

Village of Hill End: Privately Owned Lands



Archaeological Management Plan: Volume 1 - Report

Permit/Consent No. 20.00287

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Hill End Historic Site

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EXECUTIVE SUMMARY

This report presents an Archaeological Management Plan (AMP) for the Hill End Historic Site, near Bathurst, Central West New South Wales. The AMP was commissioned and funded by Bathurst Regional Council, New South Wales. This AMP specifically details archaeological issues associated with the Village Precinct, in addition to the outlying cultural landscape and mining areas, not investigated in the previous Archaeological Landscape Management Plan (ALMP) prepared for the New South Wales National Parks and Wildlife Service (NPWS) (Long 2002).

The study comprises a suit of documents containing the Main Report (Vol. 1) and three supplementary volumes outlining the results of the 2015 archaeological survey. A register of individual land blocks is presented in Volume 2 (Survey Results: Parcel Registers), which is itemised by description, built history and archaeological zoning. Similarly, archaeological features are itemised in Volume 3 (Survey Results: Archaeological Feature Register), presenting a register of archaeological features and sensitivity. Volume 4 (Survey Results: Parcel Maps) contains individual maps of parcels within the study area, including aerial and result maps.

The report (Vol. 1) presents background historical information, a review of built history in the Village Precinct and outlying areas, the results of the archaeological assessment, the Archaeological Zoning Plan (AZP), which identifies archaeological features and Potential Archaeological Deposits (PADs) across the Village Precinct and outlying areas, a statement of archaeological significance and a future research design. The final section presents a review of management considerations and outlines a process for archaeological impact assessment. In addition, recommendations for further research and proactive measures are presented. The methodology employed in preparing the AZP is presented as an Appendix.

The AZP presents a broad characterisation of archaeological values across the Village Precinct and outlying areas according to archaeological sensitivity ratings (high, moderate, low and low-zero), applied to extant and former building sites. The AZP results are based on data collected utilising a *Differential Global Position System* (DGPS) device to record a high level of detail with regard to the precise location, condition and significance of PADs. However, as the intended property access was not granted in its entirety, it is also recommended that a greater level of resolution can be achieved through proactive investigation as part of the management planning process. The Clarke and Tambaroora Street frontages represent a precinct of outstanding archaeological significance (Precinct 1), which requires careful conservation management. The remainder of the study area (Precincts 2-4) was of overall moderate to zero archaeological sensitivity, though several outlying blocks of high potential sensitivity have been identified.

The AMP is designed as a module to be used in conjunction with Long's previous study (2002). A process for implementing management principles and policies for heritage conservation at Hill End has been provided, based on the significance of the archaeological record and the nature of proposed works or activities.

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INTRODUCTION

1.1 Preamble

This report presents an Archaeological Management Plan (AMP) for the Hill End Historic Site (the 'Historic Site'), near Bathurst, Central West New South Wales (Figure 1). The AMP was commissioned and funded by Bathurst Regional Council, New South Wales (BRC) and managed by Janet Bingham (Manager Strategic Planning, BRC).

The AMP specifically details archaeological issues associated with privately owned lands in the Village Precinct and the outlying cultural landscape, within the study area (RU5). This AMP also considers Crown Lands and areas not formally approached by the previous Archaeological Landscape Management Plan (ALMP), prepared for the New South Wales National Parks and Wildlife Service (NPWS) (Long 2002).

The project objectives were outlined in a brief circulated by BRC (Appendix 2), which were to produce the following outputs:

- determine the key historic boundaries of settlement of Hill End (i.e. Archaeological Zoning Plan);
- a thematic history of the settlement with a focus on physical history (i.e. Archaeology);
- identify the relative likelihood and significance for archaeological resources;
- recommendations as to the preferred method of development controls (i.e. Conservation policies and guidelines); and
- identify sites that should be considered for future interpretation.

1.2 Study Area

Hill End is located approximately 300 km north west of Sydney, and 80 km north of Bathurst within the Bathurst Regional Council, formally Evans Shire Council, in Central West New South Wales (Figure 1). The village of Hill End loosely occupies the headwaters of an upland valley (AHD 850m), which drains a broad plateau overlooking the confluence of the Turon and Macquarie Rivers, as they carve a gorge-like course through an isolated section of the Central Tablelands.

The township of Hill End and the former mining settlement of Tambaroora are contained within a discrete parcel of cleared and substantially modified land, isolated from other major settlement by an extensive tract of deeply dissected, forested hills, though outlying pastoral and agricultural properties are scattered throughout the wider hinterland. The modern township is essentially a contracted version of the township at its maximum extent (c. 1880), which has seen comparatively limited new development over the past century. The majority of the core township area is composed of 19th century structures, though a range of more recent outlying property developments are strung along the outlying roads to the north and south of the main streets. It is the high integrity of the architectural, archaeological and landscape values of the locale that give Hill End high heritage significance (Section 7).

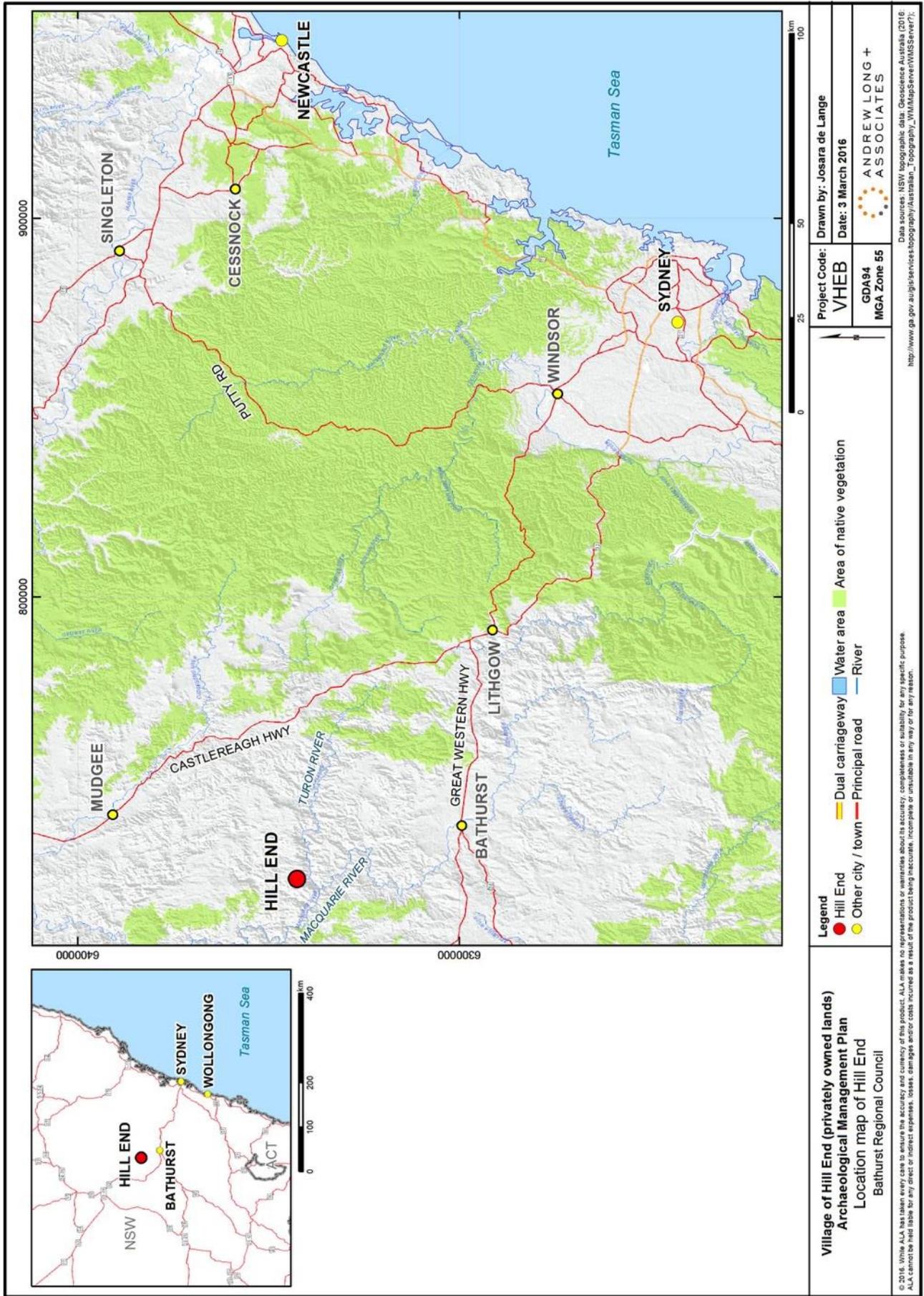


Figure 1: Study area location

The Village Precinct is roughly defined as the area of the township covered by the Bathurst Regional Council Development Control Plan (DCP) for Hill End (BRC DCP 2014: Map No. 21 and 22).

As the current study is an extension of Long's investigations undertaken in 2002, this AMP examines the areas excluded by the previous report which includes outlying sections and portions of the Village, including areas characterised by mining, crown and private land. Road reserves and a small number of untitled allotments within this area have also been included in this study, these are considered collectively as general unit. The study area consists of a contiguous belt of Crown and private sections and portions, which contains the modern township and outlying areas of Hill End. This area includes a total of 189 titled blocks in total, with 155 privately owned by individuals and 38 by either government and/or private industry (Figure 2). For ease of understanding, the parcels within the study area are organised by unique Parcel Identifiers known as *ALA Sites* with a unique number (*ALA ID*), each corresponding to allotments within RU5 Village Zone under Bathurst Regional Local Environmental Plan (LEP), 2014 (Appendix 1).¹

The natural environment of Hill End township has been substantially modified through open gold mining methods, resulting in substantial gully and sheet erosion, particularly along former watercourses and steep, exposed hill slopes. There are comparatively few intact landforms in the Village Precinct, with much of the surrounding landscape dominated by spoil heaps and a combination of degraded and reinstated mining land surfaces.

The underlying geology is dominated by folded sedimentary and metamorphic rocks of Silurian and Devonian Age (Chesleigh and Cookman Formations), punctuated by later basalt inclusions, such as Bald Hill, a steep dome-like formation which overlooks the western side of the township (Houghton *et al* 1981: 13).

A wide variety of soils are represented within the district, largely determined by the underlying geology and topography. Within the Village Precinct these primarily consist of red and yellow duplex soils of the Worcester and Peel series (Houghton *et al* 1981: 17). Both soils are susceptible to erosion given the high fine sand and silt component, though red duplex soils have a more stable, clay-based sub-soil.

Extensive erosion has already occurred to these soils, resulting in considerable structural modification. Gullying is particularly prevalent along natural watercourses and on steep eminences, while slope wash has universally effected the upper slopes of the hills surrounding the township. Much of this material has been redeposited across the lower slopes, particularly where built landscape elements have acted as a sediment. Consequently, soils on the lower slopes should be viewed as younger and deeper than those on higher levels, originating in the period after open mining methods commenced (e.g. sluicing).

The local vegetation structure consists primarily of regenerated dry sclerophyll forest dominated by brittle gum (*E. mannifera*) and red stringybark (*E. macrorhyncha*), with extensive exotic plantings and cleared land within the township area (Houghton *et al* 1981: 26). Much of the cleared area now consists of vacant land (mown by NPWS to reduce the potential fire hazard), subject to light grazing or garden landscaping.

¹ See Appendix 1: Parcel Identifiers (ALA sites) for the complete list of Parcel Identifiers (*ALA ID*) and corresponding allotments. Please note that allotments referred to in this report are done so according to their ALA site numbers.

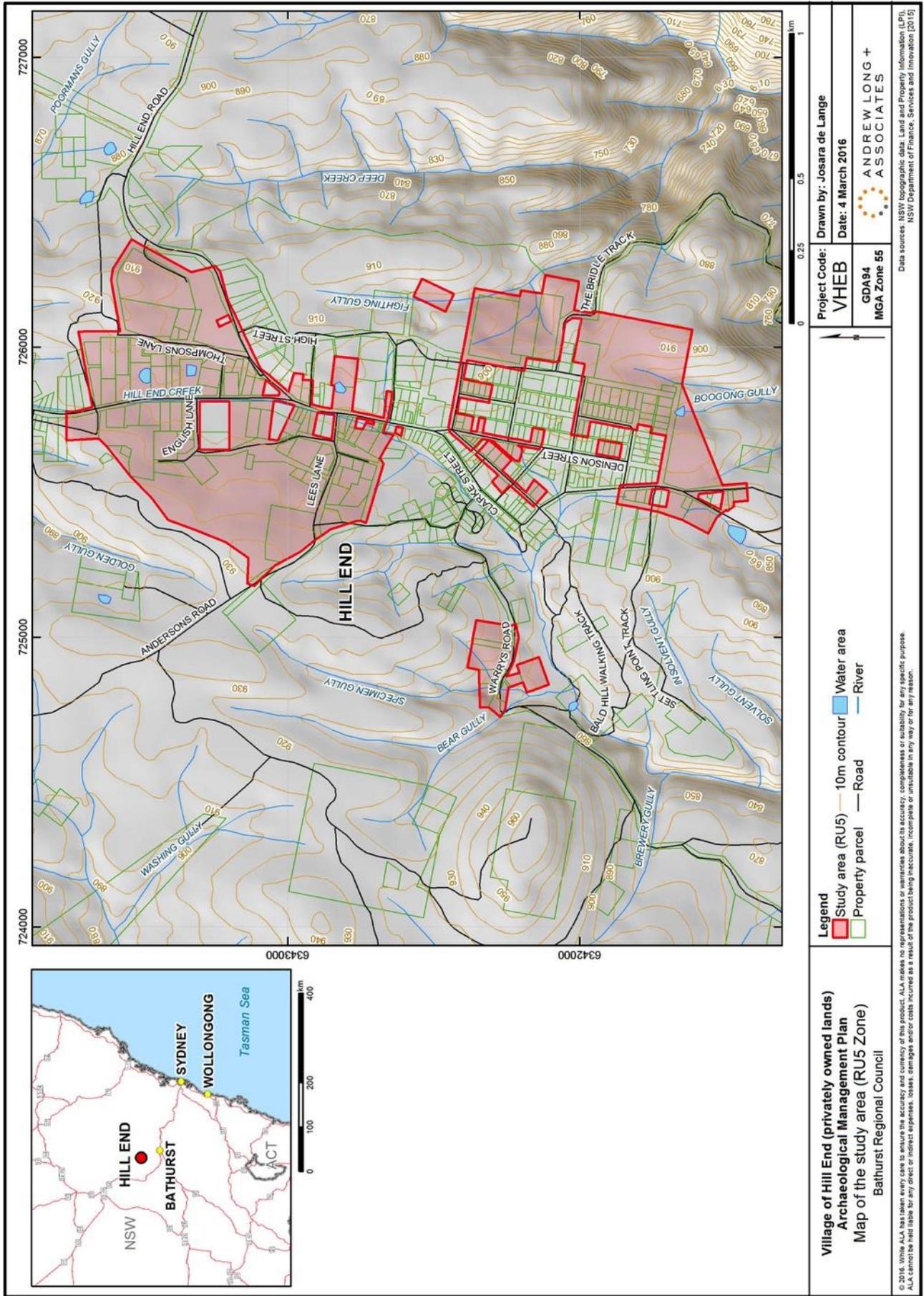


Figure 2: Study area (BRC Zone RU5)

1.3 Consultation

Andrew Long + Associates (ALA) were commissioned by BRC to undertake non-invasive field assessments for all sites within those boundaries (excluding the majority of land owned/controlled by the National Parks and Wildlife Service (NPWS) – that is land zoned to E1 National Parks and Nature Reserves under Bathurst Regional LEP, 2014) to identify the relative likelihood and significance for archaeological resources. At the commencement of the study, community members of Hill End were invited to attend a consultation whereby Council and ALA outlined the scope of this AMP. The project was managed by Janet Bingham (Manager Strategic Planning) of BRC with Andrew Long as Project Manager for ALA.

1.4 Research Design

This study has consisted of two concurrent stages. The first involved the examination of historical documents (particularly GIS and map-based sources) to determine the pattern of built-heritage across the Village Precinct and the outlying areas of Hill End. This resulted in a sequence of georeferenced plans that illustrate the phases of built history for each block of land in the Village Precinct and outlying areas. This information was supplemented by textual sources, which assisted in identifying the nature of construction materials and other activities associated with the historic use of the location.

This process has resulted in the production of a historical land register, which lists buildings and structures (or 'Potential Archaeological Deposits'; [PADs]) identified through archival research on a title-by-title (section and portion) basis (Volume 2: Table 1 and Table 2).

Secondly, these plans were compared against the existing condition of the landscape to gauge the likely state of preservation of structures and deposits indicated by the documentary record. This process consisted of a physical analysis of the external areas of the precinct, including a separate photographic record, the measurement of varying levels of erosion and soil accumulation across the site and notation of the types of ground surface (e.g. asphalt, concrete and lawn), evidence of past impacts likely to affect sub-surface deposits (e.g. sluicing and gullyng), and the position of existing buildings.

A register of archaeological features identified during the field survey (Volume 3: Table 1) has been produced for comparison with the Parcel Register (Volume 2: Table 1 and Table 2).

Collectively this process is termed 'predictive modelling', by which potential archaeological deposits can be identified through the comparison of a range of documentary sources and a simple field inspection, without recourse to costly and time consuming excavation techniques. A detailed overview of the methodology employed in the production of this predictive model or Archaeological Zoning Plan (AZP) is presented in Appendix 3.

1.5 Report Structure

This report presents an interactive product comprising the Archaeological Management Plan (Volume 1), three supplemental volumes of data (Volumes 2-4) and associated materials;

Volume 1: A textual report outlining the project methodology, results and management implications, which is intended to act as a guide to the interactive components.

The textual report consists of an introductory chapter (this Section), and chapters presenting:

- Section 2 - a historical overview to the precinct;
- Section 3 - an overview of the built history of the township;
- Section 4 - the archaeological assessment and its results;

- Section 5 - the archaeological zoning plan;
- Section 6 - an outline of the archaeological research framework for Hill End;
- Section 7 - a statement of archaeological significance;
- Section 8 - discussion of management considerations, policy and guidelines; and
- Section 9 - an outline of implementation strategies and actions for the Historic Site.

Volume 2: Survey Results: Parcel Registers - Tables, comprising:

- Table 1: Parcel Description Register;
- Table 2: Built History Register; and
- Table 3: Parcel Archaeological Zoning Ratings Register.

Volume 3: Survey Results: Archaeological Feature Register – Tables, Comprising:

- Table 1: Archaeological Feature and Archaeological Sensitivity Rating Register.

These above tables cross-refer to the plans in Volume 4 (see below).

Volume 4: Survey Results: Parcel Maps

Volume 4 is a single document containing individual parcel level plans within the study area, which comprise aerial, built history, Archaeological Feature and Archaeological Zoning result maps. The volume comprises two series of figures:

- Figure 12: Archaeological Sensitivity and Archaeological Features by property parcel; and
- Figure 13: Built History by property parcel.

In addition, spatial data files containing the results of the AMP within RU5 Village Zone under Bathurst Regional LEP, 2014 accompany the report. This data represents the basic spatial data of the archaeological management plan, and allow the comparison of a range of landscape attributes, such as built history, landscape integrity, archaeological features and zoning. These files also present reproductions of historical mapping and collate data in which highlights built history on parcel basis.

Individual layers presented for each property parcel are outlined in *Volume 4* consist of:

- A base layer, depicting property parcel boundaries;
- An aerial photograph;
- A Landscape Integrity layer;
- An Archaeological Sensitivity layer;
- A Built History layer, based on the following sources;
 - Buildings shapefile - unverified or supplemental data (NPWS);
 - Holterman photo map 1 (based on the Holterman Collection 1872);
 - Holterman photo map 2 (based on the Holterman Collection 1872);
 - Plan of Village of Hill End 1859 (Historical map);

- Plan of Village of Forbes² 1859 (Historical map);
- Plan of Village of Hill End 1871 (Historical map); and
- Hill End Map 1978 (NPWS) (Historical map);
- Plan of Village of Hill End 1867-1880.

Areas of potential archaeological deposits (PADs) are primarily indicated by the Archaeological Sensitivity ratings established for each property parcel and the Archaeological Features (AF) identified throughout the survey. These ratings take into Built History, Archaeological Imprint and Landscape Integrity to determine the likelihood of PADs. In some instances, AFs include sensitivity buffers, which approximate the extent of a given feature’s archaeological sensitivity.

Individual layers presented in figures in overview maps also include:

- An Archaeological Zoning Plan data - based on landscape integrity, built history and predicted archaeological imprint;
- Extant Archaeological Features – based on known archaeological remains (features), extant buildings and topography; and
- Significant Archaeological Precincts – based on Long’s (2002) previous research.

1.6 Personnel

This report has been produced by:

- **Andrew Long**, Director, Andrew Long + Associates.
- **Paul Pepdjonovic**, Project Manager, Andrew Long + Associates.

1.7 Limitations

The following presents the main limitations to the outcomes of this study, which require some discussion in order to qualify the effectiveness of the results.

Firstly, the far-reaching scope of the project has required some rationalisation in order to produce an effective and useful management document within the available timeline. This study should be considered a ‘broad-brush’ characterisation of the archaeological landscape at Hill End, which is limited in its ability to make definitive and accurate predictions regarding the distribution and significance of archaeological deposits for specific planning purposes. However, an Archaeological Zoning Plans (AZP) will aim to establish the relative Archaeological Sensitivity of different areas or zones within Hill End. The boundaries depicted in the AZP should be viewed as approximations only, and subject to full verification only after more detailed field assessment through test excavation or monitoring.

Secondly, the quality and comprehensiveness of existing data on the site has not been optimum, despite the level of prior research into the history and archaeology of Hill End. Considerable time has been spent collecting and researching a basic level of documentation of this extensive and rich historical area, yet the information gathered is neither complete, nor fully validated. One problem in particular has stemmed from the lack of ‘methodological blueprint’ that could establish the extent and sources used in previous interpretations of the built history of the village. Furthermore, there was an especially low level of available information concerning the 20th century built history of the village (cf. 1900-1970), and the construction/demolition of buildings within this broad timeframe was largely a matter of conjecture. As

² Prior to 1862, the Village of Hill End was originally known as the Village of Forbes

such, it is felt that there will be considerable information gaps that will need to be addressed upon conclusion of the study.

Access limitations have also impacted upon the ability to retrieve archaeological data. A month prior to the archaeological investigations, Bathurst Regional Council sent owners/occupiers a request for access of private properties located within the study area (RU5). Consent for access was granted for a number of properties, however the study was limited to these areas. Where access was denied or not confirmed, basic non-intrusive observations were made from public spaces (e.g. street).

Consequently, this report should be viewed as an all-encompassing, but basic and unrefined assessment of the archaeological landscape potential of the Village Precinct and outlying areas that highlights broad zones, with a level of accuracy achieved with the use of a handheld *Differential Global Position System* (DGPS). Whilst the data collected may not be considered definitive, the precise location, extent and significance of potential archaeological deposits has been recorded and interpreted.

1.8 Definitions

The following definitions have been adopted from the NSW Archaeological Assessment Guidelines (Heritage Office 1996a) with some modifications specific to this AMP.

Archaeological Deposit – Accumulations of cultural material that result from human activity, including materials discarded during the use, occupation or abandonment of a building or activity site (see also potential archaeological deposit).

Archaeological Feature (AF) – Any physical evidence of past human activity, including buildings, works, relics, structures, foundations, deposits, cultural landscapes and shipwrecks.

