit is heavily charcoal stained.

Site Condition: Moderate.

Human Impacts: The Bomaderry Creek walking trail runs past the entrance to the shelter. The shelter is advertised on the trail as a 'Sheltered Cave'. A wooden seat has been erected on the shelter deposit in the past. There is a fireplace ring of stones towards the back wall of the shelter with a small amount of charcoal graffiti above this. Aluminum foil remains were observed in the fireplace.

Natural Impacts/Weathering: Natural shelter wall exfoliation is occurring. Drip-line erosion is exposing some artefacts. Roof collapse has occurred in the southern half of the shelter in the past.

Potential Impact Rating: Low. The Illaroo Road-West Bunberra Street option for the North Nowra Road Alignment would be located south of the shelter approximately 400 metres.

Research Potential: Low.



Plate 61: Shelter.



Plate 62: Artefacts.



Plate 63: Artefacts.

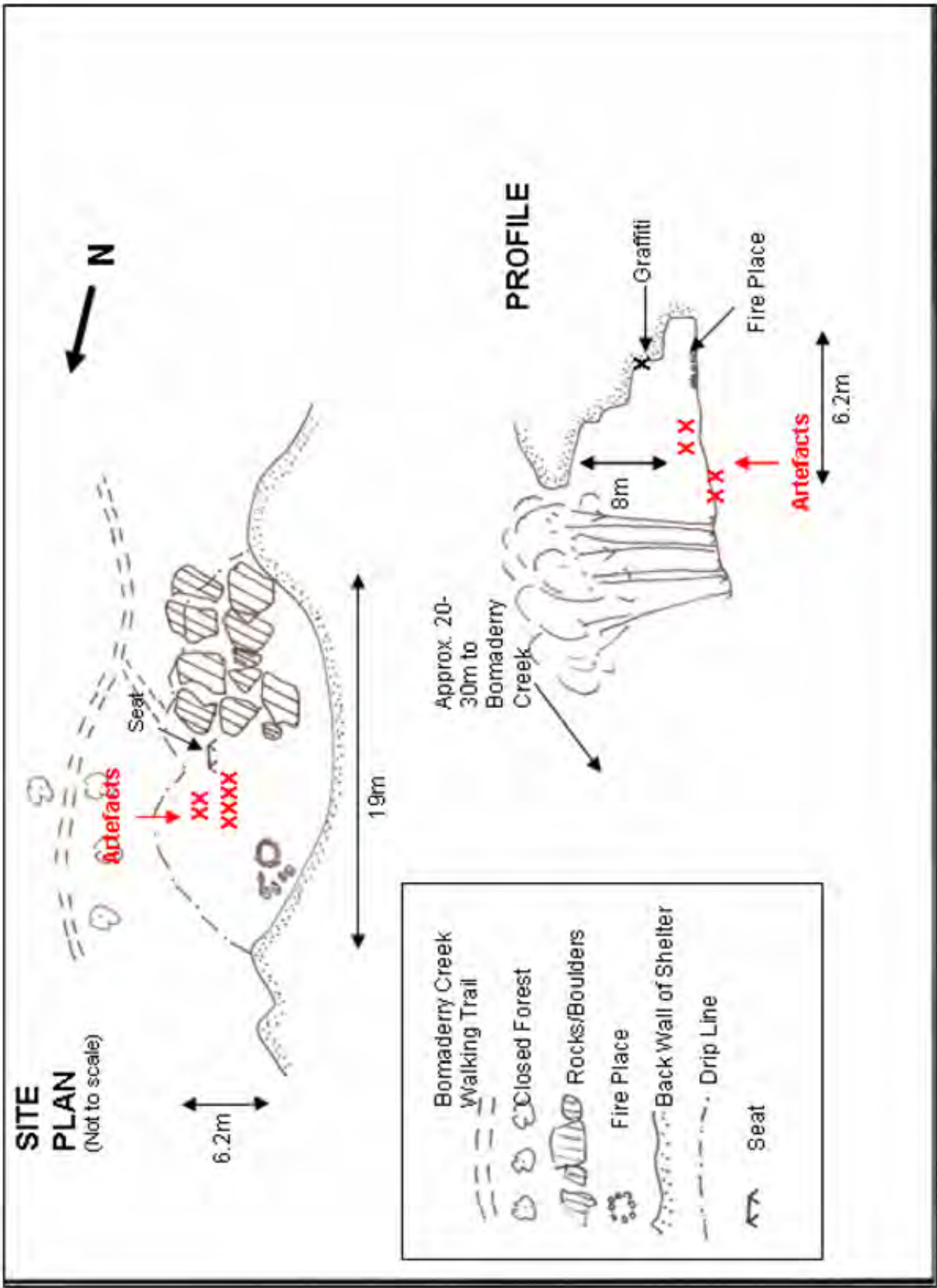


Figure 24: Site Plan & Profile

BCRP 022 - 30 Metres West of the Sheltered Cave

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Occupation Shelter. Site recorded 17/09/07.

Road Option: Option 2 (Southern Route)

Aspect: 30° M (north-north/east).

Site Description: Sandstone shelter on the western side of Bomaderry Creek gorge [Plate 64 and Figure 25]. The shelter is 12 metres long x 3.2 metres deep x 4.5 metres high. The shelter is located approximately 30 metres west of site 021, the 'Sheltered Cave'. Two red fine-grained proximal flakes, one with pot-lid scar on the ventral surface, were located at this site [Plate 65]. The deposit has 70% native grass cover. An upper hole or cavity in the shelter back wall is located in the north/west part of the shelter.

Site Condition: Poor.

Human Impacts: No non-Indigenous impacts were observed.

Natural Impacts/Weathering: Natural shelter wall exfoliation is occurring. The deposit slopes slightly from north to south causing minor erosion along the drip line.

Potential Impact Rating: Low. The Illaroo Road-West Bunberra Street option for the North Nowra Road Alignment would be located south of the shelter approximately 450 metres.

Research Potential: Low.



Plate 64: Shelter.

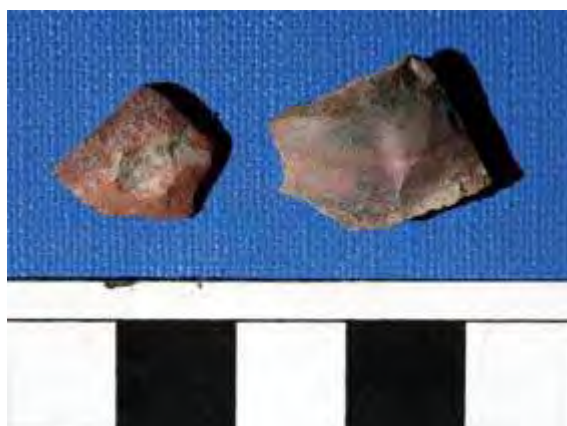


Plate 65: Artefacts.

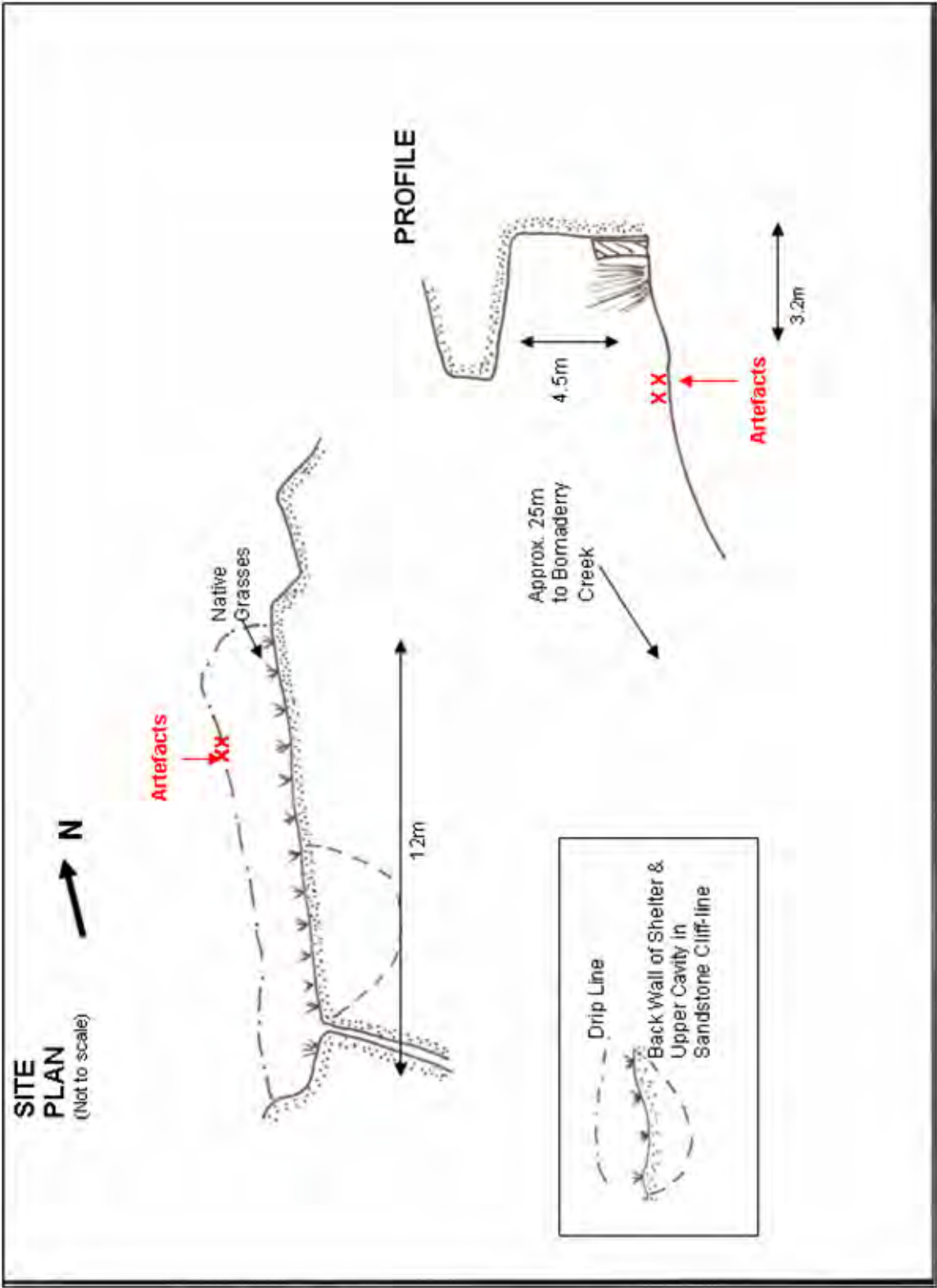


Figure 25: Site Plan & Profile

BCRP 023 - Charcoal Oval Art Site

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Shelter/Art. Site recorded 17/09/07.

