Olympic Highway (MR78) route safety review project

Aboriginal cultural heritage constraints mapping report

Report to Transport for NSW

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Lantern Heritage

shining a light on people and place

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Project Client

Client name

Transport for NSW
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Project Name

Olympic Highway (MR78) Route Safety Review Project
Aboriginal cultural heritage constraints mapping report

Project Reference Number

128-114

Local Government Area

Cowra, Hilltops, Cootamundra-Gundagai, Junee, Wagga Wagga, Lockhart, Greater Hume, Gerogery, Albury

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EXECUTIVE SUMMARY

Transport for NSW (Transport) has completed a Route Safety Review (RSR) of a 318 km section of the Olympic Highway (MR78) between Cowra and Albury. The Olympic Highway provides an alternate road link between Sydney and Albury, via Bathurst and Cowra, as well as servicing Wagga Wagga. The RSR identified key roadside infrastructure and line making safety improvements at various locations along the Olympic Highway.

This desktop assessment reviewed archaeological investigations, ethnographic sources, regional histories and the New South Wales heritage databases. There are 35 sites recorded on the AHIMS that are located within 100 m of proposed impacts

Aboriginal communities within the study area have strong, ongoing connections to this country (see Section 7). This project is in the preliminary stages of investigation and further archaeological investigation and community consultation is required. A level of goodwill and willingness to engage with Transport for NSW and Lantern Heritage has been expressed by the majority of Aboriginal communities within the study area. There is an opportunity to further this rapport through consistent and honest engagement with the community.

This desktop analysis of Aboriginal cultural heritage constraints mapping report has identified four zones of sensitivity (low-moderate; moderate-high; high; and very high) that have been developed on the basis of a combination of quantitative and qualitative approaches to the data and mapping reviewed in this report. The approach was to implement buffers around known sites and major water courses, and to interpolate the geology and Aboriginal sites decision support tool (ASDST) mapping in order to map the predicted Aboriginal cultural heritage constraints mapping report along the length of the study area.

The resultant mapping of cultural heritage constraints is presented below in Figure 20 to Figure 26 (Section 11).

The implication of the mapping of cultural heritage constraints is that further investigation in the form of comprehensive field survey and review of Aboriginal cultural heritage values is required across all areas of high and very high sensitivity. This is necessary to confirm the status, nature, extent and significance of known sites and areas of predicted high to very high potential for Aboriginal cultural heritage constraints. As discussed during the consultation meetings, further investigations in the form of a sampling approach to landforms within areas of moderate-high sensitivity would be necessary to ground truth and further refine the modelling along the study area.

Desktop analysis has shown that a field assessment with Aboriginal community for the proposed project area is warranted prior to finalising design route options of the Olympic Highway road safety improvement works. Further investigation is recommended for all sites recorded within the project area to confirm the status, location, condition, extent and cultural heritage significance of these sites. In addition, further investigation is recommended for all sections of road identified as having high to very high sensitivity.

On the basis of the desktop analysis and preliminary community consultation documented in this report, it is recommended that:

1. Further investigation in the form of field survey is required to ground truth the sites listed below. These sites are recorded within 100m of proposed impacts from the Olympic Highway road safety review project and the location, extent and condition of these sites should be investigated area prior to impacts.

Section 1	Section 2	Section 3
55-6-0070	50-5-0208	50-3-0038
55-6-0071	50-4-0069	50-3-0052
56-4-0347	50-5-0207	50-3-0054
56-4-0208	50-05-0204	44-4-0337
56-4-0206		44-4-0338
56-4-0204		44-4-0339
56-4-0207		44-4-0209
56-4-0205		50-6-0148
56-4-0210		44-4-0381
56-1-0653		50-3-0040
56-1-0123		
56-1-0378		
56-1-0392		
56-1-0376		
56-1-0129		
56-1-0381		
56-1-0373		
56-1-0382		
56-1-0375		
56-1-0377		
56-1-0379		

2. If sites listed in Table 9 cannot be avoided, apply for an Aboriginal Heritage Impact Permit (AHIP) from Heritage NSW to impact these sites.
3. Further investigation in the form of field survey is required for all sections of the Olympic Highway assessed to have high to very high sensitivity, prior to any future impacts.
4. Further investigation in the form of targeted sample survey is required across the sections of the Olympic Highway assessed to have moderate-high sensitivity prior to any future impacts.
5. Areas of low-moderate significance should be subject to due diligence assessment and visual inspection, prior to impacts from any proposed works.
6. Field survey should be conducted in partnership with the local Aboriginal community to determine the cultural significance of the study area.
7. Training in Aboriginal cultural heritage awareness be provided to employees and contractors of Transport for NSW.
8. Long term management plans be developed for future works and activities that may occur beyond current study corridor.

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1 PROJECT OVERVIEW

1.1 Introduction

Transport for NSW (Transport) has completed a Route Safety Review (RSR) of a 318 km section of the Olympic Highway (MR78) between Cowra and Albury. The Olympic Highway provides an alternate road link between Sydney and Albury via Bathurst and Cowra, as well as servicing Wagga Wagga, linking the Sturt Highway (Figure 1). The RSR identified key roadside infrastructure and line making safety improvements at various locations along the Olympic Highway including:

- Road edge repair;
- Road widening up to 10 metres from existing carriageway edge line;
- Road signage upgrade;
- Installation of new audio tactile line marking;
- Reinstatement of line marking and raised pavement markers;
- Installation of safety barrier where hazard free clear zones cannot be achieved;
- Property acquisition if required;
- Relocation of utilities if required;
- Provision of a 10mm primer seal followed by a 7mm final seal at the road widenings;
- Establishment of 5m clear zones where possible; and
- Tree removal and vegetation maintenance.

Lantern Heritage is engaged by Transport to prepare Aboriginal cultural heritage constraints mapping reporting and mapping along the Olympic Highway study area.

This report documents the Aboriginal cultural heritage constraints mapping assessment undertaken of the Olympic Highway between Cowra and Albury. The assessment includes background research, overall assessments of cultural significance, potential impacts to Aboriginal cultural values and mapping of cultural constraints. It has been prepared in accordance with the *NSW Office of Environment* and *Heritage's Code of Practice for Archaeological Investigation of Aboriginal Objects* in New South Wales (DECCW 2010a) and the *Roads and Maritime Services procedure for Aboriginal cultural heritage consultation and investigation* (RMS 2011). This report has been compiled in accordance with the Burra Charter: *The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS, 2013).

1.2 Study area and scope of activity

The study area comprises the length of the Olympic Highway from Cowra to Table Top, north of Albury excluding the towns of Young, Wagga Wagga, Junee and Cootamundra (see Figure 1). The study area crosses through the Local Government areas of Cowra, Hilltops, Cootamundra-Gundagai, Junee, Wagga Wagga, Lockhart, Greater Hume, Gerogery and Albury.

The Olympic Highway traverses the western foothills of the Great Dividing Range from Cowra in the north to Albury in the south. The Olympic Highway road corridor stretches up to 10m

from each side of the existing carriageway edge line, allowing creation of a 5m clear zone from the carriageway edge line where possible. This Aboriginal cultural heritage constraints mapping report focusses on a study area that consists of a100m buffer around the road reserve, as provided in *.shp format by Transport (Heritage_Buffer_Export_13022020), and the zone of proposed impacts also provided by Transport.

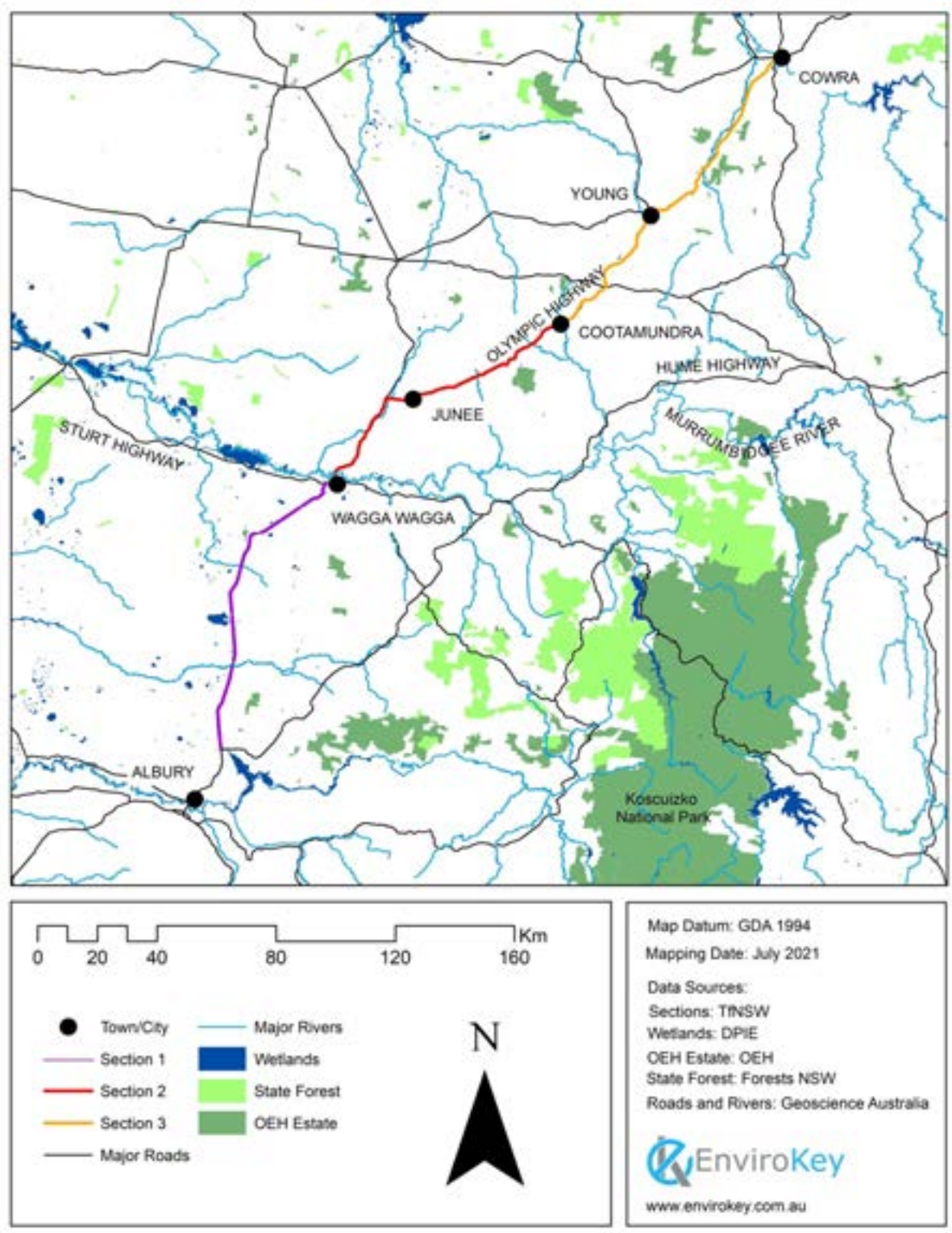

Figure 1 Olympic Highway Route safety review project study area (EnviroKey 2021).

1.3 Legislative Framework

1.3.1 National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 (as amended), administered jointly by Heritage NSW and Department of Planning and Environment, is the primary legislation for the protection of Aboriginal cultural heritage in New South Wales. Part 6 of the NPW Act provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of harm.

Table 1 summarises those offences and their associated penalties. However, if due diligence is exercised, this is a defence against prosecution for the strict liability offence, in the event that an Aboriginal object is later unknowingly harmed without an Aboriginal Heritage Impact Permit (AHIP).

Table 1 - Offences and penalties for harming or desecrating Aboriginal objects and declared Aboriginal Places

Offence	Maximum Penalty: Individual	Maximum Penalty: Corporation
A person must not harm or desecrate an Aboriginal object that the person knows is an Aboriginal object.	2,500 penalty units ($275,000) or imprisonment for 1 year 5,000 penalty units ($550,000) or imprisonment for 2 years or both (in circumstances of aggravation)	10,000 penalty units ($1,100,000)
A person must not harm or desecrate an Aboriginal object (strict liability offence).	500 penalty units ($55,000) 1,000 penalty units ($110,000) (in circumstances of aggravation)	2,000 penalty units ($220,000)
A person must not harm or desecrate an Aboriginal Place (strict liability offence).	5,000 penalty units ($550,000) or imprisonment for 2 years or both	10,000 penalty units ($1,100,000)
Failure to notify DECCW of the location of an Aboriginal object (existing offence and penalty)	100 penalty units ($11,000). For continuing offences a further maximum penalty of 10 penalty units ($1,100) applies for each day the offence continues.	200 penalty units ($22,000). For continuing offences a further maximum penalty of 20 penalty units ($2,200) applies for each day the offence continues
Contravention of any condition of an Aboriginal Heritage Impact Permit	1,000 penalty units ($110,000) or imprisonment for 6 months, or both, and in the case of a continuing offence a further penalty of 100 penalty units ($11,000) for each day the offence continues	2,000 penalty units ($220,000) and in the case of a continuing offence a further penalty of 200 penalty units ($22,000) for each day the offence continues

Table 1: Offences and penalties for harming or desecrating Aboriginal objects and declared Aboriginal Places (DECCW 2010b)

1.3.2 1.3.2 Environmental Planning and Assessment Act 1979 (NSW)

The NSW Environmental Planning and Assessment Act 1979 (EP&A Act) and the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) provide the overarching structure for planning in NSW. The two most commonly used policies that support the EP&A Act and the EP&A Regulation are State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs).

SEPPs deal with matters of State or regional environmental planning significance. These policies are made by the Governor on the recommendation of the Minister for Planning. SEPPs may be exhibited for public comment in draft form before being published as a legal document to allow the public the opportunity to provide feedback.

LEPs are administered by Local government. An LEP is a planning instrument that councils prepare under the EP&A Act, in consultation with their community and approved by the Minister for Planning (or their delegate). Each local government area has a LEP that guides development and planning decisions as well as providing protection for natural resources. All local councils are required to identify items of local heritage significance in a heritage schedule to their LEP. Items listed on the heritage schedule of an LEP are also listed on the State Heritage Inventory (SHI).

LEPs are normally supported by a Development Control Plan (DCP), which provides detailed planning and design guidelines. The DCP identifies additional development controls and standards for addressing local development issues. It can normally be applied more flexibly than a LEP.

1.3.3 Project framework

The works proposed at as part of the Olympic Highway road safety review project are being assessed under Part 5 of the EP&A Act 1979. A Review of Environmental Factors (REF) has been prepared by Envirokey in relation to the proposed works. A REF is an environmental assessment undertaken to assist in meeting the requirements of Part 5 of the EP&A Act. Under the Infrastructure SEPP 2007 (Div. 12), the project has been deemed to be development permitted without consent, Transport will self-determine the REF.

1.3.4 Aims and objectives

This Aboriginal cultural heritage constraints mapping report has been prepared to inform the review of environmental factors for this project. The assessment detailed in this report was undertaken in order to document the potential harm of the proposed activities on Aboriginal objects and places and to clearly set out which impacts are avoidable and which are not. Where harm to Aboriginal objects and places cannot be avoided, recommendations are provided regarding ways of reducing the extent and severity of harm to significant Aboriginal objects. It includes actions to be taken before, during and after an activity to manage and protect Aboriginal objects where harm cannot be avoided.

1.3.5 Report restrictions and copyright

None of the information contained in this report has been identified as confidential or restricted.

2 INVESTIGATORS AND CONTRIBUTORS

The background research, mapping, analysis of results and report writing for this project were managed and undertaken by Christine Gant-Thompson (Senior Archaeologist) and Conor McAdams (Geoarchaeologist), with assistance from Tom Knight (Archaeologist), Anna Raudino (business manager) and Majella Hammersley (Junior Archaeologist). Aboriginal community consultation meetings were facilitated by Anna Raudino (Business manager) and Tom Knight (Archaeologist).

Christine has a MA (Hons) in archaeology and over 10 years' experience in Aboriginal cultural heritage assessments and Majella is completing her studies at ANU in 2021. Rebecca has a BA (Hons) and a PhD in archaeology; she has over 20 years' experience in investigating Aboriginal archaeology. Tom Knight has a MA (Hons) in archaeology and over 25 years experience in Aboriginal archaeology. Conor McAdams (geoarchaeologist, B.Sc, M.Phil) has published studies on archaeological site prospection, preservation and interpretation and has contributed to a number of Aboriginal cultural heritage assessments in 2021.

2.1 Contributors

Anna Raudino undertook the internal review and editing of this report.

3 LANDSCAPE CONTEXT

The Olympic Highway runs northeast-southwest through the southeastern portion of the NSW South Western Slopes bioregion. The study area skirts the western foothills of the Great Dividing Range, crossing the ecotonal boundary between the Upper Slopes and Lower Slopes subregions, which contain contrasting geological substrates, soils and vegetation (NSW NPWS 2003). These subregions are broadly congruent with two of the nine Australian climate zones defined by Stern et al. (2000; see figure 3 in Benson 2006): the Temperate – No Dry Season (hot summer) climate zone that more-or-less corresponds with the Lower Slopes Sub-region; and the Temperate – No Dry Season (warm summer) climate zone that more-or-less corresponds with the Upper Slopes Subregion (Benson, 2008). Mean annual rainfall within the bioregion varies from over 800 mm, at Tumut (350 m asl) in the east, to 470 mm at Condobolin (220 m asl) in the west (NSW NPWS 2003). Maximum annual average monthly temperatures range from 24° to 33° C and minimum annual average monthly temperatures range from -0.7° to 3.2°C (NSW NPWS 2003).

3.1 Landforms and Hydrology

The Section of the Olympic Highway within the study area intersects ~200 watercourses, including tributaries of the Lachlan, Murray and Murrumbidgee rivers and the Murrumbidgee itself. In the Upper Slopes sub-region, the main landform patterns are hills, which may be very steep in places, with small areas of floodplains and alluvial plains along major river valleys. The Lower Slopes sub-region is dominated by flood plains, alluvial plains and terrace plains with some isolated rocky hills. Overall, alluvial deposits cover 33% of the whole NSWSWS Bioregion (NSW NPWS 2003).

As shown in Figures 2 to 4 and Table 2 the study route passes through the following 12 landscapes described by Dr Peter Mitchell (DECC 2002), which form smaller units of analysis. Starting at the northern end of the study area, at Cowra:

1. The **Upper Lachlan Channels and Floodplains** landscape surrounds the reaches of the Lachlan River passing through the central western tablelands to the floodplains on the western slopes. The stream pattern cuts across the geologic structure forming several narrow gorge sections with rocky walls and limited deposits of gravel alluvium.

2. The **Eugowra Plains** Landscape consists of alluvial plains and the lower hill slopes of Lachlan River terraces and tributary valleys on Quaternary alluvium, with a general elevation of 200 to 300 m. Extensive red-brown earths and cracking clay soils dominate.

3. The **Weddin Range and Slopes** landscape consists of prominent strike ridges, cliffs, peaks and benched slopes on moderately folded Devonian quartz sandstone, siltstone and conglomerate, general elevation 350 to 720m, local relief 250m. Thin stony uniform sands on crests and benches, deeper red brown loamy sand on slopes occasional red-brown texture-contrast soil.

4. The **Young Hills and Slopes** landscape consists of rounded hills and some steep slopes to tor covered ridges on massive and gneissic SilurianDevonian granites and granodiorite, general elevation 400 to 730m, local relief 100 to 250m. Gradational red earths are found on upper slopes, with red-yellow texture-contrast soils on lower slopes reflecting poorer drainage.

5. The **Murrumbidgee-Tarcutta Channels and Floodplains** landscape consists of channels, floodplain and terraces of Murrumbidgee tributaries on Quaternary alluvium, general elevation 200 to 400m, local relief 25m. Undifferentiated organic

sand and loam are common on the floodplain, with brown gradational loam and yellow texture-contrast soils on higher terraces.

6. The **Frampton Hills** landscape comprises rounded ranges and hills with moderate slopes on Silurian slate, jasper, chert, amphibolite, and Devonian dacite and mudstone, general elevation 400 to 720m. Shallow stony red brown structured loams dominate.

7. The **Springdale Hills** landscape consists of rounded ridges and a few peaks on Silurian sandstone, shale and acid volcanics, general elevation 300 to 530m, local relief 150m. Gravelly uniform clay loams and red-brown texture-contrast soils.

8. The **Ulandra-Narabulla Hills and Slopes** landscape consists of rounded hills and isolated peaks on Silurian-Devonian granite, granodiorite and granite gneiss, general elevation 300 to 930m, local relief 300m. Abundant rock outcrop, thin gritty loams and shallow red-brown texture-contrast soils.

9. The **Junee Hills and Slopes** landscape consists of hills, low ranges and undulating plain on Silurian-Devonian massive granite and granodiorite, general elevation 300 to 450m, local relief 60m. Coarse siliceous sands are found amongst rock outcrop and tors, while thin, gritty red and yellow texture-contrast soilsare found on slopes with harsh blocky subsoil.

10. The **Wonga Hills and Ranges** landscape consists of rolling hills, low rises and ridges on Ordovician siltstone, slate, quartzite and phyllite, general elevation 250 to 370m, local relief 50m. Stony, thin red and brown texture-contrast soils merging to yellow harsh texture-contrast soilsare found on valley floors.

11. The **Brokong Plains** landscape consists of Quaternaryalluvial plains, with a general elevation of 170 m. Red-brown texture contrast soils dominate.

12. The **Table Top Range** landscape consists of Isolated hills with low to moderates slopes on Devonian conglomerate, sandstone and shale, general elevation 200 to 445m, local relief 100m. Shallow sandy red texture-contrast soils.

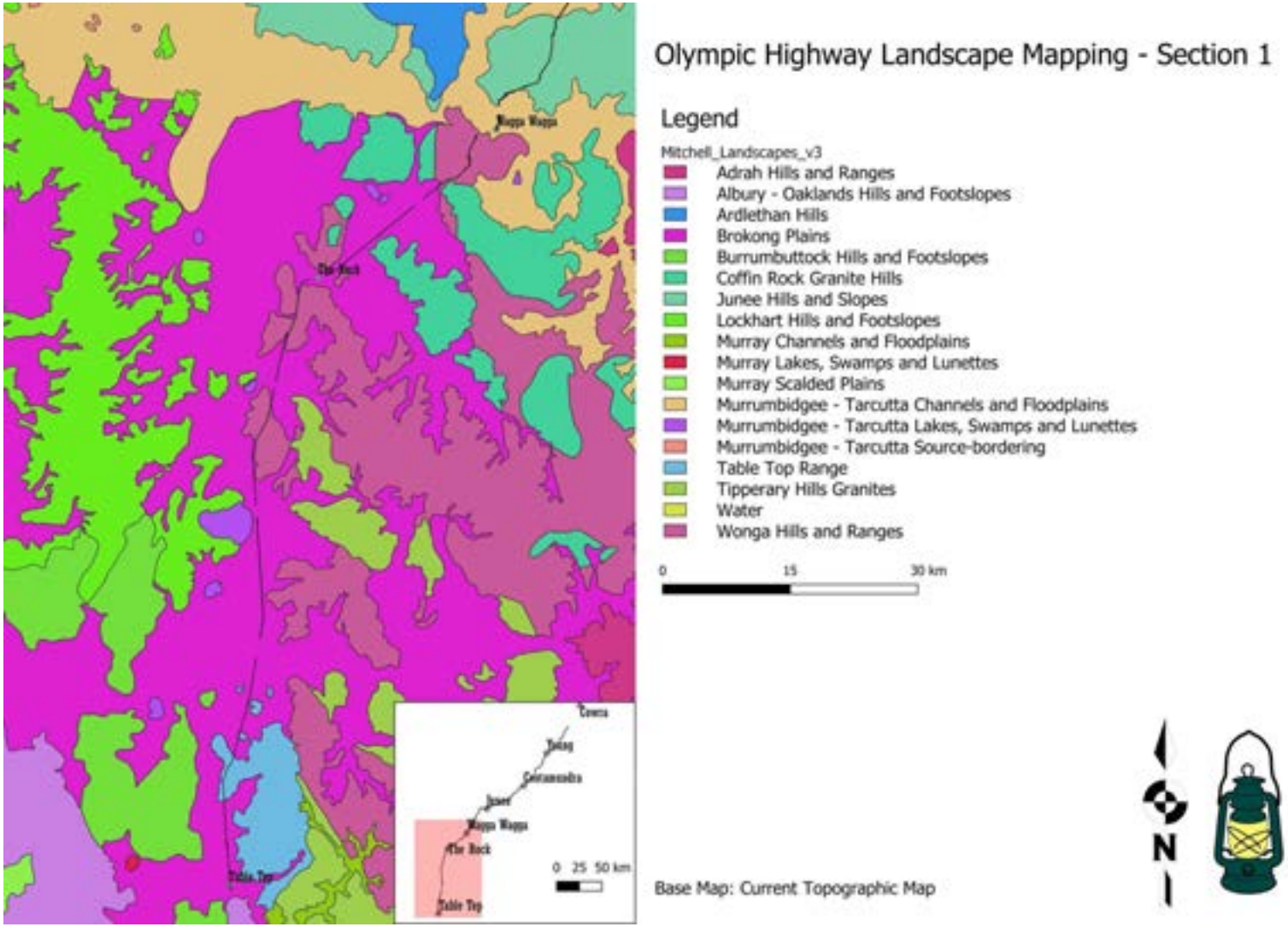

Figure 2 - Location of Mitchell landscapes within Section 1 of the study area

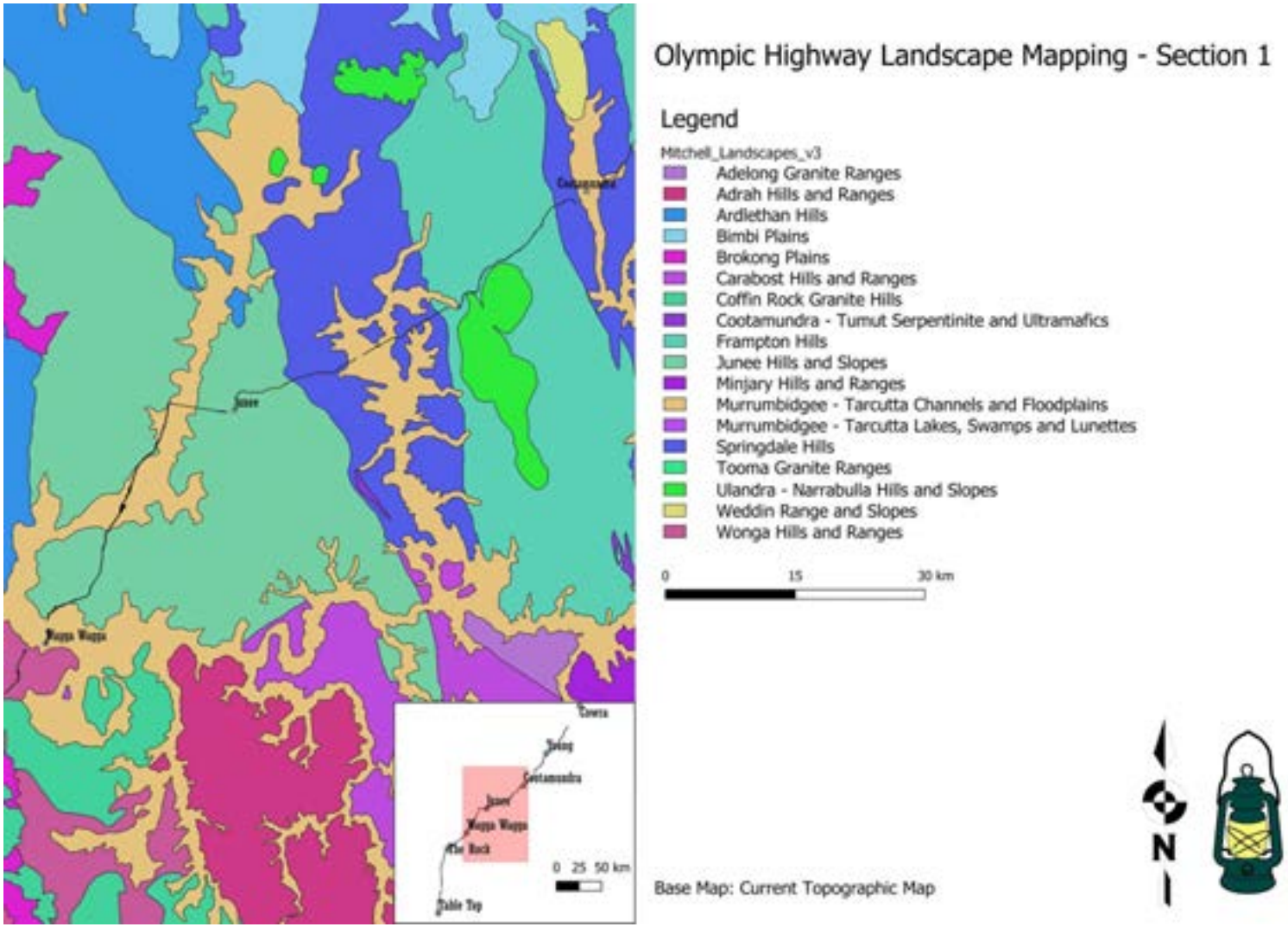

Figure 3 Location of Mitchell Landscapes within Section 2 of the study area

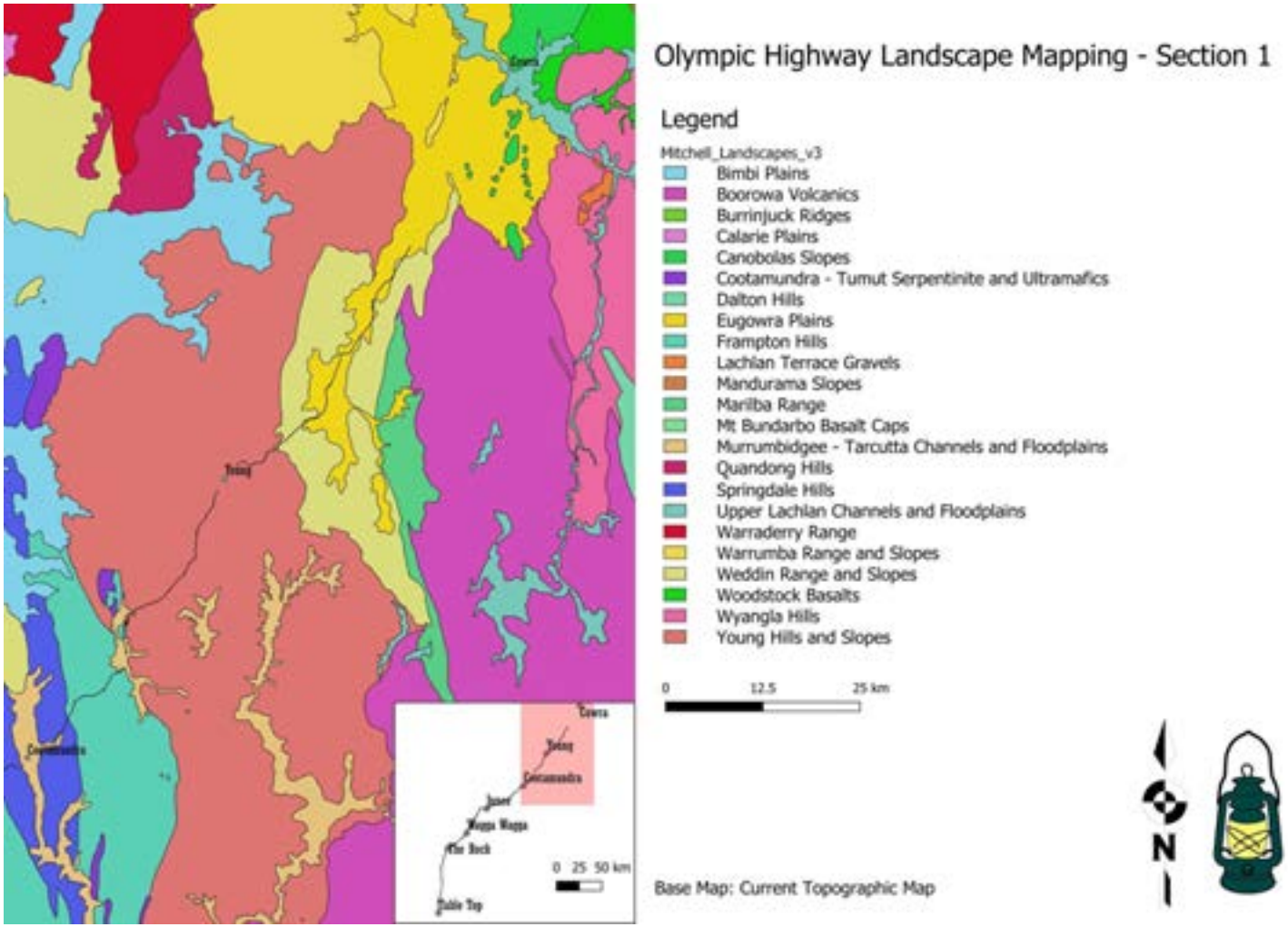

Figure 4 Location of Mitchell landscapes in Section 3 of the study area

Table 2 Mitchell Landscape characteristics in study area

Landscapes in Research Area	Landforms and geology	Soil description	Vegetation	Archaeological Implications
Brokong Plains	Quaternary alluvial plains	Red-brown texture contrast soils.	Formerly grey box, yellow box, Blakely's red gum and white cypress.	Artefact scatter Hearths Culturally modified tree (occasional) Burial Midden
Eugowra Plains	Alluvial plains, lower hill slopes of Lachlan River terraces and tributary valleys on Quaternary alluvium.	Red-brown earths and cracking clay soils.	Formerly white cypress pine and grey box, with yellow box and river red gum in riparian environments.	Artefact scatter Hearths Culturally modified tree (occasional) Burial Midden
Frampton Hills	Rounded ranges and hills with moderate slopes on Silurian slate, jasper, chert, amphibolite, and Devonian dacite and mudstone,	Shallow stony red brown structured loam.	Open forest of grey box, red stringybark, red ironbark, Blakely's red gum and black cypress pine.	Artefact scatter Culturally modified tree (occasional) Ceremonial Stone arrangement Quarry
Junee Hills and Slopes	hills, low ranges and undulating plain on Silurian-Devonian massive granite and granodiorite	Coarse siliceous sands amongst rock outcrop and tors, thin gritty red and yellow texture-contrast soils on slopes with harsh blocky subsoil.	Woodland of Dwyer's gum and red ironbark on high rocky areas. Open forest of grey box and red stringybark on slopes, with patches of black cypress pine in rocky outcrops. River red gum and river oak in riparian environments.	Artefact scatter Culturally modified tree (occasional) Ceremonial Stone arrangement Quarry

Landscapes in Research Area	Landforms and geology	Soil description	Vegetation	Archaeological Implications
Murrumbidgee – Tarcutta Channels and Floodplains	Channels, floodplain and terraces including active and inactive tributaries of the Murrumbidgee.	Quaternary alluvium: organic sand and loam on floodplain with yellow texture-contrast soils on higher terraces.	River red gum, river cooba, lignum Cumbungi, reed and nardoo in flooded depressions. Black box and saltbush varieties on back plains	Artefact scatter Hearths Culturally modified tree (occasional) Burial Midden
Springdale Hills	Rounded ridges and a few peaks on Silurian sandstone, shale and acid volcanics.	Gravelly uniform clay loams and red-brown texture-contrast soils.	Grey box, red ironbark, white cypress pine and patches of mallee. Bimble box along creek lines.	Artefact scatter Culturally modified tree (occasional) Ceremonial Stone arrangement Quarry
Table Top Range	Isolated hills with low to moderates slopes on Devonian conglomerate, sandstone and shale,	Shallow sandy red texture-contrast soils.	Tumbledown red gum, red stringybark, black cypress pine and red ironbark. Yellow box on flats, river red gum along larger streams.	Artefact scatter Culturally modified tree (occasional) Ceremonial Stone arrangement Quarry
Ulandra-Narabulla Hills and Slopes	of rounded hills and isolated peaks on Silurian-Devonian granite, granodiorite and granite gneiss,	Abundant rock outcrop, thin gritty loams and shallow red-brown texture-contrast soils.	Woodland of red stringybark, Blakely's red gum, black cypress pine, white box, yellow box, long leaved box and red box. High diversity of shrubs includeing Cootamundra wattle.	Artefact scatter Culturally modified tree (occasional) Ceremonial Stone arrangement Quarry
Upper Lachlan Channels and Floodplains	The stream pattern cuts across the geologic structure forming several narrow gorge	Gravel alluvium.	River oak is dominant with river red gum and yellow box becoming more common along	Artefact scatter Culturally modified tree

Landscapes in Research Area	Landforms and geology	Soil description	Vegetation	Archaeological Implications
	sections with rocky walls.		downstream reaches.	
Weddin Range and Slopes	Prominent strike ridges, cliffs, peaks and benched slopes on moderately folded Devonian quartz sandstone, siltstone and conglomerate.	Thin stony uniform sands on crests and benches, deeper red brown loamy sand on slopes occasional red-brown texture-contrast soil.	Red ironbark, Blakely's red gum, red stringybark, white gum, apple box, and tumbledown red gum. Slopes support white box, yellow box, fuzzy box and a shrubby understorey of hopbush and wattles.	Artefact scatter Culturally modified tree (occasional) Ceremonial Stone arrangement Quarry
Wonga Hills and Ranges	Rolling hills, low rises and ridges on Ordovician siltstone, slate, quartzite and phyllite.	Stony, thin red and brown texture-contrast soils merging to yellow harsh texture-contrast soils on valley floors	Tubledown red gum, red stringybark and grey box on slopes. Yellow box, white box and Blakely's red gum on flats, with kangaroo grass and plains grass.	Artefact scatter Culturally modified tree (occasional) Ceremonial Stone arrangement Quarry
Young Hills and Slopes	Rounded hills and some steep slopes to tor covered ridges on massive and gneissic SilurianDevonian granites and granodiorite.	Gradational red earths on upper slopes and red-yellow texture-contrast soils on lower slopes reflecting poorer drainage.	Extensively cleared, with patches of remaining woodland containing white box, yellow box, broad-leaved peppermint, red stringybark and Blakely's red gum.	Artefact scatter Culturally modified tree (occasional) Ceremonial Stone arrangement Quarry

3.2 Geology and soils of the South Western Slopes Bioregion

The varied geology of the study area (Figures 5–7) is a major factor affecting the distribution of resources throughout the landscape and, therefore, the distribution of archaeological sites. The South Western Slopes bioregion is situated on the Lachlan Fold belt, a series of north to northwesterly trending, folded bodies of Cambrian to Early Carboniferous sedimentary and volcanic rocks that formed 500-230 million years ago (Short and Woodroffe, 2009). These large-scale upfolded bodies of rock are granite-rich and granite

landscapes occur either as central basins surrounded by steep hills formed on contact metamorphic rocks, or as high blocky plateau features with rock outcrops and tors (NSW NPWS, 2003), such as those found on the hills between Albury and Wagga Wagga (NSW Department of Mines 1971). Rock outcrops and exposed crests may have formed sources of raw materials for stone tool manufacture, areas where rock art was created and prominent landscape features that formed foci of Dreaming sites and ceremonial gatherings.

Structural features (bedding and faults) control the development of the hilly landscapes that are developed on the sedimentary and volcanic rocks, typically forming lines of hills extended along the strike of more resistant rocks, such as the siliceous, metamorphic rock quartzite. Quartzite was often used for making grinding stones and other artefacts and commonly outcrops on the crests of hills throughout the Upper Slopes Sub-region, while north-south orientated strike ridges are primarily composed of sandstone. Some hills are composed of conglomerate, and limited outcrops of limestone occur, the most famous being at Wellington Caves (Osborne 1998). The valleys between ranges are either in granite or generally softer rocks such as the common metamorphics shale, phyllite or slate. Acid volcanic rocks (mainly rhyolite) outcrop on hills north of Boorowa including at Wyangala Dam and on the Hervey and Currumbena Ranges near Peak Hill (including part of Goobang National Park) in the northern part of the bioregion (NSW Department of Mines 1971). There are also limited areas of Teritary basalt with underlying river gravels and sands, The very large number of mineral deposits in this area have supported the mining industry over the past 150 years.

In the Lower Slopes, Quaternary alluvium buries the underlying geology and occasional lakes become the dominant landscape form. At the western edge of the bioregion the alluvial fans of the Riverine Plain have largely buried bedrock forms. Remnants of earlier gravel deposition are found as terrace features in the valleys and as gravel outwash plains on these fans. These deposits are indicative of higher river discharges that occurred as a result of seasonal meltwater from glaciers, which were found in upland areas during Pleistocene cold stages.

3.2.1 Soils

Reflecting the complex underlying geology of the Lachlan Fold Belt (Gray 1997), the Upper Slopes Sub-region is characterised by a complex soilscape that is formed on varied substrates including sedimentary, metamorphic, volcanic rocks, igneous rocks with fine-grained sedimentary rocks, such as shale and mudstone. The main soil types in the Upper Slopes Sub-region are yellow and red podsolic (texture contrast) soils, red or brown solodic soils derived from sedimentary or acid volcanic (rhyolite) rocks, along with yellow earths and red earths (Chen & McKane. 1996). Thin, rocky soils are common on rocky hills, while dark (chocolate) loam (or black earth) soils form on the small areas of Tertiary basalt. Quaternary alluvium composed of gravels, sands and loams occur along river valleys and colluvium occurs on outwashes at the base of hills. Organic or peaty soils, sometimes forming swamps, have developed in some valleys where sediment has accumulated and water flow has been impaired, while wetlands occur in old river channels or in depressions on the floodplains of the Murray, Murrumbidgee and Lachlan Rivers (NSW NPWS 2003).

Benson 2008 states that the typical soils in the Lower Slopes Subregion include alluvial brown, grey and red clays, clay-loams and red or black earths (loams). Gilgai soils (small, ephemeral lake formed from a depression in the soil surface in expanding clay soils). Aeolian sands and loamy soils occur on rises near major rivers or on sand plains that over-top alluvial sediments. Fine aeolian loam or clay soils occur from Temora in the north extending to south of Wagga Wagga in the south. Shallow, gravel soils occur on low rises composed of

sedimentary sandstones, ironstone or metamorphic rocks. Thin rocky soils form on steep slopes on siliceous rock, but this landform type is relatively rare in the lower slopes.

3.3 Vegetation

A brief summary of the vegetation found across the study area is provided below with details relating to each Mitchell landscape area following.

This hilly country is generally characterised woodlands and open woodlands of white box (Eucalyptus albens). To the north, vegetation communities are increasingly dominated by grey box (Eucalyptus microcarpa) and white cypress pine (Callitris glaucophylla). Red stringybark (Eucalyptus macrorhynca) and black cypress pine (Callitris endlicheri) are common on higher slopes, while kurrajong (Brachychiton populneum), red ironbark (Eucalyptus sideroxylon), white gum (Eucalyptus rossi), yellow box (Eucalyptus melliodora) and Blakely's red gum (Eucalyptus blakelyi) occupy the lower slopes. Valley flats are dominated by rough-barked apple (Angophora floribunda), with river oak (Casuarina cunninghammia) found along eastern streams and river red gum (Eucalyptus camaldulensis) lining the larger central and western streams.

Other common trees include hill red gum (Eucalyptus dealbata), white cypress pine and red stringybark in the ranges and grey box woodlands, with yellow box, white cypress pine and belah (Casuarina pauper) occupying lower areas. Yellow box, poplar box and belah associations occupy alluvial loams. River red gum grows along all streams, with some black box (Eucalyptus largiflorens), lignum (Muehlenbeckia cunninghamii) and river cooba (Acacia stenophylla) also occurring

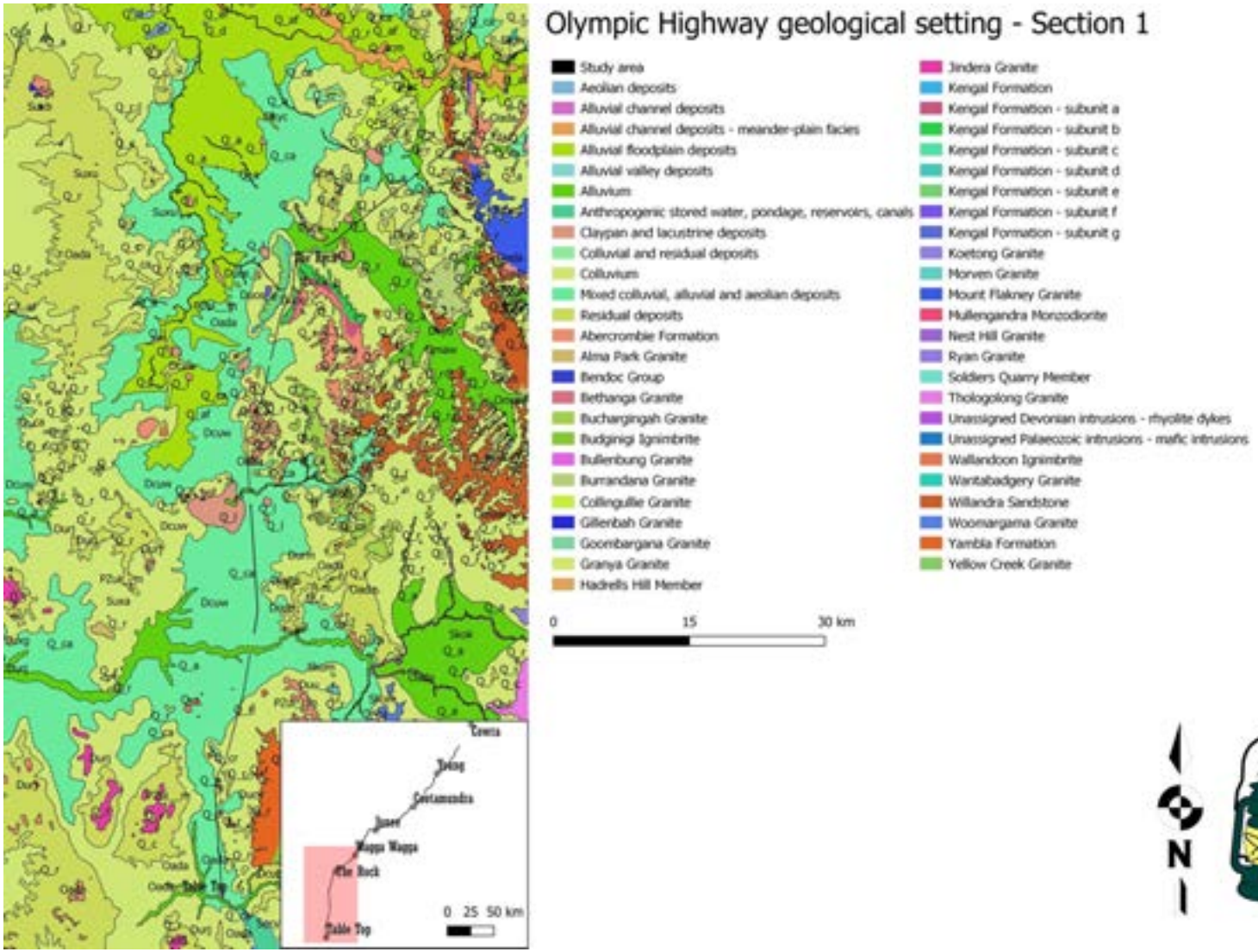

Figure 5 Geological context of Olympic Highway section 1

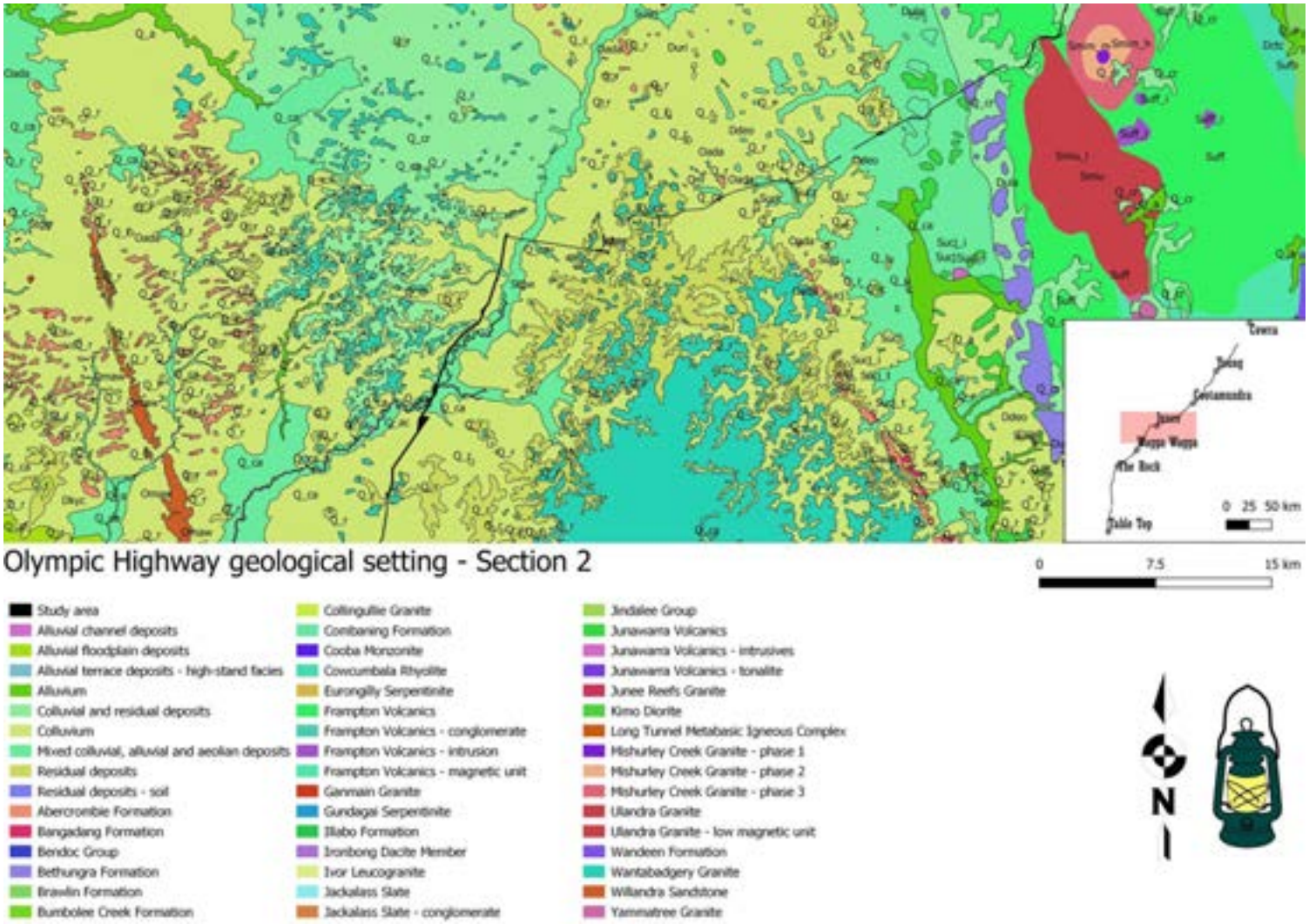

Figure 6 Geological context of Olympic Highway section 2

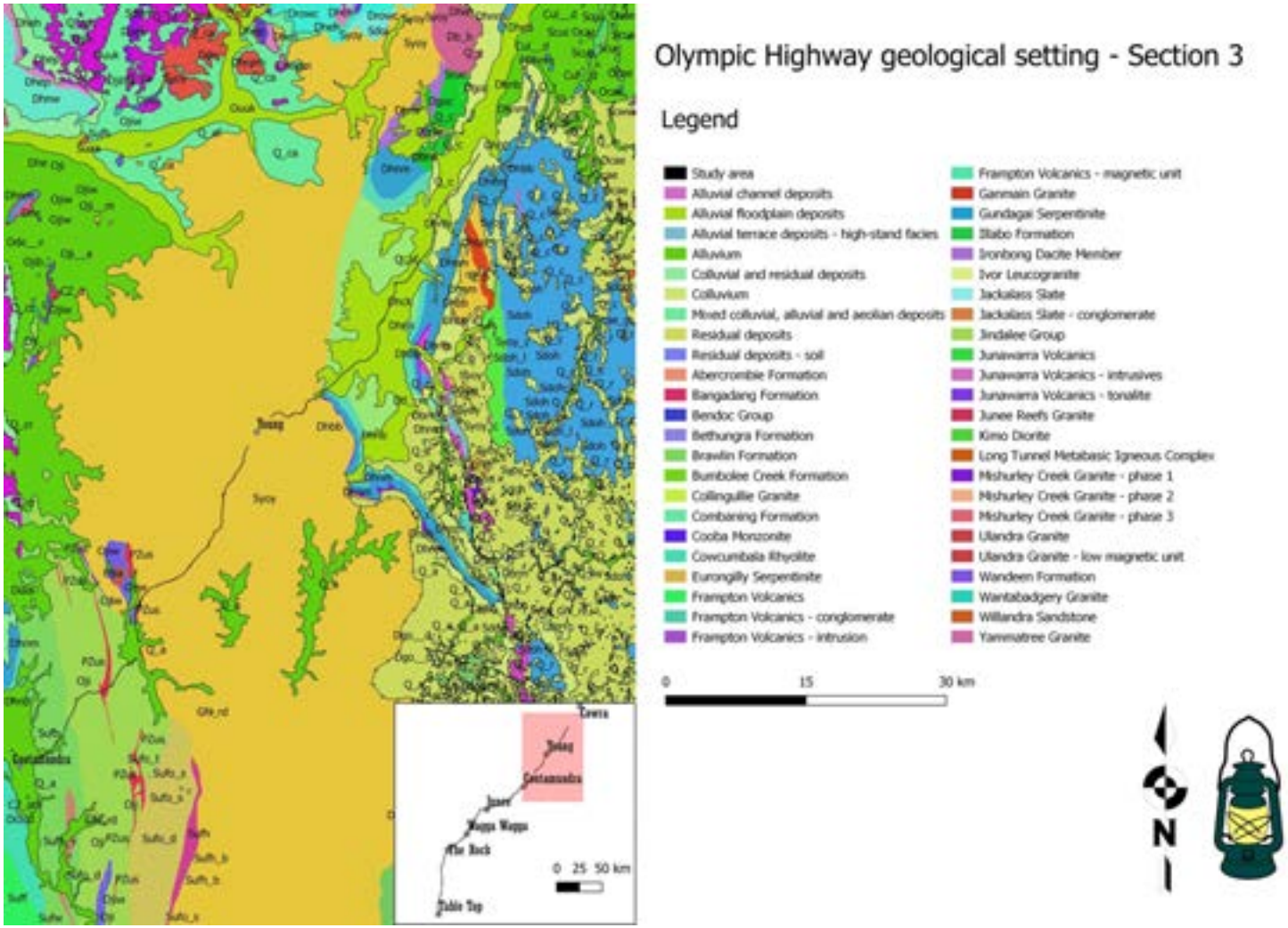

Figure 7 Geological context of Olympic Highway section 3

3.3.1 Vegetation by Mitchell landscape

1. In the **Upper Lachlan Channels and Floodplains** landscape river oak (*Casuarina cunninghamiana*) is dominant, with river red gum (*Eucalyptus camaldulensis*) and yellow box (*Eucalyptus melliodora*) becoming more common along the downstream reaches.

2. The **Eugowra Plains** Landscape is extensively cleared and farmed, but originally carried white cypress pine (*Callitris glaucophylla*) and grey box (*Eucalyptyus microcarpa*) with yellow box (*Eucalyptus melliodora*) communities and river red gum (Eucalyptus camaldulensis) adjacent to stream lines.

3. The **Weddin Range Slopes and Crests** are populated with red ironbark (*Eucalyptus sideroxylon*), Blakely's red gum (*Eucalyptus blakelyii*), red stringybark (*Eucalyptus macrorhyncha*), white gum (*Eucalyptus rossii*), apple box (*Eucalyptus bridgesiana*), and tumble down red gum (*Eucalyptus dealbata*). Slopes support white box (*Eucalyptus albens*), yellow box (*Eucalyptus melliodora*), fuzzy box (*Eucalyptus conica*), and shrubby understorey of hopbush (*Dodonaea sp.*) and wattles (*Acacia sp.*). Foot slopes support white cypress pine (*Callitris glaucophylla*).

4. The **Young Hills and Slopes** landscape is extensively cleared with patches of remaining woodland of white box (*Eucalyptus albens*), yellow box (*Eucalyptus melliodora*), broad-leaved peppermint (*Eucalyptus dives*), red stringybark (*Eucalyptus macrorhyncha*) and Blakely's red gum (*Eucalyptus blakelyii*).

5. The **Frampton Hills** landscape supports open forest of grey box (Eucalyptus microcarpa), red stringybark (*Eucalyptus macrorhyncha*), red ironbark (*Eucalyptus sideroxylon*), Blakely's red gum (*Eucalyptus blakelyii*) and black cypress pine (*Callitris endlicheri*).

6. The **Murrumbidgee-Tarcutta Channels and Floodplains** landscape supports river red gum (*Eucalyptus camaldulensis*) gallery woodland on banks, with yellow box (*Eucalyptus melliodora*) and grey box (*Eucalyptus microcarpa*) open woodland on floodplain and terraces.

7. The **Springdale Hills** landscape is populated by grey box (*Eucalyptus microcarpa*), red ironbark (*Eucalyptus sideroxylon*), white cypress pine (*Callitris glaucophylla*), with patches of mallee. Bimble box (*Eucalyptus populnea*) along creek lines.

8. The **Ulandra-Narabulla Hills and Slopes** landscape supports woodland of red stringybark (*Eucalyptus macrorhyncha*), Blakely's red gum (*Eucalyptus blakelyii*), black cypress pine (*Callitris endlicheri*), white box (*Eucalyptus albens*), yellow box (*Eucalyptus melliodora*), long-leaved box (*Eucalyptus nortonii*) and red box (*Eucalyptus polyanthemos*), with high diversity of shrubs including Cootamundra wattle (*Acacia baileyana*).

9. The **Junee Hills and Slopes** landscape supports woodland of Dwyer's red gum (*Eucalyptus dwyeri*) and red ironbark (*Eucalyptus sideroxylon*) on high rocky areas. On slopes there is open forest of; grey box (*Eucalyptus microcarpa*), red stringybark (*Eucalyptus macrorhyncha*) with patches of black cypress pine (*Callitris endlicheri*) in rocky outcrops. River red gum (*Eucalyptus camaldulensis*) and river oak (*Casuarina cunninghamiana*) are found along streams.

10. The **Table Top Range** landscape supports low forest of tumbledown red gum (*Eucalyptus dealbata*), red stringybark (*Eucalyptus macrorhyncha*), black cypress pine (*Callitris endlicheri*) and red ironbark (*Eucalyptus sideroxylon*), yellow box (*Eucalyptus melliodora*) on flats, river red gum (*Eucalyptus camaldulensis*) along larger streams.

11. The **Brokong Plains** landscape is extensively cleared and cropped, but were formerly grey box (*Eucalyptus microcarpa*), yellow box (*Eucalyptus melliodora*), Blakely's red gum (Eucalyptus blakelyii) and white cypress pine (*Callitris glaucophylla*) woodland to open forest

12. **The Wonga Hills and Ranges** landscape Woodlands of; tumbledown red gum (*Eucalyptus dealbata*), red stringybark (*Eucalyptus macrorhyncha*) and grey box (*Eucalyptus microcarpa*) on slopes, yellow box (*Eucalyptus melliodora*), white box (*Eucalyptus albens*) and occasional Blakely's red gum (*Eucalyptus blakelyii*) on flats with kangaroo grass (*Themeda triandra*) and plains grass (*Stipa aristiglumis*).

3.4 Aboriginal use of the land

3.4.1 Flora and Fauna Resources

In this section the available ethnohistorical information relating to the Aboriginal groups in this region is briefly reviewed. This information can assist in formulating a model of Aboriginal subsistence and occupation patterns in the area.

3.4.1.1 Clothing resources

Ethnohistorical sources record many descriptions of clothing, and their origins, of Indigenous peoples in the study area. Such descriptions include using kangaroo and possum skins for cloaks, processed through the use of mussel shell scrapers (Bennet, 1834; Hobler, 1825-1871). Cunningham (1817) also describes kangaroo 'mantles' which extended from the shoulder to the mid-back as being worn by women.

Bennet (1834) also describes the use of kangaroo sinew (primarily from the tail) as a form of thread used with bone needles. He also describes cloaks as being "decorated with markings representing kangaroos, emus, turtles and other ornamental designs". Bennet (1834) also describes such sinew as being coloured through the use of ochre or clays, and used for string based items such as hair nets.

Cunningham (1817) also describes belts and head coverings of "a grass network", kangaroo teeth earring, cockatoo feather hair decoration, and also observes 'young men' has having "their beards divided into three divisions and formed into plaited tails".

3.4.1.2 Food resources

Food resources are recorded as being used by Indigenous peoples in ethnohistoric sources. These include freshwater aquatic resources, mammal and reptile species, both land and water bird species, plant species, and various insects and grubs.

Freshwater resources are commonly used in areas close to rivers and water sources and recorded as a primary food source in such areas. Ethnohistoric sources frequently describe various fish species as being caught with nets and traps (Mitchell, 1839; Morey, nd; Margaret Tucker 1977). McDonald (1850) reports fish to become a significantly less common food source during times of increasing floodwater. Freshwater turtles are noted by both Mitchell (1839), and Tucker (1977). Various reptiles are also described by Fraser (1892) and Cunningham (1817) which may also include freshwater turtle. Yabbies are described as a food source by Mitchell (1839), and other shellfish such as mussel (Sturt, 1833), are also noted as a food source. Mitchell (1839) also refers to various mussel type species being harvestable from empty lakes in the dry season through digging in the sand. Robinson (Clark 2014) also describes women as "fishing for shells" in the lakes.

The Murrumbidgee provided plentiful shellfish and fish, including large Murray cod. The country between the rivers supplied plants, tubers and nuts. Seasonal foods included yam daisies in Spring, summer and Autumn, Wattle seeds in July and August and orchid tubers in August and September. Kangaroo and possum are described as common terrestrial food sources (Fraser 1892; Gribble nd; Margaret Tucker 1977), however MacDonald (1850) describes them as being of limited priority in some of his observations.

Various types of birds are commonly described as food sources in ethnohistorical sources. These include 'turkey' (Gribble, 1933) and emu (Gribble 1933; Tucker 1977), Sturt (1833) describes emu as a food for "old men" only. General 'freshwater birds' are also commonly referred to, and occasionally specified as including pelican, swan, duck, and others (Sturt, 1833; Mitchell, 1839; McDonald, 1850; Beveridge, 1883; Gribble, 1933; Tucker, 1977). Sturt (1833), also notes that in some areas 'duck' is limited to married people only. Beveridge (1883) and Gribble (1933) also note eggs as a food source.

Various plant types are referred to as food sources by ethnohistories. These include: Pigface (*Carpobrotus glaucescens*) (Morey, nd); Balyan (likely a form of *Typha*), which was processed to form a flour-like substance (Mitchell 1839); "wild lettuce and carrots" (Gribble 1933); "roots, herbs grass seeds, fungi &c" in placement of fish species during flood periods (McDonald, 1850); and various tuber types (Gribble, 1933; Sweeney, 1947). Sturt (1835) describes them as a food source used predominantly in the dry season.

Other traditional food sources are recorded as including various types of berries, seeds and greens (Montero Lopez, 2016) along with the Yam Daisy, Kurrajong (seeds and roots) and Acacia (seeds and shoots) (Barber, Ruhl and Bradley, 2016).

Insects are described as food sources in many non-waterfront areas, including various ant species, and ant eggs (Eyre, 1845; Fraser 1892), and 'grubs', including witchety grubs (Fraser 1892, Tucker 1977). Wiradjuri from across the study area came annually to the Alpine peaks in the extreme southeast corner of their country to feast on Bogong moths. Tumut and the western flank of the alps were in Wiradjuri country, directly adjoining the Monaro Ngarigo on the eastern slopes. Here, in the Bogong mountains and the snowy mountains, large numbers of Aboriginal men assembled each December and January to collect dormant moths and roast them or pound them into cakes, while the women and children remained in the valleys below.