Archaeological Impact Assessment – A conservation management process that determines the potential impact of proposed works or activities on the archaeological record, and develops a plan to mitigate the potential impact in accordance with the significance of the remains.

Archaeological Imprint – The predicted nature of potential archaeological deposits based on their documented scale, duration and fabric. Archaeological imprint is rated from high (e.g. the remains of stone structures and earthworks) to moderate (e.g. timber structures) and low (ephemeral features, such as bark huts).

Archaeological Management Plan (AMP) – A set of management provisions that apply to particular archaeological units or zones. These provisions are structured in the form of this report.

Archaeological Landscape Management Plan (ALMP) – A set of management provisions that apply to particular archaeological units or zones. These units or zones are normally indicated graphically in an archaeological zoning plan.

Archaeological Potential – The degree of physical evidence present on an archaeological site, usually assessed on the basis of physical evaluation and historical research. In this study, potential archaeological deposits have been identified through documentary research, and qualified by the predicted nature of the remains (archaeological imprint) and the environment in which they are situated (landscape integrity) to determine a single archaeological sensitivity rating.

Archaeological Sensitivity – In this study, archaeological sensitivity is an overall rating of archaeological potential, based on a range of known and predicted factors (see archaeological potential). It is rated between High, Moderate, Low and Zero.

Archaeological Significance – A category of significance referring to scientific value or ‘research potential’, that is, the ability to yield information through investigation.

Archaeological Zoning Plan (AZP) – A graphic plan of a place, which indicates the relative archaeological sensitivity of different areas or zones. Archaeological zoning plans are prepared by undertaking broad-scale archaeological assessment of a large area.

Archaeology – The study of the human past using material evidence.

Artefacts – An object produced by human activity. In historical archaeology the term usually refers to small objects contained within archaeological deposits. The term may also encompass food or plant remains (ecofacts).

Differential Global Positioning System (DGPS) – A handheld device, which utilises global positioning satellites to record spatial data, which is later, corrected (processed) to achieve a greater level of accuracy.

Conservation Management Plan (CMP) – A document establishing the significance of a heritage item or a heritage conservation area and policies to retain that significance. It can include guidelines for additional development or maintenance associated with the heritage item or conservation area.

Cultural Landscapes – Areas of land that display evidence of human activity or occupation. They include rural lands such as farms, villages and mining sites, as well as country towns, suburbs or urban centres.

Development Control Plan (DCP) – A plan prepared by a local council to provide more detailed development controls and guidelines to accompany a Local Environmental Plan. Often used for heritage conservation areas.

Heritage Approval – The process of acquiring consent to undertake works or activities to a heritage item, through a permit application or other process endorsed by the New South Wales Heritage Council.

Historical Archaeology – The study of the human past using both material evidence and documentary sources. In Australia ‘historical archaeology’ excludes Aboriginal archaeology prior to non-indigenous occupation, but may include ‘contact’ sites.

Landscape Integrity – The character of the land unit in which a potential archaeological deposit is located, which can significantly influence the obtrusiveness, preservation and significance of the remains.

Local Environmental Plan (LEP) – A plan prepared by a local council under the Environmental Planning and Assessment Act 1979 and made by the Minister following public exhibition. Regulates the carrying out of development in a particular local government area and controls the use and development of land and the conditions under which they can take place. An LEP may identify items via a schedule, and include provisions to allow for their protection and appropriate conservation.

Parcel Identifier (ALA Site) – Parcels/allotments within the study area are organised by unique parcel identifiers known as ‘ALA Sites’, each corresponding to allotments within RU 5 zone (see Appendix 1).

Potential Archaeological Deposit (PAD) – A place that may contain evidence of past human activity. In this study, a potential archaeological deposit is a documented historical building or activity site for which there are no clear surface indications or sub-surface testing results.

Predictive Modelling – The use of largely documentary sources to predict the location, extent and significance of potential archaeological deposits, with only limited recourse to fieldwork. The results of a predictive model are essentially unverified until the model is tested through a strategic field programme, though they can greatly assist the archaeological planning process.

Relic – Any deposit, object or material evidence relating to non-indigenous settlement which is more than 50 years old.

Research Potential – The ability of an archaeological feature to yield information through archaeological investigation. The significance of archaeological sites is assessed according to their ability to contribute information to substantive research questions.

RU5 – The study area comprises land zoned as RU5 Village Zone under Bathurst Regional Local Environmental Plan, 2014.

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HISTORICAL OVERVIEW

2.1 Preamble

The contextual history of Hill End was appropriately synthesised by a study undertaken for the NSW NPWS in 2000 (Mayne 2001) and later published by the University of Melbourne in 2003 (Mayne). Mayne's research provided a balanced and textured historical interpretation of Hill End through a thematic framework, which considered the complexities of place and the interminglement of heritage, historiographical and vernacular interpretations of the physical landscape. As an alternative to the prevailing emphasis on gold mining, Hill End has a long history of gold production in the area and is a good example of the developing momentum of cultural heritage conservation and management of these historical themes in Australia (Mayne 2003:xiv). As Mayne (2003) has investigated the history of Hill End in great detail, this section presents only a broad overview of the history of the Township from the discovery of gold to the present day.

2.2 Previous Historical Research

The Village of Hill End has been a focus of historical interest for much of the latter half of the 20th century, with the primary impetus for the creation of the Historic Site in 1967 coming from both active members of the local community and the Heritage fraternity. This interest has formed the basis more comprehensive research which has demonstrated the presence of significant cultural heritage values and potential for archaeological deposits (PADs), within the Village Precinct. For contextual purposes, the following provides an overview of previous research and heritage management plans undertaken within the study area.

There have been numerous local histories, dealing with an overview of the development of the township as a community and heritage site (e.g. Goodwin 1992; B. Hodge 1982; 1988; H. Hodge 1980; 1986a; 1986b; 1987; Mullins et al 1976; Purser 1951), as well as selected aspects of biographical history (cf. Hammond 1988) and oral history (Prior 1981). The Holtermann photographic collection in particular, has added considerable value to the township as a historic place (Murray 1953; Burke 1973), bringing social significance and meaning to the physical fabric of the township. These photographs, largely taken during the gold mining 'boom' of the 1870s, constitute an extremely valuable interpretative resource, and have been used as evidence in this AMP.

Over the past two decades, a series of Conservation Management Plans (CMPs) and an archaeological landscape management plan (ALMP) have also been produced to aid in the retention and protection of cultural heritage values, within the Village of Hill End³. The *Office of Environment and Heritage*⁴ also outlines a series of CMPs that were submitted for endorsement by the NSW Heritage Council including the Craigmoor Marshall House (2000), English Cottage (2000), Holtermann's Corner Buildings (2002),

³ Ackerman 1998; Christo Aitken and Assoc. 1999; 2000; Eric Martin and Assoc. 1999; Suters Architects Snell Pty Ltd. 1999; Sheppard 1998; 1999; 2000; Hickson et. al. 2009; Conybeare Morrison 2013.

⁴ Office of Environment and Heritage, Heritage Listing for Hill End Historic Site – accessed 1/09/2015.

Denman's Cottage (2002), Athol (2003) and the General Store and Bakery site (2003). These have involved a detailed level of research into the specific and broader built history of Hill End, which have been incorporated into the histories for this AMP, where applicable. In addition, Long (2002) produced an ALMP addressing the archaeological potential across properties managed by NPWS. Further to this, the Bathurst Regional Council AMP (2011) has also prepared for the Bathurst region and contains a wide-ranging report on the significant archaeological remains of the area including the Hawkins Hill Group of Mines (Higginbotham 2011:ix).

More recently, a broader Conservation Management and Cultural Tourism Master Plan (Master Plan) was developed (Conybeare Morrison 2003a:ii). The Plan considers the conservation of heritage structures and protection of archaeological relics, through which it aims to provide a sustainable and maintainable future in the interpretation of Hill End's mining and town histories. A pertinent extension of this agenda is the Hill End Interpretation Draft Plan commissioned by NPWS, which is focused on the continued deliverance of an interpretation plan that considers the significance, adaptive reuse and authentic conservation of the town and its history under an overarching framework (GML et. al. 2014:18). This framework is centred around themes developed to accommodate storylines, which form a thematic structure based on the history and heritage values of the Historic Site (GML et. al. 2014:19).

More broadly, a thematic history of the Bathurst Regional Council Local Government Area was published by McLachlan in 2007. Mayne (2001; 2003) has more clearly defined the opportunities for useful multi-disciplinary research beyond tourism, in the enhancement of the value of future archaeological interpretation, which the Interpretation Plan has itself drawn upon to add a higher level of validation to the management process. Therefore, there exists a number of previous studies that detail the intricate history of Hill End, and management plans that seek to further refine the interpretation of, and preserve intangible and physical heritage.

2.3 Thematic Overview

In a review of the potential of Hill End for historical research, Mayne (2001, 2003) has highlighted the complexity of the interfaces on one level between the historical record and the physical fabric of Hill End (or 'palimpsest'), and the 'intersections ... between local rhythms and broader processes'. In layman's terms this means that it is difficult to isolate individual historical themes, as they are all, to some degree, interconnected, both on a local level and within the undercurrent of regional development.

Nevertheless, Mayne has identified eight key themes⁵ that stood out, and which he intended to develop further in his final historical narrative.⁶ These were:

- Aboriginal occupancy of the Hill End district (Wiradjuri possession);
- Pastoralism (including convict assignment);
- The first gold boom (alluvial mining 1851-70) - the movements of people sparked by the rush for alluvial gold;

⁵ The social landscapes identified by heritage, historical, and vernacular Mayne (2003:53).

⁶ Relevant themes identified for assessment in the project brief for the contextual history were as follows; the Aboriginal significance of Hill End; the relationship between Hill End and a greater history of gold rushes and mining; the role played by Gold Rush centres including Hill End in inspiring migrants from around the world to settle in Australia; the relationship between Hill End's development as a gold town and the financial system that supported it; the distinctive part played by Hill End as a stimulus for artists and other image-makers; the life of the township in the post-Gold Rush period; the role played by women in the history of Hill End; the unique contribution of figures such as local historian, Harry Hodge, to the sense of place; the proclamation of an Historic Site over part of Hill End in 1967 (Mayne 2001).

- The second gold boom (1871-74) - the innovations in capital formation and technology that underpinned the reef-mining boom;
- The third gold boom (1908-24)
- the local effects of depression and war (poor man's diggings);
- the influence of Hillendiana upon the current of post-war Australian art (Artist colony 1974-2002); and
- the relationship between localism and the cultural heritage movement (Historic Site 1967-2002).

The NSW Heritage Council first formalised this approach by adopting a series of historical themes, which align with nine broader Australian National Historical Themes (see 7.2.1.1 National Criteria).

These themes have some temporal basis as they broadly mirror the development of the district from Aboriginal subsistence and symbolic landscape, to the establishment of pastoral settlement in the wider region during the early to mid-19th century. Furthermore, these themes neatly frame events including the discovery of gold at Tambaroora in 1851, to the subsequent waves of immigration and industrial development during the late 19th century, and finally, the abovementioned themes reflect the declining economic fortunes of a mining township in the 20th century, and the renewed interest in the place as an Australian heritage icon in the 1950s and beyond.

Other themes are less easy to pinpoint in time and relate broadly to the human occupation and interaction with the landscape throughout the past 200 years and beyond. In particular, the interaction between ethnic groups, comparisons in gender role in the development of Hill End, and the basic human story of making a life in a remote and sometimes unforgiving environment, where events on a National and even global level are acted out on a local stage, such as the effects of European usurpation of the landscape and the economic fluctuations in the Australian economy (e.g. the depressions of the 1920s and 1930s). The ongoing pastoral and agricultural use of the landscape is a universal theme that directly links the present day to the earliest European occupation of the district, which is invariably overshadowed by mining related themes.

These themes will be assessed at a National, State and Local level to formulate a statement of significance for the archaeological landscape as a whole in the Section 7.3.⁷

2.4 Chronological Framework

Regardless of the inherent pitfalls with pigeonholing particular historical themes into a rigidly defined temporal structure, there is value in identifying chronological time brackets for the purpose of assessing archaeological significance across the township. While the wider themes assist in the identification of broad processes and their effects on the evolution of the Hill End community, the physical fabric of the site needs to be directly linked to a sequential framework that reflects the formation of the archaeological landscape. This may encompass changes in the way in which the landscape is used, modified and moulded through construction, occupation, abandonment, reuse and destruction. This can be of great value when assessing the predicted type, distribution and preservation of physical fabric relating to the representative activities undertaken during these chronological timeframes.⁸ For the purpose of this study, these phases are defined as follows;

1. Exclusive Aboriginal occupation (pre-1840) – the Hill End district formed part of an extensive part of central western New South Wales occupied by the Wiradjuri, one of the largest tribal groupings in Australia (Tindale 1974 vol. 1: 201).

⁷ See also an overview of the regional history (Heritage Office 1996a: 88-95).

⁸ These phases have been defined to correlate with the phases of development in the built history of the township (Section 3).

The full assessment of the archaeology of the Aboriginal occupation of Hill End does not form a component of this study. A separate study has been commissioned to investigate the Aboriginal values of Hill End and its environs, for which the historical background research has been completed (Zilber 2001).

At this stage there is comparatively limited documentation on specific aspects of Aboriginal occupation, though a range of Aboriginal archaeological sites have been identified across the Hill End-Tambaroora plateau, including indicating artefact scatters, rock shelters, quarries and sites of ceremonial significance (Gojak and Allen 1997). As such an Aboriginal presence at Hill End is beyond doubt, though it remains to be seen whether physical evidence has survived the mining processes and urbanisation that characterise the latter half of the 19th century.

On the basis of comparable gold mining regions (e.g. Bendigo and Ballarat, Vic) there is a strong likelihood of interaction between Aboriginal people and the initial pastoralists of the 1840s and subsequent mining communities, which could result in an Aboriginal historical record.

2. Exploration and Pastoralism (1840-1852) - although the Upper Macquarie region was first explored and settled by Europeans during the period 1813-22, there is no evidence to suggest that the Hill End district came under European influence until the 1840s, when the plateau was incorporated into the shared upland grazing lands of four pastoral stations (Hodge 1986: 24-25). Although a boiling-down plant using convict labour was established near Tambaroora, there is no evidence for European settlement at Hill End until the onset of the alluvial gold rush in 1852.

During this time, it is probable that no significant landscape modification occurred, and the Hill End valley experienced very limited visitation in the form of seasonal grazing and temporary stockmen's camps.

3. Early Gold Mining and the Establishment of Hill End Township (1842-1867) – Alluvial gold was first discovered near Tambaroora in 1851, which became the initial focus for gold prospecting and settlement on the plateau. A subsequent find was made in the Hill End Creek in 1852, and by 1853 most of the accessible alluvial deposits were rapidly worked out. Nevertheless, the potential of the district had been realised, and early reef mining began during the mid 1850s on elevated land surrounding 'Bald Hill'.

An unplanned township known prosaically as 'Bald Hills' grew up around the diggings, and it is known that a publican's licence was issued as early as 1852 (Sheppard 1999). A formal street plan was laid out in 1859, based on the present day alignments of Clarke and Tambaroora Streets. The township expanded with the pace of reef mining development, and was formally named 'Hill End' in 1867.

4. The Expansion and Slump of Reef Mining (1867-1880) – towards the end of the 1860s, the pace of reef mining at Hill End accelerated to reach a peak around 1872, matched by the expansion of the township as migrants flocked to the diggings. Much of the mining activity at this time was focussed on the flanks of Bald Hill and Hawkins Hill, 1 km to the south and west of the township. By 1874, however, most of the major discoveries had been made, and mining dwindled as an economic activity towards the end of the 1870s.

During this period the township reached its maximum extent, with a considerable expansion to the formal street layout, much of it overly optimistic.

5. Crisis of identity (1880-1920) – while reef mining persisted at Hill End into the early 1920s, its role as the primary support of the community was outstripped by agricultural and silvicultural activities, which took on an increasingly important economic role. Although there was little interest in commercial investment in gold prospecting at Hill End, subsistence mining continued to support an albeit dwindling element of the community, with some renewed interest from prospecting companies in the lead up to the First World War.

6. The Depression Years and Post-war era (1920-1970) – the effects of the depressions of the 1920s and 1930s were felt keenly at Hill End, given its isolation and fragile economic basis. This led to further decline of the township and a steady dwindling of the population to other areas in search of a livelihood.

Towards the end of this period, a new perspective of Hill End emerged as a number of young Australian artists, including Donald Friend and Russell Drysdale, were inspired by the stark, exhausted landscapes of the declining mining town (Wilson 1995). This renewed exposure of the township to the wider Australian community directly lead to the formation of the nucleus of the Historic Site in 1967.

7. The Management of the Historic Site (1970-2000)⁹ – although the recent history of Hill End effectively forms a post-script to the period of primary historical importance (c. 1852-1920), the creation of the Historic Site, its expansion and management, and the interaction between Crown authorities and private residents represents a landmark in the conservation of historical sites and places in Australia.

⁹ Although Hill End Historic Site was declared in 1967, there is no documentation for the either existing infrastructure or new developments until after 1970 (See Section 3: Built History Analysis).

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BUILT HISTORY ANALYSIS

3.1 Preamble

This section presents an overview of the built history of the Village Precinct and outlying areas of Hill End, which has allowed the identification of areas potentially containing archaeological deposits. The methodology employed in this analysis is presented in Appendix 3 (Stage 1).

Specific built history plans for individual blocks are presented in Volume 4, with a list of documented buildings itemised in Volume 2: Table 2, based on previous land use records and past heritage studies. Each property parcel presents a sequence of layers illustrating the successive development of structures identified in the above sources, according to Phases 1-6 (see Section 3.2, below), where available.

The major problem in constructing a built history for the township is the comparative absence of information on construction and demolition in the period following the last detailed historical map coverage in 1874. While the age and origin of extant structures can be identified through a fabric and stylistic analysis, it is generally not possible to state at what point between 1874 and 1970, any one of the pre-existing but no longer extant structures were demolished. The date of abandonment could have considerable bearing on the archaeological significance of these structures, as later activities (e.g. structural modification, renovation or service renewal) could substantially disturb evidence for the earliest phases of occupation. As such, archaeological deposits 'sealed' following the abandonment of a building during the 19th century may be of higher archaeological value, than those of a building of the same age, which had been continuously occupied into the late 20th century.

Late 19th century buildings (c. 1875-1900), which were demolished prior to the first aerial photographic coverage in 1974, are virtually invisible in the historical documentation, though textural references have been documented in the Register of Land Occupancy (Johnson 1989).¹⁰ It is probable, therefore, that considerable 19th century construction activity is not reflected in the historical record, and may only be identified through archaeological excavation.

3.2 History of Land Subdivision for the Study Area

The built history of the township is described in broad terms according to the main phases of development outlined in the historical overview. Owing to the lack of substantiated settlement on the Village site prior to 1852, all early development on the site is described in a single phase.

Each phase represents an average of 20 years in the history of the township, though the main development occurred within only the first 25 years after the first settlement. There is very little available data on any building activities between 1900 and 1974, a period, which was largely characterised by decline and demolition of the 19th century buildings, and expansion of occupation into semi-agricultural, outlying blocks.

¹⁰ It is currently not known whether historical survey plans exist as part of the primary data associated with these entries.

Phase 1: pre-1867

The primary documentary source is a survey plan dated 1859 (two versions exist) (Figure 3), which shows building development on the future township site up to its initial subdivision c. 1860. The discovery of gold in Hill End Creek in 1852 led to the early occupation of the creek margins close to the gold workings, which evolved over the next five years into a more permanent settlement based on two principle streets, Clarke Street and Tambaroora Street. This area quickly developed as the commercial centre of the township (Section 5.2; Precinct 1). The 1859 plan also depicts various unplanned development across outlying slopes on both sides of the Creek, with particular concentrations in the vicinity of the later Sections, 10 and 19 (Section 5.2; Precincts 2 and 3).

Aitken (Christo Aitken and Assoc. 2000 vol. 1: 27), argues that the lack of immediate population rush resulted in an orderly development characterised by ‘trim, modestly sized cottages surrounded by fruit trees and well-kept gardens.’ There is little specific data on the type and fabric of these early buildings, though residential houses, hotels and stores of weatherboard, slab, wattle and daub and bark construction are likely to have predominated.

The expansion of the township in the period 1859-1867 is largely conjectural, though much of the development depicted on the 1870s plans presumably evolved in the preceding period.¹¹

Phase 2: 1867-1880

The Holtermann photographic collection, a series of detailed maps (cf. Figure 4) and various textural sources combine during the 1870s to produce a detailed overview of the township during its heyday. The survey plans provide a clear indication of building location at the height of development, while the individual photographs and panoramas provide key information on building type, function and fabric. Towards the end of this period the township was in decline, mirrored by an overall paucity of documentary information.

Building activities intensified in the nucleus of the township established in the preceding phase, and a series of formal, north-south oriented sections were developed across the slopes to the east. The principal growth occurred in 1872-1873, after the boom in reef gold discoveries. By 1874 the township had peaked and began to decline.

The construction of slab, weatherboard and bark buildings continued throughout this phase, though many of the earlier structures were progressively replaced by more permanent brick or stone buildings. There was also considerable diversification in the types of buildings constructed, with a significant expansion in commercial premises and the addition of schools, churches, banks and other municipal structures.

Phase 3: 1880-1920

There is comparatively limited information about the period immediately following the boom years of 1872-1874, and it appears that new construction activity was minimal. The decline in gold profits saw a steady population drift, taking with it much of the commercial viability of the township. As a result, the central activities district declined rapidly, with many of the commercial premises destroyed by fire, relocated to other townships, dismantled and recycled.

There are no map-based sources for this period, though some residential, agricultural and later mining development probably occurred in outlying allotments. Despite the decline in fortunes gold mining developments continued throughout this period, and it is likely that much new construction has gone undocumented.

¹¹ 1862. ‘Design for the Village of Hill-End, County of Wellington, New South Wales, 1859’ (AO 114 and later redrawn in 1870 as AO 10634).