Road Option: Option 1 (Central Route)

Aspect: 345° M (north).

Site Description: Sandstone shelter on the western side of Bomaderry Creek gorge [Plate 66 and Figure 26]. The shelter is formed by a leaning cliff-line and is 31 metres long x 2 metres deep x 6-7 metres high approximately. One red fine-grained flake piece and one red fine-grained core were observed eroding from the edge of the Bomaderry Creek walking trail towards the north of the shelter. The deposit mostly has a cover of native grasses and bracken. Two charcoal drawings were observed in the northwest of the shelter back wall. They are located on the southern side of a fault in the back wall of the shelter in which small animals have been burrowing. Motif one consists of a charcoal oval with no infill, 1.3 metres from the shelter floor [Plate 67]. Motif two consists of seven parallel/diagonal charcoal lines 1.07 metres from the shelter floor. [Plate 68]

Site Condition: Poor.

Human Impacts: Minor erosion of the central front section of the deposit from the Bomaderry Creek walking trail.

Natural Impacts/Weathering: Natural shelter wall exfoliation is occurring. The back wall of the shelter is stained with white mineral salt and partially lichen covered.

Potential Impact Rating: Low. The shelter is not located near the North Nowra Road Alignments.

Research Potential: Low.



Plate 66: Shelter.



Plate 67: Charcoal art – motif 1.

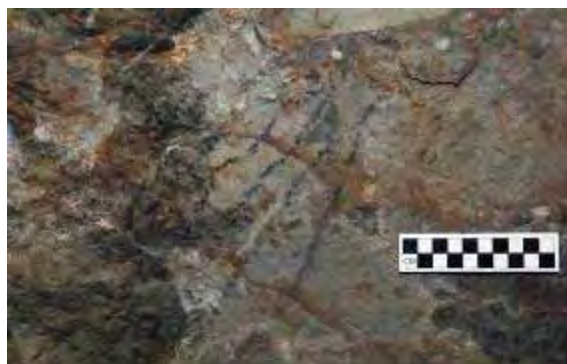


Plate 68: Charcoal art – motif 2.

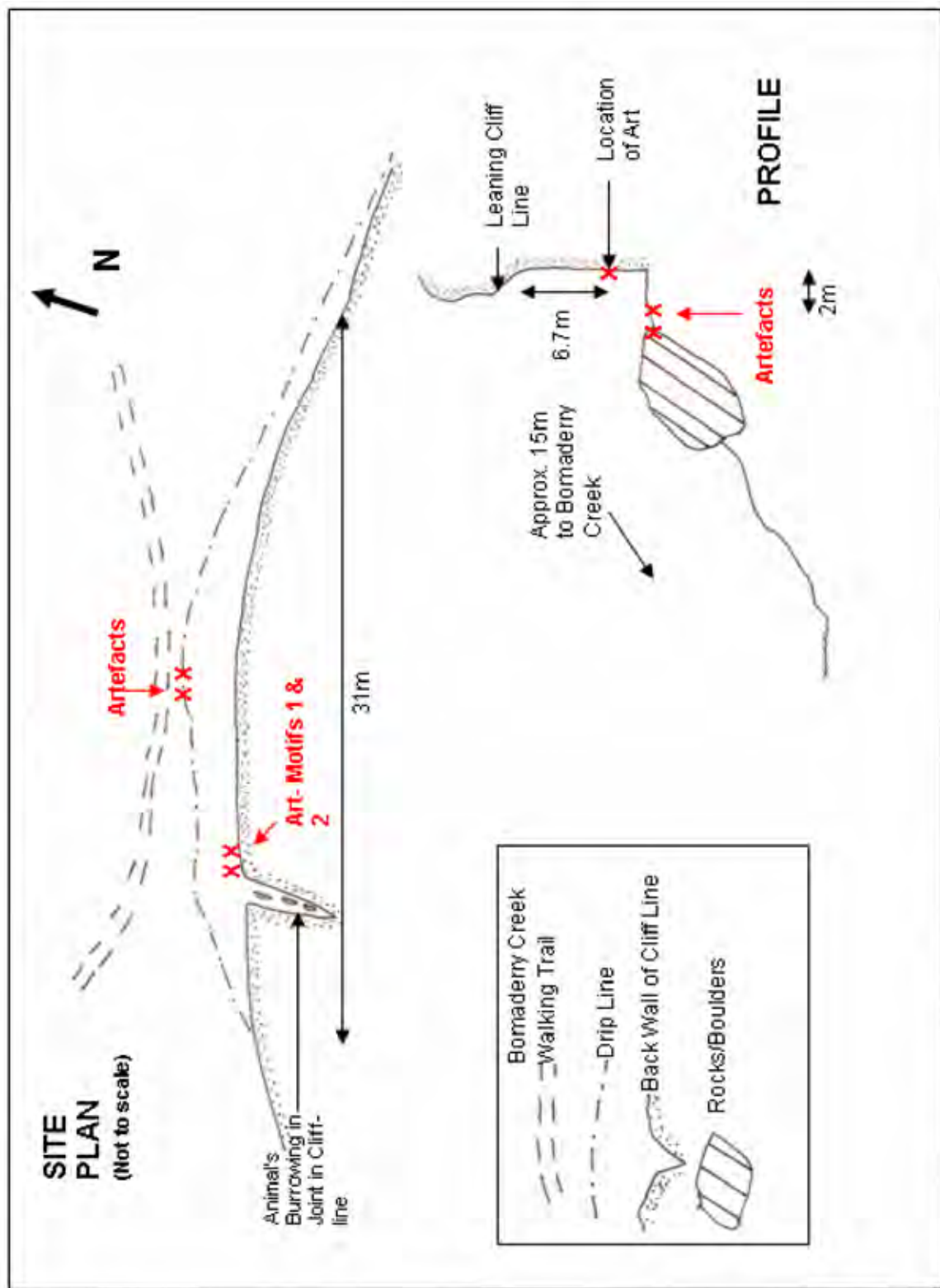


Figure 26: Site Plan & Profile

BCRP 024 - One Silcrete Flake Shelter

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Occupation Shelter. Site recorded 17/09/07.

Road Option: Option 1 (Central Route)

Aspect: 17° M (north).

Site Description: Small sandstone shelter on the western side of Bomaderry Creek gorge. The shelter is 6.7 metres long x 2.10 metres deep x 1.3 metres high (Plate 69 and Figure 27). One grey silcrete flake with a step termination was located in the drip line towards the centre of the shelter (Plate 70). The shelter is approximately six metres west of the Bomaderry Creek Reserve walking trail and 10-12 metres from Bomaderry Creek.

Site Condition: Poor.

Human Impacts: One plastic bottle modified for smoking marijuana is located on the shelter floor.

Natural Impacts/Weathering: Natural shelter wall exfoliation is occurring. The back wall of the shelter is partially lichen covered.

Potential Impact Rating: Low. The shelter is not located near the North Nowra Road Alignments.

Research Potential: Low.



Plate 69: Shelter.



Plate 70: Artefact.

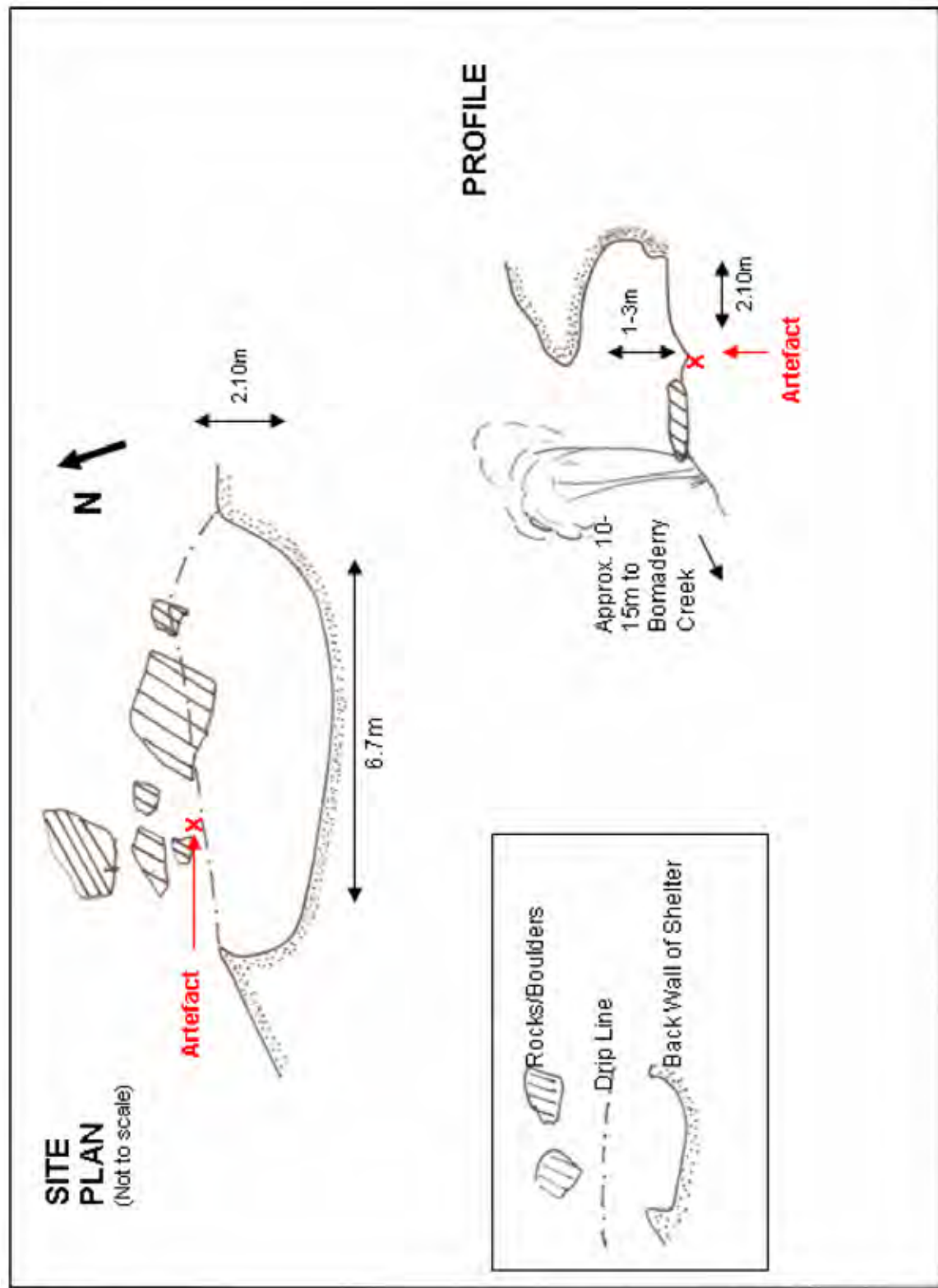


Figure 27: Site Plan & Profile

BCRP 025 - Trenched Drip-Line Shelter

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Occupation Shelter. Site recorded 17/09/07.

