

Appendix E Aboriginal and Historic Heritage Assessment



View southeast from the banks of the Yass River towards Structure 10.

ABORIGINAL DUE DILIGENCE & HISTORIC HERITAGE ASSESSMENT REPORT

COPPABELLA WIND FARM – LINE 99M REBUILD

YASS VALLEY AND HILLTOPS LGA

MAY 2019

Report prepared by
OzArk Environment & Heritage
for TransGrid

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Acknowledgement

OzArk acknowledge Traditional Owners of the area on which this assessment took place and pay respect to their beliefs, cultural heritage and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

EXECUTIVE SUMMARY

OzArk Environment & Heritage (OzArk) has been engaged by TransGrid (the proponent) to complete an Aboriginal and historic due diligence archaeological assessment for the rebuild of Transmission Line 99M between Structure 143 and Yass substation as a double circuit line followed by the removal of the existing wooden pole transmission line (the proposal). The proposal traverses the Yass Valley and Hilltops Local Government Areas (LGAs). The proposed activity is required to support the grid connection of the Coppabella Wind Farm.

The visual inspection of the study area was undertaken by OzArk Project Archaeologist, Philippa Sokol, on Tuesday 27 and Wednesday 28 November 2018. An additional visual inspection was undertaken by OzArk Principal Archaeologist, Ben Churcher, on Tuesday 2 April 2019, to ground-truth the location of previously recorded AHIMS sites #51-4-0052 and #50-5-0027.

No Aboriginal sites were recorded during the visual inspection. Three previously recorded AHIMS sites that were close to proposed activity locations were inspected and the current site features and site extents confirmed (Booroo Ponds 1 [#50-5-0027], YSS1 [#51-4-0052] and Yass River-OS1 [#51-4-0392]). In addition, during the desktop and gap analysis, 18 activity locations were identified as having increased archaeological potential and all these locations were inspected.

The visual inspection did not record significant heritage items and it is assessed that there is a low likelihood that the proposal will impact significant heritage items or archaeological deposits.

Recommendations concerning the study area are as follows:

Aboriginal heritage

- 1) Management recommendations regarding the three previously recorded sites near or within the proposed work areas (AHIMS #50-5-0027, #51-4-0027 and #51-4-0392) are provided in **Section 3.6**. Provided the mitigation measures in **Section 3.6** are adhered to, should impacts are proposed to occur at #50-5-0027 and #51-4-0027.
- 2) Further archaeological investigation at AHIMS #51-4-0392 (Yass River-OS1) is required and will be managed under an approved Aboriginal Heritage Impact Permit (AHIP) from OEH.
- 3) To avoid the potential for harm to Aboriginal objects within unassessed, adjacent landforms, all ground disturbance activities must be confined to the proposed activity areas at each structure, with machinery, equipment and materials used for the proposed work confined to within these areas and to the existing access tracks and vehicle areas.
- 4) During works, if Aboriginal artefacts or skeletal material are noted, all work should cease and procedures in the TransGrid *Unanticipated Finds Protocol* (**Appendix 3**) should be

followed. To assist work crews in the identification of Aboriginal objects, a summary sheet is provided in **Appendix 4**.

- 5) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

Historic heritage

- 6) This assessment has concluded that there is low likelihood that the proposed work will harm historic heritage objects, sites or PADs; as such, the proposed work can proceed without further archaeological investigation.
- 7) To avoid the potential for harm to historic objects within unassessed, adjacent landforms, all ground disturbance activities must be confined to the proposed activity areas at each structure, with machinery, equipment and materials used for the proposed work confined to within these areas and to the existing access tracks and vehicle areas.
- 8) If any previously unknown significant subsurface historic deposit is observed during works, the Unanticipated Finds Protocol (**Appendix 5**) should be followed.

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1 INTRODUCTION

1.1 BRIEF DESCRIPTION OF THE PROPOSAL

OzArk Environment & Heritage (OzArk) has been engaged by TransGrid (the proponent), to complete an Aboriginal and historic due diligence archaeological assessment for the rebuild of Transmission Line 99M (Line 99M) as a double circuit line between Structure 143 and Yass substation, followed by the removal of the existing wooden pole transmission line (the proposal). This report examines proposed works associated with the proposal. The proposal is in the Yass Valley and Hilltops Council Local Government Areas (LGA) (**Figure 1-1**).

1.2 BACKGROUND

The Coppabella Wind Farm (CWF) would connect to the National Electricity Market (NEM) via TransGrid's Line 99M, which provides a single circuit 132 kV electrical transmission connection between TransGrid's Yass and Murrumburrah substations.

The current capacity of Line 99M does not meet the required rating to transmit the generation capacity of the CWF in the NEM. Consequently, rebuilding the approximate 39 km section of Line 99M from the CWF site to Yass substation as a double circuit line, would meet the generation capacity of the CWF and address the predicted marginal loss factors associated with electrical generation of the CWF.

1.3 STUDY AREA

The study area consists of the Line 99M 132kV transmission line, between Structure 143 and the Yass 330kV substation, shown on **Figure 1-2** and **Figure 1-3**. The study area encompasses all access tracks to the Line 99M easement and structures (i.e. access track and watercourse crossing upgrade from Coppabella Road to Structure 143).

The proposal will include Structures 1 to 143 on the Line 99M transmission line. The study area is approximately 39 kilometres (km) long and will mainly occur within the existing 45 metre (m) wide easement and associated access tracks.

Details of the structures and works required at each location, including ancillary works, on Line 99M are included in **Appendix 2. Table 1** and **Appendix 2. Table 2**.

1.4 ASSESSMENT APPROACH

Aboriginal cultural heritage

The desktop and visual inspection component for the study area follows the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Due Diligence; DECCW 2010). The field inspection followed the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH 2011).

The activity locations, including ancillary works, which would require visual assessment was determined using TransGrid's Due Diligence Assessment Procedure (TransGrid 2018) at the request of the proponent. This was conducted as a gap analysis while undertaking the desktop research.

Historic heritage

This assessment applies the Heritage Council's *Historical Archaeology Code of Practice* (Heritage Council 2006) in the completion of a historical heritage assessment, including field investigations.

Figure 1-1: location of the proposal.

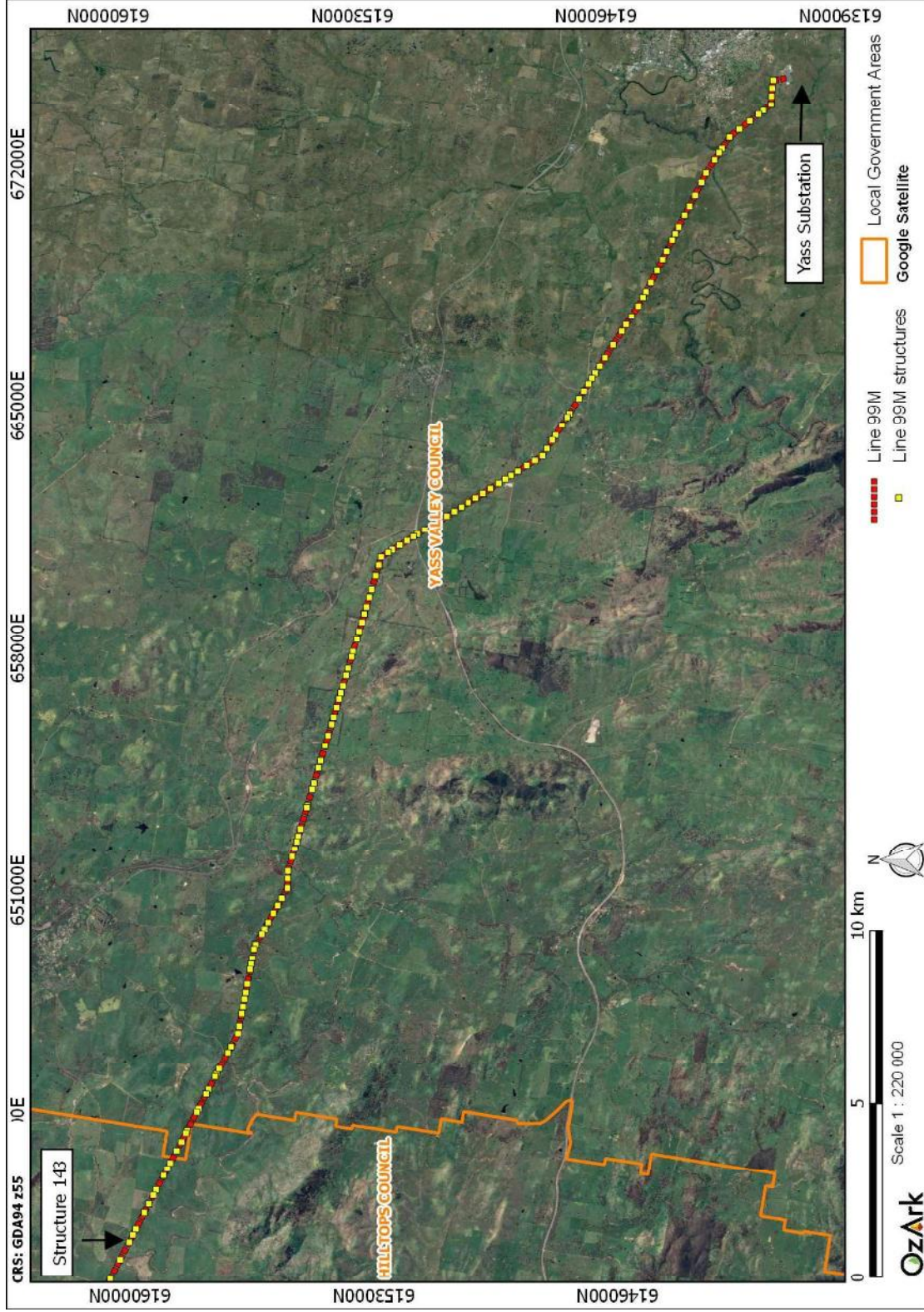


Figure 1-2: Activity locations in the south-eastern portion of Line 99M.

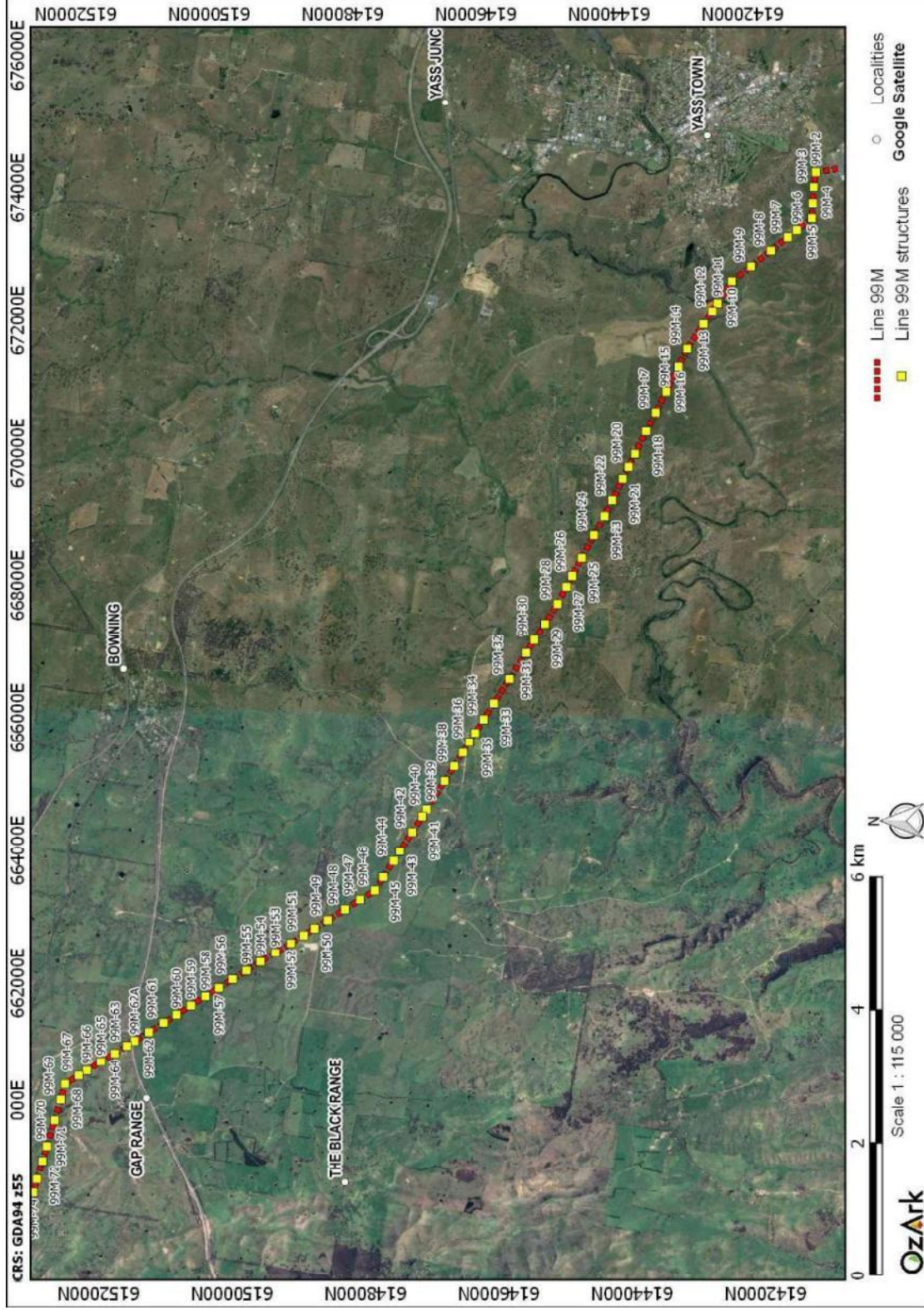
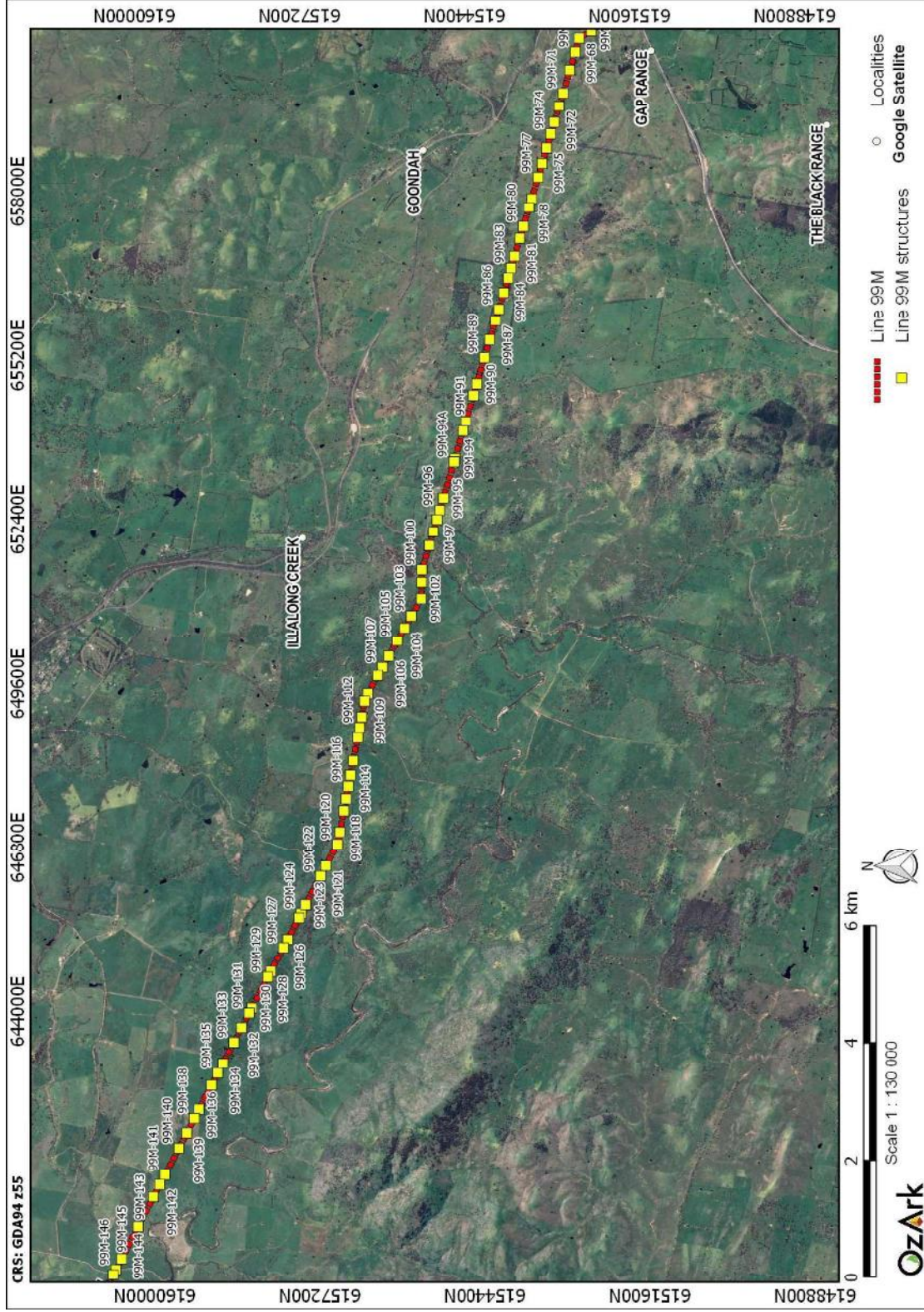


Figure 1-3: Activity locations in the north-western portion of Line 99M.



