

Bega Structure Plan

Appendix E - Preliminary Aboriginal
Heritage Desktop Assessment

Preliminary Aboriginal Heritage Desktop Assessment

Bega Structure Planning

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1. Introduction

Better Cities Group, on behalf of Bega Valley Shire Council (BVSC), have engaged NGH Pty Ltd (NGH), to prepare a Preliminary Aboriginal Heritage Desktop Assessment in accordance with the relevant steps in the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW, 2010) (Due Diligence Code) to identify any known Aboriginal heritage constraints for the Bega Structure Plan which incorporates a proposed urban expansion area, which involves a residential subdivision, immediately south of the township of Bega within the Bega Valley Shire Council Local Government Area (hereafter referred to as the Project Area show as shown in Figure 1-1).

The forecasted population growth within the Bega Valley Shire strongly suggests the need to increase the availability of housing locally. Furthermore, the township of Bega is currently experiencing a severe housing shortage, both for owner occupier and rental occupier arrangements. This shortage of housing for current and potential workers has been identified as having negative implications for the local economy. It has been recognised that identification and facilitation of future residential development areas around Bega is critical to ensuring housing supply can better meet demand in the area.

The need to prioritise planning for urban release areas has brought about the Bega Structure Plan. As one of the aims of the Bega Structure Plan is to respect Aboriginal Heritage the purpose of this report is to undertake a desktop assessment to detail Aboriginal Heritage constraints in the Project Area.

1.1. Project Area

The Project Area is comprised of two designated areas to the south of the existing Bega township within the Bega Valley Shire Council Local Government Area as detailed below.

- 1) **Bega Urban Investigation Area (BUIA)** – This land comprises 658 ha where an estimated 2,600 dwellings may be built. The BUIA includes three rural residential subdivisions approved but not completed and BVSC will work with the potential developers of these parts of the Project Area to provide options that will increase dwelling yield.
- 2) **Opportunity Areas** - This land comprises 206 ha which adjoins the BUIA and may provide additional opportunities for future approval of residential subdivisions.

1.2. Project Personnel

This Preliminary Aboriginal Heritage Desktop Assessment undertaken in accordance with the relevant steps in the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW, 2010) was carried out by qualified archaeologists Glenn Willcox and Kirwan Williams of NGH. This included desktop research and local Aboriginal community consultation. Qualified archaeologist Kirsten Bradley reviewed the report.

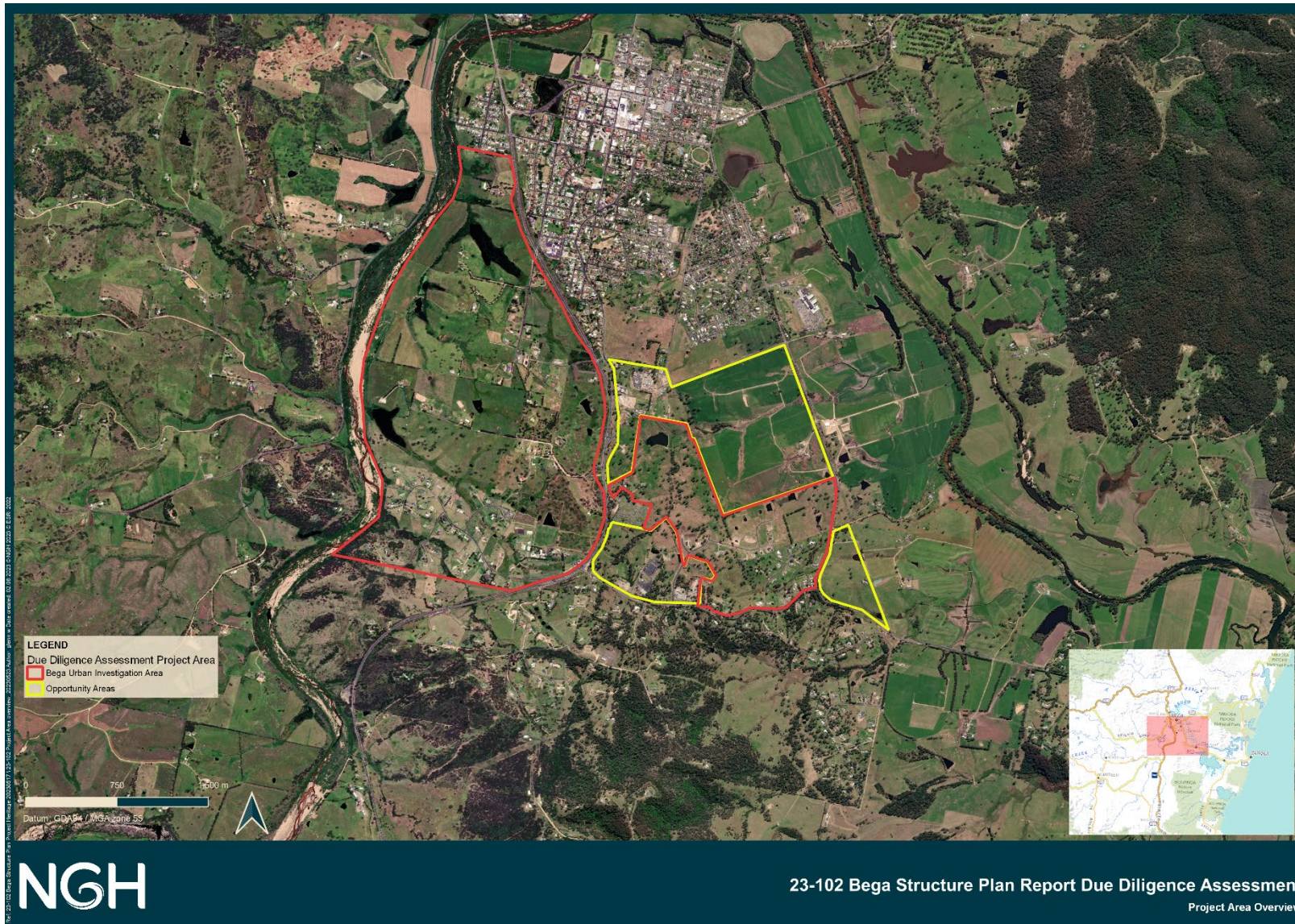


Figure 1-1 The Project Area

1.3. Approach and Format of this Report

This report has been drafted in keeping with the sequence of steps identified in the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (Due Diligence Code) (DECCW, 2010) as relevant to undertaking a desktop assessment. The format of the report has been designed to outline the legislative background, archaeological background, constraints overview, and further assessment requirements.

The Due Diligence Code outlines a five-step approach to determine if an activity is likely to cause harm to an Aboriginal object, as defined by the NSW *National Parks and Wildlife Act 1974* (NPW Act). The steps follow a logical sequence of questions, and the answer to each question determines the need for the next step in the process in order to:

- Identify whether Aboriginal objects are, or are likely to be, present in the Project Area; and
- Determine whether or not the proposed activities are likely to harm Aboriginal objects (if present) in the Project Area.

Table 1-1 Due Diligence steps

Due Diligence steps	
Step 1.	Will the activity disturb the ground surface?
Step 2a.	Search the AHIMS database and use any other sources of information of which you are already aware.
Step 2b.	Are activities proposed in areas where landscape features indicate the presence of Aboriginal objects?
Step 3.	Can you avoid harm to the object or disturbance of the landscape feature?
Step 4.	Undertake a desktop assessment and visual inspection. Is it likely that Aboriginal objects will be impacted by the proposed works?
Step 5.	Further investigations and impact assessment.

If the proposed activities are not ‘low impact activities’ (a defence for which is provided under the NPW Regulation), the considerations result in a determination of whether or not further approval under the NPW Act is required, in the form of an Aboriginal Heritage impact Permit (AHIP) or if the Due Diligence obligations for the protection of Aboriginal objects are discharged by the process under the Code.

For the purposes of the Due Diligence assessment, disturbed land is defined in the Due Diligence Code. Land is disturbed if it has been the subject of a human activity that has changed the land’s surface, with the changes remaining clear and observable. The defence against prosecution offered by following the Due Diligence Code process does not apply to situations where it is known there is an Aboriginal object present. The defence does not authorise harm to Aboriginal objects.