Road Option: Option 1 (Central Route)

Aspect: 50° M (north-east).

Site Description: Long sandstone shelter on the western side of Bomaderry Creek gorge [Plate 71 and Figure 28]. The shelter is 44 metres long x 4 metres deep x 5 metres high. At the northern end of the site Bomaderry Creek flows within two metres of the shelter. The drip line has eroded into the deposit approximately 35-40 centimetres. Six red fine-grained flakes and flake pieces were observed along the shelter drip-line [Plate 72]. The deposit is scattered with fresh water mussel shells that could be the result of flood deposition.

Site Condition: Moderate.

Human Impacts: Small amount of graffiti towards the centre and north part of the shelter. There is also a small amount of broken glass, toilet paper and fireplace ring of stones.

Natural Impacts/Weathering: Natural shelter wall exfoliation is occurring. The back wall of the shelter is damp and partially lichen covered.

Potential Impact Rating: Low. The shelter is not located near the North Nowra Road Alignments.

Research Potential: Low.



Plate 71: Shelter.



Plate 72: Artefacts.

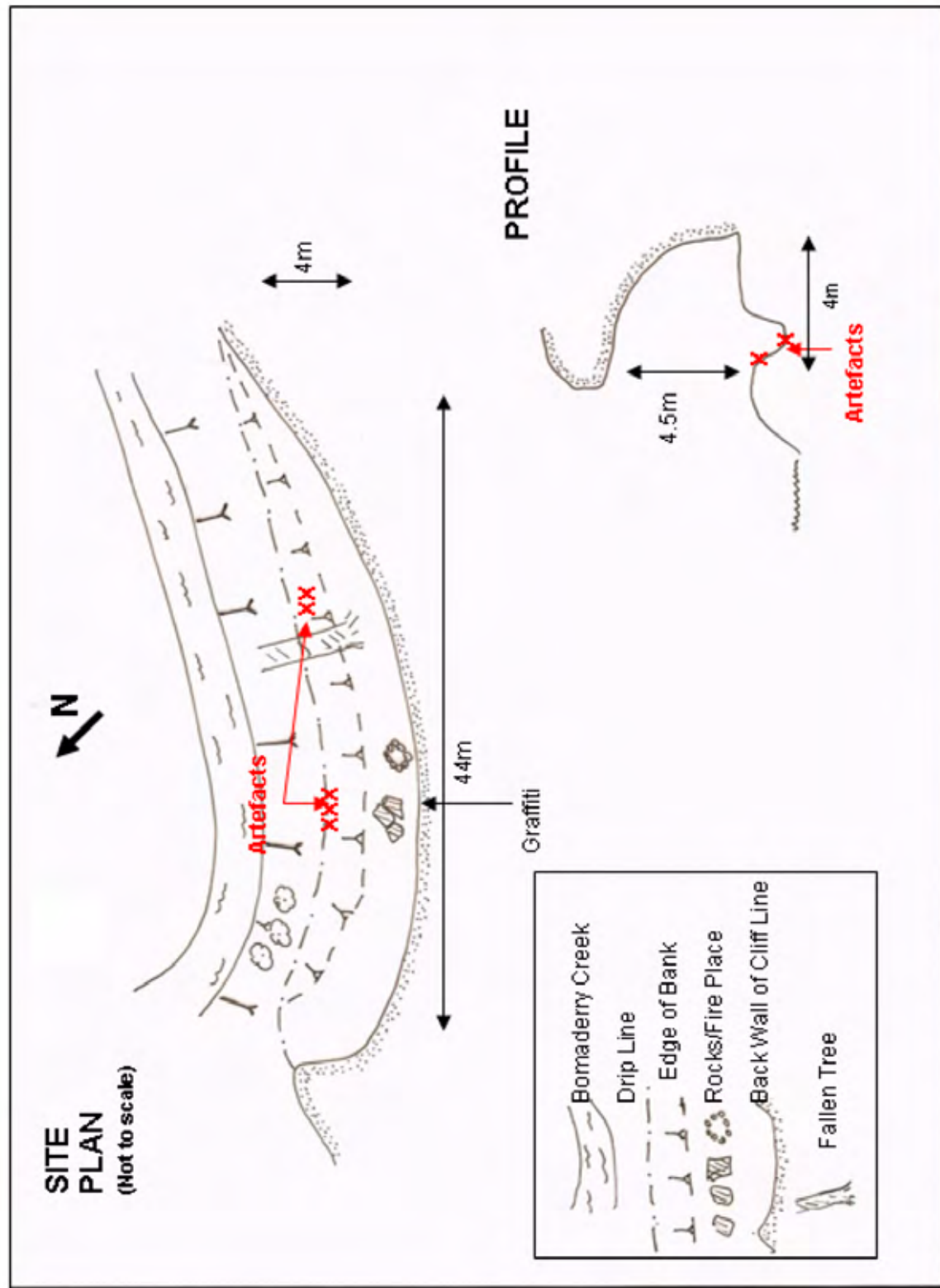


Figure 28: Site Plan & Profile

BCRP 026 - Rock Fall Canyon Shelter

AHIMS Number: Site not previously recorded with AHIMS..

Site Type: Occupation Shelter. Site recorded 17/09/07

Road Option: Option 2 (Southern Route)

Aspect: 280° M (west).

Site Description: Sandstone shelter on the eastern side of Bomaderry Creek gorge, directly below the Illaroo Road-West Bunberra Street option for the North Nowra Road Alignment [Plate 73 and Figure 29]. The shelter is 18.4 metres long x 9.4 metres deep x approximately 20 metres high at the drip-line. The shelter is at the down stream (southern) side of the Rock Fall Canyon in Bomaderry Creek Reserve. The walking trail through the reserve runs through the shelter. The deposit slopes from the back wall to the front and has a small scattering of shell fragments towards the drip-line [Plate 74]. One red fine-grained flake piece was located at the central part of the drip-line [Plate 74]. An aluminum seat has been erected in the centre of the deposit.

Site Condition: Poor.

Human Impacts: Small amount of graffiti on the shelter back wall. Aluminum seat has been erected on the deposit.

Natural Impacts/Weathering: Natural shelter wall exfoliation is occurring. The back wall of the shelter is partially lichen covered.

Potential Impact Rating: High. The shelter is located directly below the Illaroo Road-West Bunberra Street option for the North Nowra Road Alignment.

Research Potential: Low.



Plate 73: Shelter.



Plate 74: Shell Fragments and Artefact.

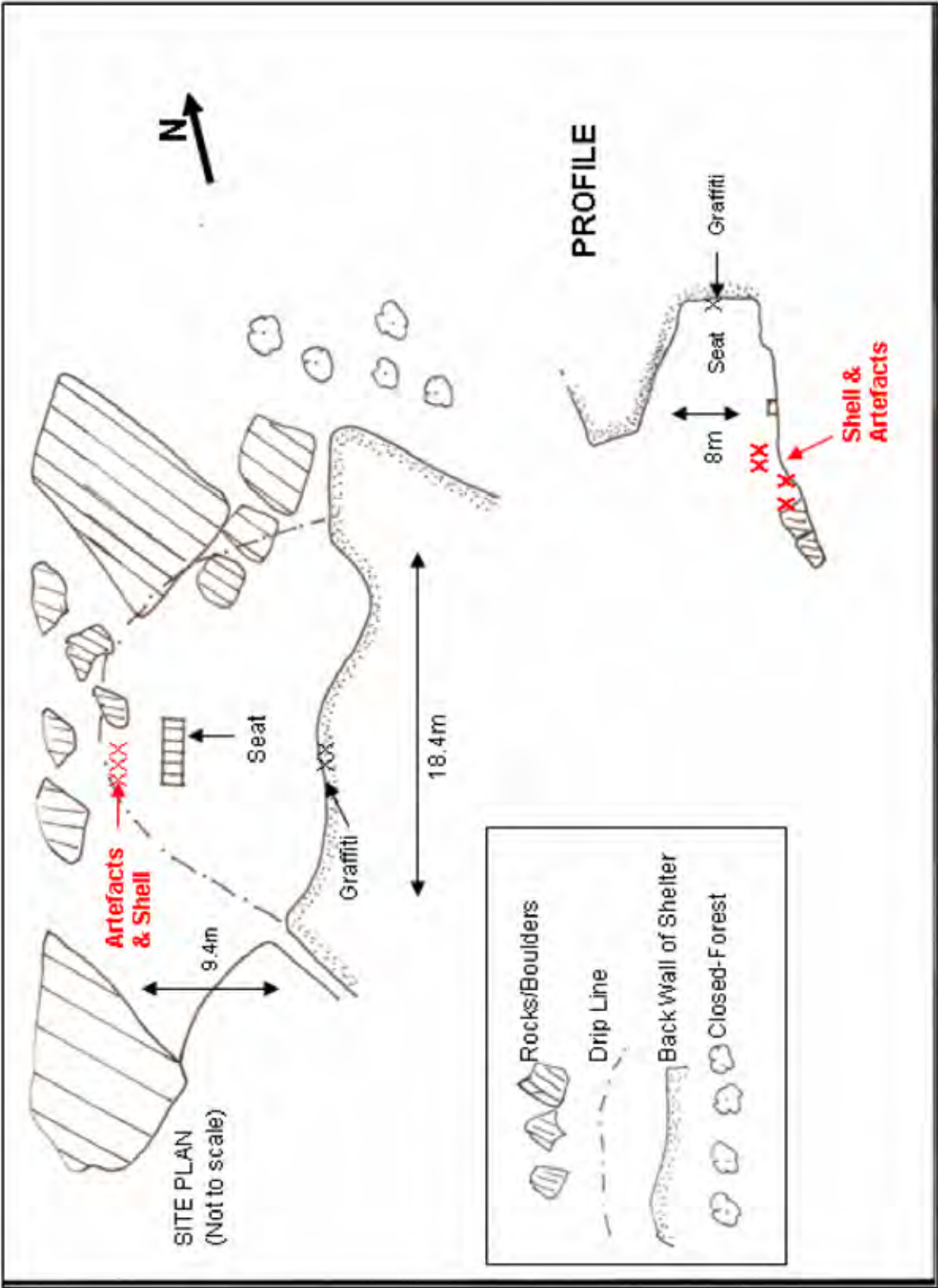


Figure 29: Site Plan & Profile

BCRP 027 - Feather Termination Shelter

AHIMS Number: Site not previously recorded with AHIMS.