2 ABORIGINAL DUE DILIGENCE ASSESSMENT

2.1 INTRODUCTION

The *National Parks and Wildlife Regulation 2009* (NPW Regulation) made under the *National Parks and Wildlife Act 1974* (NPW Act) advocates a Due Diligence process to determine likely impacts on Aboriginal objects. Carrying out Due Diligence provides a defence to the offence of harming Aboriginal objects and is an important step in satisfying Aboriginal heritage obligations in NSW. This assessment follows the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Due Diligence; DECCW 2010) in conjunction with *TransGrid's Due Diligence Assessment Procedure* (TransGrid 2018) which was applied for this assessment.

2.2 DEFENCES UNDER THE NPW REGULATION 2009

2.2.1 Low impact activities

The first step before application of the Due Diligence process itself is to determine whether the proposed activity is a “low impact activity” for which there is a defence in the NPW Regulation. The exemptions are listed in Section 80B (1) of the NPW Regulation (DECCW 2010: 6).

A number of the activities carried out by TransGrid along Line 99M may be considered to be a ‘low impact activity’, however, there are also a number of activities that will involve ground disturbance that are not considered a ‘low impact activity’. Regardless, the ‘low impact activity’ defence does not apply to situations where there is reason to suspect that an Aboriginal object may be present. As the proposed work is in landforms with a heightened potential to contain Aboriginal objects, the due diligence process must be applied.

2.2.2 Disturbed lands

Relevant to this process is the assessed levels of previous land-use disturbance.

The NPW Regulation Section 80B (4) (DECCW 2010: 18) define disturbed land as follows:

Land is disturbed if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable.

Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure) and construction of earthworks.

The proposed activities are in areas that have predominantly been subject to: vegetation clearing; general farming; extensive ploughing and cropping; livestock grazing; fencing; erosion; construction and maintenance of the transmission lines; substation construction; transport corridors (i.e. formed sealed roads, road reserves and property tracks); suburban and rural residential development; and farm buildings and infrastructure.

While portions of the study area and some of the proposed activity locations could be considered 'disturbed land' as per the Due Diligence guidelines, some of these disturbances can be variable and difficult to verify at a desktop level. As such, places where it was difficult, at a desktop level, to determine whether the location was 'disturbed land' were visually inspected to determine the level of disturbance and the archaeological potential at each location.

In summary, it is determined that the proposal must be assessed under the Due Diligence Code. The reasoning for this determination is set out in **Table 2-1**.

Table 2-1: Determination of whether Due Diligence Code applies.

| Item | Reasoning | Answer |
|---|--|----------|
| Is the activity a Part 3A project declared under section 75B of the EP&A Act? | The proposal is assessed under Part 5 of the EP&A Act. | No |
| Is the activity exempt from the NPW Act or NPW Regulation? | The proposal is not exempt under this Act or Regulation. | No |
| Will the activity involve harm that is trivial or negligible? | The activity will not involve harm that is trivial or negligible. | No |
| Do either or both of these apply: Is the activity in an Aboriginal place? Have previous investigations that meet the requirements of this Code identified Aboriginal objects? | The activity will not occur in an Aboriginal place. Yes, previous investigations have been undertaken which have identified Aboriginal objects near proposed activity locations. However, these assessments cannot be used in this instance as they do not completely cover the study area or were conducted too long ago to be reliable today. | No No |
| Is the activity a low impact one for which there is a defence in the NPW Regulation? | The proposal is not a low impact activity for which there is a defence in the NPW Regulation. | No |
| Do you want to use an industry-specific code of practice, adopted by the NPW Regulation or other Due Diligence process? | While TransGrid's Due Diligence Assessment Procedure (2018) will be used to determine levels of assessment required at locations, the Due Diligence Code of Practice will be the primary guidelines referred to. | No |
| The Due Diligence Code of Practice applies | | |

2.3 APPLICATION OF THE DUE DILIGENCE CODE OF PRACTICE TO THE PROPOSAL

To follow the generic Due Diligence process, a series of steps in a question/answer flowchart format (DECCW 2010: 10) are applied to the proposed impacts and the study area, and the responses documented.

2.3.1 Step 1

Will the activity disturb the ground surface or any culturally modified trees?

Yes, the proposal will impact the ground surface where works are proposed to be undertaken and may impact or be in close vicinity to mature trees that have the potential to be culturally modified.

The proposed work will involve the rebuilding of Line 99M between Structure 143 and the Yass 330 kV Substation as a double circuit line. The work will involve the replacement of the existing wooden pole structures with single pole steel structures, which will be approximately up to 20 m higher than the existing structures at some locations; with a total structure height of 40 m. The new structures are proposed to be placed within 5 to 10 m of the existing structures, as close to the existing easement line as possible.

The proposed ancillary activities would also be required:

- The establishment of level construction benches at select structures, aside from where environmental and heritage constraints are identified
- Repair and / or upgrade of existing access tracks and construction of new access tracks
- Upgrade to some existing water crossings and construction of new watercourse crossings

The establishment of a 40 m x 40 m construction work site at each structure has been assumed; for the laydown of materials and equipment and to support the structure replacement works (i.e. use of an elevated work platform (EWP), crane and other plant equipment).

The proposed activities at particular locations are outlined in **Appendix 2. Table 1** and **Appendix 2. Table 2**. Representative photographs of the activity locations along Line 99M are shown in **Plates 1 to 10**. All proposed works were taken into consideration during the due diligence process.

2.3.2 Step 2a

Are there any relevant confirmed site records or other associated landscape feature information on AHIMS?

Yes, there are previously recorded Aboriginal sites within the study area.

A desktop database search was undertaken of the Office of Environment and Heritage (OEH) administered Aboriginal Heritage Information Management System (AHIMS) database for the

entire Line 99M. The AHIMS search was undertaken to include a 1 km buffer of Line 99M (inclusive of easements) and identified 36 previously recorded sites. As the study area only includes Structures 1 to 143, only the AHIMS sites in relation to the study area are detailed in Table 2-2: Site types and frequencies of AHIMS sites near the study area. **Table 2-2** and on **Figure 2-1**, **Figure 2-2**, and **Figure 2-3**. The full results of the AHIMS extensive search are attached in **Appendix 1**.

Table 2-2: Site types and frequencies of AHIMS sites near the study area.

| Site Type | Number | % Frequency |
|-----------------------|-----------|-------------|
| Isolated find | 11 | 55% |
| Artefact Scatter | 5 | 25% |
| Artefact Scatter- PAD | 1 | 5% |
| PAD | 1 | 5% |
| Modified Tree | 2 | 10% |
| Total | 20 | 100% |

A total of 20 previously recorded Aboriginal sites were identified in the study area (**Table 2-2**). One site was recorded within the Line 99M easement (#51-4-0392) between Structures 11 and 12 and located within the 40 x 40 m impact area for the proposed works and therefore at risk of impact. This site was ground-truthed and assessed during the visual inspection of the study area; proposed management of the site is detailed in **Section 3.6.3**. The next closest site to the study area and proposed activity locations is AHIMS #50-5-0027 approximately 85 m east of the proposed access track work to Structures 9 and 10. All other 19 AHIMS sites are located outside of the 40 x 40 m impact area for proposed works and are not at risk of impact.

Artefact sites, including isolated finds and artefact scatters, comprise most of the AHIMS sites for the search area (80%), including a site which also contains potential archaeological deposit (PAD) (5%). Modified trees were also recorded in the area (10%) and one area identified as PAD (5%). Recorded stone artefact sites are typically recorded on well-elevated, flatter landforms (crests, spurs and creek banks) and in the proximity of a reliable water source and landscapes that provide suitable shelter. Many of the sites would have been revealed through modern land use practices such as vegetation clearing, fencing, cultivation, livestock grazing, and farm infrastructure. Additionally, natural processes such as water wash and erosion have revealed Aboriginal objects that would have originally been subsurface deposits. Modified trees have been identified in the AHIMS search though are expected to be rare in the study area due to previous vegetation clearing that has occurred within the Line 99M easement. The location of PADs is usually identified based on landform potential and access to available resources and are often associated with reliable water sources, and elevated and sheltered landforms.

Figure 2-1: AHIMS sites near the proposed activity locations along the south-eastern portion of Line 99M.

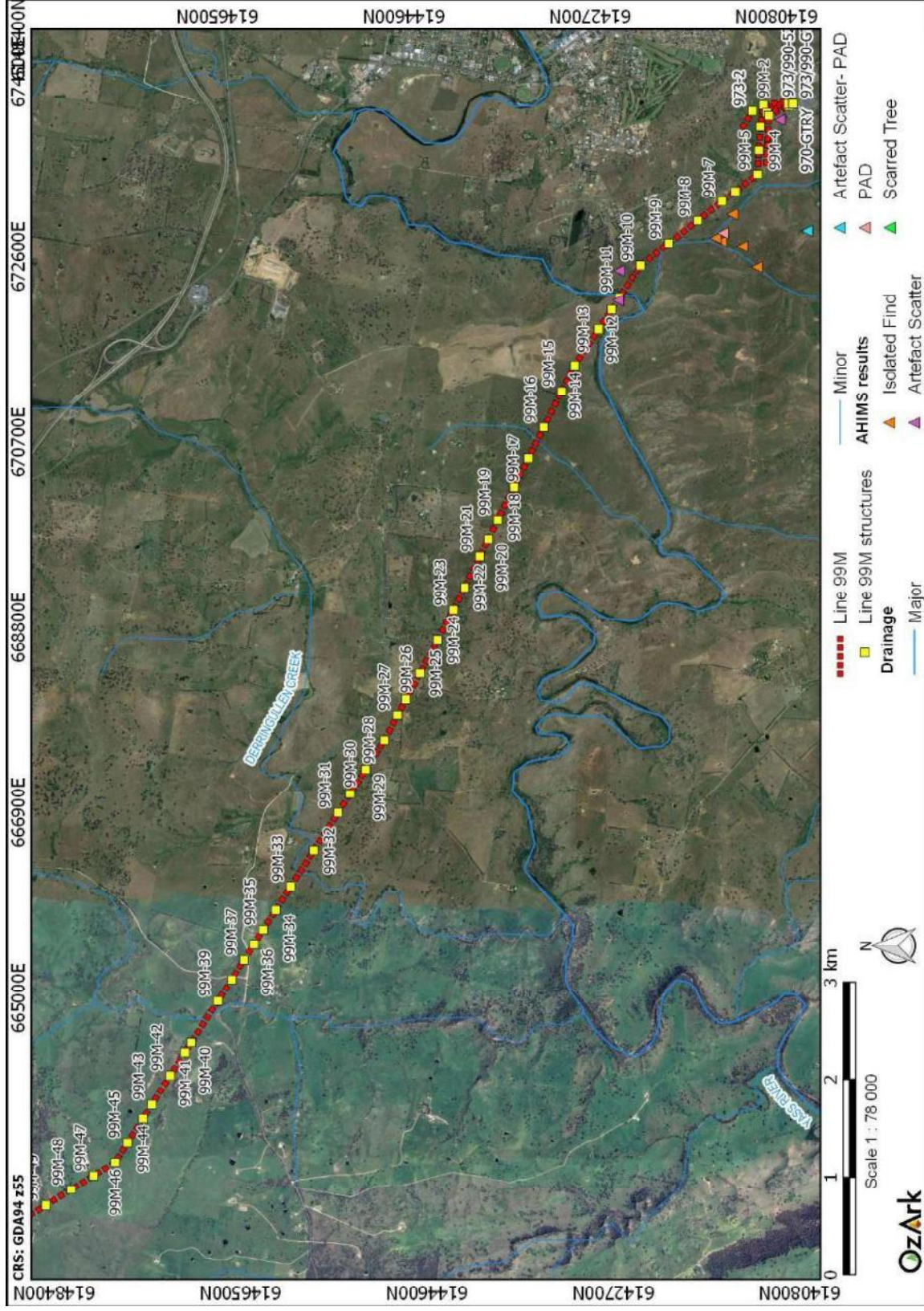


Figure 2-2: AHIMS sites near proposed activity locations along the central portion of Line 99M.