Each section within this report follows the relevant step outlined in the Due Diligence Code (DECCW, 2010).

2. Legislation

In NSW, Aboriginal heritage is principally protected by two legislative acts:

- *National Parks and Wildlife Act 1974* (NSW) (NPW Act) and its subordinate legislation, the National Parks and Wildlife Regulation 2019; and
- *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act).

2.1. National Parks and Wildlife Act 1974

Part 6 of the NPW Act concerns Aboriginal objects and places and various sections describe the offences, defences and requirements to harm an Aboriginal object or place. All Aboriginal material receives blanket protection under the NPW Act. The main offences under section 86 of the NPW Act are:

- A person must not harm or desecrate an object that the person knows is an Aboriginal object.
- A person must not harm an Aboriginal object.
- For the purposes of this section, "circumstances of aggravation" are:
 - that the offence was committed in the course of carrying out a commercial activity; or
 - that the offence was the second or subsequent occasion on which the offender was convicted of an offence under this section.
- A person must not harm or desecrate an Aboriginal place.

An Aboriginal object is defined as:

- Any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with the occupation of that area by persons on non-Aboriginal extraction and includes Aboriginal remains.

Section 87 sets out defences that are available to a person who is prosecuted for a particular harm offence under section 86. For example, it will be a defence in certain circumstances if the person who is being prosecuted can show that:

- the harm or desecration was authorised through an Aboriginal Heritage Impact Permit (AHIP) and conditions of the AHIP were not contravened;
- the person exercised due diligence to determine whether the act/omission constituted the offence would harm an Aboriginal object and reasonably determined no harm would occur;
- the person complied with requirements or a code of practice, as prescribed in in the National Parks and Wildlife Regulation (2019); or
- was a low impact act or omission.

Section 89A of the NPW Act also requires that a person who is aware of an Aboriginal object, must notify the Director-General in a prescribed manner. In effect, this section requires the completion of AHIMS site cards for all sites located during heritage surveys.

2.2. Environmental Planning and Assessment Act 1979

The EP&A Act regulates development in NSW. It sets up a planning structure that requires developers (individuals or companies) to consider impact of the project on the environment and to promote the sustainable manage of built and cultural heritage (which includes Aboriginal cultural heritage).

The EP&A Act requires that Aboriginal cultural heritage, and the possible impacts that development may have to Aboriginal heritage be considered, as part of the environmental impact assessment process under the EP&A Act. For most projects requiring assessment under Part 4 and 5 of the EP&A Act, the NPW Act will apply and an AHIP may be required. However, where the project is a "State Significant" project approved under Part 3A of the EP&A Act, the operation of the NPW Act is excluded the Part 3A assessment will involve consideration of impact to Aboriginal cultural heritage.

It also provides for the identification, protection, and management of heritage items through inclusion of these items into schedules off planning instruments, such as Local Environmental Plans (LEPs).

2.3. Bega Valley Local Environmental Plan 2013

The Project Area is located within the Bega Valley LGA. Clause 5.10 of the Bega Valley LEP requires that development consent be obtained for any proposed activity which will result in impacts to an Aboriginal object or Aboriginal Place. This includes any identified within the LEP itself, or on any other register.

Schedule 5 of the LEP 2010 details the included environmental heritage items covered by the plan.

3. Aboriginal Consultation

The Aboriginal Due Diligence process does not formally require consultation with Aboriginal community groups however it is considered archaeological best practise to engage the local Aboriginal community when assessing Aboriginal heritage values in the early stages of any proposed development. Therefore, as part of this assessment a limited program of consultation was undertaken with the local Aboriginal community, specifically with the Bega Local Aboriginal Land Council (Bega LALC) and the Djirringanj Elders Federation.

Email correspondence was sent to the Bega LALC and the Djirringanj Elders Federation on the 24th of May 2023 by NGH archaeologist Glenn Willcox to ensure these local Aboriginal community groups were made aware of the project and to seek any information regarding the known Aboriginal heritage values within the Project Area and its broader landscape context.

Responses were received from both parties expressing interest in the Bega Structure Plan project and seeking to ensure that appropriate assessment of the Aboriginal heritage values of the Project Area is undertaken during the planning phase of any future development processes. There was a particular focus on the need for consultation/engagement of the Aboriginal community early in the processes.

On the 29th of May 2023 John Dixon, a representative from the Djirringanj Elders Federation, verbally provided the following general statements about the cultural values associated with the Project Area and planning for future developments. The wording below which is based on notes taken by Glenn Willcox was approved by John Dixon for inclusion on the 29th of May 2023.

“At this stage I will provide general information about the area, but more detailed information is known.

The landscape south of the township of Bega, including the Project Area for the Bega Structure Plan, is a culturally significant landscape to the Djirringanj people. The area includes the biggest trading ground in the region and was a prime hunting ground as well. There are very significant ceremonial sites in the area.

This information has long been known to the current Djirringanj people and it is vital that ongoing consultation is undertaken during any planning and development programs. Adequate consultation is the key to avoid a repeat of past damaging impacts from development activity to significant cultural places in the area.”

(per comm John Dixon 29/05/2023)

4. Ground disturbance

Step 1. Will the activity disturb the ground surface or any culturally modified trees?

While the Bega Structure Plan itself does not include any ground disturbance activities it aims to help design and facilitate the future residential housing development and ground disturbing activities within the Project Area.

The future development of residential housing development within the Project Area would likely include, but not be limited to, the following activities:

- Installation of civil services and associated infrastructure (such as roads, power, water and sewerage);
- Construction of dwellings;
- Vegetation removal;
- Culvert and stormwater drainage installation;
- Pavement construction;
- Bulk earthworks;
- Landscaping; and
- Construction of retaining walls and slope stabilisation.

As the proposed future activities within the Project Area require significant ground disturbance any Aboriginal objects and/or sites within the Project Area could therefore be subject to harm. The confirmation that ground disturbance would occur requires the next step in the Aboriginal Due Diligence process to be completed.

5. Register search and background research

5.1. AHIMS search

Step 2a. Search the AHIMS Database and other information sources

A search of relevant heritage registers for Aboriginal sites and places provides an indication of the presence of previously recorded sites. A register search is not conclusive, however, as it requires that an area has been subject to archaeological survey, and information about any sites identified has been submitted for registration. However, as a starting point, the search will indicate whether any sites are known within or adjacent to the Project Area and provide oversight regarding the site types most commonly recorded within the local area.

The Aboriginal Heritage Information Management System (AHIMS) provides a database of previously recorded Aboriginal heritage sites in NSW. An extensive search provides basic information about any sites previously identified within a search area. The results of the search are valid for 12 months for the purposes of a Due Diligence level assessment. On the 17th of May 2023 an extensive search of the AHIMS database was undertaken over an approximately 15 km x 15 km area centred on the Project Area, as follows:

- Client Service ID: 782528
- MGA Zone 55, Eastings 746000-761000, Northings 5928000-5943000
- Aboriginal objects: 87
- Aboriginal Places: 0

There were 87 Aboriginal sites recorded within this search area and no declared Aboriginal Places. Table 5-1 below shows the breakdown of site types and Figure 5-1 show the location of the AHIMS sites in relation to the Project Area.

Table 5-1 Breakdown of previously recorded Aboriginal sites in the region.

Site type	Number	%
Potential Archaeological Deposit (PAD)	40	46.0
Artefact (1 or more)	18	20.7
PAD and Artefact (1 or more)	11	12.6
Modified Tree	8	9.2
Ceremonial Ring (stone or earth)	5	5.7
Restricted Sites	3	3.4
Ceremonial Ring (stone or earth), Artefact and shell	1	1.2
Ceremonial Ring (stone or earth) and Artefact	1	1.2
Total	87	100

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A total of 23 previously recorded Aboriginal sites on AHIMS are located within the BUIA portion of the Project Area as summarised in Table 5-2 below. A total of nine of previously recorded Aboriginal sites on AHIMS are located within the Opportunity Areas as summarised in Table 5-3 below.

An additional six previously recorded Aboriginal sites on AHIMS have GPS point locations immediately adjacent to and in close proximity (within 150 m) to the Project Area as summarised in Table 5-4 below.