Site Type: Occupation Shelter. Site recorded 17/09/07.

Road Option: Option 2 (Southern Route)

Aspect: 152° M (south-south/east).

Site Description: Large sandstone shelter on the eastern side of Bomaderry Creek gorge, close to the Illaroo Road-West Bunberra Street option for the North Nowra Road Alignment [Plate 75 and Figure 30]. The shelter is 36 metres long x 7 metres deep x approximately 20 metres high at the drip-line. The Bomaderry Creek Reserve walking trail runs through the shelter. Eight artefacts were recorded at the site consisting of five red fine-grained flake pieces, one red fine-grained core, one quartz core and one pale-grey silcrete flake with feather termination and re-touch along the left lateral margin [Plate 76 and Plate 77].

Site Condition: Moderate.

Human Impacts: The Bomaderry Creek walking trail runs through the shelter and has caused minor erosion of the shelter deposit.

Natural Impacts/Weathering: Natural shelter wall exfoliation is occurring. The back wall of the shelter is partially covered by mineral salt staining and lichen growth.

Potential Impact Rating: High. The shelter is located close to the Illaroo Road-West Bunberra Street option for the North Nowra Road Alignment.

Research Potential: Moderate.



Plate 75: Shelter.



Plate 76: Artefacts and Shell Fragment.



Plate 77: Silcrete Flake.

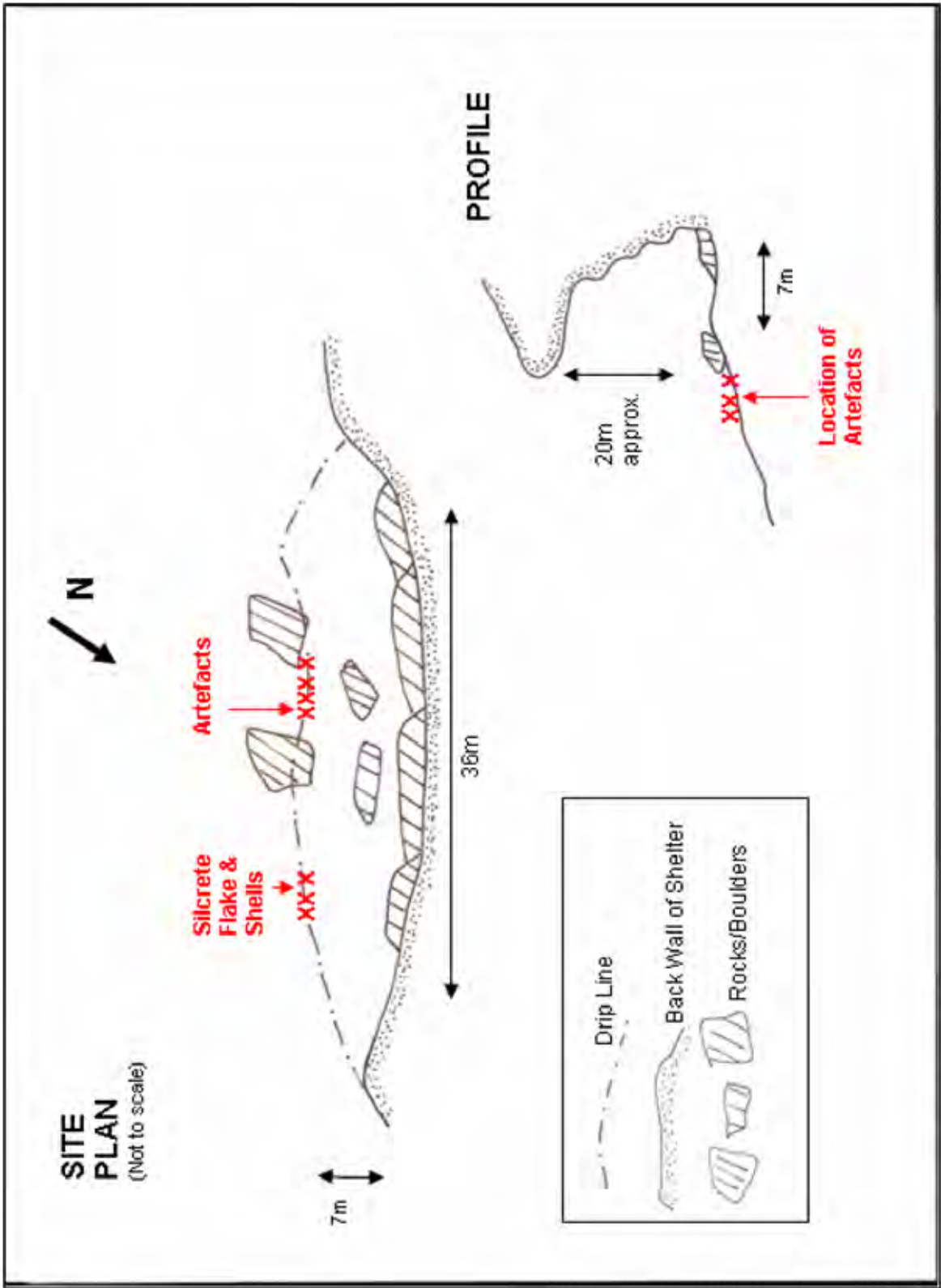


Figure 30: Site Plan & Profile

BCRP 028 – West Cambewarra Rd, Bomaderry Creek

AHIMS Number: 52-2-1797

Site Type: Grinding Grooves. Site recorded 1/12/09.

Road Option: Option 3 (Northern Route)

Aspect: n/a

Site Description: Sandstone outcrop bordering the eastern margin of Bomaderry Creek. Site originally recorded in 1995. The coordinates from the original recording place the site approximately 85 m south of its actual location. Using the site description from the AHIMS site card, the grinding grooves were identified beneath thick leaf litter and casuarina needles near the edge of a sandstone outcrop and approximately 2.5 m above Bomaderry Creek. A total of 10 grinding grooves were identified. An artificial pool cut into the sandstone outcrop was located immediately east of the grinding grooves.

Site Condition: Moderate.

Human Impacts: Located in an easily accessible portion of Bomaderry Creek. Excavation of rock pool may have destroyed other grinding grooves in the vicinity.

Natural Impacts/Weathering: Surface weathering of sandstone surface.

Potential Impact Rating: Very high. The site is located within Option 3.

Research Potential: Moderate.



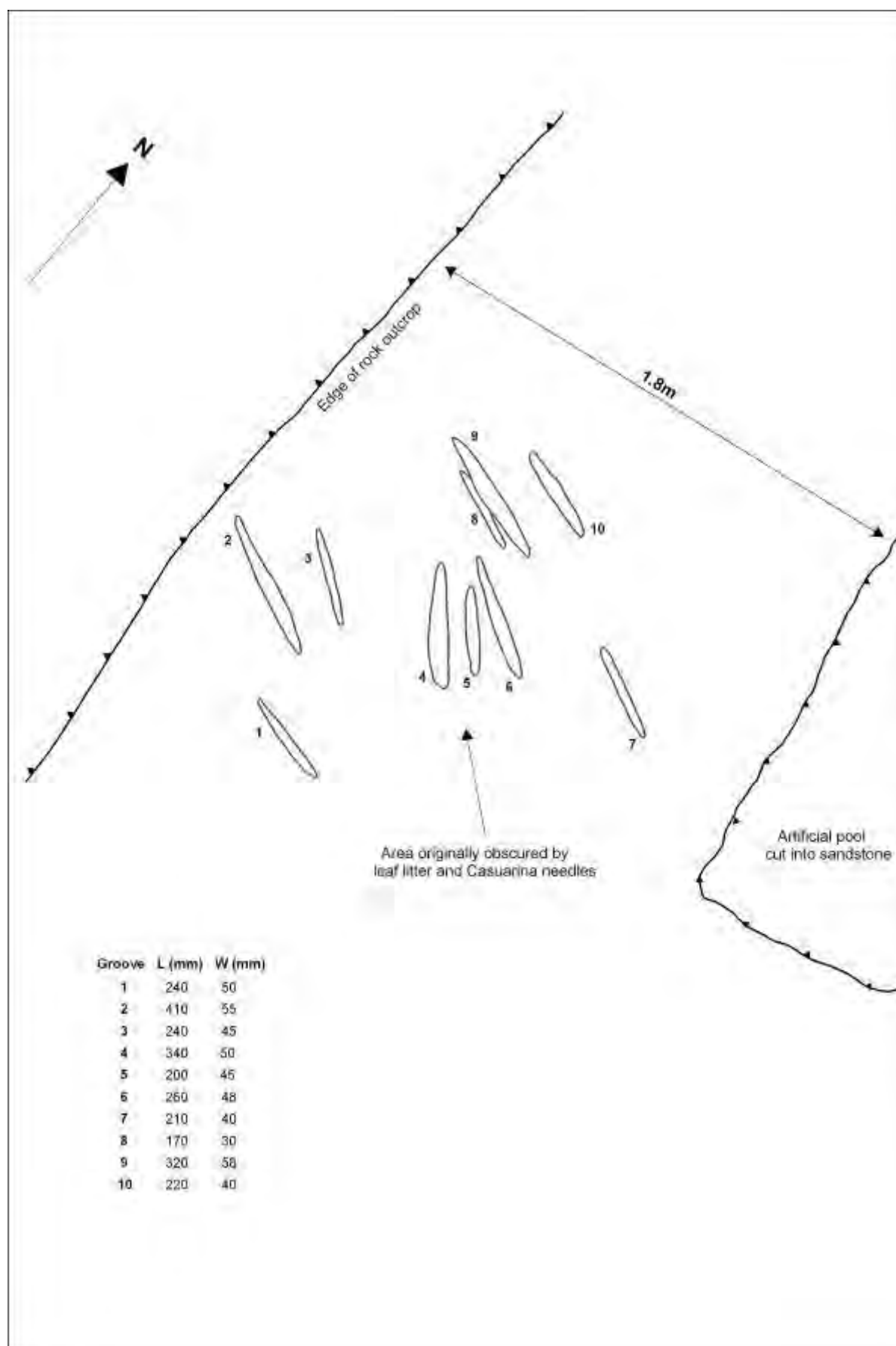
Plate 78: View south across the rock outcrop, showing the artificial pool in the centre of the photo and the grinding grooves next to the range pole.



Plate 79: View northwest across grinding grooves, with Bomaderry Creek in the background.



Plate 80: Grinding grooves, site BCRP 028.