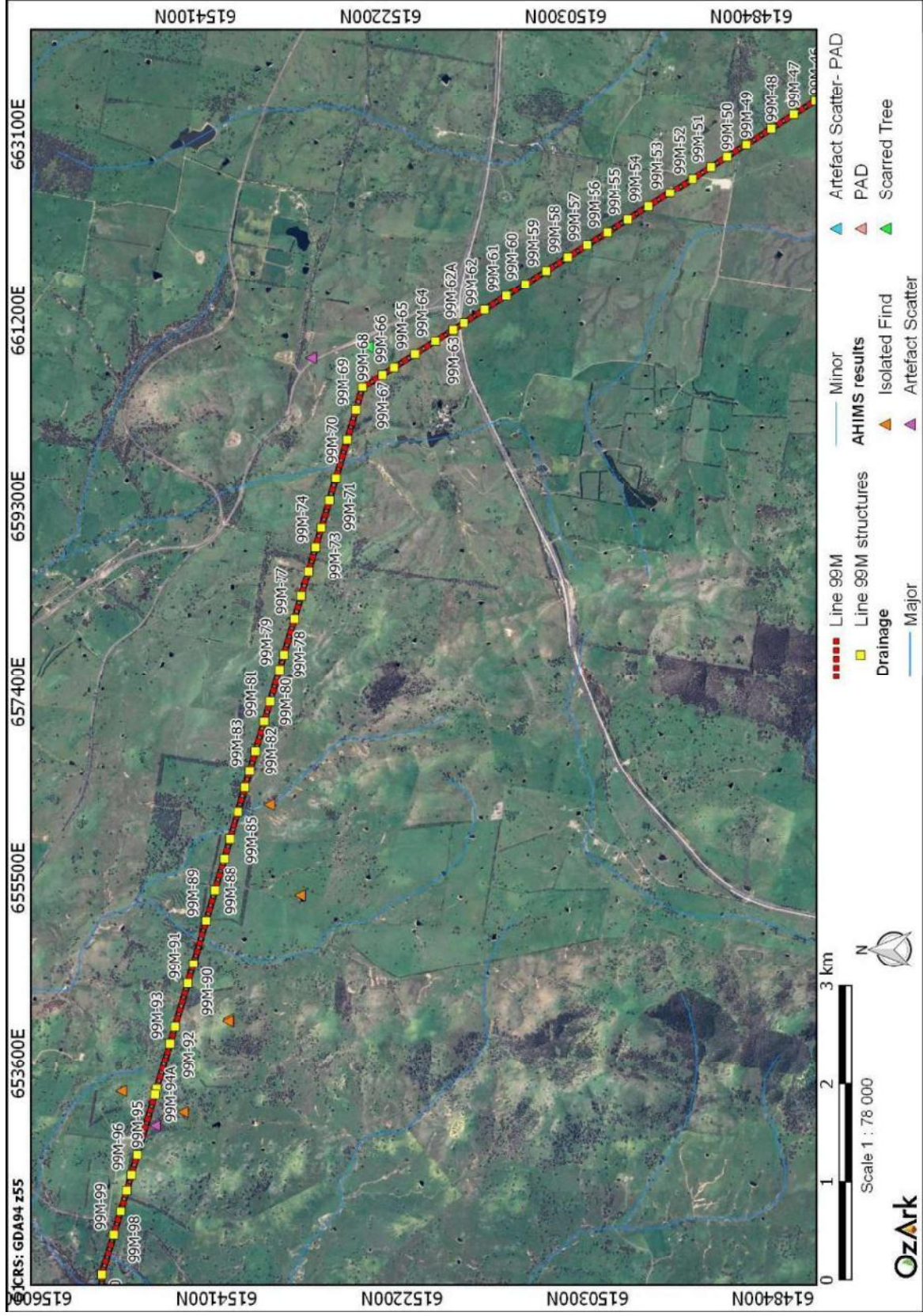
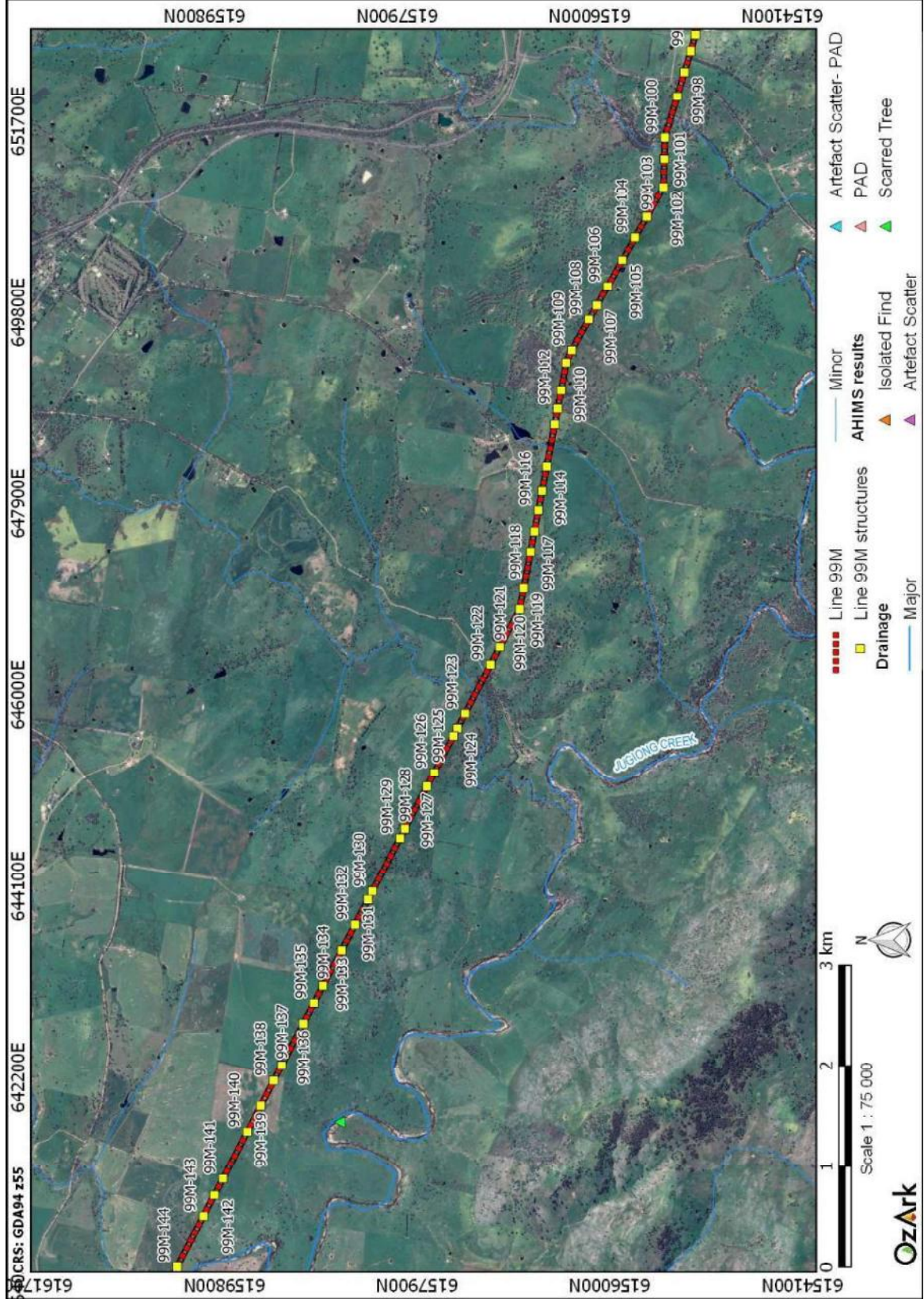


Figure 2-3: AHIMS sites near proposed activity locations along the north-western portion of Line 99M.



2.3.3 Step 2b

Are there any other sources of information of which a person is already aware?

No. However, there is a number of local archaeological studies that are relevant to the study area.

Activity locations within the study area have been previously assessed by OzArk (2018), with a summary of this assessment provided in **Section 1.2**. Additionally, archaeological studies have been undertaken near Line 99M and within similar landforms to the study area. Some of these studies comprise sections of Line 99M itself. Studies have been produced to support infrastructure driven developments such as water pipeline installation, electricity infrastructure remediation, optic fibre cable installations, and residential and industrial developments.

Local studies

Koettig (1986) undertook test excavation works on landforms northwest of Yass (approximately 7 km north of Span 16–17 of the Line 99M easement). The excavation was along a section of the Bowning to Yass water supply pipeline, near Derringullen Creek. The investigation area extended over approximately 700 m between the railway line to the west and the creek to the east. The topography comprised three main spurs separated by shallow drainage channels. Test excavations were undertaken with a small backhoe and varied in length from 1.2 to 1.6 m. Most of the excavation pits were concentrated in the southern 200 m of the site area as this offered the flattest landform (trenches A to D). One pit was excavated at the northern end of the site on a spur which forms the bank of Stone Sharpening Creek (trench E).

Soils comprised upper humic, loam to grey silt overlying orange clay. In trench E the deposit was variable sized cobbles within a loose soil matrix, with red clay under the soil and cobble layer. Glass fragments were common in all humic layers of the trenches. Artefacts were present in such low numbers that no analysis was undertaken. Artefact manifestations were consistently sparse over all trenches. A total of 17 artefacts were found across all excavation trenches and comprised raw materials dominated by quartz, mudstone, chert, quartzite and porcellanite. Scarred trees had also been recorded in the area, however, beyond the location of the proposed pipeline route. A third scarred tree was identified during the excavation works, 44 m northeast of the proposed pipeline. The scarred trees were recorded at least 6 km north of the Line 99M structures; therefore, wholly outside of the Line 99M easement. Based on the results of the investigations, it was recommended that no further archaeological work was required along the pipeline route. The scarred trees were beyond the proposed pipeline route and were at no risk of impact from the works.

Kuskie (1992) was engaged by Landscan Pty Ltd to undertake an archaeological assessment for an optical fibre cable construction, situated north of Line 99M and extending further northwest to Harden and southwest to Cootamundra, NSW. The proposed optic route was proposed to extend

from Cootamundra to Hall, coming near the townships of Harden, Galong, Binalong, and to the south of Yass, running immediately adjacent to Line 99M; especially from Structure 1 to 40. Kuskie (1992) assessed the cable route in three sections according to its alignment, the most applicable being the Galong–Yass section, to the northwest of the Yass substation. This section of the cable route passed through undulating terrain, isolated hills, with intermittent streams, swampy areas and named watercourses. During the field assessment stage of Kuskie’s assessment, test pitting was undertaken in areas considered to have sensitivity based on landform proximity to local resources and in areas where surface visibility was low.

The first group of test pitting was undertaken along the north side of the Yass River near Hattons Gully. Six test pits were excavated, ranging from a shallow depth of eight centimetres (cm) to the deepest pit at 34 cm. The soils were identified as shallow and predominantly clayey overlaying limestone, shale and siltstone. Consequently, the area was assessed as having low archaeological sensitivity.

The second group of test pitting was undertaken along the south side of the Yass River in the broad valley of Booroo Ponds. Four test pits were excavated, ranging from the shallowest pit depth of 22 cm to the deepest pit at 57 cm. The soils were observed to be much deeper in the tested area likely due to the proximity of the low valley and predominantly silty sands and sandy loam soils. However, the pits were also stony containing inclusions of shale and siltstone. No artefacts were identified in any of the test pits and the cable route in this section was assessed as an area of low archaeological sensitivity as it avoided the elevated terraces and lower slopes in the east. One site was identified in this portion of the route: Booroo Ponds 1 (AHIMS #50-5-0027); a low-density surface artefact scatter with possible sub-surface deposit.

OzArk were engaged by TransGrid to undertake an Aboriginal and historic heritage assessment for the southern poles and low spans remediation project over 13 transmission lines in southern NSW and the Australian Capital Territory (OzArk 2017a). The proposed work across all 13 transmission lines included structure replacements and sign installation between structures. The closest transmission line, albeit located at a distance to the north of the current study area, is Line 973 that runs from Yass to Cowra.

One artefact scatter site (Limestone Creek-OS1) was identified during the field survey located approximately 200 m southwest of transmission Line 973. No Aboriginal sites, objects or PADs were identified within any of the remaining proposed work locations; however, several archaeologically sensitive landforms (SALs) were identified. These were generally situated on gently elevated landforms near a reliable water source.

OzArk were engaged by TransGrid to undertake an Aboriginal and historic heritage assessment for the southern poles and low spans remediation project for transmission lines 991 and 99M (OzArk 2017b). The fieldwork for this previous study focused on proposed activity locations at

targeted locations along the entire length of Line 99M, which was completed in 2016 and the report was finalised in 2017. The proposed work across the two transmission lines included structure replacements, construction benches, installation of gates, and signage between structures. No Aboriginal sites, objects or PADs were identified within any of the proposed work locations; however, several archaeologically sensitive landforms (SALs) were identified. SALs were generally situated on gentle slopes near a reliable water source and were predominantly concentrated in the far north-western portion of Line 99M near the location of Structure 212 through to Murrumburrah substation, in the far northwest.

Dibden (2009) was engaged by NGH Environmental on behalf of Epuron Pty Ltd to undertake an archaeological assessment of Aboriginal and non-Aboriginal heritage for the proposed Yass Valley Wind Farm Development, situated approximately 20–35 km west and southwest of Yass NSW. The proposal consisted of up to 182 wind turbines, turbine generators and electrical plants, that were located across three separate precincts (Carrolls Ridge, Coppabella Hills, Marilba Hills). The field survey units for the Aboriginal heritage survey were based on landform morphology types within the three proposed precincts for the wind farm. The historic heritage assessment generally targeted European occupation areas and used Parish maps to understand the historic use of the landscape.

The Carroll Ridge survey area comprised 137 hectares (ha), and 70 ha was surveyed. The survey identified 15 Aboriginal sites, predominantly stone artefact sites and two areas were assessed as PADs. Sites were generally recorded along crest landforms. The Coppabella Hills survey area comprised approximately 458 ha, and 207 ha was surveyed. The survey identified 70 sites comprising stone artefacts, the majority recorded on crest landforms. Some of the survey areas and sites were considered to contain subsurface artefacts of low/moderate density on saddles, large upland basins and within valleys. A historic ploughed landform was recorded as a historic item, but was assessed to have no heritage significance. The Marilba Hills survey area comprised approximately 488 ha, and 301 ha was surveyed. The survey identified 31 Aboriginal sites along crest landforms. Most of the sites contained either a single artefact or very low-density scatters. Two historic heritage items were recorded. These included a section of a wooden fence and a small stone feature possibility being the footings of a small building. Both were assessed to have low heritage significance.

OzArk (2018) completed a due diligence assessment for the proposed uprating of Line 99M from Yass to Murrumburrah. The project was for the remediation works associated with the uprating of the line between the Yass substation and Structure 143. The project included indirect impact works: optical ground wire stringing (OPGW); brake and winch sites; and structure reinforcement through cross-bracing. The direct impact works were to include: structure replacement; structure reinforcement using guy wire installation; structure straightening; earthworks; construction benches; various road upgrades and watercourse crossings; and gate installations. The project

covered landforms of moderate to steep undulations to low lying areas prone to inundation. Gentle open spurs and crests with moderate to gentle side slopes were present as well as landforms next to permanent water bodies with steeper side slopes and flat tops. Predictive modelling was undertaken prior to field surveys focusing on landform features and associated resources which were likely to increase the potential for Aboriginal occupation and was analysed in relation to the impacts from proposed activity within those portions of the line. The field inspection of these areas with potential for Aboriginal occupation was undertaken in December 2017 and one Aboriginal site was recorded: Yass River-OS1 (AHIMS #51-4-0392), an artefact scatter of up to 16 artefacts predominantly manufactured from tuff, mudstone, quartzite, quartz, chert and fine-grained siliceous material. The site was assessed to have potential archaeological deposit (PAD), likely to be within a secondary context within the existing 'plough zone', and with potential for more intact deposits below this zone.

Cultural values of the study area

To the best of OzArk's knowledge, there are no cultural values associated with any places within the study area. No Aboriginal community members accompanied the current visual inspection.

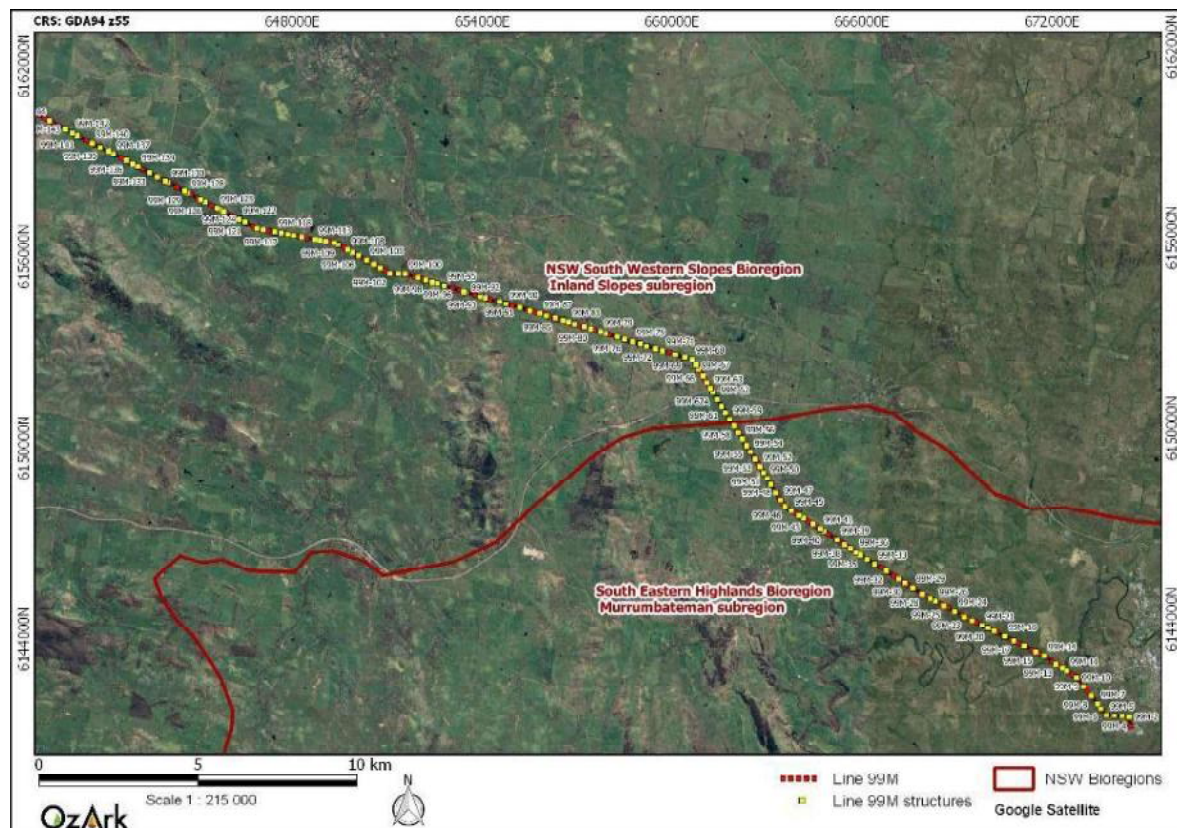
2.3.4 Step 2c

Are there any landscape features that are likely to indicate presence of Aboriginal objects?