Confirmation was received from Heritage NSW on the 23rd of May 2023 that none of the three sites with restricted location information included in the search results are located within or in close proximity to the Project Area.

Table 5-2 Sites within the BUIA Project Area

Site number	Site name	Site type	Site status on AHIMS
62-6-0617	South Bega - Survey Unit 1	PAD	Valid
62-6-0618	South Bega - Survey Unit 2	PAD	Valid
62-6-0619	South Bega - Survey Unit 4	PAD	Valid
62-6-0620	South Bega - Survey Unit 5	PAD	Valid
62-6-0621	South Bega - Survey Unit 6/Locale 1	Artefact	Valid
62-6-0622	South Bega - Survey Unit 6/Locale 2	Artefact	Valid
62-6-0623	South Bega - Survey Unit 7	PAD	Valid
62-6-0624	South Bega - Survey Unit 8	PAD	Valid
62-6-0625	South Bega - Survey Unit 9	PAD	Valid
62-6-0626	South Bega - Survey Unit 10	PAD	Valid
62-6-0627	South Bega - Survey Unit 12	PAD	Valid
62-6-0628	South Bega - Survey Unit 16	PAD	Valid
62-6-0629	South Bega - Survey Unit 17	PAD	Valid
62-6-0631	South Bega - Survey Unit 23	PAD	Valid
62-6-0633	South Bega - Survey Unit 26	PAD	Valid
62-6-0634	South Bega - Survey Unit 30, including site Survey Unit 30/Locale 1	PAD and Artefact	Valid
62-6-0635	South Bega - Survey Unit 31	PAD	Valid
62-6-0636	South Bega - Survey Unit 33, Including sites Survey Unit 33 / Locale 2 & Survey Unit 33/ locale 3	PAD and Artefact	Valid

Site number	Site name	Site type	Site status on AHIMS
62-6-0641	South Bega - Survey Unit 40, including site Survey Unit 40 / Locale 1	PAD and Artefact	Valid
62-6-0642	South Bega - Survey Unit 41	PAD	Valid
62-6-0643	South Bega - Survey Unit 42	PAD	Valid
62-6-0649	South Bega - Survey Unit 56	PAD	Valid
62-6-0650	South Bega - Survey Unit 58	PAD	Valid

Table 5-3 Sites within the Opportunity Areas

Site number	Site name	Site type	Site status on AHIMS
62-6-0630	South Bega - Survey Unit 18	PAD	Valid
62-6-0637	South Bega - Survey Unit 35	PAD	Valid
62-6-0638	South Bega - Survey Unit 36	PAD	Valid
62-6-0639	South Bega Survey Unit 37, including site survey Unit 37/ Locale 1	PAD and Artefact	Valid
62-6-0644	South Bega - Survey Unit 43	PAD	Valid
62-6-0647	South Bega - Survey Unit 47	PAD	Valid
62-6-0648	South Bega - Survey Unit 52, including site Survey Unit 52 / Locale 1	Isolated Find	Valid
62-6-0715	Sediment Control PAD (Bega Bypass)	PAD	Valid
62-6-0824	TM21-01	PAD and Artefact	Valid

Table 5-4 Sites with GPS point locations immediately adjacent and in close proximity to the Project Area.

Site number	Site name	Site type	Site status on AHIMS	Distance to the Project Area
62-6-0054	Bega: Bega West	Ceremonial Ring	Valid	130 m west of the north-western boundary of the Project Area
62-6-0645	South Bega- Survey Unit 46 including site Survey Unit 46/ Locale 1	Artefact	Valid	Directly adjacent to Project Area
62-6-0711	High St to Rawlinson St PAD (Bega Bypass)	PAD	Valid	Directly adjacent to Project Area

Site number	Site name	Site type	Site status on AHIMS	Distance to the Project Area
62-6-0712	Rawlinson St to Prospect St PAD (Bega Bypass)	PAD	Valid	Directly adjacent to Project Area
62-6-0713	Prospect St to Applegum Cl PAD (Bega Bypass)	PAD	Valid	Directly adjacent to Project Area
62-6-0714	Applegum Cl to Reservoirs PAD	PAD	Valid	Directly adjacent to Project Area

5.1.1. Other Register Heritage Searches

Other heritage register searches were also undertaken to identify any items or places in proximity to the Project Area. The following resources were used as part of this assessment:

- The NSW State Heritage Inventory (SHI), this includes items on the State Heritage Register and items listed by state agencies and local Government, to identify any items currently listed within or adjacent to the proposal area.
- The Australian Heritage Database, this includes items on the National and Commonwealth Heritage Lists, to identify any items that are currently listed within or adjacent to the proposal area.

The results of the Australian Heritage Database search indicated that 20 sites are located within Bega. The Bega General Cemetery, which is directly adjacent to the Project Area, is registered as an Indicative Place on the Register of National Estate (Non-Statutory archive)

The results of the NSW SHI database search indicated that there are three previously recorded Aboriginal Places listed under the *National Parks and Wildlife Act* within the NSW State Heritage Inventory within the Bega Valley LGA. None of the Aboriginal Places are located within or adjacent to the Project Area.

The results of the NSW SHI database search indicated that 12 previously recorded heritage sites are listed under the *NSW Heritage Act* within the Bega Valley LGA. No sites are located within the Project Area however, one site is located directly adjacent to the Project Area. This site is the Bega Cemetery (Listing No: I657).

The results of the NSW SHI database search indicated that 161 previously recorded heritage sites are listed by the Local and State Agencies within Bega in the Bega Valley LGA. Three of the sites are located within or adjacent to the Project Area which include:

- The Old Bega Hospital (Main building and outbuildings) (Item: 009)
- Bega Cemetery (Listing No: I657).
- Warragaburra Homestead (I002).

No other known previously recorded heritage sites or known possible heritage sites are located within or adjacent to the Project Area. The location of the sites noted above to be within and/or adjacent to the Project Area are shown in Figure 5-2.