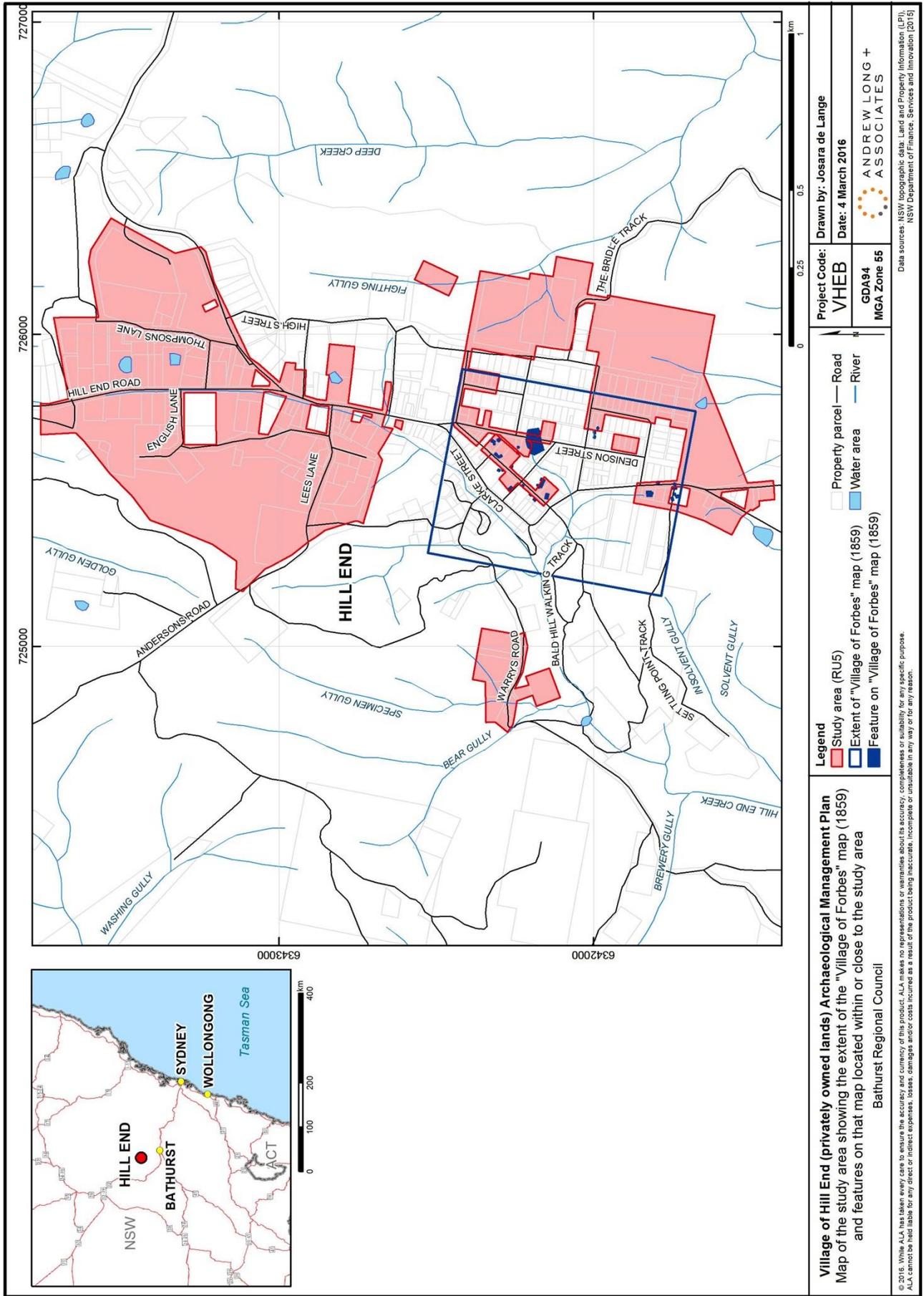


Figure 3: Map of study area showing historically recorded features (1859)

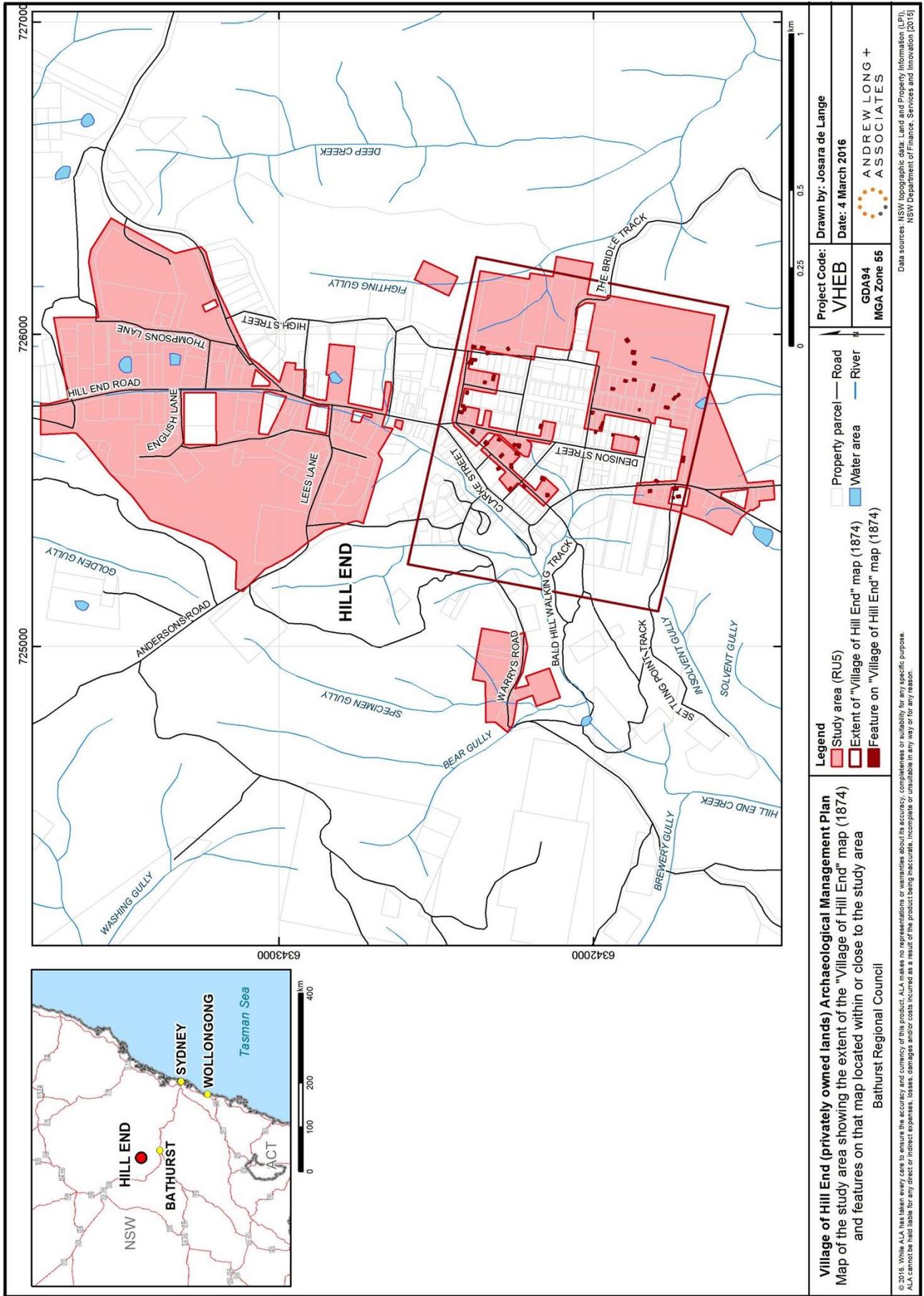


Figure 4: Map of study area showing historically recorded features (1874)

Phase 4: 1920-1950

It is likely that the modern streetscape largely evolved during 1920-1950. Aside from this, there is very little documented information about new construction during the depression years, and much of the documentary record is characterised by the continued decline and demolition of extant structures. By the late 1940s and 1950s this process was continuing, as recorded in the various paintings and photographs associated with the Hill End artists. Again it is probable that some outlying residential properties were constructed during this period, as the economic basis became dominated by farming and other rural activities.

The Everingham Panorama (c. 1928) appears to define this period, which displays considerably fewer extant buildings than its 1870s equivalents, particularly across the upper slopes. Interestingly, many picket fence boundaries were still standing, despite the lack of buildings. This possibly indicates that the buildings were formally demolished and removed, with virtually no residual construction materials, but the plot boundaries were maintained in case the land was re-occupied.

Given the comparative absence of documentation, this period is considered as an arbitrary time bracket that could be merged with Phase 5.

Phase 5: 1950-1970

This phase equates to the period leading up to the declaration of the Historic Site in 1967. There appears to have been very little, if any constructional activity during this period, though detailed research has not been undertaken. Although Hill End Historic Site was declared in 1967, the first documentation relating to this phase post-dates 1970.

Phase 6: 1970-2000

The progressive acquisition and management of the township by NPWS has effectively arrested the process of building demolition, though the problem of maintaining the historical fabric of the extant 19th century buildings remains. During this period there is considerably better documentation for improvements and further construction works, in the form of management records, aerial photographs and oral testimony. There has only been limited new construction activity, mostly in the form of visitor facilities and service infrastructure. Broadly speaking, this phase represents the structures in existence today.

3.3 Potential Archaeology Deposits

Long's ALMP (2002) first identified approximately 626 individual buildings through documentary research, however not all structures were precisely located, in part due to the scope of research and size of the previous study area. The present study features the available information and research undertaken specifically on structures within the study area, in addition to the examination of archaeological ruins, relics and topographical features within the privately owned lands and the outlying areas demarcated by the RU5 Village Zone under Bathurst Regional Local Environmental Plan, 2014. The Parcel Register outlined in Volume 2: Table 2 further demonstrates the outcomes of the study in juxtaposition with previous land use records and past survey results, and is best considered comparatively alongside Volume 4.

Long's ALMP (2002) also notes that a total of 536 buildings may have been constructed during Phases 1-3 (pre-1859-1920), and these are considered to have archaeological potential (termed Potential Archaeological Deposits, or PADs). During the 2002 study, these were determined to have comprised demolished buildings that were either no longer visible on the ground surface or were highly ruinous, though 52 extant buildings or building complexes were also included. With a similar approach, this AMP

relies on georeferenced historical mapping to determine whether buildings of this kind (termed Archaeological Features, or AFs) occupy the present study area.

These AFs and PADs are the basic unit used in the formulation of the Archaeological Zoning Plan (AZP) (Section 5). It is probable that many as yet undocumented former structures have not been identified during this study, and the boundaries of the total area covered by AFs and PADs should be treated with caution. The archaeological assessment (Section 4) has provided corroborative evidence for surface remains potentially relating to these structures.

ARCHAEOLOGICAL ASSESSMENT

4.1 Preamble

This section presents an overview of the known archaeological values of Hill End, and the results of a basic survey of the township undertaken in July 2015. This survey was undertaken with a view of identifying Archaeological Features (AF) on the basis of surface indicators, as well as to identify evidence of processes that have impacted on, and thus compromised the integrity of any sub-surface deposits.

The methodology employed during the fieldwork is presented in Appendix 3 (Stage 2). A register of AFs is presented in Volume 3 (Table 1), and plans showing AF distribution on individual blocks is presented in Volume 4.

4.2 Previous Archaeological Research

The archaeological values of the Hill End Township have been recognised since the inception of the Historic Site, and there has been several coordinated strategies implemented towards its effective investigation and management, including a Long's previous ALMP (2002) of the Village Precinct occupying NPWS areas.

The first documented archaeological project at Hill End was a programme of excavations undertaken in May 1974 on the site of the Metropolitan Hotel (Section 17, Lot 2) and the outlying quartz roasting pits, 10 km north of Hill End (Birmingham 1976: 315; Birmingham *et al* 1979: 57 and 93; Gojak and Allen 1997), by the University of Sydney Centre for Historical Archaeology. The project was undertaken as a dual training and research exercise, and sanctioned by NPWS as a means of promoting the archaeological values of Hill End. Although a number of photographs of the excavation in progress are on display at the Hill End Visitor Centre, no report documenting the methodology and results of the project was produced, and no other documentation is on file at the local, regional or central Cultural Heritage Division offices of NPWS.¹²

Since the 1974 excavation programme, archaeological investigations have been formally commissioned within the historic site on several occasions. Firstly, the excavation of a series of trenches for the construction of a toilet block at the rear of the Royal Hotel was subject to an archaeological monitoring exercise (Aitken 1987). Although historical artefacts were identified, the site had been extensively disturbed during the 20th century and no significant deposits were recorded. In 1988, a survey of the group camping area was commissioned (du Cros 1986).¹³

¹² The location of the trenches are visible on a series of oblique aerial photographs on file at the Cultural Heritage Division, NPWS. It is possible that information may be accessible through consultation with the University of Sydney, though this was considered outside the scope of the present project.

¹³ The results of this study are unknown, as the report was not sighted.

In 1992, Evans Shire Council formulated a Development Control Plan (DCP), which outlined a series of archaeological considerations (Robert A. Moore Pty Ltd. and Pike 1992: 6). In response, the Shire commissioned a historical archaeological survey which focused on the privately owned (i.e. non-NPWS managed) component of the Village Precinct (Bairstow 1993), and the detailed assessment of two allotments with specific development applications (Bairstow 1992), one of which required some limited archaeological excavation for the installation of a septic tank (Bairstow 1993: 4). The project resulted in a gazetteer of surface archaeological remains on private land, and provided draft guidelines for prospective developments.¹⁴

There have been a number of locality assessments undertaken by NPWS staff. These have involved an archaeological examination of the interior of Beyers Cottage (Gojak 1989), an assessment of fencing and safety measures at exposed mine shafts (Gojak 1997), an evaluation of renovations at Krohmann/Ackerman Cottage (Section 19) (Gojak pers. comm. 2001), and most comprehensively a CMP for the quartz roasting pits, 10 km north of Hill End (Gojak and Allen 1997). Between 2000 and 2003 a series of CMPs were also submitted for endorsement by the Heritage council, including the Craigmoor-Marshall House, English Cottage, Holtermann's Corner Buildings, Denman's Cottage, the Athol, the General Store and Bakery.¹⁵

More recently a number of broader and specific locality assessments were undertaken, including: the Bridle Track CMP, Conservation Management and Cultural Tourism Master Plan for Hill End Historic Site (Conybeare Morrison International 2013) and Hill End Interpretation Plan (GML et. al. 2014). The latter two form a part of a broader framework and revitalisation program overseen by NPWS, aimed at communicating significant heritage values to the public (See Section 7.1). Several independent archaeological studies within the Village Precinct have also been undertaken to assess the impact of modern development on known archaeology (e.g. Thorp 2008; High Ground Consulting 2013).

The instigation of a programme of CMPs for the Historic Site has effectively raised the profile of archaeological planning in the broader context of heritage conservation, though to date archaeological assessment has constituted a minor component of these studies, and has generally been undertaken without qualified archaeological input.

4.3 Survey and Field Methodology

The field survey methodology consisted of a broad characterisation of the archaeological landscape based on a rapid inspection of the Village Precinct and outlying areas not included by Long's original ALMP (2002). In the formulation of an AZP (See Chapter 5: Archaeological Zoning; Volume 4) and to establish the *Archaeological Sensitivity* of the landscape, the survey was based largely on the determination of *Landscape Integrity* and *Archaeological Imprint*, measured by the methodology and matrix developed in Appendix 3. Collectively, this data is intended to complete the previous data set which could also be used as a comparative tool against Bairstow's survey (1993), which shares similar objectives and focused on non-historic allotments. It should be noted that some of the allotments investigated by Bairstow have since been re-examined during this project. In some instances, the results of this assessment differ from the earlier study, presumably due to differences in ground surface conditions engendered by variations in visibility or the influence of subsequent construction or land clearing activities.

¹⁴ Other archaeological investigations undertaken at this time are referred to by Bairstow, but records for these have not been sighted for incorporation in this study.

¹⁵ Procedures/Exceptions, Office of Environment and Heritage website (accessed 1/10/2015).

The primary aim of this assessment was to determine the extent of variable levels of archaeological site preservation across the township and outlying areas, by systematically examining remnant features on each allotment or portion. Given the largely sub-surface nature of the archaeological record, the investigations were principally focused on the assessment of archaeological features relative to the location of historical structures detailed by a series of historical maps (e.g. Figure 3 and Figure 4). Spatial data including aerial photograph used in conjunction with georeferenced historical data, guided the survey in areas of potential significance, specifically as a predictive model in the determination of PADs where archaeological remains were expected to occur based on the landscape and historical records.

Five primary classes of identification were introduced to characterise the physical aspects of the archaeological landscape, including whether the feature was extant, in ruin, a relic, topographic in nature or modern (post 1920). Unique, modern features that either appeared in place of historical structures or potentially comprised of historical materials, were also recorded. Whilst it is considered that greater resolution will be gained through future archaeological assessments on a title or development specific basis (such as heritage impact assessments or watching briefs) as guided by the AMP (Sections 8 and 9), the identification of potentially buried or shallow topographic features was bolstered by the use of georeferenced historical mapping to achieve the highest possible resolution in the field.

The area assessed in this manner corresponds precisely to the parts of the Historic Site included in the AMP (Figure 2).

Survey

The field survey was undertaken over a five-day period between 27th and 31st July, 2015. Ground surface visibility varied considerably depending on vegetation cover (forest litter, long grass, mown grass or lawns), land use (residential gardens, vacant land and regenerated bushland) and variations in sedimentary stability (slope wash deposition, gullyng), though in general it was not possible to examine the structure and content of sub-surface deposits.

The majority of the Village Precinct was characterised by overgrown or mown grass surfaces, either vacant or actively used as pasture, with a significant component of urban development, residential gardens and areas of regenerated woodland. Residential, Crown and other leasehold allotments were directly accessed where consent was granted (Bathurst Regional Council), though their general attributes were assessed from the perimeter.

Some outlying parts of the Village were considered to be peripheral to the precinct's main functions and included mining dominated landscapes in the western margin of the township. This area contained a significant proportion of mineshafts and evidence for soil mounds presumably established for the purposes of water retardation.

Where visibility allowed their identification, surface archaeological features (cf. ruins, artificial topography and historical artefact deposits) were recorded by DGPS and also plotted on a series of survey maps. A basic sketch or location plan was noted for each feature and, where justifiable given lighting conditions and obtrusiveness, a photographic recording was also made. During analysis, the recorded DGPS data was post-processed, resulting in a series of georeferenced site plans each containing mapped locations of all recorded archaeological features. Where property access could not be attained and where GPS data was not recorded, items of interest were digitised (plotted) on georeferenced aerial maps via DGPS. These detailed recordings, whilst not definitive, serve as primary indicator for locations where sub-surface preservation conditions were sufficiently high to allow some surface expression of the form and complexity of the underlying deposits.

Recording

Items of heritage value were identified as *Archaeological Features* (AF) and assigned individual identification registration numbers (AF ID), recorded within the study area. A feature was designated an AF ID and attributed an *Archaeological Class* according to one or more categories that define the character of the evidence. These consist of:

- *Extant/modified heritage buildings* - occupied structures pre-dating 1920;
- *Ruins* - dilapidated buildings and other surface evidence of structural remains (i.e. posts, footings and rubble);
- *Relics* – any deposit, object or material evidence relating to non-indigenous settlement which is more than 50 years old;
- *Topography* – artificial undulations in the ground surface caused by buried structural remains, earthworks or the subsidence of excavations;
- *Mineshafts* – a sub-class of *Topography*; openings to tunnels established for the mining of gold from the 1850s;
- *Modern* – post-1920 features that may resemble ruins or historical structures, which were reclassified during analysis; and
- *Repurposed* – a sub-class of *Modern*; objects or other structures modified for modern use, which may be more than 50 years old (i.e. water tank and well).

A small number of AFs were identified post-survey and were included in the study for matters of consistency and further analysis. All AFs were assessed in conjunction with the Johnson's Land Register (1987) and the Bairstow Survey (1993).

4.4 Results

The survey area comprised a total of 189 individual land parcels, 102 of which were approved for access. Of the 87 properties where access was not formally permitted, general observations were made by roadside in conjunction with aerial photography. An overview spatial map of the AFs identified throughout the survey, is presented in Figure 5A, and further by detail maps in Appendix 4. An AF register detailing a catalogue of each feature and its associated property parcel, is addressed in Volume 3: Table 1. To aid interpretation, the results have been assembled to reflect associations with built heritage, in Volume 2 (Table 1 and Table 2).

The field assessment should not be considered a definitive statement on the surface archaeological record of Hill End. It has, however, allowed a classification of the landscape into zones of variable potential (high, moderate and low) for the survival of archaeological deposits (Figure 6), with some documentation of surface remains. This factor considers the variable effects of soil deposition, erosion and land use, which have resulted in considerable changes to the Hill End landscape since the 1880s. As such, the distribution of archaeological features visible on the surface is not considered to be representative of the wider, underlying pattern of buried deposits and structural remains.

The field assessment has resulted in a recording of 194 archaeological features (AFs) (Volume 3: Table 1; Figure 5), which have been included in the shapefiles submitted to BRC for comparison with built history and landscape integrity (Figure 6). These AFs were interpreted as archaeologically sensitive at the time of their recording. The results form a collective of interpretative type categories and precise locational and condition information. The area covered by the field assessment corresponds to the extent of the study area.

Five primary and two secondary types of archaeological features have been defined, several of which could be present at any given location;

1. *Extant/modified heritage buildings* (n=26) – intact or modified pre-1920 structures, which may contain archaeological deposits.
2. *Relics* (n=4) – Any deposit, object or material evidence relating to non-indigenous settlement which is more than 50 years old (e.g. glass and ceramic fragments), which are found within intact deposits and/or that may be attributable to a historical phase or activity.
3. *Ruins* (n=34) – fragmentary structural remains (brick, stone, timber, concrete) exposed at or above the land surface. These variously include dilapidated buildings, in situ wall footings, stone revetted terraces and scatters of construction materials. The existence of a surface ruin implies the presence of a building or structure with potential archaeological significance.
4. *Topographic features* (n=31) – areas of artificial surface topography (e.g. depressions, mounding and levelling), indicative of either ground surface disturbance or an underlying pattern of buried structural remains or deposits (e.g. pits, postholes, wall footings, house platforms). Areas of surface topography could be quite extensive and cover the site of several former structures.
5. *Mineshafts* (n=85) - openings to tunnels established for the mining of gold from the 1850s.

Where a feature was later identified as modern or if it had been significantly modified or taken out of its original context for use in the present day, it was categorised by the following types, respectively;

6. *Modern features* (n=7) – features that were initially thought to have archaeological significance, but were later identified as a modern feature dating post-1920 (e.g. stone wall, terraced areas).
7. *Repurposed features* (n=7) – objects or other structures modified for modern use, which may be more than 50 years old (i.e. water tank, wagon parts, modern well in place of original).

In addition, a number of the structures formally identified as ‘Heritage/modified structures’ may not necessarily hold significant archaeological value, however in some cases this could not be confirmed to property access issues where permission was not granted. It should also be noted that archaeological features thought to post-date 1920 are considered intrusive elements in the landscape without archaeological significance at this time.

The archaeological assessment has provided some corroborative evidence for the location, preservation and significance of potential archaeological deposits identified through the built history analysis, though as discussed in Appendix 3 this assessment has been far from comprehensive. This information has been incorporated into the archaeological zoning plan (Section 5).

No conclusive evidence for Aboriginal occupation was identified.