Yes. The study area intersects with many different types of landscape features, including watercourses, flat elevated terraces, ridgelines and elevated flats along hill tops which have the potential to contain Aboriginal objects.

The study area extends across two environmental bioregions: NSW South Western Slopes Bioregion and South Eastern Highlands Bioregion (NPWS 2003). The South Eastern Highlands Bioregion covers the south-eastern portion of Line 99M, from the Yass Substation to span 58–59, and the South Western Slopes Bioregion covers the north-western portion of Line 99M (Figure 2-4). The environmental characteristics of the bioregions are further detailed below.

Figure 2-4: The study area in relation to the two bioregions (NPWS 2003).



NSW South Western Slopes Bioregion

This bioregion lies over the north-western portion of the study area and is characterised by Cambrian to Early Carboniferous sedimentary and volcanic rocks of the Lachlan Fold Belt. Granites are common and mostly located in large scale upfolded rock bodies. Within the bioregion, granite landscapes occur either as central basins surrounded by steep hills of metamorphic rocks, or as high rocky plateau with rocky outcrops. The valleys between the ranges are either in granite or softer rocks such as shale, phyllite or slate (NPWS 2003).

The overall pattern of soils within the bioregion consists of shallow, stony soils on the top of ridges and hills. Downslope from ridges, texture contrast soils are common which contain subsoils derived from the underlying weathered rock and topsoils of coarser material derived from all parts of the slope. Valley floor subsoils are usually poorly drained and can accumulate soluble salts. Dryland salinity is widespread. Alluvial sands and loams are more common than clays in most parts of the landscape, although alluvial clays become more important nearer to the Riverine Plains (NPWS 2003).

At the time of European colonisation, typical vegetation in the surround of the study area would have comprised red stringybark on higher slopes, with black cypress pine, kurrajong, red ironbark, white gum, yellow box and Blakely's red gum occupying the lower slopes. Valley flats would have been dominated by rough-barked apple, with river oak along eastern streams and river red gum lining the larger central and western streams (NPWS 2003).

South Eastern Highlands Bioregion

This bioregion lies over the south-eastern portion of the study area and is bounded by the Australian Alps in the south and the southern western slopes to the west. The highlands are part of the Lachlan fold belt and contain an underlying geology of sandstone, shales and volcanic rocks intruded by numerous granite bodies. The general structural trend of this bioregion is north-south and the topography strongly suggests this. The dominant topographic features of the bioregion include plateau remnants, granite basins and prominent ridges formed on contact metamorphic rocks, and valleys are narrow. Generally, streams within the bioregion are deeply entrenched with few terrace features (NPWS 2003).

Soils vary across the bioregion according to altitude, temperature and rainfall. On parent material slates, sandstone and volcanic, mottled red and yellow texture contrast soils with red earths are found. On granite rock, shallow red earths occur on ridges, and yellow texture contrast soils on all slopes with deep coarse sands in alluvium. On Tertiary basalts, shallow red-brown to black stony loam exists, with alluvial loams and black clays in swampy valley floors (NPWS 2003).

Vegetation within the bioregion varies in relation to altitude, temperature and rainfall. Prior to European settlement, vegetation communities occupying lower areas would have included yellow box, red box, and Blakely's red gum, with some white box. Red stringybark, broad-leaved peppermint, and white gum would have dominated hills in the west. Brown barrel communities are common in the east and river oak is seen along main streams. Grey gum and Blaxland's stringybark are found on lower areas, and brown barrel, mountain gum, narrow-leaved peppermint and ribbon gum occur on higher areas. Patches of snow gum can be found in places with the highest altitude (NPWS 2003).

Topography and hydrology

The topography of the study area is predominantly situated on steep to moderately undulating landforms; or low-lying areas of periodic inundation. Gentle open spurs and crests with moderate to gentle side slopes are also present and landforms closer to permanent water bodies have steeper side slopes generally with flat tops. General elevation ranges from 420 m to 500 m. The predominant hydrological features which traverse the study area include: Yass River, Booroo Ponds, Barrandella Gully, Rosebank Creek, Hingertys Creek, Derringullen Creek, Bowning Creek, and Washpen Creek. Dunderalligo Creek, Illalong Creek, Two Mile Creek, Balgalal Creek and Bobbara Creek.

Predictive modelling

Based on the named watercourses that cross the study area and the concept of stream ordering, the known landforms of the study area, recorded sites and previously conducted studies, the following general predictions can be made regarding the nature of Aboriginal sites and their possible location in the study area.

Artefact scatter: this site type is expected to be the most common present and the location of such sites will be generally associated with elevated, well-drained landforms near water, however, sites associated with the Yass Valley Wind Farm Development (**Section 2.3.3**) were commonly associated with crest landforms. Artefact scatters are likely to have been impacted by European agricultural practices as landforms favoured for prehistoric occupation were also often favoured for the European occupation or agriculture.

Isolated finds: Isolated finds may occur anywhere, especially in disturbed locations near water sources or on travel routes, often within elevated landforms.

Modified trees: Few mature trees of an age to bear cultural scars are likely to remain in the cleared easement of the study area, although some remnant individuals may be present.

Grinding grooves: this site type was not identified in the AHIMS search results; however, it may be recorded in areas where appropriate sandstone is present, particularly near water. However, it is suspected that the lack of suitable sandstone outcrops will make this site type very rare in the study area.

Burials: Human burials are usually located away from occupation sites but in areas accessible from occupation sites. If they comprise interments, then deposits are usually required to be soft or sandy for easy digging. It is unlikely that burials will be present within the study area.

The due diligence process has indicated that there are activity locations within the study area that are in landforms that have potential to contain Aboriginal objects or are near to previously recorded sites. At these locations a visual inspection was undertaken (**Section 2.3.6**) to ground-truth the findings of the desktop and gap analysis assessment.

2.3.5 Step 3

Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?

No. landforms with identified archaeological sensitivity may be impacted by the proposal.

The proposed work includes landscape features that have potential to contain Aboriginal sites and objects, and in most instances, these landscape features cannot be avoided.

2.3.6 Step 4

Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?

Yes. There are previously recorded Aboriginal objects within the study area, and the locations of three previously recorded AHIMS sites were ground-truthed.

The visual inspection of the study area was undertaken by OzArk Project Archaeologist, Philippa Sokol, on Tuesday 27 and Wednesday 28 November 2018. An additional visual inspection was undertaken by OzArk Principal Archaeologist, Ben Churcher, on Tuesday 2 April 2019, to ground-truth the location of previously recorded AHIMS sites #51-4-0052 and #50-5-0027.

The activity locations chosen for visual inspection was based on a gap analysis for Structures 1 to 143, Line 99M. The gap analysis to determine the likelihood of Aboriginal cultural heritage being present considered previous heritage assessments and recommendations, local environment features, the similarity (or dissimilarity) of landforms containing nearby AHIMS sites, and the proposed level of ground disturbance impact. The TransGrid *Due Diligence Assessment Procedure* (2018) was considered when determining which activity locations required visual inspection.

No Aboriginal sites were recorded during the visual inspection. Three previously recorded AHIMS sites that were close to proposed activity locations were inspected and the current site features and site extents confirmed (Booroo Ponds 1 [#50-5-0027], YSS1 [#51-4-0052] and Yass River-OS1 [#51-4-0392]).

Standard archaeological field survey and recording methods were employed (Burke and Smith 2004) during the visual assessment. A total of 18 activity locations were accessed by vehicle and then inspected on foot. The details and results from the ground-truth assessment of previously recorded sites are detailed in **Section 3**. The results of the visual inspection, including any heritage constraints or mitigation for each structure or structure access, are presented in **Appendix 2. Table 1. Appendix 2. Table 2** outlines the results of the gap analysis for activity locations and access tracks along Line 99M which were not visually inspected. These structures were not visually inspected during the current assessment as some have already been assessed

during projects as recent as 2016 to 2018, and the proposed work at other activity locations were classed as 'low-impact activities' as defined by TransGrid (2018: 14) and will be limited to within a 20 m radius of the existing structures. Representative photographs of the study area are shown in **Plates 1 to 10**.

2.4 CONCLUSION

The assessment of the study area has considered there to be no additional archaeologically sensitive landforms associated with the proposed activity and no further heritage constraints were identified.

The Due Diligence process has resulted in the outcome that further investigation is required. The reasoning behind this determination is set out in **Table 2-3**.

Table 2-3: Due Diligence Process application.

| Item | Reasoning | Answer |
|--|--|--------|
| Will the activity disturb the ground surface or any culturally modified trees? | The proposed works will disturb the ground surface through earthworks (e.g. access track construction, watercourse crossings, construction benches and installation of transmission structures). The proposal includes the disturbance of some regrowth vegetation to clear the easement but will not involve the disturbance of any mature trees. | Yes |
| Are there any relevant records of Aboriginal heritage on site (AHIMS or from other sources), or landscape features that are likely to indicate presence of Aboriginal objects? | A search of AHIMS indicated several Aboriginal sites exist within the study area, some with an increased risk of harm by the proposal. | Yes |
| Can harm to Aboriginal objects or relevant landscape features be avoided? | There are known items of Aboriginal significance present in the study area and identified landforms with archaeological sensitivity. | Yes |
| Does a desktop assessment and visual assessment confirm that there are Aboriginal objects or that they are likely? | Desktop searches and the visual inspection found known items of Aboriginal heritage in the study area. It is assessed that there is a moderate likelihood of there being subsurface archaeological deposits within some portions of the study area. | Yes |
| Further investigation required | | |

3 ABORIGINAL HERITAGE SITES RECORDED

There are three previously recorded Aboriginal sites (AHIMS #50-5-0027, #51-4-0052 and #51-4-0392) which have been identified on or immediately adjacent to proposed activity locations or access tracks that will be used during the proposal. All sites were located and ground-truthed to further understand their current condition and whether Aboriginal objects/features are present and are at risk of being impacted.

3.1 AHIMS #50-5-0027 (BOOROO PONDS 1)

The original recording of the site describes it as a low-density artefact scatter with the potential for subsurface deposits, as the site is located on a broad gently sloping elevated terrace. The surface artefacts were recorded on an exposed area of a track approximately 45 m x 4 m.

The ground-truth of the site confirmed that the original recorded site location sits north of the Line 99M, as documented in Kuskie (1992). No surface artefacts were visible at the site location, therefore, vehicle movement across the surface of the existing access track can continue through to Structures 8 to 10, without further archaeological investigation. **Figure 3-1** provides images of the recorded site location. **Figure 3-2** Error! Reference source not found. details the location of the site and the access track that can be used during the proposed works.

Access track work – west of #50-5-0027

An area of land to the southwest of the site has been proposed to undergo earthworks involving ground levelling to allow for heavy machinery to enter through the existing property gate, turn and proceed southeast towards the activity locations. The distance between the gate and turn in the track is narrow and drops quite steeply into the lower terrace. TransGrid proposed to slightly level this narrow landform to provide easier access for machinery.

Figure 3-1: AHIMS #50-5-0027. View of the recorded site area.




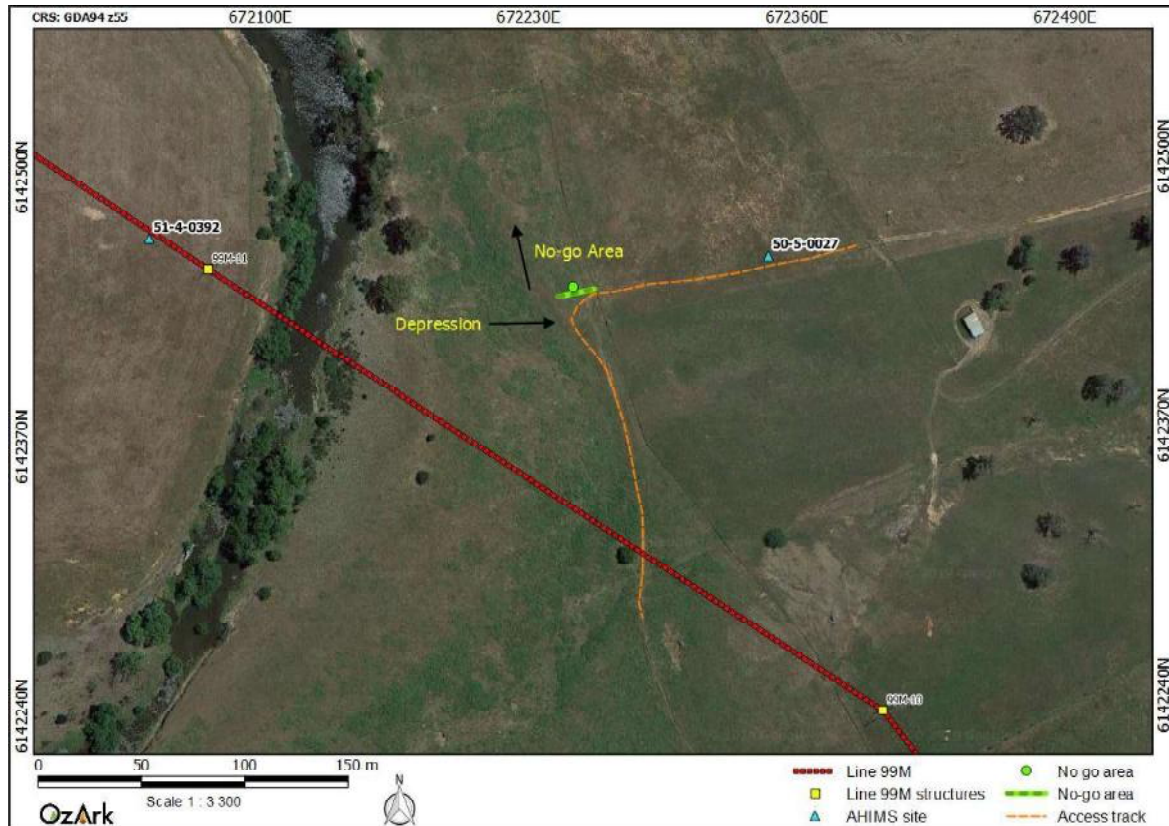
| | |
|--|--|
|  |  |
| <p>1. View north looking towards the access track where the artefacts were originally recorded and the property gate to be used by plant equipment to access activity locations.</p> | <p>2. View west at the proposed access to activity locations and the part of the landform requiring access track work.</p> |
|  | |
| <p>3. View further west from the property gate, showing disturbance from burrowing animals.</p> | |

Figure 3-2: Location of AHIMS #50-5-0027, the 'No-go' area and the proposed access track.



3.2 AHIMS #51-4-0052 (YSS1)

The site card describes this site as a low-density artefact scatter with few artefacts exposed on the surface of a dirt track, trending east–west from the Yass Substation. The site extends along the track for approximately 105 m and an area of archaeological potential was identified further to the south and southeast of the track, which gradually falls into a shallow gully associated with Booroo Ponds.

The ground-truth of the site did not identify any surface artefacts and due to the large amount of rock outcropping across the site area, it was assessed that there is little potential for subsurface archaeological deposits as the soils appeared to be very thin. In addition, landforms to the immediate west of the site location appear to be a more suitable landform for occupation.

Figure 3-3 provides images of the recorded site location and **Figure 3-4** shows the location of the site in relation to the access track that will be used during the proposed works.

Figure 3-3: AHIMS #51-4-0052. View of the recorded site area.