3.4.1.3 Plant tool and weapon resources

Bark, primarily from Eucalypt species, was a common resource utilised for creating a number of tools, as well as for various other uses. Bark harvesting for such uses leaves identifiable scars on existing trees, which add to the archaeological record.

Gribble (1933) also describes "dinner plates" and coolamon as being made from singular pieces of bark removed from Eucalypt trees. Likewise, he also describes large pieces of bark as being stripped from Eucalypts for use in shelter and house construction. He also describes one shield type made in the Warrangesda area. He notes this shield to be broad in shape, "made out of very thick sun-dried bark", and used especially against spears (Gribble, 1933).

Though Gribble (1933) does reference canoe construction, he primarily discusses using them as a child, rather than the process and materials. Tucker (1977) does however describe the process and materials. She identifies the need for a "suitable gum tree" from which the correct shape of harp would be removed using an axe. Gribble (1933) also describes the use of "the pith of a certain plant" which was lit and used to create small circular burn scars which "were worked into a design by way or ornamentation". This is a process which Gribble describes as being associated with women – although he is not clear

if the ornamentation type is only used by women, or if it is women who are responsible for conducting the practice.

Thin strips of bark are also recorded as being sewn together to create bags (Gribble, 1933). Gribble (1933) describes these bags as being especially useful for honey gathering. Similarly, Gribble (1933) also notes that vessels for carrying water could be made from the bark "stripped from the round lumps on gum trees". Thin strips of bark from cypress pines, are also recorded as being used for creating torches (Thompson, 1982).

Wood and other plant materials were also utilised in a number of ways for manufacture of tools and weapons, as well as other more general uses. Beveridge (1883) describes the creation of cord from plant fibres, similarly Gribble (1933) notes the creation of bags and baskets from fibres, rather than bark strips.

Gribble (1932) also describes bark squares as being used during processing of skins. He also notes "carefully made" pegs used to pin out the skins for drying and processing (Gribble, 1932). He describes these pegs as being hardened with fire, and also being made of "a certain shrub which grew in the sand-hills" (Gribble, 1932).

Other wooden artefacts described in ethnohistorical sources include digging sticks (Sturt 1833; Mitchell, 1839) and shovels (Oxley, 1820; Bennet, 1834). Weapons also included spear throwers, clubs/nulla nullas, throwing sticks, and axe handles (Oxley, 1820; Bennet, 1834). Gribble (1933) also describes wooden shields for use against nulla nullas, and broad tipped boomerangs with "decorative carving".

3.4.2 Inorganic resources

Ethnographic sources make little mention of inorganic material sources; however they do note the use of a number of materials. Various clays and ochres are mentioned in passing, with clays being used for decorations primarily, and ochres primarily in reference to dying and colouring (Bennet, 1834). Ethnographic sources do not seem to mention the origin of these resources, however.

Stone material is referenced as being in use for creating a number of tools and weapons, however the specifications of this material, or its origin is not noted. Cunningham (1817) does refer to a "green jade hatchet" which he trades for in the Murrumbidgee area. Beveridge (1883) does, interestingly, reference several materials outside stone which are used to create tools. These materials include shell, bone, and reed materials. He references these tools specifically regarding cooking, however, as Hobler (1825-1871) and Bennet (1834) both reference mussel shell scrapers used in processing skins, it is feasible that such tools existed in non-food related contexts.

3.4.3 Land Management

In recent years, questions related to the resource management strategies employed by Aboriginal groups have risen to prominence in the media.

A number of ethnohistorical sources note the use and construction of fish trap and weir structures by Indigenous peoples.

Ethnohistoric recordings of such sites include Townsend (in Klaver 1998) who described a 'fish dam' west of the study area near Narranderra, Beveridge (1883) who described weir structures built from wooden stakes which functioned as both traps, and pools in which fish could be stored for later capture. Gilmore (1934) also describes 'log traps' in use in billabong sites during large gatherings. Beveridge (1883) describes the creation of weir structures and the collection of fish as a practice conducted by women. Norton (1907) also described weir structures on the Murray and Murrumbidgee rivers as being sapling based, and used

during the flood season to trap fish for ease of catch, or for storing fish in the post-flood season. He notes that these structures were primarily created in the spring season. During the 19th century, fish traps on the Murrumbidgee were destroyed in order to allow steamers access upriver to Wagga Wagga.

3.4.4 Sites

Of various site types present in the study area, burial sites are those most predominantly recorded in ethnohistorical sources. Burial sites are not, however, necessarily limited to one specific landform. Mitchell (1839) records observing burial sites in a number of landforms and environments, including "reedy hollows" and "risen ground". He also records, in the Murrumbidgee/Riverine area, burials on raised mounds on floodplains, and on the Lachlan River, burials existed on flat country. Sturt (1838) records burials on sandhills, and theorises that "sandy soils are utilized as being easier to excavate". Morey (nd) described burials near Euston as being "on a high bank overlooking the river", while in other instances (Morey nd) describes the burial of an important man as being in a selected cemetery "on a sandy rise sloping to the river". Morey (nd) does however, note that this was abnormal due to the status of the man, and that remains were usually interred in the nearest location that consisted a of a sandhill "above the floodmark". Stone (1911) also references the practice of burials in association with hearth sites.

Cunningham (1817) also describes locations of campsites he observes as being near creeks, or on margins of "extensive low swamps". While hearth and oven sites are observed, these are rarely recorded with any connection to landform or environmental descriptions. Stone (1911) and Mitchell (1839) do, however, suggest these could be prominent sites in the landscape, and Mitchell (1839) observes many of these hearth and oven sites as being located in proximity to water, to the extent that "very ancient" sites might be within the current path of the river, or far from it, depending on the movements of the water course over time.

3.5 Settler Land-use

Aboriginal communities had been living within, and modifying, the Murrumbidgee landscape for Millennia, but attention of European invaders was naturally focussed on many of the same areas favoured by the indigenous people. The environment of the Olympic Highway study area has been significantly impacted by European settlement. While in 1829 Charles Sturt was able to admire the open woodlands of the Murrumbidgee valley, within 15 years all water frontages along the Murrumbidgee had been occupied by pastoralists. Land clearance for agriculture and the impact of rabbits has changed the vegetation of the study area, particularly in low-lying alluvial areas.

European settlement in the northern part of the study area, around Cowra shire, was tentative, because of apprehensions about resistance from the Aboriginal people. There was some contact, witnessed by sporadic hostility and by the quantity of surviving artefacts manufactued from European glass. Frank Jenkins of Bangus station, on the south bank of the Murrumbidgee, "found that about 200 Aborigines had surrounded a mob of his cattle and were ringing them around, and within the circle formed the blacks were riddling the cattle with spears all the time" in the 1830s.

To the west, the 'Wiradjuri wars' refers to a series of incidents that occurred along the Murrumbidgee (centreing on Narrandera) from 1839 to 1841. These incidents included Wiradjuri reactions, to atrocities committed by settlers and the loss of traditional hunting and fishing grounds, such as cattle-taking and spearing of stockmen The dislocation of Aboriginal routines of life by European settlers was increasingly severe from the 1830s onwards, and new diseases, particularly syphilid and influenza, took a terrible toll on the Wiradjuri. In the end, the Wiradjuri were deprived of their riverine territory and driven to the

hills and to employment on the stations as cattlemen, general hands, sheep-shearers, flour grinders, or in the case of the women, domestic servants and mothers of settlers children.

Gundagai, situated to the east of the study area, was the first township to develop in 1826, But pastoralism spread quickly along the Murrumbidgee and the town of Wagga Wagga was established in 1847-9, forming a major administrative centre. Steam boat traffic could reach Wagga Wagga, but could not regularly get as far as Gundagai. The road south through Gundagai became superseded by the road from Dubbo and Forbes to Albury via Wagga Wagga, part of which forms the focus of this study.

The area around Wagga Wagga and Gundagai developed rapidly, and as all the Murrumbidgee frontages were taken, new stations were opened on the tributary creeks both north and south of the main river, such as Muttama creek stretching from Cootamundra to Coolac. While initial settlement of the region was associated with the rivers, many towns in the Murrumbidgee are situated far away from water courses. These grew up for a variety of reasons, Junee because of the Goulburn to Albury railway, Young because of the Gold rushes in 1859-60.

4 ETHNOHISTORIC CONTEXT

Despite the likelihood of a common Wiradjuric language having been spoken across a large area, White (1986) and Read (1983) have stated that the broad-scale 'language as tribe' model fails to account for political and social variation. Rather, White (1986) suggests that the pre-invasion Wiradjuri may have exhibited considerable cultural 'dimensions' across their geographical range; such a social system, while displaying some economic and social variation, was complemented by long-range group affiliation and interaction, particularly within ceremonial and knowledge-holding cultural realms (White 1986: 61-66, 83-84, 96, 98, 106; see also Mathews 1896; Howitt 1904; Klaver 1998: 73-74; Knight 2001). Within the current study area historical references and research relating to the tract of landscape falling roughly between Young and Cowra are of particular relevance here. In the late 1800s Crown Surveyor F.B. Woolrych described this area as being inhabited and immediately bounded by several inter-riverine plains 'tribes' who considered themselves separate from the 'Burrowa Tribe' to the immediate east, even though they shared a common language (Woolrych 1890: 63, 70). Included within this linguistically related but socially variable collective were the 'Lachlan Tribe', the Kolerer-Mittong and Bundaburra to the north, the 'Boorowa/Burrowa Tribe', 'Cowra Blacks' and 'Bennelong Tribe' to the east, the 'Murrumbidgee Tribe' and Murrung Bulla to the south and the 'Levels Tribe' to the west (White 1986; Woolrych 1890; Morgan 1934 in Clark 1977: 15).

More recently, Jackson-Nakano has argued that the country around Cowra was originally inhabited by the 'Wallabalooa' people who spoke the Ngoonawal language and shared primary cultural affinities with the peoples of the more mountainous terrain of the east such as the Walgalu, Gundungarra and Kamberri (Jackson-Nakano 2001: 97; 2002: xxxii, 110). A Wiradjuri presence in this country by early contact period and in the late 1800s/earlier twentieth century is viewed by Jackson-Nakano as evidence of later phase Wiradjuri expansion towards the east and subsequent post-invasion social disruption (Jackson-Nakano 2001: 97). Nonetheless, it should be noted that this contention remains tempered by plentiful evidence supportive of regular interaction, kinship and connection as well as division; regardless of language and/or perceived identity, numerous accounts tell of powerful social links cemented through trade, intermarriage, cosmology and mutual participation in critically important ceremonial activity (Bennett 1834: 274; H.P. 1896: 18; Mathews 1896; Howitt 1904: 511; Morgan 1934 in Clark 1977: 15; Swan 1970: 7-8; Tazewell 1981 in Smith 1992: 10; Knight 2001). Jackson-Nakano also concedes that land tenure in earlier times was most likely far from static:

... expansion and contraction of territories would most likely have been a constant feature of pre-European Aboriginal groups throughout this region as individuals intermarried with others, wives were stolen and then, perhaps, later joined by relatives, and as a result of internecine wars between the groups. (2001: 19)

5 ARCHAEOLOGIAL CONTEXT

An extensive site search was conducted of the AHIMS database. 1135 sites or objects were listed on AHIMS as being present within the search area (Appendix 2). Of these, 234 were found within 1 km of the road reserve, as provided in *.shp format by Transport (Heritage_Buffer_Export_13022020). By section there are: 161 sites recorded on AHIMS within 1 km of section 1; 61 within 1 km of section 2 and; 12 sites within 1 km of section 3. Shapefiles provided by Transport indicate a zone of proposed impacts, which extends northwards beyond the study area along the road between Young and Cowra. Three sites (AHIMS# 44-4-0381; 50-6-0148; 50-3-0040) are recorded within this area of proposed works.

It must be noted that the number of sites physically located within the road corridor may be significantly different to what is recorded on AHIMS. This is the result of errors in the translation of site coordinates from earlier mapping systems, as well as the lack of spatial information recorded on AHIMS that shows the physical extent of site boundaries. For example, the GPS coordinates of a site recording may show that the site is located outside the road reserve, however, the actual dimensions of the site boundary may extend within the reserve. As such, Lantern has expanded the limits of the AHIMS search results to include sites within a 100m buffer of the road reserve and the zone of proposed impacts. As shown in Table 3, this brings the total number of sites recorded within 100 m of the road reserve to 65, and those within 100m of proposed impacts to 35.

Table 3 provides an overview of the 234 sites, previously recorded within 1 km of the study area, according to site types and features. The real number of sites totals more than 234, as some sites are recorded with more than one feature. For example, one site could be a scarred tree associated with an artefact scatter. As noted below, the vast majority of sites are culturally modified or scarred trees (CMT) (143), followed by artefacts (86). A number of other site types are also recorded. These include grinding grooves, a stone arrangement, a potential archaeological deposit (PAD) area, a resource and gathering site and a waterhole.

The mapping in Figure 8 to Figure 13 show the location of each recorded AHIMS site in relation to the Olympic Highway project area.

Table 3 Overview of sites within 1 km of the study area

Site features	Total	% of total
Artefact	86	37
Burial	0	0
Modified Tree (Carved or Scarred)	143	61
Stone Arrangement	1	<1
Grinding Groove	1	<1
Water Hole	1	<1
Aboriginal Resource and Gathering	1	<1
Potential Archaeological Deposit	1	<1
Total	234	100.0

AHIMS #	Site name	Feature/s	Proximity to Study Area	Proximity to proposed impacts
Section 1: Table Top to Wagga Wagga				
55-6-0070	ARTC 2	Artefact : 1	<100m	<100m
55-6-0071	ARTC 3	Artefact : 1	<100m	<100m
55-6-0072	ARTC 13	Artefact: 1	<100m	>100m
56-4-0347	Henty Pipeline IF1	Artefact	<100m	<100m
56-4-0208	ARTC 8	Artefact : 1	<100m	<100m
56-4-0206	ARTC 6	Artefact : 1	<100m	<100m
56-4-0204	ARTC 4	Artefact : 2	<100m	<100m
56-4-0207	ARTC 7	Artefact : 4	<100m	<100m
56-4-0205	ARTC 5	Artefact : 1	<100m	<100m
56-4-0210	ARTC 10	Artefact : 1	<100m	<100m
56-4-0011	Burkes Creek	Artefact	<100m	>100m
56-1-0654	Sandy Creek SF AFT 10	Artefact	<100m	>100m
56-1-0653	Sandy Creek SF AFT 9	Artefact	<100m	<100m
56-1-0655	Sandy Creek SF AFT 11	Artefact	>100m	>100m
56-1-0096	L-IF-1	Artefact: 1	<100m	>100m
56-1-0123	OLYMPIC HIGHWAY THE ROCK SCARRED TREE 1	Modified Tree (Carved or Scarred) : 1	<100m	<100m
56-1-0490	The Rock Rd Side Scar Tree 1	Modified Tree (Carved or Scarred) : 1	<100m	>100m
56-1-0378	Gabuga Tank 2	Modified Tree (Carved or Scarred) : -	<100m	<100m
56-1-0391	Gabuga Tank 17	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0392	Gabuga Tank 18	Modified Tree (Carved or Scarred) : -	<100m	<100m
56-1-0374	Gabuga Water Tank 3	Modified Tree (Carved or Scarred) : -	<100m	>100m

AHIMS #	Site name	Feature/s	Proximity to Study Area	Proximity to proposed impacts
56-1-0376	Gabuga Water Tank 5	Modified Tree (Carved or Scarred) : -	<100m	<100m
56-1-0386	Mark Saddler Gabuga 1	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0129	Kapooka Pump Station ST 1	Modified Tree (Carved or Scarred) : 1	<100m	<100m
56-1-0387	Gabuga Tank 13	Modified Tree (Carved or Scarred) : -	<100m	<100m
56-1-0383	Gabuga Tank 9	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0381	Gabuga Tank 10	Modified Tree (Carved or Scarred) : -	<100m	<100m
56-1-0127	Kapooka Water Tank ST 1	Modified Tree (Carved or Scarred) : 1	<100m	>100m
56-1-0373	Gabuga Water Tank 1	Modified Tree (Carved or Scarred) : -	<100m	<100m
56-1-0382	Gabuga Tank 11	Modified Tree (Carved or Scarred) : -	<100m	< 100m
56-1-0375	Gabuga Water Tank 4	Modified Tree (Carved or Scarred) : -	<100m	<100m
56-1-0377	Gabuga Water Tank 6	Modified Tree (Carved or Scarred) : -	<100m	<100m
56-1-0379	Gabuga Tank 7	Modified Tree (Carved or Scarred) : -	<100m	<100m
56-1-0389	Gabuga Tank 15	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0390	Gabuga Tank 16	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0388	Gabuga Tank 14	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0496	Gabuga Overpass Scar 1	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0352	Wagga Wagga Pounds Flat TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0098	L-ST-1	Modified Tree (Carved or Scarred) : 1	<100m	>100m
		Section 2: Wagga Wagga to Cootamundra		
50-5-0274	Olympic Highway Illabo Artefacts 3	Artefact	<100m	>100m
50-5-0115	Olympic Hwy - Bethungra 1	Artefact : 5	<100m	>100m
50-5-0275	Olympic Highway Illabo Artefacts 5	Artefact	<100m	>100m

AHIMS #	Site name	Feature/s	Proximity to Study Area	Proximity to proposed impacts
50-5-0276	Olympic Highway Illabo Artefacts 4	Artefact	<100m	>100m
50-5-0207	Cungegong TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	<100m	<100m
50-5-0204	Cungegong TSR Scar Tree 1	Modified Tree (Carved or Scarred) : -	<100m	<100m
50-5-0208	Cungegong TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	<100m	<100m
50-5-0205	Cungegong TSR Scar Tree 2	Modified Tree (Carved or Scarred) : -	<100m	>100m
50-5-0187	Bethungra Rail Tunnel 1	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0352	Wagga Wagga Pounds Flat TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0354	Wagga Wagga Pound Flat Scar Tree 1	Modified Tree (Carved or Scarred) : -	<100m	>100m
56-1-0345	Wagga Wagga Pounds Flat TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	<100m	>100m
50-4-0069	Harts TSR Olympic Highway, Wallacetown via Wagga Wagga	Modified Tree (Carved or Scarred) : -	<100m	<100m
50-5-0280	Olympic Highway Illabo PAD	Potential Archaeological Deposit (PAD) : -	<100m	>100m
		Section 3: Cootamundra to Cowra		
50-3-0038	APA-ST4-11	Modified Tree (Carved or Scarred) : -	<100m	<100m
50-3-0054	Flixton TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	<100m	<100m
50-3-0041	Karyrie Park Scar Tree 1	Modified Tree (Carved or Scarred) : -	<100m	>100m
50-3-0052	Flixton TSR Scar Tree 1	Modified Tree (Carved or Scarred) : -	<100m	<100m
50-3-0053	Flixton TSR Scar Tree 2	Modified Tree (Carved or Scarred) : -	<100m	>100m
50-3-0040	Wombat Tree	Modified Tree (Carved or Scarred) : 1	<100m	Within impact zone
50-6-0148	Wallendoon Lane	Modified Tree (Carved or Scarred) : -	<100m	Within impact zone
44-4-0381	Wattamondara 960	Modified Tree (Carved or Scarred) : -	>100m	Within impact zone
44-4-0338	N-ST-2, Cowra	Modified Tree (Carved or Scarred) : 1	>100m	<100m
44-4-0339	N-ST-3, Cowra	Modified Tree (Carved or Scarred) : 1	>100m	<100m

AHIMS #	Site name	Feature/s	Proximity to Study Area	Proximity to proposed impacts
44-4-0337	N-ST-1, Cowra	Modified Tree (Carved or Scarred) : 1	>100m	<100m
44-4-0209	Noonbinna S/T1;	Modified Tree (Carved or Scarred) : -	>100m	<100m

Table 4 Sites within 100 m of the road reserve

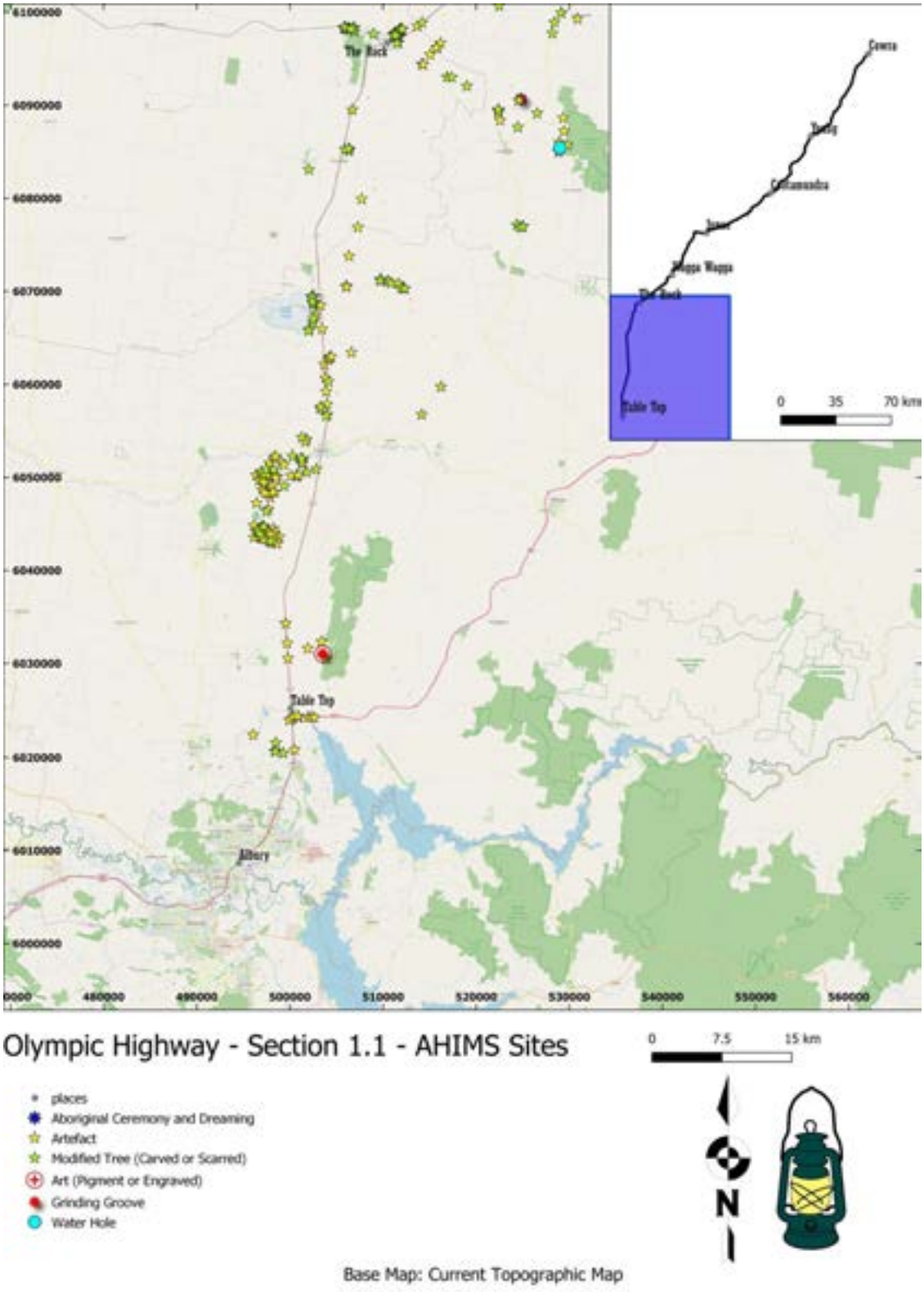

Figure 8 AHIMS sites surrounding study area section 1.1

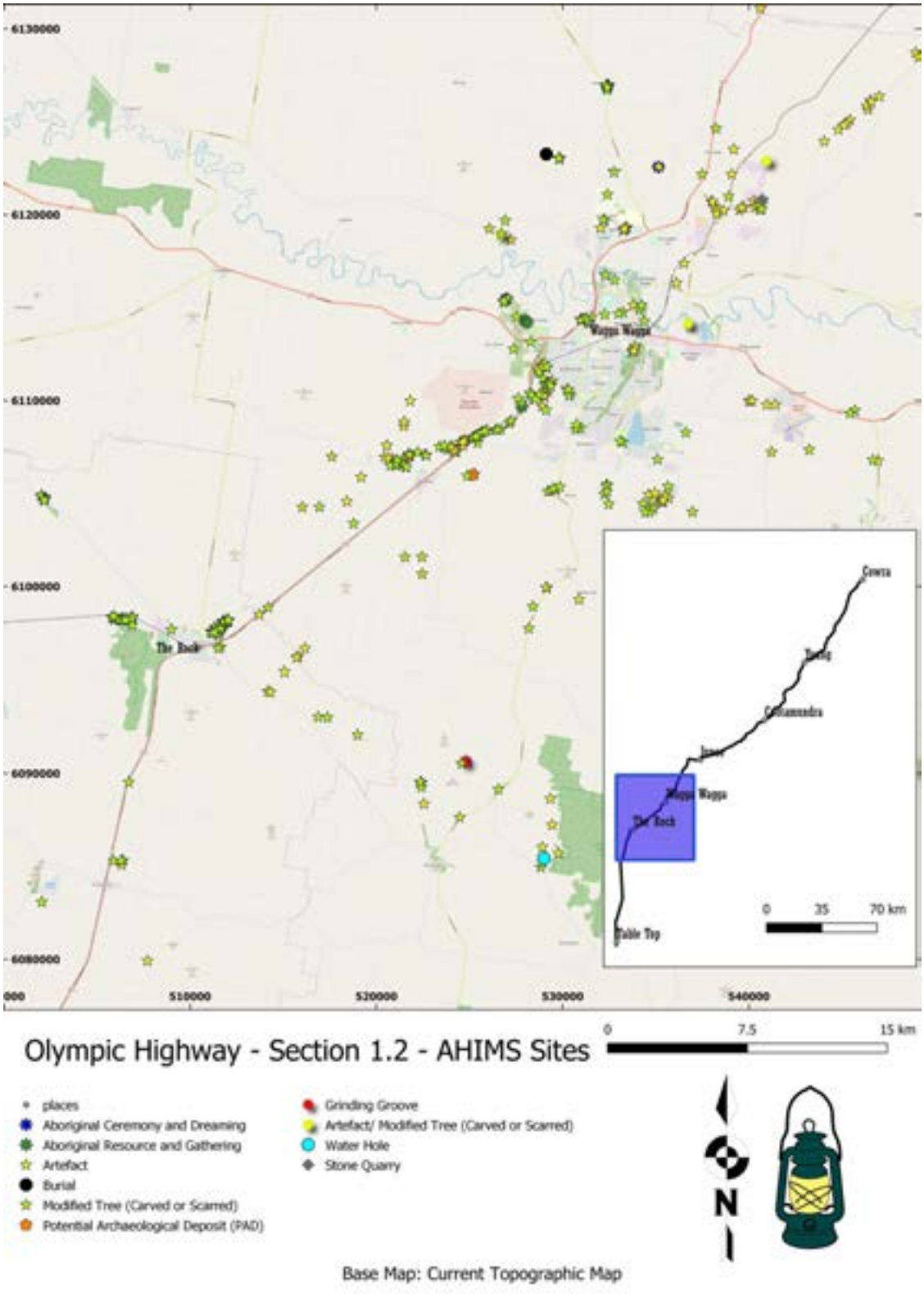

Figure 9 AHIMS sites surrounding study area section 1.2

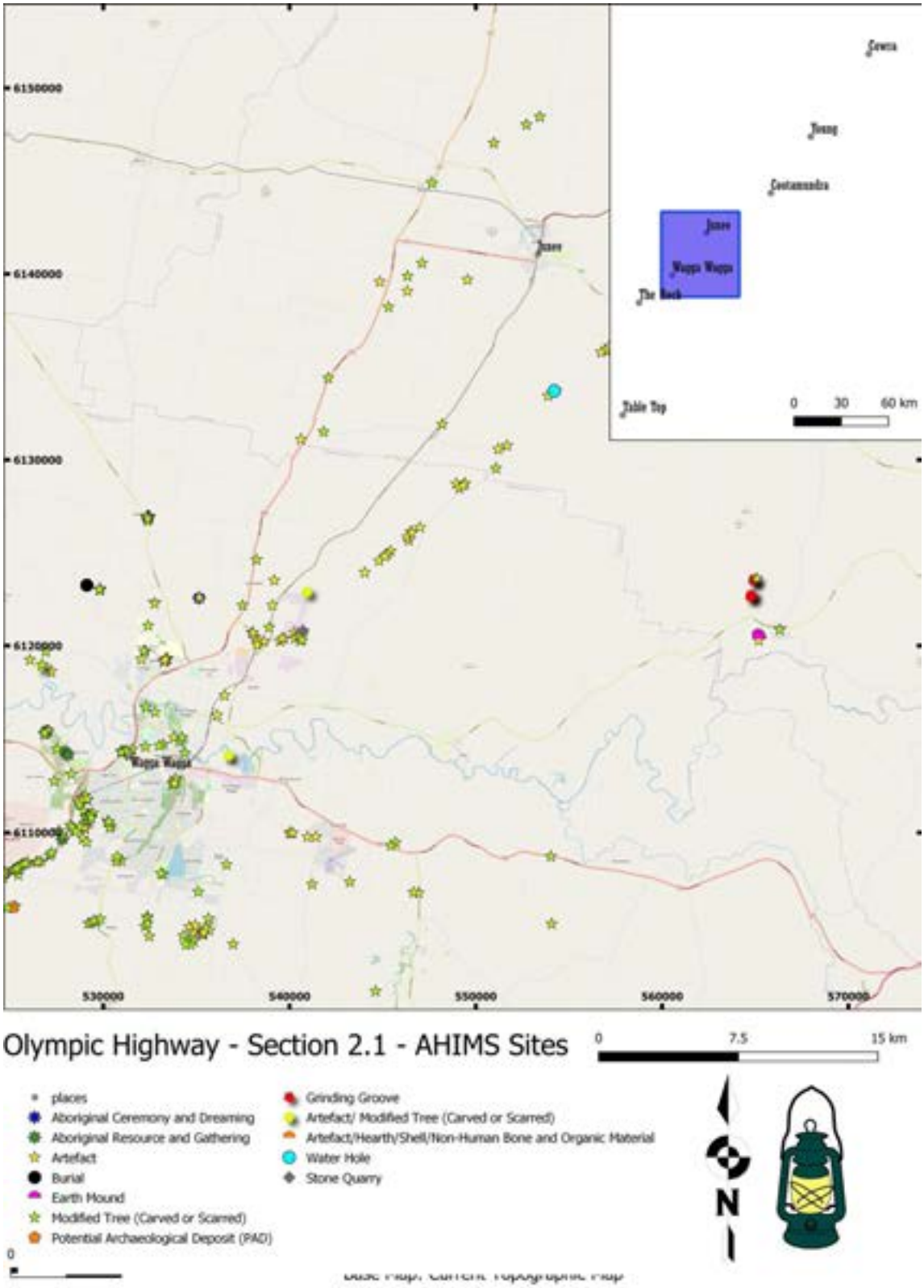

Figure 10 AHIMS sites surrounding study area section 2.1

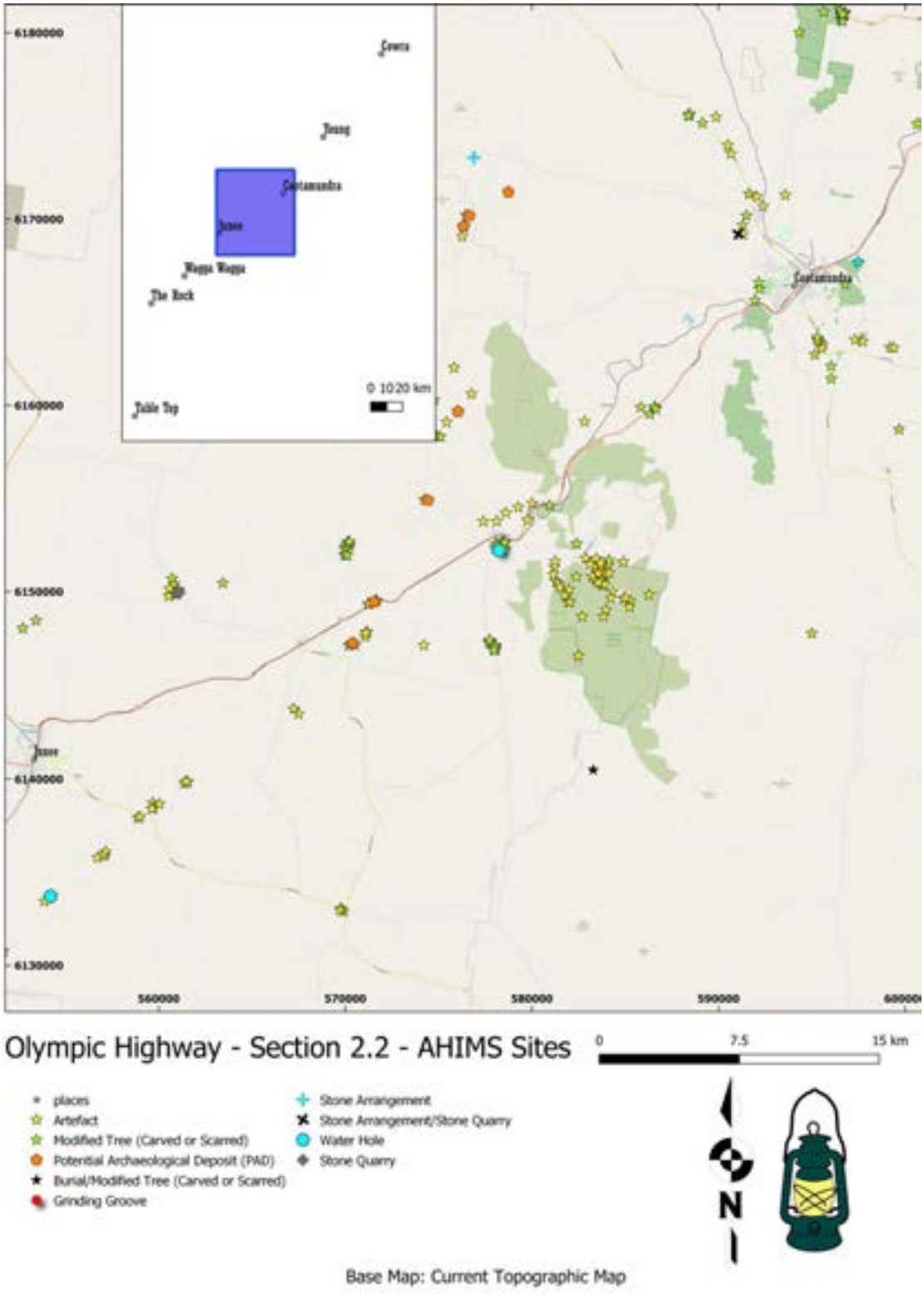

Figure 11 AHIMS sites surrounding study area section 2.2

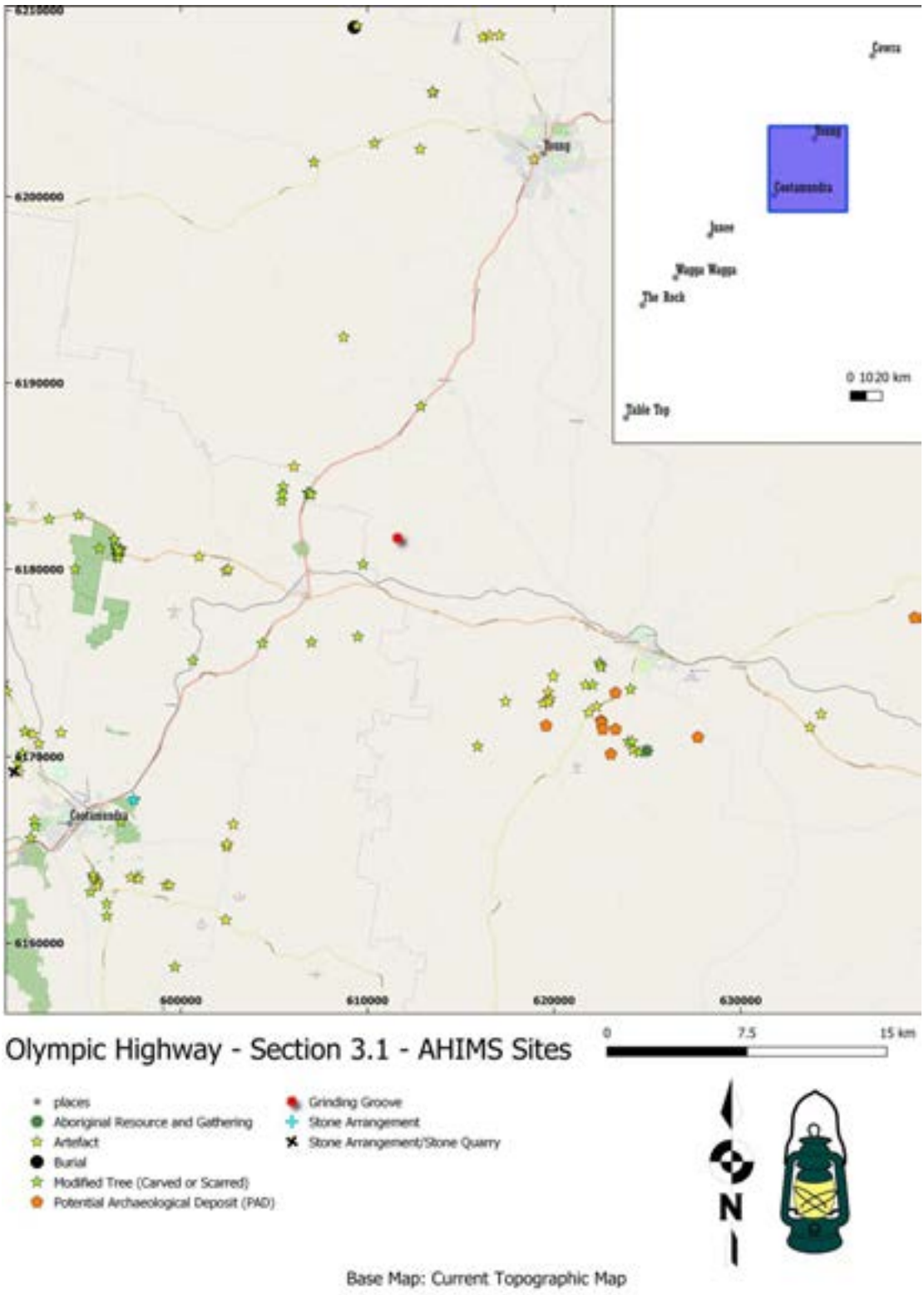

Figure 12 AHIMS sites surrounding study area section 3.1

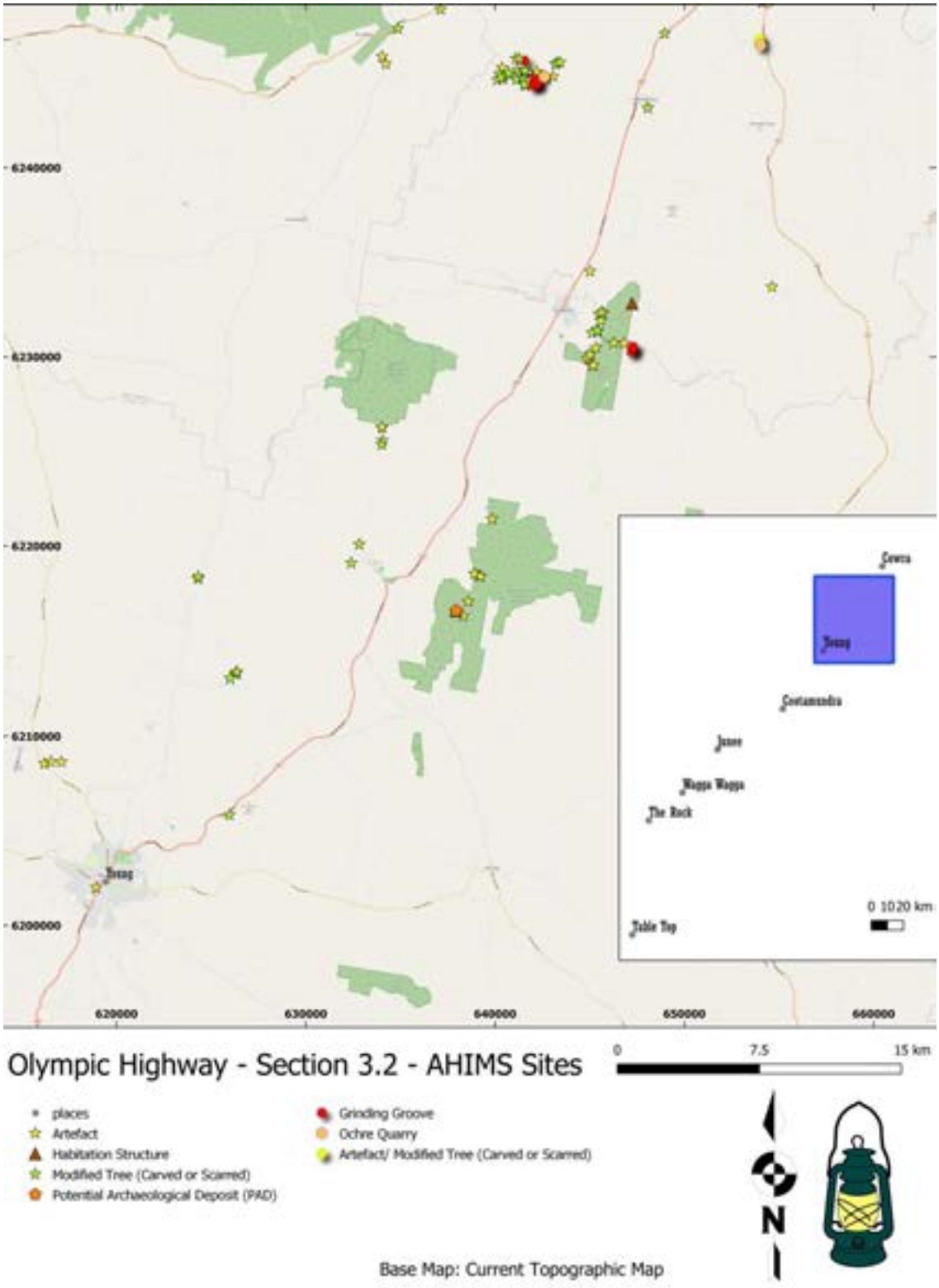

Figure 13 AHIMS sites surrounding study area section 3.2

5.1 Section 1: Wagga Wagga to Albury

5.1.1 C-3093. Archaeological Survey Proposed Extension to Culcairn Hard Rock Quarry, Hurricane Hill NSW, Kelvin Officer, 1994 (Navin Officer Archaeological Resource Management)

An archaeological survey was carried out in advance of the expansion of a hard rock extraction quarry at Hurricane Hill, 9 km SW of Culcairn. A scarred tree was found within the study area and deemed to have moderate archaeological significance within a local context, while an isolated find within the study area was deemed to have low archaeological significance. No European historic sites or features were discovered within the study area. The report recommended that if development was likely to impact the isolated find, an application should be made to NSW NPWS to collect the artefact and that funding and opportunity should be provided to the local ALC to carry out that collection. The study also recommended that if the scarred tree was likely to be impacted by the development, then application should be made to NSW WPS for a Consent to Destroy, conditional upon further recording, radiometric dating and potential salvage of the scarred section of the tree.

5.1.2 C-4604 Proposed replacement of Kapooka Railway Overbridge and Realignment of Approaches, Olympic Highway, NSW, Louise Gay 1999, Heritage Search

This Aboriginal heritage assessment was carried out in advance of the replacement of Kapoka overbridge, 10 km south of Wagga Wagga. This investigation comprised desk-based background research, consultation with the site officer from Wagga Wagga and local ALC, along with field survey. The study recognized that a range of archaeological site types are found in the surrounding area, but as the site is not near a permanent water source the author indicates that the archaeological potential is low. Associated sites would be restricted to isolated artefacts or small open sites. In addition, the extent of disturbance due to agriculture is likely to have dispersed or destroyed any archaeological remains. Field survey estimated that 90% of the study area had undergone a high to moderate degree of modern disturbance. No archaeological sites were detected within the study area and the author states that there is little potential for archaeological sites to occur within the study area. This conclusion was reached because of: the results of modelling; The moderate to high degree of land-use related disturbance; and the absence of artefacts of aboriginal sites in areas of exposed ground surfaces.

5.1.3 986368 – Wodonga to Wagga Wagga Natural Gas Pipeline – Further archaeological assessment, Kerry Navin and Kelvin Officer, October 1996, report to Sinclair Knight Merz

Following on from the preliminary survey of the Wodonga to Wagga Wagga natural gas pipeline route (below), a more detailed cultural heritage assessment was carried out. This consisted of further field survey, inspection of all mature native trees in the pipeline easement, and more comprehensive consultation with Aboriginal communities. As a result of this work, 23 Aboriginal sites, comprising 17 artefact scatters, 6 scarred trees and nine isolated finds were detected. Five historic sites, comprising a weatherboard cottage, a dump, two railway corridors and a former homestead site were detected. Of these, ten Aboriginal sites, four isolated finds and three historic sites occurred within the proposed easement, while eight potential archaeological deposits were detected, seven of which were located within the proposed easement. In the end, 38 Aboriginal sites, 19 isolated finds and 6 historic features were found to be within or in the vicinity of the easement. A range of management strategies, commensurate with significance assessments of individual sites/finds, were recommended with regards to sites and features located in or within 40 m of the easement.

5.1.4 AHIMS 98639 – Wondonga to Wagga Wagga natural gas pipeline EIS cultural heritage assessment, Kerry Navin, Kelvin Officer and Michael Tracey May 1996, report to Sinclair Knight Merz

This study was carried out in advance of the construction of a ~146 km long natural gas pipeline from Wodonga, in Victoria, to Wagga Wagga, in NSW, and formed the cultural heritage and anthropology components of a wider EIS (Environmental Impact Study). The report consists of a detailed study of the landscape, alongside a record of consultation with local Aboriginal groups and a thorough review of relevant literature, including PhD theses and archaeological reports. This research informed a predictive model of the study area, and a series of preliminary field studies that were designed to assess the likely impacts of pipeline construction on both historic and Aboriginal cultural resources.

In the NSW section of the study area, 11 sites were listed within 4 km of the pipeline area, including nine scarred trees, one artefact scatter and one isolated find. The author highlighted the likelihood of finding scarred trees in the study area, as mature native trees are found along fluvial corridors and as shade trees on grazing land despite intensive land clearance. Mound sites are described in detail in this report, and it is mentioned that there is potential for them to occur within the study area.

During consultations with the Aboriginal communities, Mr Dan Atkinson, chairperson of Wagga Wagga Local Aboriginal Land Council and Mr Roly Williams, Sites Officer with the Wiradjuri Regional Aboriginal Land Council suggested that there may be sensitive areas around Culcairn and Henty, and the representatives were concerned that Creek crossings, ridge tops, sandhills and marsh areas may be sensitive also. The representatives were keen to investigate these areas alongside the archaeologists.

Field survey was limited to preliminary surface inspections of specific, targeted areas within the pipeline corridor. 15 sites, comprising 12 artefact scatters, 3 scarred trees and 10 isolated finds, were located during the survey. Two Aboriginal sites (Billabong Creek 3 and West Pomingalarna 2) and six isolated finds (EAPL IF5,6,7,8,9,10) were located within the pipeline easement, while one site, Negarie 1, is located immediately adjacent to the easement. It was considered likely that Aboriginal archaeological sites remain undetected in the pipeline corridor, particularly in well-drained contexts within riparian zones and adjacent to water sources and it was recommended that mitigation of damage from pipeline construction would be best served by detailed field survey and subsurface testing

5.1.5 100575 – Hume Highway Upgrade Table Top to Mullengandra Section – Aboriginal Cultural Heritage Assessment, Kelleher Nightingale Consulting Pty ltd. July 2007, prepared for the RTA NSW

This archaeological assessment of a 32 km stretch of highway was undertaken on behalf of the RTA. A previous assessment (Upcher and Smith, 1994) had been undertaken, but this assessment was designed as an addendum to that report. Providing an updated archaeological assessment of Aboriginal heritage and social/cultural values. This report identified a close relationship between the archaeological remains detected through AHIMS and the culturally important places identified and recorded as a result of consultation with the Aboriginal community. In particular, the area around a mens' ceremonial area at Table Top is seen to be more intensively spatially organized than surrounding areas. This area contains a series of campsites, identified as "ceremonial support sites" and containing evidence for activities that have been segregated along gendered lines in a more distinct way than is typically observed at occupation sites. The study notes important relationships between site function and inter-site visibility, suggesting that future work at these sites may prove very fruitful.

The authors made a range of recommendations to mitigate any impacts from proposed works, including continued consultation with Aboriginal stakeholders and knowledge holders, implementation of a conservation management plan to avoid inadvertent damage to cultural places and archaeological sites and the application for Section 90 Consent to Destroy permits for any archaeological sites that might be impacted. Section 87 Consent to salvage orders were also recommended for a selection of sites. The author noted that the nature of the development provided an opportunity for the recognition and interpretation of Aboriginal cultural heritage, and to generate educational opportunities targeting the wider community following further consultation with Aboriginal stakeholders.

5.1.6 100576 – Archaeological Survey of the Proposed Albury-Wodonga Bypass Routes NSW and Victoria. Catherine Upcher, Laurajane Smith. School of Art and Cultural Heritage, Charles Sturt University, Albury. October 1994, Report to Gutteridge Haskins and Davey

This report details the results of archaeological survey carried out along two proposed routes of a road bypassing the centre of Albury Wodonga. The inner route following the existing Hume Highway south of Wodonga and the outer route diverging from the Hume Highway 10 km south of Wodonga and running through the Jindera hills. Archaeological survey recorded eight open campsites and three isolated artefacts. While the majority of the sites were detected in extensively disturbed sections of the study area, the authors suggest that this disturbance would likely also have destroyed or dispersed other sites which once existed along the route, and where land-use has involved municipal services or industrial processes no archaeology survives. The authors also say that a generally low number of sites detected results from poor visibility in the study area, due to grass cover. Where ground was exposed, due to erosional processes, cultural material was always detected.

All of the sites were located in close proximity to present conditions of permanent or semi-permanent water availability, and their distribution may suggest that pre-contact some dry creeks in the area may have provided more reliable water sources. They note that all sites, except “BP3” and “IR 1”, have been heavily eroded, but that those two sites may require further investigation due to the potential for preservation of sub-surface deposits. The authors recommended that test excavations were carried out at four sites in advance of works (BP1, BP3, BP4 and BP6 or IR1, depending on which route was chosen). And that archaeologists and LALC representatives monitored a variety of the works conducted that may disturb subsurface deposits. The authors also recommended that Consent to Destroy orders were sought for BP2, BP5 and BP7 and that surface collection was made of all threatened artefacts by LALC members and an archaeologist, in accordance with a permit. The author also recommended sending a copy of the report to the LALC.

5.1.7 101938 Due diligence – Optus cable installation Tabletop Nature Reserve – Oliver Brown consulting archaeology, June 2010

This due diligence assessment was carried out in advance of the installation of an underground fibre-optic cable within Table Top Nature Reserve, primarily along the route of an extensively modified fire trail, but in the vicinity of some distinctive rock art and other archaeological sites including grinding grooves and open camp sites. Due diligence assessment was chosen due to the high potential for fibre optic cable installation along existing road easements and disturbed land, with design modifications allowing impacts to Aboriginal cultural heritage to be avoided. Following a thoughtful and well-reasoned examination of relevant literature and existing predictive models, a desk-based survey of AHIMS sites and a survey of the study area, the author determined that there would be no impacts to Aboriginal cultural heritage videos caused by the proposed works. The author, however, recommended that work should avoid any impact to topsoil profiles at the top of

the mountain, and stressed the need to avoid storing any material, equipment or machinery near a creek line, which was identified as a potentially archaeologically sensitive area.

5.1.8 102754 - Aboriginal and Historic Heritage Assessment: Proposed Road Upgrade to the Olympic Highway (MR78) near the Rock, NSW: Franz Reidel, September 2012

Ozark was commissioned by Roads and Maritime service to conduct a heritage assessment of an area within the road corridor of a 5 km section of the Olympic Highway just south of the township of the Rock, in the Lockhart LGA, NSW. The study area had, as it is located entirely within the road corridor, undergone various alterations through time, as it is located entirely within the road corridor. One Aboriginal site, a modified tree with a potential scar from making a Coolamon, was recorded during the assessment (OH the Rock ST-1). The report recommended that this culturally modified tree was preserved in-situ, and if impact was unavoidable then an Aboriginal Heritage Impact Permit would need to be sought from the NSW office of Environment and Heritage (OEH), who were the relevant body at that time. The Aboriginal community also wished to retain an area surrounding an accumulation of burnt clay nodules, though this site is not registered as an Aboriginal site. Two surveyors trees were also detected during the assessment, protected under Section 24(1) of the Surveying Act 2002, requiring authorization to destroy if impact should be unavoidable

This study provides details of "Kengal", a declared Aboriginal place within the Rock national park. This is a Dreaming place, a lookout and a ceremonial site of importance to the Wiradjuri. Wiradjuri cultural visits to Kengal continued up until the 1950s. In 1962, the area was gazetted as a nature reserve which has since helped to protect the natural values of the area. More recently, Aboriginal populations in settlements surrounding the Rock Nature Reserve-Kengal Aboriginal Place have increased, which in turn has brought about an increasing appreciation and respect for the site. It continues to be a place which is often visited by local Aboriginal people to maintain and re-establish links to land and culture.

The predictive model indicated that landforms surrounding the study area, especially due to the degree of disturbance, had low potential for containing Aboriginal archaeological sites. The subject area was devoid of major drainage systems. There is a lack of recorded in the immediate region of the subject area and the predictive model suggests that, if there are further, undetected sites within the subject area, they are likely to contain a low density of artefacts or more likely isolated artefacts.

5.1.9 102414 – Aboriginal Heritage Assessment – Kapooka Bridge Replacement Project – Tim Tuovinen and Dr Jodie Benton - March 2011 – Ozark environmental management

This report was prepared in advance of the replacement of Kapooka Bridge and the related realignment of the Olympic (high) Way, located approximately 8 km south of Wagga Wagga. The study area was approximately 4.25 km in length and stretched up to 1 km in width. Ozark conducted field surveys, accompanied by the project manager and Aboriginal Community Heritage Advisor from RTA, and local Aboriginal stakeholders. One site was recorded during the survey, a scarred tree of probable Aboriginal origin. One sensitive landform, an elevated spur overlooking drainage channels, was also identified. The authors recommended that impacts to both of these features were avoided, but recommended that, if impacts proved unavoidable, an AHIP for removal of the tree would be required, while subsurface testing of the sensitive landform would be necessary.

5.1.10 102415 – Supplementary Aboriginal Heritage Assessment – Letter Report – Kapooka Bridge Realignment Project – Tim Tuovinen and Dr Jodie Benton, September 2011 – Ozark

This report is supplementary to AHIMS#102414, dealing with an additional parcel of land that was deemed necessary to complete the Kapooka Bridge project. Survey was carried out on the land and, while no new sites were detected, an attempt was made to relocate two known sites that had been lost, due to confusion over co-ordinate systems. A scarred tree was located, approximately 120 m from the area to be impacted, but an isolated find could not be found. The author recommended a buffer zone of approximately 30 m around the listed find site of the isolated artefact, and that the CMT was avoided entirely. It is recommended that both of these sites could be protected via construction of a temporary fence around the eastern margin of the impact footprint and appropriate instruction to all construction workers. All construction work should be conducted within the limits of the fence, and if any objects or other sites were detected through the course of works then relevant procedures should be followed. It was also recommended that the location of the previously recorded sites be adjusted to the correct co-ordinate system in AHIMS.

5.1.11 103048 – Transpacific Cleanaway Pty ltd. Organic composting facility project. Archaeological due diligence draft report. 15 august 2012

Report prepared to assess the cultural heritage impacts in advance of construction/operation of an Organic Composting Facility Project near Gerogery, NSW. The assessment included Aboriginal community consultation, desktop assessment and search of relevant heritage registers, alongside a site inspection of the study area to test the accuracy and reliability of the information obtained during desktop assessment. A predictive model was produced which suggested that, although archaeological remains in the form of artefacts, artefact scatters or camp sites may be present, the history of disturbance and land use as a result of pastoral and agricultural activity would likely have compromised any archaeological remains in the study area. This due diligence survey determined that, although Aboriginal cultural heritage was detected within the vicinity of the project area, the proposed activities were unlikely to impact upon any recorded Aboriginal sites or historical heritage sites. The report also proposes a list of strategies to mitigate any impacts that may occur on any unknown sites, whether buried or submerged, within the appropriate legal framework.

5.1.12 98656 – Preliminary ACHA study: Selected National Parks and Nature Reserves, South West Slopes Region, NSW. June 2002. Charles Darling & Alistair Grinbergs.

This preliminary study was conducted in response to NSW NPWS intending to prepare management plans for nature reserves and national parks within the South-west Slopes region of NSW. The preliminary study covered Ulandra and Ellerslie Nature Reserves, and Livingstone National Park in the Murrumbidgee area; Minjary and Benambra National Parks in the Riverina-Highlands area; and the Cuumbeun, Stony Creek, and Wanna Wanna nature reserves in the Queanbeyan area.

The study resulted in the recording of 593 artefacts, including 73 artefact scatters and 29 isolated finds. The most extensive and complex assemblage was that discovered within the Ulandra nature reserve, which is traversed by the Olympic Highway. Though effective survey coverage amounted to 0.18% of the reserve, 239 artefacts were recovered. While dominated by quartz (60% of assemblages), assemblages in this area were manufactured from up to 7 different raw materials. Benambra nature reserve, also near the Olympic Highway, had a much lower density of finds, this was related to the lack of standing water within this area.

This study found evidence for artefact curation across their entire study area and highlighted the need for a more synthetic approach to the archaeology of the region. The authors point to enigmatic/unexplained sites that show a high degree of complexity in areas with no similar sites. The authors note that north of the Murrumbidgee, assemblages are typically dominated by non-quartz stone, while to the south quartz dominates assemblages (with the exception of the basalt quarry south of Wagga Wagga and Witter 1980 noticed similar trends. The amount of quartz in the alluvial floodplains of the Murrumbidgee may suggest that there are undiscovered raw material sources in the area, but the high levels of curation evident points towards a lack of suitable stone in the area.

5.1.13 104313 – Pomingalarna park: Aboriginal Cultural Heritage Report - Dr ALyce Cameron, September 2019 – prepared from Wagga Wagga City Council

Report details ACHAR survey in advance of construction of a cycle park at Pomingalarna park to the west of Wagga Wagga. Four Aboriginal sites were recorded during the assessment, including a scarred tree, a cultural area, pieces of ochre and one restricted site with five features. It was determined that no Aboriginal sites would be impacted by the proposal, and work could proceed without an AHIP.

5.2 Sections 1 and 2

5.2.1 100469 – North-South Rail Corridor Albury to Junee Passing Lane Projject: Archaeological Survey – November 2006: Chris Lewczak, Sam Moody, Anne Ford – Report for John Holland Rail and MVM Rail Pty Ltd

This report presents an Aboriginal and cultural heritage assessment for the proposed passing lanes along the main southern railway between Melbourne and Junee in 2005. In an AHIMS search, 101 sites were detected within 5 km of the study area, 63 of which were artefact scatters, 33 were culturally modified trees. Two art sites, one grinding groove, one stone quarry and one watering hole were also discovered. The two art sites that were discovered were within Table Top Ridge, an environment that is conducive to preserving art sites because of the sandstone overhangs. But the proposed passing lane does not enter this terrain. During field survey, 13 Aboriginal sites were discovered, 11 of which were isolated artefacts and the other two were open camp sites. The sites were all detected within a disturbed context, and were all characterized by fragmentary artefacts. Every site was listed as having low scientific significance. Historic heritage items identified were primarily railway infrastructure. The report recommended that a section 90 consent permit application was lodged, to allow the removal and reburial of the Aboriginal artefacts that were recorded in the area of proposed works.

5.3 Section 2: Cootamundra to Wagga Wagga

5.3.1 C-3248 A preliminary Archaeological Investigation for the Proposed Telecom Fibre Optic Cable Route: Ilabo Break Off to Bethungra, South West Slopes of NSW. By J. Kelton, 1995. Central West Archaeological and Heritage Services – Report to Telecom Australia

This report details preliminary investigations along the proposed, 14 km route of a fibre optic cable. The study area falls between the settlements of Ilabo and Bethunga, adjacent to the northern end of the Olympic highway, west of the township of Cootamundra. Desk based survey rated agricultural land that was distant from reliable sources of water, as having low archaeological sensitivity. Areas in closer proximity to intermittent streams and creeks were

regarded as moderately archaeologically sensitive, as a number of open campsites had been recorded in such within 1.5 km of the study area. Because of the low-impact nature of the proposed works, which were unlikely to disturb any subsurface horizons except where navigating streams etc., The creek banks and alluvial flats intersected by the proposed route of the fibre optic cable were assessed as unlikely to be impacted by the activity.

The preliminary field study included in this report was designed to assess the need for future archaeological investigations of the study area, not as a formal archaeological survey. It incorporated inspection of all exposed ground and all timber along the route for archaeological sites and deposits. On foot coverage paid particular attention to sensitive areas e.g., creek banks and alluvial flats. But less than 1% of the study area passes through landforms considered to be archaeologically sensitive and no aboriginal or non-aboriginal archaeological or cultural sites were detected. The authors concluded that the landscape had been stable, and that geomorphological processes did not cause a substantial loss of archaeological material. The lack of archaeological material detected was therefore considered an indication of Aboriginal settlement practice in the past. The report determined there was no requirement for further archaeological and anthropological investigation in the study area, but that monitoring should occur when work is carried out in archaeologically sensitive areas, involving a representative of the Wiradjuri Land Council, and an archaeologist where necessary.

5.3.2 102413 – Wagga Wagga Local Environmental Study: Aboriginal Cultural Heritage Assessment – Josh Symons, Alison Nightingale 2008 – prepared for Willana associates.

Written to assist Wagga Wagga city council as they prepared a draft Local Environmental Study (LES), in preparation of the Rezoning of eight sites. Four of these were considered major release areas. The LES aims to identify appropriate land uses (residential and industrial) for each of the eight sites and this archaeological report, consisting of community consultation, desk-based research and field survey, forms a related, specialist study. AHIMS register search revealed 16 Aboriginal sites within the study area. The authors noted that the low number of recorded sites in the area was probably due to the limited number of archaeological investigations that had occurred at that time and their predictive model suggested that sites were more likely to occur near water and near sources of raw material (i.e. outcrops).

Study Area 1: Lloyd

Lloyd is an area bordering the Olympic Highway, south of Wagga Wagga. The area is predominantly grazing land, but also contains an active quarry and a water tank in land that belongs to the Riverina Water County Council. Two previous investigations (Navin Officer 2002; Kelton 2006) were conducted in the western portion of the Lloyd study area. During the Navin Officer investigation five Aboriginal archaeological sites and three PADs were discovered (3 open campsites/artefact scatters, one isolated artefact, one scarred tree and three PADs). During the Kelton investigation eight Aboriginal archaeological sites and four PADs were discovered (two isolated artefacts and six scarred trees). The study concluded that this hilly area had undulating topography and extensive historic impacts and based on the location of the previous archaeological finds, the lower slopes, upper slopes and crests were judged to be of low to moderate archaeological sensitivity, while the flat and gently undulating land and drainage lines were judged to be of moderate to high archaeological sensitivity.