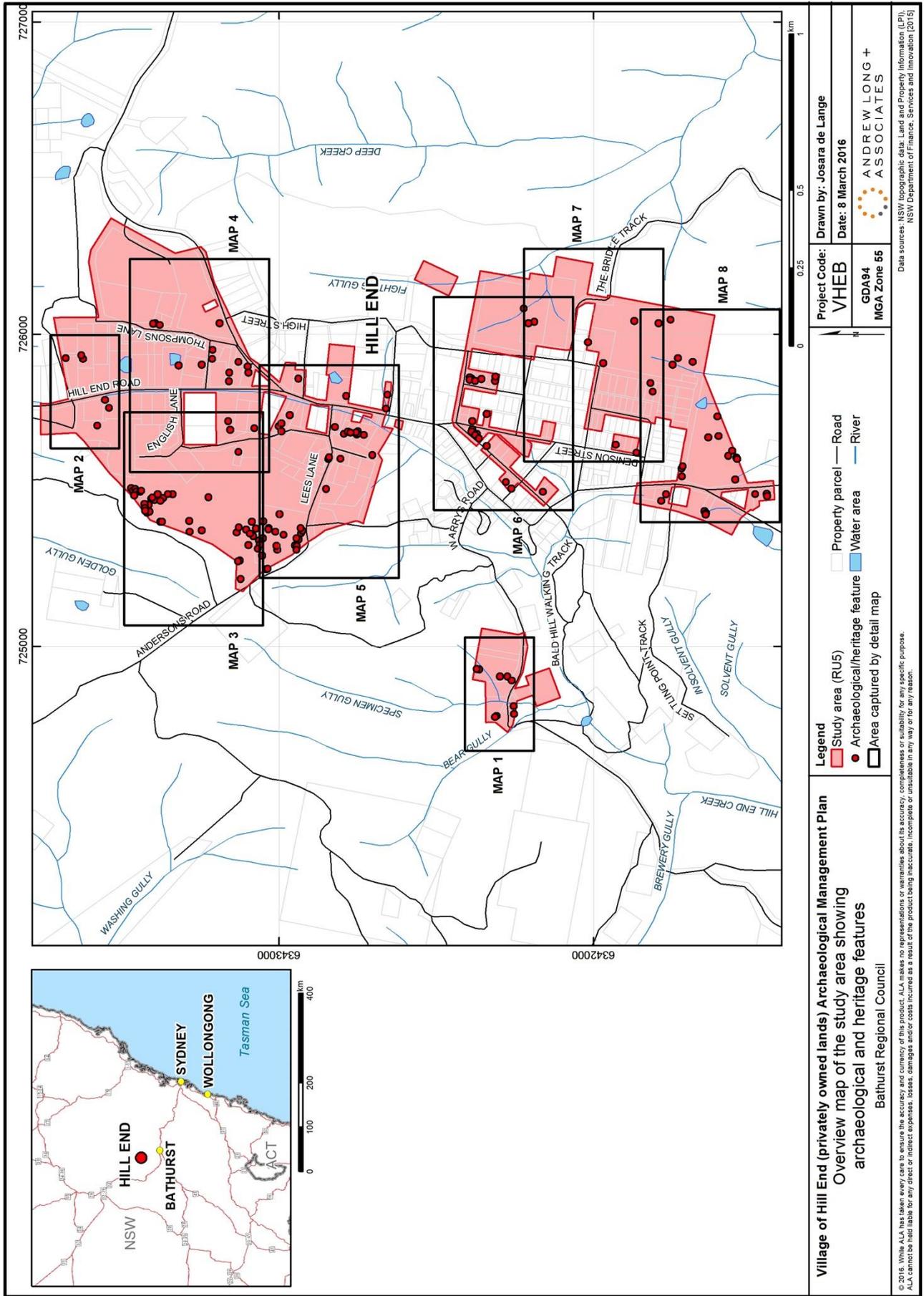


Figure 5A: Overview map showing archaeological features across the study area

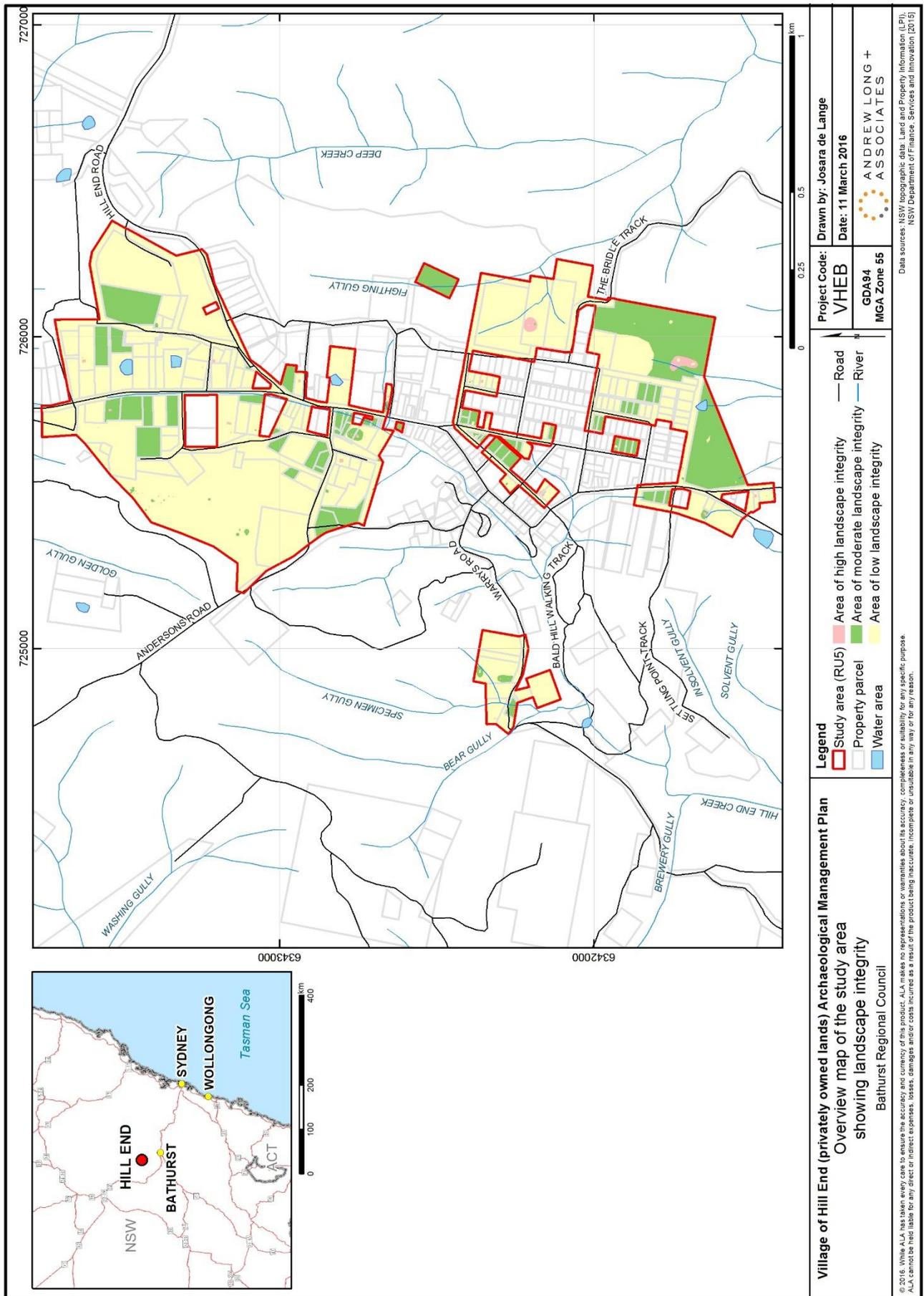


Figure 6: Overview map showing landscape integrity across the study area

4.5 Discussion of Results

This section presents an overview of the most intact and most representative AFs encountered during the survey of Hill End (July 2015) (Figure 5B). These results demonstrate the effectiveness of combining spatial data and georeferenced historical maps in the identification of archaeological features in place of historically recorded structures. The majority of features identified during the survey comprised structural remains including, fireplaces, chimney flumes, wall foundations and pits. In some instances, these features were distinguishable by low-integrity imprints delineated by compacted surfaces. In other cases, older chimneys and walls formed part of more modern structures, built or restored around remnant archaeology.

It is presumed that a number of properties across Hill End also contained within them similar constructions, however further investigations were limited by the nature of the survey. As the coverage of historical mapping was constricted to the core Village Precinct, the consultant relied on oral accounts and landscape cues in the identification of archaeological features outside the core precinct.

The following summaries the above-mentioned findings, and provides a short discussion of their context, interpretation of their presumed function. Whilst this discussion is limited to the key features identified during the survey, a complete list of AFs is outlined in Volume 3: Table 1. The archaeological precincts presented here will be discussed in greater detail in Section 5. A series of sites that could be considered for future interpretation are presented. Please note that the photographs in use represent Crown and non-privately owned land.

4.5.1 Wattle and Daub Structures

A small number of Wattle and daub structures were identified across Hill End. These structures are considered to be ephemeral or flimsy buildings that rarely preserve well unless well maintained. Further testament to this is their lacking presence observed across the landscape, which was limited to two archaeologically sensitive dwellings identified outside the core Village Precinct (ALA 108 and ALA 137). In general, buildings constructed of wattle and daub preceded prefabricated structures like those built entirely of brick, comprising locally procured materials and were often hastily erected – useful in the interpretation of site chronology (Cox and Freeland 1969; Lewis 1977; Bell 1990:3). These structures were located in areas possibly relating to the earliest phase of occupation (Phase 1; pre-1867), however it is probable that these areas were subject to settlement during the boom period of the 1870s and could relate to the later 19th century (Phase 2; 1867-1880). Whilst few structures were physically identified, it is presumed that a number of trace archaeological imprints - like those identified in association with ruined brick chimneys/fireplaces, originally formed the foundations of wattle and daub dwellings, tents bark or iron huts (see Brick Structures and Features).

AF 107 – Wattle and daub dwelling

The structure (AF 107) located at ALA 108, exhibited a moderate level of cosmetic wear, although its external structural integrity appeared relatively intact. The structure, presently occupied as a dwelling, comprised wattle and daub construction, an original brick chimney, a corrugated iron roof and veranda; suitable for residential accommodation. The structure chronologically precedes all-brick constructed architecture, however it shares a chimney style which spans several architectural phases exhibited throughout the Township. Therefore, as a tool the chimney is a useful chronological marker, which presumably first appeared alongside more crudely built wattle and daub dwellings, and later as part of prefabricated all-brick architecture. It is not clear whether such early wattle and daub dwellings were entirely superseded by a preference for brick, however such changes are a reflection of an evolution of architecture based on labour expenditure, access to construction materials and availability of resources.

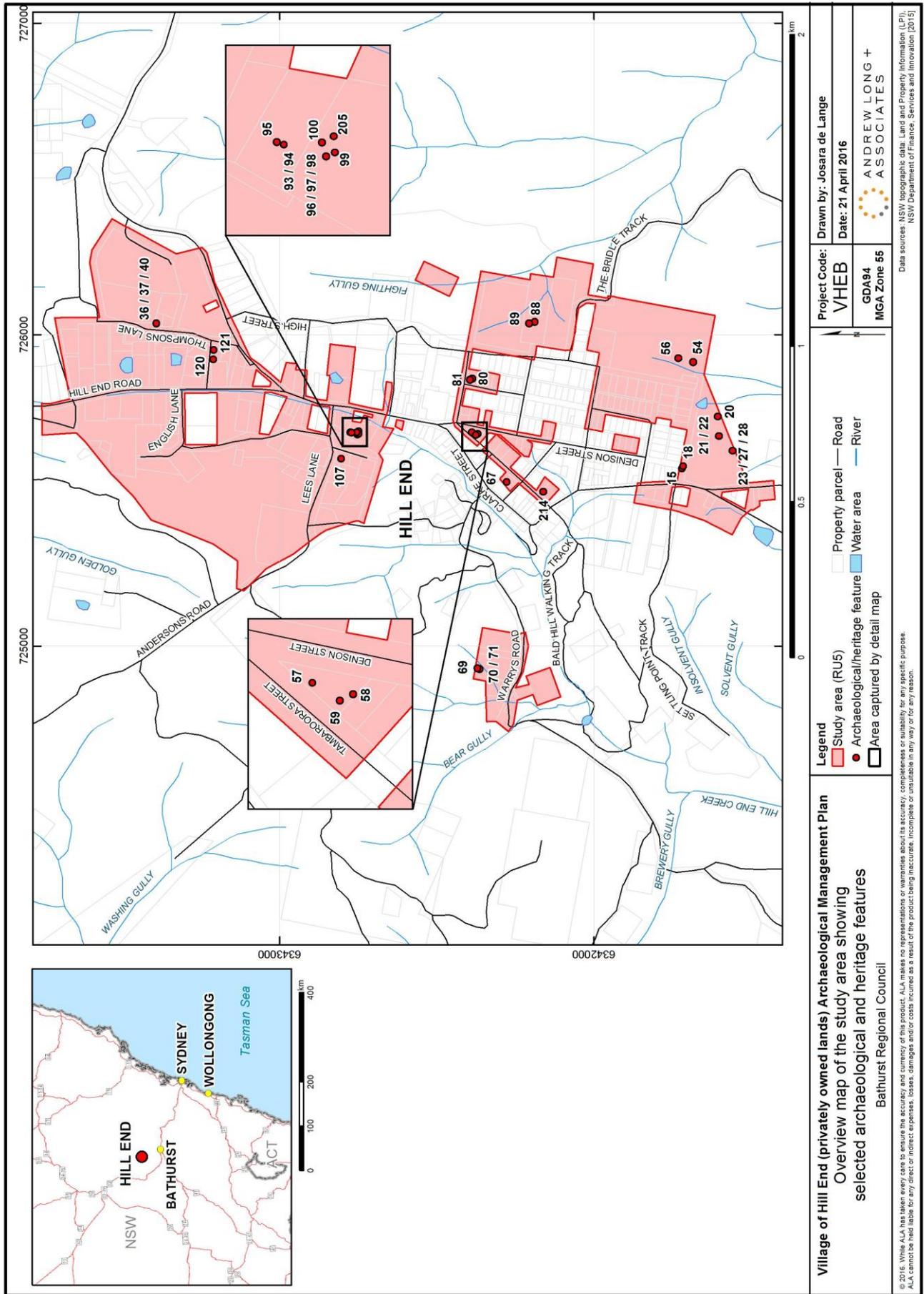


Figure 5B: Overview map showing selected archaeological features across the study area

AF 120, 121 – Wattle and daub dwelling and cellar

An atypical example of Hill End's architectural evolution was presented at ALA 137, which contained a renovated wattle and daub dwelling (AF 120) comprising materials introduced over three extension phases. The wattle and daub façade, which constituted the original structure (Phase 1-2), was modified with the addition of a brick structure and subsequent weatherboard attachment; likely the result of 20th century renovations. The extensions appeared chronological, each stemming from the core wattle and daub structure, which was presumably built in the 1870s.¹⁶ The dwelling stood in good condition and reflected an attitude of care in the consideration of the site's heritage value. However, a number of modifications to the original wattle and daub construction were also observed; these included a restumped porch, replacement corrugated galvanised iron roof and restorative concrete render in areas vulnerable to decay. Whilst modifications to the façade are imperative to retaining the structural integrity of the building, consultation with council is recommended to best preserve the historical character of the structure, especially where significant heritage values and potential archaeological deposits may be represented.

According to oral accounts, the property also comprised two cellars nearby, one of which was identified during the survey; located east of the dwelling. The cellar (AF 121), which appeared to be void of intact archaeology, had been previously exhumed with evidence for back-filling and artefact dispersal (e.g. brick inclusions). In general, cellars or pits have the potential to contain archeologically significant data associated with vectors of discard, often preserved upon their closure. These deposits are significant, especially in outlying areas where historical information is limited. Therefore, it is critical that property owners/occupiers consider the complexities of these deposits when modifying their land as the data yielded has the potential to better inform mitigation and research strategies in the future development of property parcels.

Trace wattle and daub foundations

Whilst the survey identified a small number of surviving wattle and daub structures, there is further potential for additional low-integrity imprints preserved within the built fabric of more modern constructions. In the event of structural decay or dilapidation, buildings were often renovated or built-over, particularly in locations considered optimal for habitation (i.e. resource availability, access to pre-existing dams). As the survey was limited to surface observations, it is possible that a number of existing structures, which contain significant historical foundations, were not observed. An example has been recorded as 'mud-brick' hut, although this may refer to a wattle and daub composition.

4.5.2 Mud-Brick Structures

A single mud-hut was identified outside the core Village Precinct in ALA 92. This structure existed in an area possibly relating to the earliest phase of occupation (Phase 1; pre-1867), however it is probable that these areas were subject to settlement during the boom period of the 1870s and could relate to the later 19th century (Phase 2; 1867-1880).

AF 205 – Mud-brick hut

The foundations for a 'mud-brick' hut were recorded to exist within a present modern dwelling occupying ALA 92.¹⁷ Due to its location within the house, the survey was not able to assess the condition, composition or the extent of the hut. Therefore, it is possible that the structure originally comprised other ephemeral materials including timber, bark or wattle and daub, which indicates further potential for surrounding archaeological deposits. Similarly, several structures across the Township

¹⁶ Oral correspondence with property owner of portion 141 (ALA 137) (29/07/2015).

¹⁷ Oral correspondence with property owner of portion 102 (ALA 92) (28/07/2015).

exhibited some form of reuse of historical blueprints, made evident primarily in the form of repurposed brick fireplaces and chimneys, or inferred based on their location relative to past surveyors plans. Formal considerations regarding the modification of built heritage in these circumstances should be advised on by council to best preserve any remnant, archaeologically significant structural components, should they exist.

4.5.3 Brick Structures and Features

A number of ruined brick structures were identified across Hill End, predominantly in the form of remnant chimneys or fireplaces. The construction style was typical to those utilised by extant structures (brick, galvanized iron), and in some instances could be linked to heritage/modified buildings. Brick foundations were often accompanied by a topographical structural imprint, comprising compacted surfaces. The absence of other materials surrounding these features may indicate composite constructions, the materials of which have since degraded or removed and reused elsewhere. The likely chronology of these brick-built structures relates to earliest phase of occupation (Phase 1; pre-1867), however it is probable that the all-brick structures relate to the settlement during the boom period of the 1870s and later 19th and early 20th century constructions (Phases 2-3; 1867-1920).

AF 93-95 – Ruined fireplace (2), topographical imprint and well

Three features of low-integrity were recorded at site ALA 93, including the foundations of two ruined fireplaces (AF 93, 94) and a compacted surface of a previous structure. Formally, these archaeological features likely constituted a small dwelling, originally comprising two brick chimneys and ephemeral construction materials. Whilst the physical remains were inconclusive, georeferenced historical data indicates that the property may have been erected between 1867 and 1880 and likely shared property space with the structures located nearby on ALA 92, nearby.

AF 96-100 – Chimney/fireplace (2), topographical imprint and paving

Collectively, features 96-98 frame the extent of a structure built on a rise located on ALA 92. The complex of features includes a structure defined by two standing chimneys with open fireplaces, a compacted foundational imprint and an entrance staircase leading to a lower garden. The feature is supported by a retaining wall, presumably erected to brace the foundations of AF 96-98 above and the paved garden area below. It is likely that pavement formed part of a patio possibly shared by the nearby structure (see Mud-Brick Structures). As no demolition materials were found in association with the dual-chimney structure, it is probable that it was primarily constructed of ephemeral materials including, bark, timber or wattle and daub. The site may have also formed part of complex of structures existing between 1867 and 1880, including AF 96-98, AF 93-95 and AF 205. However, whilst the function of these properties remains unclear, it is possible that each structure was either occupied during the same period or replaced in succession. Furthermore, the presence of a large well nearby in addition to several smaller shafts, may also be indicative shared resources and greater capacity of occupation. Sites ALA 92, ALA 93 and surrounding parcels exhibited a number of archaeological features which must be considered should development occur.

AF 80, 81 – Chimney/fireplace and wall

Features 80 and 81 (ALA 56), defined the extent of a large structure, outlined by a series of brick, stone and timber features. The primary element consisted of an extant chimney with dual-fireplace, providing evidence for multiple rooms or multiple structures. The extant residential dwelling nearby may once have formed part of ruined building, however, this relationship could not be further explored due to the limitations of the survey. A small stone stack or crudely-built ruined wall was also identified alongside the

dual-fireplace, representative of either a storage trough or an internal foundational wall. Nearby, a remnant external wall (corner section) was also identified, indicating that the structure was primarily constructed of brick and supported by large timber posts, as evidenced by an upright post abutting the wall. Georeferenced historical data indicates that the property may have been erected between 1867 and 1880, and likely holds potential to contain further sub-surface archaeological deposits given above findings.

AF 89 – Brickwork, single course

Several courses of poorly preserved brickwork were identified across the landscape, with a notable remnant course of masonry (AF 89) identified in ALA 53. Its presence amongst demolition rubble and its curious location outside the core Village Precinct in an area prone to washouts, was likely a contributing factor for its abandonment. Whilst the structure appeared to occupy a cut into the slope, its purpose could not be established however, it is probable that the foundations constituted a small dwelling. Despite the structures current condition, its location may be useful in discussions concerning the habitation of outlying areas during Phase 3 (1880-1920), particularly in reference to the development of the Township's peripheral areas.

4.5.4 Stone Structures and Features

A small number of ruined stone structures were identified in discreet pockets across Hill End, primarily in the form of remnant wall foundations or fireplaces. In most instances their construction comprised crudely placed stones, typical in raw material to the geomorphology of the area. Like those constructed of wattle and daub, stone structures consisted of locally procured materials and were often hastily erected as evidenced by the build quality and exploitation of unrefined natural rock. In some instances, stone foundations were accompanied by compacted surface imprints of former structures (topographic) however, the majority of stone courses existed independent of accompanying features and appeared random. The absence of other materials surrounding these features may indicate composite constructions (e.g. stone foundations, wattle and daub walls), the materials of which have since degraded or removed and reused elsewhere. Historically, dry-stack constructions consisted of mud or limestone plasters, which acted as caulking agents to stop air-flow, rather than for the purposes of bonding (Vivian 1976). Therefore, it is possible that such plasters had since decayed and were not identified during the survey. The likely chronology of these stone structures could relate earliest phase of occupation (Phase 1; pre-1867), however it is also probable that they relate to the settlement during the boom period of the 1870s (Phase 2; 1867-1880).

AF 15, 18, 20, 69, 88 – Linear and semi-circular foundations

Several linear foundational ruins were identified, the most intact appeared across ALA 10, ALA 53 and ALA 80. The following summaries these findings and their distribution:

The foundations of crudely built stone wall (AF 15) were identified at the western periphery of ALA 10 (Plate 1). The construction comprised irregularly shaped, small-sized stones stacked to an approximate height of 20cm and 180cm in length. Significant water erosion destroyed the majority of the feature, however the surviving section remained largely articulated. The semi-circular arrangement may be indicative of a corner section or a retaining wall – given its washout-prone location. Nearby, a linear of course of stone was also identified (AF 18). Again similar in composition, the course comprised six small and irregularly-shaped stones, which loosely outlined a foundational wall 10cm high and 80cm in length. The surrounding area also contained displaced stones which may have bared some relation to either structure, based on the proximity of their dispersal. Georeferenced historical data indicates that two small structures existed in the location of both features between 1867 and 1880. Despite the impacts caused by severe water erosion, it is probable that sub-surface archaeological deposits may exist intact.

Similarly, a linear course of stone (AF 20) was identified on the same parcel of Crown land (ALA 10), located on the upper slope of the site (Plate 2). The single course measuring 15cm in height and 60cm in length, was sympathetic in construction to the style of those lower on the slope (AF 15, AF 18). However, while AF 20 was possibly erected during the same period, historical records do not illustrate the presence of the structure. Therefore, it is unclear if the feature constitutes a structure overlooked by previous surveys, succeeded historical recording or formed part water retardation device. However, given the frequency of finds and the similarities expressed throughout this area it seems likely that small, temporary establishments once peppered the landscape.

Several kilometres away, a stone course (AF 88) measuring 120cm in length and approximately 25cm in height was identified in an area heavily impacted upon by water erosion on ALA 53. Again, the linear arrangement resembled the foundational layer of a wall or water retardation device and comprised small, crudely fashioned stones. Historical records document various structures in place of the stonework, increasing the likelihood that the feature functioned as a part of a dwelling or other associated building, dating to between 1867 and 1880. Given the historical imprint in this particular location, the potential for sub-surface archaeological deposits is considered moderate.