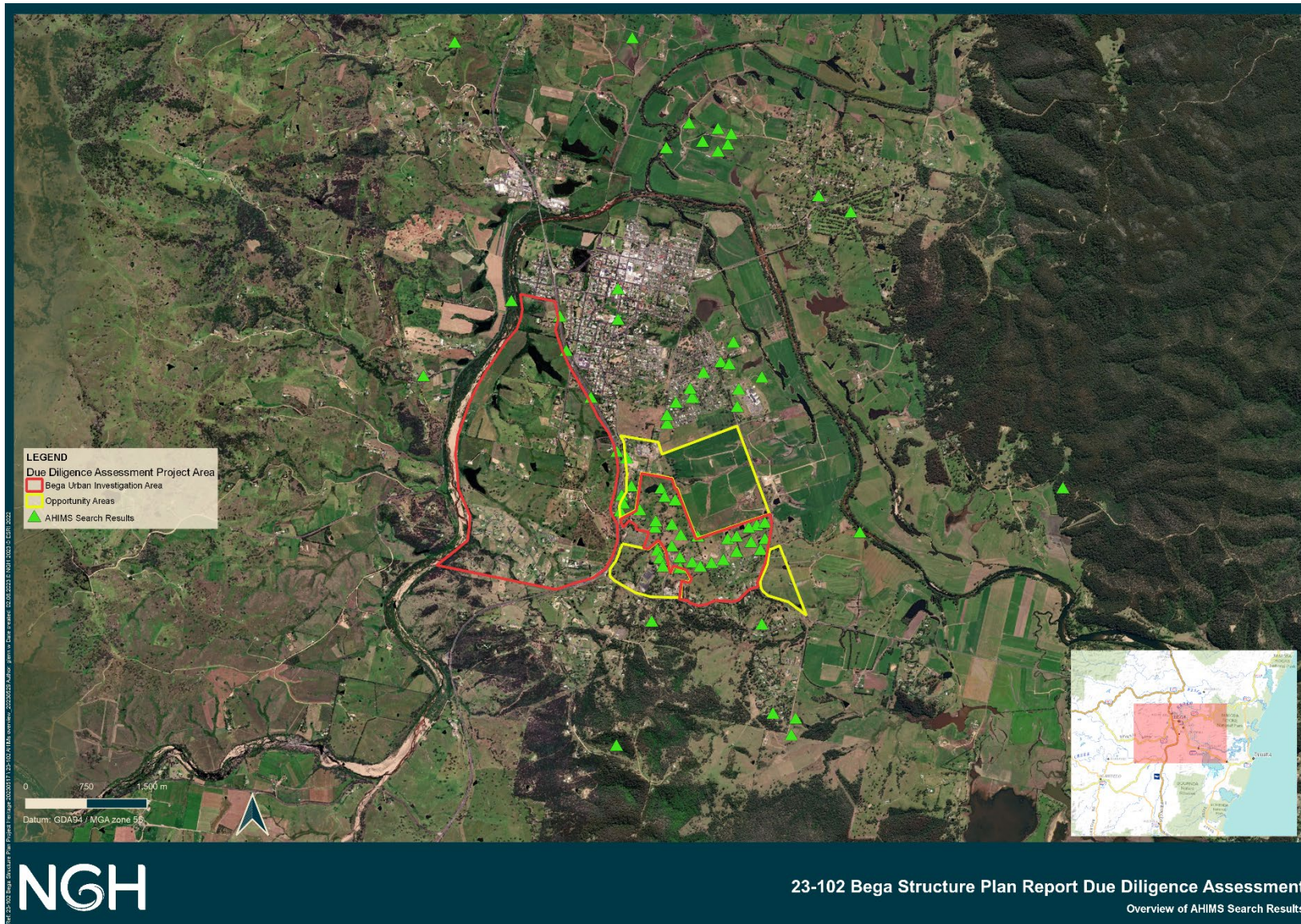


Figure 5-1 Location of AHIMS Search Results.

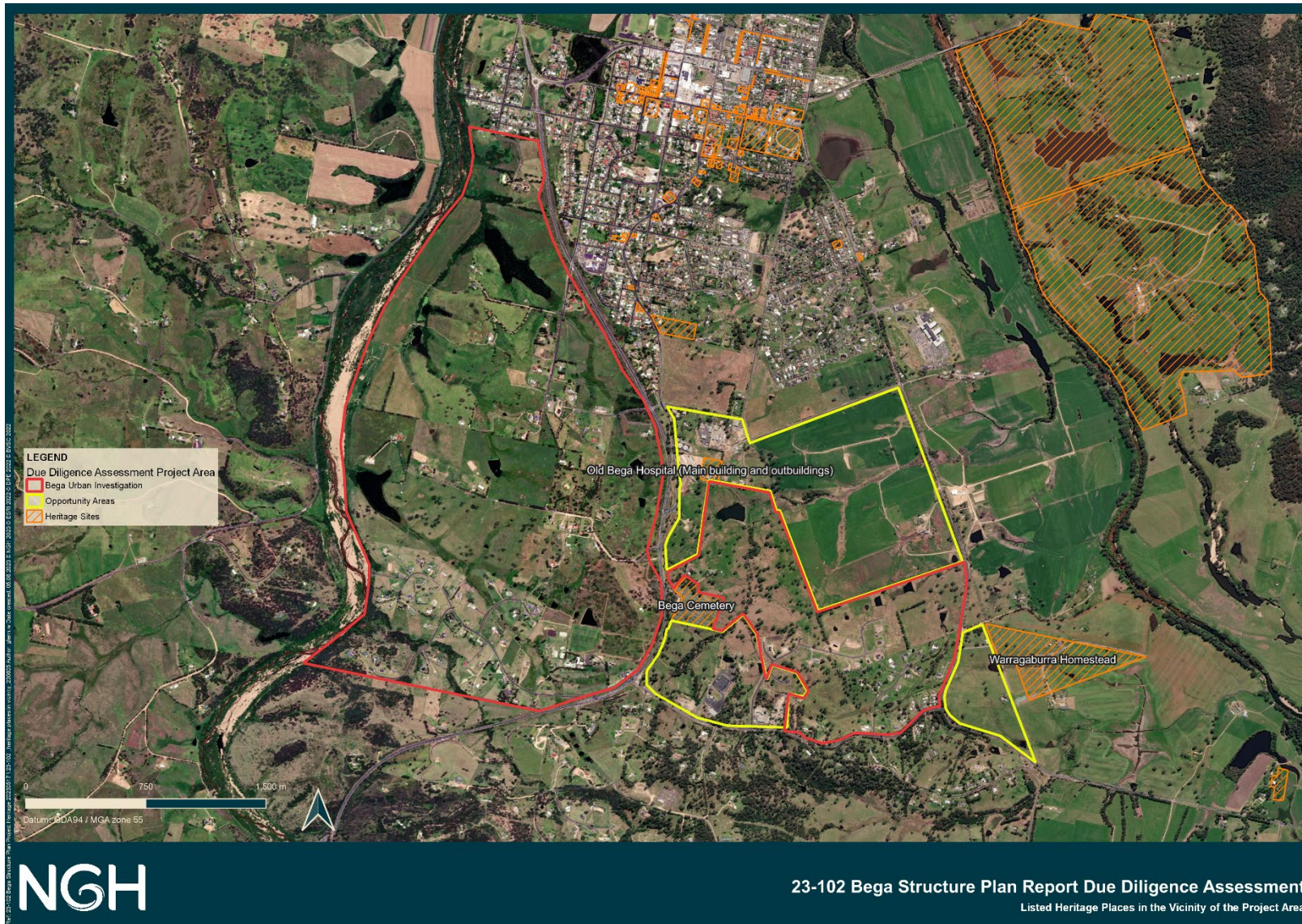


Figure 5-2 LEP search results

5.2. Archaeological context

A number of surveys have been undertaken in the Bega area primarily driven by land development works. An overview of these studies is provided below and those located in close proximity to the Project Area are shown in Figure 5-3.

Steele and Douglas (2001) undertook the survey of the Bega High School site. No sites were identified during the survey, which was noted to likely be the result of low ground surface visibility, and it was recommended that further assessment through a program of test excavation be undertaken to determine the true archaeological nature of the site. Subsequently, in 2002 a subsurface testing program was undertaken with a total of 19 artefacts recovered. The low artefact densities recovered from the area were noted to likely be due to the prior disturbance of the area (as cited in Dibden 2009).

Saunders (2003) conducted an Aboriginal archaeological assessment approximately 35 ha for the "Glen Mia" proposed subdivision on the southern fringe of Bega, on the western side of Tathra Road, approximately 200m north the eastern extent of the Project Area additional opportunities area. "Glen Mia" was noted to be highly disturbed from agricultural and clearing activities. The area consisted of gently to moderately inclined slopes and spur with intermittent streams that were tributaries of the Bega River. Two scarred trees and four PADs were identified. The PADs were located above first order streams on spur crests and slopes with PADs 1 and 2 covering approximately 100 m x 75 m, PAD 3 covering approximately 125 m x 100 m and PAD 4 covering 70 m x 50 m. Saunders recommended that the scarred trees be retained and that subsurface testing be undertaken in the in the PAD areas prior to any works (as cited in On Site CHM 2014 & RPS 2012). Saunders (2004) subsequently completed the recommended test excavations of the "Glen Mia" PADs through mechanical excavation using an excavator and backhoe. Each PAD was investigated by undertaking 2-3 scapes of the PAD area with samples of the excavated soil dry sieved through 4 mm mesh wire. The soil testing stopping when no more artefacts were detected. There were five artefacts recovered from the surface and 27 subsurface artefacts recovered from the testing program. The subsurface artefacts were recovered from depths of 0-30 cm. It was noted that as only a sample of the soil was tested, further artefacts may have been undetected. The low density of artefacts recovered from the testing program resulted in the assessment of the remaining "Glen Mia" area being determined as having low archaeological potential (as cited in RPS 2012).