Study Area 2: Lloyd

The Bomen study area is to the north of Wagga Wagga, bordered by the Olympic Highway along its western margin. The majority of the study area is used for agriculture, with

industrial use concentrated in its lower portion. There are numerous large dams in the centre of the study area, associated with wool cleaning activities. A previous study by Officer and Navin (1998) detected two isolated finds and an "Aboriginal surficial hardstone basalt quarry" (AHIMS# 56-1-0043). The quarry was a site with evidence for procurement of basalt cobbles, and reduction to form axe or hatchet preforms. The original investigators noted a scatter of around 500 artefacts at this site. While the model of archaeological sensitivity in this area generally followed that of Lloyd (above) the presence of outcropping granite results in some highly sensitive landforms in the area of the upper hillslopes and crests. During the course of survey an isolated artefact was also found in a paddock. The scarcity of raw materials in this region suggests the site would have been very important source of raw material.

Study Area 3: Estella West

This area is northwest of Wagga Wagga, bordered by old Narrandera Road to the South and agricultural land around the remainder. No recorded Aboriginal sites were within this study area and no Aboriginal archaeological material was observed during field survey. Several areas of major historical impact were observed, including two horse training tacks, houses/buildings and roads. These areas were likely to have low archaeological sensitivity. Areas of outcropping granite were observed in upper hillslope/crest contexts, which may have provided a source of raw material for stone tool manufacture. The gently undulating land within this study area, overlooking the vast floodplains to the south, suggests that in general this well drained land in an elevated position above a resource rich area is likely to be of moderate to high archaeological potential.

Study area 4: Boorooma east

This study area is located north of Wagga Wagga and is bordered by the Olympic Highway to its south. No archaeological investigations had been conducted within the study area prior to this study, though a general lack of surface visibility due to thick grass cover had been noted. The study area is at the northern margin of the Murrumbidgee floodplain and contains the southern terminus of a spur with a large amount of outcropping granite. The combination of its elevated position above the Murrumbidgee floodplain, providing a prime location for accessing subsistence resources, and the granite outcrop, which may have provided inclusions useful for tool manufacture, meant that this area was determined to have a moderate to high level of archaeological sensitivity overall.

Study Areas in the Alluvial floodplain: Edison Road, Hammond Avenue, Copland street, Moorong street

No previous archaeological investigationsEdison road, Hammond Avenue was deemed to be of low archaeological sensitivity, as it is a low lying area of Murrumbidgee floodplain with no elevated positions. The authors made a range of recommendations. In the areas with landforms of high sensitivity and identified archaeological features, it was stated that consultation processes with Aboriginal community groups were ongoing. The report outlined a range of options for moving forwards, including avoidance of impacts to known sites and further, detailed assessments using survey and excavation.

5.4 Sections 2 and 3

5.4.1 C-738: An archaeological pipeline survey between Wagga Wagga and Young. Dan Witter, 1980

Dan Witter carried out an impact assessment for a proposed pipeline development along a study area that stretched for 134 km, from just north of Young to Bomen, near Wagga Wagga. 15 Aboriginal sites were detected during this archaeological survey, including 13 open campsites, one possible rock well and one scarred tree. Witter noted that all sites were associated with water courses. In general, alluvial flats in settings of undulating hills and creek valleys were associated with the greatest numbers of artefact scatters and isolated finds. Smaller sites were also found on higher slopes and ridges in more mountainous settings to the northeast of the study area. The author noted that burnt clay hearths were associated with the area of the Murrumbidgee, but petered out to the north, around Junee. The author recommended a range of conservation solutions. Some sites, such as the large campsite BY/4, were identified as unusually well-preserved and of great importance for understanding the archaeology of the wider region. In these cases it was suggested that impacts were entirely avoided, while in less well-preserved sites salvage by excavation was recommended. In areas where the pipeline would pass through archaeologically sensitive areas with poor survey visibility, monitoring of works was recommended.

5.4.2 102549 – Heritage assessment – Young to Wagga Wagga Looping Gas Pipeline –Rick Bullers, 29-January 2010- Prepared for APA Group ltd.

Report prepared in advance of natural gas pipeline construction between Young and Wagga Wagga. Only land within the 20 m easement of the pipeline was investigated, except where it traversed waterways, in which case the area was expanded to a 100 m buffer zone. No historic heritage items were found during desk-based or field-based components of this research. A search of the AHIMS database indicated that there were 13 previously recorded sites within a 100 m buffer zone of the pipeline easement. Of these, six were considered close enough to warrant further investigation. A total of 36 Aboriginal sites were identified during the field survey, six isolated finds and 30 low density artefact scatters. Of these, 29 were likely to be impacted by works. The nature of the pipeline construction meant that alternative routes were not possible, but the authors state that there were no indications that Aboriginal heritage values would be impacted by the development. The sites that were to be impacted had already been subject to substantial disturbance associated with pipeline construction. The authors recommended that a majority of impacted sites could be destroyed without salvage due to their low scientific and cultural value. A number of sites were recommended for salvage, while mitigation strategies were advised to minimise impacts outside of the area of proposed works and particularly around watercourses.

5.5 Section 3: Cowra to Cootamundra

5.5.1 C-1027 Theredsa Bonhomme – An archaeological survey of proposed pipeline route between Young and Lithgow for Pipeline Authority, Canberra (ANU archaeological consultancies)

This archaeological report details desk-based survey, Aboriginal community consultation, field survey and excavations that were carried out in advance of construction of a 200 km natural gas pipeline from Young to Lithgow. Ten sites and eight isolated finds were found during the survey. These sites included three locations with scarred trees (T1–3) and seven open sites consisting of stone artefact scatters (YLS 1–7), some associated with scarred

trees. Eleven test excavations were conducted to assess sub-surface archaeological potential and one test pit at YLS 5 revealed buried archaeological material, including quartz cores.

The study found sites along the pipeline route were in similar location to those discussed in Witter (1983). Sites between Young and Lithgow were typically found on lower slopes and along creek banks near water. Factors that appeared to be important were: close proximity to water; the presence of well-drained sloping to flat ground; low elevation; A northerly or open aspect; and access to potential foods or raw materials for artefact manufacture.

The investigation found that pipeline construction could proceed, though it identified a number of areas where the pipeline had to be diverted to avoid damage to an archaeological deposit (YLS5) and Site T1. It was recommended that the pipeline authority pursure a "Consent to Destroy" for Site YLS/6, an artefact scatter site in the pipeline route that had previously been damaged by ploughing. The further 8 sites detected were not thought likely to be harmed during the proposed works.

5.5.2 C-2115 Aboriginal Site Management Goonigal and Gooloogong "Goanna Trees" NPWS Site Nos 43-6-4 and 44-4-1. By Colin Roberts – (NPWS) September 1991

This report details maintenance/restoration work carried out on two scarred trees near Cowra, at the request of the Cowra Aboriginal community. These trees are deemed to have contemporary significance to the Aboriginal community and are used in conjunction with other sites in the area to educate the younger children in Aboriginal culture. This report presents details of Aboriginal tree carving practices, including the differences between taphoglyphs (carved trees associated with burial sites, where the bark is removed and the heartwood is deeply carved) and teleteglyphs (figures of snakes, lace lizards, human forms, emus) which only have the bark within the outline of the design removed and are associated with ceremonial spaces (Bora grounds). The "Goanna Trees" that form the basis of this report are classified as teleteglyphs, as only their bark within the outline of the shapes has been removed, but they are not near any known Bora grounds.

Both designs were re-cut to the satisfaction of the Cowra Aboriginal community, and it was recommended that the trees were to be monitored on a regular basis (at six-month intervals). Furthermore, proposed restorations of this type were to be carried out to the communities wishes, down to the last detail, thereby eliminating any misunderstandings related to such works. Small shrubs were to be planted in front of the designs, to shield them from view and prevent vandalism and a plaque be placed at the base of the trees, detailing NPWS legislation concerning relics.

5.5.3 C-3224 An Archaeological Survey for the Roads and Traffic Authority NSW. Mid-Western Highway, Holmwood. Waugoola Creek Bridge replacement and Railway crossing Road Realignment, Cowra NSW. Jim Kelton, April 1995

This reports desk-based survey, Aboriginal community consultation and field survey in advance of a realignment of the Mid-Western Highway at Holmwood railway crossing, along with reconstruction of the existing Waugoola Creek bridge, which was situated ~900 m south of the Holmwood railway crossing. No sites of significance to the local Aboriginal community were identified during consultation, but a predictive model identified that a variety of Aboriginal sites could occur within the study area. A survey that was carried out with high effective coverage only identified two isolated artefacts, both located within the Holmwood rail crossing section of the study area. The lack of sites was attributed to the high levels of historical disturbance affecting the study area and the authors recommended that the development should proceed without further archaeological investigation.

5.5.4 C-3371 The management of the Aboriginal open scatter site-camp Site, (BR-OS-1)(Kelton 1993), Located on the Noonbinna East Road, Morongla Creek Crossing, Near Cowra, Central Western NSW. Jim Kelton (October 1993)

This is a discussion paper, providing an assessment of management plans for an Aboriginal site, consisting of an open artefact scatter beside the Noonbinna East Road near Cowra. The report details the activities which have negatively impacted the preservation of the site over time, including the construction of a blue metal pad. The site was 'skimmed' prior to the deposition of the aggregate and a lot of archaeological material was redeposited down the creek bank. Some of the area which survived this impact was subsequently disturbed during road re-routing and causeway construction. The author lamented the loss of this site and criticized the lack of knowledge that existed on the part of council managers at that time, with regards to their responsibilities relating to aboriginal heritage. The paper proposed that council needs to establish links with NPWS and local aboriginal groups and details a site meeting that occurred 23/9/93 to discuss the apparent breaches by Cowra Shire Council.

Various solutions were discussed to preserve the remains of the site and the author recommended against fencing off the entire site, as the site has a tradition of use by non-Aboriginal travelers and visitors. They also warned against signage that would draw visitors attention to the Aboriginal significance of the site, as this may encourage vandalism or destructive behaviour from a number of visitors. Site rehabilitation was proposed, with the aim of turning the site into a floral reserve with trees planted to provide shade. Furthermore, a four-part management committee was proposed, to manage the site and prepare a draft management plan, but the ultimate fate of the site should be at the discretion of the Cowra Aboriginal council.

5.5.5 97839 – An Aboriginal archaeology Survey and non-indigenous heritage overview of the proposed "North Cowra" residential sub-division, Cowra NSW – J. Kelton – February 2000 – Report to Cowra Shire Council

In advance of construction work relating to the proposed 27 ha "North Cowra" residential subdivision, a detailed search of NPWS site recordings in the area revealed that 11 Aboriginal heritage sites, all scarred trees, remained within the study area. 25 further Aboriginal sites were recorded during field survey, 22 of which were scarred trees, 21 within the survey area. Three open-campsite artefact scatters were located outside of but immediately adjacent to the survey area. Cowra LALC indicated that they would have no concerns over the proposed residential sub-division proceeding, but expressed concerns over how council would provide appropriate levels of protection to all sites. The consultant recommended a buffer zone around all recognized Aboriginal sites, and that council should avoid all Aboriginal sites where at all possible. Where impacts are unavoidable, the council must pursue individual Consent(s) to Destroy under the relevant legislation at the time Council indicated that they would attempt to avoid all sites wherever possible, bearing in mind their obligations under the NSW parks and Wildlife act 1974. Two non-Indigenous heritage relics, related to the WWII Cowra Prisoner of War camp, were also discovered in the study area. While impacts were deemed to be avoidable, appropriate actions were recommended in the case that such impacts could not be avoided.

5.5.6 98260 - Yawarra Project Report no. 3: An Aboriginal archaeological survey of the "Yawarra-Hillford" property near Cowra, NSW. A report to the Weigelli Aboriginal Corporation and the University of Sydney, Orange: Faculty of Rural and Professional

services. Report prepared by Central West Archaeological and Heritage services pty. Ltd. Jim Kelton – August 2002

This report presents an Aboriginal cultural heritage assessment of the 687 hectare "Yarrawa Hillford" property, ~25 km west of Cowra, by road, in advance of development of an ecotourism venture by Weigelli Aboriginal corporation. The proposed ecotourism venture intended to interpret the property's aboriginal heritage (within the constraints of cultural sensitivity). Desk-based investigation discovered 3 previously recorded sites within 5 km, all 3 were on the Yarrawa-Hillford property, but outside of the study area and in the highly disturbed, cleared paddocks to the east. Property managers knew of two other sites, an axe-grinding groove site and a possible quarry site, but field survey detected 36 Aboriginal sites. These included 3 open campsite occupations, 3 isolated artefact finds, 1 confirmed rock shelter occupation site, 3 potential rock shelter occupation sites, 1 potential stone quarry site, 20 culturally modified trees and 5 axe grinding groove sites. 7 potential archaeological deposits (PADs) were also identified, based on the location of landforms/micro-landform units, which were recognized as archaeologically-sensitive at the time of survey. While the ecotourism development posed no threat to the preservation of these archaeological remains, it was recommended that precautionary measures were implemented to avoid harming any of the sites or PADS, taking into account that the property may continue to be managed as a farming and grazing enterprise.

5.5.7 102171 – Cowangs Reservoir to Bauloora Reservoir Pipeline. Navin Officer September 2010 – Report to GHD

This presents of desk-based study, community consultation and field survey in advance of the replacement of a 28.9 km section of pipeline connecting the Cowangs Reservoir to the Bauloora Reservoir. The study found no previously recorded Aboriginal sites within the study area, but identified 16 Aboriginal sites during field survey. These were comprised of: nine artefact scatters, four artefact scatters associated with PAD, three isolated finds and one area of PAD. The study also identified three recorded historic sites that were adjacent to, but not within, the study area, but did not detect any further historic sites during field survey. The study concluded that there were no Aboriginal or European heritage issues that would pose an absolute constraint on the development. The authors recommended that, where possible, all impact to the Aboriginal sites should be avoided. Where impact was unavoidable, the authors recommended that salvage programs be conducted, in accordance with AHIPs, to avoid harm to the artefact scatters. Where PADs were recognized, the authors recommended a subsurface testing program in order to assess the extent and nature of the deposits. These activities would also require an AHIP.

5.5.8 102779 ERM Power pty ltd Yung to Wellington gas pipeline, cultural heritage assessment and consultation 22-04-2010 Colin Pardoe, CNC project management. Technical report 3: Cultural Heritage Assessment and Consultation – report to ERM power pty

EMC power pty limited engaged CNC project management to carry out Aboriginal Cultural Heritage Assessment for its proposed Young to Wellington Gas Pipeline Project. The study included a search of all relevant registers, extensive community consultation with local Aboriginal groups and a ground survey, which was conducted in conditions of maximum visibility following harvest. A search of the AHIMS register found no sites within 200m of the proposed pipeline alignment, but 129 sites within 3 km, with most (83%)sites being either isolated lithic artefacts or concentrations of artefacts, or culturally modified trees. Field survey was conducted over 21 working days in February and March 2010, and involved 23 Aboriginal representatives from 7 organisations. A total of 18 sites were recorded and registered with DECCW. Five were open sites consisting of concentrations of lithic items, 13

were culturally modified trees. All sites were to be avoided by the development, though the authors recommended a series of contingency measures to deal with unexpected events.

5.5.9 Unnumbered – Olympic highway widening at Bethungra, NSW – Archaeological survey report, 11 January 2013 – Rachel Loizeau – Sinclair Knight Merz

This report was prepared for RMS in advance of Olympic Highway pavement widening along the existing route (Olympic Highway) from just north of Bethungra to the Junee/Cootamundra local government area (LGA) boundary. The study area for the project was approximately 4.13 km long. Investigations, comprising desktop assessment and field survey, were triggered after an Aboriginal site (Olympic Hwy - Bethungra 1, 50-5-0115) was identified in the Olympic Highway reserve. The desktop assessment detected six known Aboriginal sites are registered within 2 km of the study area, consisting of four artefact scatters and two scarred trees. Predictive modelling concluded that the study area is of low archaeological sensitivity and the most likely Aboriginal sites to occur within the study area are artefact scatters and scarred trees, with artefact scatters most likely to occur on flat, elevated land adjacent to watercourses. Any Aboriginal sites in the study area are likely to be in a disturbed context. Field survey was undertaken by a heritage consultant with the Aboriginal Cultural Heritage Advisor, RMS, and two representatives from Wagga Wagga LALC. No new archaeological sites or PADs were identified during the survey and the survey team agreed that there is low potential for further cultural heritage sites in the study area due to the high level of disturbance observed. No further assessment was recommended for the study area.

5.6 NSW State Heritage Register and Inventory search

A search was made of the NSW State Heritage Register and State Heritage Inventory. No Aboriginal places or places with identified Aboriginal cultural values are listed on either the State Heritage Register or the State Heritage Inventory within 100 m of the road reserve or zone of proposed impacts.

6 REGIONAL CHARACTER

6.1 Predictive Model

Reflecting the diverse landforms traversed by the study area (Section 3.1–3), the archaeology surrounding the study area is complex and varied. Archaeological sites surrounding the study area are dominated by scarred or culturally modified trees and isolated artefacts. Less common sites include earth mounds, ceremonial and Dreaming sites, resource and gathering sites, habitation structures, ochre or stone quarries, grinding grooves, stone arrangements and significant waterholes, many of which are located to exploit natural resources or features. Environmental factors also affect the detection of archaeological sites. For example, the prevalence of surface ground exposure, together with erosional features that expose subsoils, will often dictate the likelihood of identifying the presence of stone artefacts during survey.

While the study area is contained within one bioregion, the South Western Slopes, it weaves along the ecotonal boundary between the foothills of the Great Dividing Range and the deep alluvial deposits that stretch westwards towards the Riverina. First the archaeological implications of these two general landscape types are considered, then the likely distribution of archaeological sites within each section of the Olympic Highway is considered individually, in detail. This predictive model is summarised in Table 5. This refines the archaeological implications for each Mitchell Landscape in the study area, as listed in Table 2.

6.1.1 Alluvial landscapes

In the extensively farmed, lower-lying alluvial landscapes, such as the Brokong Plains, the dominant landforms are Quaternary alluvial features (NSW NPWS 2003: 92), which may preserve a greater range of site-types than the granite uplands. These landscapes were resource-rich, and the rivers that traverse them are associated with many wetlands. Wetlands were a focus of relatively intensive Aboriginal occupation activity, as evidenced by ethnographic sources and recent archaeological investigations (Sections 4; 5). In these lower lying areas, culturally modified trees may be found anywhere with undisturbed vegetation, but are more likely to be found near water courses. These vegetated areas may also preserve culturally significant plant resources, such as Bush tomatoes (Crew and Pappin, 2009).

Burials in this area are typically found on raised alluvial landforms, and the location of occupation sites is correlated with the relative permanence of a water source (Littleton and Allen, 2007). Burials are not restricted to one specific landform, but upstanding alluvial features may consist of sand. The relative ease of digging through these sandy soils and sediments was probably a factor in the location of those archaeological sites. Burials are frequently associated with other archaeological features, such as culturally modified trees. Occupation sites include complex types, such as earth mounds and shell-middens related to mussel processing. It is important to note that archaeological sites may be associated with palaeochannels of the Murrumbidgee and Lachlan rivers, as well as their modern channels and tributaries.

The environmental factors that attracted Aboriginal groups also attracted European settlers, and these low-lying landscapes have often been subject to extreme degrees of disturbance.

Table 5 Summary of predictive model for ecoregions, landscape types and landforms covered traversed by the study area

Landscape type	Landform	Potential Sites	Archaeological potential
Hills and slopes	Rock outcrops	Quarries, resource gathering sites	High
	Exposed crests	Rock art, ceremonial sites	High
	Steep slopes	Isolated artefacts, artefact scatters	Low
	Moderate slopes	Isolated artefacts, artefact scatters	Low-moderate
	Gentle slopes overlooking water courses	Isolated artefacts, artefact scatters, hearth-artefact complexes, ovens	High
	Valley floors	Isolated artefacts, artefact scatters	Low
Alluvial floodplain	Alluvial flatland	Isolated artefact, artefact scatters, culturally modified trees	Low-moderate
	Raised alluvial landforms	Burials, culturally modified trees, artefacts, artefact scatters, hearths, ovens, ceremonial sites	High, dependant on proximity to modern or ancient watercourses
	Watercourses and wetlands	Shell processing sites, artefacts, artefact scatters, culturally modified trees	Moderate-high
	Palaeochannels	Shell processing sites, artefacts, artefact scatters, culturally modified trees	Moderate-high

6.1.2 Hilly landscapes: the foothills of the Great Dividing Range

In the granite uplands that are distributed across the study area, including the Wonga Hills and Ranges and the Coffin Rock Granite Hills landscapes in the vicinity of Wagga Wagga (NSW NPWS 2003:120), the dominant site types are artefact scatters and culturally modified trees (Section 5.4.1). Previous studies in this landscape setting have suggested that, in these hilly landscapes, low valley floors were not preferred occupation locations (Reidel, 2013). Rather, sites were established on elevated terraces or low spur tops that overlook, or are adjacent to, water sources. In this area as in others, proximity to a permanent water supply is the primary factor determining the location of Aboriginal campsites and McDonald (1997) has demonstrated a significant correlation between the permanence of a water source and the permanence and/or complexity of the area's Aboriginal occupation, based on the results of targeted excavations. Moderate to steep slopes are often considered to have low archaeological potential, due to the lesser likelihood of occupation activity in these areas and the preservation issues that are caused by thin, eroding soils. Ceremonial sites, such as the ritual landscapes at Table Top (Section 5.1.8), and rock art sites may, however, be found in hilly areas, especially those with exposed crests. Hilly areas with outcropping rocks such as basalt or granite may also have provided the raw materials for stone tool manufacture.

6.2 Summary predictive statement

This 318 km stretch of the Olympic Highway passes through a range of archaeologically sensitive areas, including ritualized landscapes associated with ceremonial activities. Granite uplands, such as those concentrated in the northern half of the study area, generally preserve a limited range of Aboriginal sites, predominantly restricted to culturally modified trees, along with artefacts and artefact scatters that are likely to have been affected by colluvial movement. However, these landscapes are dissected by watercourses and related areas of alluvial deposits throughout the study area. It is important to note the important symbolic activities such as ceremonial activities and rock art manufacture that are known to be associated with upland landscapes, such as the Table Top Range and the Weddin range nearby. There is also the potential for rock outcrops to form useful sources of raw material for stone tool manufacture and other activities in these geologically complex areas.

The lower-lying alluvial plains that characterise the rest of the study area tend to have much greater archaeological potential, Quaternary landforms such as sand dunes, lunettes and raised alluvial features may preserve a range of sensitive and scientifically important archaeological sites, such as stratified shell middens, burials and the remains of habitation structures. The primary factors determining their location is the proximity of persistent water sources and the history of sediment erosion and deposition at the site. It is likely that, where work is carried out in the vicinity of modern or ancient watercourses, lakes, or raised, alluvial landforms of Quaternary age, Aboriginal archaeology, including occupation sites, burials and ceremonial sites, may be encountered.

6.3 Predictive statement for individual sections of the Olympic Highway

6.3.1 Table Top to Wagga Wagga

This section of the study area passes through the Brokong Plains landscape, which is characterized by alluvial features, and near to the hills of the Table Top ranges, which preserve ritual landscapes of great importance to the Wiradjuri. Based on results of previous archaeological investigations along the Olympic Highway corridor and surrounding regions, it is possible to provide the following predictions regarding site locations within the study area.

Isolated artefacts – are found across the entire landscape and such sites are likely to occur in the study area. Table 4 lists 12 stone artefact find spots within 100 m of the road reserve in this section.

Stone artefact scatters –Landforms overlooking the tributaries, channels and palaeochannels or the Murrumbidgee are mostly likely to be associated with this site type in this section.

Scarred / Culturally modified trees –There are stands of remnant vegetation within the road corridor of this section of the Olympic Highway, and Table 4 details 12 culturally modified trees that are located within 100 m of the road reserve.

Hearths/ovens –Hearths are recorded either in isolation or association with other Aboriginal cultural features such as camp sites. Ovens are generally larger than hearths and often include other materials such as bone.

Burials –It is important to note that burials are typically only detected through disturbance. They are generally found in elevated, soft sandy, alluvial deposits or in proximity to rivers and major creeks.

Shell middens – show evidence of shell discard after people have collected, eaten and discarded shellfish. Middens may also contain other cultural material including stone artefacts, other faunal remains or charcoal from cooking. These sites are found along the edges of billabongs, swamps, rivers and major creeks.

Ceremonial Places - are found in isolated locations throughout the landscape. The preferred location of these places will vary from region to region. A ceremonial landscape of significance to the Wiradjuri is known to exist around the Rock, though its precise location is not recorded in AHIMS. Rock art sites within the Table Top range are recorded approximately 3 km from the Highway route.

Grinding grooves - Quarries are likely to be located where suitable rocks outcrop. Numerous grinding grooves are found in the landscapes surrounding this section of the study area.

6.3.2 Wagga Wagga to Cootamundra

This section of the study area passes through a variety of hilly landscapes, cut across by sections of the Murrumbidgee-Tarcutta channels and floodplains. Based on results of previous archaeological investigations along the Olympic Highway corridor and surrounding regions, it is possible to provide the following predictions regarding site locations within the study area.

Isolated artefacts – are found across the entire landscape and such sites are likely to occur in the study area.

Stone artefact scatters –As elsewhere in the study area, landforms overlooking watercourses, including palaeochannels, are most likely to be associated with this site type. Larger examples are likely to be found in alluvial landscapes, such as the sections of the Murrumbidgee-Tarcutta Channels and Floodplains landscape (Fig. 3) that the route passes through.

Scarred / Culturally modified trees –There are stands of remnant vegetation within the road corridor of this section of the Olympic Highway, and Table 4 details three culturally modified trees that are located within 100 m of the road reserve.

Hearths/ovens – Hearths are recorded either in isolation or association with other Aboriginal cultural features such as camp sites.

Burials – Burials have been discovered within the wider landscape surrounding this section of road, but none are known to be within the area of proposed works. It is important to note that burials are typically only detected through disturbance and are generally found in elevated, soft sandy, alluvial deposits or in proximity to rivers and major creeks.

Shell middens – show evidence of shell discard after people have collected, eaten and discarded shellfish. Middens may also contain other cultural material including stone artefacts, other faunal remains or charcoal from cooking. These sites are found along the edges of billabongs, swamps, rivers and major creeks. No shell middens have been recorded within this section of the study area.

Ceremonial places – are found in isolated locations throughout the landscape. The preferred location of these places will vary from region to region.

Grinding grooves - Quarries are likely to be located where suitable rocks outcrop. Numerous grinding grooves are found in the landscapes surrounding this section of the study area.

Quarries – Quarries are likely to be located where outcrops of rocks exist that are useful for stone tool manufacture. One quarry was detected in the landscape surrounding the study area within the Springdale hills (Fig. 10).

6.3.3 Cowra to Cootamundra

This section of the study area passes through a variety of hilly landscapes, close by sections of the Murrumbidgee-Tarcutta channels and floodplains and the channels of the Upper Lachlan (Figure 4). Based on results of previous archaeological investigations along the Olympic Highway corridor and surrounding regions, it is possible to provide the following predictions regarding site locations within the study area.

Isolated artefacts – are found across the entire landscape. These finds can occur in any location as Aboriginal people traversed the country for thousands of years. Isolated finds may end up in a recorded location through humans, erosion or depositional forces. These sites are likely to occur in the study area, and one isolated artefact (Koora – 05 -1) is recorded ~300 m from the centre of the road reserve near Koorawatha.

Scarred / Culturally modified trees – display evidence of human modification and manipulation. They require the presence of mature trees and are likely to be found along major waterways and stands of remnant vegetation. There are stands of remnant vegetation within the road corridor of this section of the Olympic Highway, and Table 4 details 3 culturally modified trees that are located within 100 m of the road reserve.

Stone artefact scatters – representing a camping location, these sites are identified by a concentration of stone flakes. They are a common site type as they are more likely to survive in the archaeological record. Artefact scatters will occur across the landscape, usually in association with a resource. Within the study area it is noted that locations close to major water sources, including relict lake systems were a preferred location for camping. As the study area crosses many of these landscape features, artefact scatters may occur throughout. But more extensive lithic scatters are likely to occur in low-lying areas in association with permanent water courses. The landforms surrounding and overlooking the channels, palaeochannels and tributaries of the Murrumbidgee river are, therefore, more likely to be associated with this site type.

Hearths/ovens – indicate locations where a fire was lit for one-off (hearth) or multiple uses (oven) and are identified by presence of charcoal or burnt clay (used as heat retainers).

Hearths are recorded either in isolation or association with other Aboriginal cultural features such as camp sites. Ovens are generally larger than hearths and often include other materials such as bone. No hearths or ovens have been recorded within this section of the study area.

Burials – are generally found in elevated, soft sandy, alluvial deposits or in proximity to rivers and major creeks. Just south of Cowra, a burial is recorded ~500 m from the centre of the road easement in the alluvial landscape of the Eugowra Plains. It is important to note that burials are, typically, only detected through disturbance, and that the low-lying alluvial landscapes within this section contain landforms that are of types known to be a focus of Aboriginal burials.

Shell middens – show evidence of shell discard after people have collected, eaten and discarded shellfish. Middens may also contain other cultural material including stone artefacts, other faunal remains or charcoal from cooking. These sites are found along the edges of billabongs, swamps, rivers and major creeks. They are unlikely to be found in the upland areas of this section of highway, and none are recorded in the alluvial or riparian environments associated with the Lachlan or its tributaries within the study area.

Ceremonial places – are found in isolated locations throughout the landscape. The preferred location of these places will vary from region to region. A stone arrangement is recorded within 1 km of the road easement, approximately 3 km northwest from the centre of Young.

Grinding grooves - Quarries are likely to be located where suitable rocks outcrop. Numerous grinding grooves are found in the landscapes surrounding this section of the study area.

Quarries – Quarries are likely to be located where outcrops of rocks exist that are useful for stone tool manufacture, or other purposes. Numerous ochre quarries are found in the landscapes surrounding this section of the study area.

6.4 Predictive mapping from Aboriginal Site Decision Support Tool

Figures 14 through 19 provide an overview of the predictive modelling available through the Aboriginal Site Decision Support Tool (ASDST). The ASDST is a modelling tool that was developed in order to provide a set of spatial GIS layers combined with analytical techniques that provide visual and quantitative information regarding the distribution of Aboriginal site features across the landscape and associated accumulated impacts (Ridges 2010). The modelling provides GIS layers for artefacts, rock art, burials, earth mounds, grinding grooves, hearths, shell middens, stone quarries and culturally modified trees, as well as layers relating to accumulated impacts, model reliability and survey priority.

For the purposes of this preliminary desktop assessment the ASDST mapping has been used to both review the AHIMS search results and predict the likelihood of particular site types occurring in the Olympic Highway study area. Overview maps showing results of the ASDST modelling are included below with detailed maps for each section of the study area included in Appendix 3. Figure 14 illustrates areas of prior disturbance from a variety of post contact impacts such as vegetation clearance, agricultural activities and transport infrastructure. While there are areas showing high levels of accumulated impacts within the study area, this does not mean that archaeological and cultural sites are absent from these areas. Rather, it means that sites are less likely to be recorded in their original location in these areas and that they may have been partially or fully harmed.

As previously discussed, there are many areas of New South Wales that have never been archaeologically surveyed. Figure 15 combines these unsurveyed areas with landforms that have high likelihood for sites to be located. This figure aims to predict areas for further investigation based on modelling of these two factors.

The most commonly recorded site types within the study area are scarred trees and Artefact scatters (AHIMS search results Table 3). Figures 16 to Figures 17 illustrate the potential location of these site types within the study area. Figure 18 models the predicted location of rock art within the study area. This site type is included in this section as they are concentrated around Table Top and the Rock, both areas were identified as containing important ceremonial landscapes during the course of community consultation. The predicted location of other site types within the study area are included in Appendix 3.

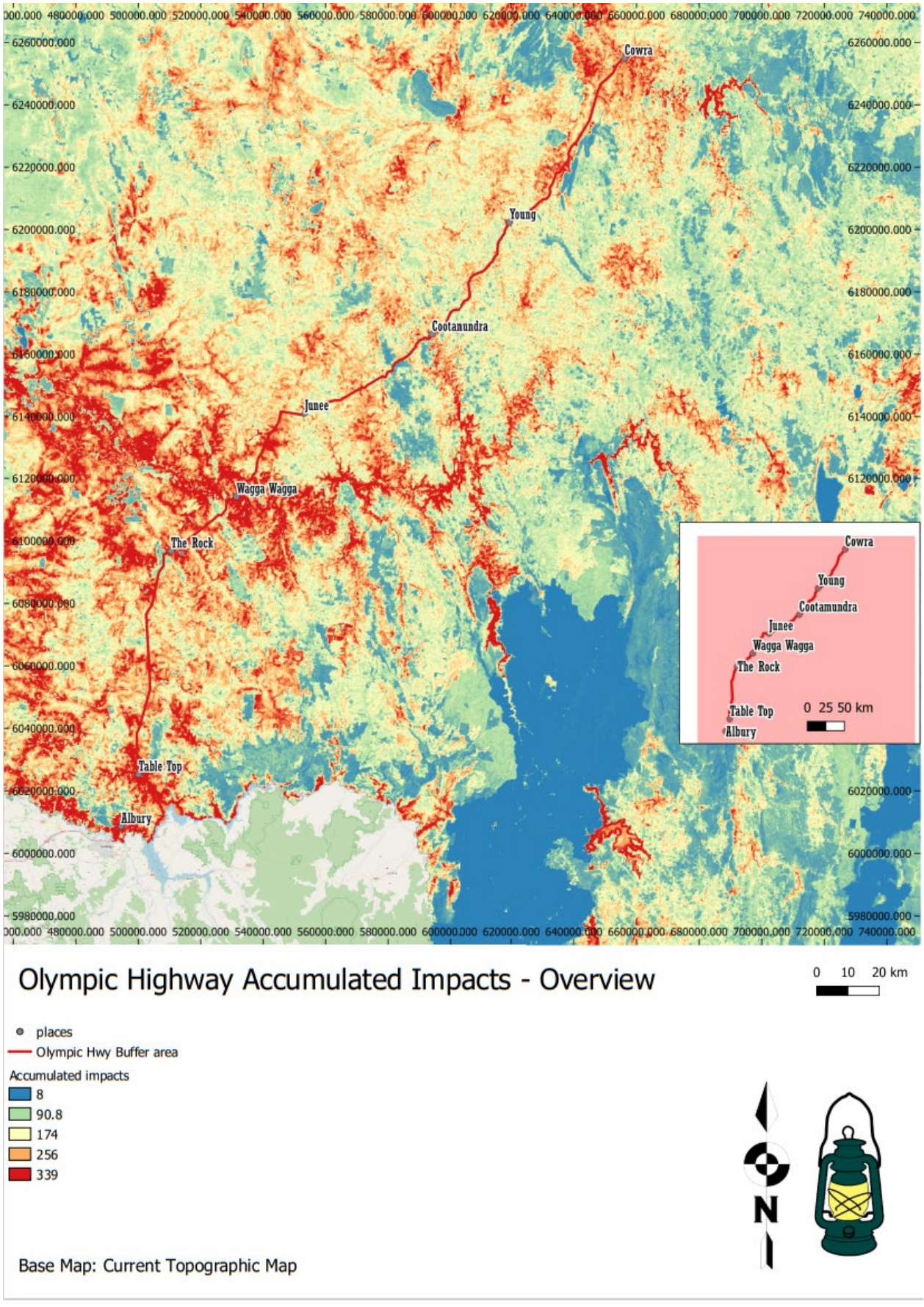

Figure 14 ASDST modelling of accumulated impacts of the Olympic Highway study area

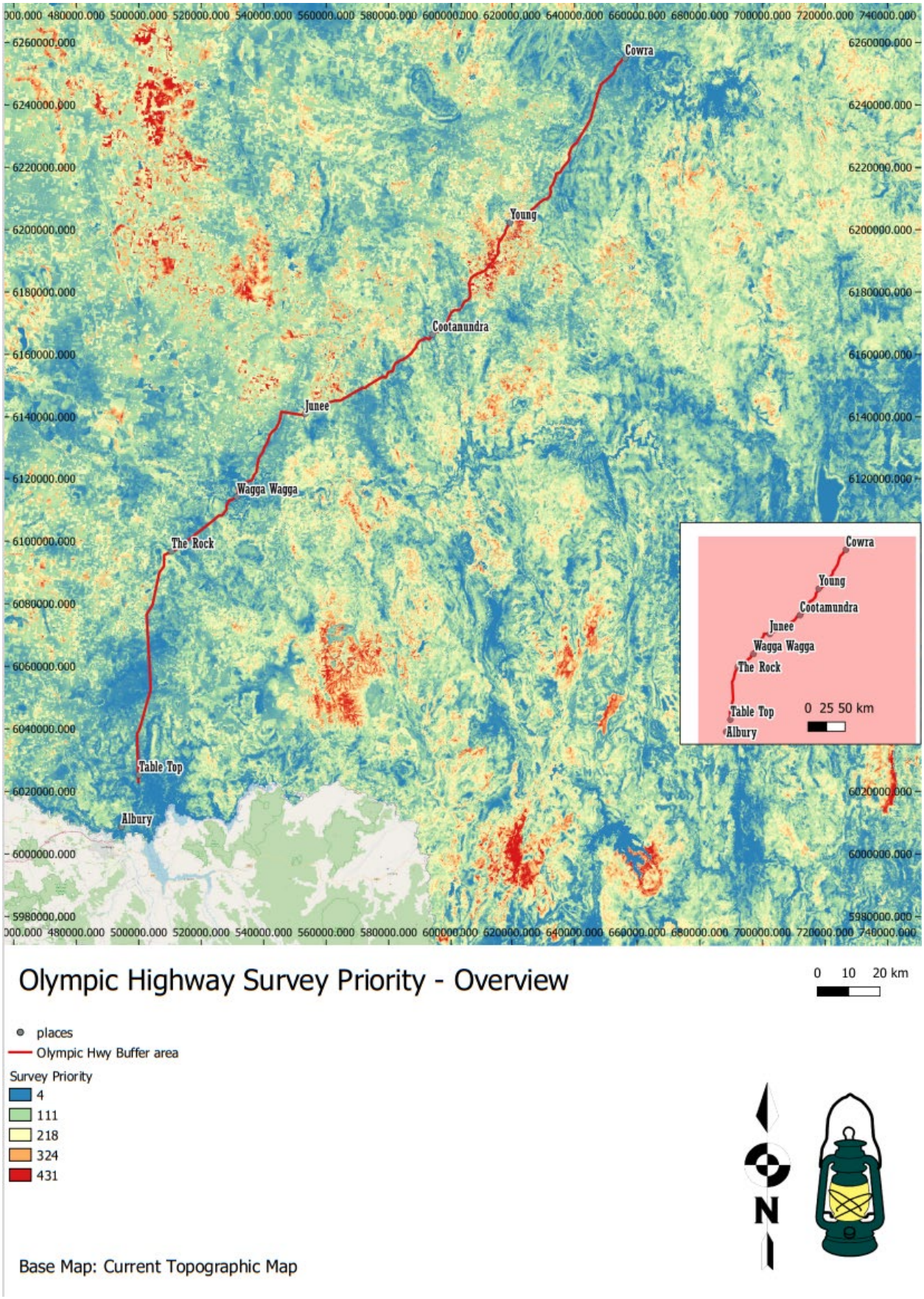

Figure 15 ASDST modelling of priority survey areas along the Olympic Highway study area

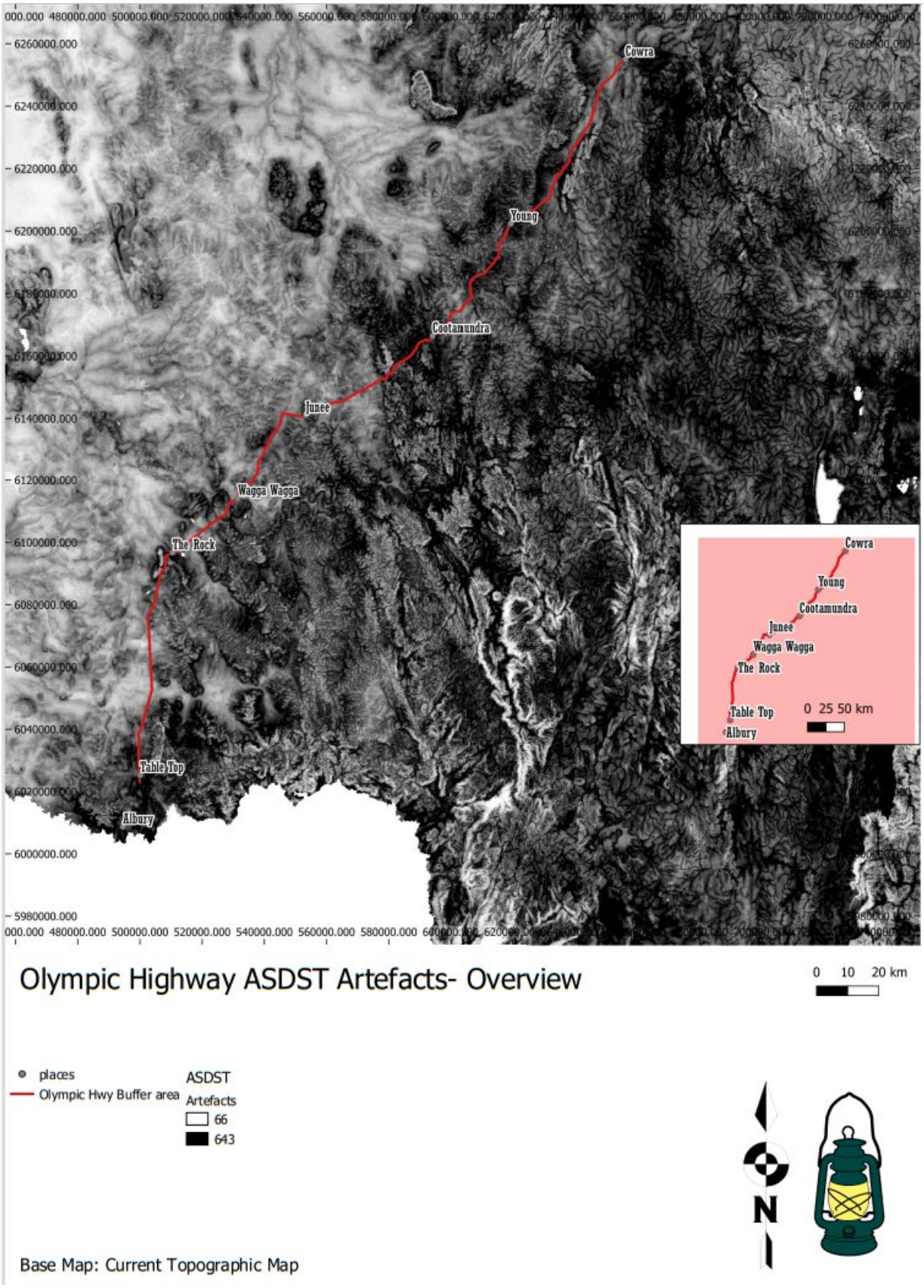

Figure 16 ASDST modelling of predicted locations of artefact scatters surrounding the Olympic Highway study area

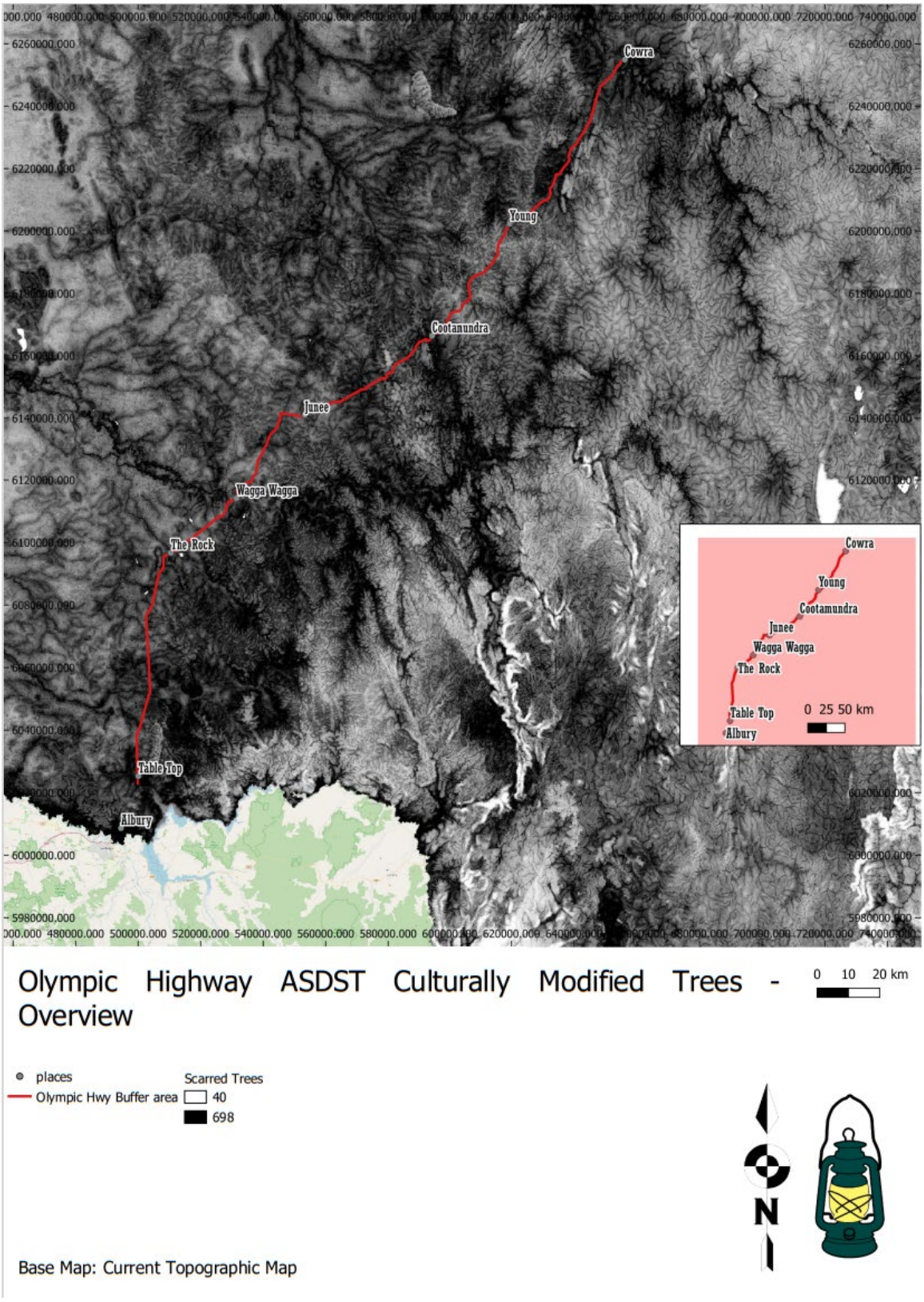

Figure 17 ASDST modelling of predicted locations of scarred trees surrounding the Olympic Highway study area

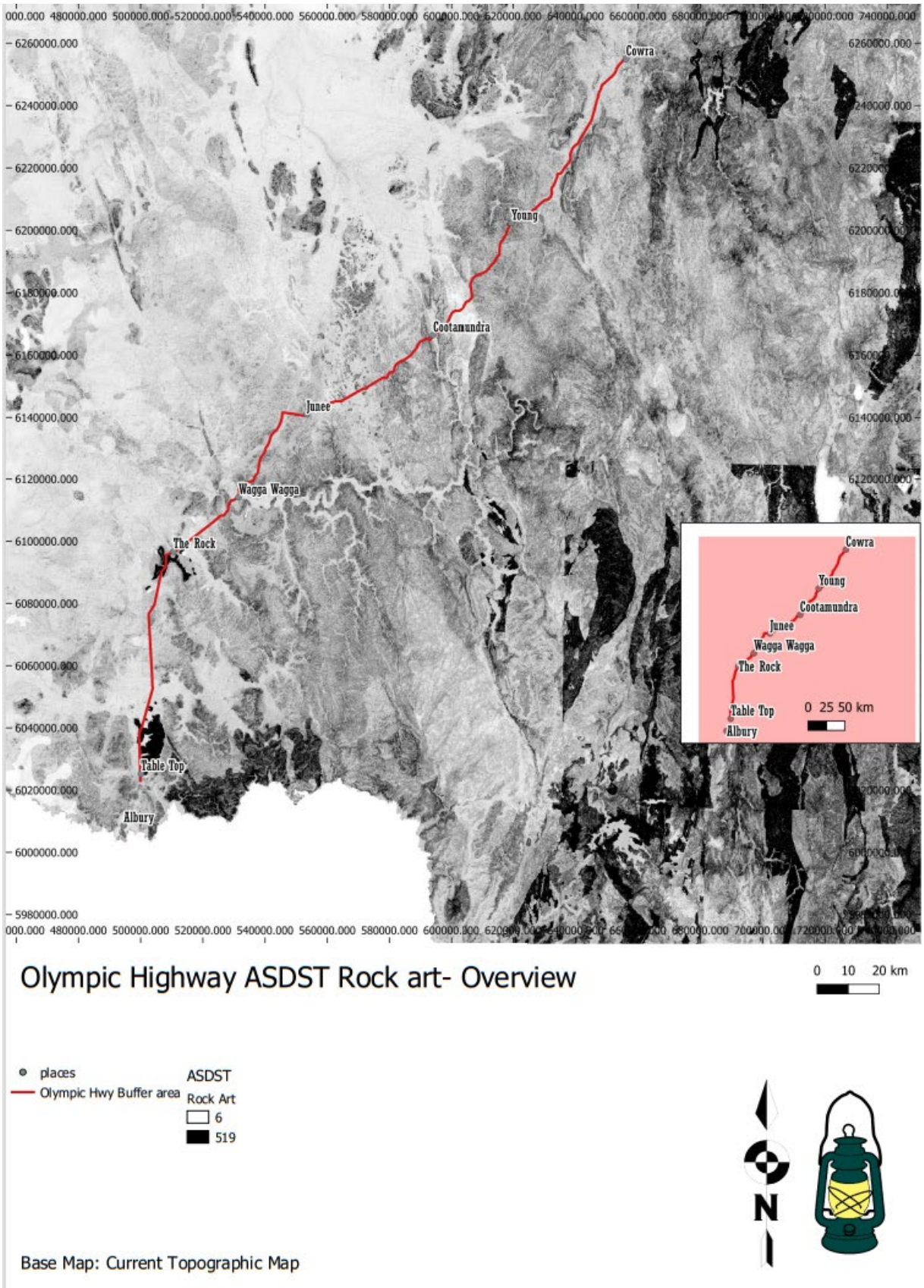

Figure 18 ASDST modelling of predicted locations of rock art surrounding the Olympic Highway study area

7 CONSULTATION PROCESS

7.1 Overview

The Transport for NSW *Procedure for Aboriginal cultural heritage consultation and investigation (PACHCI)* (RMS 2011) wasimplemented by Lantern Heritage at the commencement of the project. The consultation process is ongoing. Summaries of the various stages in the consultation process are provided below, together with inputs received to date by registered Aboriginal parties (RAPs). Examples of correspondence and notifications sent out to Aboriginal groups and individuals are provided in Appendix 1 together with a summary log of all consultation.

7.2 Stage 1

The first stage of the consultation process involved the identification of potential stakeholders and invitations to register an interest in the program. This initially involved letters (refer to Appendix 1 for an example of the letter) sent out to the following organisations on 12 July 2021 and 17 July 2021:

- Office of the Registrar Aboriginal Land Rights Act 1983 (Office of the Registrar ALRA);
- Aboriginal Cultural Heritage Regulation Team, Heritage NSW – Queanbeyan;
- Native Title Services Corp (NTS Corp);
- National Native Title Services (NNTS);
- Local Land Services;
- Albury City Council;
- Wagga Wagga Local Aboriginal Land Council;
- Junee Shire Council;
- Cootamundra-Gundagai Local Government;
- Cowra Council;
- Greater Hume Council;
- Hilltops (Young) Council;
- Lockhart Local Government Area;
- Albury and District LALC;
- Young LALC;
- Cowra LALC, and
- Wagga Wagga LALC.

Newspaper advertisements (refer to Appendix 1 for a copy of the advertisement) were also placed in the:

- Wagga Wagga Daily Advertiser on 13 July 2021;
- Cootamundra Herald 14 July 2021; and
- Cowra Guardian on 16 July 2021.

The closing date for initial registrations of interest was 30 July 2021.

Following receipt of advice from the above government agencies, invitations to register for the project were sent out to the following groups, organisations, and individuals in July 2021:

Table 6 Invitations to register - dates sent

Aboriginal Party	Invitation Letter Sent
Albury District LALC	17/7/2021
Young LALC	17/7/2021
Cowra LALC	17/7/2021
Wagga Wagga Local Aboriginal Land Council	17/7/2021
Onerwal LALC	17/7/2021
Yalmambirra	2/8/2021
Mungabareena Aboriginal Corporation 21	2/8/2021
Wiradjuri Council of Elders	2/8/2021
Denise McGrath	2/8/2021
Leonie McIntosh	2/8/2021
Ken Murray	2/8/2021
Liz Heta	2/8/2021
Gunjeewong Cultural Heritage Aboriginal Corporation	2/8/2021
Alice Williams	2/8/2021
Koomurri Ngunawal Aboriginal Corporation (KNAC)	2/8/2021
Corroboree Aboriginal Corporation	2/8/2021
Murri Bidgee Mullangari Aboriginal Corporation	2/8/2021
Thunderstone Cultural & Land Management Services Aboriginal Corporation	2/8/2021
Barking Owl Aboriginal Corporation	2/8/2021
Oak Hill Enterprises	2/8/2021
Ngunawal Heritage Aboriginal Corporation	2/8/2021
Alice and Olive Williams	2/8/2021
Eva Coe	2/8/2021
Gundungurra Aboriginal Heritage Association inc	2/8/2021
Gundungurra Tribal Council Aboriginal Corporation	2/8/2021
Mooka	2/8/2021
Murra Bidgee Aboriginal Corporation, Cultural Heritage	2/8/2021
Trevor Robinson	2/8/2021
Wiradjuri Council of Elders	2/8/2021

Aboriginal Party	Invitation Letter Sent
Wiradjuri Interim Working Party	2/8/2021
Karlari Ngunnawal Pajong Wallabalooa Descendants	2/8/2021
Bundyi Aboriginal Cultural Knowledge	2/8/2021
Miyagan Culture & Heritage	2/8/2021
Gunjeewong Cultural Heritage Aboriginal Corporation	2/8/2021
Corroboree Aboriginal Corporation	2/8/2021
Murri Bidgee Mullangari Aboriginal Corporation	2/8/2021
Didge Ngunawal clan	2/8/2021
Ginninderra Aboriginal Corporation	2/8/2021
Merrigarn Indigenous Corporation	2/8/2021
Thunderstone Aboriginal Cultural and Land Management Services Aboriginal Corporation	2/8/2021
Karlari Ngunnawal Ngunnawal Pajong Wallabalooa Descendants	2/8/2021
Ngunnawal Pajong Wallabalooa Descendants	2/8/2021
Janine Thompson	2/8/2021
Ngurambang	2/8/2021
Clorine Lyons	2/8/2021
Oak Hill Enterprises	2/8/2021
Clive Freeman	2/8/2021
Ngunawal Heritage Aboriginal Corporation	2/8/2021
Yurwang Gundana Consultancy Cultural Heritage Services	
Bangerang Aboriginal Corporation	2/8/2021
Bundyi Aboriginal Cultural Knowledge	2/8/2021
Waagan Waagan Project Group	2/8/2021
Miyagan Culture & Heritage	2/8/2021

Registrations of interest were received from the following groups and individuals (RAPs):

- Wagga Wagga LALC

- Cootamundra-Gundagai Regional Local Government
- Yalmambirra
- Murri Bidgee Mullangari Aboriginal Corporation
- Corroboree Aboriginal Corporation
- Bundyi Aboriginal Cultural Knowledge
- Didge Ngunawal clan
- Karlari Ngunnawal Pajong Wallabalooa Descendants
- Merrigarn Indigenous Corporation
- Karlari Ngunnawal Ngunnawal Pajong Wallabalooa Descendants
- Yurwang Gundana Consultancy Cultural Heritage Services
- Enid Clarke (Elder)
- Keith Freeman (Elder)
- Norma Freeman (Elder)
- Martin Riley (Elder)
- Alona Apps
- Marnie Freeman
- Jirrah Freeman
- Tori Apps
- Jahnayah Freeman
- Bidya Marra Consultancy
- Woka Aboriginal Corporation
  Preservation of Culture & Heritage
- Muragadi
- Albury and District LALC
- Benjiaminn Smith
- Lavinus Ingram

7.3 Stages 2 and 3 – community consultation meetings

Each of the RAPs were then contacted again by letter with more detailed information relating to the proposed Olympic Highway project and an invitation to attend a community consultation meeting during the week starting 31 August in four locations. The aim of this meeting was to share cultural values of the study area and surrounding region. The first round of letters were sent out on 23 August 2021 with RAPs given until 27 August to respond (refer to Appendix 1 for an example of the letter).

The following RAPs responded to attend meetings at the following locations:

Table 7 RAP RSVPs

Locations	RSVP Prior to Meeting	RAPs Attendance
Cowra 10am 31 August 2021	• Lilly Carroll- Didge Ngunawal clan • Corroboree Aboriginal Corporation (Marilyn Carroll- Johnson, Director) • Rebecca Ingram • Lavinus Ingram • Francies Coe	• Lilly Carroll-Didge Ngunawal clan • Corroboree Aboriginal Corporation (Marilyn Carroll- Johnson, Director) • Rebecca Ingram • Lavinus Ingram

Locations	RSVP Prior to Meeting	RAPs Attendance
	• Eva Coe	• Francies Coe • Eva Coe

Young
2pm
 	
31 August 2021
	• Mark Saddler
	• Young LALC
	• Murri Bidgee Mullangari Aboriginal Corporation
	• Cootamundra-Gundagai Regional Local Government
		• Mark Saddler
		• Young LALC
		  ▪ Enid Clarke (Elder)
		  ▪ Keith Freeman (Elder)
		  ▪ Norma Freeman (Elder)
		  ▪ Martin Riley (Elder)
		  ▪ Marnie Freeman
		  ▪ Gail Freeman
		  ▪ Alona Apps
		  ▪ Jirrah Freeman
		  ▪ Tori Apps
		  ▪ Jahnayah Freeman
		• Murri Bidgee Mullangari Aboriginal Corporation
		  ▪ Darleen Johnson Ryan Johnson)
		• Cootamundra-Gundagai Regional Local Government

Wagga Wagga
10am
1 September 2021
	• Mark Saddler
	• Bidya Marra Consultancy
	• Yurwang Gundana Consultancy Cultural Heritage Services
	• Merekai Bell (Yurwang Gundana Cultural Heritage Services)
		• Mark Saddler
		• Bidya Marra Consultancy
		  ▪ James Ingram
		  ▪ Quentin Ingram
		  ▪ Dylan Ingram
		• Yurwang Gundana Consultancy Cultural Heritage Services
		• Merekai Bell

The Rock 2pm 1 September 2021	• Mark Saddler • Yalmambirra • BidyaMarra Consultancy • Yurwang Gundana Consultancy Cultural Heritage Services • Benjiaminn Smith • Albury LALC	• Mark Saddler • Yalmambirra • BidyaMarra Consultancy • Yurwang • Gundana Consultancy Cultural Heritage Services • Benjiaminn Smith

Locations	RSVP Prior to Meeting	RAPs Attendance

7.4 Stage 1 –Inception Aboriginal Consultation meeting results

Table 8 Aboriginal consultation meeting outcomes

Cowra Meeting 31/8/21	
Attending	;
Cultural info	Primary outcome was that a more formalised consultation process be established asap between Lantern and the Aboriginal community. During the meeting it was stated the followings: • Cowra was not Wiradjuri country and emphatically pointed out it was part of Ngunnawal territory.
Concerns	It was required that only local Aboriginal people were to be consulted about on-country issues.
Other notes	• Any welcome to country signs along the road were seen as an issue. • It was stated that previously unrecorded sites will occur along the road, one scarred tree 'south of Cowra' was mentioned.

Young Meeting 31/8/2021	
Attending	• Mark Saddler • Young LALC • Murri Bidgee Mullangari Aboriginal Corporation • Cootamundra-Gundagai Regional Local Government
Cultural info	It was seen as critical that Aboriginal involvement in the road project be undertaken from the very beginning and that this was the only way that damage to or destruction of cultural places could be avoided.
Concerns	• Site destruction/damage arising from previous road projects (eg. Barton Highway) was a sore point and an unfortunate precedent for Aboriginal concern. • Potential impacts arising not just from roadworks themselves but also associated activities (such as plant/machinery parking and movement zones, stockpiles etc) must be addressed in plans and assessments. This was to include at locations where use or reuse of formerly constructed zones for parking etc was to take place.

- Waterways and bridge zones were identified as being of particular concern in terms of site location/cultural area management.

- Cultural heritage issues to be discussed and fieldwork etc undertaken only in conjunction with local Aboriginal knowledge holders (in this case Young area Wiradjuri) – 'no outsiders'.

Other notes

- Cultural awareness training for roads staff needed at all staff levels and incorporated into toolbox sessions at every job.

- Current cultural awareness training (eg. at induction sessions) needed to be redone and updated to address Aboriginal community concerns.

- Negative impressions about Aboriginal culture and site management needs to be addressed through interactive training and workshopping.

- Enid Freeman expressed willingness to engage with female archaeologists to discuss relevant women's sites and business.

- Aboriginal involvement in biodiversity studies as well as archaeology/cultural heritage specific aspects was seen as critical.

- More information requested on what the projected timeline on the roadworks would be.

Wagga Wagga Meeting 1/9/'21

Attending

- Mark Saddler
- Bidya Marra Consultancy
- Yurwang Gundana Consultancy Cultural Heritage Services
- Yurwang Gundana Cultural Heritage Services

Cultural info

- The country along the Olympic Highway route holds particular cultural significance including Dreaming sites and places.
- Places named in general include landscapes around Bethungra and Ulandra.
- Significant trees and artefacts are known to occur in and around Kangol (The Rock) and Yerong.

- Routeways to and from such significant places, including ceremonial locations, are known to occur along the road.

Concerns

- Concerns were expressed for scarred tree potential in previously unsurveyed areas along the road; it was predicted that many scarred trees and artefact scatters would occur along the route.
- Potential impacts in zones outside immediate roadwork areas (i.e. secondary impacts such as downstream changes arising from drainage works etc) need to be addressed. Impacts seen as both physical and conceptual.

Other notes

- Ancillary roadwork zones (such as parking, stockpile and layovers) needed to be incorporated into cultural heritage impact plans.
- A point-to-point preliminary survey of the highway corridor undertaken by local Aboriginal community representatives and knowledge holders and archaeologists was seen as critical.
- Recent traditional tree scars are to be included in site recording procedures (not just prehistoric entities or scars older than approximately 120 years). Recent and ongoing tree scarring is seen as part of the continuing Wiradjuri cultural tradition.
- Aboriginal involvement in biodiversity studies as well as archaeology/cultural heritage specific aspects was seen as critical.
- An early/preliminary cultural consultation process is seen to be the only safeguard against impacting/destroying cultural sites and places.
- Willingness was expressed in terms of engaging in future meetings dealing with both men's and women's business.
- Aunty Dorothy (Whyman) is very willing to discuss aspects of women's business with appropriate Lantern archaeologists (ie women).

The Rock and Albury Meeting 1/9/'21

Attending

- Mark Saddler
- Yalmambirra
- BidyaMarra Consultancy

	• Yurwang Gundana Consultancy Cultural Heritage Services • Benjiaminn Smith • Albury LALC
Cultural info	• Kangol/The Rock 'and other places' were known to be culturally significant and of relevance for both men's and women's business. • Walla Walla, Gerogery and Greg Greg (and others). have clan significance and need careful consideration. • Gabuga (Kapooka) was cited as a location where numerous scarred trees are known to occur.
Concerns	No Concerns
Other notes	• A preliminary point to point survey was seen as a critical component in both assessing the heritage/archaeological aspects of the highway route and as a means for discussing places of cultural significance. • Fostering and maintenance of good faith between NSW Roads and the local Aboriginal community required. 'Cultural immersion' programs strongly recommended for Roads staff at all levels; inductions and tool box talks need to be reworked to include appropriate Aboriginal cultural heritage components. • Participants expressed strong willingness to engage in future cultural information discussions with appropriate members of Lantern staff (i.e. men's and women's business level). Aunty Dorothy is the contact for Wagga Wagga Women's Group and the Albury mob.