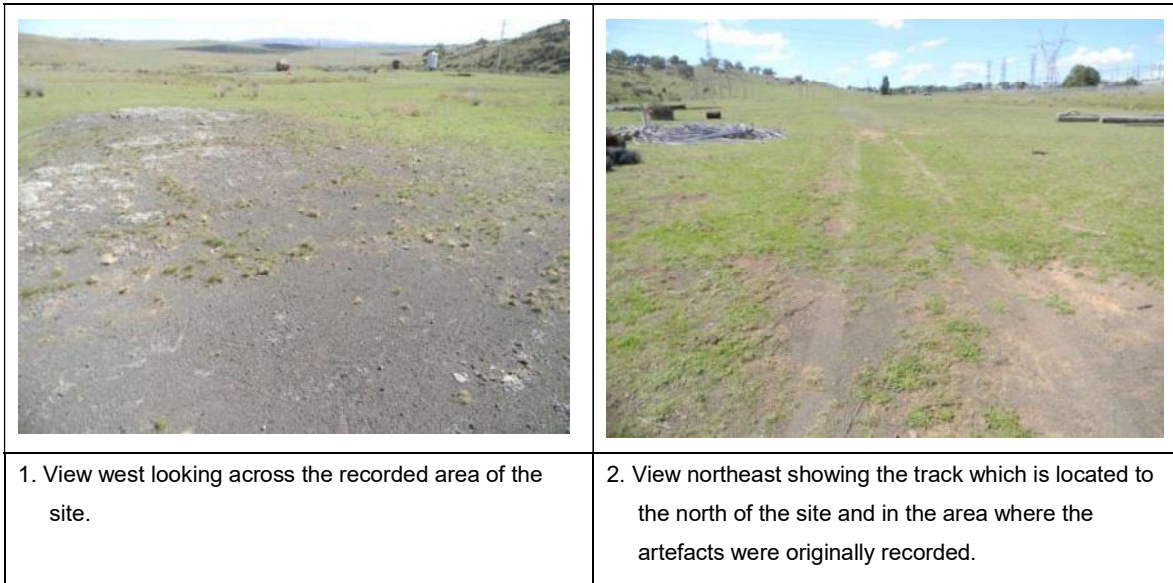
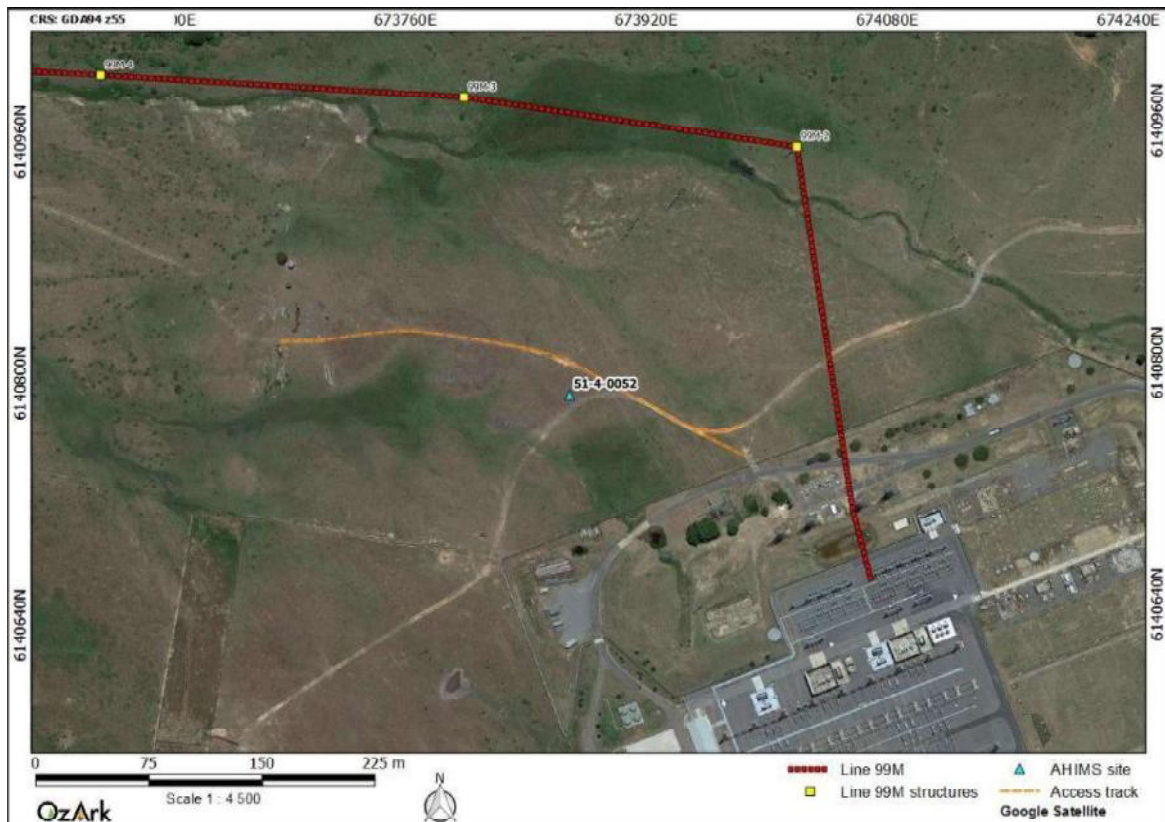


Figure 3-4: Location of AHIMS #51-4-0052 and the preferable access track to be used near the site.



3.3 AHIMS #51-4-0392 (YASS RIVER-OS1)

One previously recorded Aboriginal site (AHIMS #51-4-0392 [Yass River-OS1]) was located and the extent and PAD area associated with the site was identified and confirmed. **Table 3-1** summarises the main features of this site and **Figure 3-5** and **Figure 3-6** illustrate the updated site features and extent.

Table 3-1: AHIMS #51-4-0392: site features.

| Site Name | Coordinates (GDA) (Centre point) | Site type | Artefact Count | Site Dimensions (m) |
|----------------|-------------------------------------|---------------------------|----------------|---------------------|
| Yass River-OS1 | 672044E / 6142469N | Artefact scatter with PAD | 16 | 165 m x 130 m |

Yass River-OS1

Site Type: Artefact scatter with PAD

Location of Site: The site is situated on an elevated, flat elongated spur landform, encompassed by the Yass River, and had an open aspect (**Figure 3-5**). The site is situated within the Line 99M easement (between Structure 11 and 12) approximately 3.3 km west of Yass and 3.9 km south of Black Range Road on private property bounded on to the north, east and west by the Yass River.

Description of Site: The original site recording stated that 16 surface artefacts were identified at the site, manufactured from tuff, mudstone, quartzite, quartz, chert and fine-grained siliceous material. The artefacts were identified within circular sandy ground exposures within an actively ploughed and cropped paddock. The surface manifestation of artefacts was identified as an area of 75 m x 18 m, located within the Line 99M easement. The site was assessed as having potential to contain subsurface archaeological deposits. Although it was considered that any artefacts within the top 20 cm of the soil profile are within the 'plough zone' and therefore are in a secondary context. However, intact deposits were considered to have potential to be present beyond this depth.

During the survey, the location of #51-4-0392 site area was located and ground-truthed. The area had been ploughed since its initial recording and only two artefacts were identified, however, this can be viewed as common within cultivated landforms with the movement of soils and growth of crops. The survey confirmed that the landform surrounding the previously identified surface manifestation of artefacts (OzArk 2018) to have PAD. The extent of the PAD was confirmed during the ground-truth of the site and is illustrated on **Figure 3-6**. Furthermore, it was identified that both Structures 11 and 12 fall within its boundary and therefore investigations to further understand the subsurface deposit of the site should be considered.

Figure 3-5: AHIMS #51-4-0392. View of site and selection of recorded artefacts.


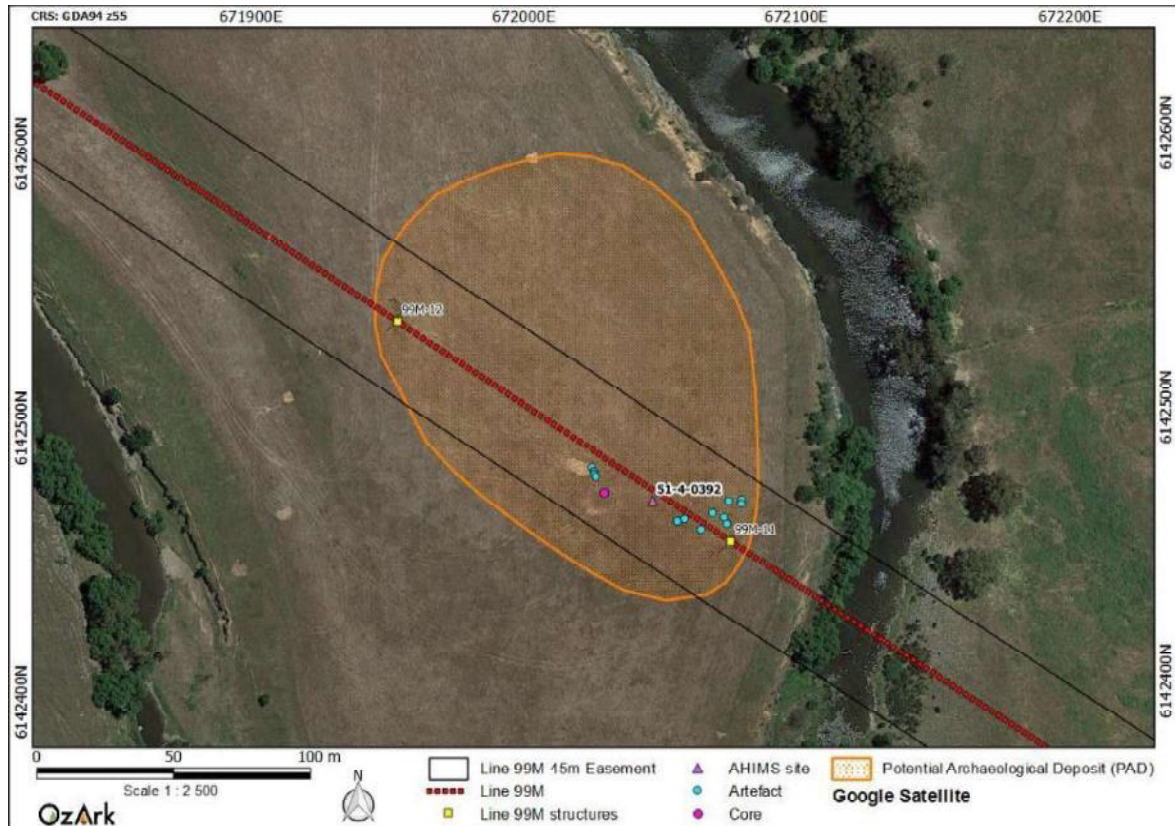
| | |
|---|--|
|  |  |
| <p>1. View southeast from Structure 12 towards Structure 11 and across the site area.</p> | <p>2. View from the north across the entire site area.</p> |
|  |  |
| <p>3. View northwest across the site area.</p> | <p>4. Chert artefact recorded at the site.</p> |
|  |  |
| <p>5. Tuff artefact recorded at the site.</p> | <p>6. Wombat burrow identified within the site area showing the likely depth of soils.</p> |

Figure 3-6: View of AHIMS #51-4-0392 with confirmed PAD extent.



3.4 DISCUSSION

The Aboriginal sites ground-truthed during the visual inspection of the study area are consistent with the site types outlined in the predictive model (**Section 2.3.4**) and the regional studies (**Section 2.3.3**).

The original location of AHIMS #50-5-0027 on a lower terrace associated with the Yass River was identified and ground-truthed. The surface artefacts originally recorded at this site were not visible. Access track works are proposed for the landform associated with #50-5-0027 and these were considered acceptable so long as specific management measures are followed.

AHIMS #51-4-0052 is located on a slightly elevated landform near to the Yass Substation, above the gullies and tributaries associated with Booroo Ponds. The previously recorded artefacts were not visible, and the portion of the site originally described to have subsurface archaeological potential was more to the west of the site area, thus further from any impacts associated with the proposal.

AHIMS #51-4-0392 was ground-truthed during visual inspection as it is within direct proposed impact by the proposal. This site was originally recorded by OzArk in 2017 (OzArk 2018; **Section 1.2**) and thus the site's features and extent were required to be confirmed so that adequate site management could be planned.

3.5 LIKELY IMPACTS TO ABORIGINAL HERITAGE FROM THE PROPOSAL

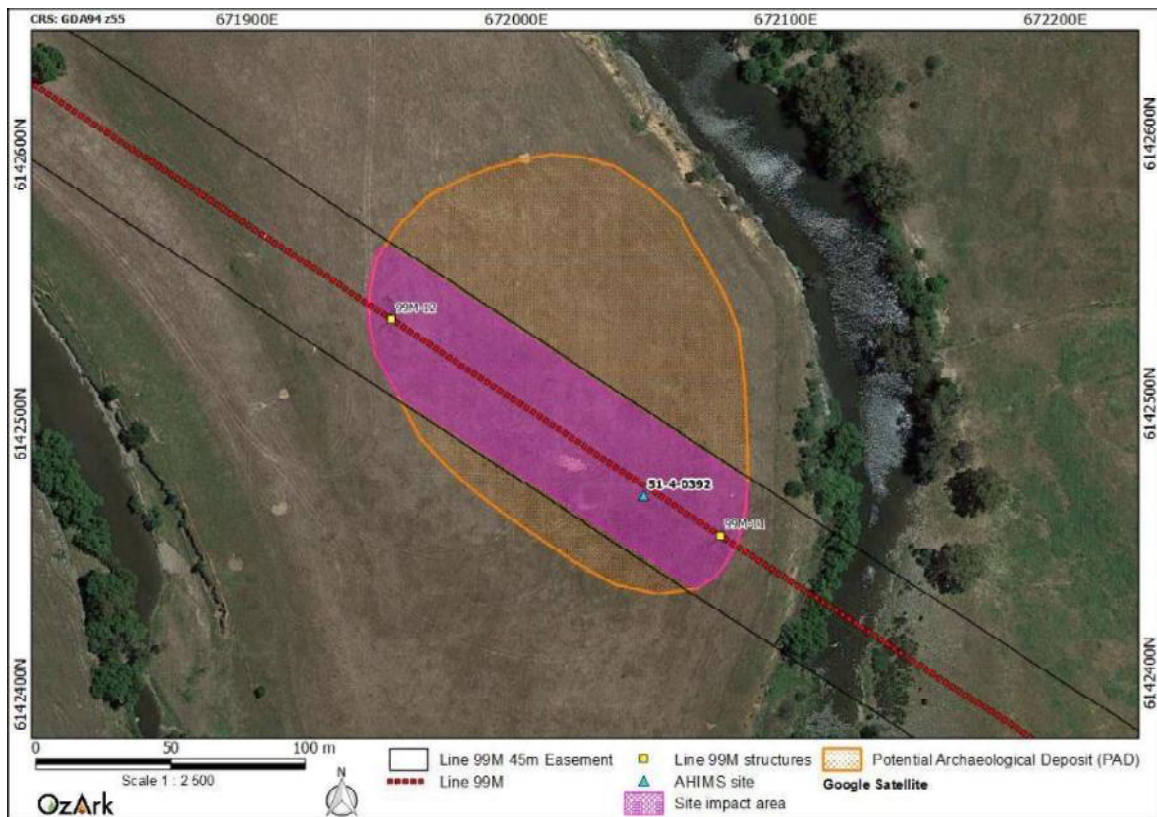
Table 3-2 presents a summary of potential impacts to the recorded AHIMS sites in relation to the planned impacts of the proposal.

Table 3-2: Aboriginal cultural heritage: impact assessment.

| Site Name & ID | Type of Harm (Direct/Indirect / None) | Degree of Harm (Total/Partial / None) | Consequence of Harm (Total/Partial/No Loss of Value) |
|---------------------------|--|--|---|
| Booroo Ponds 1 #50-5-0027 | None | None | No Loss of Value |
| YSS1 #51-4-0052 | None | None | No Loss of Value |
| Yass River-OS1 #51-4-0392 | Direct | Partial | Partial loss of value |

Table 3-2 has identified that AHIMS #51-4-0392 is at risk of harm by the proposal resulting in partial harm and partial loss of value at the site. **Figure 3-7** illustrates the portion of the site that is proposed to be directly impacted by the proposal.