Dibden (2005a) also completed a survey for the proposed subdivision of a property in South Bega, which is entirely incorporate into the eastern proportion of the current Proposal Area. Ten Aboriginal sites were identified, although it was noted that visibility was low, and the results likely did not accurately represent the archaeological potential of the area (as cited in Dibden 2009). Subsequently in 2006, Dibden undertook test excavations across the South Bega Property, comprising 38 test transects within 26 Survey Units. A total of 1,512 artefacts were recovered across 37 of the transects in very low or low densities. The artefacts were located across a range of survey units, and Dibden concluded that the area was not utilised for intensive Aboriginal occupation, but rather sporadic activities and movement through the country (as cited in Dibden 2009 & On Site CHM 2014). At South Bega the Survey Units which contained either low/moderate or moderate artefact densities were all situated in proximity (within 200 m) to drainage lines and were usually located at the confluence of two creeks; they were of low gradient (<5-6°) and orientated to either the north or east cardinal points. Survey Units such as high ridge crests located away from creek lines were found to contain either very low or low artefact densities. **The majority of the valid Aboriginal AHIMS sites within the current Project Area were recorded during this assessment.**

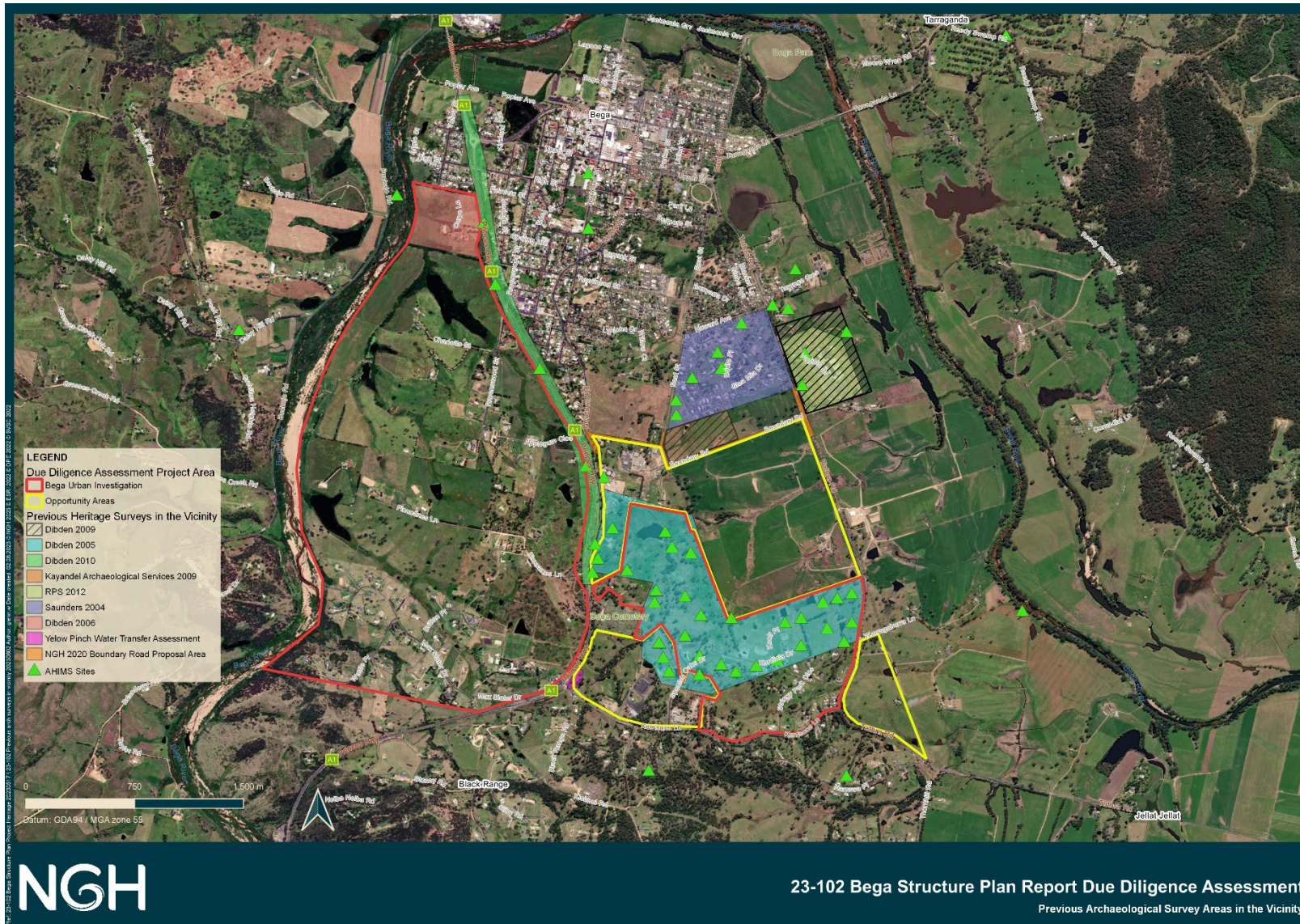


Figure 5-3 Previous studies located in close proximity to the Project Area

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Dibden (2005b) completed an Aboriginal Archaeological assessment for the proposed Bega Eco-Neighbourhood Development for Bega Eco-Neighbourhood Developers, approximately 2.4 km north of the current Project Area (Dibden 2005b). During the study, two new sites comprising isolated artefacts were identified. The artefacts recorded were one silcrete and one volcanic flake. The artefacts were located within an area of exposure created through disturbance and on a side spur with low slope within fine granitic loam soil. It was determined that the area had low archaeological sensitivity for subsurface archaeological deposits based on the results of the field survey and the consideration of high levels of prior disturbances and the geomorphology of the area (Dibden 2005b).

Dibden (2006a) undertook a survey of 95 hectares at Wanatta Lane in Frogs Hollow, approximately 8.5 km south of the current Project Area, in advance the rural residential subdivision of this land. Four Aboriginal archaeological sites were recorded, all of which were stone artefacts in clusters or isolation. Three of the sites were recorded on spur crests and one site was recorded in association with a drainage line.

AECOM (2009) undertook a study within a proposed central waste facility at Frogs Hollow, approximately 11 km south-west of the current Project Area, but recorded no Aboriginal heritage sites.

Didben (2009) surveyed two potential locations for a new hospital at Bega that included Site 1 at Boundary Road and Site 3 at Tathra Road, both areas assessed are adjacent to the current Project Area. No sites were located at the Site 1 area on Boundary Road. However, it was noted that an elevated crest landform within the Site 1 study area had potential to contain low density subsurface artefacts while very low densities were predicted to occur within the simple slope landforms. During the survey of the Site 3 study area two isolated finds were located on a hill crest overlooking the Bega River. Given that the Site 3 study area was located on elevated terrain in close proximity to the Bega River and its associated riverine swamp landscapes, the potential for subsurface artefacts was noted by Dibden to likely vary across the study area with moderate densities on relatively flat landforms close to the river and very low densities on the simple slope landforms. While Dibden noted that some landforms within the two study areas were likely to contain low density artefacts it was noted that further archaeological investigation of the areas was unlikely to identify sites of high or very high significance that would preclude the areas from future developments. Site 1 on Boundary Road was noted to be the least archaeologically significant of the two potential hospital site areas investigated during the study.

In 2009 the Bega Bypass route which is adjacent to the current Project Area was surveyed by Kayandel Archaeological Services who recommended that a subsurface testing program be undertaken in order to accurately determine the subsurface potential of the area to mitigate the poor visibility at the time of survey (as cited in Dibden 2010). A subsequent subsurface test excavation program was undertaken in 2010 by Dibden. Test pits were placed across five areas, which included the ridge near High Street to Rawlinson street, a ridge near Rawlinson Street to Prospect Street, mid to upper slopes from Prospect street to Applegum Close, lower slopes opposite Finucane Lane and the upper to mid slopes of Applegum Close to the Reservoirs. A total of 60 test pits were excavated across the five areas that had been previously defined by Kayandel Archaeological Services. A total of 83 artefacts were recovered from 21 of the test pits. The majority of the artefacts recovered were recorded as debitage scattered across the areas with the highest artefact density noted to be the area from Rawlinson Street to Prospect Street. The areas tested from Applegum close to Reservoirs and Prospect Street to Applegum Close are adjacent to the western most portion of the current proposal area and consisted of test transects 5 to 8. The test transects were excavated for the purposes of obtaining a sample to characterise the density and nature of archaeological deposits in each of the areas. From the 24 test pits excavated within test transects 5 to 8 near the current Project Area