8 SUMMARY AND ANALYSIS OF BACKGROUND INFORMATION

Analysis of the background information presented in sections 3, 4 and 5 allows an assessment of the cultural heritage values within the study area to be made. Through consideration of information from ethnographic/historic sources, landscape description, archaeological context and Aboriginal community consultation we can develop an insight into how the landscape of the study are was used and what kinds of events took place in the past. This section aims to bring together this variety of information to develop an understanding of the cultural landscape of the study area.

Over the last few decades, archaeological investigations within the region recorded physical evidence of Aboriginal land use activities as site types including more commonly occurring sites such as scarred or culturally modified trees, and artefact scatters. Less common sites include ceremonial and Dreaming sites, resource and gathering sites, conflict sites, habitation structures, ochre or stone quarries, grinding grooves, stone arrangements and significant waterholes.

Intact archaeological deposits are likely to be found in a range of landscapes throughout the study area. However, the preservation of these deposits is impacted by environmental factors such as historical or modern land use (quarrying, agriculture etc), flood zones, vegetation types, and soil characteristics and stability. For example, soil landscapes subject to high levels of erosional or fluvial activity are less likely to retain Aboriginal objects. In contrast, areas where sediment builds up are likely to contain Aboriginal objects that are no longer in their original location.

Disturbance from land cleaning, farming activities and road construction may have removed evidence of many site types within the Olympic Highway project area. But in some cases, the Olympic Highway corridor has provided a corridor of land where remnant native vegetation remains and protects culturally modified trees.

Throughout the wider landscape archaeological surveys and excavations have confirmed the presence of a variety of archaeological site types, and consultation has identified many important places in the landscape. These places include resource gathering locations, massacre sites, burials, 'songlines' and archaeological sites. Aboriginal community consultation confirmed that the study area is rich in Aboriginal cultural heritage values. At this stage of the investigation, the focus of Aboriginal community consultation is on establishing rapport with community so that a greater depth of knowledge sharing can occur at a later time. Ongoing consultation with community is one way to ensure that this rapport is sustained through the life of the project. Another is when the cultural heritage values shared about the Olympic Highway project area are developed into a resource that communities can share rather than staying locked into a report.

9 PRELIMINARY CULTURAL HERITAGE VALUES AND STATEMENT OF SIGNIFICANCE

This section details a preliminary assessment of all cultural heritage values within the Olympic Highway study area. It has been compiled in accordance with the processes outlined in the Burra Charter (AICOMOS 2013a). Each of the sub-sections below provides an overview of how different cultural heritage values are defined in the *Burra Charter*, followed by discussion of how these values apply to the study area and the site assessed during field survey. This is followed by preliminary desktop statements of significance for the part of the site where impacts are anticipated.

9.1 Social or Cultural Values

Within the Burra Charter Practice Note on *Understanding and Assessing Cultural Significance* (AICOMOS 2013b: 4) Social Value is defined as follows:

> ***Social value*** *refers to the associations that a place has for a particular community or cultural group and the social or cultural meanings that it holds for them.*

Within the context of assessing Aboriginal cultural heritage, spiritual values are often closely tied to social values. Within the Burra Charter Practice Note on *Understanding and Assessing Cultural Significance* (AICOMOS 2013b: 4) Spiritual Value is defined as follows:

> ***Spiritual value*** *refers to the intangible values and meanings embodied in or evoked by a place which give it importance in the spiritual identity, or the traditional knowledge, art and practices of a cultural group. Spiritual value may also be reflected in the intensity of aesthetic and emotional responses or community associations, and be expressed through cultural practices and related places.*
>
> *The qualities of the place may inspire a strong and/or spontaneous emotional or metaphysical response in people, expanding their understanding of their place, purpose and obligations in the world, particularly in relation to the spiritual realm.*
>
> *The term spiritual value was recognised as a separate value in the Burra Charter, 1999. It is still included in the definition of social value in the Commonwealth and most state jurisdictions. Spiritual values may be interdependent on the social values and physical properties of a place.*

All sites hold cultural value to the local Aboriginal communities. However, the cultural and social value of the recorded sites can only be determined by Aboriginal people. Through the community consultation meetings it was clear that all tangible sites and intangible locations hold value. In particular, community consultation showed that the Olympic Highway passes through a number of areas with important ceremonial functions that need to be understood through further consultation. Community consultation also underscored the cultural value of scarred trees to the Aboriginal communities along the Olympic Highway project area, as they form a tangilble connection to a traditional lifestyle. These sites should be avoided by impacts.

9.2 Historic Values

Within the Burra Charter Practice Note on *Understanding and Assessing Cultural Significance* (AICOMOS 2013b: 3) Historic Value is defined as follows:

> ***Historic value*** *is intended to encompass all aspects of history—for example, the history of aesthetics, art and architecture, science, spirituality and society. It therefore often underlies other values. A place may have historic value because it has influenced, or has been influenced by, an historic event, phase, movement or activity, person or group of people. It may be the site of an important event. For any place the significance will be greater where the evidence of the association or event survives at the place, or where the setting is substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of such change or absence of evidence.*

While there are no historic sites associated with Aboriginal cultural heritage within the Olympic Highway project area, there are a number of sites within the broader area. These sites have high levels of significance to the community members associated with these areas.

9.3 Scientific/Archaeological Values

Within the Burra Charter Practice Note on *Understanding and Assessing Cultural Significance* (AICOMOS 2013b: 3-4) Scientific Value is defined as follows:

> ***Scientific value*** *refers to the information content of a place and its ability to reveal more about an aspect of the past through examination or investigation of the place, including the use of archaeological techniques. The relative scientific value of a place is likely to depend on the importance of the information or data involved, on its rarity, quality or representativeness, and its potential to contribute further important information about the place itself or a type or class of place or to address important research questions. To establish potential, it may be necessary to carry out some form of testing or sampling. For example, in the case of an archaeological site, this could be established by a test excavation.*

While the majority of sites previously recorded within the project area are scarred trees, it is likely that isolated finds and artefact scatters are likely to be many times more prevalent than those of scarred trees. This is based on the pattern of Aboriginal occupation across all landscapes in Australia where stone artefact site types outnumber any other site type. The low number of stone artefact sites recorded within the project area are most likely a reflection of a lack of pedestrian survey within the project area and a focus on highly visible site types such as scarred trees.

While the current condition of scarred trees is not part of this assessment, trees that are healthy and in good condition will have a high level of integrity. Scarred trees face many natural and human created threats to their survival such as death and decay and land clearing. This indicates that the remaining scarred trees have high value as examples of a traditional Aboriginal cultural feature that is being diminished.

While there are a limited number of other site types, such as burials, grinding grooves and resource and gathering sites, recorded within the Olympic Highway project area, these sites are highly significant for many reasons. Within the study area, these site types are relatively rare, but have high research potential to provide information on lifestyle, diet, dating and burial practices.

Overall, the research potential of the sites located within the Olympic Highway project area is generally unable to determined via the current desktop assessment. The potential for archaeological deposits would be best determined by field assessment.

9.4 Aesthetic Values

Within the Burra Charter Practice Note on *Understanding and Assessing Cultural Significance* (AICOMOS 2013b: 3) Aesthetic Value is defined as follows:

> ***Aesthetic value*** *refers to the sensory and perceptual experience of a place—that is, how we respond to visual and non-visual aspects such as sounds, smells and other factors having a strong impact on human thoughts, feelings and attitudes. Aesthetic qualities may include the concept of beauty and formal aesthetic ideals. Expressions of aesthetics are culturally influenced.*

There are limited aesthetic values associated with the archaeological site recorded within the project area. The location of some sites adjacent to watercourses provide aesthetic qualities through the natural beauty of the riverine environment. It could be argued that the location of sites adjacent to and within the Olympic Highway road corridor detracts from the aesthetic values of sites.

9.5 Preliminary statement of Significance

The following preliminary statement of significance has been compiled on the basis of the Aboriginal consultation undertaken for this report, together with desktop research. A future field inspection of each site would provide a comprehensive statement of significance.

Overall the sites recorded within the 100 m of the Olympic Highway road reserve and the zone of proposed impacts are considered to be representative of a wider landscape and therefore their archaeological or scientific value is considered to be moderate. Some sites are assessed to have low or high archaeological significance and this is based on the frequency or rarity of these sites. The heritage significance of each site within the study area is summarised in Table 9 Statement of significance.

Table 9 Statement of significance

AHIMS #	Site name	Feature/s	Statement of significane
Section 1 – Table Top to Wagga Wagga			
55-6-0070	ARTC 2	Artefact : 1	Low-moderate
55-6-0071	ARTC 3	Artefact : 1	Low-moderate
55-6-0072	ARTC 13	Artefact: 1	Low-moderate

AHIMS #	Site name	Feature/s	Statement of significane
56-4-0347	Henty Pipeline IF1	Artefact	Low-moderate
56-4-0208	ARTC 8	Artefact : 1	Low-moderate
56-4-0206	ARTC 6	Artefact : 1	Low-moderate
56-4-0204	ARTC 4	Artefact : 2	Low-moderate
56-4-0207	ARTC 7	Artefact : 4	Low-moderate
56-4-0205	ARTC 5	Artefact : 1	Low-moderate
56-4-0210	ARTC 10	Artefact : 1	Low-moderate
56-4-0011	Burkes Creek	Artefact	Low-moderate
56-1-0654	Sandy Creek SF AFT 10	Artefact	Low-moderate
56-1-0653	Sandy Creek SF AFT 9	Artefact	Low-moderate
56-1-0655	Sandy Creek SF AFT 11	Artefact	Low-moderate
56-1-0096	L-IF-1	Artefact: 1	Low-moderate
56-1-0123	OLYMPIC HIGHWAY THE ROCK SCARRED TREE 1	Modified Tree (Carved or Scarred) : 1	high
56-1-0490	The Rock Rd Side Scar Tree 1	Modified Tree (Carved or Scarred) : 1	high
56-1-0378	Gabuga Tank 2	Modified Tree (Carved or Scarred) : -	high
56-1-0391	Gabuga Tank 17	Modified Tree (Carved or Scarred) : -	high
56-1-0392	Gabuga Tank 18	Modified Tree (Carved or Scarred) : -	high
56-1-0374	Gabuga Water Tank 3	Modified Tree (Carved or Scarred) : -	high
56-1-0376	Gabuga Water Tank 5	Modified Tree (Carved or Scarred) : -	high
56-1-0386	Mark Saddler Gabuga 1	Modified Tree (Carved or Scarred) : -	high
56-1-0129	Kapooka Pump Station ST 1	Modified Tree (Carved or Scarred) : 1	high
56-1-0387	Gabuga Tank 13	Modified Tree (Carved or Scarred) : -	high

AHIMS #	Site name	Feature/s	Statement of significane
56-1-0383	Gabuga Tank 9	Modified Tree (Carved or Scarred) : -	high
56-1-0381	Gabuga Tank 10	Modified Tree (Carved or Scarred) : -	high
56-1-0127	Kapooka Water Tank ST 1	Modified Tree (Carved or Scarred) : 1	high
56-1-0373	Gabuga Water Tank 1	Modified Tree (Carved or Scarred) : -	high
56-1-0382	Gabuga Tank 11	Modified Tree (Carved or Scarred) : -	high
56-1-0375	Gabuga Water Tank 4	Modified Tree (Carved or Scarred) : -	high
56-1-0377	Gabuga Water Tank 6	Modified Tree (Carved or Scarred) : -	high
56-1-0379	Gabuga Tank 7	Modified Tree (Carved or Scarred) : -	high
56-1-0389	Gabuga Tank 15	Modified Tree (Carved or Scarred) : -	high
56-1-0390	Gabuga Tank 16	Modified Tree (Carved or Scarred) : -	high
56-1-0388	Gabuga Tank 14	Modified Tree (Carved or Scarred) : -	high
56-1-0496	Gabuga Overpass Scar 1	Modified Tree (Carved or Scarred) : -	high
56-1-0352	Wagga Wagga Pounds Flat TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	high
56-1-0098	L-ST-1	Modified Tree (Carved or Scarred) : 1	high
Section 2 – Wagga Wagga to Cootmundra			
50-5-0274	Olympic Highway Illabo Artefacts 3	Artefact	Low-moderate
50-5-0115	Olympic Hwy - Bethungra 1	Artefact : 5	Low-moderate
50-5-0275	Olympic Highway Illabo Artefacts 5	Artefact	Low-moderate
50-5-0276	Olympic Highway Illabo Artefacts 4	Artefact	Low-moderate
50-5-0207	Cungegong TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	high
50-5-0204	Cungegong TSR Scar Tree 1	Modified Tree (Carved or Scarred) : -	high
50-5-0208	Cungegong TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	high
50-5-0205	Cungegong TSR Scar Tree 2	Modified Tree (Carved or Scarred) : -	high

AHIMS #	Site name	Feature/s	Statement of significane
50-5-0187	Bethungra Rail Tunnel 1	Modified Tree (Carved or Scarred) : -	high
56-1-0352	Wagga Wagga Pounds Flat TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	high
56-1-0354	Wagga Wagga Pound Flat Scar Tree 1	Modified Tree (Carved or Scarred) : -	high
56-1-0345	Wagga Wagga Pounds Flat TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	high
50-4-0069	Harts TSR Olympic Highway, Wallacetown via Wagga Wagga	Modified Tree (Carved or Scarred) : -	high
50-5-0280	Olympic Highway Illabo PAD	Potential Archaeological Deposit (PAD) : -	moderate
Section 3 – Cootamundra to Cowra			
50-3-0038	APA-ST4-11	Modified Tree (Carved or Scarred) : -	high
50-3-0054	Flixton TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	high
50-3-0041	Karyrie Park Scar Tree 1	Modified Tree (Carved or Scarred) : -	high
50-3-0052	Flixton TSR Scar Tree 1	Modified Tree (Carved or Scarred) : -	high
50-3-0053	Flixton TSR Scar Tree 2	Modified Tree (Carved or Scarred) : -	high
50-3-0040	Wombat Tree	Modified Tree (Carved or Scarred) : 1	high
50-6-0148	Wallendoon Lane	Modified Tree (Carved or Scarred) : -	high
44-4-0381	Wattamondara 960	Modified Tree (Carved or Scarred) : -	high
44-4-0338	N-ST-2, Cowra	Modified Tree (Carved or Scarred) : 1	high
44-4-0339	N-ST-3, Cowra	Modified Tree (Carved or Scarred) : 1	high
44-4-0337	N-ST-1, Cowra	Modified Tree (Carved or Scarred) : 1	high
44-4-0209	Noonbinna S/T1;	Modified Tree (Carved or Scarred) : -	high

9.6 Potential harm to Aboriginal objects

While sites recorded within the Olympic Highway road corridor are located within a highly disturbed area, the potential impacts from construction activities include

- Establishment of compounds, stockpile sites, laydown areas and exclusion zone fencing. Transport and stockpiling of materials may result in indirect impacts. These activities also have potential to directly impact and/or damage Aboriginal artefacts on the surface and within subsurface archaeological deposits.
- Installation of erosion and sediment controls will be supported by posts driven directly into the ground. Driving these posts into the ground will generate ground disturbance, and as such has the potential to directly harm any Aboriginal objects that are present in those areas.
- Relocation of utilities away from the project impact area. This will involve excavation of existing utilities and digging new trenches where they can be relocated. These activities have potential to disturb and/or damage Aboriginal artefacts at surface and within subsurface archaeological deposits.
- Reinstatement of a hazard free roadside where possible by; removal of trees and maintenance of vegetation regrowth. Clearing has the potential to result in ground disturbance, and as such has the potential to directly harm (disturb or damage) any Aboriginal objects that are present in those areas.
- Road edge repair and widening of road formation at various locations including the required ancillary works such as culvert and drainage structure widening. The proposed road forming methods involve ground disturbance and ground excavations that have the potential to directly harm any Aboriginal objects that may be present in those areas.
- Flattening of batters where possible. These activities have potential to disturb and/or damage Aboriginal artefacts at surface and within subsurface archaeological deposits.

Reinstatement of road signage and guideposts will occur at various locations within the zone of proposed impacts. These signs will be supported by single, double or triple posts. The posts will be installed in concrete measuring 250mm by 250mm drilled to 600mm depth. Excavating post holes for foundations generates ground disturbance, and as such has the potential to directly harm any Aboriginal objects that are present in those areas.

- Site clean-up and removal of stockpiles and compound. The clean-up of stockpiles and compound areas may result in damage (e.g. crushing or surface abrasion) to Aboriginal objects, such as stone artefacts.
- Removal of traffic controls and any erosion and sediment controls. The removal of these controls may result in damage (e.g. crushing or surface abrasion) to Aboriginal objects, such as stone artefacts.

9.7 Assessment of Harm

Various aspects of the proposed works for the Olympic Highway project have the potential to result in direct and/or indirect harm to 35 recorded AHIMS sites. Table 10 provides a summary of the anticipated impacts in terms of where sites are relative to the zone of proposed impacts. This impact assessment considers all sites located within 100 m of the road reserve according to AHIMS, as well as sites recorded within 100m of the Olympic Highway zone of proposed impacts. Of these sites, impacts may occur to 35 during the current scope of works.

As discussed previously, it must be noted that the number of sites physically located within the road corridor or zone of proposed impacts may be significantly different to what is recorded on AHIMS. This is the result of errors in the translation of site coordinates from earlier mapping systems as well as the lack of spatial information relating to site boundaries. As such, Lantern is taking a conservative approach to considering the sites that may be impacted by the proposed works and including sites within 100m of proposed tree removal and road improvements.

While direct impacts may be anticipated to the 35 sites located within 100 m of the Olympic Highway proposed works, in most cases the degree of harm would be partial and would result in a partial loss of value only.

Table 10 Summary of anticipated impacts

AHIMS #	Site name	Feature/s	Proximity to proposed impacts	Potential impacts
Section 1: Table Top to Wagga Wagga				
55-6-0070	ARTC 2	Artefact : 1	<100m	Tree removal
55-6-0071	ARTC 3	Artefact : 1	<100m	Tree removal
55-6-0072	ARTC 13	Artefact: 1	>100m	none
56-4-0347	Henty Pipeline IF1	Artefact	<100m	Road improvement
56-4-0208	ARTC 8	Artefact : 1	<100m	Road improvement
56-4-0206	ARTC 6	Artefact : 1	<100m	Road improvement
56-4-0204	ARTC 4	Artefact : 2	<100m	Tree removal
56-4-0207	ARTC 7	Artefact : 4	<100m	Road improvement
56-4-0205	ARTC 5	Artefact : 1	<100m	Tree removal
56-4-0210	ARTC 10	Artefact : 1	<100m	Road improvement
56-4-0011	Burkes Creek	Artefact	>100m	none
56-1-0654	Sandy Creek SF AFT 10	Artefact	>100m	none
56-1-0653	Sandy Creek SF AFT 9	Artefact	<100m	Tree removal
56-1-0655	Sandy Creek SF AFT 11	Artefact	>100m	none
56-1-0096	L-IF-1	Artefact: 1	>100m	none
56-1-0123	OLYMPIC HIGHWAY THE ROCK SCARRED TREE 1	Modified Tree (Carved or Scarred) : 1	<100m	Road improvement
56-1-0490	The Rock Rd Side Scar Tree 1	Modified Tree (Carved or Scarred) : 1	>100m	none
56-1-0378	Gabuga Tank 2	Modified Tree (Carved or Scarred) : -	<100m	Tree removal
56-1-0391	Gabuga Tank 17	Modified Tree (Carved or Scarred) : -	>100m	none

AHIMS #	Site name	Feature/s	Proximity to proposed impacts	Potential impacts
56-1-0392	Gabuga Tank 18	Modified Tree (Carved or Scarred) : -	<100m	Tree removal
56-1-0374	Gabuga Water Tank 3	Modified Tree (Carved or Scarred) : -	>100m	none
56-1-0376	Gabuga Water Tank 5	Modified Tree (Carved or Scarred) : -	<100m	Tree removal
56-1-0386	Mark Saddler Gabuga 1	Modified Tree (Carved or Scarred) : -	>100m	none
56-1-0129	Kapooka Pump Station ST 1	Modified Tree (Carved or Scarred) : 1	<100m	Tree removal
56-1-0387	Gabuga Tank 13	Modified Tree (Carved or Scarred) : -	<100m	Tree removal
56-1-0383	Gabuga Tank 9	Modified Tree (Carved or Scarred) : -	>100m	Tree removal
56-1-0381	Gabuga Tank 10	Modified Tree (Carved or Scarred) : -	<100m	Tree removal
56-1-0127	Kapooka Water Tank ST 1	Modified Tree (Carved or Scarred) : 1	>100m	none
56-1-0373	Gabuga Water Tank 1	Modified Tree (Carved or Scarred) : -	<100m	Tree removal
56-1-0382	Gabuga Tank 11	Modified Tree (Carved or Scarred) : -	< 100m	Tree removal
56-1-0375	Gabuga Water Tank 4	Modified Tree (Carved or Scarred) : -	<100m	Tree removal
56-1-0377	Gabuga Water Tank 6	Modified Tree (Carved or Scarred) : -	<100m	Road improvement
56-1-0379	Gabuga Tank 7	Modified Tree (Carved or Scarred) : -	<100m	Road improvement
56-1-0389	Gabuga Tank 15	Modified Tree (Carved or Scarred) : -	>100m	none
56-1-0390	Gabuga Tank 16	Modified Tree (Carved or Scarred) : -	>100m	none
56-1-0388	Gabuga Tank 14	Modified Tree (Carved or Scarred) : -	>100m	none
56-1-0496	Gabuga Overpass Scar 1	Modified Tree (Carved or Scarred) : -	>100m	none
56-1-0352	Wagga Wagga Pounds Flat TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	>100m	none
56-1-0098	L-ST-1	Modified Tree (Carved or Scarred) : 1	>100m	none
		Section 2: Wagga Wagga to Cootamundra		
50-5-0274	Olympic Highway Illabo Artefacts 3	Artefact	>100m	none
50-5-0115	Olympic Hwy - Bethungra 1	Artefact : 5	>100m	none

AHIMS #	Site name	Feature/s	Proximity to proposed impacts	Potential impacts
50-5-0275	Olympic Highway Illabo Artefacts 5	Artefact	>100m	none
50-5-0276	Olympic Highway Illabo Artefacts 4	Artefact	>100m	none
50-5-0207	Cungegong TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	<100m	Road improvement
50-5-0204	Cungegong TSR Scar Tree 1	Modified Tree (Carved or Scarred) : -	<100m	Road improvement
50-5-0208	Cungegong TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	<100m	Road improvement
50-5-0205	Cungegong TSR Scar Tree 2	Modified Tree (Carved or Scarred) : -	>100m	none
50-5-0187	Bethungra Rail Tunnel 1	Modified Tree (Carved or Scarred) : -	>100m	none
56-1-0352	Wagga Wagga Pounds Flat TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	>100m	none
56-1-0354	Wagga Wagga Pound Flat Scar Tree 1	Modified Tree (Carved or Scarred) : -	>100m	none
56-1-0345	Wagga Wagga Pounds Flat TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	>100m	none
50-4-0069	Harts TSR Olympic Highway, Wallacetown via Wagga Wagga	Modified Tree (Carved or Scarred) : -	<100m	Tree removal
50-5-0280	Olympic Highway Illabo PAD	Potential Archaeological Deposit (PAD) : -	>100m	none
Section 3: Cootamundra to Cowra				
50-3-0038	APA-ST4-11	Modified Tree (Carved or Scarred) : -	<100m	Road improvement
50-3-0054	Flixton TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	<100m	Road improvement
50-3-0041	Karyrie Park Scar Tree 1	Modified Tree (Carved or Scarred) : -	>100m	none
50-3-0052	Flixton TSR Scar Tree 1	Modified Tree (Carved or Scarred) : -	<100m	Road improvement
50-3-0053	Flixton TSR Scar Tree 2	Modified Tree (Carved or Scarred) : -	>100m	none
50-3-0040	Wombat Tree	Modified Tree (Carved or Scarred) : 1	Within impact zone	Road improvement and tree removal
50-6-0148	Wallendoon Lane	Modified Tree (Carved or Scarred) : -	Within impact zone	Tree removal
44-4-0381	Wattamondara 960	Modified Tree (Carved or Scarred) : -	Within impact zone	Road improvement
44-4-0338	N-ST-2, Cowra	Modified Tree (Carved or Scarred) : 1	<100m	Road improvement

AHIMS #	Site name	Feature/s	Proximity to proposed impacts	Potential impacts
44-4-0339	N-ST-3, Cowra	Modified Tree (Carved or Scarred) : 1	<100m	Road improvement
44-4-0337	N-ST-1, Cowra	Modified Tree (Carved or Scarred) : 1	<100m	Road improvement
44-4-0209	Noonbinna S/T1;	Modified Tree (Carved or Scarred) : -	<100m	Road improvement

9.7.1 Direct harm

Direct harm may occur from the following activities associated with the Olympic Highway road safety project: vegetation clearance, site compound construction, temporary stockpiles, topsoil stripping for road expansion, and installation of posts to support signage.

9.7.2 Indirect harm

Indirect harm may occur from increased public visitation or use of the sites due to improved communication.

9.7.3 Impacts on cultural heritage values

Impacts to the social and cultural values from works will have a range of impacts. Aboriginal people retain strong cultural links to country and further consultation is required to ensure that the proposed development will not result in any net increase to loss of cultural heritage significance.

This evaluation of the different levels of impact has direct relevance to the rationales supporting the management and mitigation measures proposed in Section 11 which aim to provide guidance on how to minimise potential impacts, and how to mitigate those impacts where possible.

10 THE PROPOSED ACTIVITY

Following completion of a Route Safety Review of the Olympic Highway, Transport identified a number of potential safety infrastructure improvements. The proposed improvements will be constructed along the Olympic Highway within three sections between Table Top and Cowra, excluding the towns of Wagga Wagga, Young, Junee and Cootamundra. The proposed activities will take place within the Olympic Highway road corridor up to 10m from each side of the existing carriageway edge line.

11 ABORIGINAL CULTURAL HERITAGE CONSTRAINTS

In Australia, the principal document that provides guidance for the conservation and management of places of cultural significance is the Burra Charter (Australia ICOMOS 2013). The Burra Charter is based on the knowledge and experience of Australia ICOMOS members; it "advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained" (Australia ICOMOS 2013: 1).

Obviously, it isn't necessarily practicable to conserve all places of cultural heritage significance. This means that decisions need to be taken with regard to the heritage values of a given place, or item, the impacts that are proposed and the overall effects from such

impacts on the cultural heritage within the study area, across the local region, as well as at state and national levels.

In the context of this desktop analysis of Aboriginal cultural heritage constraints, the approach has been to identify zones of predicted risk or sensitivity. These zones have been developed on the basis of a combination of quantitative and qualitative approaches to the data and mapping reviewed in this report.

The first step in this process was to map zones based on set buffers around known site locations and major water courses. Figure 19 to Figure 22 illustrate four categories that predict broad areas of very high, high, moderate-high and low-moderate archaeological and cultural sensitivity produced through the abovementioned buffers. The buffers were set with a 200m radius around known site locations as an area of very high sensitivity and a 500m radius as an area of high sensitivity. These buffers have been set to account for factors such as inaccuracies in mapping of older site recordings, potential for sites to be more extensive than currently mapped, and potential for broader zones of intangible cultural significance associated with sites (e.g. the landscape setting of a site).

In addition to the buffers around known sites, buffers were set along major water courses. These buffers were set with 200m defining areas of predicted very high sensitivity, 500m defining areas of predicted high sensitivity, 1km defining areas of predicted moderate-high sensitivity, and 5km defining areas of predicted low-moderate sensitivity. These zones aim to account for the predicted likelihood of sites occurring in these sorts of landscape contexts (tangible cultural heritage), as well as the broader intangible social and cultural significance that is likely to be associated with water courses through this landscape.

Additional areas of very high, high, moderate-high and low-moderate sensitivity along the Olympic Highway corridor were identified through a more qualitative interpretation of the geology and ASDST mapping together with the predictive modelling outlined in Section 6. In particular, the ASDST modelling for rock art was used to identify areas of high to very high sensitivity around Table Top and the Rock, as this is a high risk site type. In this case these sites occur in important areas identified during community consultation, which may also be associated with other site types, and there is increased potential for intangible cultural heritage values to be associated with such locations. Similarly, the ASDST modelling for other site types, together with geoarchaeological predictive modelling from the geology mapping was used to review and classify all areas along the Olympic Highway corridor beyond the 200m and 500m buffers around known sites and rivers.

The resultant mapping of cultural heritage constraints is presented below in Figure 23 to Figure 26.

The implication of the mapping of cultural heritage constraints is that further investigation in the form of comprehensive field survey and review of Aboriginal cultural heritage values is required across all areas of high and very high sensitivity. This is necessary to confirm the status, nature, extent and significance of known sites and areas of predicted high to very high potential for Aboriginal cultural heritage constraints. Additionally, further investigations in the form of a sampling approach to landforms within areas of moderate-high sensitivity would be necessary to ground truth and further refine the modelling along the study area. Areas of low-moderate sensitivity should be subject to a due diligence assessment and visual inspection, prior to any impact from the proposed works.

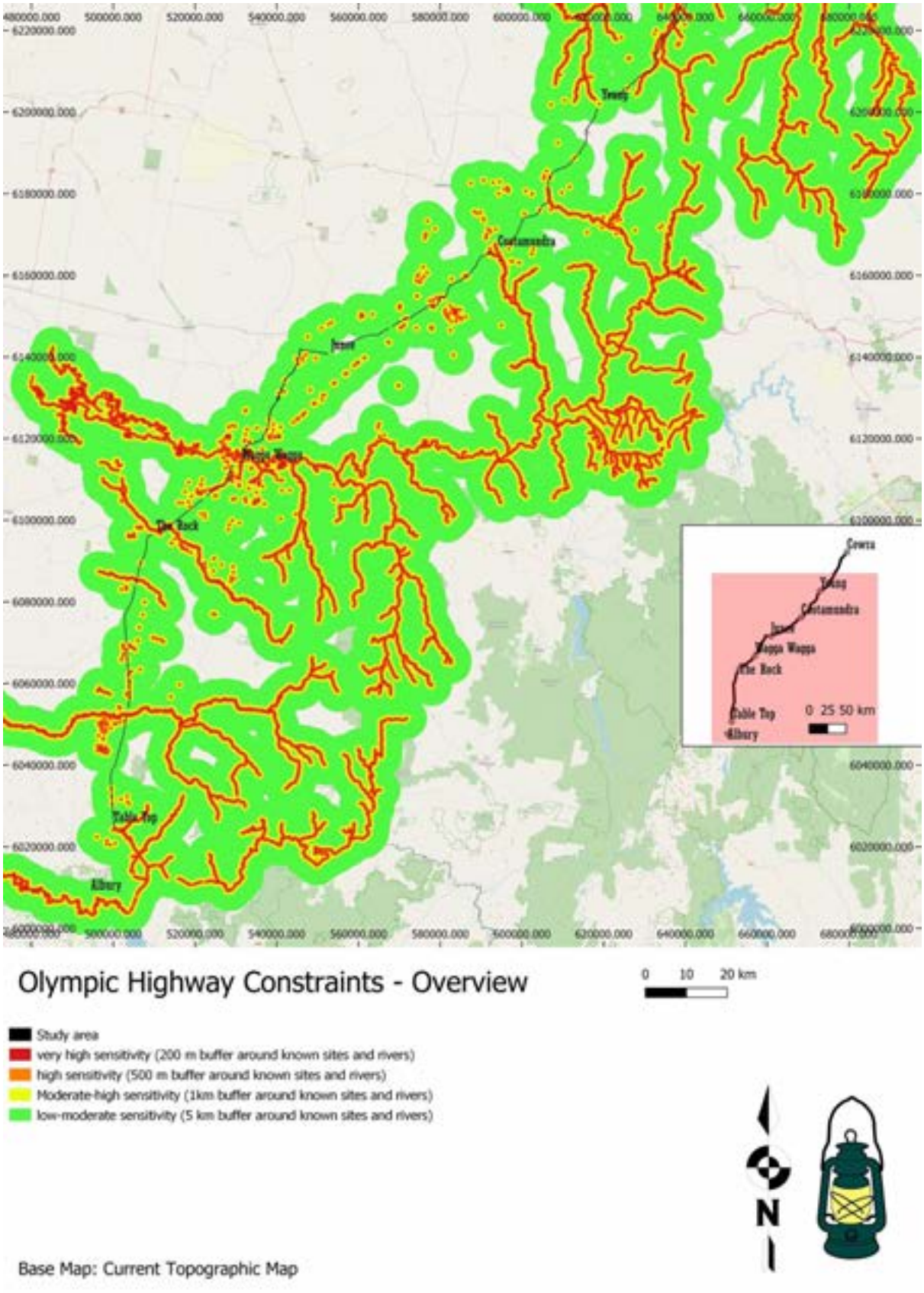

Figure 19 Aboriginal heritage constraints overview of the study area

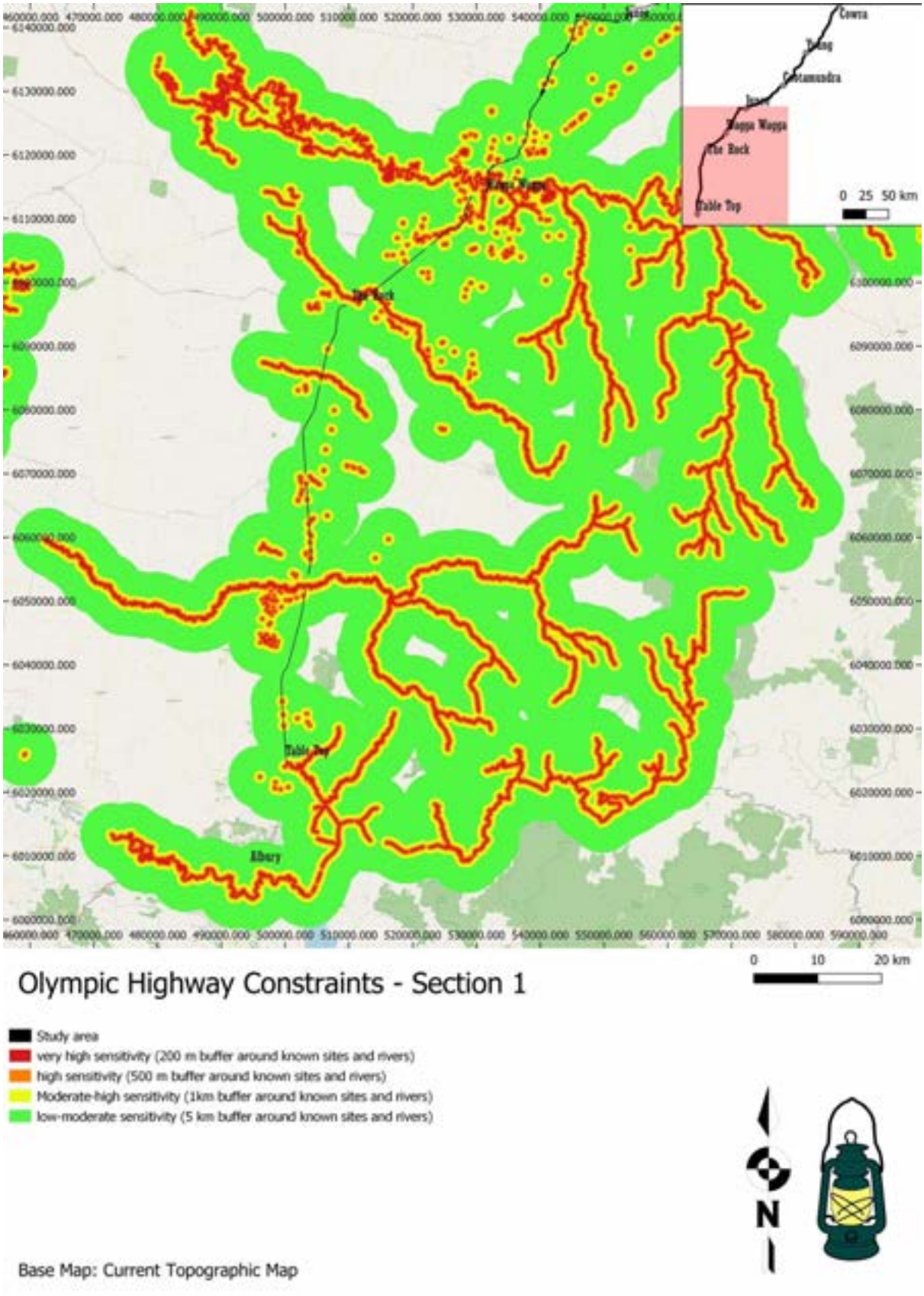

Figure 20 Aboriginal heritage constraints for section 1 of the study area

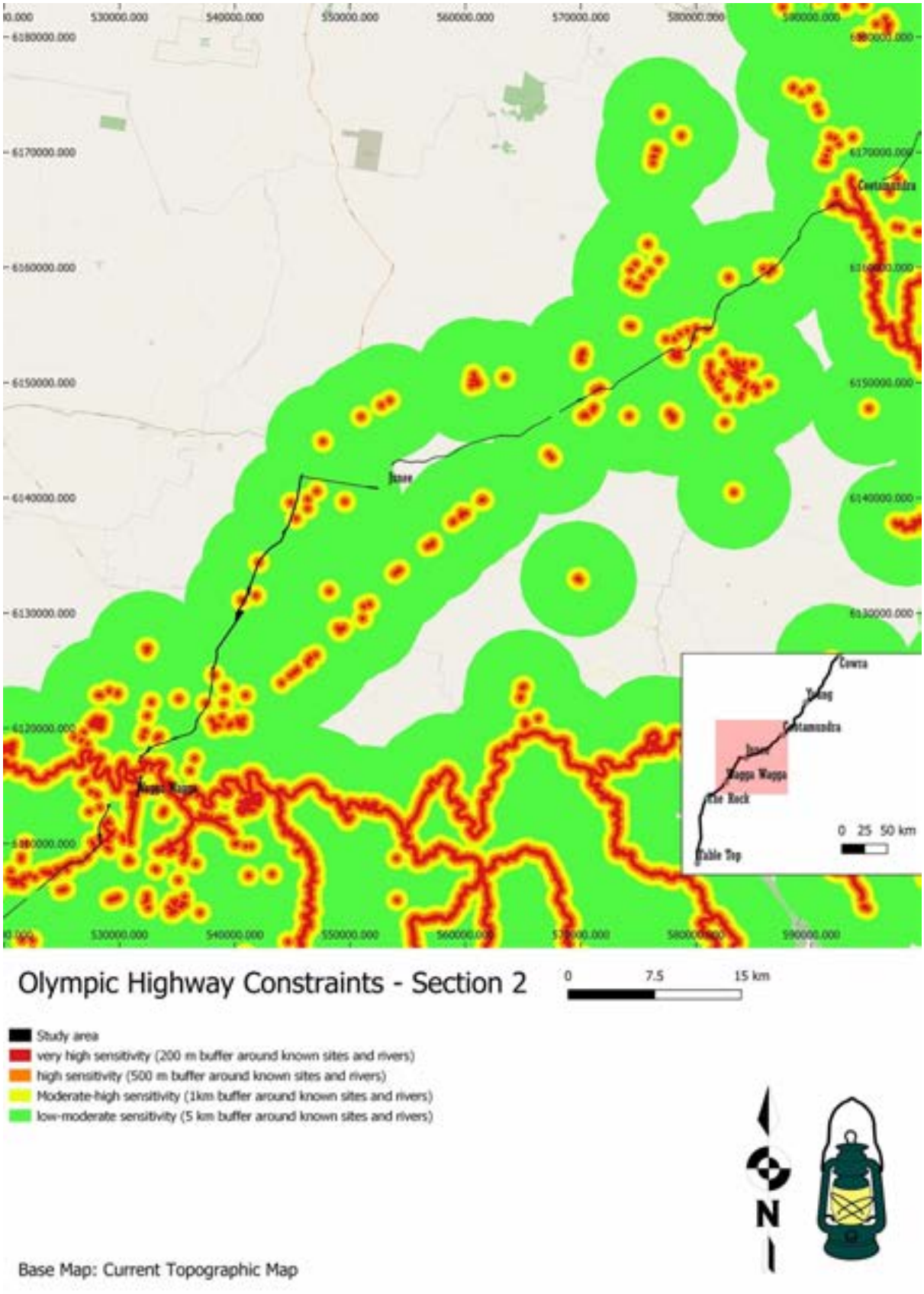

Figure 21 Aboriginal Heritage constraints for section 2 of the study area

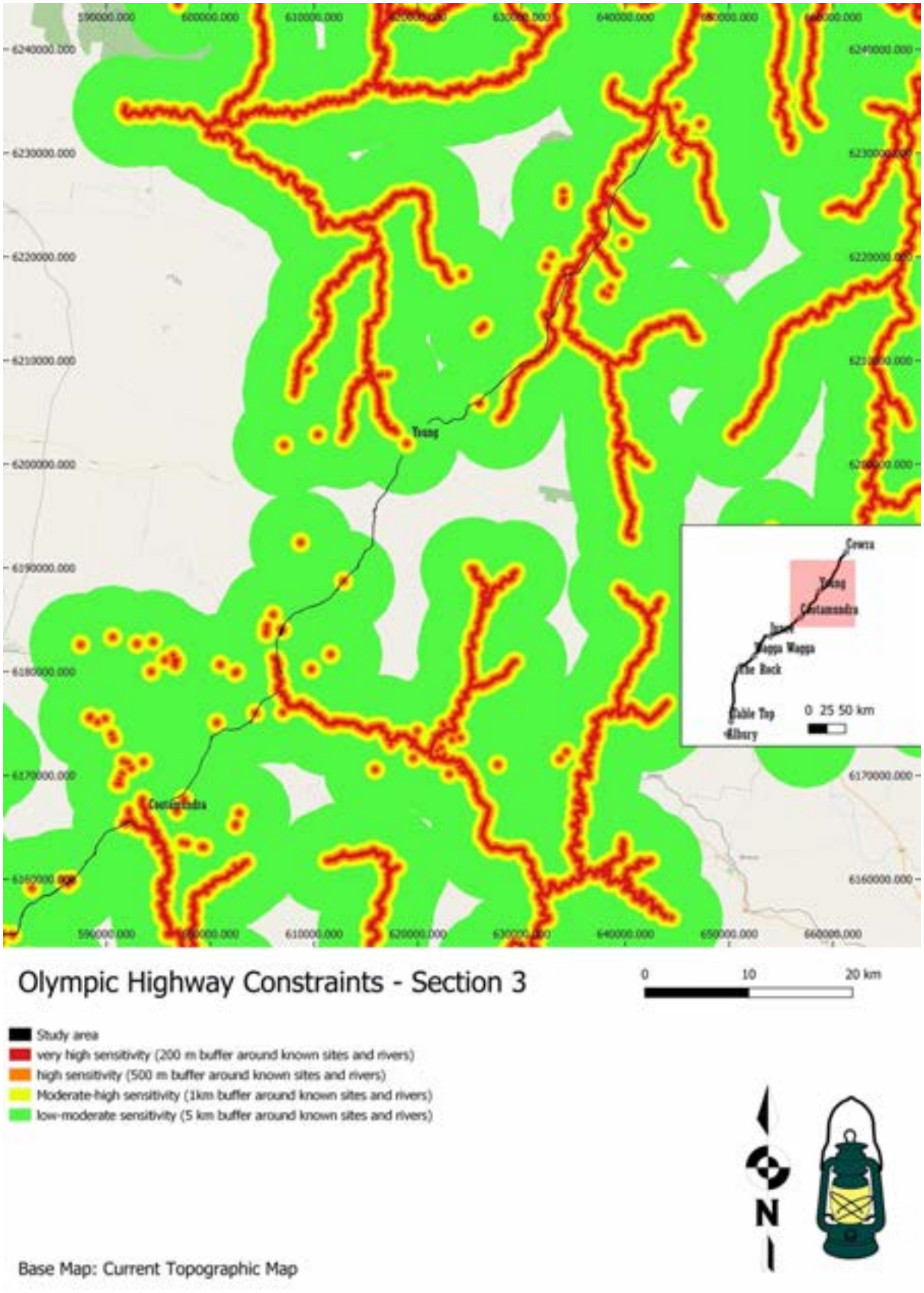

Figure 22 Aboriginal heritage constraints for section 3 of the study area

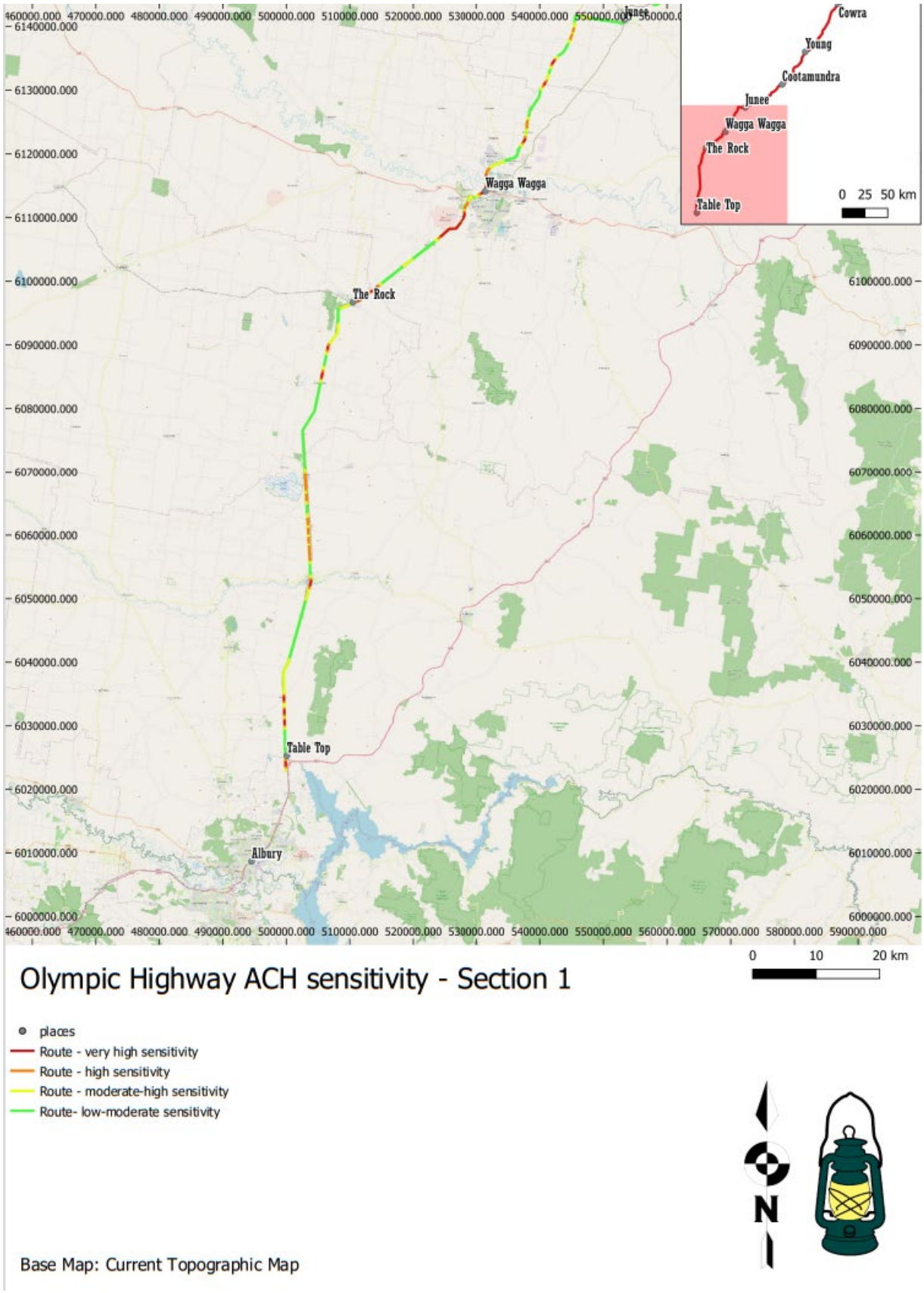

Figure 23 Illustration of levels of archaeological and cultural sensitivities Section 1 of the Olympic Highway study area

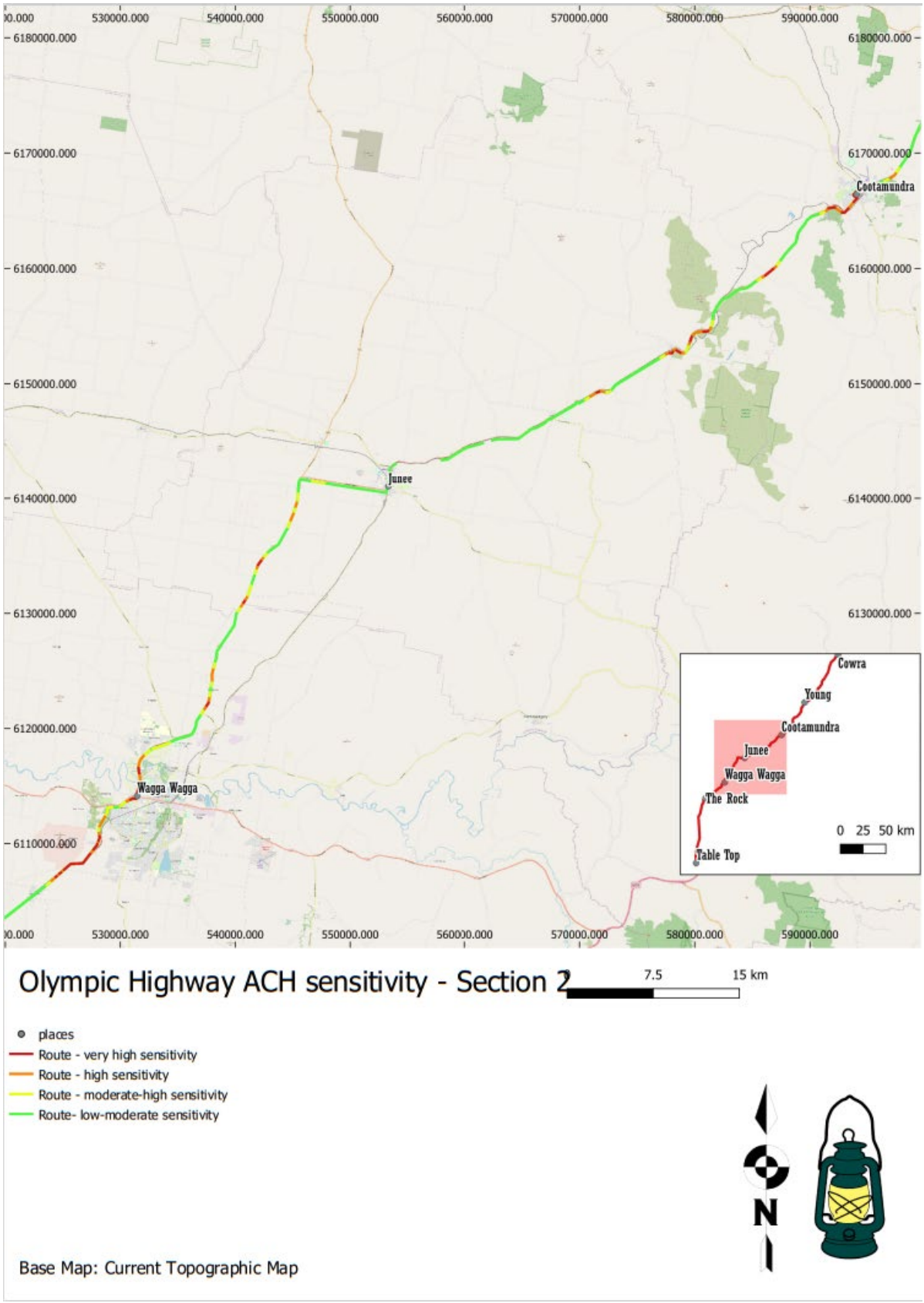

Figure 24 Illustration of levels of archaeological and cultural sensitivities Section 2 of the Olympic Highway study area

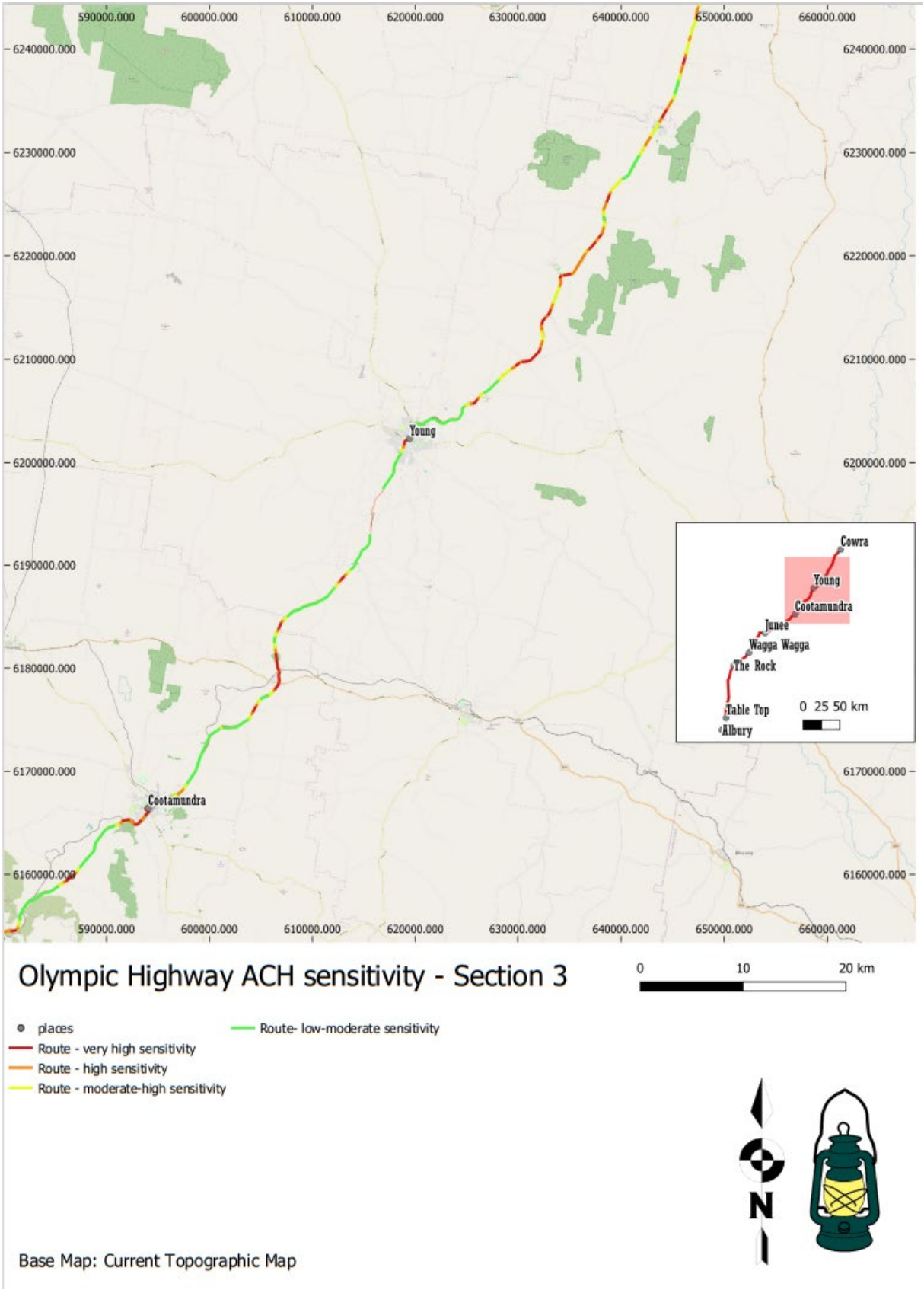

Figure 25 Illustration of levels of archaeological and cultural sensitivities Section 3 of the Olympic Highway study area

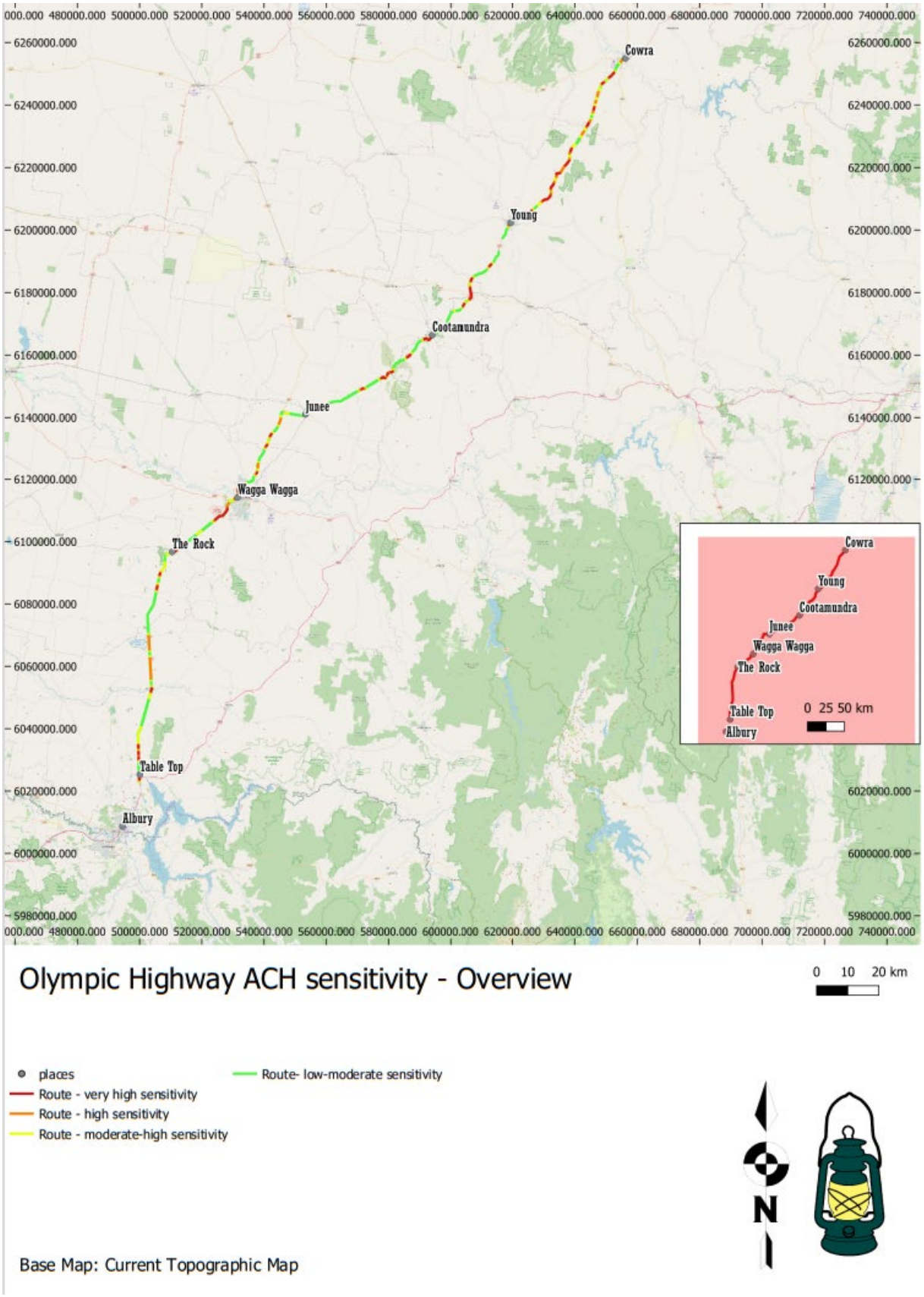

Figure 26 Illustration of levels of archaeological and cultural sensitivities along the entire Olympic Highway study area

12 SUMMARY AND RECOMMENDATIONS

The Olympic Highway project traverses 318 km of the South Western Slopes bioregion, skirting the western fall of the Great Dividing Range. Aboriginal communities with connections to the study area have strong, ongoing relationships to the diverse landscapes of this country. This project is in the preliminary stages of investigation and further archaeological investigation and community consultation is required. A level of goodwill and willingness to engage with Transport and Lantern Heritage has been expressed by the majority of Aboriginal communities within the study area, who have indicated that the study area passes through important cultural landscapes and may impact a range of site-types, including culturally modified trees and ceremonial places. There is an opportunity to further this rapport through consistent and honest engagement with the community.

Desktop analysis has shown that a field assessment for the Olympic Highway project area is warranted prior to finalising the design of the Olympic Highway Route Safety improvement works. As shown in Table 11 further investigation is recommended for all sites recorded within 100m of proposed works to confirm the status, location, condition, extent and cultural heritage significance of these sites. In addition, further investigation is recommended for all sections of road identified as having high to very high sensitivity in Figure 19 to Figure 26.