Figure 3-7: View of AHIMS #51-4-0392 showing the site extent and the portion considered to be impacted by the proposal.



3.6 MANAGEMENT OF ABORIGINAL SITES

3.6.1 AHIMS #50-5-0027 (Booroo Ponds 1)

The description of Booroo Ponds 1 places it on a terraced landform which is considered an archaeologically sensitive landform as being a primary terrace adjacent to the Yass River. It has

been assessed that the access track works around the farm gate to the west of the site can take place under the following conditions:

- a) All ground disturbing works within the terrace landform (i.e. west of the fence line) must be kept to a strict minimum
- b) As much as is possible, the depression in the terrace (former erosion) should be utilised as the location of the access track (**Figure 3-2**)
- c) There should be no ground disturbance north of the 'No-go' area boundary and GDA Zone 55 672249E; 6142442N. The 'No-go area' is a less-disturbed—apart from large wombat burrows—portion of the terrace (**Figure 3-2**)
- d) Works in the area should take place in dry weather to minimise ground churning
- e) Care should be taken to note Aboriginal objects during the ground works. Should objects suspected to be Aboriginal artefacts be noted, all work should cease and confirmation of the nature of the objects located should be sought
- f) As the terrace is a sand body, there is a low likelihood that the works could uncover human skeletal material. Should bones suspected to be human be noted during the works, all works should cease and confirmation of the nature of the bones located should be sought. The location of bones should be noted, and the area left as found as it may be a crime scene. If it is determined that the bones are human, the NSW Police should be informed.

3.6.2 AHIMS #51-4-0052 (YSS1)

The assessment of the site has determined there is a very low potential for subsurface deposits, and given that there were no artefacts visible on the track or surrounding landforms, vehicle movement across the surface of the existing track can continue without further archaeological investigation.

Figure 3-4 details the location of the site and the access track that can be used during the proposed works.

3.6.3 AHIMS #51-4-0392 (Yass River-OS1)

The portion of site #51-4-0392 within the Line 99M easement and within the 40 m x 40 m work area at activity locations is unable to be avoided (see **Figure 3-7**) and management of this site will need to include:

- The Aboriginal Cultural Heritage Consultation Requirements for Proponents (ACHCRs) will need to be initiated and there is a likelihood of test excavation, as per the Code of Practice for Archaeological Investigation of Aboriginal objects in NSW, being required

to determine the presence of subsurface material within the PAD extent and the proposed activity locations

- The results of the visual inspection and the test excavation program will be used to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) to support the Aboriginal Heritage Impact Permit (AHIP) application, should this be considered the appropriate next stage for site management. The recommendations contained in the ACHAR normally become conditions of the AHIP if it is consented.

4 HISTORIC HERITAGE ASSESSMENT: BACKGROUND

4.1 INTRODUCTION

The current assessment will apply the Heritage Council *Historical Archaeology Code of Practice* (Heritage Council 2006) in the completion of a historical heritage assessment, including field investigations.

4.2 BRIEF HISTORY OF THE YASS REGION

In 1821 Hamilton Hume was the first non-Aboriginal person to see the Yass Plains, leading an exploratory party into the area he was attracted to the superior quality of agricultural land and spectacular scenery in the area. In 1824 Hamilton Hume and William Hovell returned to the Yass Plains during their expedition to Port Phillip Bay.

By the late 1820s settlers had already begun arriving in Yass Valley bringing flocks of sheep, representing the start of the local industry. A bush track was established joining Yass and Goulburn, in the late 1820s, because of Hume and Hovell's early exploration work in the area. By around 1830, a village had begun to develop with settlement initialling beginning on the south bank of the river. An inn, one of many on the Sydney–Port Phillip Bar Road, was erected by the river crossing where the railway bridge now stands. The settlement started to become an important stopping place on the road from Sydney to Melbourne. In 1835, a local storekeeper became the first official postmaster, which later that year saw the construction of Cooma Cottage. The township was officially gazetted in 1837. Hume returned to the Yass area and purchased “Cooma Cottage” where he lived with his wife until his death in 1873.

The Yass Valley earned a reputation as a quality wool producer with the setup of ‘Merryville’, one of the country's most famous sheep studs and fine wool establishment, launched by Sir Walter Merriman in 1903 (Aussie Towns – Yass, NSW, 2019).

4.3 LOCAL CONTEXT

4.3.1 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any potential previously-recorded heritage within the study area. The results of this search are summarised in **Table 4-1**.

Table 4-1: Historic heritage: desktop-database search results.

| Name of Database Searched | Date of Search | Type of Search | Comment |
|---|----------------|---|---|
| National and Commonwealth Heritage Listings | 5/11/2018 | World Heritage List Commonwealth Heritage List National Heritage List | No items located within 500 m of the Line 99M transmission easement |

| Name of Database Searched | Date of Search | Type of Search | Comment |
|---|----------------|--|--|
| Australian Heritage Database – Comprises the World Heritage and Register of National Estate (in addition to National and Commonwealth Heritage) | 5/11/2018 | Australian Heritage Database listing – search of Yass and Harden LGA | One item – Hattons Corner Area – identified within 200 m of the Line 99M transmission easement |
| | | Hilltops LGA | No items located within 500 m of the transmission easement for Line 99M |
| State Heritage Register (SHR) | 5/11/2018 | State Heritage Register for NSW | No items located within 500 m of the transmission easement for Line 99M |
| Local Environment Plan (LEP) | 5/11/2018 | Yass Valley LEP 2013 | One item – Hattons Corner – is identified within 200 m of the Line 99M transmission easement |
| | | Harden LEP 2011 (been amalgamated into Hilltops LGA) | No items registered within 200 m of the Line 99M transmission easement |

A search of the Heritage Council of NSW administered heritage databases and the Yass Valley and Harden LEP returned no records for historical heritage sites and items within the study area.

The closest identified historic heritage item to line 99M is Hattons Corner Nature Reserve (A301) situated 75 m southwest of the study area and Structures 11 and 12). Hattons Corner is registered as an item of National Estate on the Australian Heritage Database and is listed on the Yass Valley LEP. It is registered as a classic palaeontological and stratigraphical locality providing an outstanding section of richly fossiliferous Silverdale formation and Booroo Ponds Group and is of international palaeontological importance.

4.4 SURVEY METHODOLOGY

Standard archaeological field survey and recording methods were employed (Burke & Smith 2004) during the visual assessment. The historic heritage field survey was completed concurrently with the Aboriginal heritage field assessment. The proposed activity locations were accessed by vehicle and then inspected on foot. GPS data was captured via a handheld GPS device.

The visual inspection of the study area was undertaken by OzArk Project Archaeologist, Philippa Sokol, on Tuesday 27 and Wednesday 28 November 2018. A number of activity locations were not visually inspected during the current assessment as some have already been assessed during projects as recent as 2016.

4.5 FIELD RESULTS OF THE HISTORIC HERITAGE ASSESSMENT

The visual inspection identified no historic heritage items in the proposed activity locations that were visually inspected.

Representative photographs of the proposed activity locations are shown in **Plates 1 to 10**.

An old wooden bridge was identified at crossing between Structures 89–90; however, it is no longer in use and was not considered to have historic heritage significance. **Figure 4-2** and **Figure 4-3** are photographs showing the old wooden bridge and the replacement concrete creek crossing. **Figure 4-4** illustrates the location of the old wooden bridge in relation to Line 99M and the replacement concrete creek crossing. The concrete creek crossing will be used for the proposal to access activity locations.

Figure 4-1: View of the old wooden bridge between Structures 89–90.



Figure 4-2: View of the existing concrete bridge between Structures 89–90 which will likely be used during the proposed work.



Figure 4-3: Location of the old wooden bridge between Structures 89–90 on Line 99M, and the access route using the existing and upgraded creek crossing.



5 MANAGEMENT RECOMMENDATIONS

5.1 ABORIGINAL CULTURAL HERITAGE

The undertaking of the Due Diligence process resulted in no new Aboriginal sites being recorded during the field inspection. Three previously recorded AHIMS sites were identified requiring ground-truthing as their site extents were suspected to be near proposed activity locations. These included Booroo Ponds 1 (#50-5-0027), YSS1 (#54-1-0052), and Yass River-OS1 (#51-4-0392) (**Section 3**). The management strategies outlined below are designed to ensure that impact to recorded Aboriginal sites and features by the proposal will not occur or be kept to a minimum.

Recommendations concerning the study area are as follows:

- 1) Management recommendations regarding the three previously recorded sites near or within the proposed work areas (AHIMS #50-5-0027, #51-4-0027 and #51-4-0392) are provided in **Section 3.6**. Provided the mitigation measures in **Section 3.6** are adhered to, should impacts are proposed to occur at #50-5-0027 and #51-4-0027.
- 2) Further archaeological investigation at AHIMS #51-4-0392 (Yass River-OS1) is required and will be managed under an approved Aboriginal Heritage Impact Permit (AHIP) from OEH.
- 3) To avoid the potential for harm to Aboriginal objects within unassessed, adjacent landforms, all ground disturbance activities must be confined to the proposed activity areas at each structure, with machinery, equipment and materials used for the proposed work confined to within these areas and to the existing access tracks and vehicle areas.
- 4) During works, if Aboriginal artefacts or skeletal material are noted, all work should cease and procedures in the TransGrid *Unanticipated Finds Protocol* (**Appendix 3**) should be followed. To assist work crews in the identification of Aboriginal objects, a summary sheet is provided in **Appendix 4**.
- 5) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

5.2 HISTORIC HERITAGE

Undertaking of the due diligence process resulted in the conclusion that the proposed works will have an impact on the ground surface, however, no historic objects or intact archaeological deposits will be harmed by the proposal.

To ensure the greatest possible protection to the area's historical heritage values, the following recommendations are made:

- 6) This assessment has concluded that there is low likelihood that the proposed work will harm historic heritage objects, sites or PADs; as such, the proposed work can proceed without further archaeological investigation.
- 7) To avoid the potential for harm to historic objects within unassessed, adjacent landforms, all ground disturbance activities must be confined to the proposed activity areas at each structure, with machinery, equipment and materials used for the proposed work confined to within these areas and to the existing access tracks and vehicle areas.
- 8) If any previously unknown significant subsurface historic deposit is observed during works, the Unanticipated Finds Protocol (**Appendix 5**) should be followed.

REFERENCES

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PLATES



Plate 1: View east towards Structure 2.



Plate 2: View of low lying and wet ground in the area between Structures 2 to 5.



Plate 3: View west from Structure 68 looking towards Structure 69.



Plate 4: View northwest to Structure 94A.



Plate 5: view southeast to Structure 94.



Plate 6: View north along proposed location for the access route to Structures 94 and 94A.



Plate 7: View east towards proposed landscaping area between Structures 95 and 96.



Plate 8: View northeast towards the creek crossing requiring upgrading between Structures 99–100.



Plate 9: One of the exit and entry points of the creek between Structures 99 and 100 requiring upgrading.



Plate 10: View of creek crossing upgrade area to access Structure 143.

APPENDIX 1: AHIMS SEARCH RESULTS

Office of
Environment
& HeritageAHIMS Web Services (AWS)
Extensive search - Site list reportYour Ref/PO Number : 2125 99M rebuild
Client Service ID : 380728

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status | SiteFeatures | SiteTypes | Reports |
|-----------|--|-------|------|---------|----------|-----------|-------------|--|----------------|-------------|
| 50-5-0027 | Booroo Ponds 1; Contact | AGD | 55 | 672230 | 6142270 | Open site | Valid | Artefact : - | Open Camp Site | 98836 |
| | Recorders | | | | | | | Permits | | |
| 51-4-0052 | YSS1 Contact | AGD | 55 | 673750 | 6140600 | Open site | Valid | Artefact : 4 | | 97582,98836 |
| | Recorders | | | | | | | Permits | | |
| 51-4-0056 | C-OS-1/Chris P Contact | AGD | 55 | 660650 | 6152790 | Open site | Valid | Artefact : - | | 99804 |
| | Recorders | | | | | | | Permits | 1846,2226,2500 | |
| 51-4-0055 | Yass Contact | AGD | 55 | 660750 | 6152210 | Open site | Valid | Modified Tree (Carved or Scarred) : | | 99804 |
| | Recorders | | | | | | | Permits | | |
| 50-6-0005 | MY-S2 Murrumburrh Contact | AGD | 55 | 622160 | 6172500 | Open site | Valid | Artefact : - | Open Camp Site | 600 |
| | Recorders | | | | | | | Permits | | |
| 50-6-0007 | MY-S3 Murrumburrh Contact | AGD | 55 | 621750 | 6172200 | Open site | Valid | Artefact : - | Open Camp Site | 600 |
| | Recorders | | | | | | | Permits | | |
| 50-6-0008 | MY-S5 Murrumburrh Contact | GDA | 55 | 624754 | 6168833 | Open site | Valid | Artefact : - | Open Camp Site | 600 |
| | Recorders | | | | | | | Permits | | |
| 50-6-0009 | MY-S4 Murrumburrh Contact | GDA | 55 | 624779 | 6169103 | Open site | Valid | Artefact : - | Open Camp Site | 600 |
| | Recorders | | | | | | | Permits | | |
| 50-6-0010 | MY-T3 Murrumburrh Contact | GDA | 55 | 624742 | 6168565 | Open site | Valid | Modified Tree (Carved or Scarred) : | Scarred Tree | 600 |
| | Recorders | | | | | | | Permits | | |
| 50-6-0011 | MY-T2 Murrumburrh Contact | AGD | 55 | 624500 | 6170000 | Open site | Valid | Modified Tree (Carved or Scarred) : | Scarred Tree | 600 |
| | Recorders | | | | | | | Permits | | |
| 50-6-0012 | MY-S6 Murrumburrh Contact | AGD | 55 | 624200 | 6170200 | Open site | Valid | Artefact : - | Open Camp Site | 600 |
| | Recorders | | | | | | | Permits | | |
| 50-6-0014 | Harden 3 MY-T1 Contact | AGD | 55 | 621949 | 6173682 | Open site | Valid | Modified Tree (Carved or Scarred) : | Scarred Tree | 740 |
| | Recorders | | | | | | | Permits | | |
| 50-6-0017 | Harden 2 MY-S1 Contact | AGD | 55 | 621584 | 6173679 | Open site | Valid | Artefact : - | Open Camp Site | 740 |
| | Recorders | | | | | | | Permits | | |
| 51-4-0203 | Marilba Hills SU4/L1 Contact | GDA | 55 | 654024 | 6153937 | Open site | Valid | Artefact : 1 | | 101424 |
| | Recorders | | | | | | | Permits | | |
| 51-4-0204 | Marilba Hills SU4/L2 Contact | GDA | 55 | 654000 | 6153947 | Open site | Valid | Artefact : 1 | | 101424 |
| | Recorders | | | | | | | Permits | | |

Report generated by AHIMS Web Service on 05/11/2018 for Philippa Sokol for the following area at Search using shape-file Line99M_1kmbuffer.SHP with a buffer of 0 meters. Additional Info :
GAP analysis. Number of Aboriginal sites and Aboriginal objects found is 36
This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Page 1 of 3

Office of
Environment
& HeritageAHIMS Web Services (AWS)
Extensive search - Site list reportYour Ref/PO Number : 2125 99M rebuild
Client Service ID : 380728