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total of seven artefacts were recovered. No artefacts were recovered from test transect 7. The artefact densities near the Project Area were all assessed by Dibden to be very low with the seven artefacts recovered noted to be from spits 2 and 3 (20-30 cm below the surface), which was consistent with the depths artefacts were generally recovered from across the testing program. The artefact types recorded across the testing program included flakes, flake fragments, flaked pieces, retouched artefacts, and cores. The artefacts were predominately quartz with a lesser number of silcrete, volcanic, rhyolite, chert and a banded rhyolite. Dibden (2010) noted that the density of artefacts recovered from the testing program was indicative of infrequent and short-term use and was likely representative of single use or shorter stays in the area as people moved through country. It was concluded that given the low artefact density recovered from the test excavation that the areas were unlikely to have been a focus of activity in the local area. **The majority of the valid Aboriginal AHIMS sites directly adjacent to the current Project Area were recorded during this assessment.**

In 2010 On-Site Cultural Heritage Management (On-Site) (2010) completed an Aboriginal heritage assessment of the proposed works area to widen and seal a 1.6 km portion of Wanatta Lane between the Princes Highway and the proposed Central Waste Facility near Wolumla, approximately 8 km to the south-west of the current Project Area. The potential for subsurface archaeological deposit along the road alignment was considered low due to the obvious existing disturbance and the absence of any foci point in the landscape that may have attracted Aboriginal occupation. No Aboriginal objects were identified.

An Aboriginal archaeological assessment was undertaken in 2012 by Dibden for the proposed subdivision of rural lots on Tarraganda Farm, Corridgeree Road, Bega, approximately 3 km north of the current Project Area. No Aboriginal sites were identified due to low visibility across the study area. However, it was determined that the area had high potential for Aboriginal past use due to its location adjacent to the Brogo River (<200 m), gentle to moderate slopes falling from a narrow, central crest. It was recommended that test excavations be undertaken prior to any works occurring in the area across five survey units identified by Dibden to include crests or simple slopes with gentle gradients that were noted to have low to moderate densities (as cited in RPS 2012 & On Site CHM 2014). Areas noted to have steeper gradient slopes were noted by Dibden to have very low potential for subsurface material. Following the survey Dibden subsequently undertook a subsurface testing program of the five survey units considered to be archaeologically sensitive. A total of 60 test pits were excavated across the five areas with a total of 121 artefacts recovered. The artefacts were recovered from 30 of the test pits across all the areas tested and it was noted that the areas generally had lower than predicted densities. Comparing the results of the subsurface testing to other studies in the area Dibden noted that the results seemed to reflect the modelling of the areas with low/moderate densities located in close proximity (< 200 m) to drainage lines or near the confluence of two or more water sources on low gradients. Areas located away from water sources were noted to have very low to low artefact densities.

In 2012 RPS conducted a cultural heritage impact assessment for the proposed South East Regional Hospital site in Bega, adjacent to the eastern edge of the current Project Area on Tathra Road. The location of a previously recorded site, an isolated grey volcanic flake (62-6-0724, a duplicate of 62-6-0707) was investigated, but the site was unable to be relocated. No new sites were located; however, it was noted that ground visibility was generally non-existent across the site. Two areas of PAD were identified on spurs in line with the modelling of the area and location adjacent to the Bega River floodplain. It was determined that any works in the area would require test excavations of the two PADs prior to proceeding (RPS 2012).

Bega Structure Planning

In 2014, On Site Cultural Heritage Management (On Site CHM) completed a due diligence investigation for the proposed wastewater irrigation expansion, approximately 850 m to the east of the current Project Area (On Site CHM 2014). No Aboriginal sites were located; however, five areas of PAD were identified. The landscapes surveyed included major river flats along the Brogo and Bega Rivers, and it was determined that these areas were likely major foci of Aboriginal occupation in the past, but that extensive disturbance has likely disturbed and dramatically altered sites. The report recommended that the proposed works be realigned to avoid the PAD areas.

In 2020 NGH completed an Aboriginal Due Diligence assessment for proposed road upgrade and intersection works along the extent of Boundary Road between Newtown Road and Tathra Road, Bega. While the study area was noted to be situated predominately within highly disturbed areas along the road corridor, previous studies in the Bega area have identified that spur lines, crests, and low gradient slopes in proximity to drainage lines have potential for low artefact densities and therefore a survey was undertaken to ensure any undisturbed areas within the road reserve that include these sensitive landforms was visually inspected. No Aboriginal sites or objects were recorded within the study area, and it was deemed that the area had low potential to contain *in situ* subsurface deposits due to the high level of existing disturbance.

Two other Aboriginal heritage assessments are known to have been undertaken either wholly or partially within the current Project Area. In 2006 Dibden undertook an assessment for a proposed Senior Living Project in Fairview St which is located at the most northern extent of the Project Area. Part of assessment area for the Bega to Yellow Pinch Water Transfer System Aboriginal heritage assessment undertaken by Dibden in 2009 falls at the southern extent of the Project Area. The reports for these assessments were not available during this investigation, however they should be considered in future Aboriginal heritage assessments for the Project Area if available.

5.3. Landscape assessment

Step 2b. Are there undisturbed landscape features likely to contain Aboriginal objects?

The *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* outlines a range of landscape features that have higher potential to contain Aboriginal objects. It is also necessary to consider whether there are landscape features of undisturbed land that may contain Aboriginal objects.

These include land that is:

- within 200 m of water;
- located within a sand dune system;
- located on a ridge top, ridge line or headland;
- located within 200 m below or above a cliff face, or
- within 20 m of a cave, rock shelter or cave mouth.

Understanding the landscape context of the Project Area may also assist us to better understand the archaeological modelling of the area and assist to identify local resources which may have been utilised by Aboriginal people. This information can then potentially be used in predicting the nature of Aboriginal occupation across the landscapes within and adjacent to the Project Area. Factors that are typically used to inform the archaeological potential of landscapes include the presence or absence of resources that would have been utilised by Aboriginal people including water, animal and plant foods, stone and other resources.

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The general topography of the Project Area and its surrounding area consists of gently rolling hills. The landscape is dominated by hill crests and moderate to gentle spurs, slopes and gullies. The Project Area is located at the northern extent of the north to south-oriented Black Range, which extends to Merimbula in the south, and is a known travel route utilised by Aboriginal people. The Project Area comprises a low, gentle north to south-trending ridge with the Bega River flowing around and encompassing the Proposal Area with floodplain elements of the Bega River to the east and west. Local relief within the Project Area varies, with elevations of 10 - 110 m Australian Height Datum (AHD).

The previously recorded AHIMS registered sites within and in the vicinity of the Project Area are predominantly located on ridges, hill crests, spurs and gentle slopes within proximity to water with fewer sites registered on the floodplain. The prevalence of AHIMS sites on elevated landforms, which are above the 1 in 100 year flood line, is likely due to these landforms being subject to archaeological investigation for proposed development. Within the Project Area disturbances are largely those commonly associated with farming practices however some of the ridges and crests landform features within the Project Area appear to have experienced some level of previous disturbance from road construction. However, there are relatively undisturbed landform features in the Project Area and Aboriginal sites have previously been recorded on all the landforms present within the Project Area.

The Bega River flows to the immediate west of the Project Area and wraps around the Project Area to the north and east approximately 1 km from the Project Area. Floodplain landforms associated with the Bega River are broadly present in the western extent of the Project Area and intrude to a lesser degree from the east. Many unnamed tributaries of the Bega River cross the Project Area including Parbery Creek (a 4th order watercourse) which flows from the Princes Highway east to the Bega River (see Figure 5-4). Such water sources and adjacent relatively flat ground would have provided attractive terrain and ideal conditions for Aboriginal people living in the area with gentle gradient elevated areas also accessible during flood events. These waterways would also have attracted local fauna to the area as well, providing a food resource for Aboriginal people. The Project Area is likely to have formed a small part of a larger resource-rich area in which flora and fauna resources were abundant and utilised by Aboriginal people inhabiting the area.

The Project Area has been largely cleared of original vegetation with few native shrubs and grasses present however there are remnant old growth native trees present. Consequently, there is some potential for old growth native trees to be located within the Project Area that may contain evidence of Aboriginal cultural modification.