Table 11 Recommended actions

AHIMS #	Site name	Feature/s	Proximity to proposed impacts	Potential impacts	Recommended action
Section 1: Table Top to Wagga Wagga					
55-6-0070	ARTC 2	Artefact : 1	<100m	Tree removal	Ground truth prior to impacts
55-6-0071	ARTC 3	Artefact : 1	<100m	Tree removal	Ground truth prior to impacts
55-6-0072	ARTC 13	Artefact: 1	>100m	none	None required
56-4-0347	Henty Pipeline IF1	Artefact	<100m	Road improvement	Ground truth prior to impacts
56-4-0208	ARTC 8	Artefact : 1	<100m	Road improvement	Ground truth prior to impacts
56-4-0206	ARTC 6	Artefact : 1	<100m	Road improvement	Ground truth prior to impacts
56-4-0204	ARTC 4	Artefact : 2	<100m	Tree removal	Ground truth prior to impacts

AHIMS #	Site name	Feature/s	Proximity to proposed impacts	Potential impacts	Recommended action
56-4-0207	ARTC 7	Artefact : 4	<100m	Road improvement	Ground truth prior to impacts
56-4-0205	ARTC 5	Artefact : 1	<100m	Tree removal	Ground truth prior to impacts
56-4-0210	ARTC 10	Artefact : 1	<100m	Road improvement	Ground truth prior to impacts
56-4-0011	Burkes Creek	Artefact	>100m	none	None required
56-1-0654	Sandy Creek SF AFT 10	Artefact	>100m	none	None required
56-1-0653	Sandy Creek SF AFT 9	Artefact	<100m	Tree removal	Ground truth prior to impacts
56-1-0655	Sandy Creek SF AFT 11	Artefact	>100m	none	None required
56-1-0096	L-IF-1	Artefact: 1	>100m	none	None required
56-1-0123	OLYMPIC HIGHWAY THE ROCK SCARRED TREE 1	Modified Tree (Carved or Scarred) : 1	<100m	Road improvement	Ground truth prior to impacts
56-1-0490	The Rock Rd Side Scar Tree 1	Modified Tree (Carved or Scarred) : 1	>100m	none	None required
56-1-0378	Gabuga Tank 2	Modified Tree (Carved or Scarred) : -	<100m	Tree removal	Ground truth prior to impacts
56-1-0391	Gabuga Tank 17	Modified Tree (Carved or Scarred) : -	>100m	none	None required
56-1-0392	Gabuga Tank 18	Modified Tree (Carved or Scarred) : -	<100m	Tree removal	Ground truth prior to impacts
56-1-0374	Gabuga Water Tank 3	Modified Tree (Carved or Scarred) : -	>100m	none	None required
56-1-0376	Gabuga Water Tank 5	Modified Tree (Carved or Scarred) : -	<100m	Tree removal	Ground truth prior to impacts
56-1-0386	Mark Saddler Gabuga 1	Modified Tree (Carved or Scarred) : -	>100m	none	None required

AHIMS #	Site name	Feature/s	Proximity to proposed impacts	Potential impacts	Recommended action
56-1-0129	Kapooka Pump Station ST 1	Modified Tree (Carved or Scarred) : 1	<100m	Tree removal	Ground truth prior to impacts
56-1-0387	Gabuga Tank 13	Modified Tree (Carved or Scarred) : -	<100m	Tree removal	Ground truth prior to impacts
56-1-0383	Gabuga Tank 9	Modified Tree (Carved or Scarred) : -	>100m	Tree removal	Ground truth prior to impacts
56-1-0381	Gabuga Tank 10	Modified Tree (Carved or Scarred) : -	<100m	Tree removal	Ground truth prior to impacts
56-1-0127	Kapooka Water Tank ST 1	Modified Tree (Carved or Scarred) : 1	>100m	none	None required
56-1-0373	Gabuga Water Tank 1	Modified Tree (Carved or Scarred) : -	<100m	Tree removal	Ground truth prior to impacts
56-1-0382	Gabuga Tank 11	Modified Tree (Carved or Scarred) : -	< 100m	Tree removal	Ground truth prior to impacts
56-1-0375	Gabuga Water Tank 4	Modified Tree (Carved or Scarred) : -	<100m	Tree removal	Ground truth prior to impacts
56-1-0377	Gabuga Water Tank 6	Modified Tree (Carved or Scarred) : -	<100m	Road improvement	Ground truth prior to impacts
56-1-0379	Gabuga Tank 7	Modified Tree (Carved or Scarred) : -	<100m	Road improvement	Ground truth prior to impacts
56-1-0389	Gabuga Tank 15	Modified Tree (Carved or Scarred) : -	>100m	none	None required
56-1-0390	Gabuga Tank 16	Modified Tree (Carved or Scarred) : -	>100m	none	None required
56-1-0388	Gabuga Tank 14	Modified Tree (Carved or Scarred) : -	>100m	none	None required
56-1-0496	Gabuga Overpass Scar 1	Modified Tree (Carved or Scarred) : -	>100m	none	None required
56-1-0352	Wagga Wagga Pounds Flat TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	>100m	none	None required

AHIMS #	Site name	Feature/s	Proximity to proposed impacts	Potential impacts	Recommended action
56-1-0098	L-ST-1	Modified Tree (Carved or Scarred) : 1	>100m	none	None required
Section 2: Wagga Wagga to Cootamundra					
50-5-0274	Olympic Highway Illabo Artefacts 3	Artefact	>100m	none	None required
50-5-0115	Olympic Hwy - Bethungra 1	Artefact : 5	>100m	none	None required
50-5-0275	Olympic Highway Illabo Artefacts 5	Artefact	>100m	none	None required
50-5-0276	Olympic Highway Illabo Artefacts 4	Artefact	>100m	none	None required
50-5-0207	Cungegong TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	<100m	Road improvement	Ground truth prior to impacts
50-5-0204	Cungegong TSR Scar Tree 1	Modified Tree (Carved or Scarred) : -	<100m	Road improvement	Ground truth prior to impacts
50-5-0208	Cungegong TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	<100m	Road improvement	Ground truth prior to impacts
50-5-0205	Cungegong TSR Scar Tree 2	Modified Tree (Carved or Scarred) : -	>100m	none	None required
50-5-0187	Bethungra Rail Tunnel 1	Modified Tree (Carved or Scarred) : -	>100m	none	None required
56-1-0352	Wagga Wagga Pounds Flat TSR Scar Tree 4	Modified Tree (Carved or Scarred) : -	>100m	none	None required
56-1-0354	Wagga Wagga Pound Flat Scar Tree 1	Modified Tree (Carved or Scarred) : -	>100m	none	None required
56-1-0345	Wagga Wagga Pounds Flat TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	>100m	none	None required
50-4-0069	Harts TSR Olympic Highway, Wallacetown via Wagga Wagga	Modified Tree (Carved or Scarred) : -	<100m	Tree removal	Ground truth prior to impacts
50-5-0280	Olympic Highway Illabo PAD	Potential Archaeological Deposit (PAD) : -	>100m	none	None required
Section 3: Cootamundra to Cowra					

AHIMS #	Site name	Feature/s	Proximity to proposed impacts	Potential impacts	Recommended action
50-3-0038	APA-ST4-11	Modified Tree (Carved or Scarred) : -	<100m	Road improvement	Ground truth prior to impacts
50-3-0054	Flixton TSR Scar Tree 3	Modified Tree (Carved or Scarred) : -	<100m	Road improvement	Ground truth prior to impacts
50-3-0041	Karyrie Park Scar Tree 1	Modified Tree (Carved or Scarred) : -	>100m	none	None required
50-3-0052	Flixton TSR Scar Tree 1	Modified Tree (Carved or Scarred) : -	<100m	Road improvement	Ground truth prior to impacts
50-3-0053	Flixton TSR Scar Tree 2	Modified Tree (Carved or Scarred) : -	>100m	none	None required
50-3-0040	Wombat Tree	Modified Tree (Carved or Scarred) : 1	Within impact zone	Road improvement and tree removal	Ground truth prior to impacts
50-6-0148	Wallendoon Lane	Modified Tree (Carved or Scarred) : -	Within impact zone	Tree removal	Ground truth prior to impacts
44-4-0381	Wattamondara 960	Modified Tree (Carved or Scarred) : -	Within impact zone	Road improvement	Ground truth prior to impacts
44-4-0338	N-ST-2, Cowra	Modified Tree (Carved or Scarred) : 1	<100m	Road improvement	Ground truth prior to impacts
44-4-0339	N-ST-3, Cowra	Modified Tree (Carved or Scarred) : 1	<100m	Road improvement	Ground truth prior to impacts
44-4-0337	N-ST-1, Cowra	Modified Tree (Carved or Scarred) : 1	<100m	Road improvement	None required
44-4-0209	Noonbinna S/T1;	Modified Tree (Carved or Scarred) : -	<100m	Road improvement	None required

12.1 Recommendations

On the basis of the desktop analysis and preliminary community consultation documented in this report, it is recommended that:

1. Further investigation in the form of field survey is required to ground truth the sites listed in Table 12. These sites are recorded within 100m of proposed impacts from

the Olympic Highway route safety review project and the location, extent and condition of these sites should be investigated area prior to impacts.

2. If sites listed in Table 12 cannot be avoided, apply for an Aboriginal Heritage Impact Permit (AHIP) from Heritage NSW to impact these sites.

Section 1	Section 2	Section 3
55-6-0070	50-5-0208	50-3-0038
55-6-0071	50-4-0069	50-3-0052
56-4-0347	50-5-0207	50-3-0054
56-4-0208	50-05-0204	44-4-0337
56-4-0206		44-4-0338
56-4-0204		44-4-0339
56-4-0207		44-4-0209
56-4-0205		50-6-0148
56-4-0210		44-4-0381
56-1-0653		50-3-0040
56-1-0123		
56-1-0378		
56-1-0392		
56-1-0376		
56-1-0129		
56-1-0381		
56-1-0373		
56-1-0382		
56-1-0375		
56-1-0377		
56-1-0379		

Table 12 Sites within 100 m of proposed works

3. Further investigation in the form of field survey is required for all sections of the Olympic Highway assessed to have very high to high sensitivity prior to any future impacts.
4. Further investigation in the form of targeted sample survey is required across the sections of the Olympic Highway assessed to have moderate-high sensitivity, prior to any future impacts.
5. Areas of low-moderate significance should be subject to due diligence assessment and visual inspection, prior to impacts from any proposed works.
6. Field survey should be conducted in partnership with the local Aboriginal community to determine the cultural significance of the study area.

7. Training in Aboriginal cultural heritage awareness be provided to employees and contractors of Transport for NSW.
8. Long term management plans be developed for future works and activities that may occur beyond current study corridor.

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APPENDIX 1 – ABORIGINAL CONSULTATION

Sample letter sent to the main Agencies and Local Councils to nominate knowledge holders for Olympic Hwy

Lantern Heritage Pty Ltd

PO Box 7039
Tathra
NSW 2550

ACN: 620 582 658
ABN: 30 620 582 658

Phone: (02) 6494 5759
Mobile: 0402831291

Email: info@lanternheritage.com.au
Web: www.lanternheritage.com.au

12 July 2021

Local Land Services
PO Box 118
Bega, NSW 2550

E: enquiry.southeast@lls.nsw.gov.au

To Whom It May Concern:

To seek Aboriginal knowledge holders to assist Transport for New South Wales (TfNSW) to prepare a cultural heritage assessment report for the Olympic Highway (MR 78) safety review

Transport for NSW (TfNSW) is seeking the names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the project area for Olympic Highway (MR 78) between Albury and Cowra.

Aboriginal people identified by your agency will be notified of the project and invited to participate in the assessment process as described in OEH's requirements. Please forward the details of relevant Aboriginal people to TfNSW before 27 July 2021.

The contact details for this project are:

Anna Raudino
Business Manager/Senior Archaeologist, Lantern Heritage
E: info@lanternheritage.com.au

Lantern Heritage
shining a light on people and place

1

TfNSW is undertaking a preliminary study to inform a range of key roadside infrastructure and line marking safety improvements along the Olympic Highway (MR 78) between Albury and Cowra (Figure 1). Part of this proposal is a review of Aboriginal cultural heritage constraints.

The proposal may result in TfNSW:

- Applying for an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974*, and/or
- Undertaking investigations in accordance with the *Code of practice for archaeological investigations in NSW 2010*, and/or
- Undertaking and environmental impact assessment under the *Environmental Planning & Assessment ACT 1979*.

Yours Sincerely,

Anna Raudino

Anna Raudino

Business Manager/Senior Archaeologist
Lantern Heritage Pty Ltd

Lantern Heritage
shining a light on people and place

2

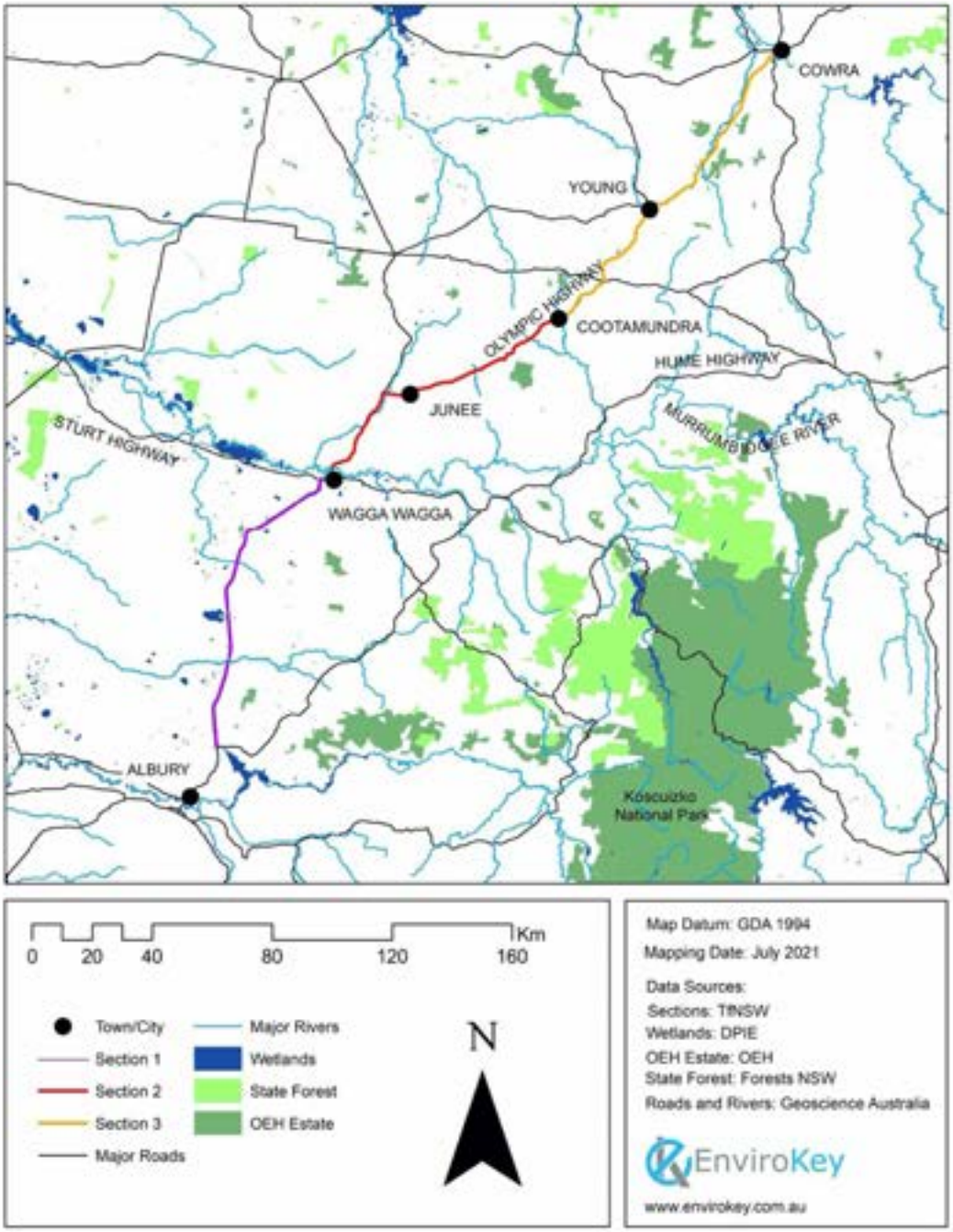


Figure 1: Olympic Highway Aboriginal cultural heritage constraints mapping study area.

Sample letter sent to RAPs to register their interest in participating in the Aboriginal Consultation.

Lantern Heritage Pty Ltd

PO Box 7039
Tathra
NSW 2550

ACN: 620 582 658
ABN: 30 620 582 658

Phone: (02) 6494 5759
Mobile: 0402831291

Email: info@lanternheritage.com.au
Web: www.lanternheritage.com.au

2 August 2021

Koomurri Ngunawal Aboriginal Corporation (KNAC)

16A Progress Street
Goulburn, NSW 2580

Email: KoomurriNAC@hotmail.com
Dear Glen:

Aboriginal community consultation notification for safety improvements along the Olympic Highway (MR 78)

Transport for NSW (TfNSW) invites you to participate in community consultation for this project.

To register your interest to be consulted about this project, please contact:

Lantern Heritage Pty Ltd
E: info@lanternheritage.com.au

To be involved in the consultation process, responses must be received by 16th of August 2021.

TfNSW is undertaking a preliminary study to inform a range of key roadside infrastructure and line marking safety improvements along the Olympic Highway (MR 78) between Albury and Cowra. Part of this proposal is a review of Aboriginal cultural heritage constraints (see Figure 1).

This notification is being undertaken in accordance with section 4.1.1 of the Office of Environment and Heritage (OEH) *Aboriginal cultural heritage consultation requirements from proponents* (2010).

Community consultation may assist TfNSW to (a) prepare an Aboriginal Heritage Impact Permit (AHIP) application for the project, or (b) undertake archaeological testing in accordance with OEH's *Code of practice for archaeological testing in NSW*, or (c) prepare an environmental impact assessment.

Yours Sincerely,

Anna Raudino

Anna Raudino
Business Manager/Senior Archaeologist
Lantern Heritage Pty Ltd

Lantern Heritage
shining a light on people and place

1

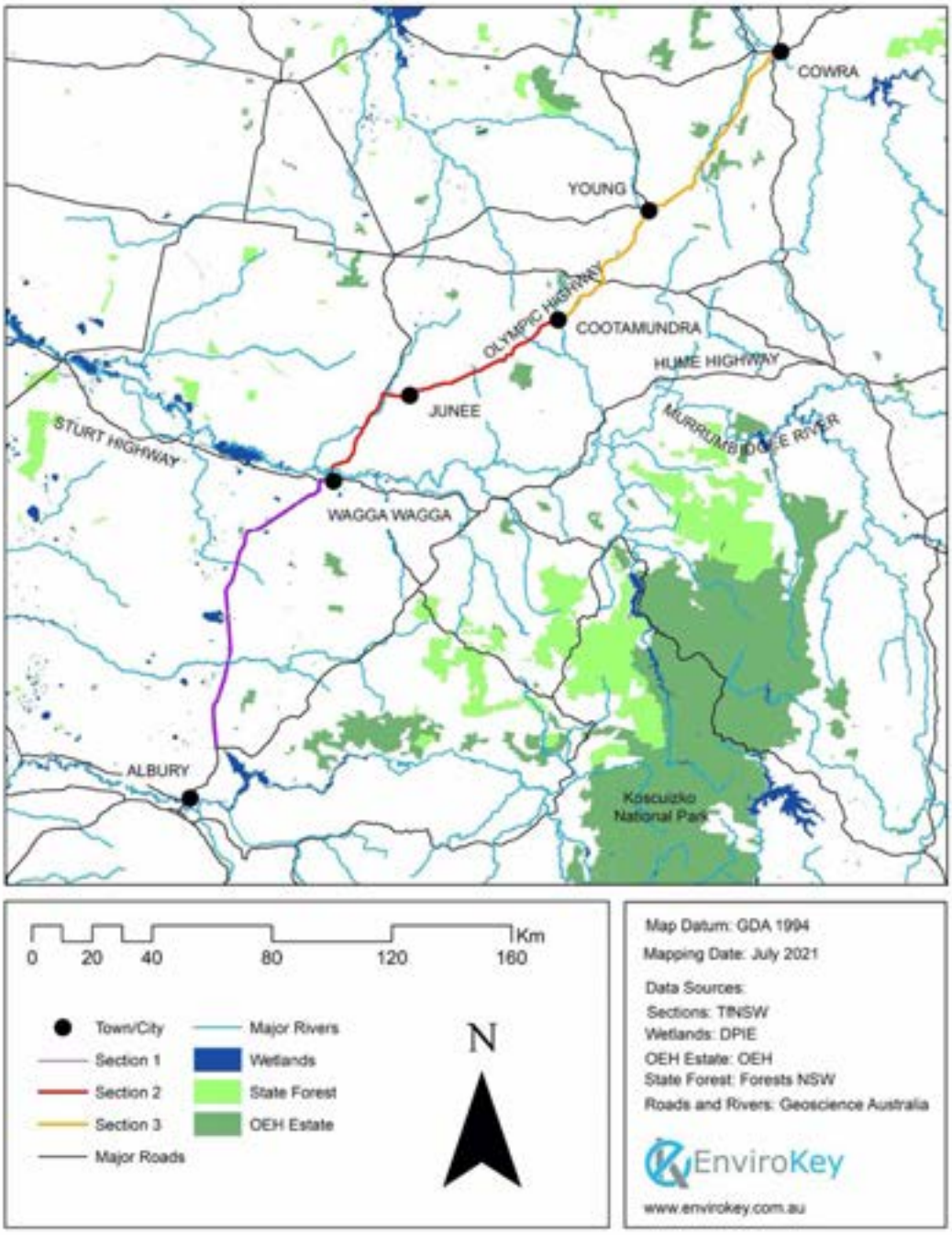


Figure 1: Olympic Highway Aboriginal cultural heritage constraints mapping study area.

Lantern Heritage
shining a light on people and place

2

Copy of the advertisement placed in the Wagga Wagga Daily Advertiser, Cootamundra Herald and Cowra Guardian

Transport for New South Wales
Aboriginal Heritage
Olympic Highway road safety review

Transport for New South Wales invites Aboriginal people and Aboriginal groups who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places for the Olympic Highway (MR 78) to register to be consulted.

To register your interest, please contact:
Email: info@lanternheritage.com.au
Phone: 0437 23 11 67

Registrations must be received by phone or in writing by **30 July 2021.**

TfNSW is undertaking a preliminary study to inform a range of key roadside infrastructure and line marking safety improvements along the Olympic Highway (MR 78) between Albury and Cowra. Part of this proposal is a review of Aboriginal cultural heritage constraints.

The proposal may result in TfNSW:

- Applying for an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974*, and/or
- Undertaking investigations in accordance with the *Code of practice for archaeological investigations in NSW 2010*, and/or
- Undertaking and environmental impact assessment under the *Environmental* Planning & Assessment ACT 1979.

Consultation Log - Olympic Highway road safety review project

Date	Organisation	Contact Name/s	Consultation type / Comment	Method
12.07.2021	Lantern Heritage Pty Ltd	Anna Raudino (Business Manager/Senior Archaeologist),National Native Title Services New South Wales - Sydney Office, NTSCorp, Heritage Branch OEH Queanbeyan, Office of the Registrar Aboriginal Land Rights Act 1983 (NSW), and Local Land Services	A letter was sent to the main Agencies to nominate knowledge holders for Olympic Hwy (MR 78).	Email sent
13.07.2021	Heritage Branch OEH Queanbeyan	Dan Clegg (Aboriginal Heritage Planning Support Officer)	Dan Clegg provided DPC Heritage NSW RAP lists for the Transport Olympic Highway (MR 78) Safety Review - Albury to Cowra (Multiple LGA's).	Email received
13.07.2021	Wagga Daily Advertiser	Anna Raudino (Business Manager/Senior Archaeologist, Lantern Heritage Pty Ltd).	Lantern Heritage sent a request to published the Public Notice on the Wagga Daily Advertiser.	Email sent

14.07.2021	Cootamundra Herald	Anna Raudino (Business Manager/Senior Archaeologist, Lantern Heritage Pty Ltd).	Lantern Heritagesent a request to published the Public Notice on the Cootamundra Herald.	Email sent
16.07.2021	Cowra Guardian	Anna Raudino (Business Manager/Senior Archaeologist, Lantern Heritage Pty Ltd).	Lantern Heritagesent a request to published the Public Notice on the Cowra Guardian.	Email sent
17.07.2021	Lantern Heritage Pty Ltd	Anna Raudino (Business Manager/Senior Archaeologist, Lantern Heritage Pty Ltd).	A letter was sent to the main City Council and LALCs to nominate knowledge holders for Olympic Hwy (MR 78) and register their interest.	Email sent
19.07.2021	Lockhard City Council	Johan Louw (Director of Engineering & Environmental Services) Lockhard City Council	Lantern was informend that Lockhard City Council has not contacts of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the project area for Olympic Highway (MR 78).	Email received.

20.07.2021	Wagga Wagga LALC	Norma Freeman	Wagga Wagga LALC registered its interest in taking part of the Aobiriginal Consultation for Olympic Hwy (MR 78). Furthermore, Wagga Wagga LALC provided further names of RAPS having cultural knowledge who have cultural knowledge for the Olympic Highway (MR 78) between Albury and Cowra.	Email received
23.08.2021	Lantern Heritage Pty Ltd	Anna Raudino	An Invitation to the meetings were sent to the registered RAPs	Emails sent
31.8.2021	TNSW, Lantern Heritage and RAPs	Zac Shaw; Tom Knight; Conor McAdams; Anna Raudino; Lilly Carroll-Didge Ngunawal clan; Corroboree Aboriginal Corporation (Marilyn Carroll- Johnson, Director); Rebecca Ingram; Lavinus Ingram; Francies Coe; Eva Coe.	Cowra Meeting	Via Teams and Phone
31.8.2021	TNSW, Lantern Heritage and RAPs	Zac Shaw; Tom Knight; Anna Raudino; Mark Saddler; Young LALC ;Murri Bidgee Mullangari Aboriginal Corporation; Cootamundra-Gundagai Regional Local Government.	Young Meeting	Via Teams and Phone

1.09.2021	TNSW, Lantern Heritage and RAPs	Zac Shaw; Tom Knight; Anna Raudino; Mark Saddler; Bidya Marra Consultancy; Yurwang Gundana Consultancy Cultural Heritage Services; Merekai Bell (Yurwang Gundana Cultural Heritage Services).	Wagga Wagga Meeting	Via Teams and Phone
1.09.2021	TNSW, Lantern Heritage and RAPs	Zac Shaw; Tom Knight; Anna Raudino; Mark Saddler; Yalmambirra; BidyaMarra Consultancy; Yurwang Gundana Consultancy Cultural Heritage Services; Benjiaminn Smith ; Albury LALC	The Rock Meeting	Via Teams and Phone

APPENDIX 2: AHIMS AND NSW HERITAGE REGISTER SEARCHES

Site	Distance from Study Area	Location	Site Type	LALC
Kurrawatha Falls	4 km	Koorawatha	multiple	Wagga Wagga
Doodle Comer	1 km	Henty	multiple	Wagga Wagga
The Rock nature reserve	1 km	The Rock	Ceremonial site	Wagga Wagga
Flowerdale Lagoon	1 km	Wagga Wagga	Resource and gathering	Wagga Wagga
Wollundry Lagoon	1 km	Wagga Wagga	Dreaming site	Wagga Wagga
Wiradjuri Reserve	1 km	Wagga Wagga	multiple	Wagga Wagga
Gobba Beach	1 km	Wagga Wagga	multiple	Wagga Wagga
Thomas Smyth memorial	No details	No details	No details	No details

Aboriginal Cultural Heritage sites found during search of NSW Heritage registers

Site ID	Site name	FEATURE_TY
56-1-0615	Pomingalarna Park Women's Area (PP WA-01)	Aboriginal Ceremony and Dreaming
56-1-0413	Coffin Rock 1	Aboriginal Ceremony and Dreaming
56-1-0619	Dreaming Site Rocky Hill Wagga	Aboriginal Ceremony and Dreaming
56-1-0385	Gabuga Tank 20	Aboriginal Resource and Gathering
56-1-0616	Pomingalarna Park O-01 (PP O-01)	Aboriginal Resource and Gathering
56-1-0617	Pomingalarna Park CA-01 (PP CA-01)	Aboriginal Resource and Gathering
56-1-0414	Coffin Rock 2	Aboriginal Resource and Gathering, Aboriginal Ceremony and Dreaming, Grinding Groove
50-6-0256	Cunningham Creek - Creek & Water	Aboriginal Resource and Gathering, Aboriginal Ceremony and Dreaming, Water Hole
56-4-0008	Pulpit Rock 2;	Art (Pigment or Engraved)
56-4-0006	Table Top Range Petroglyphs;Pulpit Rock;	Art (Pigment or Engraved)
55-6-0192	Walla Walla SF IF 19	Artefact
55-6-0187	Walla Walla SF IF 14	Artefact
55-6-0194	Walla Walla SF IF 21	Artefact
55-6-0174	Walla Walla SF IF 1	Artefact
55-6-0213	Culcairn Solar IF13	Artefact
55-6-0172	Walla Walla SF AFT 10	Artefact
55-6-0209	Culcairn Solar IF9	Artefact
55-6-0178	Walla Walla SF IF 5	Artefact

55-6-0230	Culcairn Solar AFT10	Artefact
55-6-0236	Culcairn Solar AFT16	Artefact
55-6-0070	ARTC 2	Artefact
60-4-0002	BP4	Artefact
56-4-0023	WWIF9;	Artefact
55-6-0186	Walla Walla SF IF 13	Artefact
55-6-0205	Culcairn Solar IF5	Artefact
55-6-0138	Culcairn Solar 497037	Artefact
55-6-0232	Culcairn Solar AFT12	Artefact
55-6-0235	Culcairn Solar AFT15	Artefact
55-6-0071	ARTC 3	Artefact
56-4-0024	WW5;Billabong Creek 1;	Artefact
56-4-0212	TT 2 (Table Top Creek - Hume Hwy)	Artefact
55-6-0164	Walla Walla SF AFT 2	Artefact
55-6-0203	Culcairn Solar IF3	Artefact
55-6-0206	Culcairn Solar IF6	Artefact
55-6-0188	Walla Walla SF IF 15	Artefact
55-6-0210	Culcairn Solar IF10	Artefact
55-6-0181	Walla Walla SF IF 8	Artefact

55-6-0177	Walla Walla SF IF 4	Artefact
56-4-0203	ARTC 1	Artefact
56-4-0019	WWIF5;	Artefact
56-4-0017	WW7;Billabong Creek 3;	Artefact
56-4-0022	WWIF8;	Artefact
56-4-0213	TT 3 (Table Top Creek - Hume Hwy)	Artefact
55-6-0035	BP 2 (Howlong)	Artefact
55-6-0204	Culcairn Solar IF4	Artefact
55-6-0207	Culcairn Solar IF7	Artefact
55-6-0168	Walla Walla SF AFT 6	Artefact
55-6-0139	Culcairn Solar 497239	Artefact
55-6-0182	Walla Walla SF IF 9	Artefact
55-6-0234	Culcairn Solar AFT14	Artefact
55-6-0237	Culcairn Solar AFT17	Artefact
55-6-0216	Culcairn Solar IF16	Artefact
55-6-0211	Culcairn Solar IF11	Artefact
55-6-0229	Culcairn Solar AFT9	Artefact
55-6-0163	Walla Walla SF AFT 1	Artefact
55-6-0191	Walla Walla SF IF 16	Artefact

55-6-0202	Culcairn Solar IF25	Artefact
55-6-0173	Walla Walla SF AFT 11	Artefact
55-6-0212	Culcairn Solar IF12	Artefact
55-6-0215	Culcairn Solar IF15	Artefact
55-6-0169	Walla Walla SF AFT 7	Artefact
55-6-0201	Culcairn Solar IF24	Artefact
55-6-0180	Walla Walla SF IF 7	Artefact
55-6-0072	ARTC 13	Artefact
55-6-0040	Ryan 1	Artefact
56-4-0113	TT5	Artefact
56-4-0230	TT 5 (Table Top Creek - Hume Hwy)	Artefact
56-4-0231	TT 6 (Table Top Creek - Hume Hwy)	Artefact
55-6-0214	Culcairn Solar IF14	Artefact
55-6-0183	Walla Walla SF IF 10	Artefact
55-6-0012	Hurricane Hill 2;	Artefact
55-6-0175	Walla Walla SF IF 2	Artefact
55-6-0179	Walla Walla SF IF 6	Artefact
55-6-0176	Walla Walla SF IF 3	Artefact
55-6-0231	Culcairn Solar AFT11	Artefact

56-4-0112	TT4	Artefact
56-4-0020	WWIF6;	Artefact
55-6-0028	WW24;Back Creek Tributary;	Artefact
55-6-0195	Walla Walla SF IF 22	Artefact
55-6-0208	Culcairn Solar IF8	Artefact
55-6-0185	Walla Walla SF IF 12	Artefact
55-6-0184	Walla Walla SF IF 11	Artefact
55-6-0233	Culcairn Solar AFT13	Artefact
55-6-0240	Culcairn Solar IF2	Artefact
55-6-0239	Culcairn Solar IF1	Artefact
56-4-0214	TT 4 (Table Top Creek - Hume Hwy)	Artefact
56-4-0033	Billabong Creek;Flood Channel 2;	Artefact
56-4-0034	Billabong Creek;Flood Channel 3;	Artefact
56-4-0310	Patersons Quarry 1 (Gerogery)	Artefact
55-6-0167	Walla Walla SF AFT 5	Artefact
55-6-0193	Walla Walla SF IF 20	Artefact
55-6-0196	Walla Walla SF IF 23	Artefact
55-6-0171	Walla Walla SF AFT 9	Artefact
55-6-0170	Walla Walla SF AFT 8	Artefact

56-4-0004	Hope Farm;	Artefact
56-4-0211	TT 1 (Table Top Creek - Hume Hwy)	Artefact
56-4-0021	WWIF7;	Artefact
56-4-0016	WW8;Billabong Creek 4;	Artefact
56-4-0032	Billabong Creek;Flood Channel 1;	Artefact
50-5-0020	Beechwood 1	Artefact
50-3-0004	Wombat BY 14 Tumbleton Creek	Artefact
50-3-0032	APA-AS2-11	Artefact
50-3-0031	APA-AS1-11	Artefact
50-6-0016	Murrumburrah MW-S1	Artefact
51-1-0089	Dananbilla Site 4	Artefact
51-1-0105	Dananbilla site 4-a	Artefact
50-6-0005	MY-S2 Murrumburrah	Artefact
50-5-0022	Beechwood 3	Artefact
50-3-0034	APA-IA1-11	Artefact
50-6-0019	JK1 Cunninghams Creek	Artefact
50-6-0013	MW-S2 Connaughtmans Creek	Artefact
50-6-0020	JK 1	Artefact
50-6-0007	MY-S3 Murrumburrah	Artefact

50-3-0019	Dananbilla site 8-a	Artefact
51-1-0104	Dananbilla Site 3 Bendick/murrell gap.	Artefact
51-4-0082	GALTL4	Artefact
50-6-0012	MY-S6 Murrumburrah Cloned	Artefact
50-3-0033	APA-AS3-11	Artefact
50-3-0016	Dananbilla Site 8	Artefact
50-6-0017	Harden 2 MY-S1	Artefact
50-3-0017	Dananbilla Site 9	Artefact
51-1-0087	Dananbilla Site 2	Artefact
51-1-0103	Danabbilla site 2	Artefact
50-6-0177	Bango WF SU40/L1	Artefact
50-3-0020	Dananbilla site 9-a	Artefact
51-1-0107	Dananbilla site 6-a	Artefact
50-3-0002	BY 12 Young	Artefact
50-6-0018	JK2 Cunninghams Creek	Artefact
50-6-0021	JK2	Artefact
51-1-0106	Dananbilla site 5-a	Artefact
50-3-0003	BY 13 Stoney Creek	Artefact
50-3-0056	Hilltops Aboriginal Artefact Site	Artefact

50-3-0043	Crouchdale Grinding Stone 1	Artefact
51-4-0050	Koora - 05 - 1	Artefact
44-4-0213	Hillford;OS2;	Artefact
51-1-0074	Koorawatha site 5	Artefact
44-4-0309	Y-IF-1	Artefact
50-3-0042	Crouchdale Stone Flakes 1	Artefact
51-1-0073	Koorawatha site 4	Artefact
44-4-0308	Y-OS-3	Artefact
44-4-0307	Y-OS-2	Artefact
51-1-0078	Koorawatha site 9	Artefact
44-4-0127	WS-T 1 Welcome Springs Track	Artefact
51-1-0076	Koorawatha site 7	Artefact
44-4-0310	Y-IF-2	Artefact
51-1-0070	Koorawatha site	Artefact
51-1-0071	Koorawatha site 2	Artefact
51-1-0079	Koorawatha site 10	Artefact
44-5-0083	KC-IF-1;	Artefact
51-1-0075	Koorawatha site 6	Artefact
43-6-0018	Major West Road/OS-1;MWR/OS-1;	Artefact

44-4-0214	Hillford;OS3;	Artefact
51-1-0072	Koorawatha site 3	Artefact
44-4-0311	Y-IF-3	Artefact
44-4-0306	Y-OS-1	Artefact
44-4-0297	Y-S-2	Artefact
44-4-0298	Y-S-3	Artefact
43-6-0089	TC-OS-1	Artefact
44-4-0212	Hillford;OS1;	Artefact
51-1-0010	Morongla Creek	Artefact
43-6-0090	SL-OS-1	Artefact
44-4-0103	BR-OS 3;Boorowa Road Open Scatter(3);	Artefact
51-1-0077	Koorawatha site 8	Artefact
50-5-0059	UR21	Artefact
50-5-0060	UR22	Artefact
50-5-0049	UR11	Artefact
50-5-0055	UR17	Artefact
50-5-0023	Kilrush 1;	Artefact
50-6-0088	Cowangs to Bauloora 6 (CB6)	Artefact
50-5-0068	UR29	Artefact

50-5-0033	Eulolo Homestead 1, Ulandra Nature Reserve	Artefact
50-5-0044	UR6	Artefact
50-5-0019	ULA-1	Artefact
50-5-0069	UR30	Artefact
50-5-0045	UR7	Artefact
50-5-0016	ULA-5	Artefact
50-5-0061	UR23	Artefact
50-6-0090	Cowangs to Bauloora 8 (CB8)	Artefact
50-5-0071	Beverley Hills 2	Artefact
50-5-0066	UR28	Artefact
50-5-0062	UR24	Artefact
50-6-0035	Muttama Creek IF	Artefact
50-5-0046	UR8	Artefact
50-5-0018	ULA-7	Artefact
50-6-0089	Cowangs to Bauloora 7 (CB7)	Artefact
50-5-0084	APA1	Artefact
50-5-0074	Beverley Hills 5	Artefact
50-5-0057	UR19	Artefact
50-5-0064	UR26	Artefact

50-5-0017	Bethungra	Artefact
50-5-0051	UR13	Artefact
50-5-0054	UR16	Artefact
50-5-0070	Beverley Hills 1	Artefact
50-5-0065	UR27	Artefact
50-5-0007	Frampton BY 9	Artefact
50-5-0040	UR2	Artefact
50-6-0033	Muttama Creek 3	Artefact
50-5-0013	ULA-2	Artefact
50-6-0092	Cowangs to Bauloora 10 (CB10)	Artefact
50-6-0032	Muttama Creek 2	Artefact
50-5-0058	UR20	Artefact
50-5-0024	Kilrush 2;	Artefact
50-5-0077	UR 28	Artefact
50-5-0039	UR1	Artefact
50-5-0041	UR3	Artefact
50-5-0063	UR25	Artefact
50-5-0014	ULA-3	Artefact
50-5-0056	UR18	Artefact

50-6-0002	Cootamundra BY 10	Artefact
50-5-0025	Kilrush 3;	Artefact
50-5-0073	Beverley Hills 4	Artefact
50-5-0072	Beverley Hills 3	Artefact
50-5-0050	UR12	Artefact
50-6-0031	Muttama Creek 1	Artefact
50-5-0052	UR14	Artefact
50-5-0043	UR5	Artefact
50-5-0053	UR15	Artefact
50-5-0015	ULA-4	Artefact
50-6-0091	Cowangs to Bauloora 9 (CB9)	Artefact
50-6-0095	Cowangs to Bauloora 15 (CB15)	Artefact
50-5-0075	Beverley Hills 7	Artefact
50-5-0289	US1	Artefact
50-5-0042	UR4	Artefact
50-5-0047	UR9	Artefact
50-6-0034	Muttama Creek 4	Artefact
56-1-0062	Livingstone Park 7 - Open Scatter	Artefact
56-4-0347	Henty Pipeline IF1	Artefact

56-4-0209	ARTC 9	Artefact
56-4-0031	EAPL IF 14;	Artefact
56-1-0029	EAPL IFI5;	Artefact
56-1-0423	Mick Stevens 5	Artefact
56-4-0208	ARTC 8	Artefact
56-4-0206	ARTC 6	Artefact
56-1-0641	LNP-AFT-9	Artefact
56-1-0059	Livingstone Park 4 - Open Scatter	Artefact
56-4-0204	ARTC 4	Artefact
56-4-0014	WW10;Majors Creek 2;	Artefact
56-4-0027	WW28;Buckarigingah Creek 2;	Artefact
56-1-0418	Mohr TSR 2	Artefact
56-4-0327	Henty-Doodle Comer 16	Artefact
56-4-0013	WW11;Majors Creek 3;	Artefact
56-1-0060	Livingstone Park 5 - Open Scatter	Artefact
56-4-0207	ARTC 7	Artefact
56-4-0205	ARTC 5	Artefact
56-4-0012	WWIF3;Majors Creek;	Artefact
56-1-0410	Mick Stevens 4	Artefact

56-1-0046	McClouds Creek 1	Artefact
56-4-0210	ARTC 10	Artefact
56-4-0015	WW9;Majors Creek 1;	Artefact
56-1-0475	Aimtree grinding stone 1	Artefact
56-4-0030	EAPL IF 13;	Artefact
56-1-0411	Mick Stevens 6	Artefact
56-4-0028	EAPL IF 11;Ashley Park;	Artefact
56-4-0026	WW27;Buckarigingah Creek 1;	Artefact
56-4-0029	EAPL IF 12;Hatchets Creek;	Artefact
56-4-0035	Buckargingah Creek 3	Artefact
56-1-0019	Rockleigh WW29;Rockleigh Homestead;	Artefact
56-1-0671	Gregadoo SF IF 5	Artefact
56-1-0022	WW32 Burks Creek 2;	Artefact
56-1-0623	Gregadoo SF IF4	Artefact
56-1-0332	The Rock TSR Rock Flakes 5	Artefact
56-1-0030	EAPL IFI6;	Artefact
56-1-0622	Gregadoo SF Reburial 1	Artefact
56-1-0540	Gregadoo Solar IF1	Artefact
56-1-0208	Vincent 8	Artefact

56-1-0358	The Rock TSR Rock Flake 1	Artefact
56-1-0021	WW31 Burks Creek;	Artefact
56-1-0530	Gregadoo SF 360	Artefact
56-1-0527	Gregadoo SF 463	Artefact
56-1-0539	Gregadoo Solar IF3	Artefact
56-1-0331	The Rock TSR Rock Core Flakes 4	Artefact
56-4-0011	Burkes Creek;	Artefact
56-1-0020	Rockleigh WW30;Rockleigh Homestead;	Artefact
56-1-0528	Gregadoo SF 619	Artefact
56-1-0529	Gregadoo SF 393	Artefact
56-1-0525	Gelston Homestead	Artefact
56-1-0356	The Rock TSR Rock Flakes 3	Artefact
56-1-0326	The Rock TSR Rock Flakes 2	Artefact
56-1-0023	WW33;Roping Pole Swamp Creek;	Artefact
56-1-0031	EAPL IFI7;Churchill Square property;	Artefact
56-1-0654	Sandy Creek SF AFT 10	Artefact
56-1-0656	Sandy Creek SF AFT 12	Artefact
56-1-0047	LN 1	Artefact
56-1-0448	Brunslea AS1	Artefact

56-1-0104	UW-IF-3	Artefact
56-1-0106	UW-IF-1	Artefact
56-1-0441	Brunslea IF2	Artefact
56-1-0649	Sandy Creek SF AFT 5	Artefact
56-1-0660	Sandy Creek SF AFT 16	Artefact
56-1-0659	Sandy Creek SF AFT 15	Artefact
56-1-0114	Wagga Wagga Transmission Line 2	Artefact
56-1-0052	Lloyd Neighbourhood 1	Artefact
56-1-0500	ROWANS TSR 1	Artefact
56-1-0440	Brunslea IF1	Artefact
56-1-0450	Brunslea AS7	Artefact
56-1-0032	EAPL IFI8;	Artefact
56-1-0039	Sandy Creek 4;	Artefact
56-2-0163	Grahams TSR Rock Scatter 1	Artefact
56-1-0665	Sandy Creek SF AFT 3	Artefact
56-1-0666	Sandy Creek SF AFT 4	Artefact
56-1-0650	Sandy Creek SF AFT 6	Artefact
56-1-0653	Sandy Creek SF AFT 9	Artefact
56-1-0655	Sandy Creek SF AFT 11	Artefact

56-1-0449	Brunslea AS8	Artefact
56-1-0651	Sandy Creek SF AFT 7	Artefact
56-1-0652	Sandy Creek SF AFT 8	Artefact
56-1-0024	WW34;Jacks Road;	Artefact
56-1-0663	Sandy Creek SF AFT 1	Artefact
56-1-0541	Gregadoo SF IF2	Artefact
56-1-0105	UW-IF-2	Artefact
56-1-0040	Sandy Creek 4; (Duplicate of 56-1-0039)	Artefact
56-1-0026	WW36;Sandy Creek 2;	Artefact
56-1-0657	Sandy Creek SF AFT 13	Artefact
56-1-0658	Sandy Creek SF AFT 14	Artefact
56-1-0025	WW35;Sandy Creek;	Artefact
56-1-0664	Sandy Creek SF AFT 2	Artefact
56-1-0096	L-IF-1	Artefact
56-1-0050	LN 4	Artefact
56-1-0049	LN 3	Artefact
56-1-0645	L-AFT-2	Artefact
56-1-0097	L-IF-2	Artefact
56-1-0580	L-AFT-1	Artefact

56-1-0137	Wagga Wagga Downside Dry TSR Core Stone 1	Artefact
56-1-0627	Boorooma AFT5	Artefact
56-1-0436	Willan's Hill IF1	Artefact
56-1-0014	WWIF4;	Artefact
56-1-0632	L-AFT-4	Artefact
56-1-0579	L-IF-3	Artefact
56-1-0631	L-IF-4	Artefact
56-1-0674	Lloyd Artefact Repatriation 1	Artefact
56-1-0154	Wagga Wagga Downside Dry TSR Stone Flake 1	Artefact
56-1-0126	Boor 1	Artefact
56-1-0634	L-AFT-6	Artefact
56-1-0571	Lloyd 529137	Artefact
56-1-0670	Willans Hill AFT 4	Artefact
56-1-0033	BOM-1;	Artefact
56-1-0633	L-AFT-5	Artefact
56-1-0558	Cameron,s Bore TSR	Artefact
56-1-0433	Bomen RIFL IF1	Artefact
56-1-0569	Lloyd 528899	Artefact
56-1-0628	Boorooma AFT4	Artefact

56-1-0124	TARCOOLA QUARRY ISOLATED FIND 1	Artefact
56-1-0048	LN 2	Artefact
56-1-0625	Boorooma AFT2	Artefact
56-1-0673	Willans Hill AFT 1	Artefact
56-1-0668	Willans Hill AFT 2	Artefact
56-1-0646	L-AFT-3	Artefact
56-1-0626	Boorooma AFT1	Artefact
56-1-0629	Boorooma AFT3	Artefact
56-1-0669	Willans Hill AFT 3	Artefact
56-1-0081	WW110	Artefact
56-1-0621	Wagga SAP OS-01	Artefact
50-5-0106	APA23	Artefact
50-5-0080	OS - 3	Artefact
50-5-0095	APA12	Artefact
50-5-0008	Junee BY 15 Wanitool Creek	Artefact
56-1-0462	Bomen RIFL AS3	Artefact
56-1-0457	Bomen RIFL IF4	Artefact
56-1-0120	APA36	Artefact
56-1-0116	APA32	Artefact

50-5-0109	APA26	Artefact
50-5-0104	APA21	Artefact
50-5-0102	APA19	Artefact
50-5-0163	Sawyers TSR Rock Scatter 5	Artefact
56-1-0461	Bomen RIFL AS2	Artefact
56-1-0551	BSF-AS1-18	Artefact
56-1-0556	BSF-IA2-18	Artefact
56-2-0081	APA 28	Artefact
56-2-0001	Shepherd Siding BY2;	Artefact
50-5-0135	Triangle TSR Rock Core 7	Artefact
50-5-0126	Triangle TSR Rock Scatter 2	Artefact
56-1-0463	Bomen RIFL AS4	Artefact
56-1-0555	BSF-IA3-18	Artefact
56-1-0437	Bomen Solar IS01	Artefact
56-1-0543	Bomen 540568	Artefact
50-5-0011	Harefield BY3 Reedy Creek	Artefact
50-5-0129	Triangle TSR Rock Core 4	Artefact
50-5-0094	APA11	Artefact
50-4-0001	Houlaghans Creek Harefield BY 1	Artefact

56-1-0117	APA33	Artefact
56-2-0080	APA27	Artefact
56-2-0082	APA29	Artefact
50-5-0105	APA22	Artefact
50-5-0103	APA20	Artefact
50-5-0100	APA17	Artefact
50-5-0101	APA18	Artefact
50-5-0128	Triangle TSR Rock Core 3	Artefact
50-5-0076	Illabo-Tumut Pipline Site:IT1	Artefact
56-1-0609	Wagga SAP IF-01	Artefact
56-1-0119	APA35	Artefact
50-5-0028	Haulaghans Creek	Artefact
56-2-0083	APA30	Artefact
50-5-0107	APA24	Artefact
50-5-0083	BY5	Artefact
50-5-0099	APA16	Artefact
50-5-0093	APA10	Artefact
56-2-0256	Wantabadgery TSR Rock Flake 1	Artefact
50-5-0169	Sawyers TSR Rock Scatter 4	Artefact

56-1-0554	BSF-IA4-18	Artefact
56-1-0111	Bomen Isolated Fin 1 (BIF1) duplicate of 56-1-0109	Artefact
50-5-0029	Junee Campsite	Artefact
50-5-0098	APA15	Artefact
50-5-0096	APA13	Artefact
50-5-0125	Triangle TSR Rock Scatter 1	Artefact
50-5-0091	APA8	Artefact
50-5-0036	Illabo-Tumut Pipeline Site IT2	Artefact
50-5-0162	Sawyers TSR Rock Scatter 6	Artefact
56-1-0432	Bomen RIFL IF2	Artefact
56-1-0557	BSF-IA1-18	Artefact
50-4-0068	Doyle's TSR 1, Wanterbadgery	Artefact
50-5-0108	APA25	Artefact
50-5-0009	Harefield Bucks Creek BY4	Artefact
50-5-0097	APA14	Artefact
50-5-0081	OS - 4	Artefact
50-5-0136	Triangle TSR Rock Core 6	Artefact
50-5-0037	Illabo-Tumut Pipeline Site IT1	Artefact
56-1-0434	Bomen RIFL IF3	Artefact

56-1-0550	BSF-AS2-18	Artefact
56-1-0115	APA31	Artefact
56-1-0118	APA34	Artefact
50-5-0164	Sawyers TSR Rock Hammer 3	Artefact
50-5-0168	Sawyers TSR Rock Scatter 2	Artefact
50-5-0274	Olympic Highway Illabo Artefacts 3	Artefact
50-5-0118	bethungra gum flat ironbong creek stone 1	Artefact
50-5-0031	S-OS-1	Artefact
50-5-0086	APA3	Artefact
50-5-0115	Olympic Hwy - Bethungra 1	Artefact
50-5-0285	Ironbong Road Bethungra Artefacts 1	Artefact
50-5-0283	Run Boundary Creek Bethungra Artefacts 2	Artefact
50-5-0266	Olympic Highway Illabo Artefacts 1	Artefact
50-5-0271	Dirnaseer Road Artefacts 4	Artefact
50-5-0269	Dirnaseer Road Artefacts 2	Artefact
50-5-0275	Olympic Highway Illabo Artefacts 5	Artefact
50-5-0006	Bethungra BY 8	Artefact
50-5-0085	APA2	Artefact
50-5-0276	Olympic Highway Illabo Artefacts 4	Artefact

50-5-0273	Dirnaseer Road Artefacts 6	Artefact
50-5-0268	Dirnaseer Road Artefacts 1	Artefact
50-5-0157	Bethungra Truck Yard Rock scatter 4	Artefact
50-5-0148	Bethungra Truck Yard Rock scatter 2	Artefact
50-5-0078	OS - 1 Witter 1980, BY 6	Artefact
50-5-0004	Billabong Creek Illabo BY 6	Artefact
50-5-0005	Billabong Creek BY 7	Artefact
50-5-0284	Run Boundary Creek Bethungra Artefacts 1	Artefact
50-5-0038	Bethungra Scarred Tree	Artefact
50-5-0150	Bethungra Truck Yard Rock scatter 1	Artefact
50-5-0082	QS - 1	Artefact
50-5-0087	APA4	Artefact
50-5-0267	Olympic Highway Illabo Artefacts 2	Artefact
50-5-0272	Dirnaseer Road Artefacts 5	Artefact
50-5-0160	Sawyers TSR Rock Scatter 1	Artefact
50-5-0092	APA9	Artefact
50-5-0147	Bethungra Truck Yard Rock scatter 3	Artefact
50-6-0118	APA-IA2-11	Artefact
50-6-0094	Cowangs to Bauloora 12 (CB12)	Artefact

50-6-0062	WT/OC1	Artefact
50-2-0004	WT/H?1	Artefact
50-5-0112	Cowangs to Bauloora 16 (CB16)	Artefact
50-5-0110	Cowangs to Bauloora 13 (CB13)	Artefact
50-6-0003	Muttama Creek BY 11	Artefact
50-6-0119	APA-IA3-11	Artefact
50-5-0111	Cowangs to Bauloora 14 (CB14)	Artefact
44-4-0357	Isolated Find (IF) 2 Cowra STP IF2	Artefact
44-4-0367	CPP03	Artefact
44-4-0356	Isolated Find (IF) 1 Cowra STP IF1	Artefact
44-4-0181	Ringstone_1;	Artefact
44-4-0191	H-IF-2	Artefact
44-4-0359	STP2 Cowra STP AS2	Artefact
44-4-0354	YAIF1 (Cowra)	Artefact
44-4-0183	R1;Rosedale 1;	Artefact
44-4-0360	Sewerage Treatment Plan Cowra STP AS3	Artefact
44-4-0012	Waugoola Creek (YLS/1)	Artefact
44-4-0262	CC-OS-2 (Cowra)	Artefact
44-4-0263	CC-05-2	Artefact

44-4-0008	Pine Park (YLS/7) Lachlan River	Artefact
44-4-0240	OFC 8;Coraminta;	Artefact
44-4-0157	OFC 8;	Artefact
44-4-0368	CPP02	Artefact
44-4-0192	H-IF-1	Artefact
44-4-0233	GL-OS-1;"Glen Logan";	Artefact
44-4-0149	Cowra Town Common;CTC-IF-1;	Artefact
44-4-0038	cowra common site1	Artefact
44-4-0180	Ringstone_2;	Artefact
44-4-0179	Ringstone;	Artefact
44-4-0234	Glen Logan 1;Glen Logan Lanofill;	Artefact
44-4-0369	CPP01	Artefact
44-4-0351	MQ-OS1	Artefact
44-4-0345	MQ - OS1	Artefact
51-1-0088	Dananbilla Site 3	Artefact
50-6-0093	Cowangs to Bauloora 11 (CB11)	Artefact
56-2-0247	Wantabadgery midden	Artefact, Hearth, Non-Human Bone and Organic Material, Shell
44-4-0009	Marongla Creek	Artefact, Modified Tree (Carved or Scarred)
44-4-0042	br-os 2;	Artefact, Modified Tree (Carved or Scarred)

56-1-0012	WW15 Strathmore 1;	Artefact, Modified Tree (Carved or Scarred)
56-2-0124	TQ-IF1	Artefact, Modified Tree (Carved or Scarred)
56-1-0590	BSF-ST1-18	Artefact, Modified Tree (Carved or Scarred)
44-4-0043	BR-OS 1	Artefact, Ochre Quarry
50-6-0252	Weirview AS 02	Artefact, Potential Archaeological Deposit (PAD)
50-6-0269	Weirview AS 01	Artefact, Potential Archaeological Deposit (PAD)
50-6-0253	Weirview AS 03	Artefact, Potential Archaeological Deposit (PAD)
56-1-0113	Wagga Wagga Transmission Line 1 and PAD	Artefact, Potential Archaeological Deposit (PAD)
56-1-0108	UW-05-1	Artefact, Potential Archaeological Deposit (PAD)
50-5-0140	Hogmans Tank TSR 2 rock scatter	Artefact, Stone Arrangement, Stone Quarry
56-1-0109	Bomen Isolated Find BIF1 duplicate of 56-1-0111	Artefact, Stone Quarry
51-1-0091	Dananbilla Site 6	Artefact
51-1-0090	Dananbilla Site 5	Artefact
50-5-0089	APA6	Artefact
44-4-0358	Sewerage Treatment Plant Cowra STP AS1	Artefact
50-5-0090	APA7	Artefact
50-5-0088	APA5	Artefact
56-1-0130	Wiradjuri 1	Artefact
51-1-0082	Koorawatha site 13	Artefact

50-3-0024	Old Rosedale 2	Burial
56-1-0591	WWAI Burial 1	Burial
44-4-0344	cowra mission burial	Burial
50-5-0001	Wingana The Sisters	Burial, Modified Tree (Carved or Scarred)
56-2-0257	Wantabadgery TSR Earth Mound 2	Earth Mound
56-2-0258	Wantabadgery TSR Earth Mound 3	Earth Mound
56-4-0007	Pulpit Rock;	Grinding Groove
50-3-0047	Currawong Station grinding grove 1	Grinding Groove
50-6-0063	Eureka 1	Grinding Groove
44-4-0304	Y-AG-5	Grinding Groove
44-4-0301	Y-AG-2	Grinding Groove
44-4-0299	Y-S-4	Grinding Groove
51-1-0046	KWC-AG-1	Grinding Groove
51-1-0069	Bang Bang 1	Grinding Groove
44-4-0302	Y-AG-3	Grinding Groove
44-4-0296	Y-S-1	Grinding Groove
44-4-0303	Y-AG-4	Grinding Groove
44-4-0300	Y-AG-1	Grinding Groove
51-1-0068	Bang Bang 2	Grinding Groove

56-2-0267	Waters Wantabadgery Grinding Groves 4	Grinding Groove
56-2-0266	Waters, Wantabadgery Grinding Groves 5	Grinding Groove
56-2-0270	Waters Wantabadgery Grinding Groves 1	Grinding Groove
56-2-0269	Waters Wantabadgery Grinding Groves 2	Grinding Groove
56-2-0271	Waters Wantabadgery Grinding Groves	Grinding Groove
56-2-0268	Waters Wantabadgery Grinding Groves 3	Grinding Groove
50-5-0155	Bethungra Truck Yard Rock Well 1	Grinding Groove
50-3-0015	Danabilla Site 7	Habitation Structure
51-1-0083	Koorawatha site 14	Habitation Structure
55-6-0147	Walla Solar Farm 496602	Modified Tree (Carved or Scarred)
55-6-0146	Walla Solar Farm 496812	Modified Tree (Carved or Scarred)
55-6-0091	Sargent Rd 2	Modified Tree (Carved or Scarred)
55-6-0068	mod tree 5	Modified Tree (Carved or Scarred)
56-4-0018	WW6;Billabong Creek 2;	Modified Tree (Carved or Scarred)
55-6-0069	mod tree 6	Modified Tree (Carved or Scarred)
55-6-0029	WW25;Home Farm;	Modified Tree (Carved or Scarred)
55-6-0073	Sargent Rd - mm7	Modified Tree (Carved or Scarred)
55-6-0065	MUNGABARINA-MM3	Modified Tree (Carved or Scarred)
55-6-0238	Culcairn Solar ST1	Modified Tree (Carved or Scarred)

55-6-0140	Culcairn Solar 497151	Modified Tree (Carved or Scarred)
55-6-0145	Walla Solar Farm 497199	Modified Tree (Carved or Scarred)
55-6-0013	Hurricane Hill 1;	Modified Tree (Carved or Scarred)
55-6-0134	Culcairn Solar 497439	Modified Tree (Carved or Scarred)
56-4-0001	Billabong Creek Scarred Tree IV	Modified Tree (Carved or Scarred)
56-4-0002	Rubbish Tip Scarred Tree V	Modified Tree (Carved or Scarred)
56-4-0352	Cummings Rd ST2	Modified Tree (Carved or Scarred)
55-6-0133	Culcairn Solar 498265	Modified Tree (Carved or Scarred)
55-6-0148	Walla Solar Farm 497946	Modified Tree (Carved or Scarred)
56-4-0353	Cummings Rd ST1	Modified Tree (Carved or Scarred)
50-6-0136	Harden 4	Modified Tree (Carved or Scarred)
50-6-0139	Harden 7	Modified Tree (Carved or Scarred)
50-6-0135	Harden 3	Modified Tree (Carved or Scarred)
50-6-0150	Bumgum 1	Modified Tree (Carved or Scarred)
50-6-0149	Bumgum scar 2	Modified Tree (Carved or Scarred)
50-3-0027	Rodney Freeman Tree1	Modified Tree (Carved or Scarred)
50-3-0038	APA-ST4-11	Modified Tree (Carved or Scarred)
50-3-0054	Flixton TSR Scar Tree 3	Modified Tree (Carved or Scarred)
50-3-0007	Monteagle 1	Modified Tree (Carved or Scarred)

50-3-0041	Karyrie Park Scar Tree 1	Modified Tree (Carved or Scarred)
50-6-0014	Harden 3 MY-T1	Modified Tree (Carved or Scarred)
50-3-0006	Monteagle 2;	Modified Tree (Carved or Scarred)
50-6-0011	MY-T2 Murrumburrah	Modified Tree (Carved or Scarred)
50-6-0133	Harden 1	Modified Tree (Carved or Scarred)
50-3-0030	RPS ST1 & 2	Modified Tree (Carved or Scarred)
50-3-0001	Brett's Trees	Modified Tree (Carved or Scarred)
50-6-0148	Wallendoon Lane	Modified Tree (Carved or Scarred)
50-3-0037	APA-ST3-11	Modified Tree (Carved or Scarred)
50-3-0036	APA-ST2-11	Modified Tree (Carved or Scarred)
50-3-0023	Old Rosedale 1	Modified Tree (Carved or Scarred)
50-3-0022	Bendick Murrell CMT 1	Modified Tree (Carved or Scarred)
50-6-0137	Harden 5	Modified Tree (Carved or Scarred)
50-3-0028	Rodney Freeman Tree 2	Modified Tree (Carved or Scarred)
50-3-0039	Kilmarnock Rd 1	Modified Tree (Carved or Scarred)
50-6-0204	Hardies TSR Scar Tree 1	Modified Tree (Carved or Scarred)
50-3-0009	Cudgell Park	Modified Tree (Carved or Scarred)
50-3-0052	Flixton TSR Scar Tree 1	Modified Tree (Carved or Scarred)
50-6-0189	Mandamah Mary Gilmore Way	Modified Tree (Carved or Scarred)

50-6-0181	Back Nubba rd Scar Tree 1	Modified Tree (Carved or Scarred)
50-3-0014	Manton Station	Modified Tree (Carved or Scarred)
50-6-0138	Harden 6	Modified Tree (Carved or Scarred)
50-6-0004	Connaughtmans Creek, Wallendbeen BY16	Modified Tree (Carved or Scarred)
50-3-0053	Flixton TSR Scar Tree 2	Modified Tree (Carved or Scarred)
50-3-0040	Wombat Tree	Modified Tree (Carved or Scarred)
50-6-0134	Harden 2	Modified Tree (Carved or Scarred)
50-3-0005	Leramo	Modified Tree (Carved or Scarred)
50-3-0035	APA-ST1-11	Modified Tree (Carved or Scarred)
43-6-0075	Conimbla Park Scarred Tree 1	Modified Tree (Carved or Scarred)
44-4-0316	Y-ST-5	Modified Tree (Carved or Scarred)
44-4-0328	Y-ST-17	Modified Tree (Carved or Scarred)
51-1-0081	Koorawatha site 12	Modified Tree (Carved or Scarred)
44-4-0211	W-ST-1;	Modified Tree (Carved or Scarred)
44-4-0322	Y-ST-11	Modified Tree (Carved or Scarred)
51-1-0080	Koorawatha site 11	Modified Tree (Carved or Scarred)
43-6-0001	Bumbaldry;	Modified Tree (Carved or Scarred)
51-1-0066	Koorawatha 1	Modified Tree (Carved or Scarred)
44-4-0317	Y-ST-6	Modified Tree (Carved or Scarred)

50-3-0044	Crouchdale Scar Tree 2	Modified Tree (Carved or Scarred)
44-4-0313	Y-ST-2	Modified Tree (Carved or Scarred)
44-4-0325	Y-ST-14	Modified Tree (Carved or Scarred)
44-4-0209	Noonbinna S/T1;	Modified Tree (Carved or Scarred)
43-6-0017	Broala Scarred Tree 1;BST-1;	Modified Tree (Carved or Scarred)
44-4-0315	Y-ST-4	Modified Tree (Carved or Scarred)
44-4-0327	Y-ST-16	Modified Tree (Carved or Scarred)
44-4-0329	Y-ST-18	Modified Tree (Carved or Scarred)
44-4-0331	Y-ST-20	Modified Tree (Carved or Scarred)
44-4-0338	N-ST-2, Cowra	Modified Tree (Carved or Scarred)
44-4-0086	ST(1) Boardmans Lane;	Modified Tree (Carved or Scarred)
43-6-0076	Conimbla Park Scarred Tree 2	Modified Tree (Carved or Scarred)
50-3-0045	Crouchdale Scar Tree 1	Modified Tree (Carved or Scarred)
44-4-0312	Y-ST-1	Modified Tree (Carved or Scarred)
44-4-0324	Y-ST-13	Modified Tree (Carved or Scarred)
44-4-0326	Y-ST-15	Modified Tree (Carved or Scarred)
44-4-0330	Y-ST-19	Modified Tree (Carved or Scarred)
44-4-0105	BR-ST (2);Boorowa Rd Scarred Tree (2);	Modified Tree (Carved or Scarred)
51-1-0156	Koorawatha Canoe 1	Modified Tree (Carved or Scarred)