The foundations of crudely built stone wall (AF 69) were also identified at ALA 80. The construction comprised irregularly shaped small stones, stacked to an approximate height of 20cm and 180cm in length, similar in formation to AF 15. The feature comprised loosely stacked stone, resembling either a collapsed wall or a concealed pit. However, as the feature appeared largely articulated, it seems more likely that the semi-circular arrangement may be indicative of a corner section or a retaining wall. Whilst historical records do not illustrate the presence of this structure and cannot inform this interpretation, a contextual relationship may be gleaned from the presence of structural feature (AF 70, AF 71), located nearby. A second linear formation (AF 72) was also discovered on a lower slope of ALA 80, comprising a single course of squared stone, possibly outlining a pavement boundary or collapsed wall. Due to poor surface visibility it was not possible to determine the exact extent of the feature, which measured approximately 1m in length. Potential for archaeological sub-surface deposits surrounding these features is considered moderate.



Plate 1: AF15, showing stone foundations, within ALA 10



Plate 2: AF20, showing stone foundations, within ALA 10

AF 21, 22 – Wall foundations and fire pit

A linear course of stonework (AF 21), similar in form to AFs 15, 18 and 20, was identified on ALA 10 (Plate 3). The stonework comprised irregularly-shaped natural rock and measured approximately 10cm high with a length of 130cm. A circular arrangement of crudely-placed stone of the same material lay adjacent to the course. The circular feature (AF 22), measuring 60cm in diameter, possibly marks the remains of a fire pit associated with the linear stonework. The absence of a sturdy fireplace is indicative of a temporary establishment comparable to a crudely fashioned hut or camp site likely relating to Phase 2 of the town's chronology (1867-1880). This may also shed light on similar features peppered across outlying areas susceptible to erosive processes.



Plate 3: AF21, showing stone foundations and possible fire pit, within ALA 10

AF 23-28 – Structural foundations, topographical imprint and pit

A complex of spatially related stone features was encountered along the highest slope of ALA 10 (Plate 4 and Plate 5). The foundation of a European-constructed stone structure was indicated by a series of surface features which included: wall footings, a stone step and a square-shaped pit. The ruined wall comprised natural rock, including larger boulders at corner intersections and smaller, crudely-fashioned stones in linear formations. Despite significant water erosion, brick demolition rubble was identified loosely scattered across the feature, indicative of either a collapsed wall of the same material or a remnant fireplace. A stone-lined formation was also identified immediately to the north of the structure, representative of an annexed structure or refuse pit with potential for archaeological deposits. Collectively, the evidence is suggestive of a former small dwelling with a possible brick fireplace, stepped entrance with facility for refuse in the form of a pit or extension (i.e. outhouse). The structure's remote location may have been influenced by mining activities as two shafts were located nearby. The likely chronology of the structure could relate earliest phase of occupation (Phase 1; pre-1867), however it is also likely that it relates to opportunistic settlement during the boom period of the 1870s (Phase 2; 1867-1880).



Plate 4: AF23-28, showing stone foundations, within ALA 10



Plate 5: AF27-28, showing stone foundations and possible pit, within ALA 10

AF 67 – Structure

A large rectangular structure in ruin was identified at the midpoint of a vacant paddock, adjoining the present Presbyterian Church (ALA 71) (Plate 6). The crudely-constructed body of the stone feature appeared to have been the result of a demolition event, the remains of which constituted a corner segment of wall which had been preassembly reconstructed above the original imprint imbedded below. The feature measured approximately 120 x 150cm, and 60cm high and comprised loosely stacked stone and further disturbed by an exotic tree which had emerged through the feature's eastern wall. The structure seems to have experienced an inward collapse, which may suggest potential for preserved archaeological deposits beneath. The placement of the stonework may indicate a relationship to the former structures which had originally fronted on Tambaroora Street, dating sometime between 1867 and 1880. However, it is unclear if the feature functioned as a storage pit, fireplace or a structural foundation of a former building.



Plate 6: AF67, showing stone foundations, within ALA 71

AF 70-71 – Fireplace and topographical imprint

A large rectangular feature (AF 70) was identified on the northern edge of ALA 80. The feature comprised crudely-shaped stone facing inward towards a uniquely compacted surface (AF 71) - presumably the foundational imprint of a demolished structure. The feature measured approximately 90 x 70 x 50cm and appeared to have experienced an inward collapse as evidenced by an overlying rubble layer. The stone arrangement resembled a ruined fireplace or storage trough demonstrated by low-lying and walled foundations, the collapse of which may have preserved archaeological deposits beneath. In comparison to more loosely laid stone features encountered by the survey, AF 70 comprised tightly-packed and robust construction which likely functioned to limited airflow for the purposes of heat and fire retention. Collectively, both features resemble the foundations of a dwelling possibly dating sometime between 1867 and 1880. It may also bear relation to AF 69 nearby, which functioned as either a retaining wall or a pit. Whilst historical records do not illustrate the presence of structures in this area, the stone construction appears to coincide, chronologically, with similar builds identified across outlying areas.

AF 36, 37, 40, 214 – Fireplace, topographical imprint, paving and historic tree

The ruins of a small dwelling were identified along western periphery of ALA 148, comprising a stone fireplace (AF 36) and an imprint of the original structure (AF 37). Whilst significant historically, the site is currently used for modern domestic activities, some of which have impacted on the integrity of the site's archaeological deposits. Specifically, the stone fireplace had been reconstructed from demolition materials found in association, placed loosely above the original foundations consisting of large, deeply imbedded stones. These natural rocks, potentially procured from the surrounds, measured on average 1m in length and were employed for quick construction, likely relating to earliest phase of occupation (Phase 1; pre-1867), or the boom period of the 1870s (Phase 2; 1867-1880). It was evident that any intact deposits relating to the fireplace had since been removed due to modern use. In addition, adjacent to the former structure, a single course of stone was also identified, possibly marking the perimeter of remnant paving for a path or garden area (AF 40), the extent of which could not be investigated further due to obstructions. According to oral history, the small dwelling, originally comprised poorly-surviving organic materials like wattle and daub and occupied by a Hill End's pioneer, whom was believed to have planted the large pine tree (AF 214) that presently overlooks the property.

4.5.5 Topographical Features

A small number of potential structures comprising low archaeological imprints, were identified in areas across the Township. The resultant integrity is presumably the outcome of subsequent land use and/or influence of natural processes, a combination of which has likely led to poor preservation of surface features as identified by the survey. These features were typically identified in areas exhibiting a compaction of the surface, and in some cases were visibly rectangular. Topographic foundational imprints were generally identified alongside brick and stone features, which in most cases assisted in the definition of a structure's extent and boundaries (see above). However, a small number of imprints were discovered independent of an obvious archaeological marker, due to demolition or decay (i.e. bark, wattle and daub).

AF 54, 56 – Topographic imprints

The survey identified several features along the southwestern section of ALA 45. The property parcel, which had been formally developed for the purposes of establishing the Hill End Ranch, demonstrated a significant level of site disturbance. However, a small number of features were found along the east overlooking an ephemeral gully. Topographical relief AF 54 comprised a rectangular surface adjoining a built up mound, presumably associated with the demolition of a fireplace. Upon closer inspection, several disassociated brick and stone fragments were also identified at the feature's southeast corner. Collectively, these elements may constitute a small dwelling formally comprising low integrity materials such as bark or wattle and daub. It is likely that the structure relates to the earliest phase of occupation (Phase 1; pre-1867), however it is probable that these areas were subject to settlement during the boom period of the 1870s and could relate to the later 19th century (Phase 2; 1867-1880).

Similarly, AF 56 was identified along along the southwestern section of ALA 45, overlooking the ephemeral gully. The poorly preserved feature comprised a rectangular compacted surface, accompanied by a slight rise which may contain the demolition remains of a former fireplace. Several small stones were also identified scattered across the feature, further indicative of a subsequent destruction event. Whilst the feature was of low-integrity due to demolition and natural erosional processes, the preservation of sub-surface deposits is likely.

AF 57-59, –Topographic imprints and well (Dunbeacon)

Recent archaeological studies were conducted on Dunbeacon, a property comprising three blocks within the survey area (High Ground 2013). The historical sensitivity of the site was outlined subsequent report, the features of which were further defined by the present archaeological investigations. The Dunbeacon report detailed the history of ephemeral structures formally occupying the Denison Street frontage, and likely relate to the compacted surfaces (AF 57, 59) identified on sites ALA 70 (Lot 11) and ALA 73 (Lot 1 Section 8). These topographic features encountered possibly align with foundational imprints of structures illustrated by the Holterman Collection, including the wine and spirit merchant and independent businesses. The High Ground report further details site's local significance and includes recommendations and legislative guidelines in the protection of the site's significant features, including a research design to facilitate future investigations including the preservation of a large stone-line well (AF 58) (c1870-80), re-identified by the survey. The Dunbeacon archaeological investigation is working example of the benefits of formal consultation, mitigation and research strategies implemented in the appropriate management of archaeological significance and the planning process.

4.6 Conclusion

The pedestrian survey confirmed the presence of a number of historically recorded built heritage and associated activities. These included heritage/modified buildings, ruined fireplaces/chimneys, walls, pits and compacted surfaces. As historical documentation was limited to the core Village Precinct, the survey relied on observations to identify features located in outlying areas in the recording of additional built heritage and individual site interpretations. The resulting formal investigation required the systematic recording of numerous archaeological features encountered within peripheral areas, the outcome of which forms a register and typology of stone, brick and ephemeral structures (Volume 3: Table 1). A number of these features comprised a combination of materials, characterised by robust foundations (i.e. stone wall, brick chimney) and poorly-surviving frames (i.e. bark, timber, wattle and daub). Factors including resource availability and ease of construction would have influenced the composition and build of these structures, which was frequently evident in outlying areas where poorly-preserved stone features were most prominent. In areas surrounding the core Village Precinct, preserved brick fireplaces/chimneys and few wattle and daub constructions were increasingly evident. Ruined brick features were often accompanied by surface compactions interpreted as topographical imprints of former structures. The style of chimney represented was also observed in various forms across the Township's extant structures, often preserved through modern renovations or pre-existing as part of standing heritage buildings. Collectively, this data which is further detailed in Volume 2 (Table 1 and Table 2), has contributed to the pre-existing knowledgebase in the archaeological verification heritage features in core Village areas documented by historical records. Furthermore, the survey also identified a number of additional features within these areas and those considered to have limited to, no historical data, demonstrating some level of archaeological potential throughout outlying areas.

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ARCHAEOLOGICAL ZONING

5.1 Preamble

An Archaeological Zoning Plan (AZP) is a graphic plan of a place, which indicates the relative archaeological sensitivity of different areas or zones (Heritage Office 1996a: 34). The Hill End AZP consists of maps of archaeological sensitivity produced at different scales:

- Individual title plans showing the detailed results of the built history analysis (AF) including sensitivity buffers based on the archaeological assessment on an individual structure basis (Volume 4).
- An overview of the study area showing an average rating of the archaeological sensitivity for each block (Figure 7; detail maps in Appendix 5).
- An overview of the study area showing the definition of broad archaeological precincts (Figure 8).

The methodology used in classifying archaeological sensitivity is presented in Appendix 3.

5.2 Archaeological Sensitivity

As a general statement, Hill End represents an area of outstanding archaeological sensitivity, though many zones within the Village Precinct have lower values through either an absence of historical activity or the effects of subsequent land use and other impacts.

Four categories of archaeological sensitivity have been defined within the AZP:

- *Zones of high archaeological sensitivity (H)* – these consist of PADs with moderate to high archaeological imprint (e.g. stone and brick buildings), contained in areas of overall high landscape integrity.

This value also applies to locations with standing building remains and other high significance archaeological features.

- *Zones of moderate archaeological sensitivity (M)* – these consist of PADs with low to moderate archaeological imprint (e.g. substantial timber buildings), contained in areas of overall moderate landscape integrity.

This value also applies to locations with no documented PADs, but with high landscape integrity that could preserve as yet undocumented deposits.

- *Zones of low archaeological sensitivity (L)* – these consist of PADs with low to moderate archaeological imprint (e.g. bark huts and other insubstantial timber buildings), contained in areas of generally low landscape integrity.

This value also applies to locations with no documented PADs but with moderate landscape integrity.

- *Archaeologically sterile zones (0)* – these consist of PADs with low imprint (e.g. tin sheds) and/or with no documented archaeological potential, contained in areas of overall low landscape integrity. It should be noted that pockets of archaeological deposit may still be preserved in otherwise sterile zones.

These ratings reflect the archaeological significance of individual titles, and will determine an appropriate management response to future land use and development (Section 8.5). Figure 7 (detail maps Appendix 5) and Volume 2: Table 3 present the overall sensitivity ratings for each specific block covered by this AMP. Figure 9 further illustrates the range of sensitivity ratings established across the Village of Hill End, and includes the results from the 2015 survey and Long’s ALMP (2002). Overall, a large number of sites outside the Village Precinct were identified as having moderate to low sensitivity. This is primarily due to a lacking presence of archaeologically robust features¹⁸, which have not survived due to natural erosional processes, land clearing and/or feature reuse and renovation. This is not to say that areas with a low to moderate sensitivity have less potential to contain significant sub-surface archaeological deposits, and this may merit further inquiry/inspection where Council deems it appropriate.

¹⁸ Features including, brick bluestone and other hard-wearing building materials.

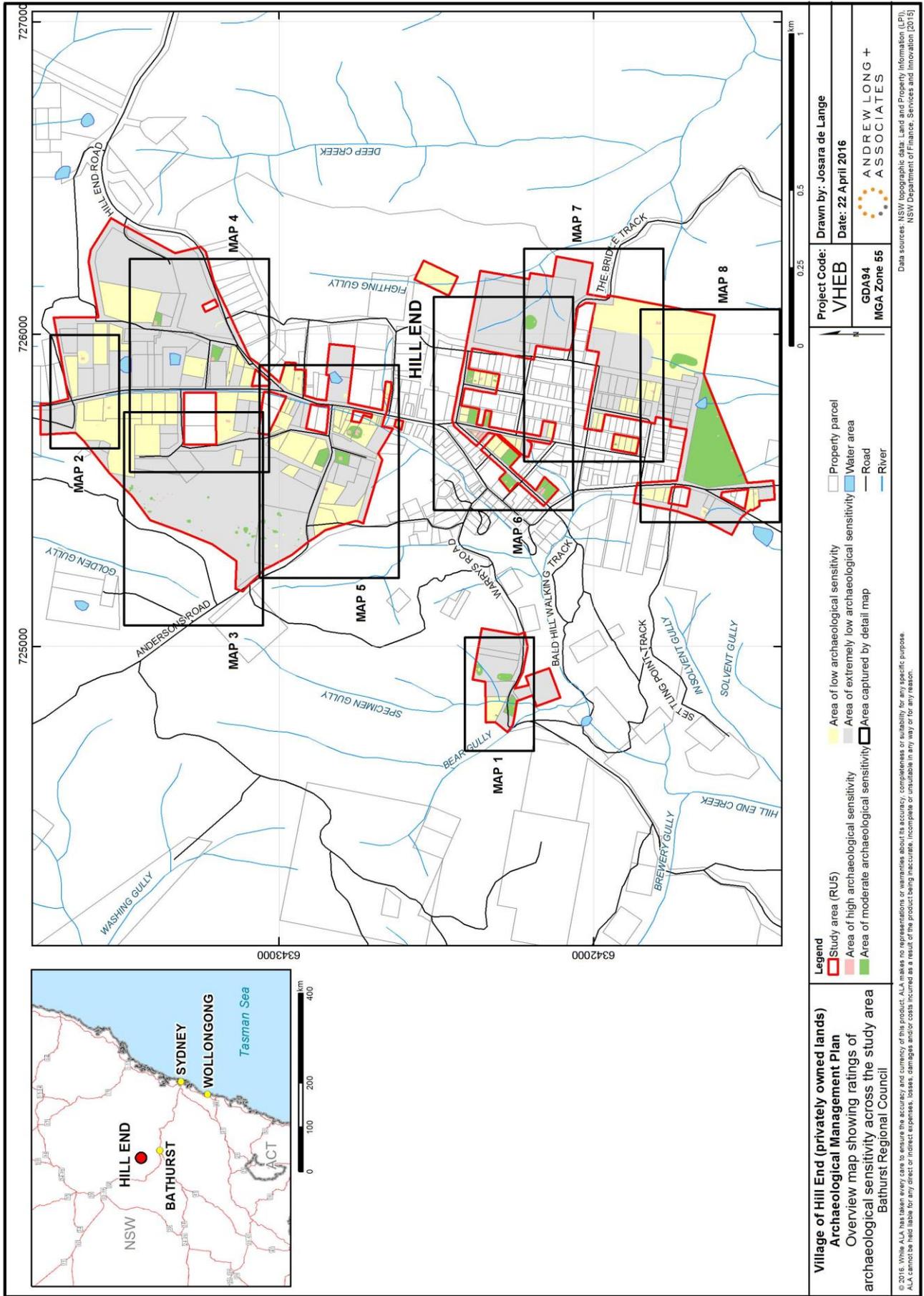


Figure 7: Overview map showing archaeological sensitivity across the study area (Detail maps Appendix 5)

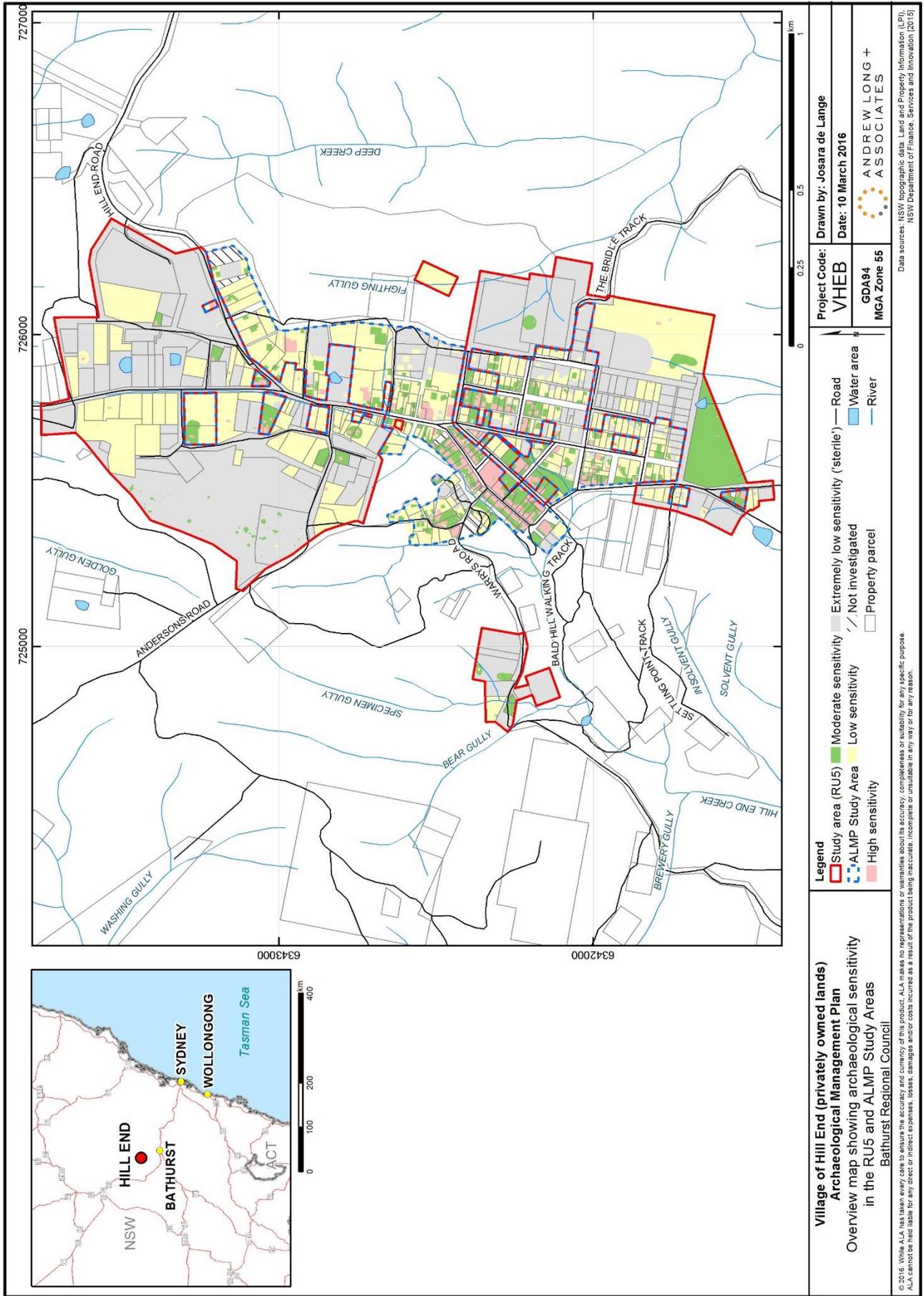


Figure 8: Overview map showing archaeological sensitivity across the Village of Hill End

5.3 Archaeological Precincts

To gain a broad overview of the archaeological sensitivity of Hill End, it is useful to view the Village Precinct in terms of four broad zones or archaeological precincts, based on the overall results of the AZP (Figure 9). These consist of zones that display broadly comparable characteristics, which can be used as the basis for significance assessment and management decisions. Figure 10 further demonstrates the allocation of these zones across Hill End, inclusive of Long's ALMP (2002). These results are based on the generalised archaeological sensitivity values for each title included in the AZP first presented in Figure 7 and detailed by localised results in Volume 4.

The precincts are defined as follows;

Precinct 1: Core Village Zone

Description – The central zone of Hill End township, containing the nucleus of the historical activity district as depicted on the 1859 and 1874 plans. The zone consists of all titles adjacent to Clarke, Tambaroora and Church Street, defined on the western margin by Hill End Creek.

Landscape integrity – High. There has been comparatively limited disturbance in this zone, with few indications of erosional processes, cultivation and subsequent land development, with the exception of the degraded margins of Hill End Creek. The zone lies in an aggradational environment at the lowest point of the Hill End plateau, and it is likely that much of the archaeological record has been buried by deposits derived from upslope erosion. There is considerable potential for the preservation of significant archaeological deposits.

Overall archaeological sensitivity – High. The zone contains extensive archaeological remains in the form of well-preserved ruins, landscape topography and extant heritage buildings. The surface evidence and the results of the previous archaeological investigations (cf. the Metropolitan Hotel; Section 17, Lot 2) suggests considerable complexity and structure to the archaeological deposits, reflecting the earliest and most intensive occupation in the township.

Archaeological significance – High. It is predicted that archaeological deposits in this zone are extensive, well preserved, have considerable complexity and research potential. They will relate to the entire period of historical occupation at Hill End (Phases 1-3; pre-1867-1920), with only limited impact from later disturbance.

Management issues – This zone is a rare archaeological landscape of outstanding heritage significance, which requires careful future management in order to preserve these values. Future research is very high. There are limited opportunities for development without significantly impacting on the archaeological record, though relatively minor works will be permissible subject to appropriate planning and impact mitigation. The zone requires a high level of conservation to protect and maintain these values.

Precinct 2: Eastern Slopes Zone

Description – This extensive zone comprises the broad eastern periphery of the core village zone, extending from Reef Street to Bowen Street and Beyers Avenue. The zone contains outlying, but significant sections of the historical village of Hill End as depicted on the 1859 and 1874 plans. The zone broadly equates to the lower portion of the extensive slopes overlooking the eastern margin of the township.

Landscape integrity – Moderate. The zone has been variably disturbed by mining, gullying, sheet erosion, agriculture and development, though substantial pockets of relatively intact archaeological deposit may survive across selected parts of the zone.