7 Significance Assessment

7.1 Significance Assessment Criteria

One of the primary steps in the process of cultural heritage management is the assessment of significance. Not all sites are equally significant and not all are worthy of equal consideration and management (Sullivan and Bowdler 1984, Pearson and Sullivan 1995:7). The determination of significance can be a difficult process as the social and scientific context within which these decisions are made is subject to change (Sullivan and Bowdler 1984). This does not lessen the value of the heritage approach, but enriches both the process and the long-term outcomes for future generations as the nature of what is conserved and why, also changes over time.

Significance assessment can generally be described under three broad headings (Pearson and Sullivan 1995:7):

- value to groups such as Aboriginal communities;
- value to scientists and other information gatherers; and
- value to the general public in the context of regional, state and national heritage.

Professional guidelines for the assessment of significance (NPWS 1997) discuss two types of significance relevant to the assessment of Aboriginal sites: social significance and archaeological significance.

Cultural / Social Significance

This area of assessment concerns the value/s of a feature or site to a particular community group, in this case the local Aboriginal community. Aspects of social significance are relevant to sites, objects and landscapes that are important or have become important to the local Aboriginal community. This importance involves both traditional links with specific areas as well as an overall concern by Aboriginal people for sites generally and their continued protection. Aboriginal cultural significance may include social, spiritual, historic and archaeological values.

Scientific / Archaeological Significance

For archaeologists, scientific significance refers to the potential of a site to contribute to current research questions. Alternately, a site may be an *in situ* repository of demonstrably important information, for example rare artefacts of unusually high antiquity.

Scientific significance is assessed using criteria to evaluate the contents of a site, state of preservation, integrity of deposits, representativeness of the site type, rarity/uniqueness and potential to answer research questions on past human behaviour (NPWS 1997). DEC guidelines recommended criteria for assessing archaeological significance include:

- ♦ *Archaeological Research Potential* - significance may be based on the potential of a site or landscape to explain past human behaviour and can incorporate the intactness, stratigraphic integrity or state of preservation of a site, the association of the site to other sites in the region (connectivity), or a datable chronology;
- ♦ *Representativeness* - all sites are representative of those in their class (site type/subtype) however; the issue here relates to whether particular sites should be conserved to ensure a representative sample of the archaeological record is retained. Representativeness is based on an understanding of the regional archaeological context in terms of site variability in and around the study area, the resources already conserved and the relationship of sites across the landscape; and
- ♦ *Rarity* – which defines how distinctive a site may be, based on an understanding of what is unique in the archaeological record and consideration of key archaeological research questions (i.e. some sites are considered more important due to their ability to provide certain information). It may be assessed at local, regional, state and national levels.

High significance is usually attributed to sites which are so rare or unique that the loss of the site would affect our ability to understand an aspect of past Aboriginal use/occupation of an area. In some cases a site may be considered highly significant because it is now rare due to destruction of the archaeological record through development. Moderate/Medium significance is attributed to sites which provide information on an established research question. Low significance is attributed to sites which cannot contribute new information about past Aboriginal use/occupation of an area. This may be due to site disturbance or the nature of the site's contents.

7.2 Significance of Aboriginal Sites

28 sites are discussed in this report in relation to potential impact caused by the various road options. 20 of these sites are newly recorded sites and the remainder are previously identified sites. 21 of the sites exhibit low archaeological significance (Table 4) in accordance with the above criteria. These sites are generally located in a disturbed context.

Six of the sites exhibit at least moderate archaeological significance (Table 4). These six sites are more representative of Bomaderry Creek's regional archaeological importance (compare Clarke and Kuskie 2006) and are generally located in more information bearing landforms and are more likely found in a less disturbed context. Further to this assessment, representative rock art sites should be considered of higher value within Bomaderry Gorge as these sites more clearly define the archaeological nature of gorge

Council has indicated its willingness and flexibility to shift its provisional design corridors to mitigate potential impact as it recognises the significance of the region's archaeological story. All archaeological sites should be considered during the detailed design stages.

Cultural Significance

Cultural significance is assessed by the Aboriginal stakeholders. Consultation with Aboriginal stakeholders indicates all sites have some significance to the Aboriginal community as evidence of the presence of their forbearers.

7.3 Potential Impact to Significant Aboriginal Heritage

Option 1

This option exhibits a low potential to impact on Aboriginal archaeological and cultural significance. Three sites may be impacted by this option (see section 8.1). Although all identified archaeological sites exhibit some cultural significance as indicated by the Aboriginal community during field inspections, none of the potential impacted sites within Option 1 display exceptional cultural or archaeological value.

Option 2

This option exhibits a moderate potential to impact on Aboriginal archaeological and cultural significance. Three sites may be impacted by this option (see section 8.2). Discussions during field inspections with the Aboriginal community indicate that this (southern) portion of Bomaderry Gorge is more culturally significant (as a cultural landscape) than the more northern portion. In addition, some of the archaeology identified along this route is of moderate significance and should be conserved if possible. In short, Option 2 displays moderate Aboriginal cultural and archaeological significance.

Option 3

This option exhibits a moderate potential to impact on Aboriginal archaeological and cultural significance. Three sites exhibit some potential to be impacted by Option 3 (see section 8.3). Option 3 displays the highest archaeological significance, compared to the other options, amongst potentially impacted sites and should be conserved if possible. Discussions with the Aboriginal community during fieldwork indicate that the identified Aboriginal objects along this route (e.g. 52-5-0546 and 52-2-1797) are of at least moderate cultural value. In short, Option 3 displays moderate Aboriginal cultural and archaeological significance.

Table 4. Summary table of site condition, archaeological significance and impact potential

Report ID	AHIMS	Route Option	Condition	Archaeological Significance
BCRP 001	52-5-0538	Option 1 Pitt to Narang	Poor	Moderate
BCRP 002	52-5-0539	Option 1 Pitt to Narang	Poor	Low
BCRP 003	52-5-0540	Option 2 Illaroo to West Bunberra	Poor	Low
BCRP 004	52-5-0453	Option 2 Illaroo to West Bunberra	Moderate	Moderate
BCRP 005	52-5-0541	Option 2 Illaroo to West Bunberra	Moderate	Low
BCRP 006	52-5-0542	Option 1 Pitt to Narang	Poor	Low
BCRP 007	52-5-0543	Option 1 Pitt to Narang	Moderate	Low
BCRP 008	52-5-0454	Option 1 Pitt to Narang	Poor	Low
BCRP 009	52-5-0262	Option 1 Pitt to Narang	Poor	Low
BCRP 010	52-5-0263	Option 1 Pitt to Narang	Poor	Low
BCRP 011	52-5-0390	Option 1 Pitt to Narang	Poor	Low
BCRP 012	52-5-0544	Option 1 Pitt to Narang	Poor	Low
BCRP 013	52-5-0545	Option 3 West Cambewarra	Poor	Low
BCRP 014	52-5-0546	Option 3 West Cambewarra	Moderate – Poor	Moderate
BCRP 015	52-5-0547	Option 3 West Cambewarra	Poor	Low
BCRP 016	52-5-0548	Option 2 Illaroo to West Bunberra	N/A	Low
BCRP 017	52-5-0549	Option 2 Illaroo to West Bunberra	Moderate	Low
BCRP 018	52-5-0386	Option 2 Illaroo to West Bunberra	Moderate	Moderate
BCRP 019	52-5-0551	Option 2 Illaroo to West Bunberra	Moderate	Low
BCRP 020	52-5-0552	Option 2 Illaroo to West Bunberra	Moderate	Low
BCRP 021	52-5-0389	Option 2 Illaroo to West Bunberra	Moderate	Low
BCRP 022	52-5-0552	Option 2 Illaroo to West Bunberra	Poor	Low
BCRP 023	52-5-0554	Option 1 Pitt to Narang	Poor	Low
BCRP 024	52-5-0554	Option 1 Pitt to Narang	Poor	Low
BCRP 025	52-5-0556	Option 1 Pitt to Narang	Moderate	Low
BCRP 026	52-5-0557	Option 2 Illaroo to West Bunberra	Poor	Low
BCRP 027	52-5-0558	Option 2 Illaroo to West Bunberra	Moderate	Moderate
BCRP 028	52-2-1797	Option 3 West Cambewarra	Moderate	Moderate

8 Impact Assessment and Management Strategy

All three options exhibit some potential to directly impact on Aboriginal archaeological heritage. Informed detailed design should be able to limit or eliminate impact on Aboriginal archaeological heritage. Conservation of significant Aboriginal heritage should be given priority.

Council has indicated it will take Aboriginal heritage into consideration when selecting a preferred option (following on from the findings in the Stage 1 report).

8.1 Option 1 Impact Assessment

Option 1 does not exhibit a direct impact on significant archaeological features. Potentially impacted sites from Option 1 include:

- a disturbed low significance artefact scatter (52-5-0390);
- a disturbed low significance rock shelter (52-5-0542); and
- a disturbed low significance isolated find (52-5-0544).

Based on existing design information provided by Council (Appendix B) Option 1 will have the least direct impact on Aboriginal heritage in relation to Options 2 and 3.

No mitigation is warranted for the impacted sites associated with Option 1. The sites are either disturbed or contain little potentially significant archaeological information (e.g. disturbed or no archaeological deposit). However it is recommended that any impact is avoided if possible. In particular, further detailed design may be able to avoid direct impact to site 52-5-0542. It is further recommended that any portions of a site not directly impacted should be temporarily fenced along the construction boundary to limit inadvertent impacts.

Aboriginal Community Views

Discussions with the Aboriginal community indicate a preference for Option 1. This option was seen to have the smallest direct impact on Aboriginal archaeological and cultural heritage. The identified archaeological sites potentially impacted by Option 1 were seen as representing low cultural significance and not warranting mitigation. Furthermore, based on discussions in the field with Aboriginal representatives, the perceived cultural significance (and archaeology) of the gorge is greatest around Option 2 and the direct impacts are most significant with Option 3.

This report has been forwarded to NLALC for comment (May 2010). To date no comments have been received (July 2010). If comments are received in future they will be added in full as an appendix.

Table 5. Impacted by current concept design and management / mitigation measures

Site	Type	Significance	Impact Assessment	Management / Mitigation Measures
52-5-0390 (BCRP 11)	Artefact Scatter	Low	Will be impacted	Avoid or minimise impacts to site if possible. If site cannot be avoided then it can only be impacted after project approval is obtained. Temporary protective fencing should be installed along the construction boundary if the site is only partially impacted.
52-5-0542 (BCRP 6)	Rockshelter	Low	Will be impacted	Avoid or minimise impacts to site if possible. If site cannot be avoided then it can only be impacted after project approval is obtained. Temporary protective fencing should be installed along the construction boundary if the site is only partially impacted.
52-5-0544 (BCRP 12)	Isolated artefact	Low	Will be impacted	Avoid or minimise impacts to site if possible. If site cannot be avoided then it can only be impacted after project approval is obtained. Temporary protective fencing should be installed along the construction boundary if the site is only partially impacted.