51-1-0157	Koorawatha Canoe Bang Bang Creek 1	Modified Tree (Carved or Scarred)
44-4-0381	Wattamondara 960	Modified Tree (Carved or Scarred)
44-4-0314	Y-ST-3	Modified Tree (Carved or Scarred)
44-4-0320	Y-ST-9	Modified Tree (Carved or Scarred)
44-4-0319	Y-ST-8	Modified Tree (Carved or Scarred)
44-4-0321	Y-ST-10	Modified Tree (Carved or Scarred)
44-4-0323	Y-ST-12	Modified Tree (Carved or Scarred)
51-1-0155	Koorawatha 2	Modified Tree (Carved or Scarred)
44-4-0339	N-ST-3, Cowra	Modified Tree (Carved or Scarred)
44-4-0337	N-ST-1, Cowra	Modified Tree (Carved or Scarred)
44-4-0318	Y-ST-7	Modified Tree (Carved or Scarred)
50-5-0207	Cungegong TSR Scar Tree 3	Modified Tree (Carved or Scarred)
50-6-0209	Long Water Hole TSR Scar Tree 2	Modified Tree (Carved or Scarred)
50-5-0204	Cungegong TSR Scar Tree 1	Modified Tree (Carved or Scarred)
50-6-0172	Cootamundra Gap TSR Scar Tree 2	Modified Tree (Carved or Scarred)
50-6-0125	Shaftsbury Scar Tree 2	Modified Tree (Carved or Scarred)
50-6-0126	Shaftsbury 3 Scar Tree	Modified Tree (Carved or Scarred)
50-5-0067	URST1	Modified Tree (Carved or Scarred)
50-5-0208	Cungegong TSR Scar Tree 4	Modified Tree (Carved or Scarred)

50-5-0116	APA-ST5-11	Modified Tree (Carved or Scarred)
50-6-0171	Cootamundra Gap TSR Scar Tree 3	Modified Tree (Carved or Scarred)
50-6-0173	Cootamundra Gap TSR Scar Tree 1	Modified Tree (Carved or Scarred)
50-5-0206	Cunjegong Creek Scar Tree 1	Modified Tree (Carved or Scarred)
50-5-0205	Cungegong TSR Scar Tree 2	Modified Tree (Carved or Scarred)
50-6-0208	Long Water Hole TSR Scar Tree 3	Modified Tree (Carved or Scarred)
50-6-0206	Long Water Hole TSR Scar Tree 1	Modified Tree (Carved or Scarred)
50-6-0182	Ingolds Muttama Scar Tree 1	Modified Tree (Carved or Scarred)
50-6-0036	Muttama Creek 5	Modified Tree (Carved or Scarred)
50-6-0129	Boundary TSR Canoe tree 1	Modified Tree (Carved or Scarred)
50-6-0127	Cootamundra 3 Mile TRS Canoe Tree 2	Modified Tree (Carved or Scarred)
50-6-0233	Cootamundra 3	Modified Tree (Carved or Scarred)
50-6-0203	Old Gundagai Road Scar Tree 1	Modified Tree (Carved or Scarred)
50-6-0207	Long Water Hole TSR Scar Tree 4	Modified Tree (Carved or Scarred)
50-5-0032	Lake Bethungra, Bethungra Reserve	Modified Tree (Carved or Scarred)
50-5-0187	Bethungra Rail Tunnel 1	Modified Tree (Carved or Scarred)
50-6-0037	Muttama Creek 6	Modified Tree (Carved or Scarred)
56-4-0335	Henty-Doodle Comer 25	Modified Tree (Carved or Scarred)
56-4-0308	Henty Swamp Road Scarred Tree	Modified Tree (Carved or Scarred)

61-1-0008	Thurgoona Park;Mitta Junction;	Modified Tree (Carved or Scarred)
56-4-0318	Henty-Doodle Comer 3	Modified Tree (Carved or Scarred)
56-4-0317	Henty-Doodle Comer 2	Modified Tree (Carved or Scarred)
56-4-0331	Henty-Doodle Comer 20	Modified Tree (Carved or Scarred)
56-4-0341	Coolamon Land Care 5	Modified Tree (Carved or Scarred)
56-4-0333	Henty-Doodle Comer 23	Modified Tree (Carved or Scarred)
56-1-0562	Jaeger Scar 518994	Modified Tree (Carved or Scarred)
56-1-0486	Paper Forest TSR Scar Tree 2	Modified Tree (Carved or Scarred)
56-4-0330	Henty-Doodle Comer 19	Modified Tree (Carved or Scarred)
56-1-0417	Mohr TSR 1	Modified Tree (Carved or Scarred)
56-4-0321	Henty-Doodle Comer 6	Modified Tree (Carved or Scarred)
56-4-0329	Henty-Doodle Comer 18	Modified Tree (Carved or Scarred)
56-4-0319	Henty-Doodle Comer 4	Modified Tree (Carved or Scarred)
56-4-0326	Henty-Doodle Comer 12	Modified Tree (Carved or Scarred)
56-1-0123	OLYMPIC HIGHWAY THE ROCK SCARRED TREE 1	Modified Tree (Carved or Scarred)
56-4-0339	Coolamon Land Care 1	Modified Tree (Carved or Scarred)
56-4-0340	Coolamon Land Care 2	Modified Tree (Carved or Scarred)
56-1-0564	Jaeger Canoe 516867	Modified Tree (Carved or Scarred)
56-1-0563	Jaeger Scar 517376	Modified Tree (Carved or Scarred)

56-1-0481	Ceramic Scar Tree 2	Modified Tree (Carved or Scarred)
56-1-0471	Aimtree Scar Tree 1	Modified Tree (Carved or Scarred)
56-4-0323	Henty-Doodle Comer 8	Modified Tree (Carved or Scarred)
56-4-0351	Morvan 514157	Modified Tree (Carved or Scarred)
56-4-0342	Kooka Morvan 1	Modified Tree (Carved or Scarred)
56-1-0487	Paper Forest TSR Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0587	Mango Ring 526546	Modified Tree (Carved or Scarred)
56-4-0322	Henty-Doodle Comer 7	Modified Tree (Carved or Scarred)
56-4-0325	Henty-Doodle Comer 11	Modified Tree (Carved or Scarred)
56-4-0003	Ashley Park Scarred Tree VI	Modified Tree (Carved or Scarred)
56-1-0412	Mick Stevens 7	Modified Tree (Carved or Scarred)
56-1-0407	Mick Stevens 1	Modified Tree (Carved or Scarred)
56-1-0484	Paper Forest TSR Scar Tree 4	Modified Tree (Carved or Scarred)
56-4-0324	Henty-Doodle Comer 10	Modified Tree (Carved or Scarred)
56-1-0420	Mohr TSR 4	Modified Tree (Carved or Scarred)
56-1-0419	Mohr TSR 3	Modified Tree (Carved or Scarred)
56-4-0025	WW26;Ashley Park 1;	Modified Tree (Carved or Scarred)
56-1-0472	Aimtree Scar Tree 2	Modified Tree (Carved or Scarred)
56-4-0338	Henty Field Day 2	Modified Tree (Carved or Scarred)

56-1-0408	Mick Stevens 2	Modified Tree (Carved or Scarred)
56-1-0415	Coffin Rock 3	Modified Tree (Carved or Scarred)
56-1-0424	Mohr TSR 7	Modified Tree (Carved or Scarred)
56-1-0422	Mohr TSR 6	Modified Tree (Carved or Scarred)
56-1-0474	Aimtree Scar Tree 4	Modified Tree (Carved or Scarred)
56-4-0332	Henty-Doodle Comer 22	Modified Tree (Carved or Scarred)
56-4-0316	Henty -Doodle Comer 1	Modified Tree (Carved or Scarred)
56-1-0409	Mick Stevens 3	Modified Tree (Carved or Scarred)
56-1-0416	Coffin Rock 4	Modified Tree (Carved or Scarred)
56-1-0485	Paper Forest TSR Scar Tree 3	Modified Tree (Carved or Scarred)
56-4-0315	Henty Scar Tree	Modified Tree (Carved or Scarred)
56-1-0473	Aimtree Scar Tree 3	Modified Tree (Carved or Scarred)
56-4-0337	Henty Field Day Site	Modified Tree (Carved or Scarred)
56-4-0336	Henty Doodle Comer 26	Modified Tree (Carved or Scarred)
56-1-0561	Plumpton Rd 2236	Modified Tree (Carved or Scarred)
56-1-0211	Vincent 11	Modified Tree (Carved or Scarred)
56-1-0207	Vincent 7	Modified Tree (Carved or Scarred)
56-1-0205	Vincent 5	Modified Tree (Carved or Scarred)
56-1-0206	Vincent 6	Modified Tree (Carved or Scarred)

56-1-0334	The Rock TSR Scar Tree 12	Modified Tree (Carved or Scarred)
56-1-0490	The Rock Rd Side Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0001	Boiling Down Rd 1;	Modified Tree (Carved or Scarred)
56-1-0036	Wagga Tip 2;	Modified Tree (Carved or Scarred)
56-1-0234	Blackwood 20	Modified Tree (Carved or Scarred)
56-1-0233	Blackwood 19	Modified Tree (Carved or Scarred)
56-1-0002	Lucas Prop. 2;Boiling Down Rd. 2;	Modified Tree (Carved or Scarred)
56-1-0204	Vincent 4	Modified Tree (Carved or Scarred)
56-1-0435	Kengal 3	Modified Tree (Carved or Scarred)
56-1-0589	The Rock Ring Tree 508997	Modified Tree (Carved or Scarred)
56-1-0431	The Rock TSR Scar Tree 14	Modified Tree (Carved or Scarred)
56-1-0518	Kings Own 639	Modified Tree (Carved or Scarred)
56-1-0359	The Rock TSR Scar Tree 3	Modified Tree (Carved or Scarred)
56-1-0330	The Rock TSR Occluded Scar Tree 2	Modified Tree (Carved or Scarred)
56-1-0328	The Rock TSR Scar Tree 10	Modified Tree (Carved or Scarred)
56-1-0004	Rodham Prop. 4;Old Station Rd;	Modified Tree (Carved or Scarred)
56-1-0215	Blackwood 1	Modified Tree (Carved or Scarred)
56-1-0235	Blackwood 21	Modified Tree (Carved or Scarred)
56-1-0218	Vincent 12	Modified Tree (Carved or Scarred)

56-1-0565	Kengal 506822	Modified Tree (Carved or Scarred)
56-1-0566	Kengal 506869	Modified Tree (Carved or Scarred)
56-1-0340	The Rock TSR Scar Tree 32	Modified Tree (Carved or Scarred)
56-1-0497	Simpson TSR 1	Modified Tree (Carved or Scarred)
56-1-0008	Lewington Prop. 10;Wyandra;	Modified Tree (Carved or Scarred)
56-1-0493	Big Springs Gregardoo TSR 1	Modified Tree (Carved or Scarred)
56-1-0494	Big Springs Gregardoo TSR 2	Modified Tree (Carved or Scarred)
56-1-0035	Wagga Tip 1;	Modified Tree (Carved or Scarred)
56-1-0465	Thirteen Mile Rd scar 1	Modified Tree (Carved or Scarred)
56-1-0210	Vincent 10	Modified Tree (Carved or Scarred)
56-1-0209	Vincent 9	Modified Tree (Carved or Scarred)
56-1-0203	Vincent 3	Modified Tree (Carved or Scarred)
56-1-0567	Kengal 506853	Modified Tree (Carved or Scarred)
56-1-0239	Kengal 1	Modified Tree (Carved or Scarred)
56-1-0491	The Rock TSR Scar Tree 18	Modified Tree (Carved or Scarred)
56-1-0324	The Rock TSR Scar Tree 28	Modified Tree (Carved or Scarred)
56-1-0333	The Rock TSR Fire Scar Tree 2	Modified Tree (Carved or Scarred)
56-1-0131	The Rock TSR - S1	Modified Tree (Carved or Scarred)
56-1-0325	The Rock TSR Scar Tree 8	Modified Tree (Carved or Scarred)

56-1-0003	Rodham Prop. 3;Old Station Rd;	Modified Tree (Carved or Scarred)
56-1-0038	Wagga Tip 4;	Modified Tree (Carved or Scarred)
56-1-0222	Blackwood 6	Modified Tree (Carved or Scarred)
56-1-0217	Blackwood 3	Modified Tree (Carved or Scarred)
56-1-0477	Plum Pudding TSR Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0568	Kengal yugay 1	Modified Tree (Carved or Scarred)
56-1-0492	The Rock TSR Scar Tree 19	Modified Tree (Carved or Scarred)
56-1-0336	The Rock TSR Scar Tree 17	Modified Tree (Carved or Scarred)
56-1-0519	Kings Own 502	Modified Tree (Carved or Scarred)
56-1-0343	The Rock TSR Scar Tree 29	Modified Tree (Carved or Scarred)
56-1-0362	The Rock TSR Occluded Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0006	Rodham Prop. 7;Olympic Hwy;	Modified Tree (Carved or Scarred)
56-1-0237	Blackwood 23	Modified Tree (Carved or Scarred)
56-1-0216	Blackwood 2	Modified Tree (Carved or Scarred)
56-1-0586	Plum Pudding 528182	Modified Tree (Carved or Scarred)
56-1-0476	plum Pudding TSR Scar Tree 2	Modified Tree (Carved or Scarred)
56-1-0213	Vincent 13	Modified Tree (Carved or Scarred)
56-1-0214	Vincent 14	Modified Tree (Carved or Scarred)
56-1-0240	Kengal 2	Modified Tree (Carved or Scarred)

56-1-0337	The Rock TSR Scar Tree 16	Modified Tree (Carved or Scarred)
56-1-0322	The Rock TSR Scar Tree 27	Modified Tree (Carved or Scarred)
56-1-0341	The Rock TSR Scar Tree 31	Modified Tree (Carved or Scarred)
56-1-0335	The Rock TSR Scar Tree 13	Modified Tree (Carved or Scarred)
56-1-0357	The Rock TSR Scar Tree 2	Modified Tree (Carved or Scarred)
56-1-0329	The Rock TSR Scar Tree 11	Modified Tree (Carved or Scarred)
56-1-0327	The Rock TSR Scar Tree 9	Modified Tree (Carved or Scarred)
56-1-0007	Lewington Prop. 9;	Modified Tree (Carved or Scarred)
56-1-0223	Blackwood 5	Modified Tree (Carved or Scarred)
56-1-0202	Vincent 2	Modified Tree (Carved or Scarred)
56-1-0338	The Rock TSR Occluded Scar Tree 3	Modified Tree (Carved or Scarred)
56-1-0342	The Rock TSR Scar Tree 30	Modified Tree (Carved or Scarred)
56-1-0339	The Rock TSR Scar Tree 33	Modified Tree (Carved or Scarred)
56-1-0360	The Rock TSR Scar Tree 4	Modified Tree (Carved or Scarred)
56-1-0085	WW116	Modified Tree (Carved or Scarred)
56-1-0037	Wagga Tip 3;	Modified Tree (Carved or Scarred)
56-1-0355	The Rock TSR Scar Tree 15	Modified Tree (Carved or Scarred)
56-1-0323	The Rock TSR Scar Tree 26	Modified Tree (Carved or Scarred)
56-1-0361	The Rock TSR Scar Tree 5	Modified Tree (Carved or Scarred)

56-1-0344	The Rock TSR Scar Tree 7	Modified Tree (Carved or Scarred)
56-1-0363	The Rock TSR Scar Tree 6	Modified Tree (Carved or Scarred)
56-1-0005	Rodham Prop. 5;Old Station Rd;	Modified Tree (Carved or Scarred)
56-1-0221	Blackwood 7	Modified Tree (Carved or Scarred)
56-1-0224	Blackwood 4	Modified Tree (Carved or Scarred)
56-1-0236	Blackwood 22	Modified Tree (Carved or Scarred)
56-1-0501	ROWANS TSR 2	Modified Tree (Carved or Scarred)
56-1-0079	WW104	Modified Tree (Carved or Scarred)
56-1-0128	Sandy Creek Scarred Tree 1	Modified Tree (Carved or Scarred)
56-1-0078	WW103	Modified Tree (Carved or Scarred)
56-2-0162	Grahams TSR Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0391	Gabuga Tank 17	Modified Tree (Carved or Scarred)
56-1-0608	Dunns road ring tree 1	Modified Tree (Carved or Scarred)
56-1-0378	Gabuga Tank 2	Modified Tree (Carved or Scarred)
56-1-0380	Gabuga Tank 8	Modified Tree (Carved or Scarred)
56-1-0520	Springvale 957	Modified Tree (Carved or Scarred)
56-1-0077	WW102	Modified Tree (Carved or Scarred)
56-2-0293	Alfredtown TSR 2	Modified Tree (Carved or Scarred)
56-1-0661	Sandy Creek SF ST 1	Modified Tree (Carved or Scarred)

56-1-0392	Gabuga Tank 18	Modified Tree (Carved or Scarred)
56-1-0374	Gabuga Water Tank 3	Modified Tree (Carved or Scarred)
56-1-0503	ROWANS TSR 4	Modified Tree (Carved or Scarred)
56-1-0559	Plumpton Rd 2370	Modified Tree (Carved or Scarred)
56-1-0346	Uranquinty TSR Scar Tree 7	Modified Tree (Carved or Scarred)
56-1-0365	Uranquinty TSR Fire Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0499	Alfred town TSR 1	Modified Tree (Carved or Scarred)
56-1-0376	Gabuga Water Tank 5	Modified Tree (Carved or Scarred)
56-1-0386	Mark Saddler Gabuga 1	Modified Tree (Carved or Scarred)
56-1-0311	Flowerdale1	Modified Tree (Carved or Scarred)
56-1-0676	Ring Tree Boat Club Wagga	Modified Tree (Carved or Scarred)
56-1-0367	Uranquinty TSR Scar Tree 2	Modified Tree (Carved or Scarred)
56-1-0371	Uranquinty TSR Scar Tree 5	Modified Tree (Carved or Scarred)
56-1-0370	Uranquinty TSR Fire Scar Tree 2	Modified Tree (Carved or Scarred)
56-1-0662	Sandy Creek SF ST 2	Modified Tree (Carved or Scarred)
56-1-0129	Kapooka Pump Station ST 1	Modified Tree (Carved or Scarred)
56-1-0387	Gabuga Tank 13	Modified Tree (Carved or Scarred)
56-1-0383	Gabuga Tank 9	Modified Tree (Carved or Scarred)
56-1-0495	Big Springs Gregardoo 3	Modified Tree (Carved or Scarred)

56-1-0607	RAAF Base 543234	Modified Tree (Carved or Scarred)
56-1-0369	Uranquinty TSR Scar Tree 4	Modified Tree (Carved or Scarred)
56-1-0089	WW101	Modified Tree (Carved or Scarred)
56-1-0381	Gabuga Tank 10	Modified Tree (Carved or Scarred)
56-1-0125	LLOYD SITE 1	Modified Tree (Carved or Scarred)
56-1-0502	ROWANS TSR 3	Modified Tree (Carved or Scarred)
56-1-0585	Stringybark Creek 529852	Modified Tree (Carved or Scarred)
56-1-0080	WW105	Modified Tree (Carved or Scarred)
56-1-0483	Mitchell Rd 240 Canoe Tree	Modified Tree (Carved or Scarred)
56-1-0366	Uranquinty TSR Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0372	Uranquinty TSR Occluded Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0393	Rodhams Rd 1	Modified Tree (Carved or Scarred)
56-1-0430	Rodhams Rd 2	Modified Tree (Carved or Scarred)
56-1-0127	Kapooka Water Tank ST 1	Modified Tree (Carved or Scarred)
56-1-0373	Gabuga Water Tank 1	Modified Tree (Carved or Scarred)
56-1-0382	Gabuga Tank 11	Modified Tree (Carved or Scarred)
56-1-0560	Plumpton Rd 2381	Modified Tree (Carved or Scarred)
56-1-0368	Uranquinty TSR Scar Tree 3	Modified Tree (Carved or Scarred)
56-1-0364	Uranquinty TSR Scar Tree 6	Modified Tree (Carved or Scarred)

56-1-0107	UW-ST-1	Modified Tree (Carved or Scarred)
56-1-0375	Gabuga Water Tank 4	Modified Tree (Carved or Scarred)
56-1-0531	Gregadoo SF 645	Modified Tree (Carved or Scarred)
56-1-0377	Gabuga Water Tank 6	Modified Tree (Carved or Scarred)
56-1-0379	Gabuga Tank 7	Modified Tree (Carved or Scarred)
56-1-0121	Kapooka Bridge Scarred Tree 1	Modified Tree (Carved or Scarred)
56-1-0577	Springvale 530749	Modified Tree (Carved or Scarred)
56-1-0677	Wagga Boat Club Crown Land Scar Tree	Modified Tree (Carved or Scarred)
56-2-0263	Sturt hwy Scar Tree 1	Modified Tree (Carved or Scarred)
56-2-0281	Wandella Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0389	Gabuga Tank 15	Modified Tree (Carved or Scarred)
56-1-0390	Gabuga Tank 16	Modified Tree (Carved or Scarred)
56-1-0388	Gabuga Tank 14	Modified Tree (Carved or Scarred)
56-1-0456	Crooked Creek Ring Tree 1	Modified Tree (Carved or Scarred)
56-1-0112	Wagga Research Centre double Scar Tree	Modified Tree (Carved or Scarred)
56-1-0051	LN 5	Modified Tree (Carved or Scarred)
56-1-0468	Agricultural institute Shearing Shed Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0549	Lloyd 530368	Modified Tree (Carved or Scarred)
56-1-0353	Wagga Wagga Pounds Flat TSR Scar Tree 2	Modified Tree (Carved or Scarred)

56-1-0133	Houlaghan 1	Modified Tree (Carved or Scarred)
56-1-0153	Meggison 1	Modified Tree (Carved or Scarred)
56-1-0545	Downside Travelling Stock Reserve	Modified Tree (Carved or Scarred)
56-1-0675	Wagga caravan park CMT	Modified Tree (Carved or Scarred)
56-1-0613	Pomingalarna Park ST-02 (PP ST-02)	Modified Tree (Carved or Scarred)
56-1-0099	L-ST-2	Modified Tree (Carved or Scarred)
56-1-0667	Lloyd Scar Underpass	Modified Tree (Carved or Scarred)
56-1-0572	Lloyd 529306 L-ST-6 (duplicate copy 56-1-0102)	Modified Tree (Carved or Scarred)
56-1-0548	Llyod 530361	Modified Tree (Carved or Scarred)
56-1-0348	Wagga Wagga Pounds Flat TSR Scar Tree 7	Modified Tree (Carved or Scarred)
56-1-0350	Wagga Wagga Pounds Flat TSR Scar Tree 5	Modified Tree (Carved or Scarred)
56-1-0090	Wollundry	Modified Tree (Carved or Scarred)
56-1-0426	Murrumbidya Wetlands 1	Modified Tree (Carved or Scarred)
56-1-0140	Wagga Wagga Downside Dry TSR Tree Scar 5 occluded	Modified Tree (Carved or Scarred)
56-1-0427	Murrumbidya Wetlands 2	Modified Tree (Carved or Scarred)
56-1-0612	Pomingalarna Park ST-03 (PP ST-03)	Modified Tree (Carved or Scarred)
56-1-0618	Pomingalarna Park ST-06 (PP ST-06)	Modified Tree (Carved or Scarred)
56-1-0592	Kapooka PreSchool 527789	Modified Tree (Carved or Scarred)
56-1-0573	Lloyd 529096	Modified Tree (Carved or Scarred)

56-1-0575	Lloyd 529359 L-ST-6 (duplicate copy 56-1-0103)	Modified Tree (Carved or Scarred)
56-1-0313	Flowerdale 3	Modified Tree (Carved or Scarred)
56-1-0429	Mark Saddler CSU 1	Modified Tree (Carved or Scarred)
56-1-0144	Wagga Wagga Downside Dry TSR Tree Scar 2	Modified Tree (Carved or Scarred)
56-1-0145	Wagga Wagga Downside Dry TSR Tree Fire Scar 1	Modified Tree (Carved or Scarred)
56-1-0042	Jessie May	Modified Tree (Carved or Scarred)
56-1-0496	Gabuga Overpass Scar 1	Modified Tree (Carved or Scarred)
56-1-0100	L-ST-3	Modified Tree (Carved or Scarred)
56-1-0102	L-ST-5 (duplicate copy 56-1-0572)	Modified Tree (Carved or Scarred)
56-1-0576	Lloyd 529314	Modified Tree (Carved or Scarred)
56-1-0470	Agricultural institute Shearing Shed Scar Tree 3	Modified Tree (Carved or Scarred)
56-1-0138	Wagga Wagga Downside Dry TSR Canoe 1	Modified Tree (Carved or Scarred)
56-1-0142	Wagga Wagga Downside Dry TSR. Tree Scar 3 occluded	Modified Tree (Carved or Scarred)
56-1-0136	Wagga Wagga Downside Dry TSR Scar Tree 6	Modified Tree (Carved or Scarred)
56-1-0146	Wagga Wagga Downside dry TSR Tree Scar 1	Modified Tree (Carved or Scarred)
56-1-0095	WW 126	Modified Tree (Carved or Scarred)
56-1-0088	WW129	Modified Tree (Carved or Scarred)
56-1-0680	Wagga Beach 1	Modified Tree (Carved or Scarred)
56-1-0614	Pomingalarna Park ST-01 (PP ST-01)	Modified Tree (Carved or Scarred)

56-1-0349	Wagga Wagga Pounds Flat TSR Scar Tree 6	Modified Tree (Carved or Scarred)
56-1-0101	L-ST-4	Modified Tree (Carved or Scarred)
56-1-0351	Wagga Wagga Pounds Flat TSR Fire Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0352	Wagga Wagga Pounds Flat TSR Scar Tree 4	Modified Tree (Carved or Scarred)
56-1-0354	Wagga Wagga Pound Flat Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0135	Houlaghan 3	Modified Tree (Carved or Scarred)
56-1-0143	Wagga Wagga Downside Dry TSR Tree Fire Scar 2	Modified Tree (Carved or Scarred)
56-1-0620	Wagga SAP ST-01	Modified Tree (Carved or Scarred)
56-1-0091	River Road WW 121	Modified Tree (Carved or Scarred)
56-1-0086	WW120	Modified Tree (Carved or Scarred)
56-1-0544	Marrambidya Wagga 534384	Modified Tree (Carved or Scarred)
56-1-0570	Lloyd 528729 (Not an Aboriginal Object)	Modified Tree (Carved or Scarred)
56-1-0574	Lloyd 530222	Modified Tree (Carved or Scarred)
56-1-0425	Red Hill Rd West 1	Modified Tree (Carved or Scarred)
56-1-0347	Wagga Wagga Pounds Flat TSR Fire Scar 2	Modified Tree (Carved or Scarred)
56-1-0312	Flowerdale 2	Modified Tree (Carved or Scarred)
56-1-0141	Wagga Wagga Downside Dry TSR Tree Scar 4 occluded	Modified Tree (Carved or Scarred)
56-1-0122	Wollundry Tree	Modified Tree (Carved or Scarred)
56-1-0611	Pomingalarna Park ST-04 (PP ST-04)	Modified Tree (Carved or Scarred)

56-1-0098	L-ST-1	Modified Tree (Carved or Scarred)
56-1-0469	Agricultural institute Shearing Shed Scar Tree 2	Modified Tree (Carved or Scarred)
56-1-0345	Wagga Wagga Pounds Flat TSR Scar Tree 3	Modified Tree (Carved or Scarred)
56-1-0488	Olympic Highway Ashmont 1	Modified Tree (Carved or Scarred)
56-1-0578	Lloyd 529316	Modified Tree (Carved or Scarred)
56-1-0103	L-ST-6 (duplicate copy 56-1-0575)	Modified Tree (Carved or Scarred)
56-1-0489	Reefton TSR	Modified Tree (Carved or Scarred)
56-1-0139	Wagga Wagga Downside Dry TSR Tree Scar Foot Holes 1	Modified Tree (Carved or Scarred)
56-1-0134	Houlaghans 2	Modified Tree (Carved or Scarred)
56-1-0155	Wagga Wagga Downside Dry TSR ScarTree 7	Modified Tree (Carved or Scarred)
56-1-0610	Pomingalarna Park ST-05 (PP ST-05)	Modified Tree (Carved or Scarred)
56-2-0265	Wantabadgery Scar Tree 1	Modified Tree (Carved or Scarred)
50-5-0196	Eurongilly TSR Scar Tree 1	Modified Tree (Carved or Scarred)
50-4-0069	Harts TSR OLYMPIC HWY WALLACETOWN VIA WAGGA WAGGA	Modified Tree (Carved or Scarred)
50-5-0174	Myrtievale Scar Tree 1	Modified Tree (Carved or Scarred)
50-5-0133	Triangle TSR Scar Tree 4	Modified Tree (Carved or Scarred)
50-5-0173	Myrtievale Scar Tree 2	Modified Tree (Carved or Scarred)
50-5-0137	Triangle TSR Scar Tree 5	Modified Tree (Carved or Scarred)
50-5-0211	Old Junee 048	Modified Tree (Carved or Scarred)

50-5-0203	Old Sydney Rd 714	Modified Tree (Carved or Scarred)
50-5-0132	Triangle TSR Scar Tree 3	Modified Tree (Carved or Scarred)
50-5-0127	Triangle TSR Scar Tree 1	Modified Tree (Carved or Scarred)
50-5-0194	Eurongilly TSR Scar Tree 4	Modified Tree (Carved or Scarred)
50-5-0161	Sawyers TSR Scar Tree 1	Modified Tree (Carved or Scarred)
50-5-0212	Old Junee 714	Modified Tree (Carved or Scarred)
50-5-0165	Sawyers TSR Scar Tree 7	Modified Tree (Carved or Scarred)
50-5-0012	Harefield	Modified Tree (Carved or Scarred)
50-5-0143	Trigalong TSR canoe 1	Modified Tree (Carved or Scarred)
50-5-0213	Old Junee 433	Modified Tree (Carved or Scarred)
50-5-0195	Eurongilly TSR Scar Tree 3	Modified Tree (Carved or Scarred)
50-4-0070	Harts TSR 2,WALLACETOWN	Modified Tree (Carved or Scarred)
50-5-0202	Old Sydney Rd 048	Modified Tree (Carved or Scarred)
50-5-0131	Triangle TSR Scar Tree 2	Modified Tree (Carved or Scarred)
50-5-0144	Old Sydney Road Scar Tree	Modified Tree (Carved or Scarred)
56-2-0272	Waters Wantabadgery Scar Tree 1	Modified Tree (Carved or Scarred)
56-1-0428	Olive Grove Wagga 1	Modified Tree (Carved or Scarred)
50-5-0200	Old Junee 643	Modified Tree (Carved or Scarred)
50-5-0201	Old Sydney Rd 433	Modified Tree (Carved or Scarred)

56-1-0459	Bomen RIFL ST1	Modified Tree (Carved or Scarred)
56-1-0542	Bomen 540684	Modified Tree (Carved or Scarred)
50-4-0074	Wallace Town Canoe 831	Modified Tree (Carved or Scarred)
50-5-0120	bethunga crow land rd deakin/eulomo tree frie scae 2	Modified Tree (Carved or Scarred)
50-5-0177	Bethungra 4 Mile TSR Scar Tree 1	Modified Tree (Carved or Scarred)
50-5-0152	Bethungra Truck Yard Scar Tree 5	Modified Tree (Carved or Scarred)
50-5-0159	Sawyers TSR Scar Tree 3	Modified Tree (Carved or Scarred)
50-5-0154	Bethungra Truck Yard Scar Tree 7	Modified Tree (Carved or Scarred)
50-5-0166	Sawyers TSR Scar Tree 6	Modified Tree (Carved or Scarred)
50-5-0158	Sawyers TSR Scar Tree 4	Modified Tree (Carved or Scarred)
50-5-0002	Bethungra Ironbong Creek	Modified Tree (Carved or Scarred)
50-5-0117	bethungra crown land rd deakin/eulomo tree fire scar 1	Modified Tree (Carved or Scarred)
50-5-0181	Bethungra 4 Mile TSR Scar Tree 8	Modified Tree (Carved or Scarred)
50-5-0176	Bethungra 4 Mile TSR Scar Tree 11	Modified Tree (Carved or Scarred)
50-5-0153	Bethungra Truck Yard Scar Tree 6	Modified Tree (Carved or Scarred)
50-5-0178	Bethungra 4 Mile TSR Scar Tree 2	Modified Tree (Carved or Scarred)
50-5-0183	Bethungra 4 Mile TSR Scar Tree 4	Modified Tree (Carved or Scarred)
50-5-0151	Bethungra Truck Yard Scar Tree 1	Modified Tree (Carved or Scarred)
50-5-0182	Bethungra 4 Mile TSR Scar Tree 3	Modified Tree (Carved or Scarred)

50-5-0167	Sawyers TSR Scar Tree 5	Modified Tree (Carved or Scarred)
50-5-0121	bethunga crown land rd beakin/eulomo tree marker 1	Modified Tree (Carved or Scarred)
50-5-0184	Bethungra 4 Mile TSR Scar Tree 5	Modified Tree (Carved or Scarred)
50-5-0146	Bethungra Truck Yard Scar Tree 4	Modified Tree (Carved or Scarred)
50-5-0277	Ironbong Road Bethungra Scar Tree 1	Modified Tree (Carved or Scarred)
50-5-0180	Bethungra 4 Mile TSR Scar Tree 9	Modified Tree (Carved or Scarred)
50-5-0119	bethungra ironbong rd beakin/eulomo tree fire scar 1	Modified Tree (Carved or Scarred)
50-5-0286	Ironbong Road Bethungra Scar Tree 2	Modified Tree (Carved or Scarred)
50-5-0185	Bethungra 4 Mile TSR Scar Tree 7	Modified Tree (Carved or Scarred)
50-5-0186	Bethungra 4 Mile TSR Scar Tree 6	Modified Tree (Carved or Scarred)
50-5-0149	Bethungra Truck Yard Scar Tree 2	Modified Tree (Carved or Scarred)
50-5-0145	Bethungra Truck Yard Scar Tree 3	Modified Tree (Carved or Scarred)
50-5-0179	Bethungra 4 Mile TSR Scar Tree 10	Modified Tree (Carved or Scarred)
50-5-0175	Bethungra 4 Mile TSR Scar Tree 12	Modified Tree (Carved or Scarred)
50-5-0138	HOGMANS TANK TSR	Modified Tree (Carved or Scarred)
50-6-0108	Jindalee NP Tree11	Modified Tree (Carved or Scarred)
50-6-0099	Jindalee NP Tree2	Modified Tree (Carved or Scarred)
50-6-0104	Jindalee NP Tree7	Modified Tree (Carved or Scarred)
50-5-0171	Manwaring Scar Tree 2	Modified Tree (Carved or Scarred)

50-3-0010	WT/ST1	Modified Tree (Carved or Scarred)
50-6-0101	Jindalee NP Tree4	Modified Tree (Carved or Scarred)
50-6-0103	Jindalee NP Tree6	Modified Tree (Carved or Scarred)
50-5-0142	BOUNDARY TSR COOLAMON.	Modified Tree (Carved or Scarred)
50-5-0124	Wamoon 1	Modified Tree (Carved or Scarred)
50-5-0172	Manwaring Scar Tree 1	Modified Tree (Carved or Scarred)
50-6-0110	Jindalee NP Tree11	Modified Tree (Carved or Scarred)
50-6-0113	Jindalee NP Tree14	Modified Tree (Carved or Scarred)
50-6-0100	Jindalee NP Tree3	Modified Tree (Carved or Scarred)
50-6-0111	Jindalee NP Tree12	Modified Tree (Carved or Scarred)
50-6-0205	Erlingtons TSR Scar Tree 1	Modified Tree (Carved or Scarred)
50-6-0117	Jindalee NP Tree18	Modified Tree (Carved or Scarred)
50-6-0105	Jindalee NP Tree8	Modified Tree (Carved or Scarred)
50-6-0112	Jindalee NP Tree13	Modified Tree (Carved or Scarred)
50-6-0114	Jindalee NP Tree15	Modified Tree (Carved or Scarred)
50-6-0115	Jindalee NP Tree16	Modified Tree (Carved or Scarred)
50-6-0098	Jindalee NP Tree1	Modified Tree (Carved or Scarred)
50-5-0122	Coota Stock Ring 1	Modified Tree (Carved or Scarred)
50-6-0109	Jindalee NP Tree10	Modified Tree (Carved or Scarred)

50-6-0107	Jindalee NP Tree10	Modified Tree (Carved or Scarred)
50-6-0116	Jindalee NP Tree17	Modified Tree (Carved or Scarred)
50-6-0102	Jindalee NP Tree5	Modified Tree (Carved or Scarred)
50-5-0170	Manwaring Scar Tree 3	Modified Tree (Carved or Scarred)
50-2-0018	Flagstaff Memorial Nature Reserve	Modified Tree (Carved or Scarred)
50-5-0123	Coota Stock Ring 2	Modified Tree (Carved or Scarred)
50-3-0046	Burley Griffin way Scar Tree 1	Modified Tree (Carved or Scarred)
50-6-0106	Jindalee NP Tree9	Modified Tree (Carved or Scarred)
44-4-0041	br-st 1;	Modified Tree (Carved or Scarred)
44-4-0106	BGH-ST 3;Billy Goat Hill Scarred Tree(3);	Modified Tree (Carved or Scarred)
44-4-0061	CTC ST(5) Cowra Town Common	Modified Tree (Carved or Scarred)
44-4-0147	Cowra Town Common;CTC-ST-18;	Modified Tree (Carved or Scarred)
44-4-0067	CTC ST(11) Cowra Town Common	Modified Tree (Carved or Scarred)
44-4-0216	DL-ST-1;	Modified Tree (Carved or Scarred)
44-4-0151	Telecom Tower Hill;BGH-ST-6;	Modified Tree (Carved or Scarred)
44-4-0031	cowra tip rd 2;	Modified Tree (Carved or Scarred)
44-4-0278	ST-19	Modified Tree (Carved or Scarred)
44-4-0032	cowra tip rd 3;	Modified Tree (Carved or Scarred)
44-4-0282	ST-9	Modified Tree (Carved or Scarred)

44-4-0130	CTC-ST 16 Cowra town common	Modified Tree (Carved or Scarred)
44-4-0063	CTC ST(7);Cowra Town Common;	Modified Tree (Carved or Scarred)
44-4-0138	Cowra Town Common;CTC-ST-23;	Modified Tree (Carved or Scarred)
44-4-0154	Cowra Town Common;CTC-ST-24;	Modified Tree (Carved or Scarred)
44-4-0034	wangoola ck scarred tree 1;	Modified Tree (Carved or Scarred)
44-4-0016	Boutland Scarred Tree	Modified Tree (Carved or Scarred)
44-4-0028	cowra point 1 {lachlan river];	Modified Tree (Carved or Scarred)
44-4-0148	Telecom Tower Hill;BGH-ST-5;	Modified Tree (Carved or Scarred)
44-4-0380	PRIDHAM 1	Modified Tree (Carved or Scarred)
44-4-0030	cowra tip rd 1;	Modified Tree (Carved or Scarred)
44-4-0033	cowra tip rd 4;	Modified Tree (Carved or Scarred)
44-4-0046	Billy Goat Hill_(bgh-st1);Scarred tree 2;	Modified Tree (Carved or Scarred)
44-4-0283	ST-8	Modified Tree (Carved or Scarred)
44-4-0342	billy gaot hill scare tree3	Modified Tree (Carved or Scarred)
44-4-0129	CTC-ST 15 Cowra town common	Modified Tree (Carved or Scarred)
44-4-0060	CTC ST(3) Cowra Town Common	Modified Tree (Carved or Scarred)
44-4-0280	ST-17	Modified Tree (Carved or Scarred)
44-4-0144	Cowra Town Common;CTC-ST-29;	Modified Tree (Carved or Scarred)
44-4-0145	Cowra Town Common;CTC-ST-27;	Modified Tree (Carved or Scarred)

44-4-0017	Cowra - Cargo turnoff scarred tree	Modified Tree (Carved or Scarred)
44-4-0029	Cowra point 2 (Lachlan River);	Modified Tree (Carved or Scarred)
44-4-0150	Telecom Tower Hill;BGH-ST-7;	Modified Tree (Carved or Scarred)
44-4-0107	BGH-ST 4;Billy Goat Hill Scarred Tree (4);	Modified Tree (Carved or Scarred)
44-4-0343	billy goat hill scared tree	Modified Tree (Carved or Scarred)
44-4-0139	Cowra Town Common;CTC-ST-22;	Modified Tree (Carved or Scarred)
44-4-0140	Cowra Town Common;CTC-ST-21;	Modified Tree (Carved or Scarred)
44-4-0141	Cowra Town Common;CTC-ST-20;	Modified Tree (Carved or Scarred)
44-4-0146	Cowra Town Common;CTC-ST-26;	Modified Tree (Carved or Scarred)
44-4-0143	Cowra Town Common;CTC-ST-28;	Modified Tree (Carved or Scarred)
44-4-0267	MF-ST-5	Modified Tree (Carved or Scarred)
44-4-0217	SC-ST-1;	Modified Tree (Carved or Scarred)
44-4-0059	CTC ST(2) Cowra Town Common	Modified Tree (Carved or Scarred)
44-3-0098	CTC-ST 4;	Modified Tree (Carved or Scarred)
44-4-0275	ST-22	Modified Tree (Carved or Scarred)
44-4-0062	CTC ST(6) Cowra Town Common	Modified Tree (Carved or Scarred)
44-4-0137	Cowra Town Common;CTC-ST-25;	Modified Tree (Carved or Scarred)
44-4-0093	CTC-ST-14;Cowra Town Common Scarred Tree (14);	Modified Tree (Carved or Scarred)
44-4-0011	Kangaroo Flat Road	Modified Tree (Carved or Scarred)

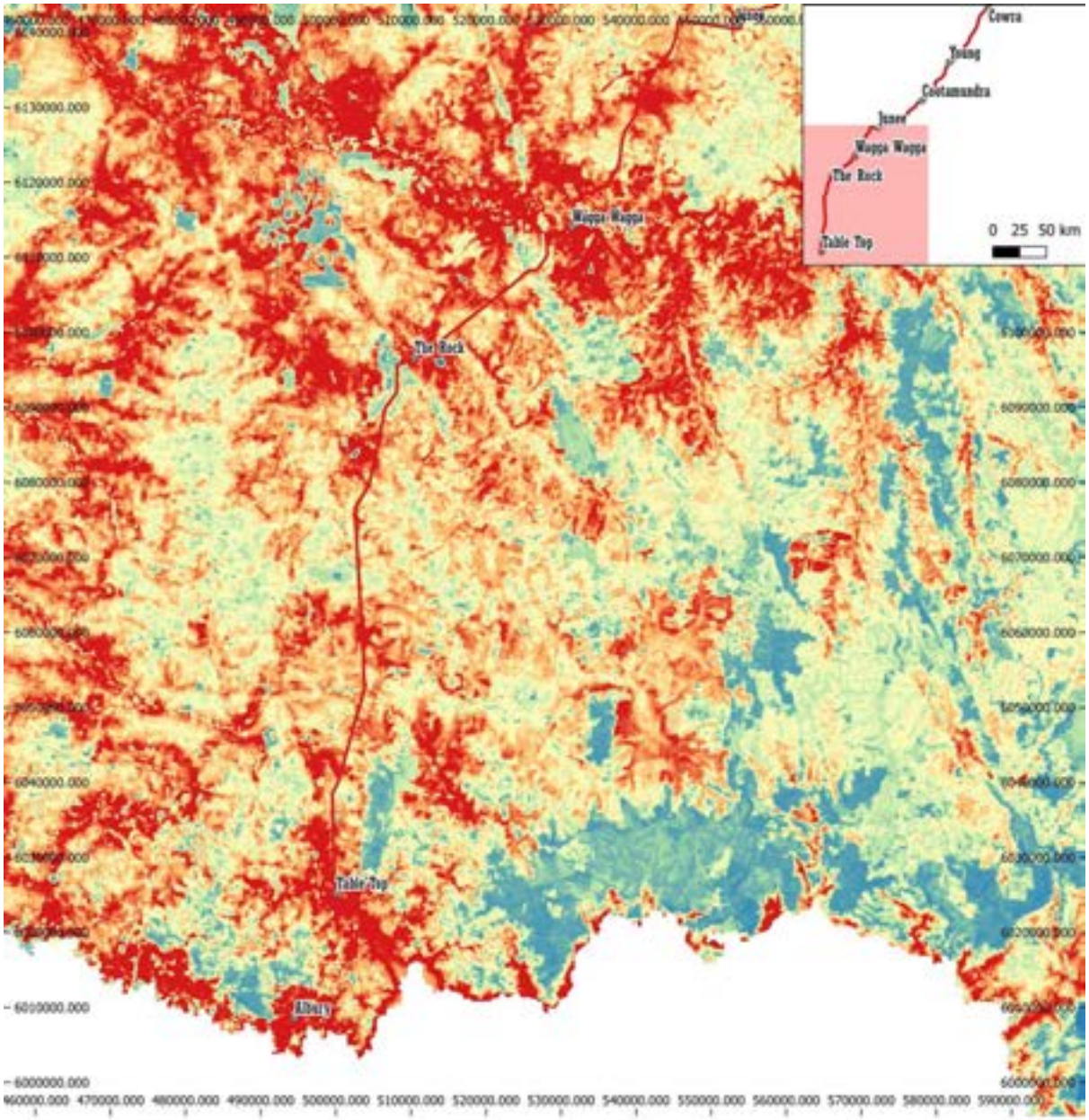
44-4-0274	ST-1	Modified Tree (Carved or Scarred)
44-4-0276	ST-21	Modified Tree (Carved or Scarred)
44-4-0142	Cowra Town Common;CTC-ST-19;	Modified Tree (Carved or Scarred)
44-4-0039	cowra common numerous scarred trees;	Modified Tree (Carved or Scarred)
44-4-0269	MF-ST-2	Modified Tree (Carved or Scarred)
44-4-0361	scar tree cowra caravan park	Modified Tree (Carved or Scarred)
44-4-0045	Billy Goat Hill_(bgh-st1);Scarred tree 1;	Modified Tree (Carved or Scarred)
44-4-0279	ST-18	Modified Tree (Carved or Scarred)
44-4-0281	ST-10	Modified Tree (Carved or Scarred)
44-4-0001	Gooloogong Goodwins Lookout Cowra Carved Tree	Modified Tree (Carved or Scarred)
44-4-0277	ST-20	Modified Tree (Carved or Scarred)
44-4-0340	billy goat hill scared tree1	Modified Tree (Carved or Scarred)
44-4-0094	CTC-ST-13;Cowra Town Common Scarred Tree (13);	Modified Tree (Carved or Scarred)
44-4-0092	CTC-ST-12 Cowra Town Common Scarred Tree (12)	Modified Tree (Carved or Scarred)
44-4-0353	YAST1 (Cowra)	Modified Tree (Carved or Scarred)
44-4-0268	MF-ST-3	Modified Tree (Carved or Scarred)
44-4-0270	MF-ST-1	Modified Tree (Carved or Scarred)
44-2-0091	Thornleigh scarred tree	Modified Tree (Carved or Scarred)
44-4-0284	ST-2	Modified Tree (Carved or Scarred)

44-4-0058	CTC ST(1) Cowra Town Common	Modified Tree (Carved or Scarred)
44-4-0131	CTC-ST 17 Cowra town common	Modified Tree (Carved or Scarred)
44-4-0341	billy goat hill scared tree 2	Modified Tree (Carved or Scarred)
44-4-0064	CTC ST(8) Cowra Town Common	Modified Tree (Carved or Scarred)
44-4-0066	CTC ST(10) Cowra Town Common	Modified Tree (Carved or Scarred)
44-4-0266	MF-ST-6	Modified Tree (Carved or Scarred)
44-4-0052	BR-OQ;Boorawa Rd Ochre Quarry;	Ochre Quarry
44-4-0305	Y-QS-1	Ochre Quarry
44-4-0102	BR-OD 2	Ochre Quarry
50-3-0021	Dananbilla Site 7	Potential Archaeological Deposit (PAD)
51-4-0077	PAD 3 - (Douglas Creek Crossing)	Potential Archaeological Deposit (PAD)
50-6-0244	Cunningham Valley Sensitive Area 01	Potential Archaeological Deposit (PAD)
50-6-0263	CV Sensitive Area 04	Potential Archaeological Deposit (PAD)
50-3-0018	Dananbilla site 7	Potential Archaeological Deposit (PAD)
50-6-0265	CV Sensitive Area 05	Potential Archaeological Deposit (PAD)
50-6-0266	CV Sensitive Area 06	Potential Archaeological Deposit (PAD)
50-6-0245	Cunningham Valley Sensitive Area 02	Potential Archaeological Deposit (PAD)
50-5-0287	Run Boundary Creek Bethungra PAD	Potential Archaeological Deposit (PAD)
50-5-0281	Dirnaseer Road PAD 2	Potential Archaeological Deposit (PAD)

50-5-0288	Dirnaseer Road PAD 1	Potential Archaeological Deposit (PAD)
50-5-0278	Ironbong Road Bethungra PAD	Potential Archaeological Deposit (PAD)
50-5-0079	OS - 2	Potential Archaeological Deposit (PAD)
50-5-0282	Old Cootamundra Road PAD	Potential Archaeological Deposit (PAD)
50-5-0280	Olympic Highway Illabo PAD	Potential Archaeological Deposit (PAD)
44-4-0355	PAD1 (Cowra)	Potential Archaeological Deposit (PAD)
44-4-0370	CPPPAD1	Potential Archaeological Deposit (PAD)
50-5-0139	Hicks TSR	Stone Arrangement
50-6-0128	Shaftsbury 1 Rock scatter	Stone Arrangement
50-5-0134	Triangle TSR Rock Quarry	Stone Quarry
50-5-0130	Triangle TSR Rock Core 5	Stone Quarry
56-1-0421	Mohr TSR 5	Water Hole
50-5-0003	Junee BY 5	Water Hole
50-5-0156	Bethungra Truck Yard Rock Well 2	Water Hole
44-4-0065	Restriction applied. Please contact ahims@environment.nsw.gov.au.	Restricted

Search results from AHIMS database

APPENDIX 3: ASDST MAPPING



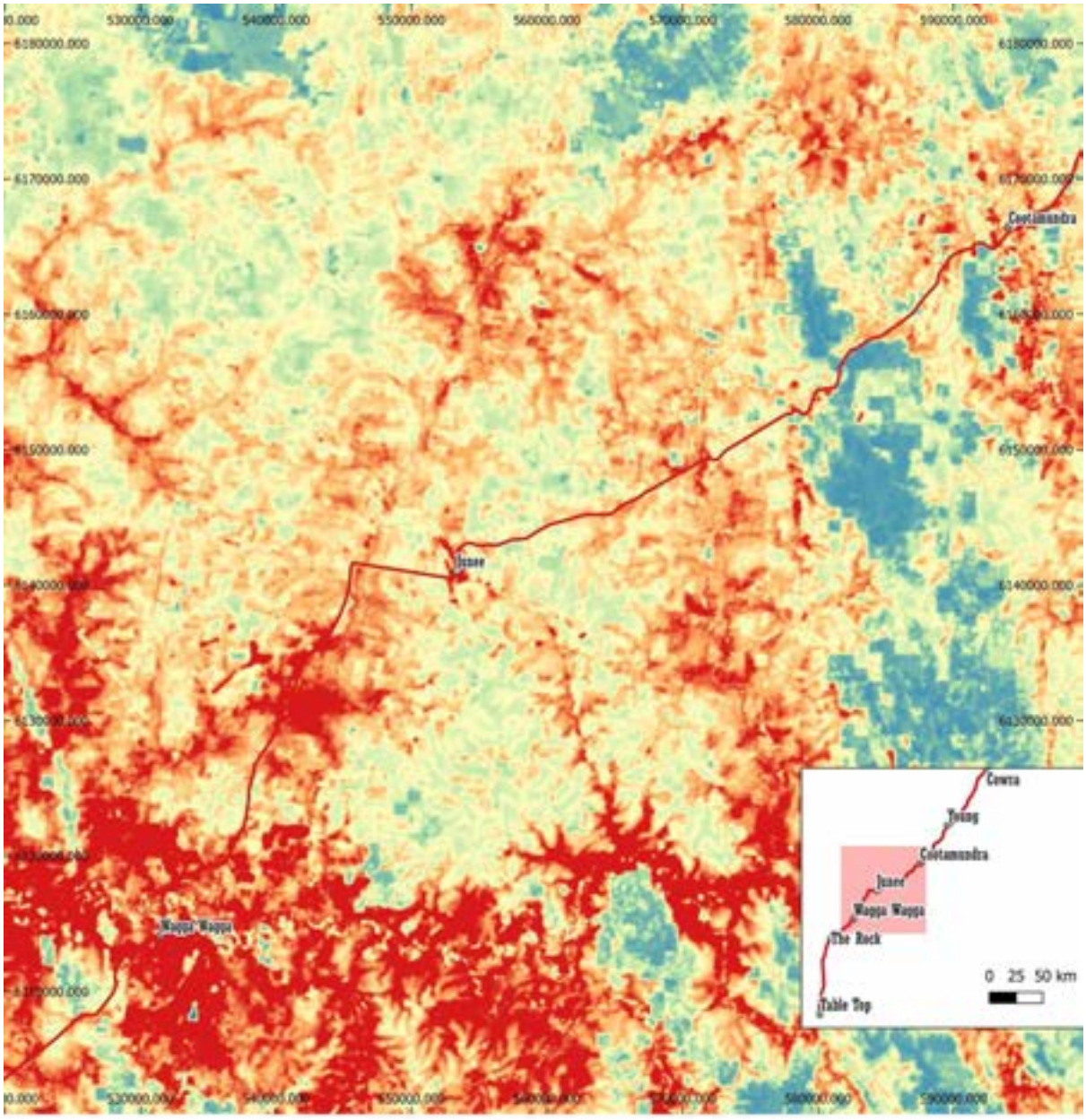
Olympic Highway ASDST Accumulated impacts - Section 1

places
Olympic Hwy Buffer area
ASDST
Accumulated impacts
8
90.8
174
256
339

0 10 20 km

N

Base Map: Current Topographic Map



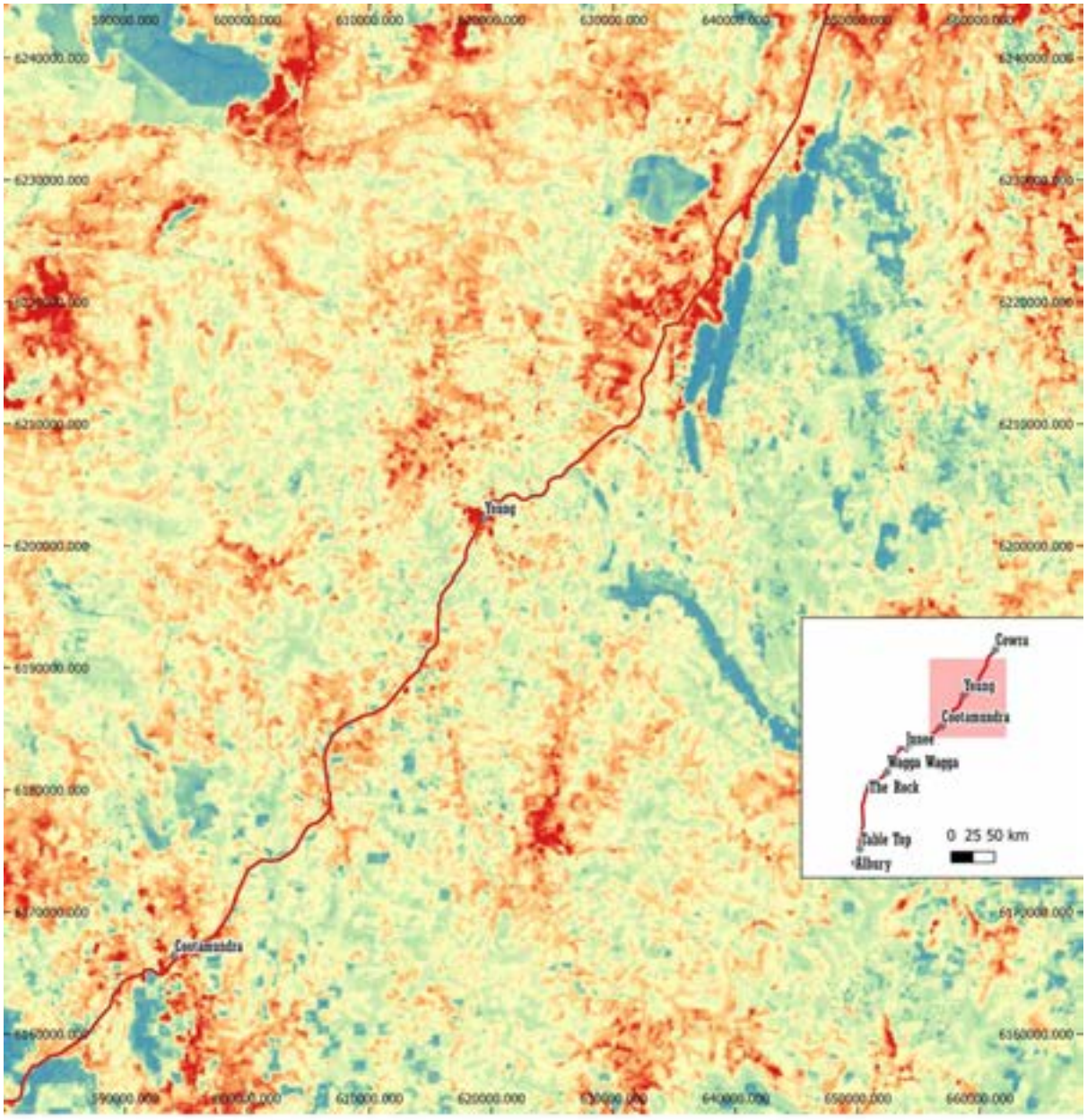
Olympic Highway ASDST Accumulated impacts - Section 2

places
Olympic Hwy Buffer area
ASDST
Accumulated impacts
8
90.8
174
256
339

0 7.5 15 km

N

Base Map: Current Topographic Map



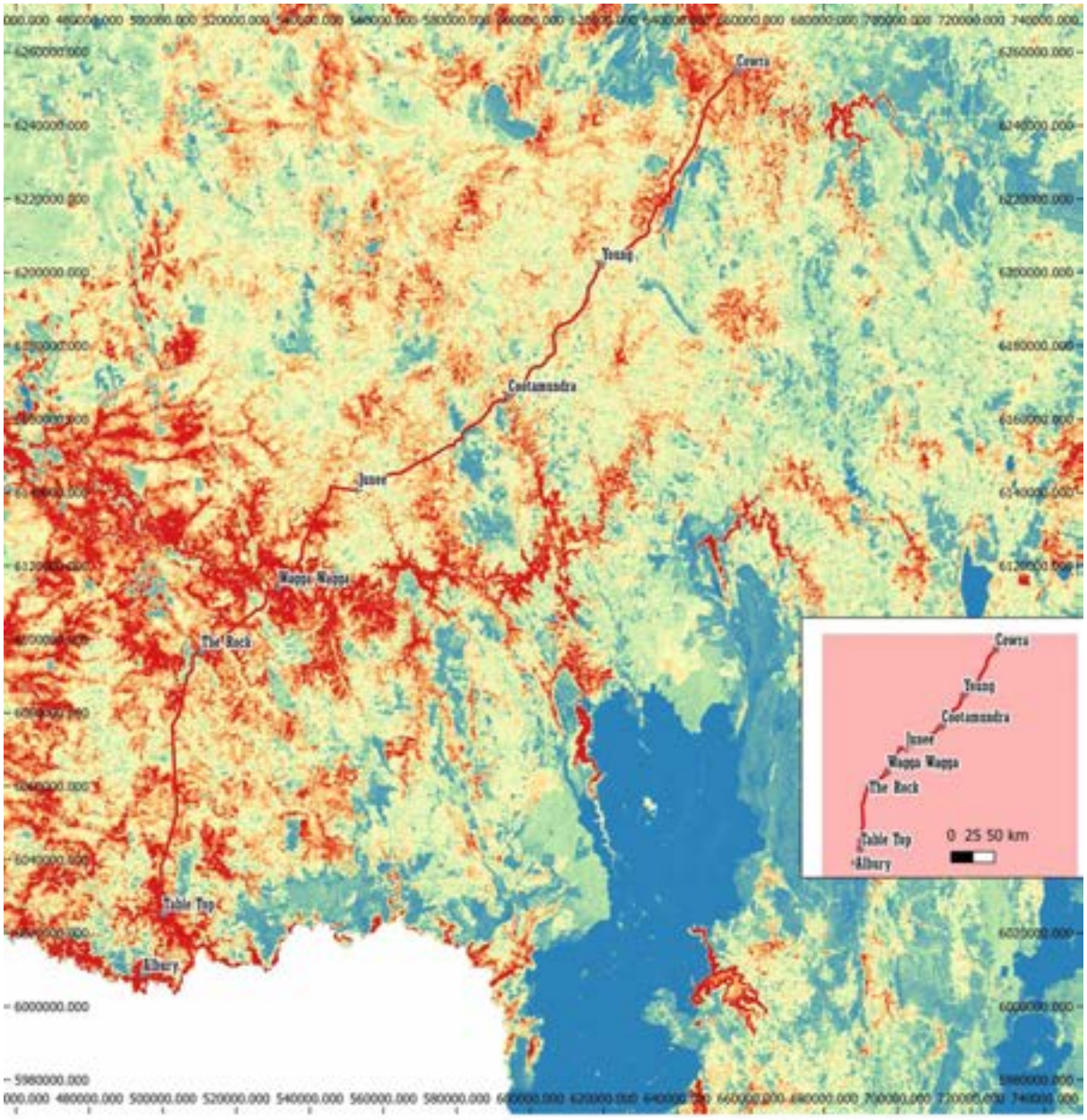
Olympic Highway ASDST Accumulated impacts - Section 3

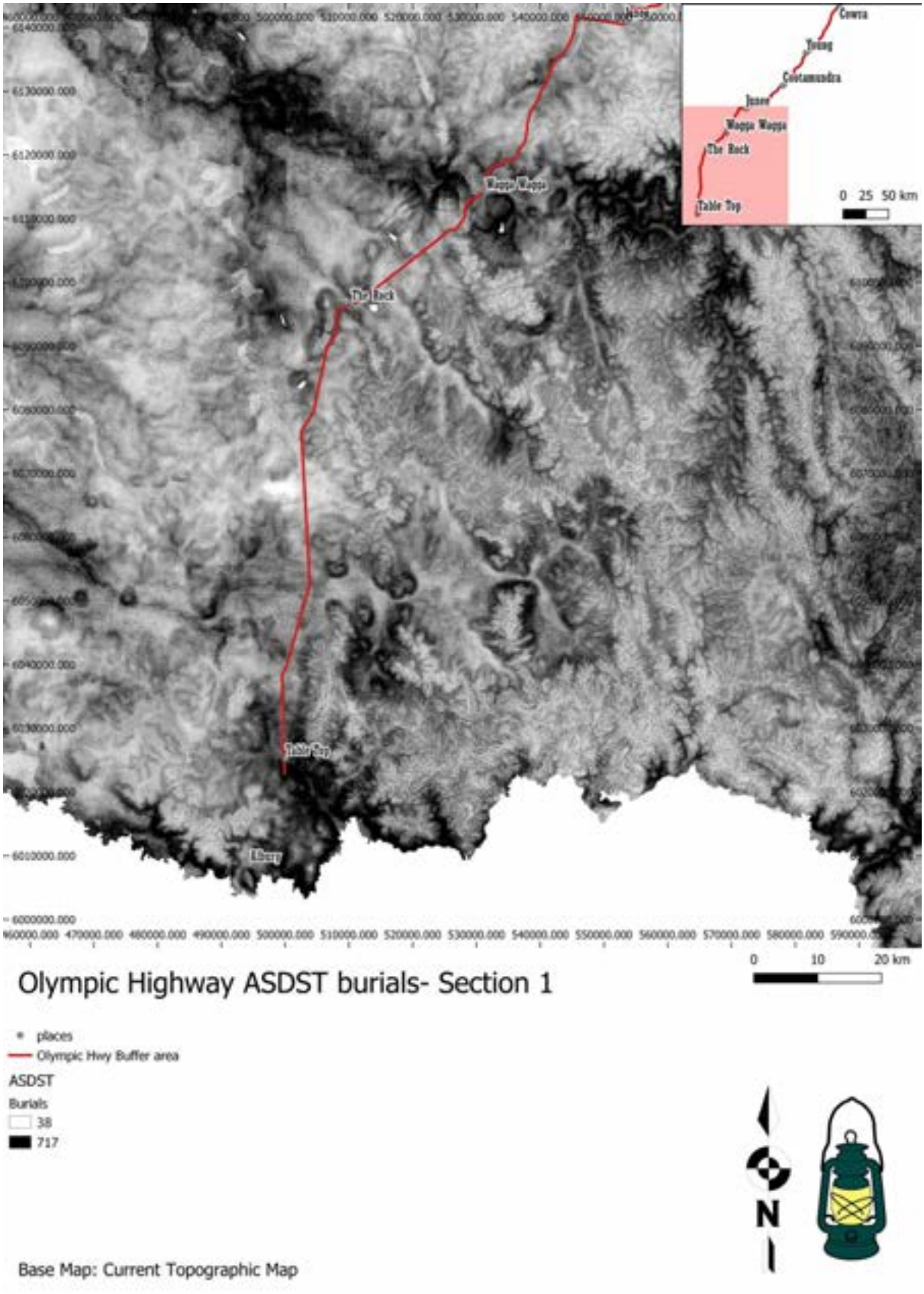
places
Olympic Hwy Buffer area
ASDST
Accumulated impacts
8
90.8
174
256
339