John Dixon, a representative from the Djirringanj Elders Federation, noted that the general landscape in which the Project Area is located across contains significant Aboriginal ceremonial sites and the identification of several ceremonial ring sites on the AHIMS register in the surrounding local area supports the information provided by the local Aboriginal community that such site types may occur within the Project Area.

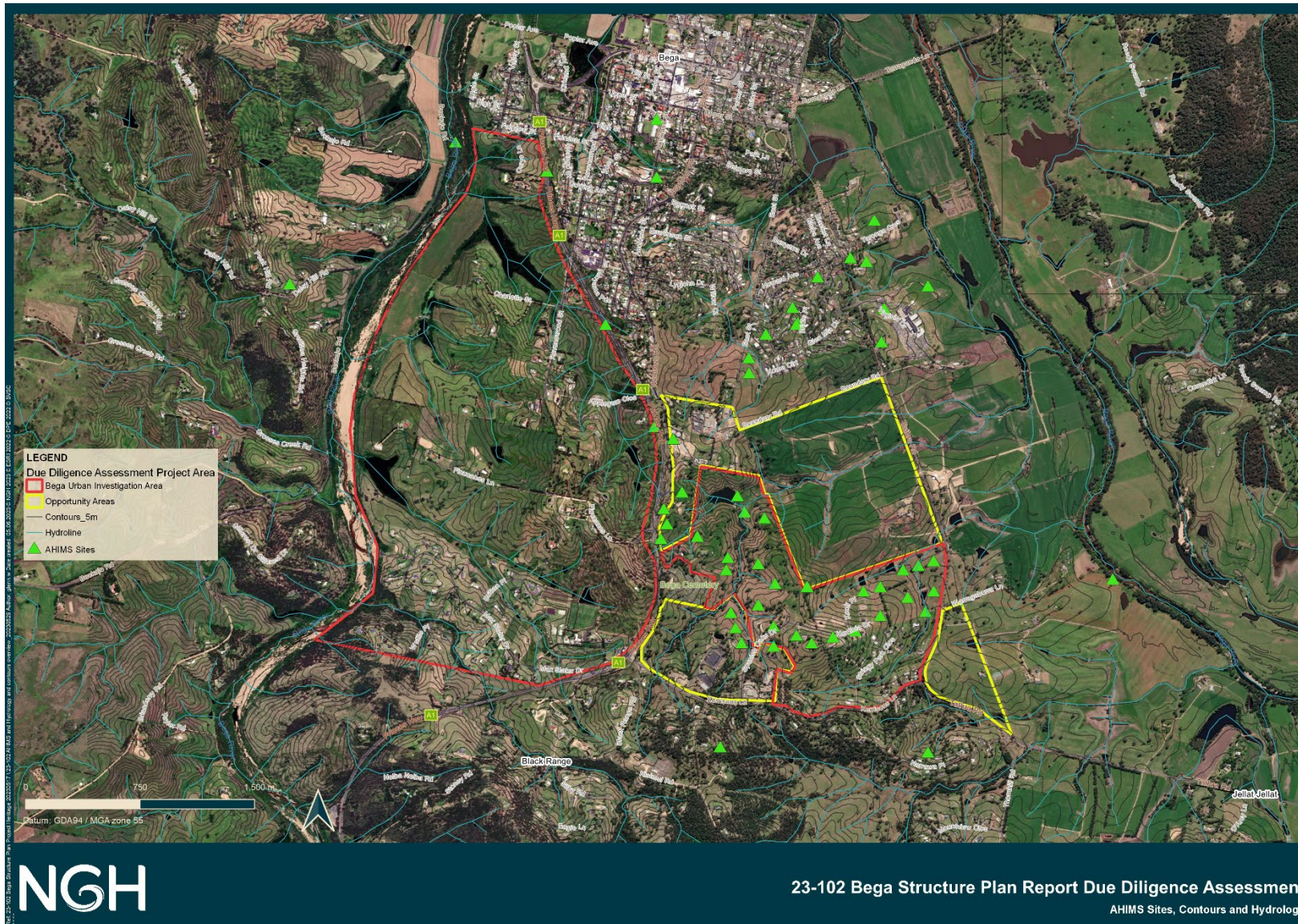


Figure 5-4 Landforms and hydrology

5.4. Aboriginal site prediction

As outlined above, Aboriginal heritage sites have been previously recorded within and in proximity to the Project Area. The previously recorded AHIMS registered sites within and in the vicinity of the Project Area are predominantly located on ridges, hill crests, spurs and gentle slopes within proximity to water with fewer sites registered on the floodplain. Based upon the initial desktop assessment, using satellite imagery and topographic data, it appears that there is potential for Aboriginal objects to occur within the Project Area, in addition to those recorded on AHIMS.

Based upon the previous archaeological investigations of the area and the currently recorded AHIMS sites there is potential for a range of site types, in particular PADs, artefact scatters and isolated stone artefacts to occur within the Project Area. Modified trees and ceremonial sites also have potential to occur within the Project Area.

The desktop assessment, therefore, indicates that there are landscapes present within the Project Area that have the potential to contain Aboriginal objects. An outline of predicted Aboriginal objects within the Project Area is provided in Table 5-5 below.

Table 5-5 Aboriginal site prediction statements

Site type	Site description	Potential
Potential Archaeological Deposits (PADs)	An area where Aboriginal objects may occur below the ground surface	Potential to occur within Project Area in areas of elevated, flat, dry land associated with water sources and on ridges, spurs, crests and low gradient slopes in proximity to drainage lines. Such sites have potential to occur within the Project Area and this site type has been previously recorded within the Project Area.
Stone artefact scatters and isolated artefacts	Artefact scatter sites can range from high-density concentrations through to isolated finds.	Artefact scatters have potential to occur in low to moderate densities on low gradient spur crests and slopes and elevated flats in close proximity to drainage lines and drainage line convergences. Simple slopes are likely to contain very low or low artefact densities while flatter elevated landforms could contain moderate to high artefact densities. Such sites have potential to occur within the Project Area and this site type has been previously recorded within the Project Area.
Modified trees	Trees that have undergone cultural modification	Potential to occur within the Project Area where there are remnant mature native trees. May occur in stands of remnant vegetation or as isolated paddock trees.
Ceremonial ring	Raised earth ring(s) associated with ceremony.	Such sites have potential to occur within the Project Area

6. Desktop assessment

Step 3. Can any AHIMS listed objects, or landscape features be avoided?

Previously recorded Aboriginal sites and areas of PAD are known to be present within portions of the Project Area. The Project Area also has landscape features which are noted to be archaeologically sensitive. While the future development of the Project Area as a whole is unlikely to be able to be relocated to another location, the exact footprint of future development is currently unknown and assumed to be flexible in nature to some degree to ensure the consideration of Aboriginal Heritage.

The desktop assessment alone is therefore not sufficient to conclusively appraise the archaeological potential of the landscape or the location of any additional sites, the next step in the process, a visual inspection, must be conducted to properly appraise the presence and potential for Aboriginal sites to occur within the Project area. A visual inspection will also allow for the inspection of the previously recorded sites and areas of PAD within the Project Area.

Step 4. Does the desktop assessment confirm that there are likely to be Aboriginal objects present or below the ground surface?

The assessment process is primarily a desktop exercise, using available information such as the AHIMS search results and relevant archaeological reports to develop or refine a model of Aboriginal site prediction based on the type of activity proposed and the level of disturbance of the area. As part of this desktop assessment it has been established that there are a number of valid Aboriginal sites registered on AHIMS within the Project Area as previously detailed in Table 5-2 and Table 5-3.

Preliminary archaeological sensitivity mapping as shown in Figure 6-1 has been developed to identify landforms and areas of high, moderate and low archaeological sensitivity (see Table 6-1) and the Aboriginal heritage constraints within the Project Area. This preliminary mapping may be used to inform the Bega Structure Plan however it must be noted that this modelling has not been ground truthed as no visual inspection was undertaken as part of this scope of works.