Overall archaeological sensitivity – Moderate. The zone contains clusters of ruins, landscape topography and extant heritage buildings, some of which date to the earliest period of occupation in the township. Much of the zone has been disturbed by later impacts, in particular land development and erosion, and it is likely archaeological deposits will consist of discrete pockets, rather than extensive site complexes.

Archaeological significance – Moderate. It is predicted that archaeological deposits in this zone are localised, but well preserved, with complexity and research potential. They could relate to the entire period of historical occupation at Hill End (Phases 1-3; pre-1867-1920).

Management issues – This zone contains pockets of high archaeological sensitivity, which will require careful future management, though much of the zone has relatively lower archaeological value than Precinct 1. There are opportunities for development without significantly impacting on the archaeological record, subject to appropriate planning and impact mitigation. The zone requires careful conservation management to protect and maintain these values, while allowing justifiable development and land use to continue.

Precinct 3: Western Slopes Zone

Description – A small group of allotments on the western slopes of Hill End Creek, containing an outlying satellite of the historical activity district as depicted on the 1859 and 1874 plans. The zone is situated around the junction of Germantown Lane and Warrys Road, and contains the Krohmann/Ackermann Cottage complex. This zone was first detailed in Long's ALMP (2002), however it does not form part of the present study area, and is included as a point of reference.

Landscape integrity – Moderate. The zone has been variably disturbed by mining, gullying, sheet erosion, agriculture and development, though substantial pockets of relatively intact archaeological deposit may survive across selected parts of the zone.

Overall archaeological sensitivity – Moderate. The zone is clustered around an outlying nucleus of the Hill End Township, displaying a range of ruins and extant heritage buildings dating to the earliest period of occupation in the township (c. 1850s). Previous investigations suggest that archaeological deposits associated with these structures have much research potential (Denis Gojak pers. Comm. 2001). Some of the zone has been disturbed by later impacts, in particular agriculture, land development and erosion, and it is likely archaeological deposits will consist of discrete pockets, rather than extensive site complexes.

Archaeological significance – Moderate. It is predicted that archaeological deposits in this zone are localised, but potentially well preserved, with complexity and research potential. They could relate to the entire period of historical occupation at Hill End (Phases 1-3; pre-1867-1920).

Management Issues – This zone contains pockets of high archaeological sensitivity, which will require careful future management, though much of the zone has relatively lower archaeological value than Precinct 1. There are opportunities for development without significantly impacting on the archaeological record, subject to appropriate planning and impact mitigation. The zone requires a moderate level of conservation to protect and maintain these values.

Precinct 4: Peripheral Zone

Description – A broad zone of relatively discontinuous land blocks around the western, eastern and northern margins of the township centre, broadly equating to the degraded higher slopes, regenerated woodland and outlying agricultural blocks. The zone contains only limited components relating to the earliest phase of occupation (Phase 1; pre-1867), but was subject to settlement during the boom period of the 1870s.

Landscape integrity – Low. The zone has been variably disturbed by mining, gullyng, sheet erosion, agriculture and development.

Overall archaeological sensitivity – Low. The zone generally consists of denuded hill slopes and regenerated bushland on degraded land surfaces, with relatively limited archaeological potential. Much of the zone has been disturbed by later impacts, in particular agriculture, land development and erosion, though archaeological deposits may survive as discrete pockets.

Archaeological significance – Low. It is predicted that archaeological deposits in this zone will be highly localised, but may still be well preserved, with complexity and research potential. They are most likely to relate to the later 19th and early 20th centuries (Phases 2-3; 1867-1920).

Management Issues – This zone contains discrete pockets of archaeological deposit, which will require careful future management, but much of the zone has relatively low or zero archaeological value. There are few constraints for development across the zone, subject to appropriate planning and impact mitigation. The zone requires a relatively low level of conservation management to protect and maintain these values.

These precincts will form a useful unit for discussing the significance (Section 7) and management (Sections 8 and 9) of the archaeology of Hill End in a broad sense, though the more detailed title-based zoning plans must be considered in the management planning process for individual developments.

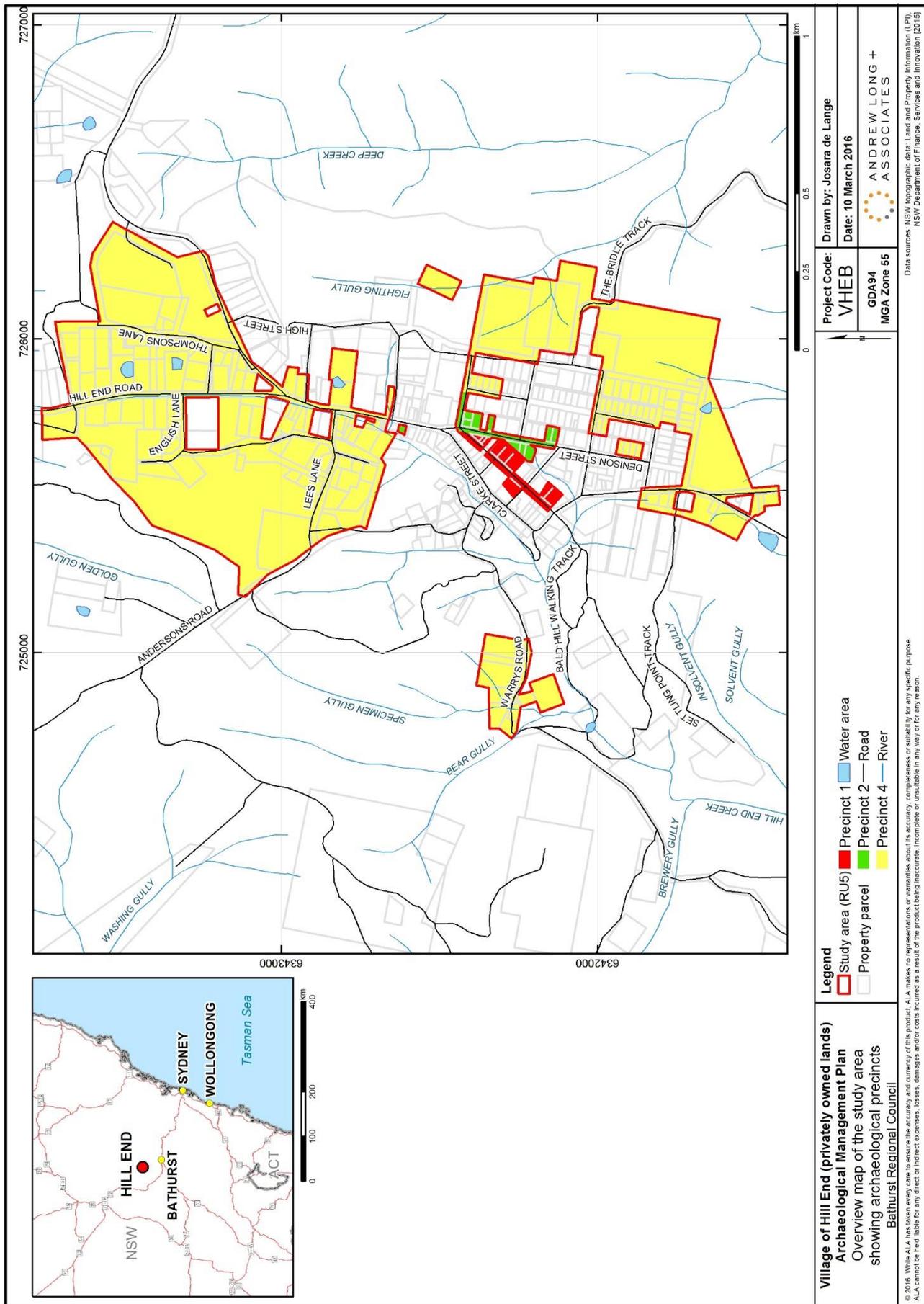


Figure 9: Overview map showing archaeological precincts across the study area

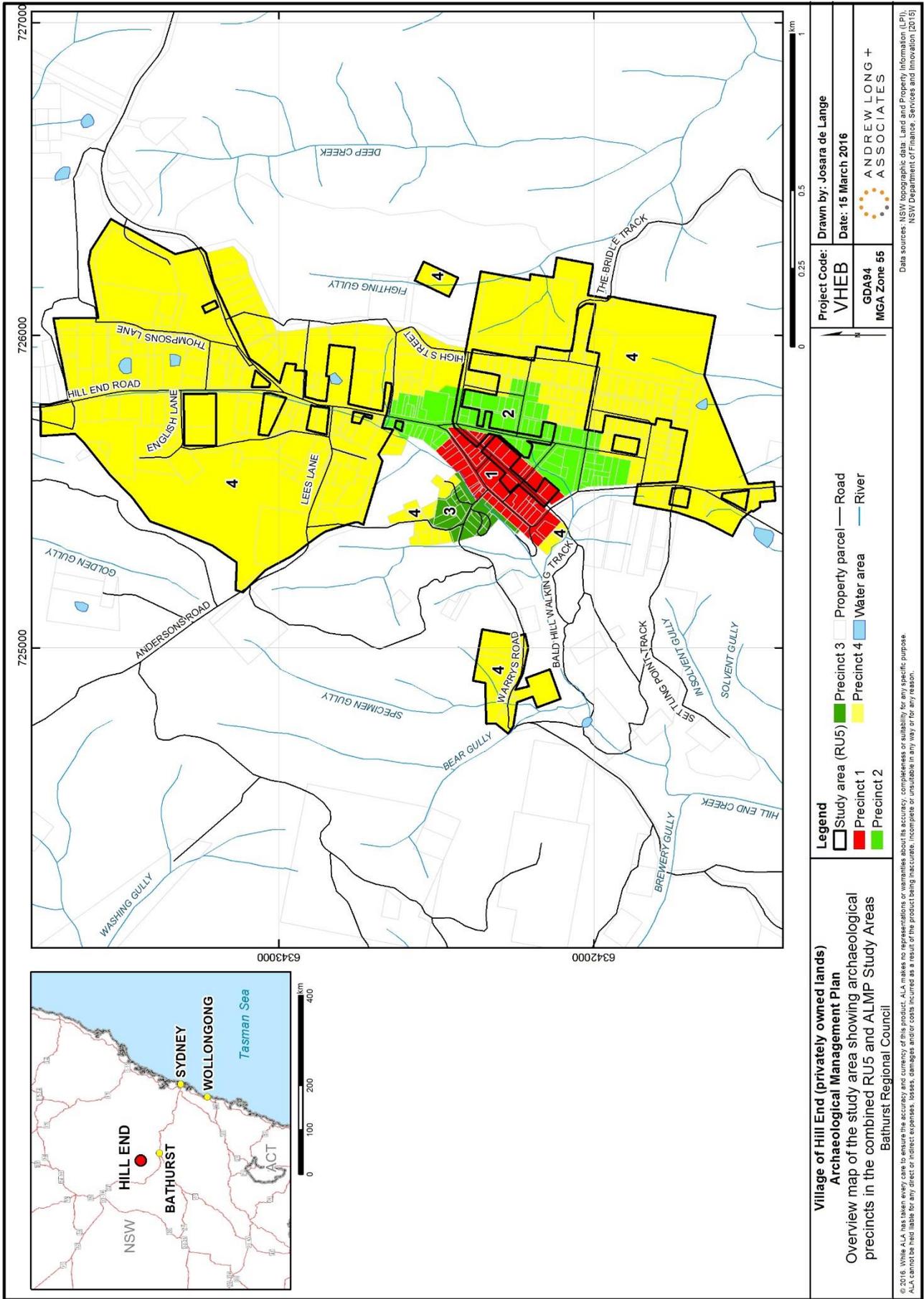


Figure 10: Overview map showing archaeological precincts across the Village of Hill End

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RESEARCH FRAMEWORK RECOMMENDATIONS

6.1 Preamble

In order to improve our understanding of the lives of people living, working and frequenting Hill End in the 19th and early 20th centuries it will be necessary to approach any future archaeological investigations - particularly those mitigating a proposed impact - with an appropriate research design. This research design should raise research questions that will direct, to a significant extent, the methodological as well as the interpretative approach to the archaeology of the study area. To date, there has been very limited systematic excavation at Hill End, some of which has resulted in a detailed or useful corpus of recorded information for analysing or interpreting the archaeological record of the township.

Given the high significance of the study area (Section 7) and the likelihood of disturbance from infrastructure expansion or other development, it is necessary to establish a responsible methodological approach that will address the principal research questions posed by such an extensive archaeological landscape, both for the interpretation of Hill End, and the principal historical themes that relate to it on a regional, state and national level. To this end, an appropriate research design should provide an effective platform for the subsequent multi-disciplinary analysis and interpretation of the archaeological record.

It is intended that the research aims and directions for this process will be driven by the results of previous research, the AMP and a set of clearly defined research questions formulated from the contextual history (Mayne 2001). It is argued that the research design be finalised at a later stage when systematically acquired field data and more detail historical documentation is available. Nevertheless, some preliminary comment is required in this report to demonstrate how archaeological research within the Village Precinct development will fit into the overarching research framework of Australian historical archaeology, and what issues need to be considered to developing a final research design.

The history and archaeology of goldfields and associated townships in Australia and elsewhere is an emerging discipline both methodologically and theoretically (Goodman 1994; Lawrence 2000; various papers in McCalman et al 2001; Lawrence and Davies 2011; Mayne in prep.). It is generally recognised that goldfields were the focus of intense and changing human activity, and that this activity has resulted in a record of great complexity through many building and destructive cycles. The excavation, analysis and interpretation of goldfields townships and time sequences allows aspects of both short and long term processes to be investigated that were not necessarily expressed in the documentary record, particularly the lives of ordinary people. Through an analysis of the spatial and chronological distribution of building fabric, the sequence of construction, abandonment, demolition and any associated infrastructure and movable heritage, the archaeological record allows the investigation of transitory urban development, the conceptualisation of space, and the nature and development of local industries and economic networks.

On a more intimate level the archaeological record may document the changing social practices in families, between sexes and the culture of household, workplace and neighbourhood development (see Samson 1990; Blanton 1994). Occasionally it documents the development of ethnic neighbourhoods. Much of this information has enormous potential for public interest and education, because it documents and contextualises the history of ordinary lives through the immediacy of recognisable items from the past, rather than through the drier and less evocative medium of 'official' text sources (e.g. rate books, censuses etc.).

Any research design has to recognise the enormous potential that an area such as Hill End has to provide information for public education and broader academic interests, for instance, comparison with similar data sets such as the Dolly's Creek (Lawrence 2000; 2001) and Mount Alexander goldfields (Mayne in prep.). This research has allowed a departure from the technology-driven 'industrial archaeology' of goldfields and the boom-bust cycle of corporate mining of the mid-late 19th century, towards the day-to-day lives of local people who lived on the proceeds of subsistence mining and part-time jobs throughout this period and into the 20th century.

One other point that needs to be considered in a future archaeological research framework is to diversify the areas of archaeological interest away from both extant and former building sites, as archaeology does not purely function to confirm the position or nature of an architectural footprint. Although archaeological complexity is often accentuated and preserved by building construction, there are other outlying elements in the landscape that are less easy to predict (e.g. gardens, cesspits, rubbish dumps, wells, outdoor work areas). Nonetheless these represent a high value archaeological resource, both for the nature of their fabric and associated remains, but also the material that may have been discarded and preserved within them. It is accepted that an analysis of the built history alone may not predict the location of these features, which may only be identified through a process of detailed historical research and fieldwork.

Taking these considerations on board, any private or public development that constitutes a threat to archaeological preservation should aim to provide a baseline recording that will facilitate more comprehensive research to take place, preferably through controlled excavation or supervised bulk soil removal where appropriate. Any excavation and analysis strategies should therefore be designed to preserve and provide information that will provide a firm foundation for the type of investigations outlined above, be easily integrated with other site data collection procedures and useful for public information purposes. In addition, a programme of post-excavation conservation and analysis of both the artefactual material and recorded data should be costed, to ensure that an appropriate level of interpretation is undertaken on completion of the fieldwork component.

Pertinent research questions that could be considered at this stage include:

- The relationship between the Wiradjuri, gold mining and early settlement in the Hill End district.
- Contemporary knowledge of the mid 19th century archaeological record is minimal. Little of the material culture of people living in the 1850s-1870s is known and in particular, little is known of the archaeological assemblages of this time. This time bracket (c. 1852-1871) represents one of the 'significant knowledge' gaps in the documentary record. There is every possibility that more information on this archaeological record can be established through careful excavation of selected sites at Hill End and this should be set as a research priority.
- The processes that enabled Hill End to survive as a living community into the late 20th century, despite its geographical isolation and the decline of mining. The reasons for Hill End's longevity remain largely obscure in the historical literature, but archaeology presents one opportunity to examine the way in which a community adapts to economic change and a diminishing population base. Phase 3 (1880-1920) represents one of the 'significant knowledge' gaps in the documentary record that could be addressed through archaeology. This could fit into the broader framework of failed settlement research and management on Crown Lands in New

South Wales, which has previously been identified as an important theme for consideration (Ashley *et al* 1991).

- The notion of boundaries between individual properties, and how they are reflected in the material record. Can distinctions be drawn between the lives of the inhabitants and material residues? This will require an integrated approach, investigating with the entirety of a property, rather discrete zones within an individual block
- Ethnicity – the organisation of the Hill End neighbourhood through time on ethnic grounds, enhanced by the diversity of racial groups residing in the district during the late 19th century, and its manifestation in material residues.
- The relationship between commerce and residence in the district, and the declining role of mining as an economic activity. The extent of the involvement of other industries at Hill End could be investigated, as well as the diversification of the local economy in the late 19th century. In particular, the transition between the boom years of the 1870s to the subsistence economy of the early 20th century should be examined. One aspect that could be developed is the micro-topographical and environmental investigation of garden sites abandoned prior to 1920, which could provide a key to understanding the process of land use change over this period.

These themes should be further developed through consultation with research stakeholders in subsequent planning, evaluation and excavation reports.

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STATEMENT OF SIGNIFICANCE

7.1 Introduction

The *archaeological* significance of the Hill End Village Precinct is presented in the following section, as distinct from the overall *heritage* significance of the place or the *archaeological* significance of the wider cultural landscape. Heritage significance is a rating of the historic, aesthetic, scientific and social values of a site or place (Pearson and Sullivan 1995: 16-21; Heritage Office 2000). The significance assessment procedure for individual sites and places can be very complex, requiring an evaluation of both the physical and cultural attributes of a particular location. The value of the site to future generations must also be considered through its educational and scientific significance. These values are vital in formulating an appropriate level of conservation and management for both individual sites and cultural landscapes. The following takes into account the archaeological heritage ratings originally formalised by Long's study in 2002.

An overall assessment of these values was originally presented in the draft Plan of Management (NPWS 1994: 11-15), the BRC, formally Evans Shire Council Development Control Plan (Robert A Moore Pty. Ltd. and Pike 1992: 9-11) and the listing of Hill End Historic Site on the State Heritage Register (www.heritage.nsw.gov.au), concluding that Hill End was a place of *National heritage* significance. This high level of significance is reflected by the declaration of the township as a Historic Site under the *NSW National Parks and Wildlife Act 1967*, the listing of the site on the Register of the National Estate, its classification as a Conservation Area by the National Trust of Australia (New South Wales) and BRC and its listing on the NSW State Heritage Register (SHR).

In 2012, a broader extension of the NPWS agenda was presented as the draft Hill End Conservation Management and Cultural Tourism Master Plan (Master Plan) as an expansion on existing planning documentation, which was finalised by the NSW Heritage Council in 2013. The plan consists of several documents which collectively outline a management framework in the ongoing conservation and adaptive reuse of the Hill End's Heritage and structures (Conybeare Morrison 2013a:i). The framework was established to reinforce the standards of research and conservation control, it considers measures to stimulate town economy, new business and interpretation of built, natural and cultural heritage (Conybeare Morrison 2013a:i). A key outcome, among others, was the development of a Conservation Management Plan formulated to provide a management framework and guidance for the preservation of heritage places. The Master Plan is also linked to an Interpretation Plan drafted in 2014 (GML et. al.), which forms part of a broader revitalisation programme undertaken by NPWS to ensure the preservation of significant heritage values of the cultural landscape. Therefore, the suite of management plans have been introduced to guide conservation efforts in future, and recognise that the heritage environment requires continuing treatment to maintain Hill End's significance and heritage values (GML et. al. 2014). Further, the Conservation Management Plan also recommends the evaluation and eventual upgrade of the current heritage listing to an international level (Conybeare Morrison 2013b:54).

In the case of this study, the archaeology of Hill End is assessed as a single cultural landscape, without detailed assessments of specific components. At this stage it is not possible to provide a definitive statement on the significance of individual structures or blocks, as more detailed field evaluation,

historical research and community consultation is required.¹⁹ As an interim measure, the archaeological sensitivity ratings (Figure 7; Volume 2: Table 3) should be adopted as broadly reflecting archaeological significance for individual blocks.

This section should not be viewed as a substitute for a detailed significance assessment for individual allotments, portions, sites and site complexes as part of a Conservation Management Plan (CMP) or other management planning process.

7.2 Significance Assessment

The following section presents an overview of the significance of the archaeological record of Hill End according to the standard criteria for heritage assessment (historic, aesthetic, social and scientific/archaeological).

7.2.1 Historical Significance

The assessment of the historical significance of the Village Precinct at Hill End is based upon the Australian Heritage Commission's (AHC) Australian Historic Themes Framework (AHC 2001) and the NSW State Heritage Manual (Heritage Office 1996a; 1996b; 2000). Where appropriate, examples of specific locations of known relevance to the themes are cited.

7.2.1.1 National Criteria

The following Australian Historic Themes, as presented by the Australian Heritage Commission (2001) are relevant to the archaeological record of Hill End:

2. *Peopling the Continent*

2.4.2 Migrating to seek opportunity

3. *Developing local, regional and national economies*

3.4.3 Mining

3.11.4 Clearing vegetation

3.12.2 Developing sources of fresh local produce

3.16 Struggling with remoteness, hardship and failure

4. *Building settlements, towns and cities*

4.1.1 Selecting township sites

4.2 Making settlements to serve rural Australia

5. *Working*

5.1 Working in harsh conditions

5.8 Working on the land

These themes of *National significance* will be reflected in the archaeological record at Hill End. At this stage there has been insufficient archaeological excavation to directly confirm evidence of these themes within the archaeological deposits, though the historical research suggests that all these elements will be

¹⁹ A consultative process undertaken on behalf of NPWS (Guppy and Assoc. 2001) does not include consideration of archaeological management issues.

in place. It is the role of a future research design to ensure that planning for ongoing investigative programmes effectively consider these themes.

7.2.1.2 State Criteria

Criterion (a) of the NSW State Heritage Manual (Heritage Office 2000: 11) defines historical significance as 'important in the course or pattern of NSW's cultural or natural history'. The specific themes of relevance to the Village Precinct are listed below (Heritage Office 1996b):

- (5) *Agriculture* – the evolution of subsistence agriculture to supply the mining township and later development as a local agricultural centre.
- (7) *Mining* – early alluvial gold mining along Hill End Creek, later subsistence mining, the operation of mine shafts within the township boundary and subsequent effects on the environment.
- (9) *Environment* – land erosion, clearing, special plantings, gardens and the preservation of open space.
- (10) *Townships* – the growth and decline of Hill End as an organised township, the preservation of significant streetscapes.
- (11) *Migration* – the influx of people from diverse backgrounds into a remote location.
- (12) *Ethnic Influences* – the importance of ethnically distinct groups in moulding the culture of Hill End township and society.
- (13) *Transport* – the remoteness of the location and consistent access difficulties over time.