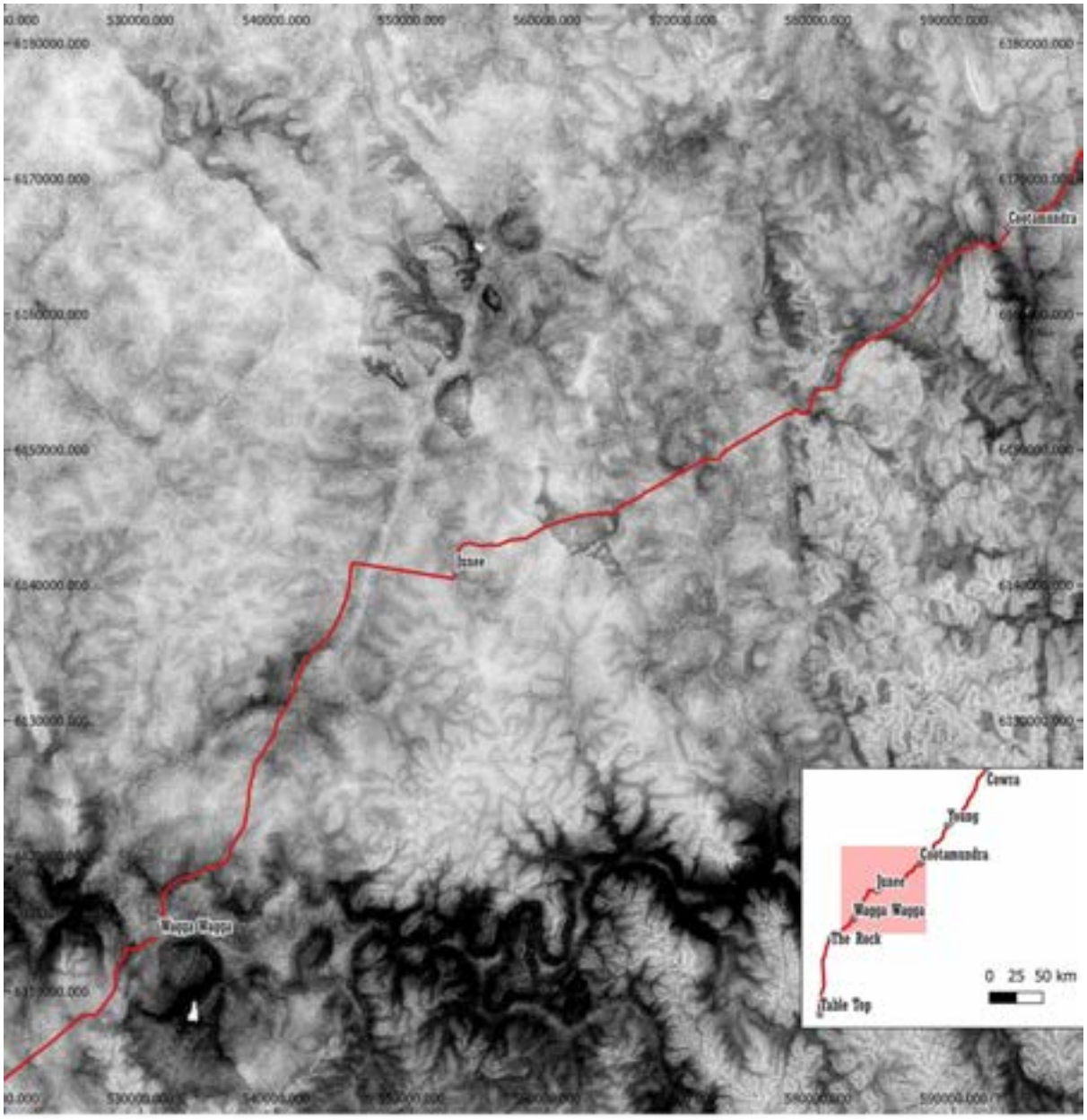
0 10 20 km

N

Base Map: Current Topographic Map


Cowra
Young
Coolamon
Junee
Wagga Wagga
The Rock
Table Top
Albury
0 25 50 km
Olympic Highway ASDST Accumulated impacts - Overview
0 10 20 km
places
Olympic Hwy Buffer area
ASDST
Accumulated impacts
8
90.8
174
256
339
N
Base Map: Current Topographic Map


Cowra
Young
Cootamundra
Junee
Wagga Wagga
The Rock
Table Top
0 25 50 km
Wagga Wagga
The Rock
Table Top
0 10 20 km
Olympic Highway ASDST burials- Section 1
places
Olympic Hwy Buffer area
ASDST
Burials
38
717
N
Base Map: Current Topographic Map



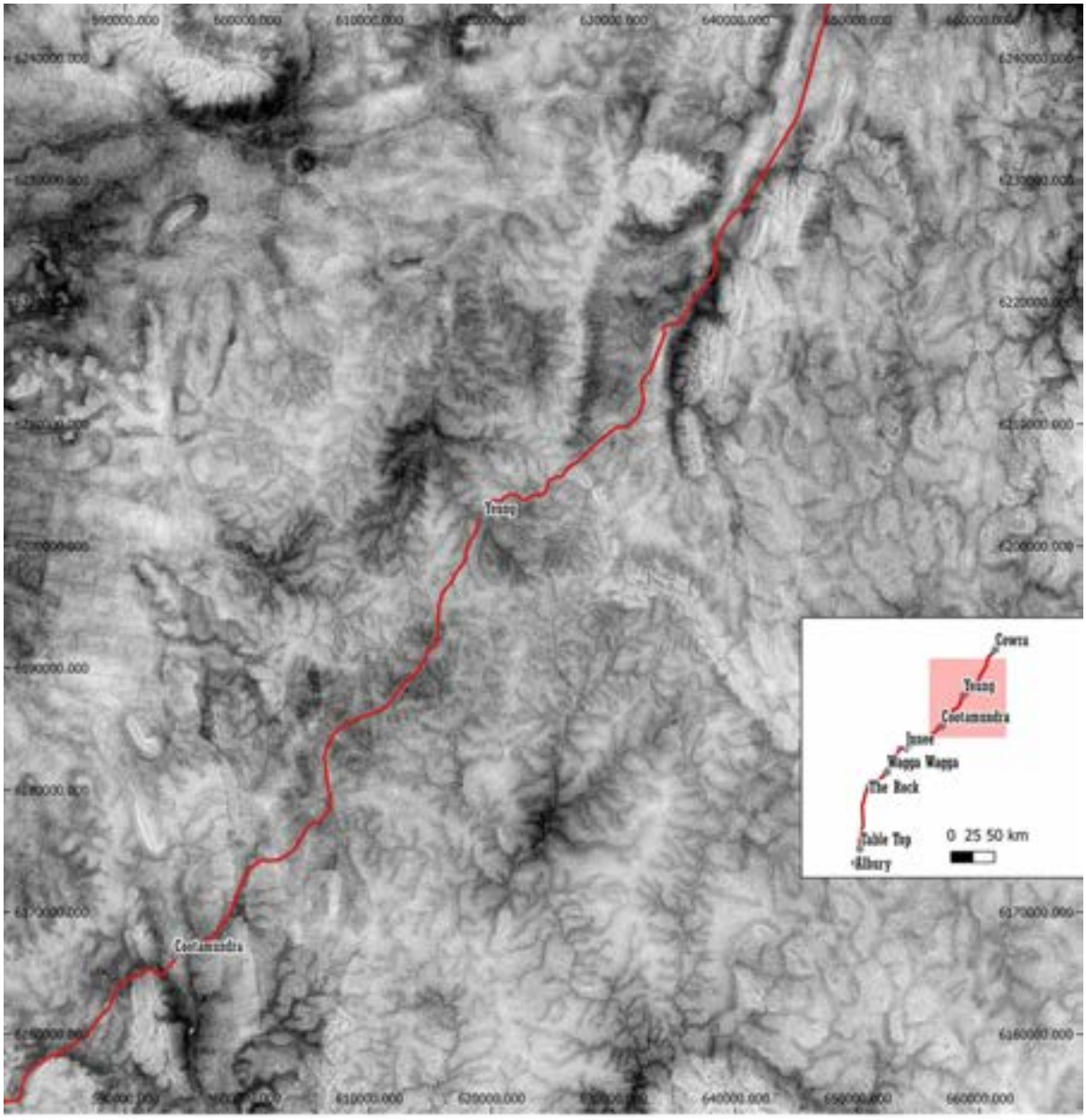
Olympic Highway ASDST burials - Section 2

0 7.5 15 km

places
Olympic Hwy Buffer area
ASDST
Burials
38
717

N

Base Map: Current Topographic Map



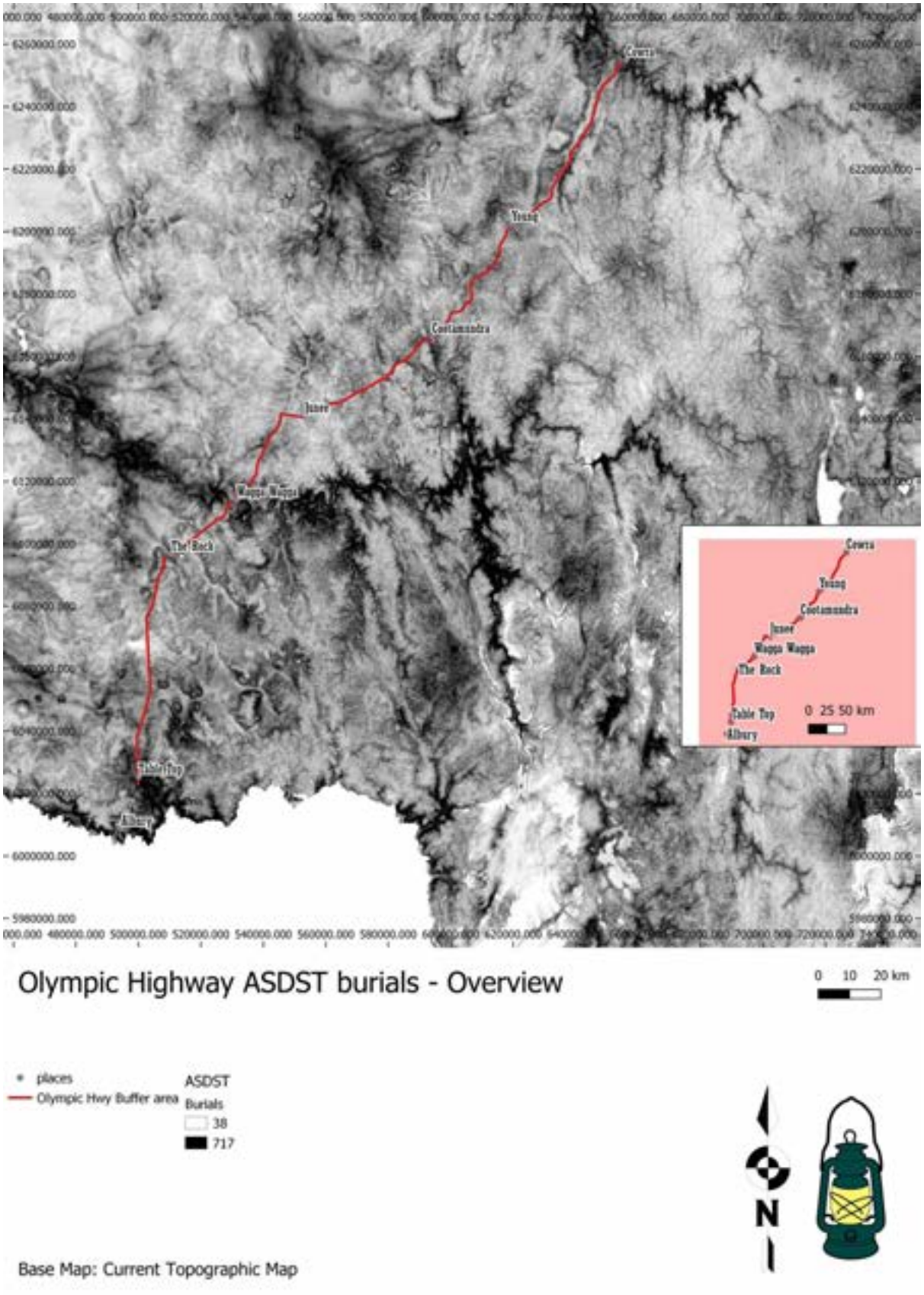
Olympic Highway ASDST burials - Section 3

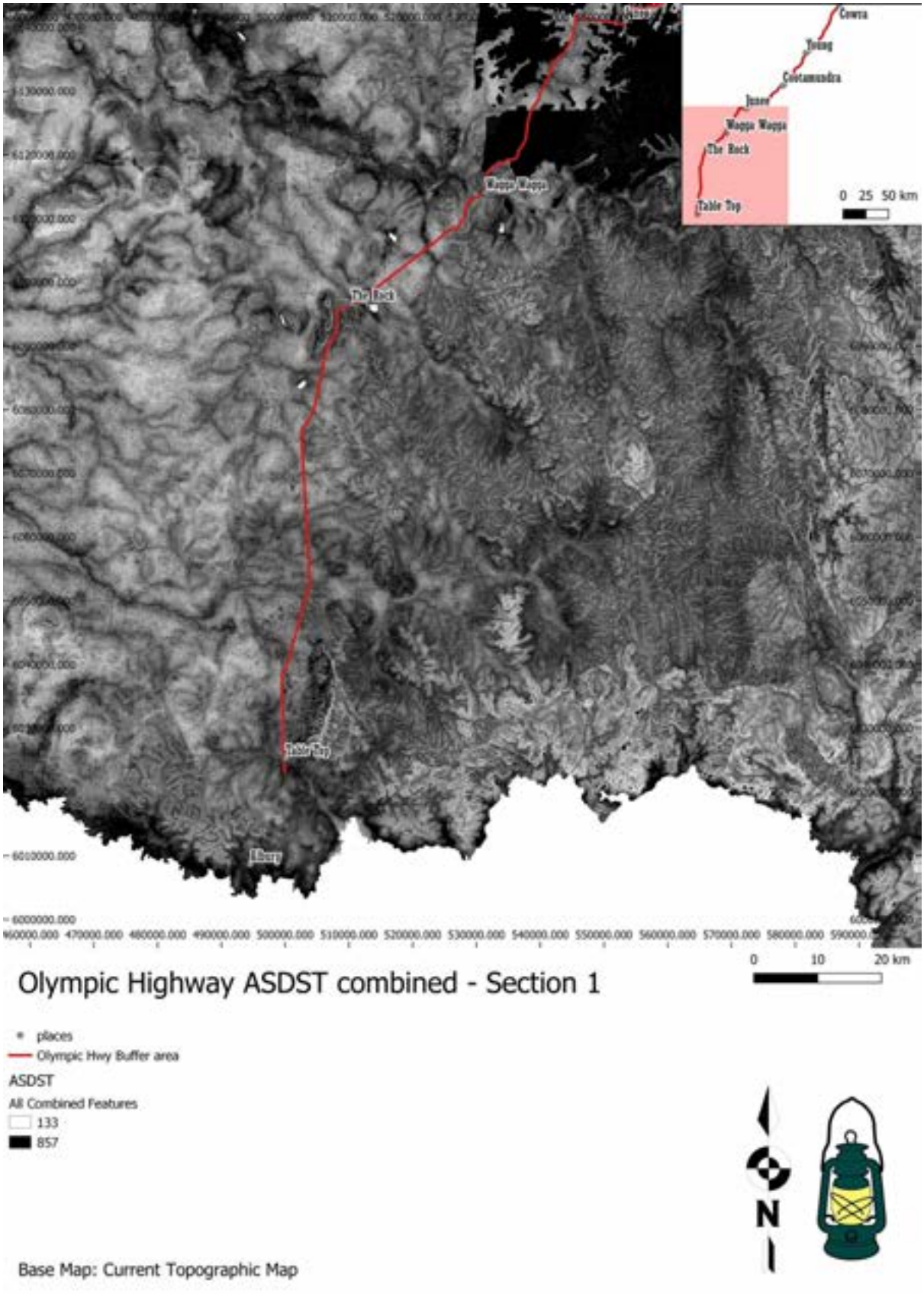
0 10 20 km

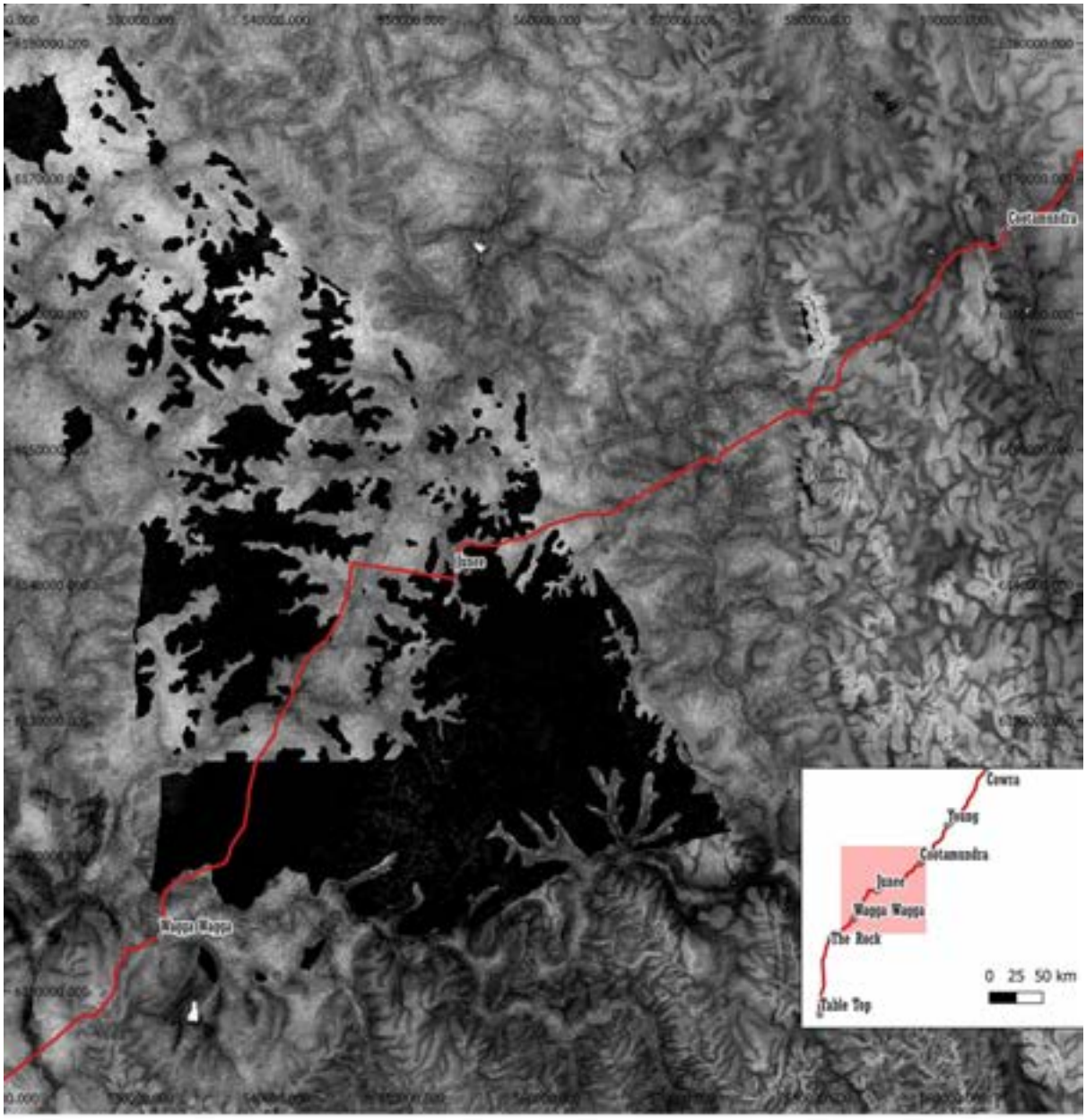
places
Olympic Hwy Buffer area
ASDST
Burials
38
717

N

Base Map: Current Topographic Map


Cowra
Young
Coota
Jugiong
Wagga Wagga
The Rock
Table Top
Albury
0 25 50 km
Olympic Highway ASDST burials - Overview
0 10 20 km
places
Olympic Hwy Buffer area
ASDST
Burials
38
717
N
Base Map: Current Topographic Map


Cowra
Young
Cootamundra
Junee
Wagga Wagga
The Rock
Table Top
0 25 50 km
Wagga Wagga
The Rock
Table Top
Albury
6130000.000
6120000.000
6110000.000
6100000.000
6090000.000
6080000.000
6070000.000
6060000.000
6050000.000
6040000.000
6030000.000
6020000.000
6010000.000
6000000.000
460000.000
470000.000
480000.000
490000.000
500000.000
510000.000
520000.000
530000.000
540000.000
550000.000
560000.000
570000.000
580000.000
590000.000
0 10 20 km
Olympic Highway ASDST combined - Section 1
places
Olympic Hwy Buffer area
ASDST
All Combined Features
133
857
N
Base Map: Current Topographic Map



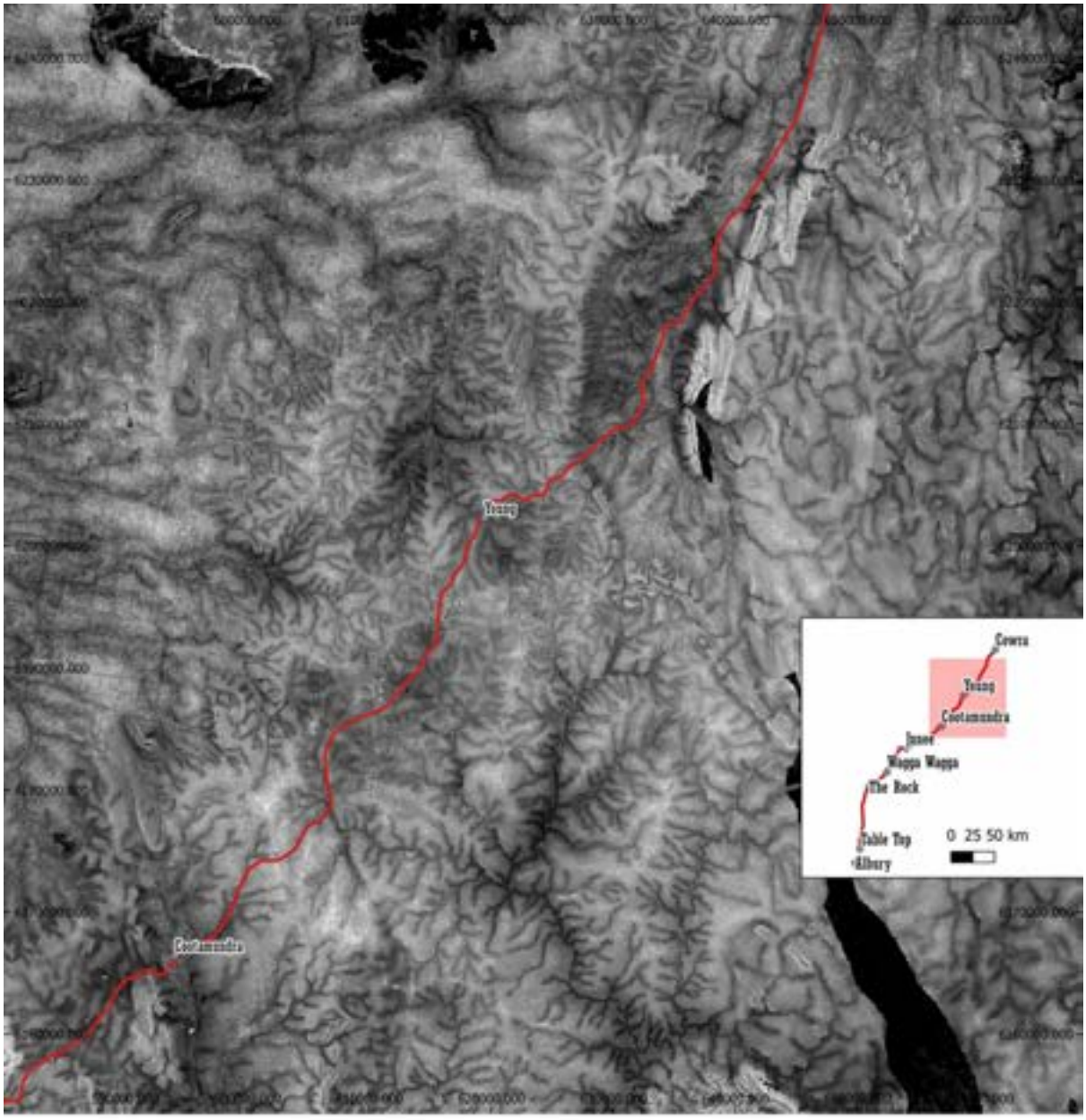
Olympic Highway ASDST combined - Section 2

0 7.5 15 km

places
Olympic Hwy Buffer area
ASDST
All Combined Features
133
857

N

Base Map: Current Topographic Map



Olympic Highway ASDST combined- Section 3

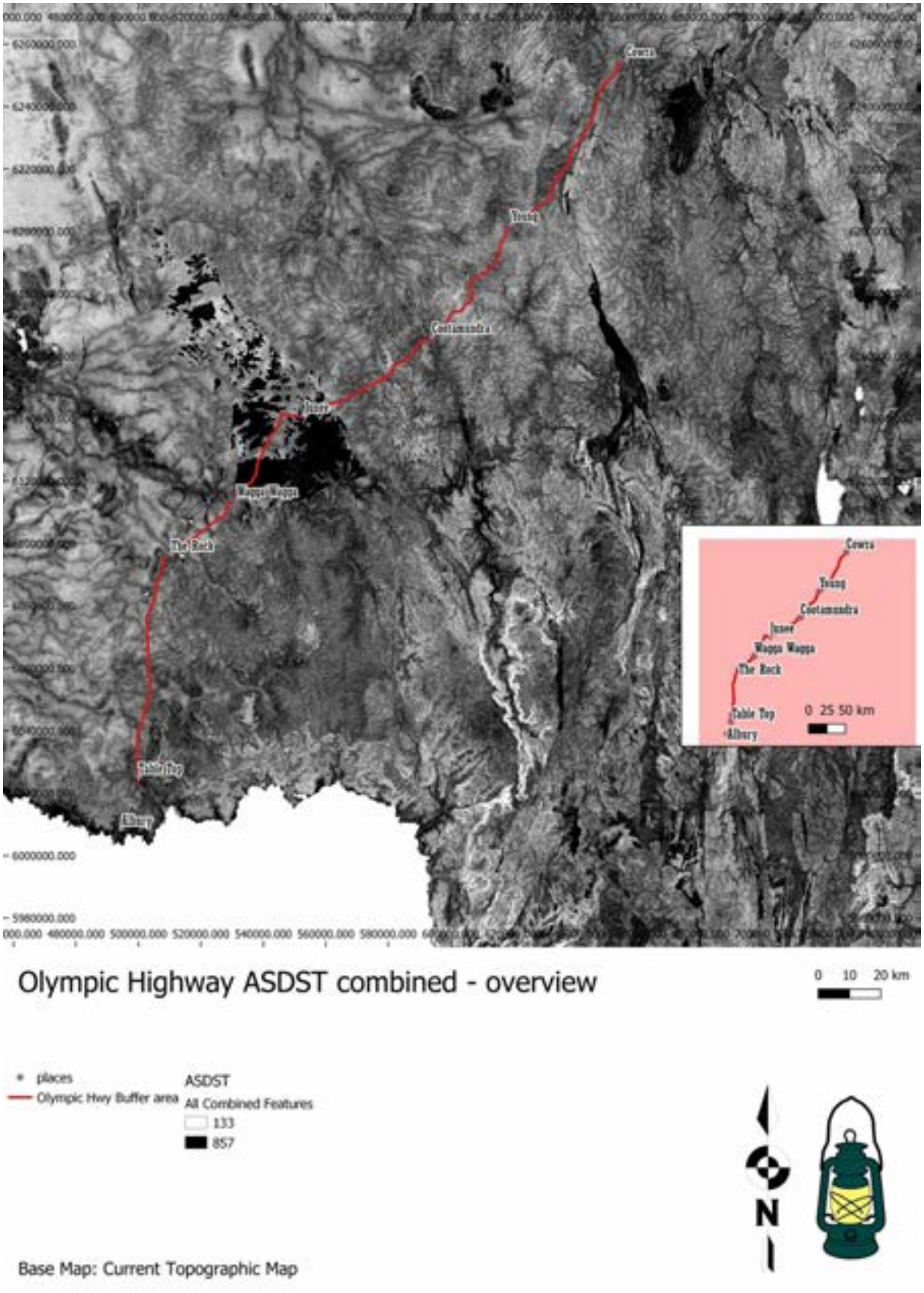
0 10 20 km

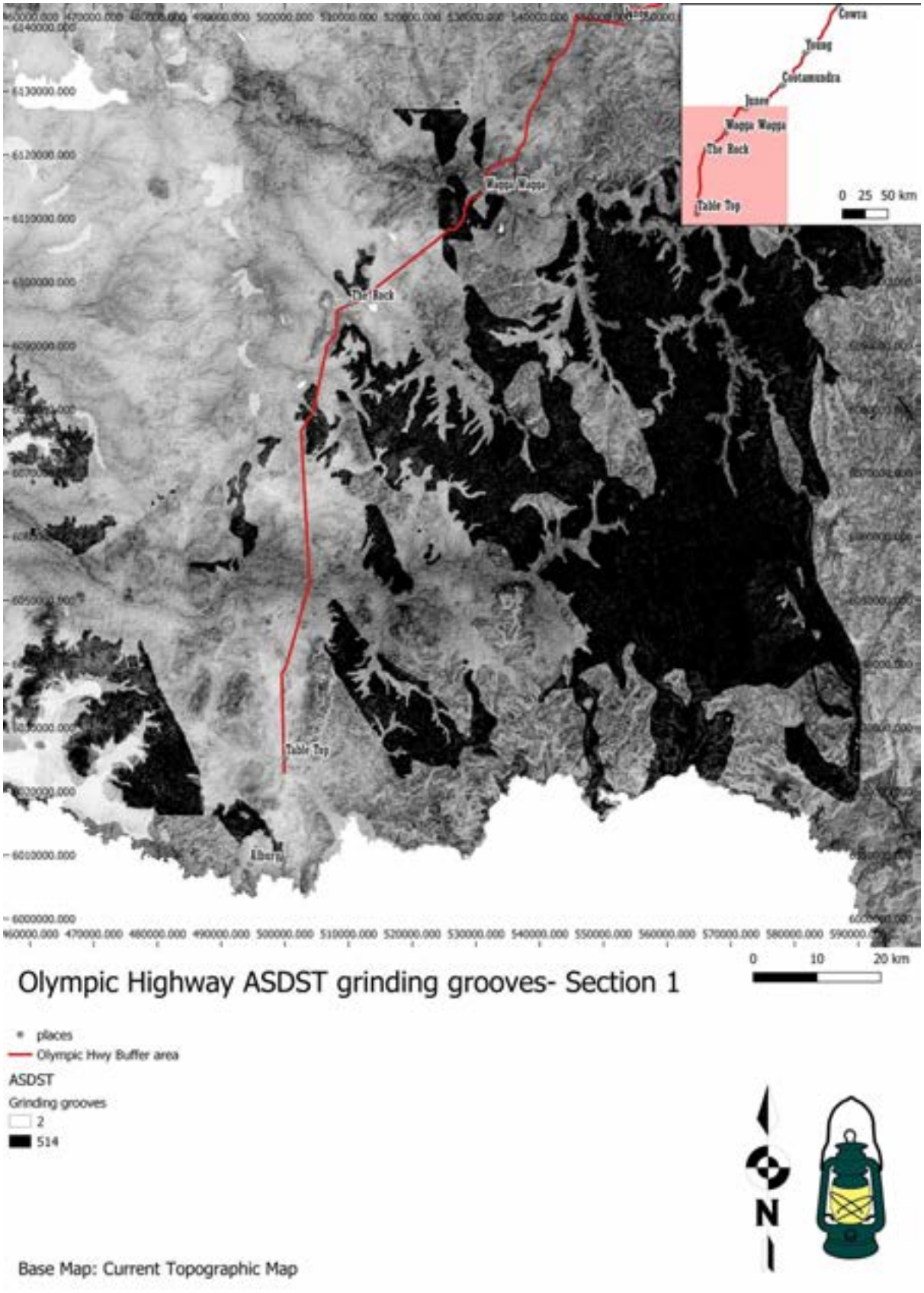
* places
Olympic Hwy Buffer area

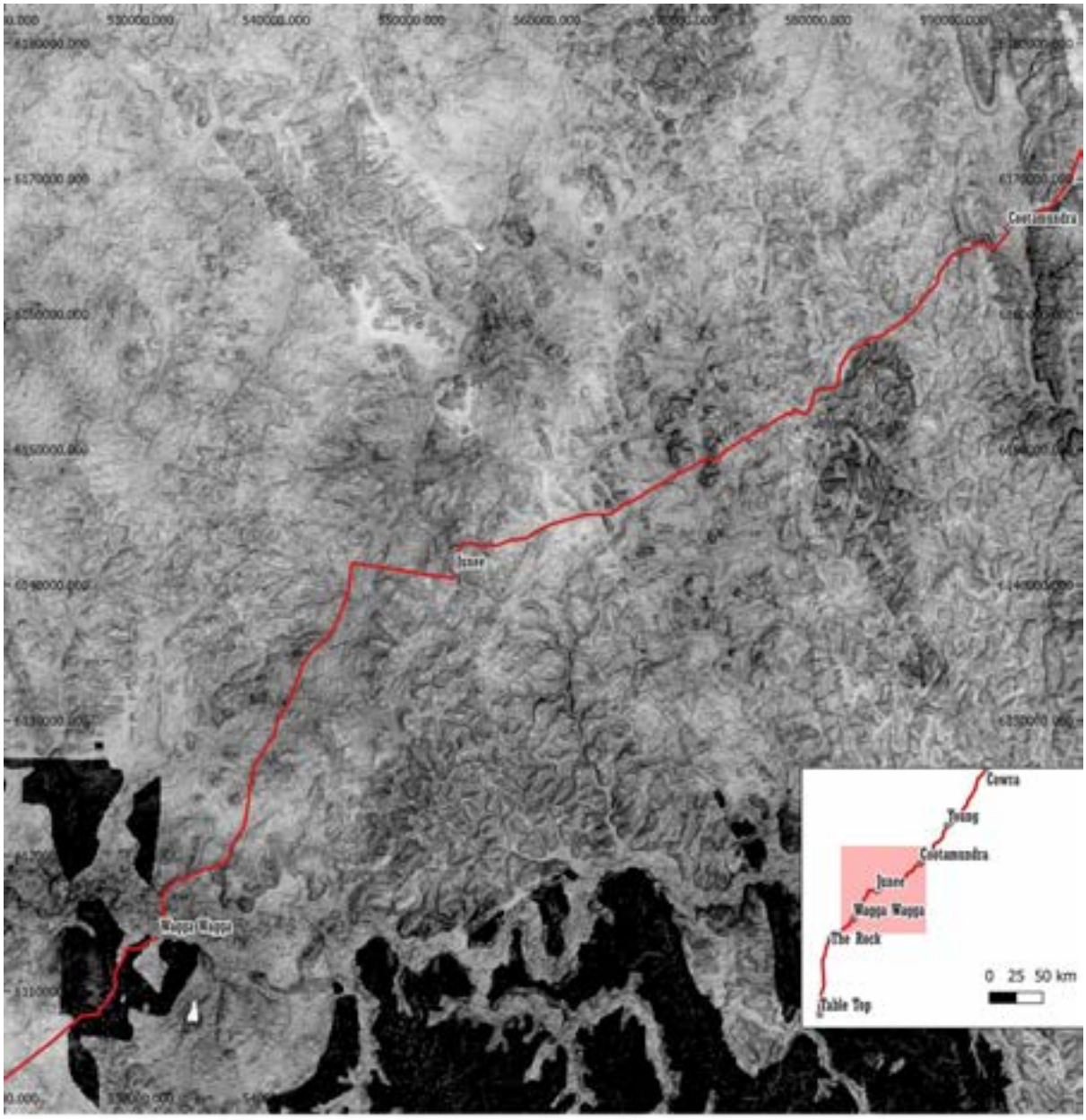
ASDST
All Combined Features
133
857

N

Base Map: Current Topographic Map


Cowra
Young
Cootamundra
Junee
Wagga Wagga
The Rock
Table Top
Albury
0 25 50 km
Olympic Highway ASDST combined - overview
0 10 20 km
places
Olympic Hwy Buffer area
ASDST
All Combined Features
133
857
N
Base Map: Current Topographic Map


Cowra
Young
Cootamundra
Junee
Wagga Wagga
The Rock
Table Top
0 25 50 km
Wagga Wagga
The Rock
Table Top
Albury
0 10 20 km
Olympic Highway ASDST grinding grooves- Section 1
places
Olympic Hwy Buffer area
ASDST
Grinding grooves
2
514
N
Base Map: Current Topographic Map



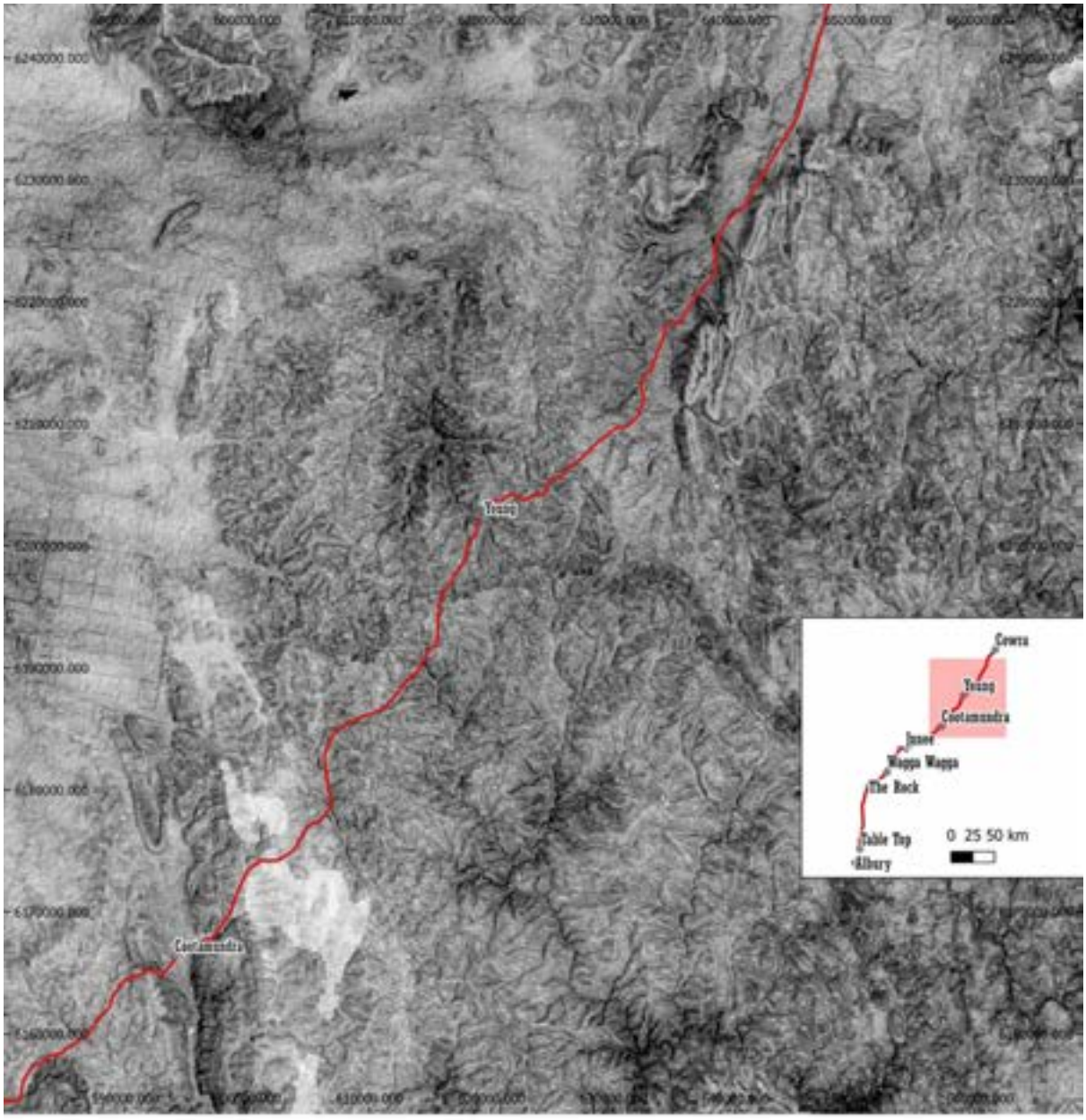
Olympic Highway ASDST grinding grooves - Section 2

7.5 15 km

places
Olympic Hwy Buffer area
ASDST
Grinding grooves
2
514

N

Base Map: Current Topographic Map



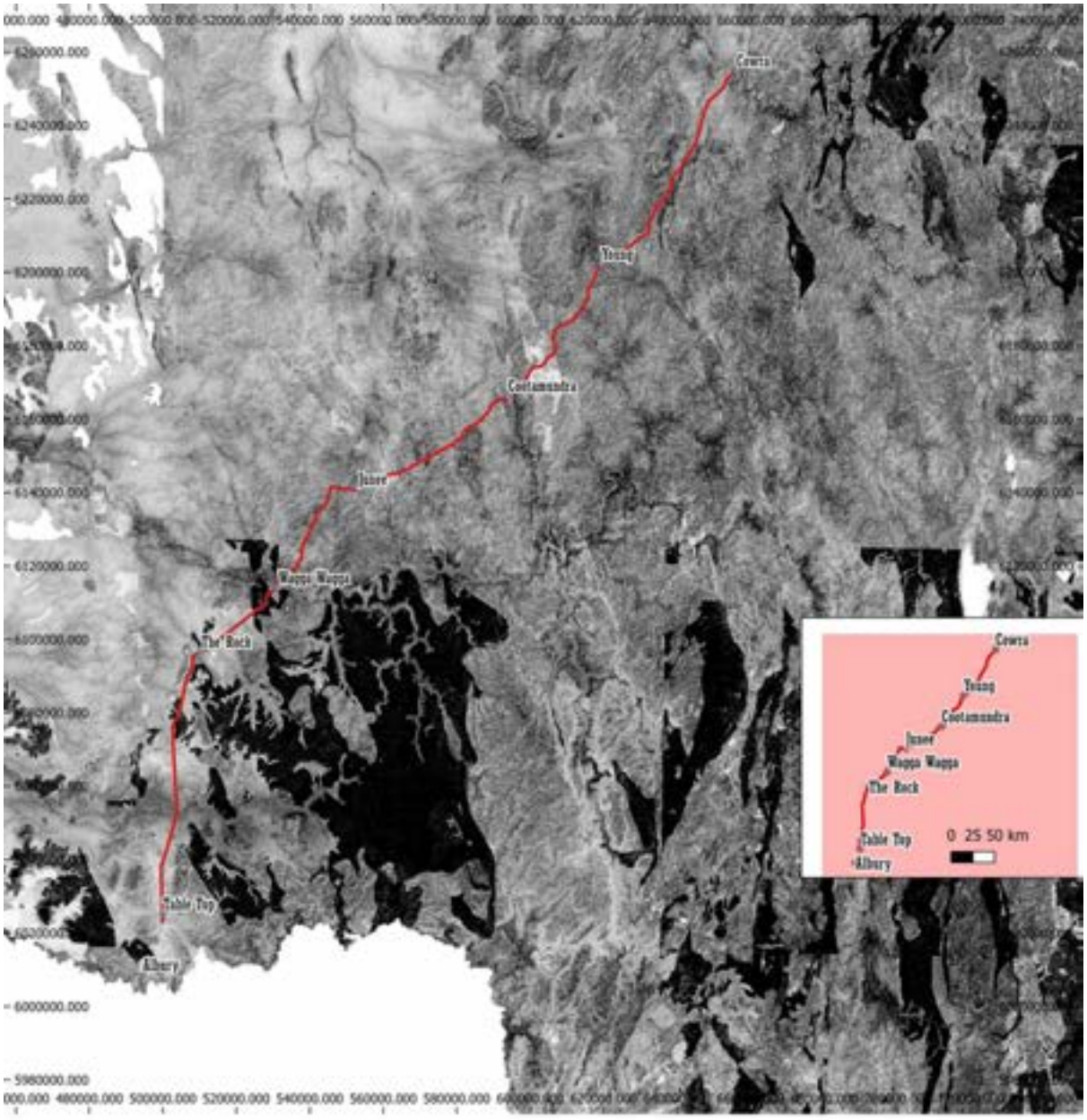
Olympic Highway ASDST grinding grooves - Section 3

10 20 km

places
Olympic Hwy Buffer area
ASDST
Grinding grooves
2
514

N

Base Map: Current Topographic Map



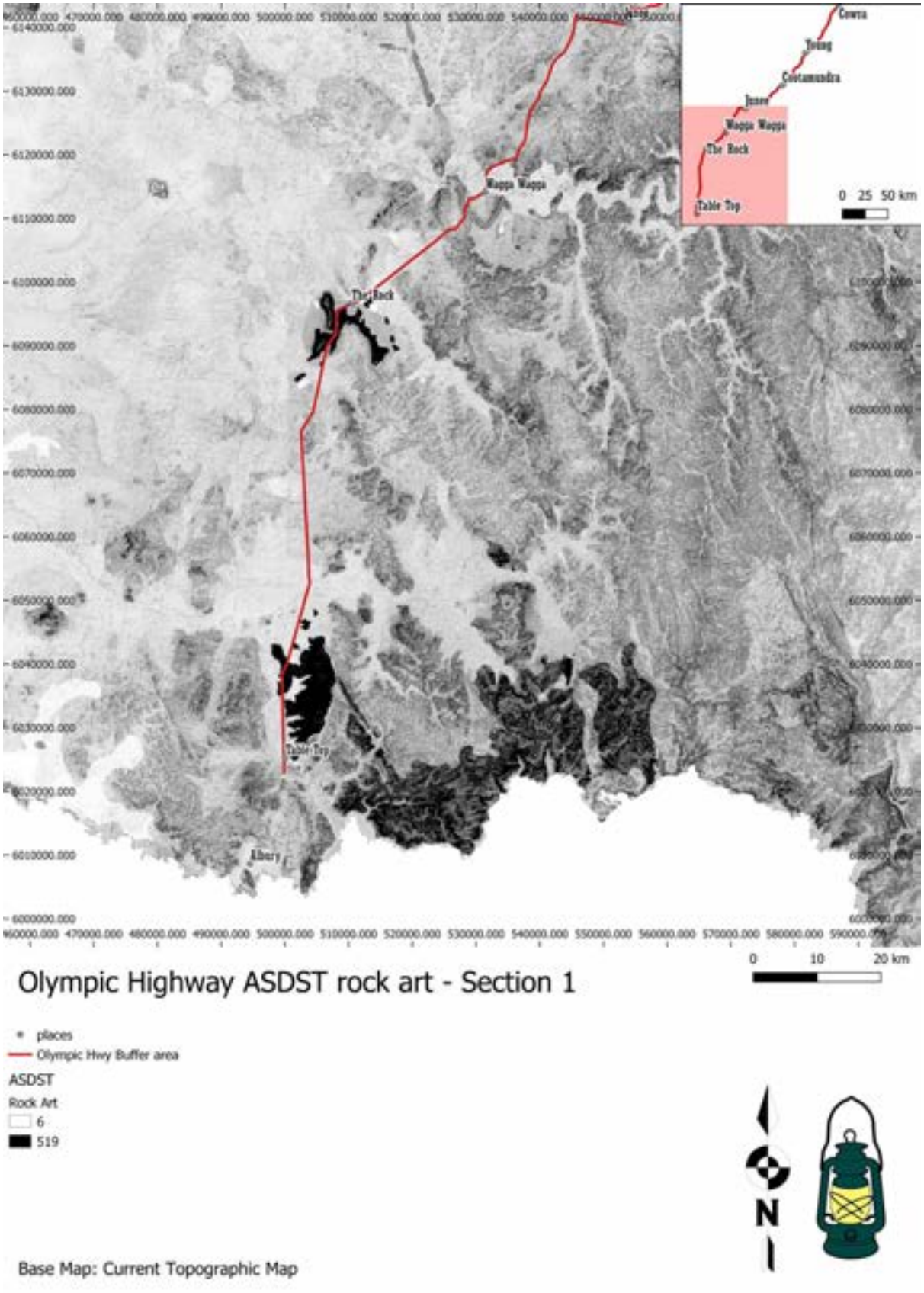
Olympic Highway ASDST grinding grooves - Overview

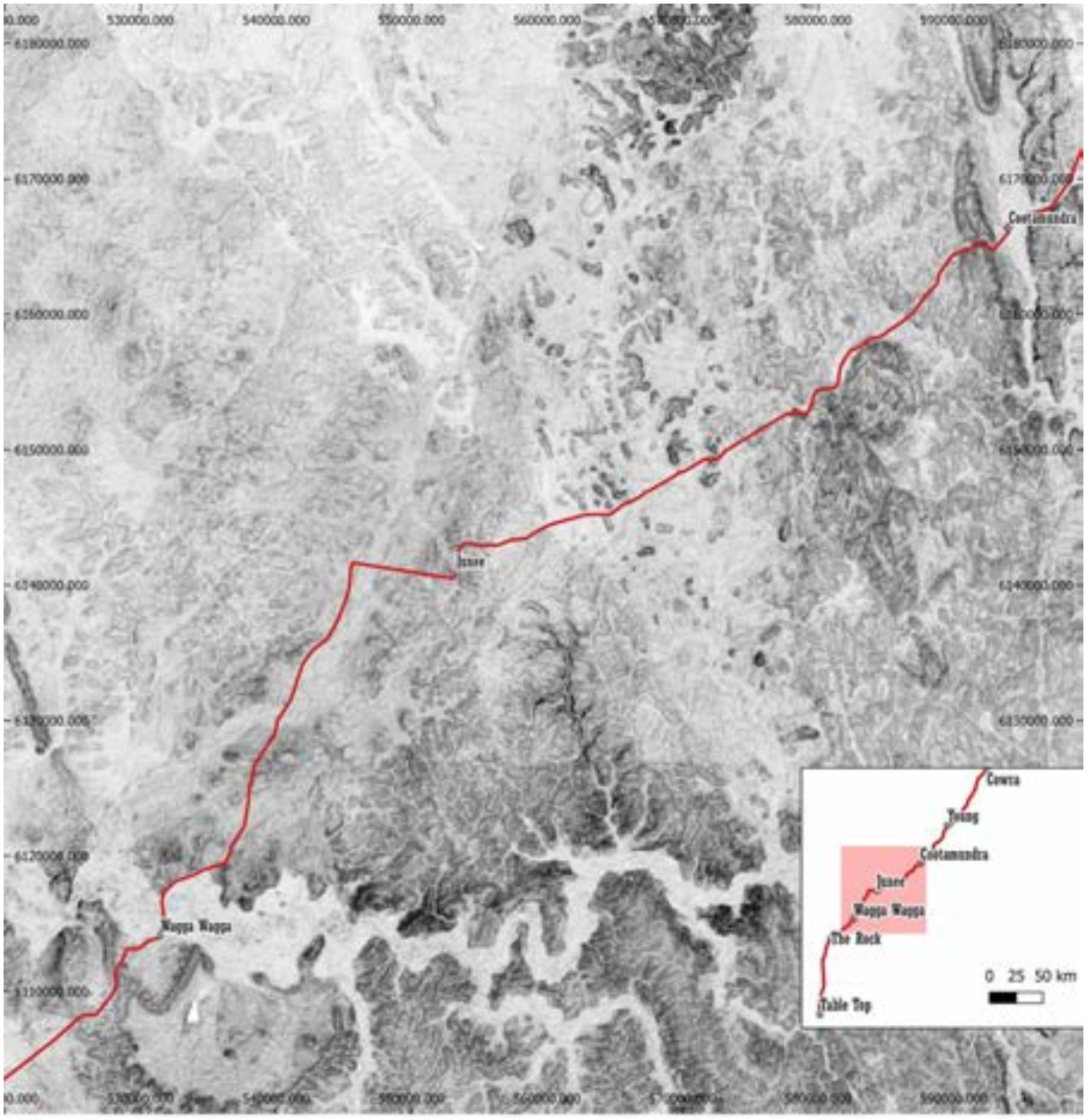
0 10 20 km

places
Olympic Hwy Buffer area
ASDST
Grinding grooves
2
514

N

Base Map: Current Topographic Map


Cowra
Young
Cootamundra
Junee
Wagga Wagga
The Rock
Table Top
0 25 50 km
Wagga Wagga
The Rock
Table Top
Albury
0 10 20 km
Olympic Highway ASDST rock art - Section 1
places
Olympic Hwy Buffer area
ASDST
Rock Art
6
519
N
Base Map: Current Topographic Map



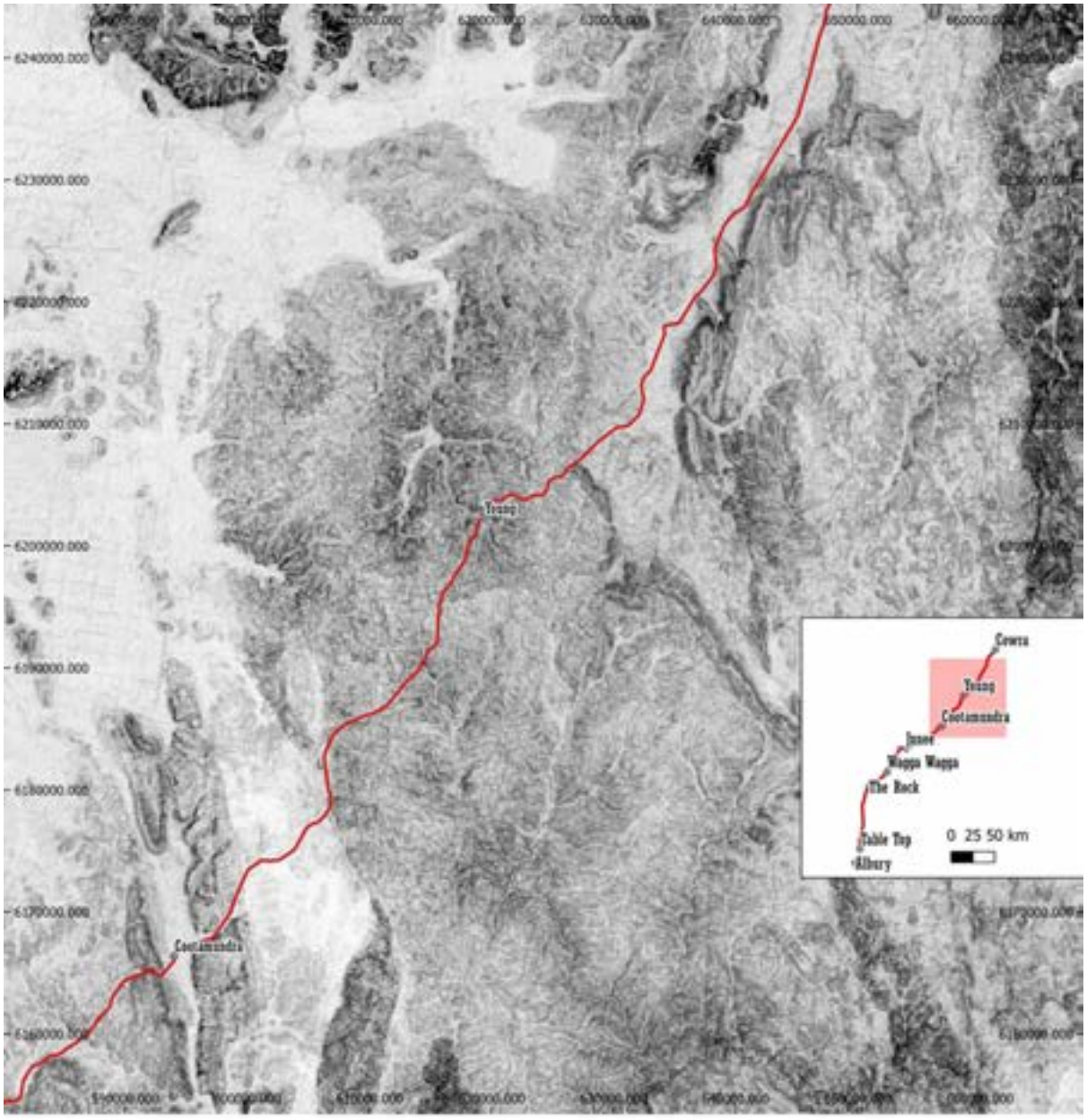
Olympic Highway ASDST rock art - Section 2

0 7.5 15 km

places
Olympic Hwy Buffer area
ASDST
Rock Art
6
519

N

Base Map: Current Topographic Map



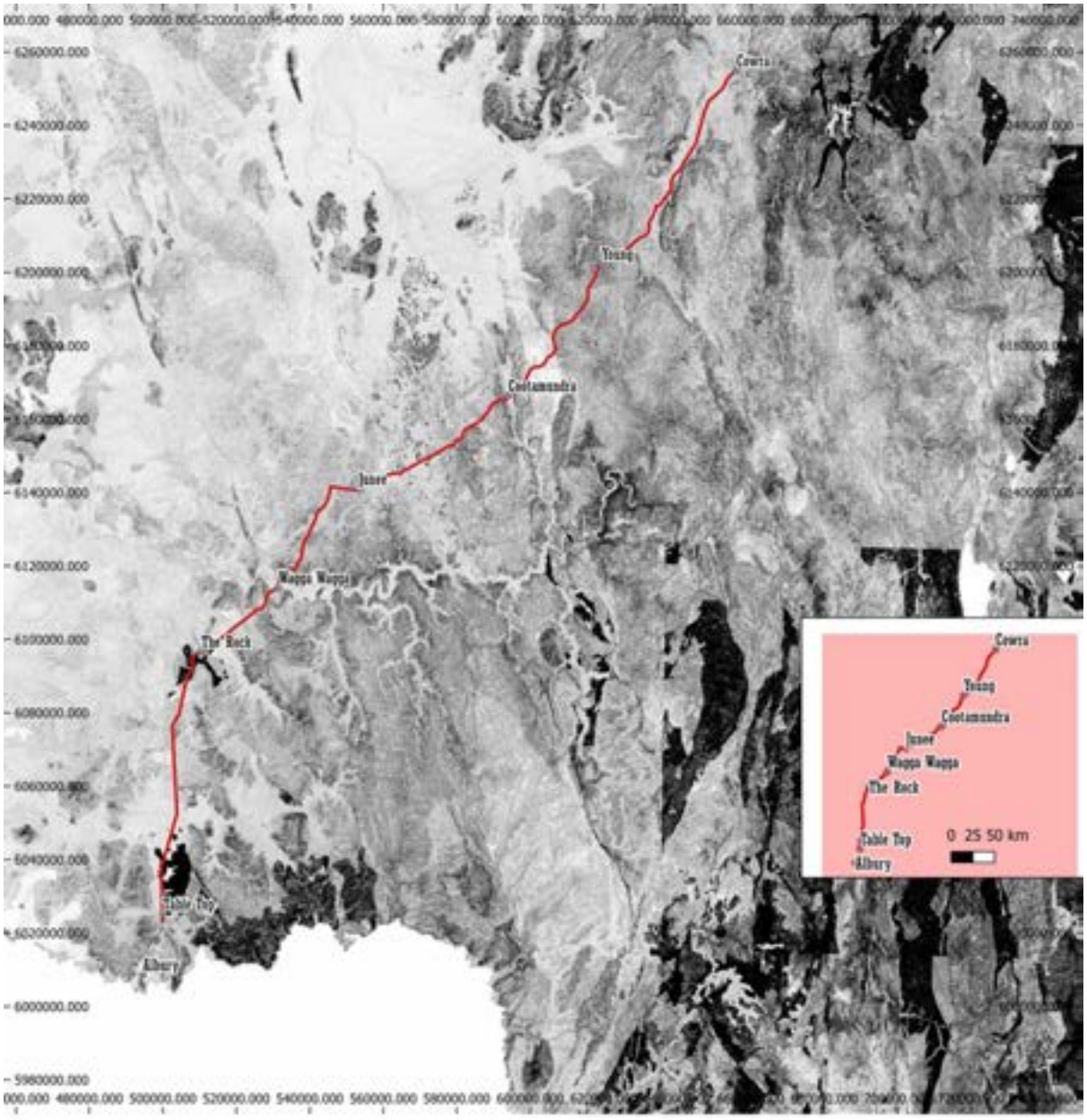
Olympic Highway ASDST rock art- Section 3