8.2 Option 2 Impact Assessment

Option 2 exhibits a moderate level of impact with a potentially significant impact on one rockshelter. Potentially impacted sites from Option 2 include:

- a disturbed low significance rock shelter (52-5-0551);
- a disturbed low significance rock shelter (52-5-0557);
- a moderate significance rock shelter (52-5-0558).

Based on existing design information Option 2 will have a moderate level of direct impact on Aboriginal archaeological heritage.

Mitigation is a likely requirement for Option 2, with rockshelter 52-5-0558 requiring some level of salvage excavation. Detailed design should try to limit or negate impacts to this site. No mitigation would be required for the less significant archaeological sites; however, a rule of conservation should apply for all sites and any design should try to limit impacts. It is further recommended that any portions of a site not directly impacted should be temporarily fenced along the construction boundary to limit inadvertent impacts.

Aboriginal Community Views

Discussion with the Aboriginal community during field inspections indicated that the southern portion of Bomaderry Gorge has some cultural significance. The archaeology associated with Option 2 was also recognised as having moderate cultural value. For this reason Option 2 was not a preferred option.

Table 6. Impacted by current concept design and management / mitigation measures

Site	Type	Significance	Impact Assessment	Management / Mitigation Measures
52-5-0551 (BCRP 19)	Rockshelter	Low	Will be impacted	Avoid or minimise impacts to site if possible. If site cannot be avoided then it can only be impacted after project approval is obtained. Temporary protective fencing should be installed along the construction boundary if the site is only partially impacted.
52-5-0557 (BCRP 26)	Rockshelter	Low	Will be impacted	Avoid or minimise impacts to site if possible. If site cannot be avoided then it can only be impacted after project approval is obtained. Temporary protective fencing should be installed along the construction boundary if the site is only partially impacted.
52-5-0558 (BCRP 27)	Rockshelter	Moderate	Will be impacted	Avoid or minimise impacts to site if possible. If site cannot be avoided then it can only be impacted after project approval is obtained. Salvage excavation is recommended for the site if avoidance is not possible.

8.3 Option 3 Impact Assessment

Option 3 will impact on a significant archaeological deposit (52-5-0546) and axe grinding groove site (52-2-1797). Potentially impacted sites from Option 3 include:

- a moderate significance open site (52-5-0546);
- a disturbed low significance isolated find (52-5-0547);
- a moderate significance grinding groove cluster (52-5-1797).

Based on existing design information Option 3 exhibits the highest level of impact on Aboriginal archaeological heritage in relation to Option 1 or Option 2.

Mitigation is a likely requirement for Option 3, with open site 52-5-0546 requiring some level of salvage excavation. It is not possible to mitigate the impacts to site 52-2-1797. Detailed design should try to limit or negate impacts to these sites. No mitigation would be required for the less significant archaeological site; however, a rule of conservation should apply for all sites and any design should try to limit impacts. It is further recommended that any portions of a site not directly impacted should be temporarily fenced along the construction boundary to limit inadvertent impacts.

Aboriginal Community Views

Discussion with the Aboriginal community during field inspections indicated that the archaeology associated with Option 3 exhibits moderate cultural value. This is especially true for the axe grinding grooves. For this reason Option 3 was not a preferred option. If Option 3 were selected then mitigation in the form of excavation and full site recordings are warranted for the impacted sites. If at all possible the axe grinding grooves should be conserved as these were considered to represent significant cultural value.

Table 7. Impacted by current concept design and management / mitigation measures

Site	Type	Significance	Impact Assessment	Management / Mitigation Measures
52-5-0546 (BCRP 14)	Open Site	Moderate	Will be impacted	Avoid or minimise impacts to site if possible. If site cannot be avoided then it can only be impacted after project approval is obtained. Salvage excavation is recommended for the site if avoidance is not possible.
52-5-0547 (BCRP 15)	Isolated Find	Low	Will be impacted	Avoid or minimise impacts to site if possible. If site cannot be avoided then it can only be impacted after project approval is obtained. Temporary protective fencing should be installed along the construction boundary if the site is only partially impacted.
52-5-1797 (BCRP 28)	Grinding Grooves	Moderate	Will be impacted	Rock marking sites should be conserved. Avoid or minimise impacts to site if possible. If site cannot be avoided then it can only be impacted after project approval is obtained. Temporary protective fencing should be installed along the construction boundary if the site is only partially impacted.

8.4 Regional Impacts

None of the archaeological sites potentially impacted by any of the three options are regionally archaeologically significant. They are valuable in terms of underlining the fact Aboriginal people occupied the gorge, but in themselves or as part of a regional model (see section 4) they are not exceptional. With this said, if possible, detailed design of the link road should try to avoid or limit the impact to the identified archaeological sites. A slight caveat exists for the grinding groove site 52-5-1797. All rock marking sites should be conserved if possible as it is not possible to mitigate their loss.

8.5 Potential Indirect Impacts

Archaeological sites in proximity to the three route options may be indirectly impacted by future construction activities; in particular rock art sites are vulnerable to vibration. However, no rock art sites are in proximity to any of the three options. Recorded rock art sites are generally over 200m away from any of the route options. This distance should be sufficient to provide protection to the art. In short, rock art sites do not appear to be indirectly impacted by the various options.

8.6 Impact Avoidance and Minimisation (Temporary Fencing)

Avoiding impacts is the preferred strategy. As indicated above, detailed design should be able to avoid or minimise impacts to Aboriginal heritage. Council has shown a willingness to avoid or minimise impacts where possible. If complete avoidance is not possible and sites are only partially impacted then the remaining portion of the sites should be identified in an Environmental Management Plan (EMP) and protected from inadvertent impact with temporary fencing along the construction boundary. No signage identifying the area as having Aboriginal significance is to be erected, signage stating 'Significant Environmental Area – No Entry Permitted' is acceptable.

Summary

All three route options exhibit some level of impact on Aboriginal archaeological and cultural heritage. Option 1 shows the least overall impact on significant archaeology. Option 2 has a moderate impact on archaeology and a perceived greater impact on cultural heritage according to the Aboriginal community. Option 3 has the greatest impact on Aboriginal archaeology and is difficult to mitigate because of the potential impact to the grinding groove site.

Aboriginal Community

The potential impact and proposed mitigation measures were discussed with the Aboriginal community in the field and those comments have been incorporated into this report. This report has been forwarded to NLALC for comment (May 2010). To date no comments have been received (July 2010). If comments are received in future they will be added in full as an appendix.

9 Management Principles and Recommendations

9.1 Management Principles

Principles for the assessment and management of Aboriginal cultural heritage are focussed on the conservation of objects, places or features of cultural value within the landscape, including places, objects and features of significance to Aboriginal people and places of scientific (archaeological) significance. While there are statutory controls to ensure that Aboriginal objects (sites) are protected and/or regulated (Part 6 of the *National Parks and Wildlife Act*), the Aboriginal cultural heritage assessment process is designed to ensure that places or features of cultural value within the landscape and of significance to Aboriginal people are conserved in addition to the sites and objects.

Identified Aboriginal archaeological sites (especially those of moderate significance) should be considered in relation to the detailed design of the selected final route option for the North Nowra Link Road. Council has shown a willingness to avoid impacting on significant Aboriginal sites.

Current design information indicates that Option 1 presents a low overall impact on significant Aboriginal archaeological and cultural features. Option 2 exhibits a moderate archaeological and cultural impact on Aboriginal heritage. Option 3 displays the highest archaeological impacts and is difficult to mitigate due to the presence of a rock marking site.

9.2 Management Outcomes – Statement of Commitments

The following management outcomes will be implemented in accordance with the management strategy as outlined in section 8.

- Ongoing consultation with the local Aboriginal community.
- Ongoing compilation of Aboriginal registrants list, through continuing to register individuals and groups for consultation on the project.
- Changes to the Approved Project will require consultation with the Aboriginal community if they have an increased impact on Aboriginal cultural heritage.
- Preferably impacts to Aboriginal heritage should be avoided. Where avoidance is not possible minimisation strategies through detailed design, mitigation (salvage), inclusion in EMP and temporary protective fencing should be implemented.
- Impacts to any Aboriginal archaeological site are only allowed after project approval is obtained.
- In the (unlikely) event that human remains are discovered either before or after Project Approval, all works in the vicinity will halt and police contacted. If the remains are determined to be of Aboriginal origin and not forensic then contact DECCW and Aboriginal stakeholders.

References

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- Organ, M., 1990. *A documentary history of the Illawarra and South Coast Aborigines 1770-1850*. Wollongong University, Wollongong, NSW.
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Appendix A Advertisement

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RD Pigg, General Manager,
PO Box 42, Nowra 2541
council@shoalhaven.nsw.gov.au • www.shoalhaven.nsw.gov.au

POSITIONS VACANT

Engineering Officer – Electrical

- Salary: \$1,050.90 to \$1,182.30 per week (Grade 14 - Band 2, Level 3) plus super
- plus disability allowance
- Access to Variable Working Hours

Council is seeking an experienced person to fill the role of Electrical Engineering Officer. This position supports the Commercial Electrical Engineer to develop and provide a range of electrical engineering services including electrical design, construction and maintenance for Council operations such as Public Halls, Waste, Sports Administration Centres, Aquatics Centres and Tourist Parks. Information packages are available on Council's website, or contact Michelle Gubb on 0244 293395 (Ref No. 49124). Enquiries: Jill Galea - 0244293424.

Applications Close: Friday 28th September, 2009

Supply Team Leader

- Salary: \$59,342 to \$65,792 per annum plus super (Grade 18, Band 3, Level 2)
- Salary: Access to Variable Working Hours
- Leaseback Vehicle
- Long Service Leave Entitlement after 5 years Service
- A higher salary may be negotiated with an outstanding applicant

Council is seeking a self-motivated, customer-focused professional to lead Shoalhaven City Council's Supply Team. This is a challenging and diverse role, managing 14 staff and a range of activities across purchasing, stores, signwriting and fleet services. The successful applicant must be experienced in management, procurement, document process and procedures, data analysis and reporting. Demonstrated management and operation of purchasing based computer systems and compliance with associated procurement policies and procedures is essential. This is a re-advertised position and previous applicants need not re-apply.