It is considered that further research may reflect these themes of state, regional or local significance in the archaeological record at Hill End. A series of broader, general Historical themes of cultural significance are detailed by Conybeare Morrison (2013b).

7.2.1.3 Summary Statement of Historical Significance

These themes reflect the development and decline of Hill End as a mining township, its impact on the local environment and subsequent struggle for economic independence as an agricultural and subsistence mining centre. The influx of migrants from ethnically distinct backgrounds, in particular Germany and Ireland is potentially well represented in the archaeological record (e.g. 'Germantown' and Krohmann/Ackermann Cottage; Precinct 3).

The archaeological record at Hill End is collectively of National significance given the unification of these themes in a cultural landscape which is reflective of the development of the township during its most significant period of occupation associated with the boom and bust cycle of gold mining in the late 19th century.

7.2.2 Aesthetic Significance

Criterion (c) of the NSW State Heritage Manual (Heritage Office 2000: 13) defines aesthetic significance as 'important in demonstrating aesthetic characteristics and/or a high degree of technical achievement in NSW or the local area'. As such an item having this value is significant because it demonstrates positive visual or sensory appeal.

The archaeological landscape at Hill End is significant in the way in which it has evolved with minimal intrusion, and has blended into the local environment and streetscapes to form an intrinsic, visual and interactive component of the Historic Site. The abandoned and ruinous buildings collectively contribute to a landscape evocative of the hardships and opportunities faced by the town's inhabitants. These have

formed the inspiration for significant artistic endeavour, which has enriched Australian cultural life at a range of levels.

The archaeological landscape at Hill End is collectively of National significance given its highly visual attributes, associations with significant developments in Australian art and the amenability to public interaction and interpretation.

7.2.3 Social Significance

Criterion (d) of the NSW State Heritage Manual (Heritage Office 2000: 14) defines social significance as having 'strong or social association with a particular community or cultural group in NSW [or the local area] for social, cultural or spiritual reasons'.

The Hill End Historic Site has high social value for the local residents, the descendants of former residents and the people of New South Wales in general for its strong connections with a former way of life, family ties and a significant period in Australia's development. The specific contribution of the archaeological record is considered to be relatively minor in this instance, with social significance being primarily derived from the sense of place, the landscape and surviving historic buildings, rather than the research potential of sub-surface deposits.

The archaeological landscape at Hill End is collectively of *State* social significance given its potential for public education and as a link to aspects of the past which are not documented through other sources.

7.2.4 Archaeological Significance

Criterion (e) of the NSW State Heritage Manual (Heritage Office 2000: 15) defines technical/research significance as having 'potential to yield information that will contribute to an understanding of NSW or the local area's cultural or natural history'. Archaeological significance forms a component of this criterion (Heritage Office 1996c: 25-27).

The key test for the assessment of archaeological significance is the ability of a place to provide, through archaeological methods, information that is useful to understanding the past through three basic enquiries (Bickford and Sullivan 1984).

Ability to provide information not available from other sources

Historical documentation for the built history of Hill End is exceptionally good for a brief period during the mining boom of the early-mid 1870s, though there is a dearth of comparable information relating to the early years of the town's development and its subsequent period of decline. Throughout the occupation of Hill End there is generally limited information relating to private lives, commonplace activities and social interactions. Furthermore, the available information is focused primarily on aspects of public life and built history, without great reference to the activities undertaken within and between the documented buildings. These significant gaps can be addressed through archaeological research into the occupation deposits at Hill End, which have significant potential to yield considerable information, especially in Precinct 1.

Ability to provide information not found on other sites

Gold mining sites are not unusual in Australia, but the preservation of a significantly intact landscape relating to both the mining activities and the lives and dwellings of the mining families, service providers and other residents is uncommon. Most previous mine site research has tended to focus on technological and industrial aspects, rather than the lives and fortunes of the participants. Hill End is particularly significant in the latter aspect, given that the residents persisted with low key mining and other activities for many years following the boom period without either widespread urban development

(e.g. as an urban centre, such as Ballarat or Bendigo) or total abandonment (see Ashley *et al* 1991: 270). Mining is a highly destructive activity, which has impacted on the preservation of the archaeological landscape (particularly in Precinct 4), but substantial parts of the 19th century township are essentially intact as archaeological deposits (e.g. the eastern Hill End Creek Margins in Precinct 1). As such, Hill End presents archaeological opportunities not present elsewhere in New South Wales, and rare on a National basis.

Ability to address pertinent research questions

A selection of pertinent research questions of especial relevance to Hill End have been presented in Section 6, which interact with both National and international research agendas for gold mining and urbanisation. These questions relate to the parallel development of the town with the gold mining industry, internal rhythms and dynamics within the township, linkages with the outside world and the community's response to the decline of the dominant economic activity.

The preservation, structure and extent of archaeological deposits, particularly in Precinct 1, have considerable potential for addressing these questions on a broad landscape basis, rather than simply the examination of discrete, disassociated parcels of land.

In all aspects, the research significance of the archaeological record at Hill End is collectively of *National significance*, though the level of this significance varies from location to location, based on differences in historical use and site preservation. In the absence of a detailed significance assessment for each potential archaeological deposit in the study area, it is proposed that the archaeological sensitivity ratings (high, moderate, low) be adopted as commensurate with significance ratings as an interim measure (Volume 2: Table 3).

Archaeological landscapes of particularly high archaeological significance include:

- The Clarke and Tambaroora Street frontages (Precinct 1).
- Dennington Cottage (Precinct 2) (Long 2002).
- Krohmann / Ackermann Cottage complex (Precinct 3) (Long 2002).
- Southern periphery of Village, and discreet pockets in the northern section (Precinct 4).

Collectively these zones are likely to contain the earliest, most complex, best-preserved and archaeologically significant deposits in Hill End.

7.3 Summary Statement of Significance

The archaeological record of Hill End is of overall *National heritage significance*, though this value varies considerably from allotment to allotment given the differences in the spatial distribution, nature, preservation and ongoing use of the remains.

This landscape contains a broad spectrum of components reflecting domestic, economic, industrial, municipal, agricultural and religious activities relating to different social classes, professions and ethnic backgrounds. Archaeological evidence has the potential to provide a detailed understanding of social interaction and commercial endeavour in a remote community from the beginning of the township in the 1850s to its decline in the 1880s-1920s.

Overall the township remains are of *National significance* as the most extensive, intact archaeological landscape relating to a 19th century goldfield settlement in New South Wales, and potentially Australia.

The township remains are of *National significance* for their strong visual appeal and association with important Australian artists, who engaged with these aesthetic values to develop significant themes in Australian art.

The township remains are of *State significance* for the sense of place they engender to the local community and the people of New South Wales, and the opportunities they provide for public education.

The township remains are of *National significance* given the potential they provide for meaningful research into the lives, economy and social interaction of a remote goldfields community in mid-late 19th and early 20th centuries.

Hill End is *extremely rare* (SHR criterion f) in its combination of the above values at a single location.

The overall archaeological significance of the four precincts defined in the AZP is rated as follows:

Precinct 1: *National significance* – the central zone of Hill End township is an area of exceptional archaeological value given the range, complexity, scale and preservation of archaeological deposits across most of the area. Although some of these remains are visible on the ground surface in the form of ruins and other archaeological features, the sub-surface archaeological potential is considerable. This precinct is considered both rare in terms of its unique values in the context of Australian goldfields, and also highly representative of a late 19th century boom period gold mining township. An area of particular interest is Dunbeacon (Section 8 Lots 1 and 11) (High Ground 2013).

Precinct 2: *State/Regional significance* – Precinct 2 is an area of variably high to moderate archaeological significance, through the preservation of archaeological deposits associated with the cottage complex and other former building sites. The high level of value is not consistent across the entire area, due to the impact of past and present land use and other processes. This zone has particularly high historical significance due to the strong influence of German settlers in this location ('Germantown'). The zone contributes to the overall National significance of the township. Selected blocks containing archaeology of high significance include Section 1 Lot 1.

Precinct 3: *State/Regional significance* – the eastern margin of the core township is an area of overall high to moderate archaeological significance, through archaeological deposits associated with a range of extant and former building sites (Long 2002). The high level of value is not consistent across the entire area, due to the impact of past and present land use and other processes. The zone contributes to the overall National significance of the township.

Precinct 4: *Local significance* – the periphery of the township is an area of overall little to moderate archaeological significance, though discrete allotments within this zone have potentially high significance. In general, the landscape has been highly disturbed through mining, erosion, revegetation and land development, and the preservation of archaeological deposits of high research potential is predicted to be uncommon. However, a number of discreet pockets were identified containing poorly surviving features of high archaeological significance. Selected blocks of potentially high to moderate significance in this broad precinct are Portions 5, 102, 141, 142, 253, 267 and 7318. In addition to Section 4, Lot 1, Section 12, Lot 5 (Lysaght's Butchery *et al*), Section 23, Lot 4, Portions 88 (Brown's Junction Hotel), 104, 244 (Hill End Hospital), 293 (Heaps Cottage), 306, 321 (Araluen Star Hotel), 322 (Denman Cottage), 331 (Dr Baker's House) and 367 (English Cottage).

MANAGEMENT CONSIDERATIONS, POLICIES AND GUIDELINES

8.1 Introduction

Archaeological predictive modelling has established that the Village Precinct at Hill End contains numerous opportunities for the investigation and interpretation of sub-surface deposits relating to an extensive sequence of historical occupation. This has resulted in an archaeological zoning plan which characterises the landscape in terms of four overall levels of archaeological sensitivity (high, medium, low, nil), based on the identified extent of historical activity and subsequent land use. This is an extension of the AZP presented in the ALMP compiled by Long (2002).

The following section presents a proposed framework for the management of the archaeological record at Hill End. This includes consideration of the existing management provisions, a proposed policy framework and a series of guidelines to facilitate the implementation of the policies.

At this stage there is no consideration of specific developments, management activities or other threats to the archaeological record. This must necessarily be undertaken on a case-by-case basis, as and when the need for impact mitigation arises (Section 9.1).

8.2 Management Considerations

This section presents an overview of the provisions for historical archaeological site management at the Hill End Historic Site, including a discussion of those originally proposed by NPWS (1994), the current provisions outlined by the Conservation Management Plan (Conybeare Morrison 2013b) and the Interpretation Draft Plan (GML et. al. 2014), the legislative framework, non-statutory documents and the predicted threats to the archaeological record.

8.2.1.1 Hill End Historic Site Draft Plan of Management (1994)

Hill End Historic Site was first subject to a draft Plan of Management, which outlined the following provisions for historical archaeological sites (NPWS 1994: 22-23).

1. Firstly, it recognised that there had been no systematic archaeological evaluation of the Historic Site and that the potential for archaeological remains had not been determined. It highlighted the need for historical archaeological investigations to precede any conservation or adaptation works on buildings which would 'otherwise obscure or interfere with known or potential archaeological remains' (NPWS 1994: 22).

2. Two policies were outlined in response, namely that:
 - An archaeological assessment of building environs shall be included in any conservation or development plan relating to the erection of a building or structure or an extension to an existing building.
 - Opportunities for archaeological research will be provided to professionally recognised research organisations or individuals with priority given to projects relevant to the management of the site.
3. The only action recommended with regard to the archaeology, was to investigate 'external funding sources and/or resources available to carry out a systematic survey of the historic site' (NPWS 1994: 23).

Several inadequacies were identified by these provisions, including the lack of recognition of the contextual value of archaeology, independent of the extant architectural fabric, or consideration of other forms of impact besides building proposals. However, it was acknowledged that NPWS resources were limited, and that a management solution should be pragmatic and targeted towards urgent or critical works. The AMP produced by Long (2002) assisted in the prioritisation of allotments and precincts within the township that were at the time, and are of primary importance. This research has since been adopted on the basis for determining an appropriate management response in these areas. The Master Plan (2013a) has more recently taken a broader approach to identifying areas for investigation, conservation and interpretation of the archaeology of Hill End.

8.2.1.2 Conservation Management and Cultural Tourism Master Plan for Hill End Historic Site (2013) and the Hill End Interpretation Plan (2014)

In 2013 the Hill End Conservation Management and Cultural Tourism Master Plan was finalised and endorsed by the NSW Heritage Council. The Master Plan, which comprises a Conservation Management Plan (CMP), includes a suite of documents targeted at the conservation of Township and its cultural landscape by various means. The documents also include a Landscape Management Plan and a Cultural Tourism and Recreation Management Plan, which form a part of a large agenda to promote Hill End's national and cultural significance and outlines the policies and recommendations surrounding historical archaeological sites (Conybeare Morrison 2013b:60). The CMP also draws upon historical and archaeological research that has been conducted throughout the recent years and considers the following:

1. Firstly, it recognises an AMP should be undertaken for the entire site, including the Hawkins Hill group of mines (Higginbotham 2011), to assess the significance and provide policies and procedures for management of this archaeology (Conybeare Morrison 2013b:54). It recommends that further research is carried out to define the overall archaeological potential of the Historic Site to ensure its protection, which forms the basis for this study (Conybeare Morrison 2013b:60).
2. Secondly, the CMP acknowledges the issues arising from archaeological resources and that there are opportunities for NPWS to consider innovative archaeological programs. The opportunities outlined by the Plan are focused on public outcomes:
 - Attracting archaeology professionals, students in archaeological education, interest groups or specialist groups.
 - Attract private and government funding for archaeological research grants.

Whilst the CMP provides a holistic assessment of the cultural significance of the Historic Site, the Plan provides strategic direction in the management of archaeological relics and reiterates the responsibilities of NPWS to consider potential threats to, and the preservation of archaeological items, should they be encountered (Conybeare Morrison 2013b:60). The CMP also cautions the careful management and full

archaeological impact assessment if and where ‘ground disturbing activities’ occur, especially with regards to the management of Archaeological Zones (Long 2002; Conybeare Morrison 2013b:75). The document encourages NPWS to consider preventative measures and forward planning and outlines several pertinent policies in line with those established by the NPWS Corporate Plan (NPWS 2001a) and outlined by Long (2002:46) (see 8.4 Management Policies).

This understanding is based on the assumption that such considerations should be made where archaeological sensitivity is known or where there is reasonable cause to expect archaeology as per the Relics provisions of the NSW *Heritage Act 1977*. Suitably, this study remedies a recommendation outlined by the Master Plan (2013) in that a wider assessment of Hill End archaeological sensitivity is provided, in conjunction with works of Long (2002). However, where archaeological sensitivity is not known the Plan recommends the undertakings of an additional AMP. Unlike the original (1994) draft Plan of Management, the CMP recognises the archaeological areas of sensitivity, through which it is assumed that contextual value of archaeology is acknowledged independent of extant architectural fabric. It also considers disturbances more generally beyond building proposals and calls for the appropriate collection management where archaeological material is excavated.

Further to this, The Hill End Interpretation Draft Plan (2014) aims to connect researchers, archaeologists and other experts to continue research and exploration of Hill End, in satisfying policy 5.7 and tourism plan (GML et. al. 2014:34)

8.2.2 Statutory Regulations

Historical sites and places in New South Wales are protected by a number of separate State acts which operate at different levels of government, and in combination provide a uniform management system for these items. For greater detail on the heritage planning process in New South Wales in general a guide to ‘Heritage Approvals’ produced by the Heritage Council (Heritage Office 1996d) should be consulted.

The Hill End Historic Site is listed on the Stage Heritage Register, the NPWS Register and Section 170 Heritage Conservation Register, the Bathurst Regional Local Environmental Plan, 2014 (BRC LEP) and the National Trust of Australia Register. It is covered under the following heritage provisions of legislature, including the NSW *Heritage Act 1977*, *National Parks and Wildlife Act 1974*, *Environmental Planning and Assessment Act 1979*, the BRC LEP 2014 and DCP 2014.²⁰

A review of the heritage protection legislation is presented in the Cultural Heritage Strategy, the relevant elements of which are summarised below:

Heritage Act 1977

Historical sites in New South Wales are primarily protected by the provisions of the *Heritage Act 1977* (amended 2010). The aim of this act is to conserve the ‘environmental heritage’ of the state, in relation to a ‘place, building, work, relic, movable object or precinct’ of historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance for the State (Section 4). The Act is administered by the Heritage Council of New South Wales through its service provider, the NSW Heritage Office.

The Hill End Historic Site is listed on the NSW State Heritage Register (SHR) (no. 00993; DB 5051460). Any works or activities proposed for an item on the SHR are subject to approval by the Heritage Council (‘Heritage Approval’), other than minor works or works pursuant to a Heritage Agreement (see below).

²⁰ As outlined by the Conservation Management and Cultural Tourism Master Plan for Hill End Historic Site (Conybeare Morrison 2013a:12).

The Heritage Council can delegate its functions for Heritage Approval. The Manager, Cultural Heritage Division, NPWS, has delegation under the Act for the following activities on NPWS estate:²¹

- To determine applications for certain minor works affecting archaeological relics (Section 60).
- To issue excavation permits (Section 140).

Works are to be considered under the Consent Authority through Council and to be undertaken by stakeholders and owner/occupiers, where private and Crown land is concerned.

NPWS develops Conservation Management Plans (CMPs) for heritage items on the SHR that form part of the NPWS estate of NSW. These are non-statutory documents which outline the significance of the item and how the item is to be managed. Where a CMP has been endorsed by the Heritage Council, activities consistent with the CMP policies are exempted from further Heritage Council approval.

National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974*, places responsibility of the management of historic sites responsibility on NPWS, including the care and control of heritage places. Under s30F (1), the act allows the reservation of land *to identify, protect and conserve areas associated with a person, event or historical theme, or containing a building, place, feature or landscape of cultural significance so as to enable those areas to be managed* in accordance a series of management principals outlined by subsection (2):

- (a) the conservation of places, objects, features and landscapes of cultural value;
- (d) provision for the sustainable use (including adaptive reuse) of any buildings or structures or modified natural areas having regard to the conservation of the historic site's natural and cultural values;
 - a. provision for the carrying out of development in any part of a special area (within the meaning of the Hunter Water Act 1991) in the historic site that is permitted under section 185A having regard to the conservation of the historic site's natural and cultural values; and
- (f) provision for appropriate research and monitoring.

Environmental Planning and Assessment Act 1979

Site protection in New South Wales is also achieved through the identification and listing of historic sites and places in local environmental plans, prepared by local government authorities (LGAs) under the *Environmental Planning and Assessment Act 1979*. This act requires LGAs to consider environmental effects when assessing new developments. Heritage is one of the 'matters for consideration' under Section 79c of the Act.

Sites of environmental heritage (including historic sites) are protected by gazetted Local Environmental Plans (LEPs) and Development Control Plans (DCPs) which specify constraints on development in the vicinity of these sites. The current plans are the Bathurst Regional Local Environmental Plan, 2014 and the Bathurst Regional Development Control Plan, 2014. The principal tool that guides LGA management decisions is the heritage study. A heritage study identifies and assesses heritage items and places, and makes recommendations on policies the LGA should adopt to ensure the protection and conservation of these places. The LEP and/or DCP translates the recommendations of the heritage study into a statutory document that provides a broad framework for the management of the LGA's heritage.

Under section 290 of the Act, a local council or delegated authority cannot issue an order in contradiction of the *Heritage Act 1977* (amended 2010).

²¹ Hill End Historic Site is subject to an exemption under Section 57 (2) of the Heritage Act 1977, in respect to the 'engaging in or carrying out of any activities described in the Schedule of Standard Exemptions and the Activities to which they apply' (NSW Government Gazette 23 October 1998).

NPWS is exempt from local planning regulations and, as such, is authorised to undertake its own heritage management process with respect to heritage items that comprise part of the NPWS estate.

Previous to the current (2014) DCP compiled by BRC, the Evans Shire Council had prepared a DCP for Hill End, which contained the provisions for archaeological values (Robert A Moore Pty Ltd and Pike 1992: 6). While the provisions outlined did not apply to the land gazetted as Hill End Historic Site, they provided a comparative framework for the consideration of archaeological issues across the remainder of the Village, and ultimately the foundations for the policies outlined by the 2014 DCP. An objective outlined in the management of the archaeological material is listed under section 7.10 *Built Environment*:²²

- (e) Preserve archaeological remains and relics, both above and below ground, including building foundation remains, kerbs and gutters, roads and retaining walls, fences and posts.

The development standards and planning measures to achieve this policy are listed under section 10.9 *Archaeological Permits*:²³

- (a) If Council is of the opinion that a site is highly likely to contain archaeological relics, it must not grant consent to any building or subdivision work on land unless it has considered an archaeological report which examines the likelihood of archaeological remains being located on the site. In granting consent Council may require an excavation permit be obtained from the NSW Heritage Division, Office of Environment and Heritage.
- (b) If Council is of the opinion that it is likely that a site might contain archaeological relics, it must include a condition of the consent as follows:
 - (i) During the development, if any archaeological remains are discovered, the developer is to stop works immediately and notify the NSW Heritage Division and Council. Any such find is to be dealt with appropriately, in accordance with the Heritage Act 1977, and recorded, and details given to Council prior to the continuing of works.
 - (ii) The applicant is to lodge, prior to the issue of a construction certificate, a Construction Heritage Management Plan to Council which addresses the following:
 1. Mitigation measures in relation to the likely archaeology onsite;
 2. The proposed monitoring that will be in place for any archaeological relics uncovered;
 3. Training, resources and consultation for staff on the site during excavation;
 4. Incident management protocol; and
 5. Methods dealing with unexpected finds during works.

8.2.3 Non-Statutory Documents

The following documents establish broad principles, policies and guidelines that provide a framework for the cultural heritage management process across Hill End. These consist of the internationally recognised 'Burra Charter' and the NSW Heritage Manual.

The Burra Charter

The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance, otherwise known as 'The Burra Charter' (Marquis-Kyle and Walker 1992),²⁴ and its associated documents, are the guidelines that direct cultural heritage practitioners in Australia, and that provide the overarching framework and principles on which statutory assessments of heritage significance are based. The Burra

²² Bathurst Regional Council Development Control Plan (2014:111).

²³ (Ibid:173).

²⁴ Revised 26th November 1999 (see www.marquis-kyle.com.au/burra99.htm).

Charter is, in turn, based on preceding international charters formulated by ICOMOS (the International Council on Monuments and Sites).

Although they are non-statutory, the conservation principles of the Burra Charter must be complied with in the management of the archaeological record at Hill End.

New South Wales Heritage Manual

The manual provides a state-wide framework for making heritage conservation decisions (Heritage Office 1996a *et seq.*).

Conservation Management and Cultural Tourism Master Plan

The Conservation Management Plan (CMP), forms part of a number of parallel studies known singularly as the Hill End Conservation Management and Cultural Tourism Master Plan. The CMP was prepared in accordance with guidelines outlined by The Burra Charter and the NSW Heritage Council's Guidelines on Conservation Management Documents.²⁵ The Plan outlines the several Conservation Policies, which provide guidance in retention of significance, and further includes an assessment the measures proposed to conserve heritage significance, including archaeological relics.

8.3 Current and Future Threats to the Archaeological Record

Archaeological remains are highly varied in their physical characteristics, contexts and vulnerability to both natural and human processes. On one level all archaeological sites are in a slow state of deterioration, as buried materials decay through biological and chemical processes, and are displaced through the mechanical action of animals and plant root systems, irrespective of human activities. This is an inevitable consequence of the abandonment of occupation and discard of materials, which in most cases does not warrant direct management intervention.