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status | SiteFeatures | SiteTypes | Reports |
|-----------|---|-------|------|---------|----------|-----------|-------------|---|-----------|---------|
| 51-4-0205 | Marilba Hills SU5/L1 Contact | GDA | 55 | 653304 | 6155050 | Open site | Valid | Artefact : 1 | | 101424 |
| | Recorders | | | | | | | Permits | | |
| 51-4-0206 | Marilba Hills SU8/L1 Contact | GDA | 55 | 652944 | 6154710 | Open site | Valid | Artefact : 2 | | 101424 |
| | Recorders | | | | | | | Permits | | |
| 51-4-0207 | Milbra Hills SU9/L1 Contact | AGD | 55 | 652964 | 6154238 | Open site | Valid | Artefact : 1 | | 101424 |
| | Recorders | | | | | | | Permits | | |
| 51-4-0215 | Marilba Hills SU17/L8 Contact | GDA | 55 | 655274 | 6153183 | Open site | Valid | Artefact : 1 | | 101424 |
| | Recorders | | | | | | | Permits | | |
| 51-4-0217 | Marilba Hills SU19/L1 Contact | GDA | 55 | 656207 | 6153483 | Open site | Valid | Artefact : 1 | | 101424 |
| | Recorders | | | | | | | Permits | | |
| 51-4-0254 | TP-IF7 Contact | GDA | 55 | 672357 | 6141045 | Open site | Valid | Artefact : 1 | | |
| | Recorders | | | | | | | Permits | | |
| 51-4-0255 | TP-IF8 Contact | GDA | 55 | 672568 | 6141190 | Open site | Valid | Artefact : 1 | | |
| | Recorders | | | | | | | Permits | | |
| 51-4-0256 | TP-IF9 Contact | GDA | 55 | 672622 | 6141404 | Open site | Valid | Artefact : 1 | | |
| | Recorders | | | | | | | Permits | | |
| 51-4-0257 | TP-IF10 Contact | GDA | 55 | 672658 | 6141461 | Open site | Valid | Artefact : 1 | | |
| | Recorders | | | | | | | Permits | | |
| 51-4-0258 | TP-IF11 Contact | GDA | 55 | 672901 | 6141286 | Open site | Valid | Artefact : 1 | | |
| | Recorders | | | | | | | Permits | | |
| 51-4-0240 | TP-AS1 Contact | GDA | 55 | 672713 | 6140529 | Open site | Valid | Artefact : 1. Potential Archaeological Deposit (PAD) :- | | 102370 |
| | Recorders | | | | | | | Permits | | |
| 51-4-0273 | TP-PAD1 Contact | GDA | 55 | 672707 | 6141385 | Open site | Valid | Potential Archaeological Deposit (PAD) :- | | |
| | Recorders | | | | | | | Permits | | |
| 50-6-0149 | Bumgum scar 2 Contact | GDA | 55 | 624188 | 6170815 | Open site | Valid | Modified Tree (Carved or Scarred) : | | |
| | Recorders | | | | | | | Permits | | |
| 50-6-0140 | Harden 8 Contact | GDA | 55 | 624503 | 6167503 | Open site | Valid | Modified Tree (Carved or Scarred) : | | |
| | Recorders | | | | | | | Permits | | |

Report generated by AHIMS Web Service on 05/11/2018 for Philippa Sokol for the following area at Search using shape-file Line99M_1kmbuffer.SHP with a buffer of 0 meters. Additional Info :
GAP analysis. Number of Aboriginal sites and Aboriginal objects found is 36
This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 2125 99M rebuild

Client Service ID : 380728

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status | SiteFeatures | SiteTypes | Reports | |
|-----------|---|------------------|---|---------|----------|-----------|-------------|---|-----------|---------|----------------|
| 50-6-0141 | Maniac Creek-Blantyre-Isolated Find 1 (MC-Blantyre-IF1) | GDA | 55 | 624867 | 6167404 | Open site | Valid | Artefact : - | | | |
| | <u>Contact</u> | <u>Recorders</u> | OzArk Environmental and Heritage Management.Miss.Stephanie Rusden | | | | | | | | <u>Permits</u> |
| 50-6-0142 | Maniac Creek-Blantyre-Isolated Find 2 (MC-Blantyre-IF2) | GDA | 55 | 624775 | 6167536 | Open site | Valid | Artefact : - | | | |
| | <u>Contact</u> | <u>Recorders</u> | OzArk Environmental and Heritage Management.Miss.Stephanie Rusden | | | | | | | | <u>Permits</u> |
| 50-6-0143 | Bonoak Road-Blantyre-Open Campsite 1 (BR-Blantyre-OS1) | GDA | 55 | 624209 | 6168644 | Open site | Valid | Artefact : - | | | |
| | <u>Contact</u> | <u>Recorders</u> | OzArk Environmental and Heritage Management.Miss.Stephanie Rusden | | | | | | | | <u>Permits</u> |
| 50-6-0150 | Bumgum 1 | GDA | 55 | 623975 | 6170815 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | | |
| | <u>Contact</u> | <u>Recorders</u> | Mr.Mark Saddler | | | | | | | | <u>Permits</u> |
| 51-4-0364 | Sykes. Scar Tree 10 | GDA | 55 | 641709 | 6158644 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | | |
| | <u>Contact</u> | <u>Recorders</u> | Mr.Peter Ingram | | | | | | | | <u>Permits</u> |
| 50-6-0155 | Eulie Rd ring tree 3 | GDA | 55 | 624525 | 6167515 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | | |
| | <u>Contact</u> | <u>Recorders</u> | Mr.Mark Saddler | | | | | | | | <u>Permits</u> |
| 51-4-0392 | Yass River-OS1 | GDA | 55 | 672044 | 6142469 | Open site | Valid | Artefact : - | | | |
| | <u>Contact</u> | <u>Recorders</u> | OzArk Environmental and Heritage Management.Miss.Philippa Sokol | | | | | | | | <u>Permits</u> |

APPENDIX 2: LINE 99M PROPOSED ACTIVITIES, HERITAGE CONSTRAINTS AND MITIGATION MEASURES

Appendix 2. Table 1: Visually Inspected Activity Locations.

Table 1: Line Rearrangement Works

| Structure number | Structure replacement | Bench (Y/N) & details | Other earthwork (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Date assessed | Aboriginal heritage & historic heritage: sensitivity, results & notes | Constraints, mitigation measures & recommendations |
|---|---|-----------------------|---------------------------------|-----------------------------------|-------------------------------------|--------------------------------|----------------------------|---|--|
| Line 970-Structure 1 Line 973-Structure 523 | Structures are steel lattice structure. If strengthening works are undertaken, this would involve the replacement or installation of additional steel members to achieve the required load capacity. If structures are replaced, they would be new steel lattice structures. New footings may be established at each of the four tower legs. | | | | | | November 2018 & April 2019 | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| Line 970-Structure 1A Line 990-Structure 522 | Existing three pole structures. If strengthening works are undertaken, would involve installation of guy wires. If requiring replacement, would be with a new three-pole concrete structure with guy wires or three-pole steel structure without guy wires. The civil works will follow the construction processes similar to the Line 99M rebuild. | | | | | | November 2018 & April 2019 | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| Line 973-new structure near to Structure 2 | Either a new concrete or steel pole structure would be installed to support the rearrangement works. A construction bench may be required at the new structure. The civil works will follow the construction processes similar to the Line 99M rebuild. | | | | | | November 2018 & April 2019 | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

Table 1: Line 99M Rebuild Works

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Bench (Y/N) & details | Other earthwork (Y/N) & details | Access Track work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Date assessed | Aboriginal heritage & historic heritage: sensitivity, results & notes | Constraints, mitigation measures & recommendations |
|------------------|-----------------------|---------------------------------------|---|-----------------------|---------------------------------|---|-------------------------------------|--|--|---------------|--|--|
| 99M-2 | Y | | N | N | N | Y – 300 m of newly cut road between Structures 2–3. | N | N | N | 27-28/11/2018 | Low archaeological sensitivity - Aboriginal and historic heritage. | No constraints. |
| 99M-3 | Y | | N | N | N | Y – 300 m of newly cut road between Structures 2–3. | N | Y - Creek/gully upgrade to access Structure 3. | N | 27-28/11/2018 | Low archaeological sensitivity - Aboriginal and historic heritage. Options for bog mats or upgrading ground work were inspected. Results identified area as highly eroded. | No constraints. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Bench (Y/N) & details | Other earthwork (Y/N) & details | Access Track work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Date assessed | Aboriginal heritage & historic heritage: sensitivity, results & notes | Constraints, mitigation measures & recommendations |
|------------------|---|---------------------------------------|---|---|--|--|-------------------------------------|---|--|---------------|--|--|
| 99M-5 | Y Tension structure – replace with two-pole double concrete or steel pole structure. | Y | N | Y - Two benches (approximately 12 m x 12 m) required for the construction of hurdles. | N | Y – 100 m of rocky road to be constructed | N | N | Y – Span 5-6. Up to two benches (12 x 12 m) & boring of six wooden pole structures | 27-28/11/2018 | previous clearing, very boggy and inundated most of the time. Exposure good - ground surface exposure (GSE) 60% and ground surface visibility (GSV) 80% - exposed B-Horizon. Low archaeological sensitivity - Aboriginal and historic heritage. Would consider no bog mats or new road needing to be cut for structure access. Ground hard, even and flat. Hurdles near to Structure 6 in an area of moderate to steep slopes, previous farming, clearing – low archaeological potential. | No constraints at work locations. Access to activity locations must follow the existing vehicle track situated to the north of AHIMS #51-4-0052. Further mitigation for work near this site is detailed in Section 3.6 . |
| 99M-9 | Y | Y | N | N | Y – to flatten drop-off adjacent to paddock gate for access to Structures 8 to 10. | Y – Access track work to flatten the drop off through gate to access Structures 9 and 10 | N | Y – To decrease the entry/exit angle to allow mobile plant access between Structure 9–10. Rocks and road base required for the roadway. | N | 27-28/11/2018 | Low – moderate archaeological sensitivity - Aboriginal and historic heritage. Highly eroded soils. Eroded creek profile shows evidence of post settlement alluvium which is up to a foot deep, adjacent to the creek crossing. The crossing is highly disturbed comprising heavy erosion ruts and water wash. Additionally, a dam exists adjacent to the crossing indicating past landform disturbance and modification because of its construction. There's a high shale and slate content (Hattons Corner within a few hundred metres southwest downstream), though no raw materials identified. The GSE/GSV 80% and 90%. Dark humic alluvial deposit. | No constraints at work locations. AHIMS #50-5-0027 in is the area proposed for access to activity locations. The access and earthworks proposed will require further mitigation to be undertaken. Details regarding this mitigation are presented in Section 3.6 . |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Bench (Y/N) & details | Other earthwork (Y/N) & details | Access Track work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Date assessed | Aboriginal heritage & historic heritage: sensitivity, results & notes | Constraints, mitigation measures & recommendations |
|--------------------------------|-----------------------|---------------------------------------|---|---|---------------------------------|-----------------------------------|-------------------------------------|--------------------------------|--|---------------|--|---|
| 99M-11 | Y | Y | N | N | N | N | N | N | N | 27-28/11/2018 | Low history heritage sensitivity. Moderate – high Aboriginal heritage sensitivity. AHIMS #51-4-0392 and associated PAD landform will require mitigation prior to TransGrid commencing work (i.e. Code test excavation, AHP). | Mitigation measures and recommendations for the proposed activity at the site are detailed in Section 3.6. |
| 99M-12 | Y | Y | N | N | N | N | N | N | N | 27-28/11/2018 | Low history heritage sensitivity. Moderate – high Aboriginal heritage sensitivity. AHIMS #51-4-0392 and associated PAD landform will require mitigation prior to TransGrid commencing work (i.e. Code test excavation, AHP). | Mitigation measures and recommendations for the proposed activity at the site are detailed in Section 3.6. |
| 99M-16 | Y | Y | N | N | N | N | N | N | N | 27-28/11/2018 | Low archaeological sensitivity - Aboriginal and historic heritage. Structure chosen for inspection base on the elevated landform of the structure in proximity to Rosebank Ck and Yass Rr. Location has been heavily cleared, grazed with surrounding fencing. Erosion is high resulting in very poor topsoil. Surface rocks observed, sandstone, though no raw material. | No constraints. |
| 99M-39 from distance see notes | Y | Y | N | Y – Up to two benches (approximately 12 x 12 m) | N | N | N | N | N | 27-28/11/2018 | Low archaeological sensitivity - Aboriginal and historic heritage. This location was identified for heritage inspection based on landform sensitivity near Bowring Ck. | No constraints. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Bench (Y/N) & details | Other earthwork (Y/N) & details | Access Track work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Date assessed | Aboriginal heritage & historic heritage: sensitivity, results & notes | Constraints, mitigation measures & recommendations |
|------------------|---|---------------------------------------|---|---|--|--|-------------------------------------|--------------------------------|--|---------------|--|--|
| 99M-68 | Y Tension structure – replace with two-pole double concrete or steel pole structure. | Y | Y – span 68-69 (located 60 m southwest of Structure towards Yass) | Y - Up to two benches (approximately 12 x 12 m) | N | Y – 40 m of new access track required for access onto bench. | N | N | N | 27-28/11/2018 | Span 38–39 was physically inspected in December 2017 and Structure 39 was visually inspected. Additionally, OzArk was informed that that a work bench was cut at Structure 39 for previous works; therefore, previous high ground disturbance impact. A visual inspection identified the structure on an approximately 15-degree slope generally not favourable for Aboriginal occupation. Ideal landforms would likely be further north of the structure and outside of the easement. Low archaeological sensitivity - Aboriginal and historic heritage. | No constraints. |
| 99M-94 | Y | Y | N | Y - Two benches (approximately 12 x 12 m) | Y - Steep and rocky site. Earthworks required to establish work site | Y – 350 m new access track. 1 new gate to be installed. Road to follow ridgeline to Structures 94 & 94A. | N | N | N | 27-28/11/2018 | Low archaeological sensitivity - Aboriginal and historic heritage. Inspection identified area as being highly eroded and heavily grazed. Rocky landform limited to no topsoil present, good to high exposure – GSE 75% and GSV 90%. Saddle landform providing good aspect however heavy past disturbances indicates low to nil potential of subsurface archaeological deposits. | No constraints. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Bench (Y/N) & details | Other earthwork (Y/N) & details | Access Track work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Date assessed | Aboriginal heritage & historic heritage: sensitivity, results & notes | Constraints, mitigation measures & recommendations |
|------------------|--|---------------------------------------|---|--|--|--|-------------------------------------|--------------------------------|---|---------------|--|--|
| 99M-94A | Y - Tension structure – replace with two-pole double concrete or steel pole structure. Interim structure replacement – converted to three-pole tension structure prior to rebuilding the new single pole. | Y | N | Y – Up to two benches (approximately 12 x 12 m). | Y - Steep and rocky site. Earthworks required to establish work site | Y – 350 m new access track. 1 new gate to be installed. Road to follow rd/geline to Structures 94 & 94A. | N | N | Y – Span 94A-95. Up to two benches (12 x 12 m) & boring of six wooden pole structures | 27-28/11/2018 | Low archaeological sensitivity - Aboriginal and historic heritage. Inspection identified area as being highly eroded and heavily grazed. Rocky landform limited to no topsoil present, good to high exposure – GSE 75% and GSV 90%. Saddle landform providing good aspect however heavy past disturbances indicates low to nil potential of subsurface archaeological deposits. | No constraints. |
| 99M-95 | Y - Tension structure – replace with two-pole double concrete or steel pole structure. Interim structure replacement – converted to three-pole tension structure prior to rebuilding the new single pole. | Y | N | N | N | Y – 100 m new cut track between 95 and 96. | N | N | Y – Span 94A-95. Up to two benches (12 x 12 m) & boring of six wooden pole structures | 27-28/11/2018 | Low archaeological sensitivity - Aboriginal and historic heritage. Area identified as Moderate - steep as opposed to appearing gently sloped at a desktop level. The area was very rocky, with limited topsoil because of extensive erosion exposing the B-Horizon. Considered a very low potential for subsurface archaeological deposits. | No constraints. |
| 99M-96 | Y | Y | N | Y – Up to two benches (approximately 12 x 12 m). | N | Y – 100 m new cut track between 95 and 96. | N | N | N | 27-28/11/2018 | Low archaeological sensitivity - Aboriginal and historic heritage. Area identified as moderate– steep as opposed to appearing gently sloped at a desktop level. The area was very rocky, with limited topsoil because of extensive erosion exposing the B-Horizon. Considered a very | No constraints. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Bench (Y/N) & details | Other earthwork (Y/N) & details | Access Track work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Date assessed | Aboriginal heritage & historic heritage: sensitivity, results & notes | Constraints, mitigation measures & recommendations |
|----------------------------------|---|---------------------------------------|---|--|---------------------------------|---|--|---|--|---------------|--|--|
| 99M-99 | Y | Y | Y – span 98-99 | N | N | N | Y - Tree lopping required (three trees) for heavy vehicles to gain access to bridge. | Y - Upgrade creek crossing, replace or widen existing causeway/bridge. Widen and flatten and flatten exit/entry | N | 27-28/11/2018 | low potential for subsurface archaeological deposits. Low archaeological sensitivity - Aboriginal and historic heritage. Field inspection identified the area as highly eroded and constantly traversed by vehicles adding to the extensive ground disturbance in the area, evidence of water was is high. Area is grazing land, cleared. Pebbles and stone fragments identified on the ground surface however no raw material. | No constraints. |
| 99M-143 creek crossings assessed | Y Tension structure – replace with two-pole double concrete or steel pole structure. | Y | Y – span 142-143 & 143-144 | Y - Up to two benches (approximately 12 x12 m) | N | Y - Access to Structure 143 off Coppabella Road will require 400 m of new access track. | N | Y – two creek crossings off Coppabella Road (from Structure 144) will require major upgrading. Earthmoving to allow for heavy plant access, and rocks and culverts to be installed. | N | 27-28/11/2018 | Low archaeological sensitivity - Aboriginal and historic heritage. The field inspection identified that the access off Coppabella Road is tricky but can be managed. Slope down to creek crossing is rocky and heavily cleared and grazed. The old crossing was found at Bobbara Creek and inspected it. This was the larger creek crossing requiring heavy earthworks. Heavy erosion and water wash have occurred in the area, most of the topsoil has been removed. Heavily farmed and likely cultivated and grazed within adjacent paddocks. No raw material or features identified. | No constraints. |

Appendix 2. Table 2: Activity Locations within the study area – previously assessed either at desktop level, visually or physically.