Information packages are available on Council's website or contact Delina Little on 02 4429 3269 (Ref No. 40613). Enquiries: Robert Spencer - 02 4429 3322

Applications Close: 27 September 2009

Fixed Term – Attendant Leisure Centre – Bay & Basin Leisure Centre

- Salary: \$56.96 to \$74.74 for a 21 hour week (Grade 8, Band 1, Level 2)
- Additional Market component per fitness class
- Minimum of 21 hours per week up to a maximum of 38 hours per week
- Working with a dynamic team of fitness professionals
- Employer superannuation contributions

Apply your exceptional customer service expertise to this multi skilled role within the Central Leisure Centre. Council is seeking a suitably qualified person to be engaged on a fixed term basis until August 2010. A current Certificate III or Certificate IV in Fitness (Gym Instructor) is required with a demonstrated ability to deliver high quality innovative exercise programs aimed at clients' needs. Les Mills instructor qualifications are highly desirable.

Information packages are available on Council's website, or contact Leisure Services Administration on (02) 44293153 (Ref No. 39527). Enquiries: Glenn Wright – Central Leisure Manager on (02) 44417722.

Applications Close: 28 September, 2009

Trainee Engineer Position

Fixed Term period for up to 12 weeks over the 09/10 summer break

- Salary: \$700.80 to \$801.00 pw + superannuation (Grade 17 to T10 - Band 1, Level 1)
- Exposure to a wide variety of engineering projects
- Burner Work Experience with South Coast location

Complement your civil or environmental engineering studies with professional experience across a broad range of engineering fields. Shoalhaven City Council is providing an opportunity to work in asset management, traffic engineering, storm water management, civil design & construction or development & land subdivision management (placement will be made to one or more areas in consultation with you regarding your areas of interest) allowing you to gain a broad understanding of each sector.

The position requires successful completion of 2nd year studies. Information packages are available on Council's website, or contact Kara Coulthart on (02) 4429 3614 (Ref No. 40141). Enquiries: Kara Coulthart - (02) 4429 3614

Applications Close: Friday 2nd October 2009

southcoastregister.com.au

PUBLIC NOTICES

Advertised Development

Proposed Advertising Signage
D4001/1998

A Development Application has been received by Council seeking the approval to the following:
Property: No. 1 (Lot 4 DP 805113), No. 3 (Lot 3 DP 805113), No. 5 (Lot 2 DP 805113) No. 7 (Lot 1 DP 805113) Jane Street, Nowra and No. 154 (Lot 3 DP 8796), No. 195 (Lot 4 DP 8796) Junction Street, Nowra

Proposed: Replacement of existing signage with one (1) free standing pylon sign and six (6) on building/facade signs

Applicant: Gamdon Neon Pty Ltd

Consent Authority: Shoalhaven City Council

The application and plans may be inspected at the City Administrative Centre, Bridge Road, Nowra at any time between 9.00am and 5.00pm Monday to Friday (except Public Holidays) for a period of fourteen (14) days from 17 September 2009 to 2 October 2009.

Any person who feels that they could be affected, either positively or negatively, by the determination of this application may make a submission addressed to the General Manager.

Submissions must be in writing addressed to the General Manager (making reference to File Number D4001/1998) and received by Council on or before 2 October 2009 detailing any grounds for objection or reasons for support. A submission may be made online using the DA Tracking links on Council's website www.shoalhaven.nsw.gov.au by following the directions in that site.

Any submission in its entirety will be made available on Council's internet site through Council's Development Application Tracking process. The substance of written submissions may also be included in a Council Report.

In making any submission, you should ensure that its content does not include defamatory, private or security issues in relation to either yourself or other people.

Submissions received in pre-printed form letters, which have been individually signed, or petitions will be considered but not formally acknowledged. A summary only of a form letter or petition will be published online.

Pursuant to Section 147 of the EP&A Act, 1979, any person making a public submission (whether opposing or supporting the application) shall disclose all reportable political donations or gifts made within two (2) years before the application or submission is made. If no political donations or gifts were made after the application or submission was made, the disclosure must be made within seven (7) days after the donations or gifts were made.

Failure to do so is an offence under the Act. If you wish to disclose a political donation and/or gift, a disclosure form is available on Council's website or by contacting Council's offices. Note that in accordance with the Act your disclosure will be made available to the public via Council's website.

Further enquiries on this matter should be directed to Council's Development & Environmental Services Group on 4429 3111.

Registration of Interest – North Nowra Link Road – Aboriginal Community Consultation

Shoalhaven City Council is continuing its investigations on route options for the proposed North Nowra Link road. Alternate options will cross Barnardys Creek and require revocation of a minor part of Barnardys Creek Regional Park.

Council is in the process of undertaking a detailed assessment of the archaeological and aboriginal cultural heritage in the area.

Aboriginal groups and individuals with a heritage or cultural interest or knowledge of this area are invited to register their interest to Shoalhaven City Council by Thursday 8 October 2009. Written registration should be made to the General Manager, Shoalhaven City Council, PO Box 42, NOWRA NSW 2541, quoting file reference 5253-13.

Exhibition of Tender Evaluation Policy

Council seeks to adopt a new Tender Evaluation Policy, as reported to Council meeting of Tuesday 25th August 2009 and as such requests comments in regard to the new policy.

The policy can be viewed on Council's website at <http://shoalhaven.nsw.gov.au/council/public/communityissues/exhibition/TenderEvaluationPolicy.pdf> or at Council's Administrative Centres – Bridge Road, Nowra or Deering Street, Ulladulla.

Written comments are invited and should be directed to the General Manager, PO Box 42, Nowra, 2541 – File 5701 by 5pm on Tuesday 6th October 2009. Please note the substance of submissions made to Council on this matter may be made available to the public or included in a Council report without notifying the correspondent. Pre-printed form letters, which have been individually signed, will be considered but not formally acknowledged.

If no objections are received the Policy will be implemented at the end of the exhibition period.

Any enquiries should be directed to the Project Delivery Manager, Cliff Harris on 44293378.

Exhibition of Local Preference Purchasing Policy

Council seeks to adopt a new Local Preference Purchasing Policy, as reported to Council meeting of Tuesday 25th August 2009, and as such requests comments in regard to the new policy.

The policy can be viewed on Council's website at <http://shoalhaven.nsw.gov.au/council/public/communityissues/exhibition/LocalPreferencePurchasingPolicy.pdf> or at Council's Administrative Centres – Bridge Road, Nowra or Deering Street, Ulladulla.

Written comments are invited and should be directed to the General Manager, PO Box 42, Nowra, 2541 – File 4092-02 by 5pm on Tuesday 6th October 2009. Please note the substance of submissions made to Council on this matter may be made available to the public or included in a Council report without notifying the correspondent. Pre-printed form letters, which have been individually signed, will be considered but not formally acknowledged.

If no objections are received the Policy will be implemented at the end of the exhibition period.

Any enquiries should be directed to the Project Delivery Manager, Cliff Harris on 44293378.

PUBLIC NOTICES

Draft Local Environmental Plans

No. LP 225 Seaspray Street and No. LP 338 Ross Avenue, Narrawallee

Notice is given that draft Local Environmental Plan (LEP) No. LP 225 for:

- Part of Lot 29 DP 8742/5 Seaspray Street, Narrawallee (File 1787-04)
- And draft LEP No. LP 338 for:
- Lot 393 DP 7924/11 Ross Avenue, Narrawallee (File 26446)

And the Deed of Agreement that relates to the above mentioned draft LEPs, will be on public exhibition from 10 September 2009 until 9 October 2009 (inclusive) between 9am and 5pm at the City Administrative Centre, Bridge Road, Nowra. Information is also available on Council's website at <http://www.shoalhaven.nsw.gov.au/applications/topics/lep.asp> and at Ulladulla Administrative Centre, Deering Street, Ulladulla.

The purpose of draft LEP No. LP 225 is to rezone that part of Lot 29 DP 8742/5 zoned Environment Protection 7(4)(2) (Special Science) to part Residential 2(a) and part Environment Protection 7(4)(2) (Special Science), and the inclusion of scenic preservation over part of the land to which the draft LEP applies. The draft Plan aims to allow for some residential development while protecting landscape values and the habitat of the threatened species, ensuring that the risk to life and property from bushfire is minimised, and ensuring that the visual impact of development is reduced through the protection and establishment of appropriate landscaping.

Draft LEP No. LP 225 was previously publicly exhibited in late 2001, however the draft Plan did not progress until such time that a Deed of Agreement was in place to ensure the dedication of Gamada Lagoon to Council. The terms of the Deed of Agreement between Council and the landowner were endorsed by Council on 12 August 2008.

Due to the time that had elapsed between the initial public exhibition of draft LEP No. LP 225 and the finalisation of the Deed of Agreement, the Department of Planning recommended that Council re-exhibit draft LEP No. LP 225 concurrently with draft LEP No. LP 338 because of the link between the LEPs.

The purpose of draft LEP No. LP 338 is to rezone that part of Lot 393 DP 7924/11 zoned Residential 2(a) (Living Area) to Environment Protection 7(a) (Ecology). The aim of the LEP is to protect Gamada Lagoon from further development. Once the land is rezoned, in part, the Deed of Agreement requires Lot 300 to be dedicated to Council.

Written comments are invited and should be lodged to the undersigned by 5pm on Friday 16 October 2009. Submitters should clearly indicate to which draft LEP and the Deed of Agreement they relate. Please note the substance of submissions made to Council on this matter may be made available to the public or included in a Council report without notifying the correspondent. Pre-printed form letters, which have been individually signed, will be considered but not formally acknowledged.

Any person making a public submission or relevant planning application, regardless of whether the submission is opposing to or supporting a plan or proposal, is now required by the under Section 147 of the Environmental Planning & Assessment Act 1979 (EP&A Act), to disclose all political donations or gifts made within the two (2) years before the plan or submission is made. If the political donations or gifts have been made after the plan or submission was made, a Disclosure Statement must be made within seven (7) days after the donations or gifts were made. Failure to do so is an offence under the EP&A Act. To disclose political donations and/or gifts, you are required to fill out a Disclosure Statement Form, which is available to download on Council's website or can be obtained from Shoalhaven City Council's administrative centres at Nowra & Ulladulla. The NSW Department of Planning has produced two planning circulars, PS 08-007 & PS 08-009, which can be viewed at <http://www.planning.nsw.gov.au> for further information.

Enquiries regarding the draft LEPs should be directed to Glen Winkley at Council's Strategic Planning and Infrastructure Group on (02) 4429 3563 quoting file numbers 1787-04 and/or 26446 in any correspondence.

Urban Design Masterplan – Nowra CBD

Registration of Interest

Registration of Interest is invited from suitably qualified consultants to prepare an Urban Design Master Plan for the Nowra Central Business District over the next 25 years. The master planning process would include:

- A review of the existing CBD strategy and structure plan to address current issues and objectives
- Conducting two workshops including community, business and Council staff involvement with a view to providing a desired future character statement and feedback on the draft master plan.
- A financial analysis to quantify costs associated with implementing key outcomes of the master plan in the short, medium and long term life of the plan.
- The preparation of Urban Design and architecture based development concept plans for key development sites (max 4).