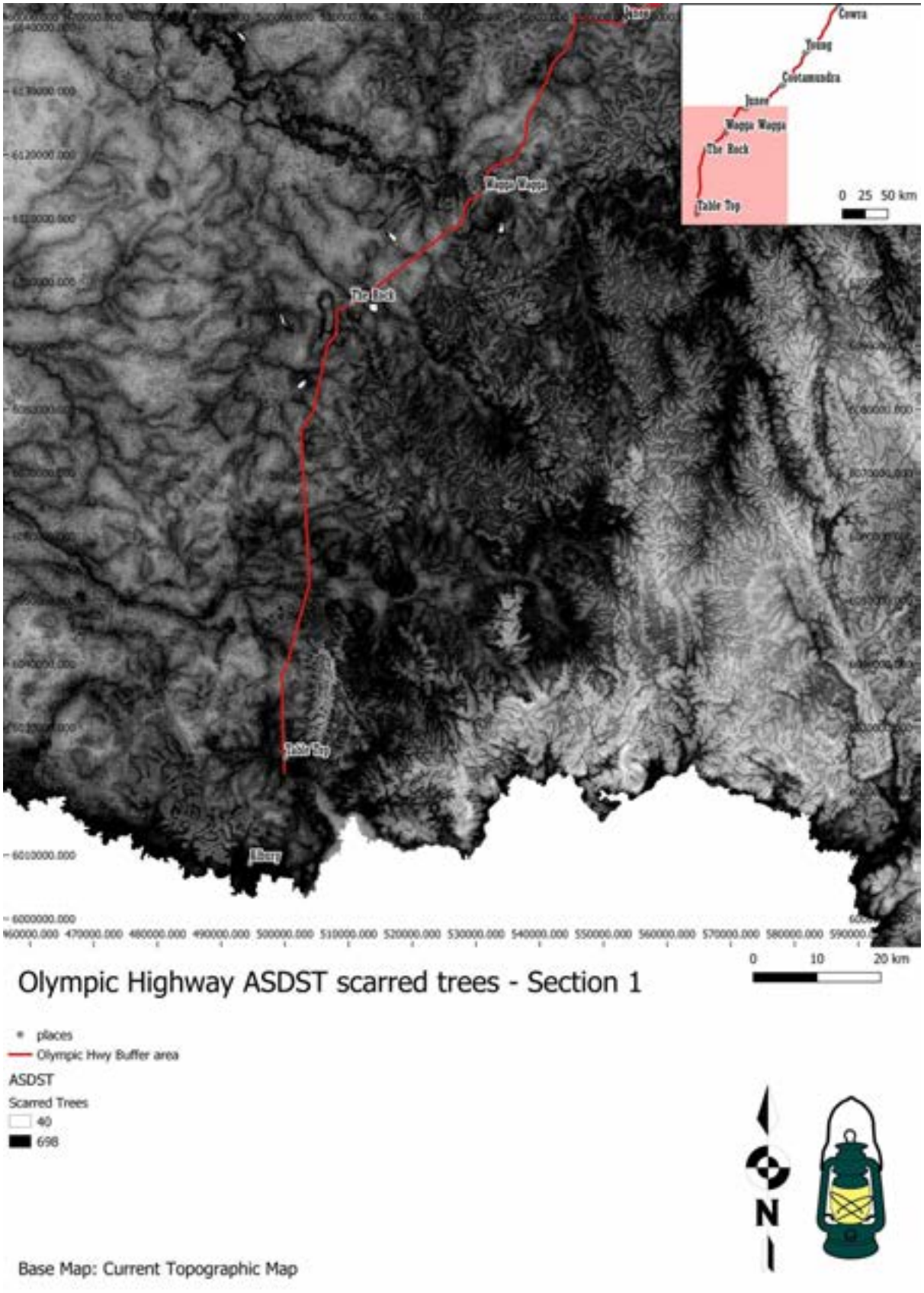
0 10 20 km

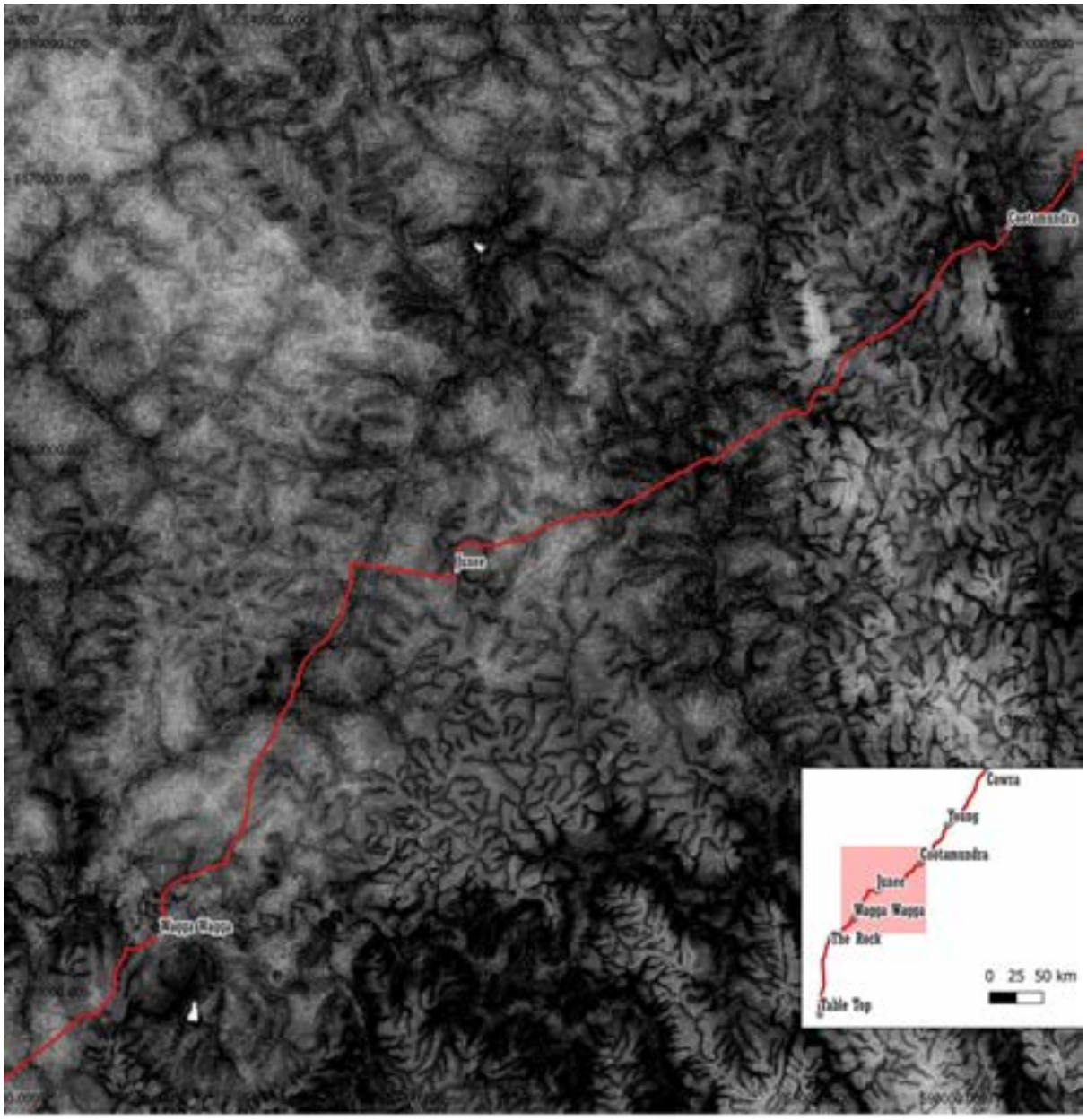
places
Olympic Hwy Buffer area
ASDST
Rock Art
6
519

N

Base Map: Current Topographic Map


Cowra
Young
Cootamundra
Jugiong
Wagga Wagga
The Rock
Table Top
Albury
0 25 50 km
Olympic Highway ASDST rock art - Overview
0 10 20 km
places
Olympic Hwy Buffer area
ASDST
Rock Art
6
519
N
Base Map: Current Topographic Map


Cowra
Young
Cootamundra
Junee
Wagga Wagga
The Rock
Table Top
0 25 50 km
Wagga Wagga
The Rock
Table Top
6120000.000
6010000.000
6000000.000
460000.000 470000.000 480000.000 490000.000 500000.000 510000.000 520000.000 530000.000 540000.000 550000.000 560000.000 570000.000 580000.000 590000.000
0 10 20 km
Olympic Highway ASDST scarred trees - Section 1
places
Olympic Hwy Buffer area
ASDST
Scarred Trees
40
698
N
Base Map: Current Topographic Map



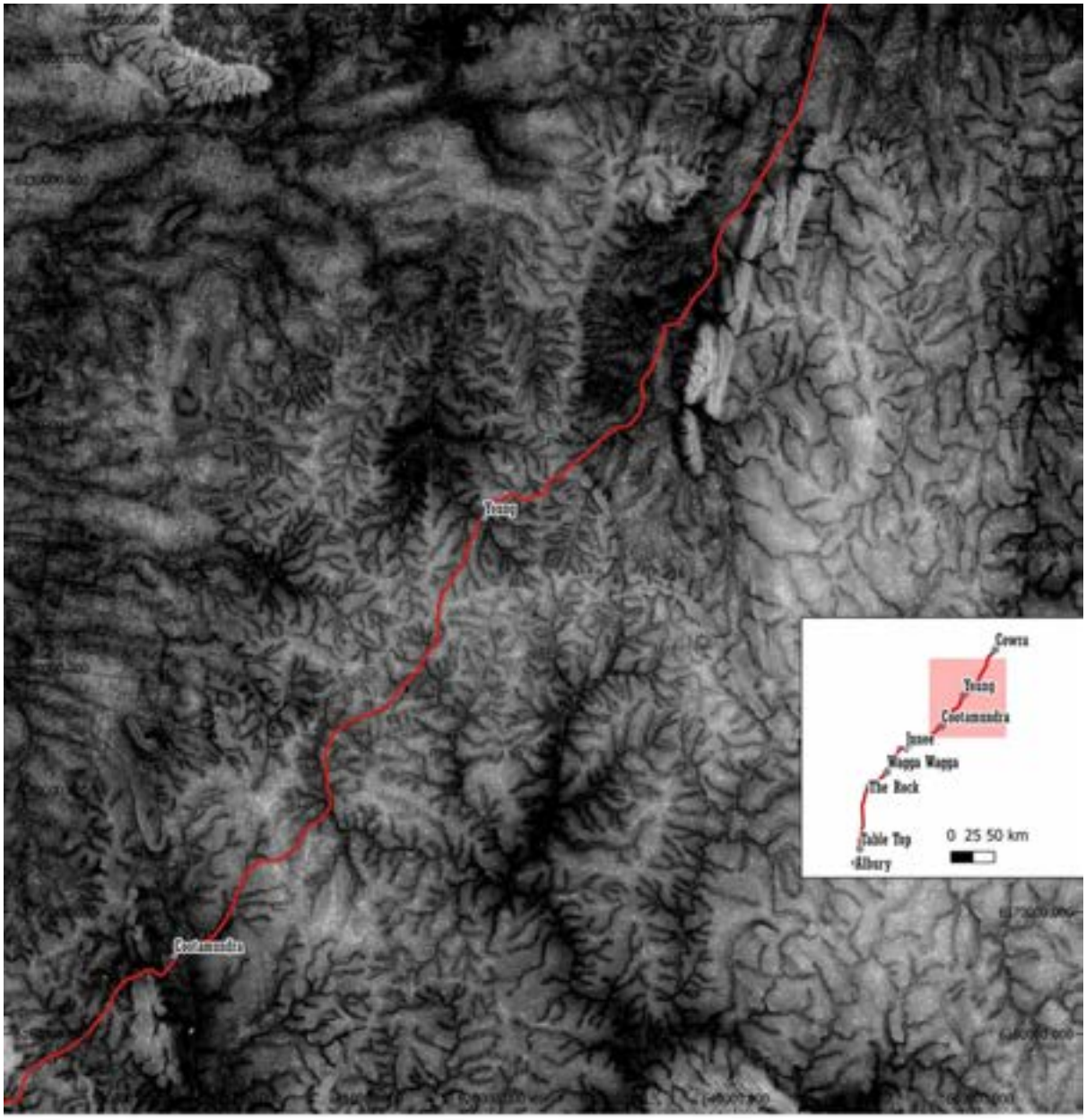
Olympic Highway ASDST scarred trees - Section 2

7.5 15 km

places
Olympic Hwy Buffer area
ASDST
Scarred Trees
40
698

N

Base Map: Current Topographic Map

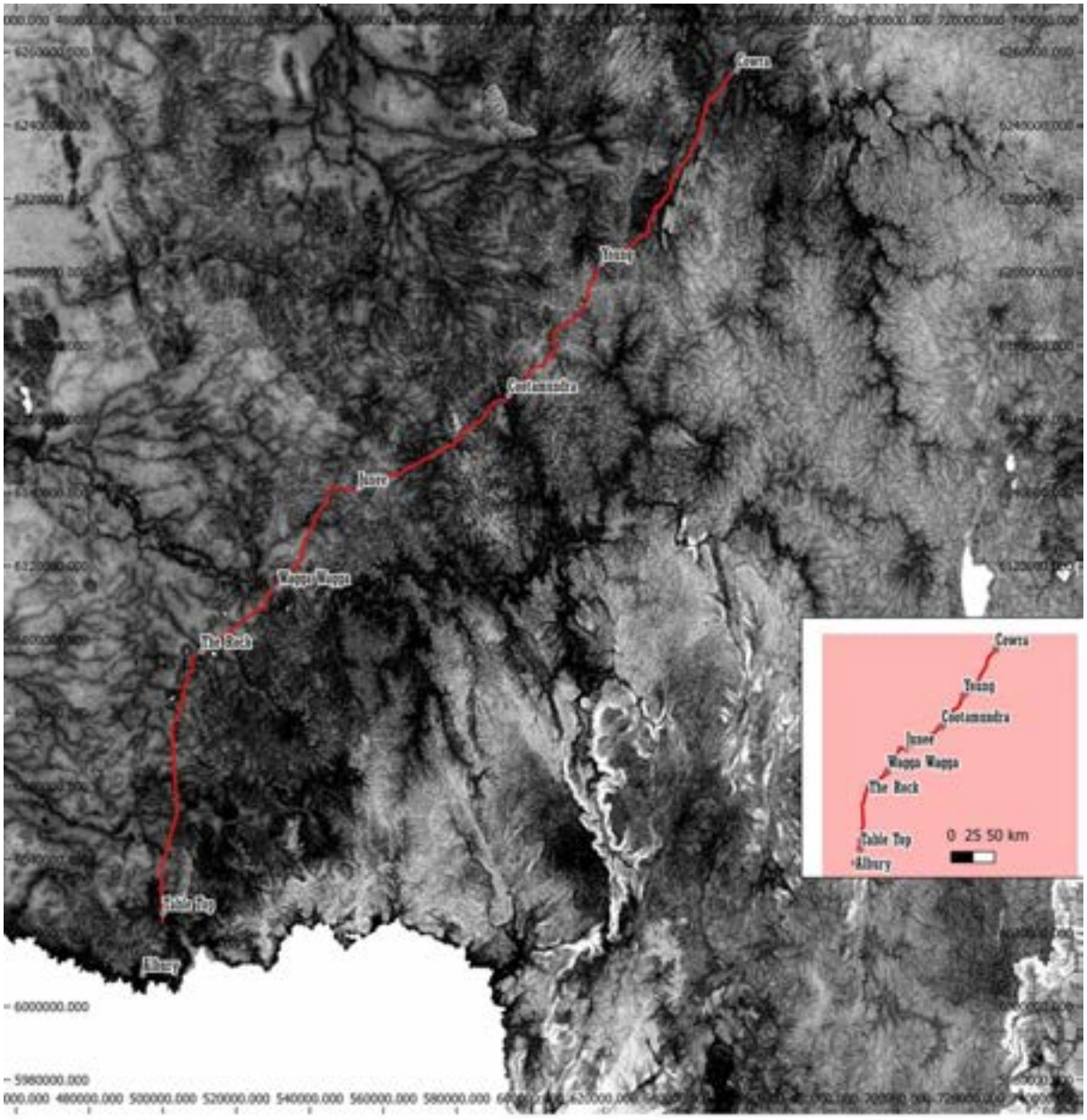


Olympic Highway ASDST scarred trees - Section 3 0 10 20 km

places
Olympic Hwy Buffer area
ASDST
Scarred Trees
40
698

N

Base Map: Current Topographic Map



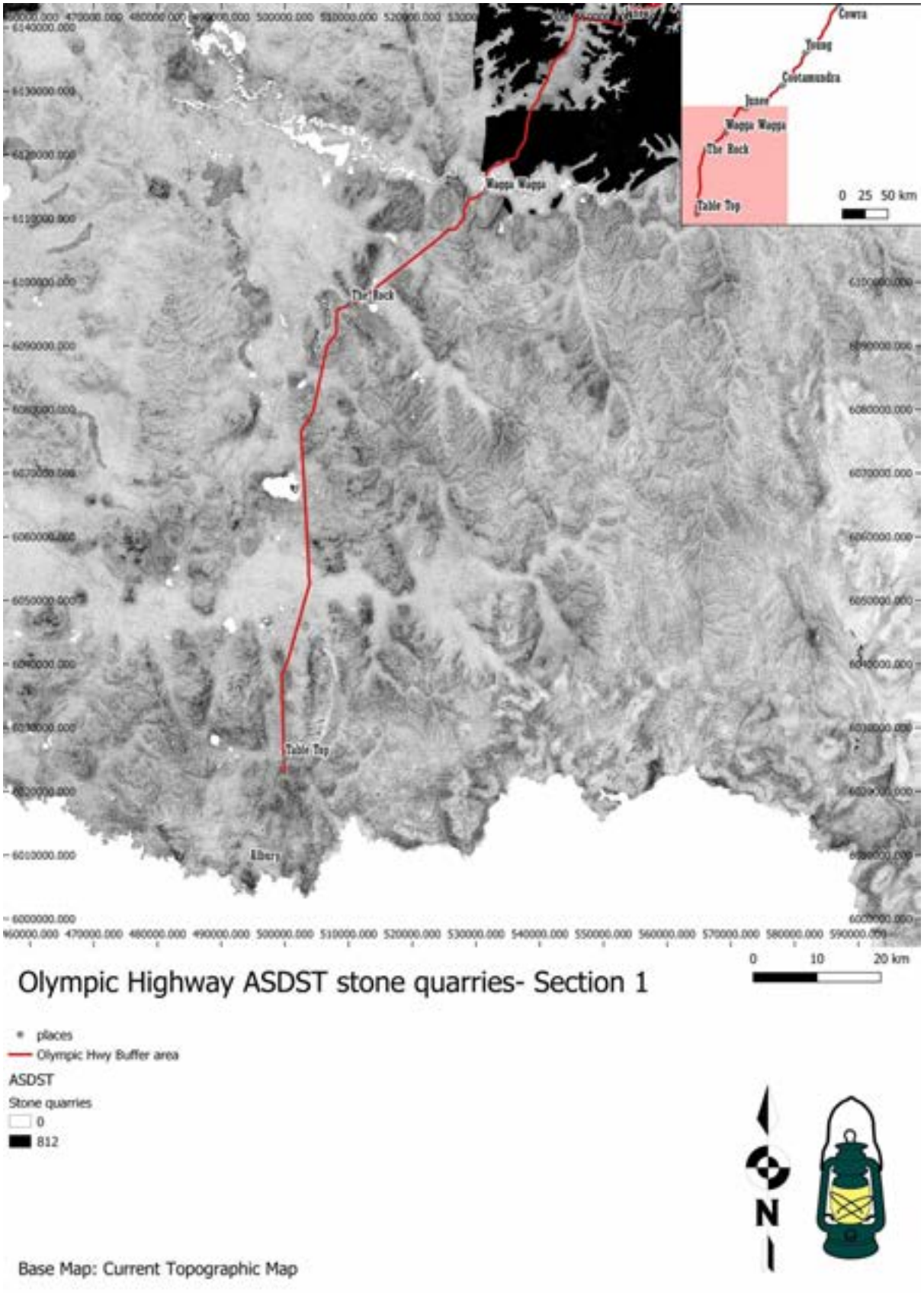
Olympic Highway ASDST scarred trees - Overview

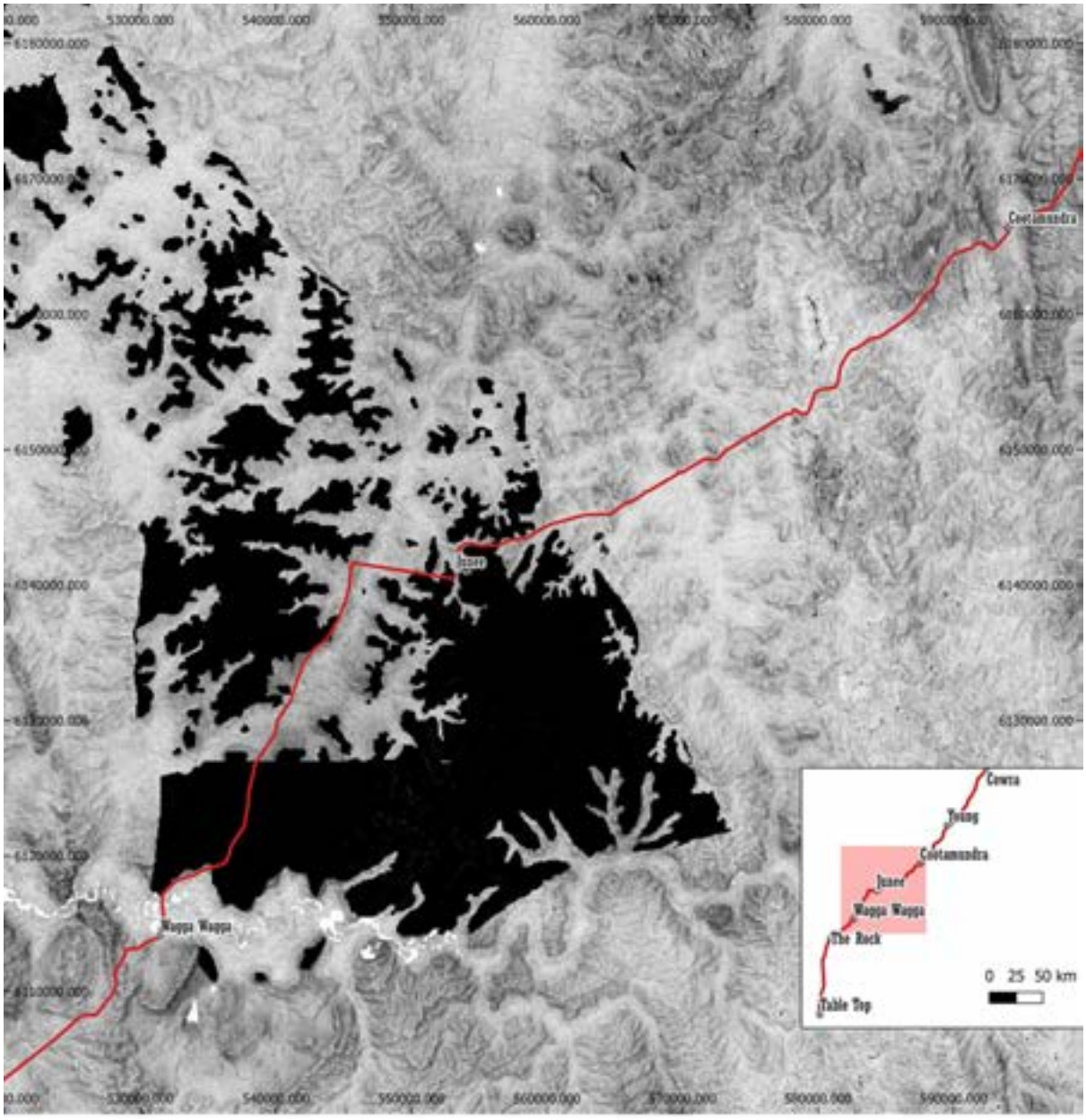
0 10 20 km

places
Olympic Hwy Buffer area
ASDST
Scarred Trees
40
698

N

Base Map: Current Topographic Map


Cowra
Young
Cootamundra
Junee
Wagga Wagga
The Rock
Table Top
0 25 50 km
Wagga Wagga
The Rock
Table Top
Albury
0 10 20 km
Olympic Highway ASDST stone quarries- Section 1
places
Olympic Hwy Buffer area
ASDST
Stone quarries
0
812
N
Base Map: Current Topographic Map



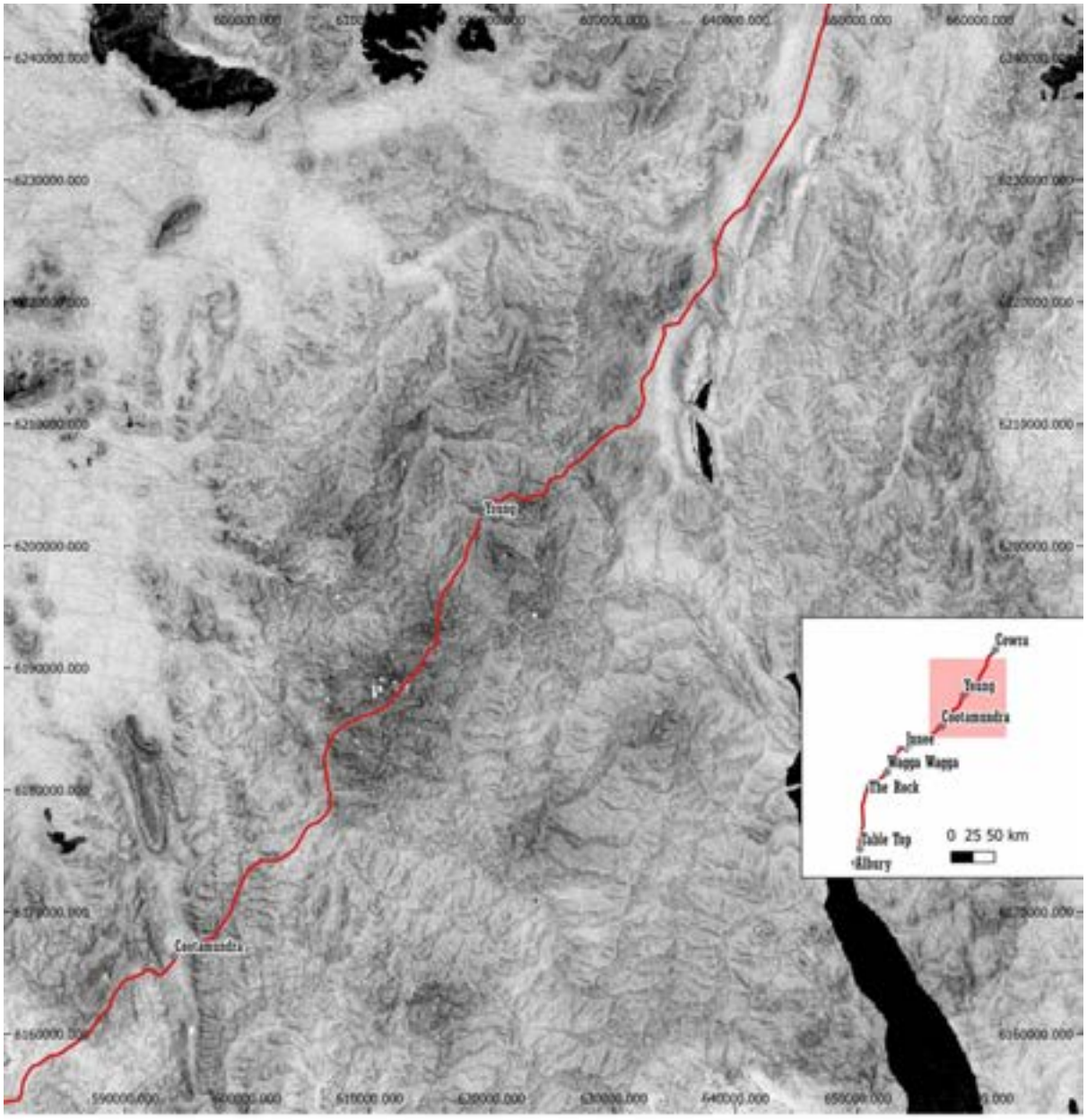
Olympic Highway ASDST stone quarries - Section 2

0 7.5 15 km

places
Olympic Hwy Buffer area
ASDST
Stone quarries
0
812

N

Base Map: Current Topographic Map



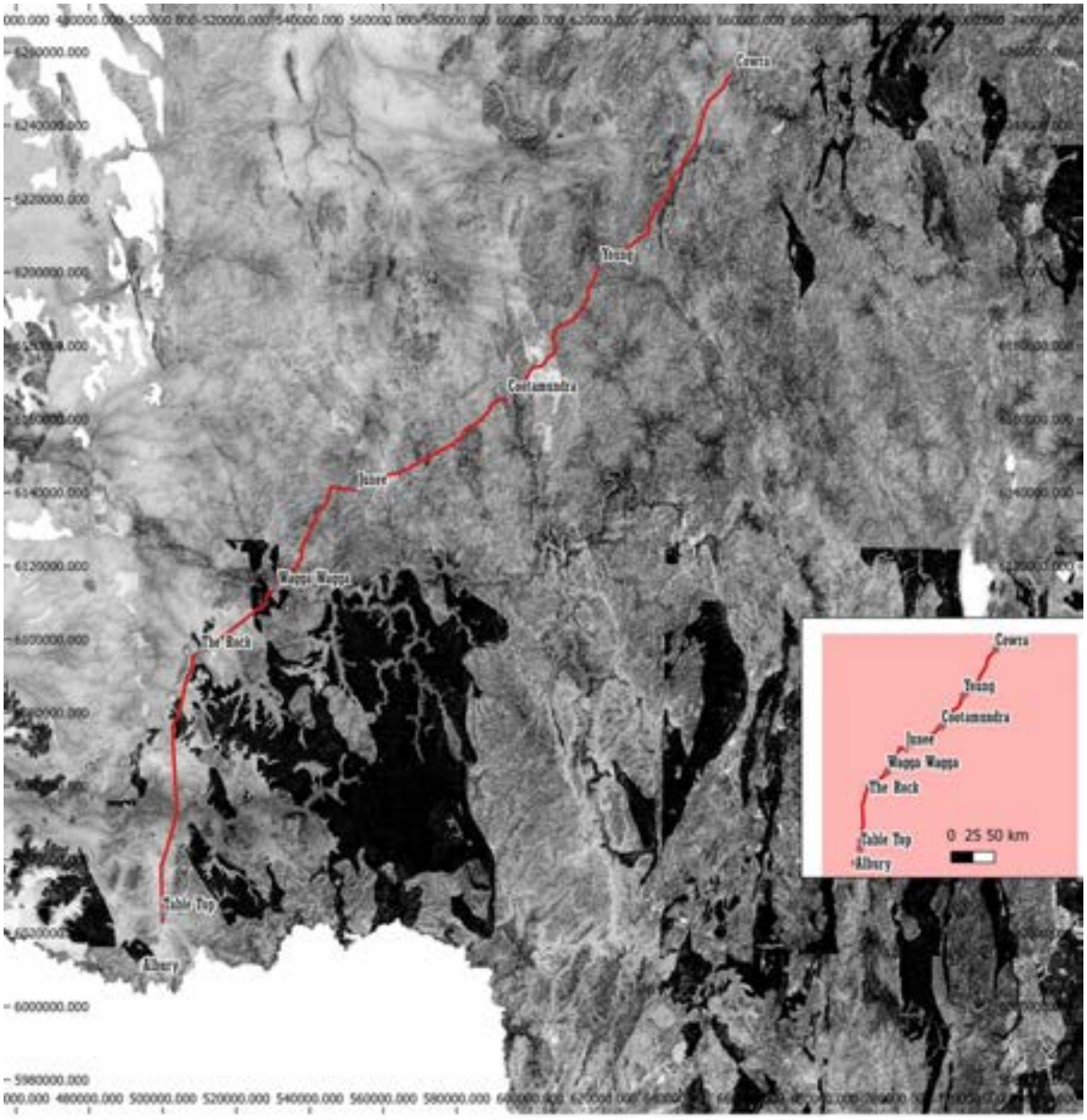
Olympic Highway ASDST stone quarries - Section 3

places
Olympic Hwy Buffer area
ASDST
Stone quarries
0
812

0 10 20 km

N

Base Map: Current Topographic Map


Cowra
Young
Cootamundra
Junee
Wagga Wagga
The Rock
Table Top
Albury
0 25 50 km
Olympic Highway ASDST stone quarries - Overview
0 10 20 km
places
Olympic Hwy Buffer area
ASDST
Grinding grooves
2
514
N
Base Map: Current Topographic Map

APPENDIX 4: CONSTRAINTS MAPPING

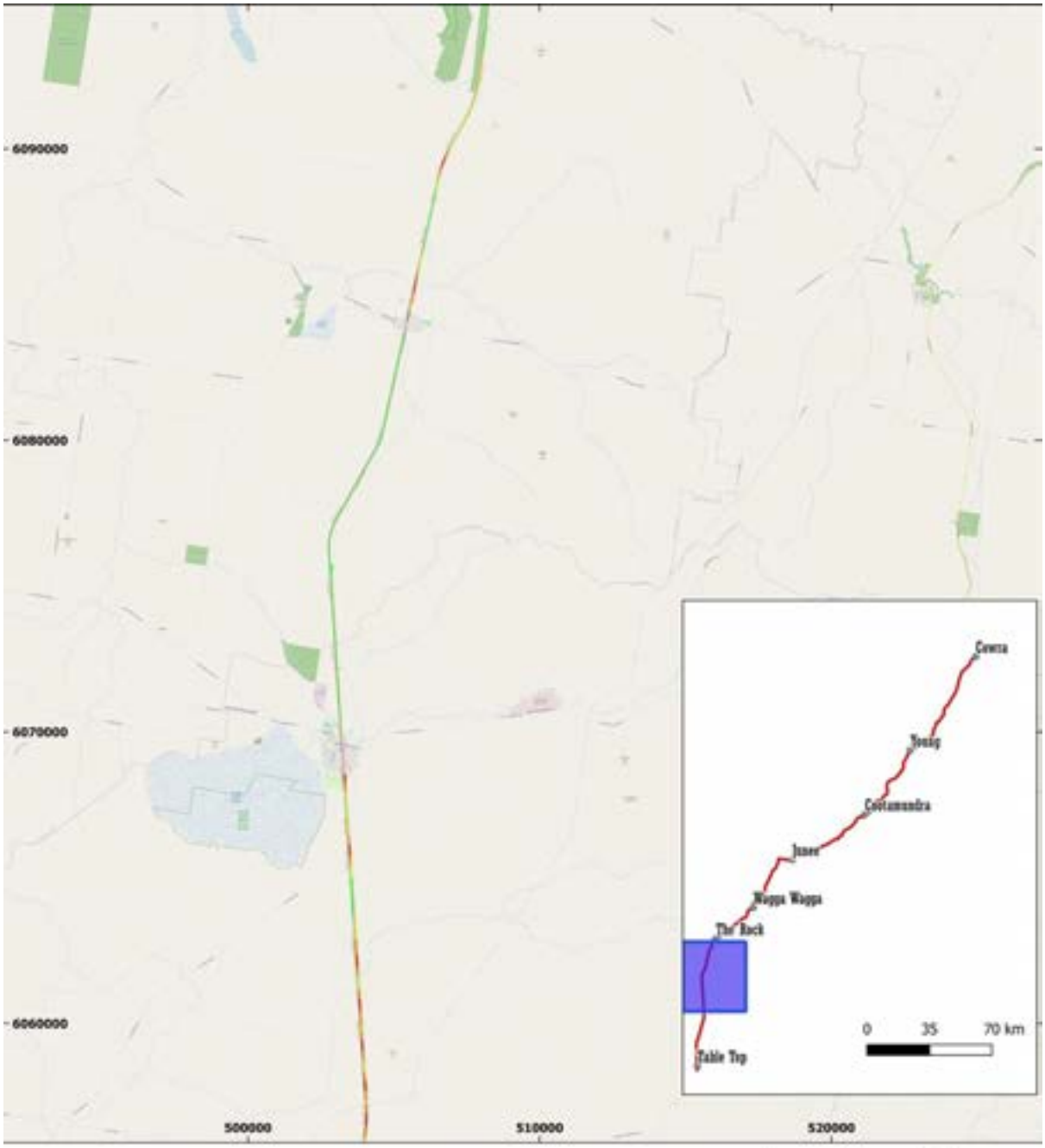
Olympic Highway - ACH sensitivity map section 1.1

0 5.5 11 km

MR78 study area - very high sensitivity
MR78 study area - high sensitivity
MR78 study area - moderate high sensitivity
MR78 study area - low-moderate sensitivity

N

Base Map: Current Topographic Map



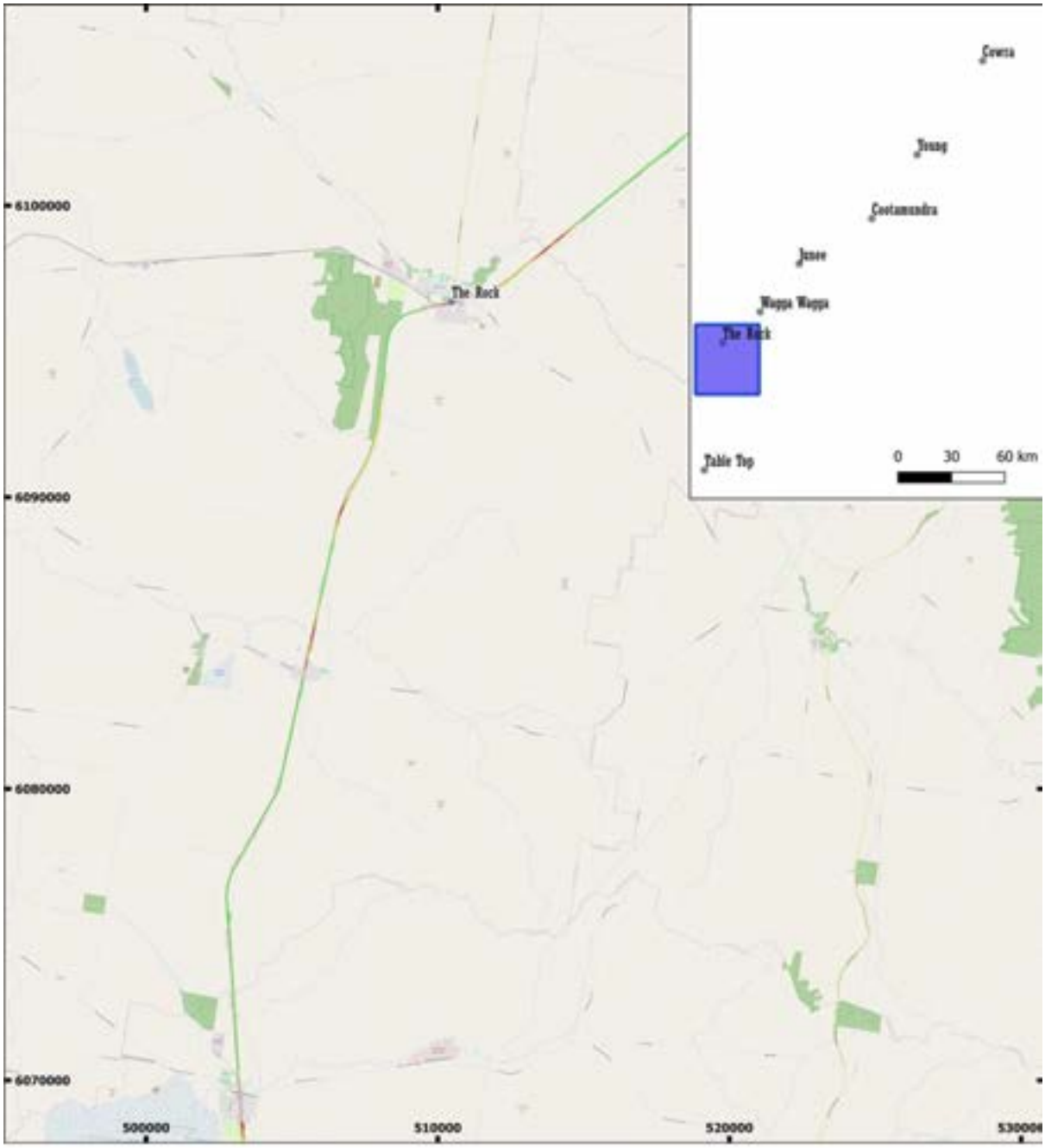
Olympic Highway - ACH sensitivity map section 1.2

0 2.5 5 km

MR78 study area - very high sensitivity
MR78 study area - high sensitivity
MR78 study area - moderate high sensitivity
MR78 study area - low-moderate sensitivity

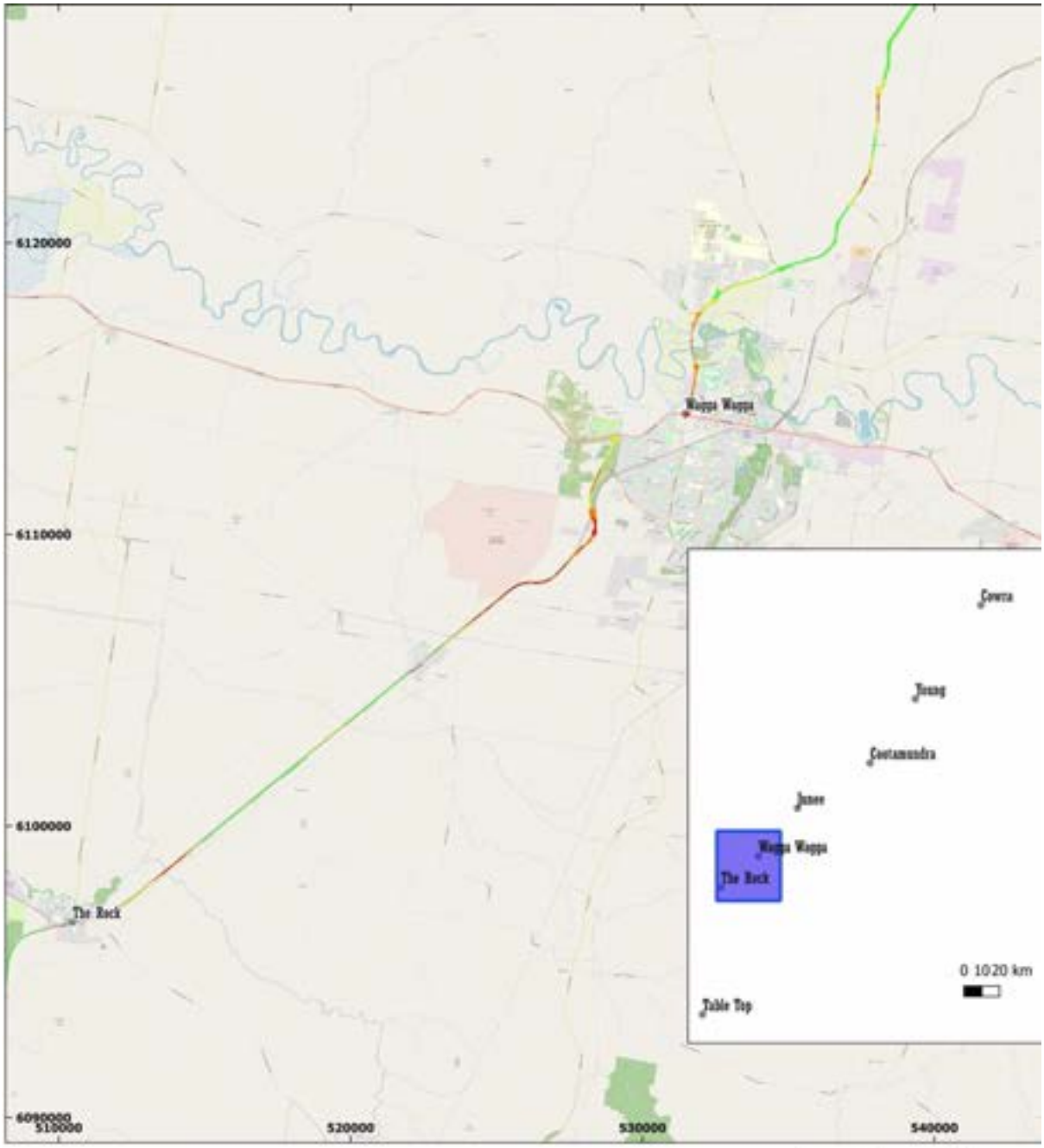
N

Base Map: Current Topographic Map



Olympic Highway - ACH sensitivity map section 1.3

Base Map: Current Topographic Map



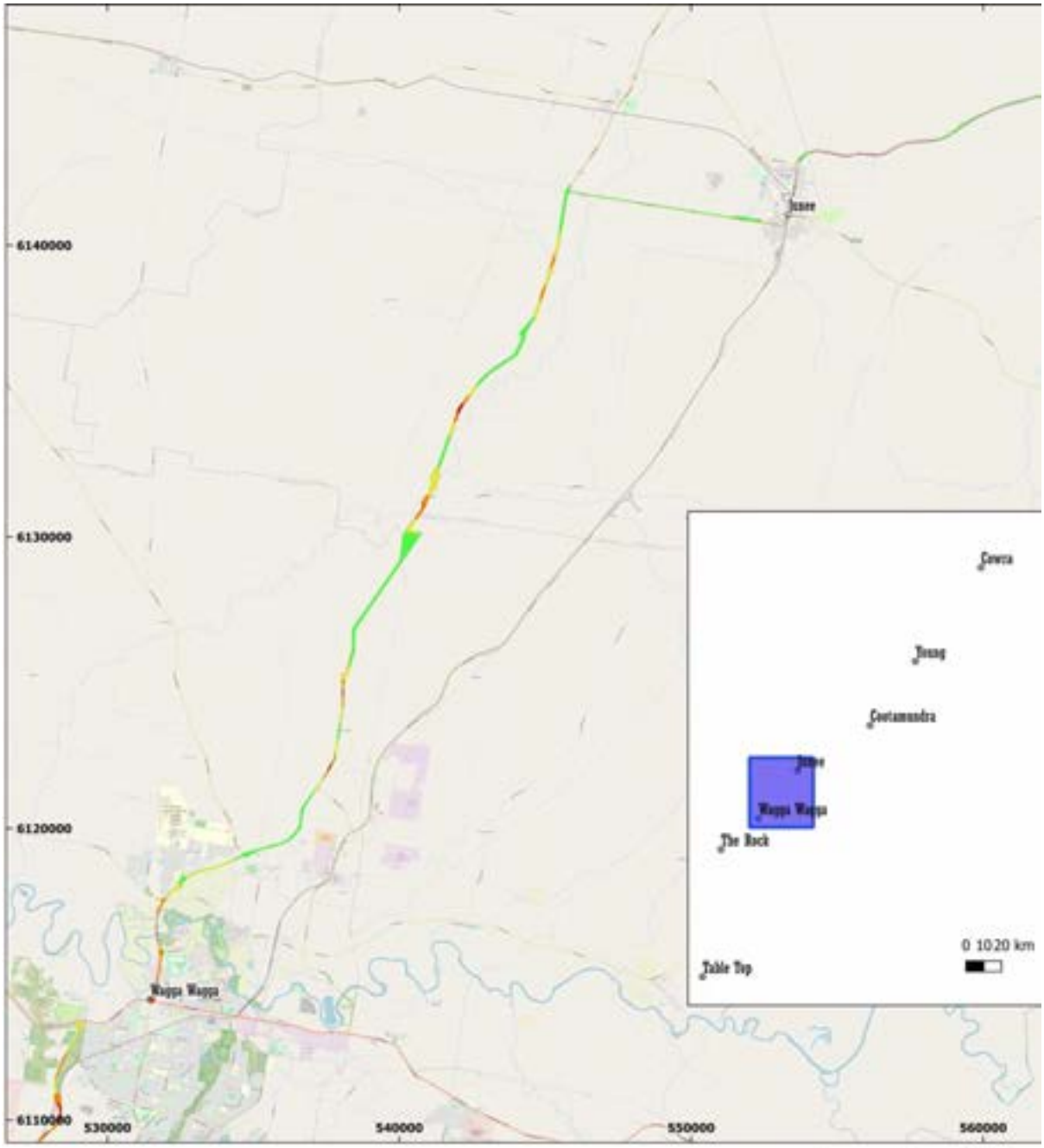
Olympic Highway - ACH sensitivity map section 1.4-2.1

0 2.5 5 km

MR78 study area - very high sensitivity
MR78 study area - high sensitivity
MR78 study area - moderate high sensitivity
MR78 study area - low-moderate sensitivity
places
OSM Standard

N

Base Map: Current Topographic Map

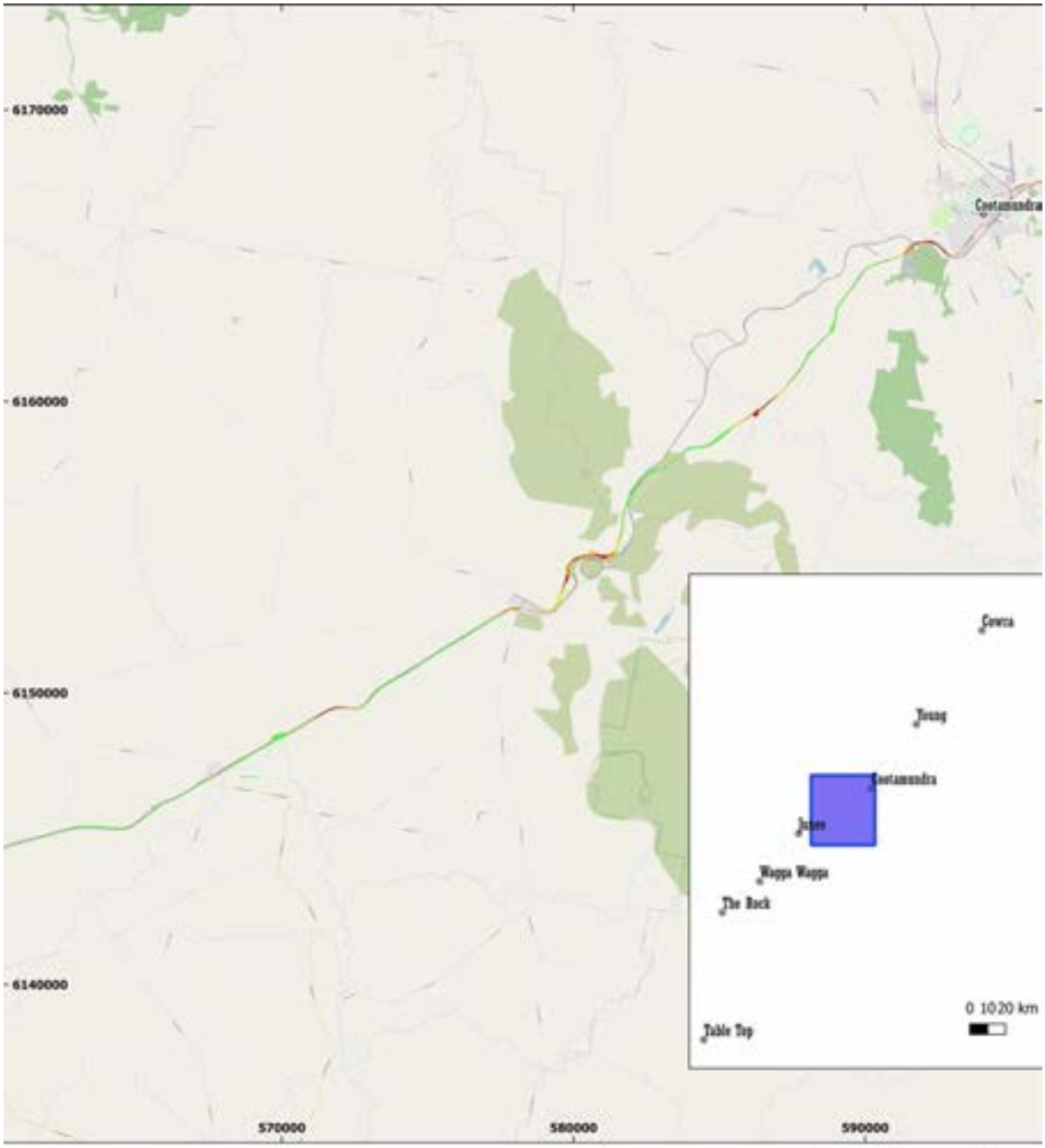


Olympic Highway - ACH sensitivity map section 2.2

0 2.5 5 km

MR78 study area - very high sensitivity
MR78 study area - high sensitivity
MR78 study area - moderate high sensitivity
MR78 study area - low-moderate sensitivity
places
OSM Standard

Base Map: Current Topographic Map



Olympic Highway - ACH sensitivity map section 2.3

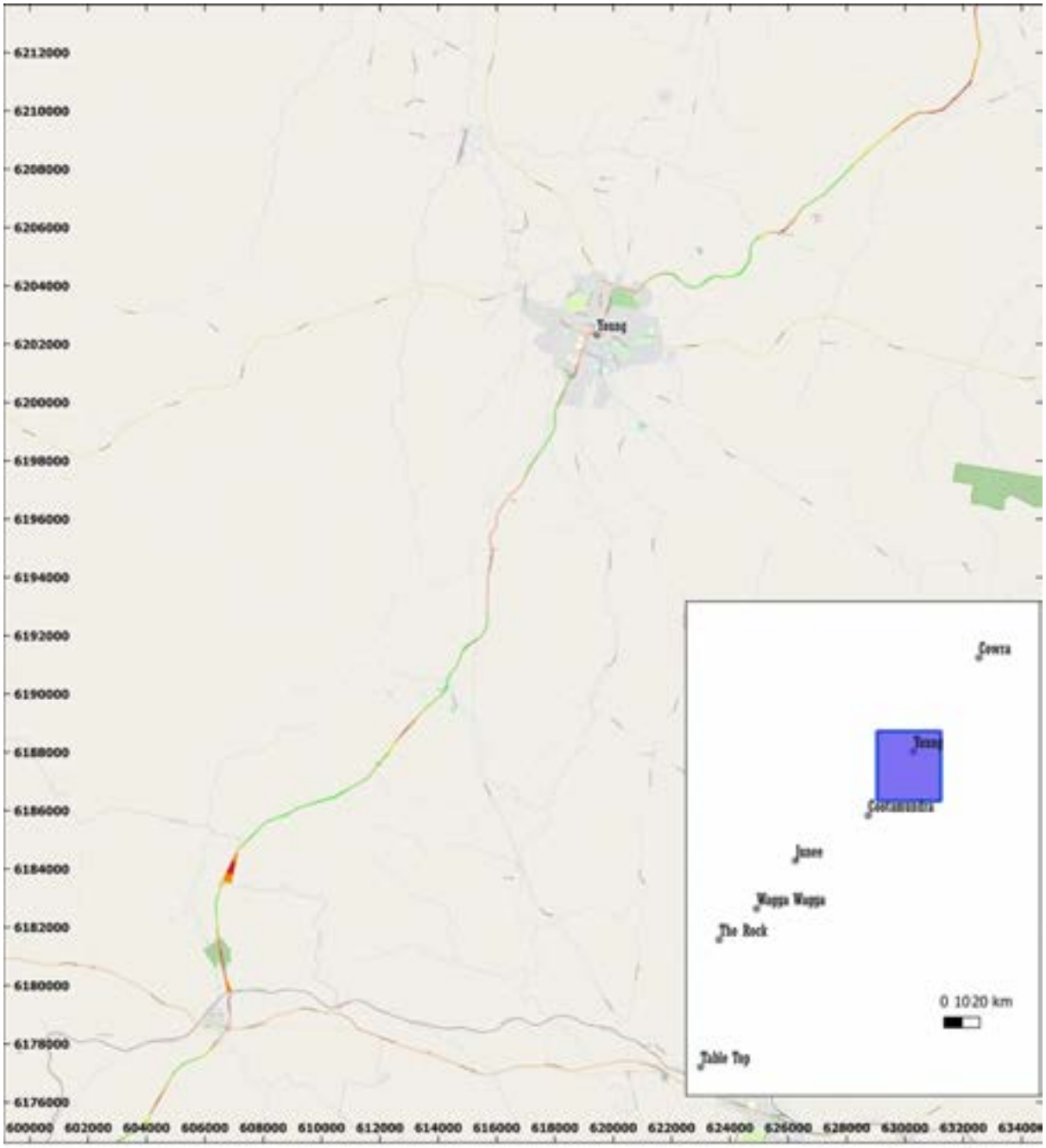
0 2.5 5 km

MR78 study area - very high sensitivity
MR78 study area - high sensitivity
MR78 study area - moderate high sensitivity
MR78 study area - low-moderate sensitivity
places
OSM Standard

Base Map: Current Topographic Map

N


6200000
6190000
6180000
6170000
590000
600000
610000
620000
Cowra
Young
Coota
Jerry
Wagga Wagga
The Rock
Table Top
0 10 20 km
Coota
Olympic Highway - ACH sensitivity map section 3.1
MR78 study area - very high sensitivity
MR78 study area - high sensitivity
MR78 study area - moderate high sensitivity
MR78 study area - low-moderate sensitivity
places
OSM Standard
Base Map: Current Topographic Map
0 2.5 5 km
N



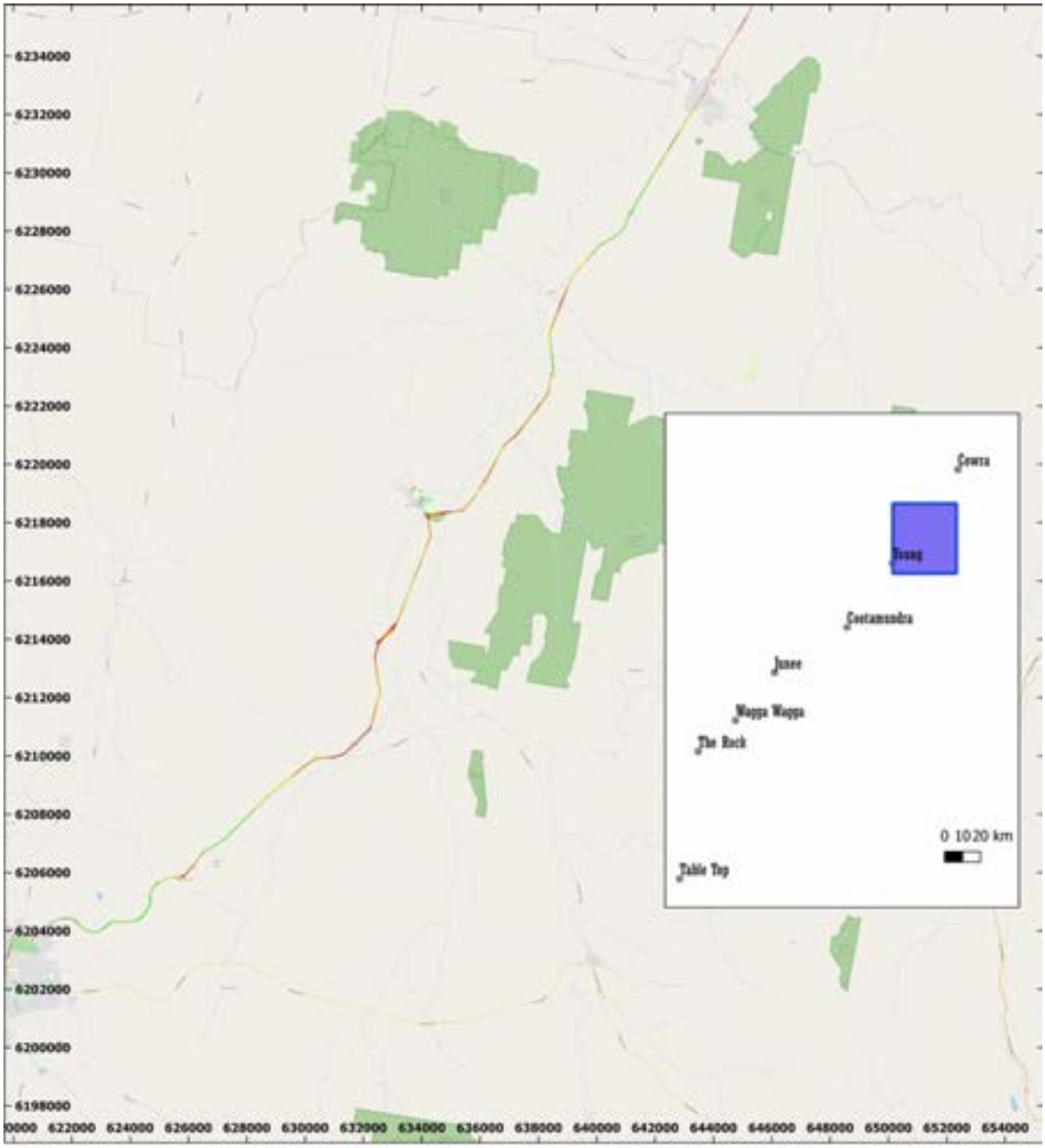
Olympic Highway - ACH sensitivity map section 3.2

MR78 study area - very high sensitivity
MR78 study area - high sensitivity
MR78 study area - moderate high sensitivity
MR78 study area - low-moderate sensitivity
places
OSM Standard

Base Map: Current Topographic Map

0 2.5 5 km

N



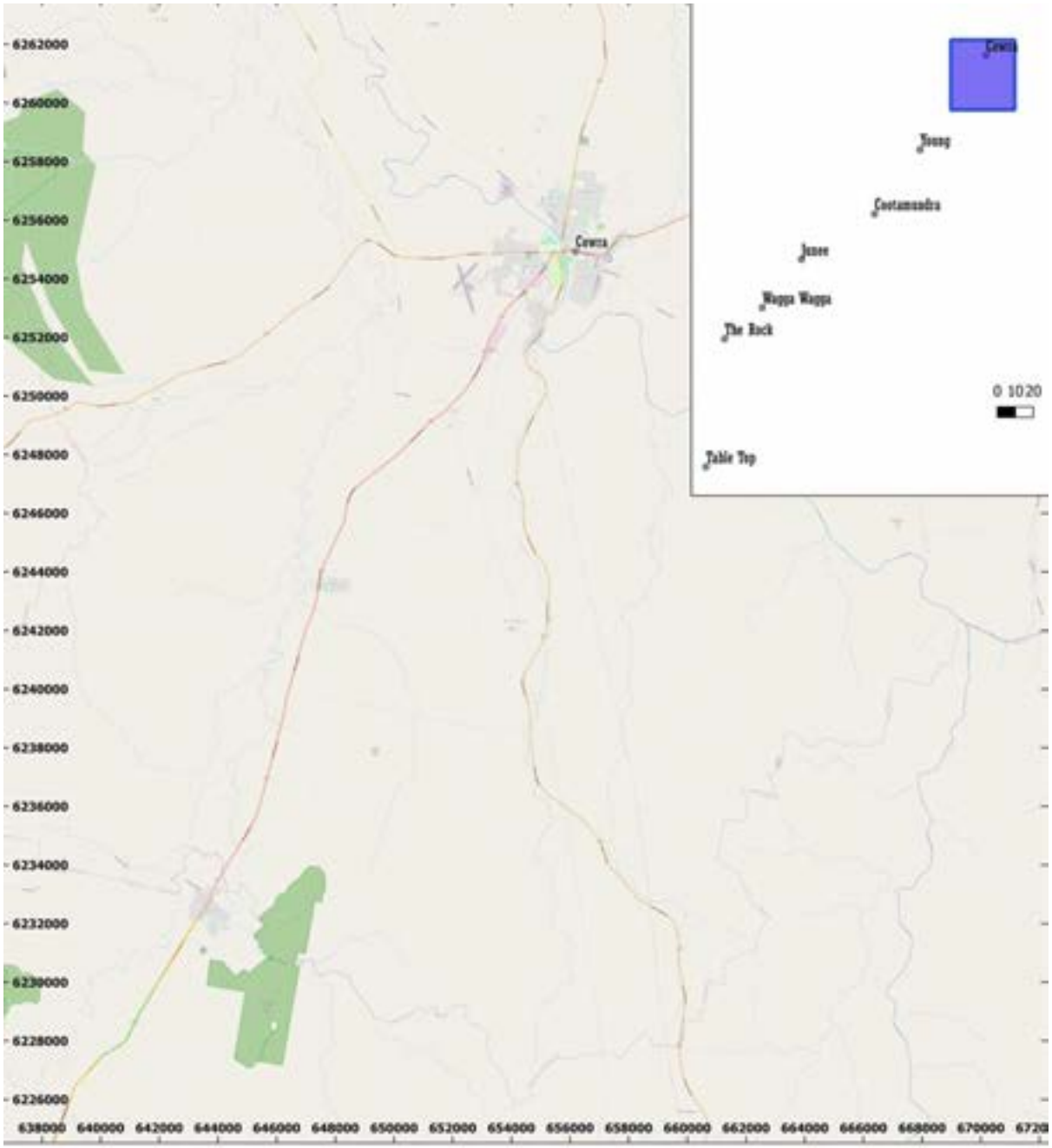
Olympic Highway - ACH sensitivity map section 3.3

MR78 study area - very high sensitivity
MR78 study area - high sensitivity
MR78 study area - moderate high sensitivity
MR78 study area - low-moderate sensitivity
places
OSM Standard

Base Map: Current Topographic Map

0 2.5 5 km

N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6234000
6232000
6230000
6228000
6226000
638000 640000 642000 644000 646000 648000 650000 652000 654000 656000 658000 660000 662000 664000 666000 668000 670000
Cowra
Young
Coota
Jenee
Wagga Wagga
The Rock
Table Top
0 10 20
Olympic Highway - ACH sensitivity map section 3.4
MR78 study area - very high sensitivity
MR78 study area - high sensitivity
MR78 study area - moderate high sensitivity
MR78 study area - low-moderate sensitivity
places
OSM Standard
Base Map: Current Topographic Map
0 2.5 5 km
N