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|--|---------------------------------------|---|--|---|-------------------------------------|---|--|---|---|---------------------------------------|
| 99M-1 | N | Y | N | | | | | N | Desktop | N/A | N/A |
| 99M-4 | Y | Y | N | N | N | N | N | N | Physical (the activity location was physically accessed and assessed) | Low archaeological sensitivity - Aboriginal and historic heritage. Previous benching work has occurred at structure; therefore, high disturbance. | None required. |
| 99M-6 | Y | Y | N | Y – Up to two benches (approximately 12 x 12m) | N | N | N | Y – Span 5-6. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-7 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. Steep sloped; heavily cleared and farmed. High water wash and erosion. | None required. |
| 99M-8 | Y | Y | N | Y – Up to two benches (approximately 12 x 12m) | N | N | Y - Upgrade of existing creek crossing to decrease the entry/exit angle to allow mobile plant access between Structures 8–9. | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. Steep sloped; heavily cleared and farmed. High water wash and erosion. | None required |
| 99M-10 | Y - Tension structure – replace with two-pole double concrete or steel pole structure. | Y | Y – Span 9-10 | N | Y – Access track work to flatten the drop off through gate to access Structure 10 | N | Y - decrease the entry/exit angle to allow mobile plant access between Structures 9–10. Rocks and road base required for the roadway. | N | Physical | Earthworks near AHIMS #50-5-0027 which are proposed to facilitate the access to Structure 10 should follow the mitigation further detailed in Section 3.6. | None required for historic heritage. |
| 99M-13 | Y | Y | Y – span 13-14 | Y – Up to two benches | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|--|---------------------------------------|---|---|-----------------------------------|-------------------------------------|--------------------------------|--|--|---|---------------------------------------|
| | | | | (approximately 12 x 12 m) | | | | | | | |
| 99M-14 | Y - Interim structure replacement – converted to three-pole tension structure prior to rebuilding the new single pole. | Y | Y – span 13-14 & 14-15 | Y – Up to two benches (approximately 12 x 12 m) | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-15 | Y | Y | Y – span 14-15 | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-17 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-18 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-19 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-20 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-21 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-22 | Y | Y | N | Y – Up to two benches (approximately 12 x 12 m) | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-23 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-24 | Y | Y | N | N | N | N | N | N | Visual (the activity location was sighted from a short distance away such as from a nearby | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|--|---------------------------------------|---|---|-----------------------------------|-------------------------------------|--------------------------------|--|------------------------------|---|---------------------------------------|
| 99M-25 | Y | Y | N | N | N | N | N | Y - Span 25-26. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-26 | Y | Y | N | N | N | N | N | Y - Span 25-26. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-27 | Y | Y | Y – span 27-28 | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-28 | Y - Tension structure – replace with two-pole double concrete or steel pole structure. Interim structure replacement – converted to three-pole tension structure prior to rebuilding the new single pole. | Y | Y – span 28-29 | Y - Up to two benches (approximately 12 x 12 m) | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-29 | Y | Y | Y – span 28-29 | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-30 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-31 | Y | Y | N | Y – Up to two benches (approximately 12 x 12 m) | N | N | N | Y - Span 31-32. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|-----------------------|---------------------------------------|---|---|-----------------------------------|-------------------------------------|--------------------------------|--|------------------------------|---|---------------------------------------|
| 99M-32 | Y | Y | N | Y – Up to two benches (approximately 12 x 12 m) | N | N | N | Y - Span 31-32. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-33 | Y | Y | N | N | N | N | N | Y - Span 32-33. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-34 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-35 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-36 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-37 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-38 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-40 | Y | Y | N | Y - Up to two benches (approximately 12 x 12 m) | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-41 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-42 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-43 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|---|---------------------------------------|---|------------------------------------|-----------------------------------|-------------------------------------|--------------------------------|--|------------------------------|---|---------------------------------------|
| 99M-44 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-45 | Y | Y | Y – span 45-46 | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-46 | Y Tension structure – replace with two-pole double concrete or steel pole structure. | Y | Y – span 46-47 | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-47 | Y | Y | Y – span 46-47 | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-48 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-49 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-50 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-51 | Y | Y | N | N | N | N | N | Y - Span 51-52. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-52 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-53 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-54 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|-----------------------|---------------------------------------|---|------------------------------------|-----------------------------------|-------------------------------------|--------------------------------|---|------------------------------|---|---------------------------------------|
| 99M-55 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-56 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-57 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-58 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-59 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-60 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-61 | Y | Y | N | N | N | N | N | Y - Span 61-62. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-62 | Y | Y | N | N | N | N | N | Y - Span 61-62. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-62A | Y | Y | N | N | N | N | N | Y - Span 62A-63. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-63 | Y | Y | N | N | N | N | N | Y - Span 62A-63. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|-----------------------|---------------------------------------|---|--|-----------------------------------|-------------------------------------|--|--|------------------------------|---|---------------------------------------|
| 99M-64 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-65 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-66 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-67 | Y | Y | Y – span 67-68 | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-69 | Y | Y | Y – span 68-69 | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-70 | Y | Y | N | Y – Up to two benches (approximately 12 x12 m) | N | N | Y - Creek crossing requires small amount of rocks. | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-71 | Y | Y | N | Y – Up to two benches (approximately 12 x12 m) | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-72 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-73 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-74 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-75 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-76 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-77 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|--|---------------------------------------|---|---|-----------------------------------|--|--|--|------------------------------|---|---------------------------------------|
| 99M-78 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-79 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-80 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-81 | Y | Y | Y – span 81-82 | Y - Two benches (approximately 12 x 12 m) | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-82 | Y - Tension structure – replace with two-pole double concrete or steel pole structure. | Y | Y – span 81-82 | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-83 | Y | Y | Y – span 82-83 | N | N | Y - Minor tree lopping required for heavy vehicle access through gate. | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-84 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-85 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-86 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-87 | Y | Y | N | N | N | N | Y - Small amount of rock required in gully/creek crossing. | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-88 | Y | Y | N | N | N | N | Y - Small amount of rock required in gully/creek crossing. | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|-----------------------|---------------------------------------|---|--|-----------------------------------|--|---|--|------------------------------|---|---------------------------------------|
| 99M-89 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-90 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-91 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-92 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-93 | Y | Y | N | Y - Up to two benches (approximately 12 x 12 m) | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-97 | Y | Y | Y - span 97-98 | N | N | Y - 25 m x 15 m of trees required to be cleared to gain access to structure. No current access possible. | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-98 | Y | Y | Y - span 98-99 | Y - two benches (approximately 20 m x 10 m) required for winch/brake sites | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-100 | Y | Y | N | N | N | N | Y - Upgrade creek crossing, replace or widen existing causeway/bridge. Widen and flatten exit/entry | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-101 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-102 | Y | Y | N | Y - Up to two benches | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|--|---------------------------------------|---|--|---|-------------------------------------|--------------------------------|--|------------------------------|---|---------------------------------------|
| | replace with two-pole double concrete or steel pole structure. | | | (approximately 12 x12 m) | | | | | | | |
| 99M-103 | Y | Y | N | Y - Up to two benches (approximately 12 x12 m) | Y - 100m new track to be able to access bench | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-104 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-105 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-106 | Y | Y | N | Y - Up to two benches (approximately 12 x12 m) | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-107 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-108 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-109 | Y - Interim structure replacement – converted to three-pole tension structure prior to rebuilding the new single pole. | Y | Y – span 109-110 | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-110 | Y | Y | Y – span 110-111 | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-111 | Y | Y | Y – span 110-111 | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-112 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|--|---------------------------------------|---|---|--|-------------------------------------|--------------------------------|--|------------------------------|---|---------------------------------------|
| 99M-113 | Y | Y | N | Y - Up to two benches (approximately 12 x 12 m) | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-114 | Y | Y | N | N | N | N | N | Y - Span 114-115. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-115 | Y | Y | N | N | N | N | N | Y - Span 114-115. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-116 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-117 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-118 | Y | Y | N | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-119 | Y | Y | Y - span 119-120 | N | N | N | N | N | Physical | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-120 | Y - Tension structure - replace with two-pole double concrete or steel pole structure. | Y | Y - span 120-121 | Y - Up to two benches (approximately 12 x 12 m) | Y - 100 m of new access track for access onto benches. | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-121 | Y | Y | Y - span 120-121 | Y - Two benches (approximately 12 m x 12 m) required for the construction of hurdles. | N | N | N | Y - Span 121-122. Up to two benches (12 x 12 m) & boring of six wooden pole structures | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-122 | Y | Y | N | N | N | N | N | Y - Span 121-122. Up to two benches (12 x 12 m) & boring | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|--|---------------------------------------|---|--|--|-------------------------------------|--|--|--|---|---------------------------------------|
| 99M-123 | Y | Y | N | Y - Up to two benches (approximately 12 x12 m) | Y - 850m new access track and a new creek crossing. | N | Y - new creek crossing (some excavating, grading, infill with rock armour) | N | Visual & Physical - new creek crossing | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-124 | Y | Y | N | Y - Up to two benches (approximately 12 x12 m) | Y - 100 m of new access track for access to benches | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-125 | Y | Y | N | Y - Up to two benches (approximately 12 x12 m) | Y - 100 m of new access track for access onto benches. | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-126 | Y | Y | N | Y - Up to two benches (approximately 12 x12 m) | Y - Widening of 100 m of track to structure. | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-127 | Y | Y | Y - span 127-128 | Y - Up to two benches (approximately 12 x12 m) | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-128 | Y - Tension structure - replace with two-pole double concrete or steel pole structure. | Y | Y - span 127-128 | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-129 | Y | Y | Y - span 128-129 | Y - Up to two benches (approximately 12 x12 m) | N | N | Y - new creek crossing or bog mats will eliminate need for a new road to be constructed. | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-130 | Y | Y | N | Y - Up to two benches (approximately 12 x12 m) | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-131 | Y | Y | N | Y - Up to two benches | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|--|---------------------------------------|---|------------------------------------|-----------------------------------|-------------------------------------|--|--|------------------------------|---|---------------------------------------|
| | | | | (approximately 12 x12 m) | | | | | | | |
| 99M-132 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-133 | Y | Y | N | N | N | N | Y - creek crossing upgrade. Rock and smooth exit/entry | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-134 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-135 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-136 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-137 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-138 | Y | Y | N | N | N | N | N | N | Visual | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-139 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-140 | Y - Tension structure – replace with two-pole double concrete or steel pole structure. Interim structure replacement – converted to three-pole tension structure prior to rebuilding the new single pole. | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

| Structure number | Structure replacement | Conductor, earthwire & OPGW installed | Brake & Winch sites (up to 2 benches 10 x 20 m may be required) | Construction bench (Y/N) & details | Track access work (Y/N) & details | Vegetation clearing (Y/N) & details | Water crossing (Y/N) & details | Hurdles & undercrossing work (Y/N) & details | Level of previous assessment | Aboriginal heritage & historic heritage: sensitivity, results & notes | Mitigation measures & recommendations |
|------------------|-----------------------|---------------------------------------|---|------------------------------------|---|-------------------------------------|--------------------------------|--|------------------------------|---|---------------------------------------|
| 99M-141 | Y | Y | N | N | N | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |
| 99M-142 | Y | Y | Y – span 142-143 | N | Y – One new gate required between Structure 142 and 143. Access upgrade between Structure 142 and 143. Rock removal, grading and gravel | N | N | N | Desktop | Low archaeological sensitivity - Aboriginal and historic heritage. | None required. |

APPENDIX 3: ABORIGINAL HERITAGE: UNANTICIPATED FINDS PROTOCOL

An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

Cultural heritage significance is assessed by the Aboriginal community and is typically based on traditional and contemporary lore, spiritual values, and oral history, and may also consider scientific and educational value.

Protocol to be followed if previously unrecorded or unanticipated Aboriginal object(s) are encountered:

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:
 - a. Not further harm the object;
 - b. Immediately cease all work at the location;
 - c. Secure the area to avoid further harm to the Aboriginal object;
 - d. Notify OEH as soon as practical on 131 555, providing any details of the Aboriginal object and its location; and
 - e. Not recommence any work at the location unless authorised in writing by OEH.
2. If Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
 - a. The recording and assessment of the find(s);
 - b. The fulfilment of any legal constraints arising from the find(s), including complying with OEH directions; and
 - c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).
4. Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from OEH (normally an Aboriginal Heritage Impact Permit).

APPENDIX 4: ABORIGINAL HERITAGE: ARTEFACT IDENTIFICATION

| | |
|---|--|
|  |  |
| <p>Retouched blades (scale = 1cm)</p> | <p>Flakes</p> |
|  |  |
| <p>Microliths (scale = 1cm)</p> | <p>Scraper (scale = 1cm)</p> |
|  |  |
| <p>Flake characteristics (scale = 1cm)</p> | <p>Core from which flakes have been removed (scale = 1cm)</p> |

APPENDIX 5: HISTORIC HERITAGE: UNANTICIPATED FINDS PROTOCOL

A historic artefact is anything which is the result of past activity not related to the Aboriginal occupation of the area. This includes pottery, wood, glass and metal objects as well as the built remains of structures, sometimes heavily ruined.

Heritage significance of historic items is assessed by suitably qualified specialists who place the item or site in context and determine its role in aiding the community's understanding of the local area, or their wider role in being an exemplar of state or even national historic themes.

The following protocol should be followed if previously unrecorded or unanticipated historic objects are encountered:

1. All ground surface disturbance in the area of the finds should cease immediately, then:
 - a) The discoverer of the find(s) will notify machinery operators in the immediate vicinity of the find(s) so that work can be halted
 - b) The site supervisor will be informed of the find(s).
2. If finds are suspected to be human skeletal remains, then NSW Police must be contacted as a matter of priority.
3. If there is substantial doubt regarding the historic significance for the finds, then gain a qualified opinion from an archaeologist as soon as possible. This can circumvent proceeding further along the protocol for items which turn out not to be significant. If a quick opinion cannot be gained, or the identification is that the item is likely to be significant, then proceed to the next step.
4. Notify OEH as soon as practical on 131 555 providing any details of the historic find and its location.
5. If in the view of the heritage specialist or OEH that the finds appear not to be significant, work may recommence without further investigation. Keep a copy of all correspondence for future reference.
6. If in the view of the heritage specialist or OEH that the finds appear to be significant, facilitate the recording and assessment of the finds by a suitably qualified heritage specialist. Such a study should include the development of appropriate management strategies.
7. If the find(s) are determined to be significant historic items (i.e. of local or state significance), any re-commencement of ground surface disturbance may only resume following compliance with any legal requirements and gaining written approval from OEH (normally a Section 60 or a Section 140 excavation permit).