Consultants should have extensive urban design experience at a local government level, have demonstrated ability to respond to the local context and deliver master plans from which a Draft Development Control plan and Draft contribution plan could be developed. It would be expected that suitable consultants would have in house expertise in Architecture, Urban Design, Financial Analysis and Town Planning.

Following registration of interest a shortlist of suitable consultants would be selected to respond to a detailed brief.

An information package is available on Council's website <http://shoalhaven.nsw.gov.au> or can be obtained by contacting Council's Urban Design Unit during normal office hours.

Contact Mr John Flett or Dr Wang-Min Lee on telephone 02 44293455 or 02 44293477 respectively.

Registration of interest is to be received by 5PM, Friday 25th September 2009 and should quote Council's reference 39902.

Traffic Flow – Albert Court Carpark – Berry

An informal meeting will be held in the Albert Court Carpark (near the mall) on Wednesday 23 September 2009 commencing at 5pm to discuss options for the improvement of traffic flow within the carpark.

If you are unable to attend, please forward comments to the General Manager, PO Box 42, Nowra 2541 or email to council@shoalhaven.nsw.gov.au.

Please contact Marc Poulton, on (02) 4429 3111 if you would like to discuss the matter.

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Appendix B Current Concept Design for Option 1



Appendix C Confidential site information

Table 8: Summary of Aboriginal sites within survey area (detailed version)

Report ID	AHIMS	Site Type	GPS(WGS 84)_Easting	Northing	Accuracy
BCRP 001		Occupation Shelter/Art			
BCRP 002		Occupation Shelter			
BCRP 003		Open Site Midden			
BCRP 004	52-5-0453	Occupation Shelter/Art			
BCRP 005		Occupation Shelter			
BCRP 006		Occupation Shelter/Midden			
BCRP 007		Open Site Artefact Scatter			
BCRP 008	52-5-0454	Occupation Shelter/Art			
BCRP 009	52-5-0262	Occupation Shelter			
BCRP 010	52-5-0263	Occupation Shelter			
BCRP 011	52-5-0390	Open Site Artefact Scatter			
BCRP 012		Isolated Find			
BCRP 013		Open Site Artefact Scatter			
BCRP 014		Open Site Artefact Scatter			
BCRP 015		Isolated Find			
BCRP 016		Not Aboriginal Heritage Site (Recent Scar Tree)			
BCRP 017		Occupation Shelter			
BCRP 018	52-5-0386	Occupation Shelter			
BCRP 019		Occupation Shelter			
BCRP 020		Occupation Shelter			
BCRP 021	52-5-0389	Occupation Shelter			
BCRP 022		Occupation Shelter			
BCRP 023		Occupation Shelter/Art			
BCRP 024		Occupation Shelter			
BCRP 025		Occupation Shelter			
BCRP 026		Occupation Shelter			
BCRP 027		Occupation Shelter			
	52-2-1797	Axe Grinding Groove			

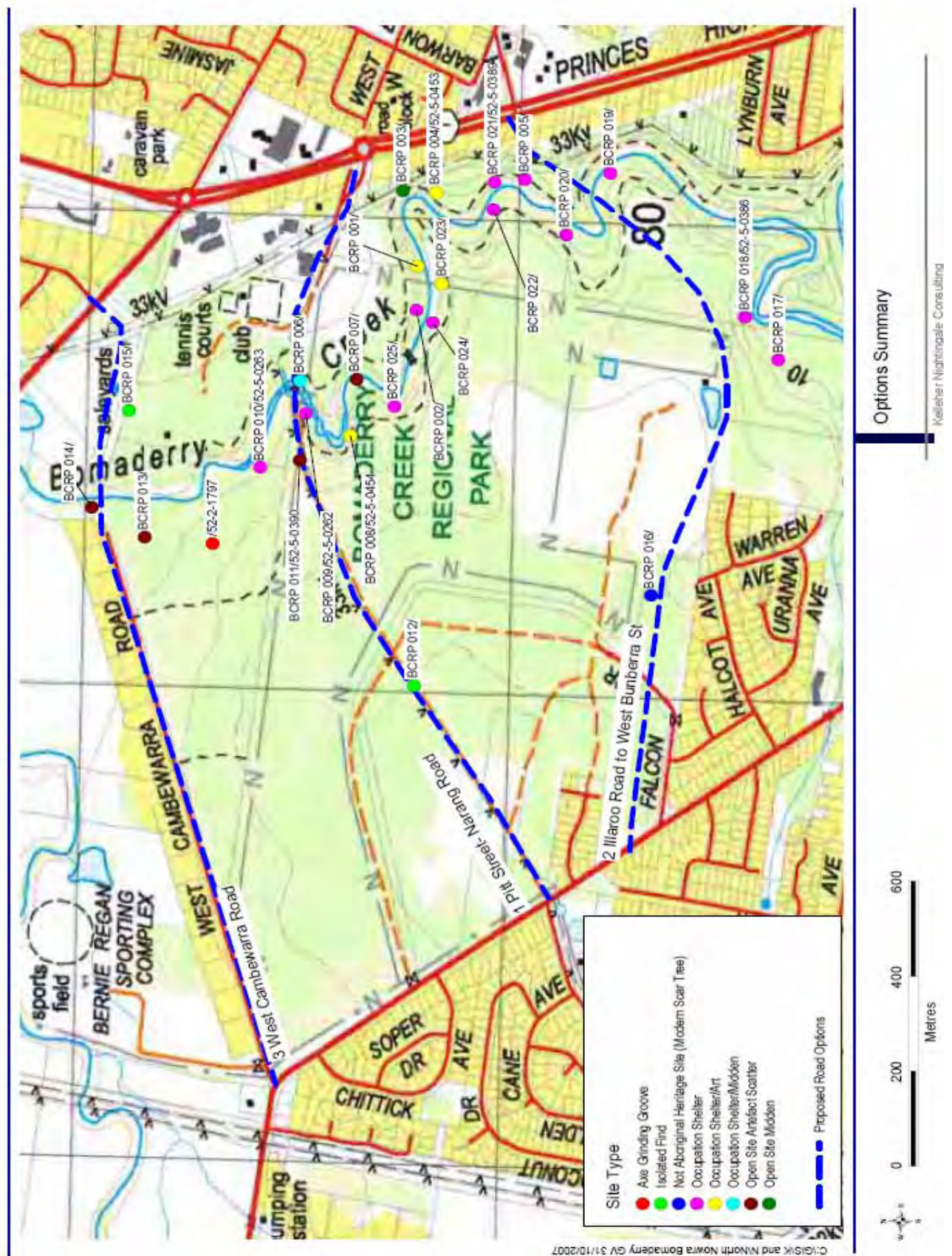


Figure 32. Route options summary

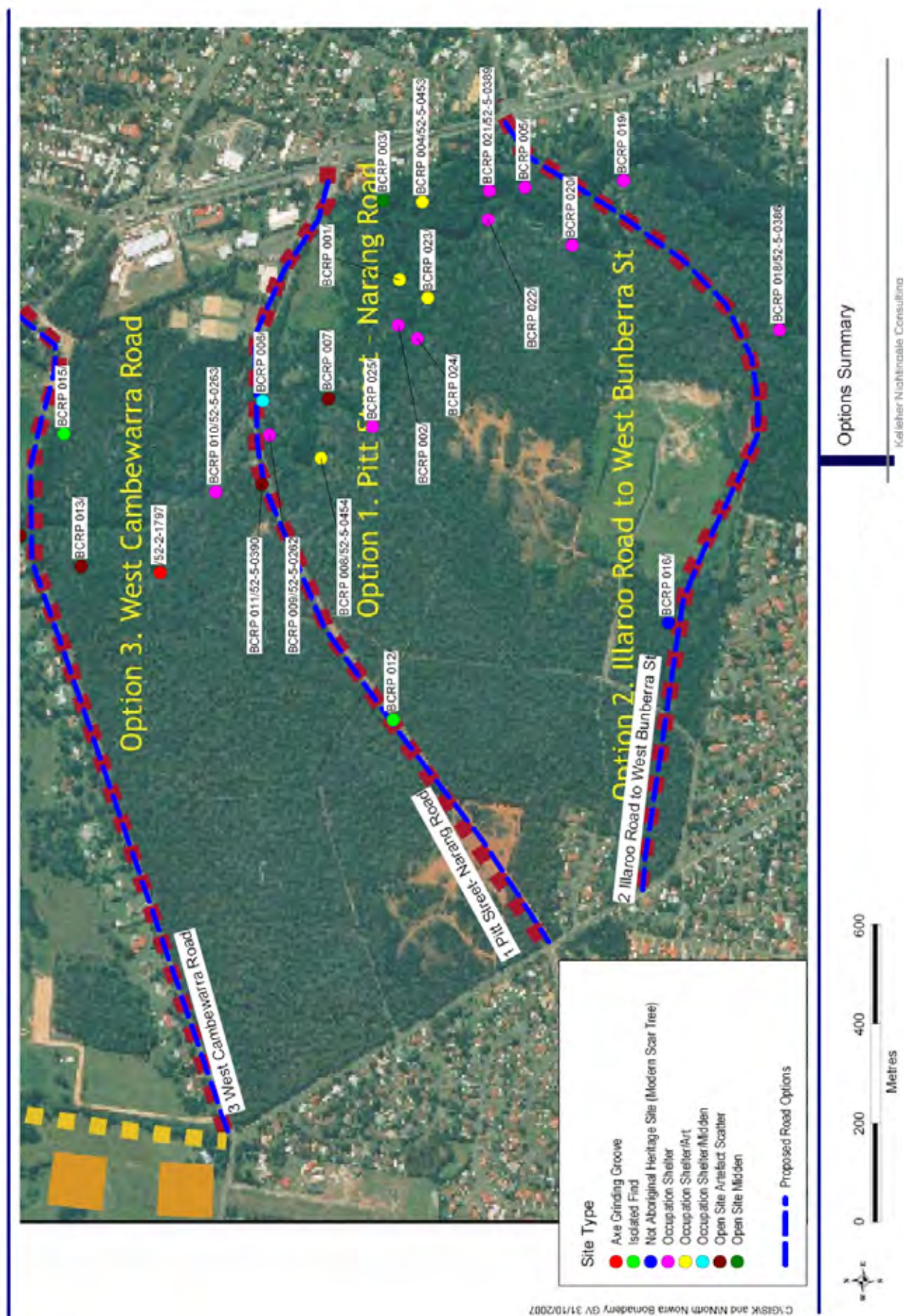


Figure 33. Route options summary