The archaeological sensitivity/ Aboriginal heritage constraints categories have been defined in terms of site size and significance, with the term 'large' referring to an archaeological site covering an extensive area and/or containing a high density of artefactual material, and 'significance' referring to the importance of the site for scientific/research potential and/or the cultural significance to the local community.

Table 6-1 Heritage constraint categories.

Constraint	Definition
Low (Green)	Low potential to encounter large and significant sites and therefore minimal impacts anticipated on Aboriginal Heritage. At a minimum a visual inspection is required as part of a Due Diligence Assessment.
Moderate (Orange)	Moderate potential to encounter large and significant sites. Impacts should be minimised, where possible. Further assessment and visual inspection required.
High (Red)	High potential to encounter large and/or significant sites. Avoid if possible. Further assessment and visual inspection required.

Bega Structure Planning

It has been established through the desktop assessment that the Project Area is located within a landscape that has the potential for the presence of Aboriginal cultural material to occur across its extent, albeit in vary degrees of sensitivity. A number of Aboriginal sites have also previously been recorded within the Project Area, specifically in the south-eastern most portion of the Project Area which has previously been subject to archaeological assessment and a subsurface test excavation programme. Given this, it is likely that Aboriginal objects will occur in similar landforms and densities across the Project Area which would be impacted by any future development works. As a general statement, the areas that residential developments prioritise for the placement of dwellings and roads, were also prioritised by Aboriginal peoples in the past for their activities and evidence of this occupation in the form of Aboriginal objects is likely to be encountered across the Project Area.

Based upon the previous archaeological investigations of the local area and the currently recorded AHIMS sites there is potential for a range of site types, in particular PADs, artefact scatters and isolated stone artefacts to occur within the Project Area. Modified trees and ceremonial sites also have potential to occur within the Project Area.



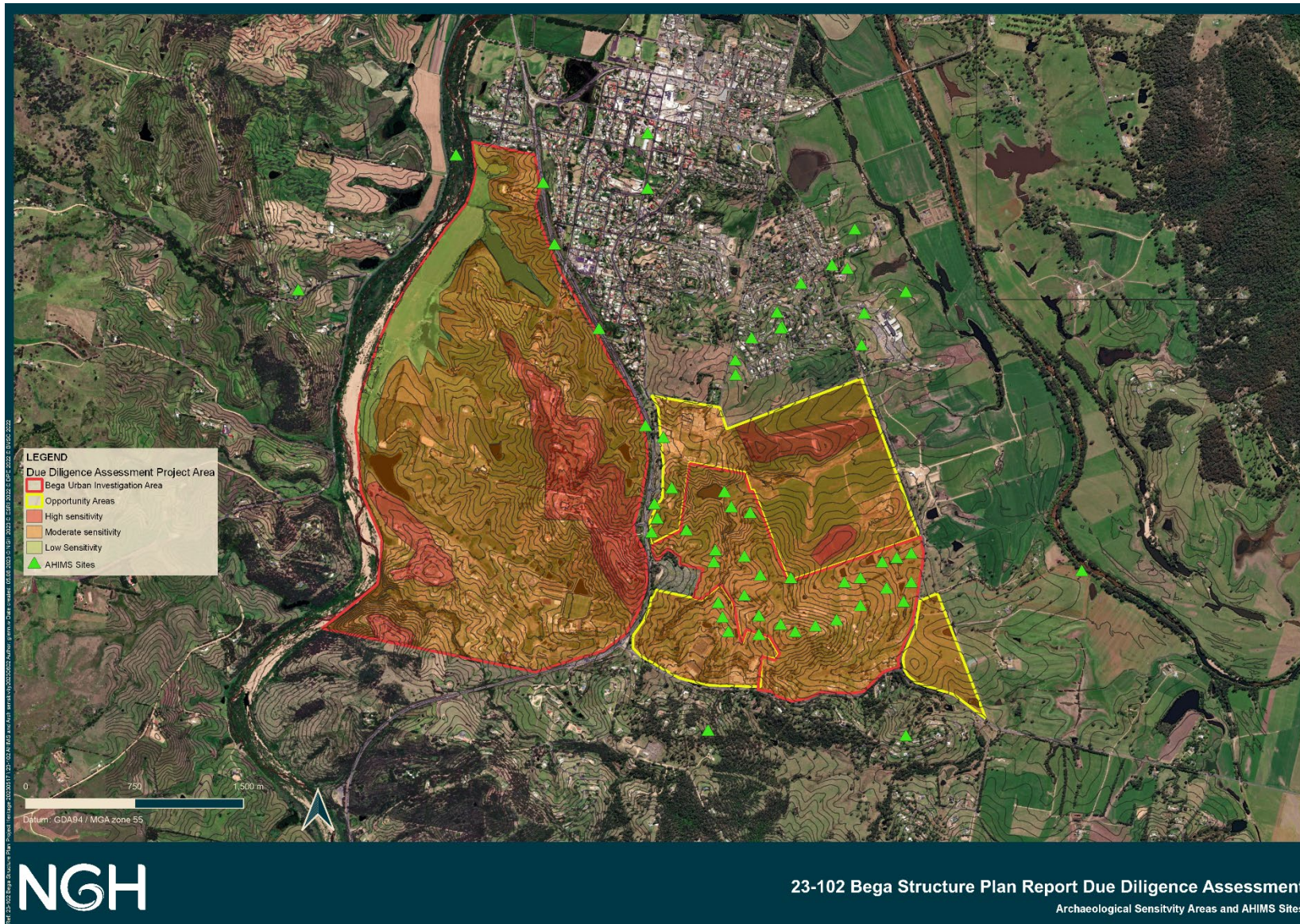


Figure 6-1 Preliminary archaeological sensitivity mapping/ Aboriginal heritage constraint

7. Further Assessment and Recommendations

Step 5. Is further investigation or impact assessment required?

The Due Diligence Code states that if, after the desktop research is completed, it is evident that harm will occur to Aboriginal objects or heritage places then further and more detailed assessment is required.

It has been established that the Project Area is located within a landscape that has the potential for the presence of Aboriginal cultural material to occur across its extent, albeit in vary degrees of sensitivity. A number of Aboriginal sites have also previously been recorded within the Project Area. Therefore, further investigation and assessment, which must include a visual inspection, is required for any proposed development projects within the Project Area.

The following recommendations are based on a number of considerations including:

- Background Aboriginal heritage research;
- Assessment of Landscape; and
- The NSW *National Parks and Wildlife Act 1974* and Aboriginal heritage guidelines in NSW.

It is recommended that:

1. As one of the aims of the Bega Structure Plan is to respect Aboriginal Heritage, the preliminary archaeological sensitivity mapping may be used to inform future development design and planning.
2. Visual inspection of the Project Area is required to ground truth and refine the preliminary archaeological sensitivity mapping identified in this desktop assessment.
3. To appropriately assess the true archaeological sensitivity and potential for Aboriginal objects to be impacted by any proposed development in the Project Area further investigation and assessment, which must include a visual inspection, is required.
4. No old growth native trees may be disturbed without inspection by a qualified archaeologist for scarring or modification.
5. It is an offence under the *National Parks and Wildlife Act 1974* to disturb, damage or destroy an Aboriginal object without a valid Aboriginal Heritage Impact Permit (AHIP).
6. A number of previously recorded valid Aboriginal sites are recorded within the Project Area. An AHIP is required to be approved by Heritage NSW to facilitate any proposed impact to these previously recorded valid Aboriginal sites.
7. To comply with current NSW legislation and Aboriginal heritage guidelines, further assessment in the form of a new Aboriginal Cultural Heritage Assessment (ACHA) is required to comply with Aboriginal consultation requirements as part of any AHIP application to Heritage NSW for the land which includes the previously recorded valid Aboriginal sites recorded within the Project Area. It is however noted that further subsurface test excavation of the land previously subject to archaeological assessment by Dibden (2005a) is unlikely to be required given the extensive testing programme previously undertaken. However, this would be required to be determined by a qualified archaeologist in consideration of the proposed development design over the parcel of land previously subject to the South Bega archaeological assessment (see Dibden 2005a).
8. Consultation with the local Aboriginal community, including the Bega LALC and Djirringanj Elders Federation, should continue for any proposed land development within the Project Area.

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