The process of archaeological excavation is itself destructive, and irreversibly changes the composition and significance of an archaeological site. It is the process of appropriate recording, cataloguing, analysis, publication of the excavation results that preserves the site values as an archive of data and excavated materials assemblage.

For the purposes of the AMP, Bathurst Regional Council and private owners needs to consider the threats to archaeological preservation that are preventable, avoidable or can be ameliorated through routine and forward planning. For the purposes of this study, relevant threats can be grouped into three categories:

Infrastructure and building development

The construction, modification and extension of buildings, services (e.g. electricity cabling, gas supply, wastewater facilities and water mains), roads and other infrastructure (e.g. visitor facilities, helipads), including renovations to existing structures. Actions that have a particular impact on the archaeological record specifically involve sub-surface disturbance. The impact of any proposed works or activities should be rated according to the Development standards outlined by the Hill End DCP 2014.²⁶ Works are to be considered under the Consent Authority through Council and to be undertaken by stakeholders and owner/occupiers, and NPWS where required.

²⁵ Conservation Management and Cultural Tourism Master Plan for Hill End Historic Site (Conybeare Morrison 2013a:i).

²⁶ Bathurst Regional Development Control Plan 2014, Section 7.9.3: Use of Land, p. 109-10.

Land uses

Routine management activities, such as firebreak construction, vegetation clearance, mowing and burn-offs, and agricultural activities such as ploughing. Works are to be considered under the Consent Authority through Council and to be undertaken by stakeholders and owner/occupiers, and NPWS where required.

Other incidental site disturbances relating to land use include the visitor impacts (e.g. path erosion) and vandalism.

Natural processes

This category includes the effects of natural processes which can potentially be controlled or prevented by management works, such as gullying and sheet erosion.

The impact of any proposed works or activities should be rated according to NPWS *Guidelines for Heritage Approval...* (2001c: 1).

8.4 Management Policies

The following management policies broadly mirror the seven conservation principles and policies first proposed for NPWS heritage management in the Corporate Plan (NPWS 2001a) and Cultural Heritage Strategic Policy (NPWS 2001b), formally outlined by Long (2002:46). These foundational policies have since been revised by the Hill End Conservation Management Plan (Conybeare Morrison 2013b:75) and are presented here:

1. (5.1) - Protect and conserve identified archaeological remains within the study area;
2. (5.2) - Obtain an excavation permit from the NSW Heritage Council before commencing any site works, especially those which disturb areas identified as potential archaeological sites;
3. (5.3) - Implement an updated Archaeology Management Plan for the Historic Site, and extending from Hawkins Hill to the Quartz Roasting Pits, including Golden Gully and the cemeteries;
4. (5.4) - Retain the cultural significance of the archaeological elements of Hill End and Tambaroora, in the context of their setting and landscape;
5. (5.5) - Improve an understanding of the significance and history of the site through research, investigation and appropriate documentation;
6. (5.6) - Recognise the high archaeological values of Hill End and Tambaroora in the management process. The archaeological values should not be managed to the exclusion of other cultural heritage and environmental values at any given location;
7. (5.7) - Manage and interpret each allotment in accordance with its archaeological significance;
8. (5.8) - Ensure that development and impact on archaeological features and potential archaeological deposits are appropriately evaluated and mitigated according to their integrity, significance and ability to address key research issues;
9. (5.9) - Appropriately consult with community stakeholders to ensure the sympathetic presentation and interpretation of archaeological remains;
10. (5.10) - Ensure the appropriate cataloguing and storage of excavated materials and other items of moveable heritage through the formulation of a collections policy consistent with NSW Heritage Council guidelines for moveable heritage;

11. (5.11) - Ensure all areas of high and moderate archaeological sensitivity are conserved with no high impact development permitted on site until a detailed archaeological review is undertaken²⁷;
12. (5.12) - Develop and implement an archaeological interpretation display to inform and enhance visitor's appreciation and experience of the archaeological significance of the place;
13. (5.13) - If archaeological remains associated with Aboriginal occupation of the area are discovered, immediately notify the Conservation and Regulation Division of the OEH;
14. (5.14) - Regeneration of bushland is not to impinge in areas of identified archaeological sensitivity, nor cultural significance; and
15. (5.15) - Prohibit fossicking activities in all identified archaeological sites. NPWS is to identify areas where mineral fossicking is permitted.

8.5 General Management Guidelines

The following guidelines are presented to assist in the implementation of the management policies outlined in Section 8.4.

- Where possible, avoid disturbance to recorded archaeological features and potential archaeological deposits through a landscape conservation approach to the management of the Hill End Historic Site.
- Be proactive in acquiring data on the archaeological values of the Village Precinct. Undertake further survey and excavation to augment the existing database.
- Use resources efficiently. Undertake archaeological management assessments for entire or groups of allotments, rather than simply assessing the impact of a specific development on a discrete area.
- Ensure that adequate information regarding the nature, extent and impact of a proposed development is available for archaeological planning purposes.
- Fully research and document existing infrastructure corridors, other areas of existing disturbance and future development zones for use by additional facilities.
- Maintain and keep accessible information on all ground disturbing activities, especially service and utility infrastructure (Section 9.2, Recommendation 2).
- Ensure that all archaeological investigations at Hill End are undertaken according to consistent standards of recording (e.g. Davies and Buckley 1987; MoLAS 1994), and to the satisfaction of the Manager, Cultural Heritage Division.
- Ensure that a construction heritage management plan (CHM) is considered under the Sections 7 and 10 of the BRC DCP (2014), where ground disturbing activities are proposed in areas of high and modern archaeological sensitivity (including Heritage Items under Schedule 5 of the BRC LEP, 2014), to ensure the accurate identification of archaeological deposits and an appropriate management response during unmonitored works²⁸.
- Undertake a programme of regular inspections to monitor impacts and changing requirements in the management process.

²⁷ Management policy revised based on DCP 2014 and Recommendation 2 In Section 9.3 of this AMP.

²⁸ Excluding 'Modern Features' in Volume 3: Archaeological Feature Register.

8.6 Precinct Management Guidelines

The following represent management guidelines specific to the archaeological precincts defined in Section 5.3 (Figure 8). These precincts should be managed in accordance with their assessed level of significance (Section 7.3). The assessment of works and activities should be undertaken in accordance with the Consent Authority through Council and to be undertaken by stakeholders and owner/occupiers, and NPWS where required (i.e. NPWS *Guidelines for Approvals...* (NPWS 2001c)).

Precinct 1: Core Village Zone

- Full archaeological impact assessments must be undertaken for all ground disturbing works and activities in Precinct 1, irrespective of archaeological sensitivity rating (Section 9.2, Stages 1-6). This is justified by the broad distribution and exceptionally high significance of PADs throughout this area. There is a high probability that as yet unidentified PADs are located in areas of seemingly lower sensitivity within this zone, given probable gaps in the available information.

Precincts 2, 3 and 4: Outlying Village Zone

- Full archaeological impact assessments must be undertaken for all ground disturbing works and activities in areas of moderate to high archaeological sensitivity in Precincts 2-4 (Section 9.2, Stages 1-6).
- Ground disturbing works and activities may be undertaken *without* a full archaeological impact assessment in zones of low archaeological sensitivity within precincts 2-4, provided the works are subject to Council approval and monitoring by a qualified historical archaeologist (Section 9.1, Stages 1, 5 and 6).
- Ground disturbing works and activities may be undertaken *without* a full archaeological impact assessment in zones of zero archaeological sensitivity within precincts 2-4, provided that works halt for assessment by a qualified historical archaeologist if a PAD is disturbed. It is the responsibility of NPWS to manage this process. No heritage approval is required, but a development application will still be needed.

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IMPLEMENTATION STRATEGIES AND ACTIONS

9.1 Preamble

The following section presents an archaeological impact assessment procedure for the implementation of the management policies and guidelines outlined in Section 8. A series of supplementary recommendations are proposed to improve the current state of knowledge on the archaeological resources of Hill End, to refine the archaeological zoning plan and to facilitate future infrastructure planning. In addition, this section outlines provisions set by the Bathurst Regional Development Control Plan (DCP), 2014.

9.2 Archaeological Impact Assessment Procedure

Overview

This section outlines a process for the implementation of the management guidelines specified in Section 8.4 in relation to works or activities which have an impact on the archaeological landscape at Hill End (Section 8.4). Only works or activities that specifically involve ground disturbance or earth moving, whether mechanically or by hand, require an archaeological impact assessment.

It is intended that this procedure will allow certain works and activities with a demonstrably negligible impact on the archaeological record to gain exemption from NSW Heritage Council approval, and thus avoid the need to undertake a permit application under Section 60 of the *Heritage Act 1977*.

This procedure should be employed in conjunction with NPWS *Guidelines for Heritage Approval...* (2001c), which provides a framework for determining the level of impact and management requirements for seeking Heritage Approval for a range of activities at locations subject to three types of heritage listing.

If the impact of the proposed works or activities is considered to be major or contentious, Heritage Approval may still be required regardless of the level of archaeological sensitivity.

Stage 1: Evaluate the archaeological sensitivity of the location at risk

The first step is to establish the archaeological sensitivity rating of the location(s) potentially at risk from the proposed works, and determine an appropriate management response.

This involves an audit of the following documentation for each location:

- The archaeological sensitivity rating specified in the AZP (high, moderate, low, zero).
- The archaeological considerations of an endorsed CMP applying to the area (if applicable).

- The precinct specific management guidelines (Section 8.6).

This process will involve correlating the location of the proposed action with the AZP to establish its sensitivity rating (Figure 7 and Volume 2: Table 3), and identifying provisions that may apply from other relevant management documents. This audit process must be undertaken using the detailed allotment zoning plans (Figure 9; Volume 4), rather than the generalised AZP presented in Figure 9.

The appropriate management response should also be developed in accordance with the heritage protection legislation (Section 8.2.2), relevant non-statutory documents (Section 8.2.3) and general management guidelines (Section 8.5).

- If the location is of *moderate* to *high* archaeological sensitivity, a full archaeological impact assessment is required. If of high sensitivity, the archaeological deposit *could* qualify for retention *in situ*, requiring that the proposed works be significantly modified. Lower values would require varying degrees of avoidance and salvage investigation. This determination will be dependent upon the outcome of a detailed impact assessment process (Stages 2-6). If the sensitivity rating is high to moderate, it would be advisable to select an alternative location with low to zero sensitivity.
- If the location is of *low* archaeological sensitivity, a detailed archaeological impact assessment is not required, however the works must be subject to a Heritage Approval, if applicable, (Stage 5) and monitoring by a qualified archaeologist (Stage 6).
- If the location is of *zero* archaeological sensitivity, no archaeological impact assessment or Heritage Approval is required, however the proposed works or activity must be undertaken in accordance with approved guidelines for unmonitored works (see Section 8.5). A Review of Environmental Factors (REF) will still be required.

In cases where the proposed works or activity affect a range of sensitivity ratings, the highest rating always takes precedence in determining the appropriate management response.

Stage 2: Document the nature and scale of the works or activity

The second stage in the process involves clearly documenting the nature and scale of the proposed works or activity. It is useful to present the proposed action as a series of options so that a low impact alternative can be identified at an early stage in the process. This may involve a comparison of alternative locations, methodologies or construction techniques.

The impact of any proposed works or activities should be rated according to NPWS *Guidelines for Heritage Approval...* (2001c: 1). If the impact is considered to be major or contentious, Heritage Approval may still be required regardless of the level of archaeological sensitivity.

Stage 3: Assess the impact of the action on the archaeological item or landscape

At this stage it is essential to engage a professional qualified to practice in historical archaeology to assess the impact of the proposed works or activity on the archaeological record at the selected location or range of locations, according to the significance of the archaeological record. This may involve more detailed historical research, survey or test excavation at the specified locations, the production of a statement of heritage impact and a detailed statement of heritage significance in accordance with the NSW Heritage Office Archaeological Assessment Manual (Heritage Office 1996a). If possible, redesign the proposed works or activity to avoid any potential archaeological features identified at this stage.

Stage 4: Prepare an appropriate research design

When a major impact to the archaeological record can be demonstrated that requires further investigation through systematic excavation, a research design must be prepared by a qualified historical archaeologist in accordance with the NSW *Heritage Office Archaeological Assessment manual* (Heritage Office 1996a). This will specify the aims and methodologies required to further assess, document and interpret the potential archaeological deposits according to the significance of the remains and pertinent research themes.

Where only monitoring is recommended, in the case of relatively low significance remains, a full research design is not required. The full results of the investigation must be documented to industry standards.

Stage 5: Obtain the necessary consents

Prior to any works or activities being undertaken, investigative or development, it is necessary to establish whether a permit is required under section 60 of the *Heritage Act 1977* to alter or disturb any part of the site.

Since 1998 the Historic Site has been subject to an exemption under Section 57 (2) of the Act, in respect to the 'engaging in or carrying out of any activities described in the Schedule of Standard Exemptions and the Activities to which they apply'. The extent to which these exemptions apply to Hill End is at the discretion of the Manager, NPWS Cultural Heritage Division, under advice from a qualified historical archaeologist. As such, NPWS is a delegated authority for the issuing of permits under Sections 60 and 140 of the *Heritage Act 1977*.

The following guidelines for heritage approval apply specifically to the area contained within the gazetted Historic Site, which is subject to a State Heritage Register listing:

- If the proposed works area exists within privately-owned lands, a consent from the Consent Authority (Bathurst Regional Council) is required as per Sections 7.7 and 7.8 of the Bathurst Regional Development Control Plan (2014).
- If the proposed works area is subject to an endorsed CMP, no permit is required provided the provisions for archaeological management within the CMP are implemented.
- If the proposed works area is not subject to an endorsed CMP, a permit is required under Sections 60 or 140 of the *Heritage Act 1977*.
- If the proposed works area is not subject to an endorsed CMP, but is categorised as having zero archaeological sensitivity, no permit is required.

Stage 6: Implement the archaeological management process

State government heritage authority is responsible for the correct application and implementation of this management process, and ensuring that adequate time, funding and resources are applied to fulfil the proposed research design and any permit conditions.

9.3 Recommendations

In addition to the archaeological management process specified above, the following recommendations will enable Bathurst Regional Council (BRC) and NPWS to be proactive in the management and conservation of the archaeological resources of Hill End. These actions cover two aspects not included within the routine management process:

- the acquisition, testing and refinement of archaeological management data, and

- forward planning for infrastructure development and other management actions.

The preceding recommendations should be considered in conjunction with the requirements of the Bathurst Regional Development Control Plan (DCP), 2014, under Sections 7 (*Rural Village Development*) and 10 (*Urban Design and Heritage Conservation*) (see Appendix 6). The recommendations presented in the following section must be considered in compliance with existing provisions (e.g. consent or permits) set within the DCP (2014). Therefore, the DCP should be considered as the primary protocol in the assessment of heritage items (including privately-owned lands), in addition to the Bathurst Regional Local Environmental Plan, 2014 (LEP). The relevant provisions (clauses) outlined by the DCP (2014), which must be adhered to in the consideration to any recommendations considered by this AMP, are as follows:

Bathurst Regional Development Control Plan, 2014

Section 7.8 Archaeology

(7.8.1) Hill End –

- [Bathurst Regional] Council must not grant consent to any building or subdivision work on land identified as being of either high or moderate, or unknown archaeological significance on DCP Map No. 22 - Hill End Archaeology, unless it has considered an archaeological report which examines the likelihood of archaeological remains being located on the site.
- [Bathurst Regional] Council must not grant consent to any building or subdivision works within the Hill End Historic Site or on land identified as “archaeologically unknown” on DCP Map No 22 – Hill End Archaeology unless it imposes a condition of consent that requires the applicant to stop works immediately and notify the NSW Heritage Branch and Council if any archaeological remains or relics are discovered. If relics are discovered a Section 140 permit under the NSW Heritage Act will need to be obtained from the Heritage Branch (see also section 10.9 – Archaeological Permits) of this Plan (see Appendix 6).

Section 10.9 Archaeological Permits

(10.9.1) General –

If the applicant or [Bathurst Regional] Council knows of former historical uses on a site, such as former mining sites, buildings which have been demolished or former uses, then it may be likely that relics will be on the site.

A relic is any deposit, artefact, object or material evidence that:

- relates to the settlement of the area of the Bathurst Regional LGA, not being Aboriginal settlement, and
- is of State or local heritage significance.

Development Standards

- If [Bathurst Regional] Council is of the opinion that a site is highly likely to contain archaeological relics, it must not grant consent to any building or subdivision work on land unless it has considered an archaeological report which examines the likelihood of archaeological remains being located on the site. In granting consent [Bathurst Regional] Council may require an excavation permit be obtained from the NSW Heritage Division, Office of Environment and Heritage.
- If Council is of the opinion that it is likely that a site might contain archaeological relics, it must include a condition of the consent as follows:

- (i) During the development, if any archaeological remains are discovered, the developer is to stop works immediately and notify the NSW Heritage Division and Council. Any such find is to be dealt with appropriately, in accordance with the Heritage Act 1977, and recorded, and details given to Council prior to the continuing of works.

Note: A Section 140 permit will need to be obtained to disturb archaeological relics. This permit is to be obtained from the NSW Heritage Division, Office of Environment and Heritage, prior to the disturbance of the archaeological relics.

- (ii) The applicant is to lodge, prior to the issue of a construction certificate, a Construction Heritage Management Plan to Council which addresses the following:
 1. Mitigation measures in relation to the likely archaeology onsite;
 2. The proposed monitoring that will be in place for any archaeological relics uncovered;
 3. Training, resources and consultation for staff on the site during excavation;
 4. Incident management protocol; and
 5. Methods dealing with unexpected finds during works.

9.3.1 General Requirements and Contingencies

Further to the DCP (2014) and based on the results of this AMP, where development should, or is proposed to occur, it is recommended that:

Where land or an Archaeological Feature (AF) that is not considered to be a modern feature (see Volume 3), is identified as having a moderate to high archaeological potential (Figure 7), the applicant should provide notification of intent for any impact²⁹ activities that may significantly alter the historic significance of a place and/or the integrity of archaeological deposits. BRC may then consider whether it is reasonable to impose the following conditions of consent:

Development Standards

- (a) The applicant is to lodge, prior to the issue of a construction certificate, a Construction Heritage Management Plan to Council which addresses the following:
 - (i) Mitigation measures in relation to the likely archaeology onsite;
 - (ii) The proposed monitoring that will be in place for any archaeological relics uncovered;
 - (iii) Training, resources and consultation for staff on the site during excavation;
 - (iv) Incident management protocol; and
 - (v) Methods dealing with unexpected finds during works.

²⁹ As per Bathurst Regional Development Control Plan (2014:159); "By 'impact' the report covers any effect that may alter the historic significance of a place. It can be a visual or physical effect. It can be a small or large effect. Having an 'impact' does not mean that such a proposal cannot proceed. The description of the impact enables council staff to determine whether the impact is acceptable and/or has been sufficiently mitigated."

- (b) During the development, if any archaeological remains are discovered, the developer is to stop works immediately and notify the NSW Heritage Division and BRC. Any such find is to be dealt with appropriately, in accordance with the *Heritage Act 1977*, and recorded, and details given to BRC prior to the continuing of works.
- (c) Where land is identified as having high archaeological potential on Figure 7, BRC may then consider whether it is reasonable to impose the following conditions of consent:
 - (i) An excavation permit must be obtained from the NSW Heritage Division, Office of Environment and Heritage. The excavation 175 Bathurst Regional Development Control Plan 2014 permit is to be supported by a site specific Archaeological Assessment Report prepared by a specialist heritage archaeologist. A copy of the Archaeological Assessment Report and the excavation permit are to be provided to BRC prior to the issue of a Construction Certificate.
 - (ii) The applicant is to lodge, prior to the issue of a construction certificate, a Construction Heritage Management Plan which addresses the following:
 1. The recommendations of the Archaeological Assessment Report and any requirements of the excavation permit;
 2. Mitigation measures that will be in relation to the likely archaeology onsite;
 3. The proposed monitoring in place for any archaeological relics uncovered;
 4. Training, resources and consultation for staff on the site during excavation;
 5. Incident management protocol; and
 6. Methods dealing with unexpected finds during works.
 - (iii) During the development, if any archaeological remains are discovered, the developer is to stop works immediately and notify the NSW Heritage Division and Council. Any such find is to be dealt with appropriately, in accordance with the *Heritage Act 1977*, and recorded, and details given to Council prior to the continuing of works.

9.3.2 General Recommendations

Recommendation 1: Testing and refining the archaeological zoning plan

To complete the development of archaeological predictive modelling, it is necessary to undertake test excavation to assess the quality of the data and the usefulness of the archaeological zoning plan as a management tool for future use.

Given the costs involved in open area excavation and the nature of Crown and private land ownership, it is recommended that this can be most effectively achieved through a programme of minor excavation and monitoring associated with infrastructure development and other works, where they occur. The results of these minor excavations can be used to build up a pattern of the sub-surface structure and deposition in a range of locations across the Historic Site. In order to achieve best results, it would be prudent to undertake a number of minor investigations in areas where no development, especially on Crown-managed land, is planned to assure adequate spatial coverage.

The results can be collated, and documented as part of a review process for the Archaeological Management Plan (AMP).

Recommendation 2: Clearance of infrastructure corridors

At this stage there is inadequate data to allow the implementation of even minor infrastructure and other management works in the core village centre (Precinct 1) without a detailed archaeological review. To facilitate future development in this area of high archaeological significance, it is recommended that the location of existing modern infrastructure be mapped and incorporated into the AZP for comparison with the archaeological sensitivity ratings.

It is further recommended that BRC, NPWS and private owners determine future utility requirements, in order to establish infrastructure corridors across the site that can be assessed and cleared for archaeological deposits in a single upfront process, and avoid the need for continual small scale impact assessment work.

Recommendation 3: Further investigation

This AMP has contributed significantly to our understanding of the archaeological record at Hill End, but has been limited in its scope to address specific site or management issues through the task of collating, synthesising and presenting the vast quantities of archaeological and historical data in a useful format.

It is recommended that consideration be given to revisiting some aspects of this AMP in terms of further field checking which could resolve many outstanding issues relating to the fine detail of the plan (e.g. the location and significance of sites and features) and better define the opportunities and constraints for development. If possible, it would be particularly useful to assess a range of proposed development options to better develop a management process to facilitate their implementation.

Recommendation 4: Interpretation

It is recommended that consideration be given to the interpretation of RU5, in-line with the Hill End Interpretation Draft Plan commissioned by NPWS. The interpretation and significance of privately-owned land may be considered through adaptive reuse and authentic conservation of the town and its history under the existing overarching framework (GML et. al. 2014:18). This general framework is centred around themes developed to accommodate storylines, which form a thematic structure based on the history and heritage values of the Historic Site (GML et. al. 2014:19). Therefore, these values may be translated through the preservation of heritage character through authentic conservation, publicly explored through general or site-specific histories, and community engagement by the use of interactive spatial resources (e.g. interactive maps with historical overlays).

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**Appendix 1: Property Parcel Locations and Parcel Identifiers
(ALA Site and ALA ID)**

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Preamble

This appendix presents the unique parcel identifiers, referred to throughout this report as *ALA Sites* with unique parcel identifiers (*ALA ID*). The following maps illustrate the spatial distribution of the property parcels investigated by this AMP, within RU (Figure 11 and Figure 12). Each property parcel is itemised in Table 1, which also details property and ownership information.

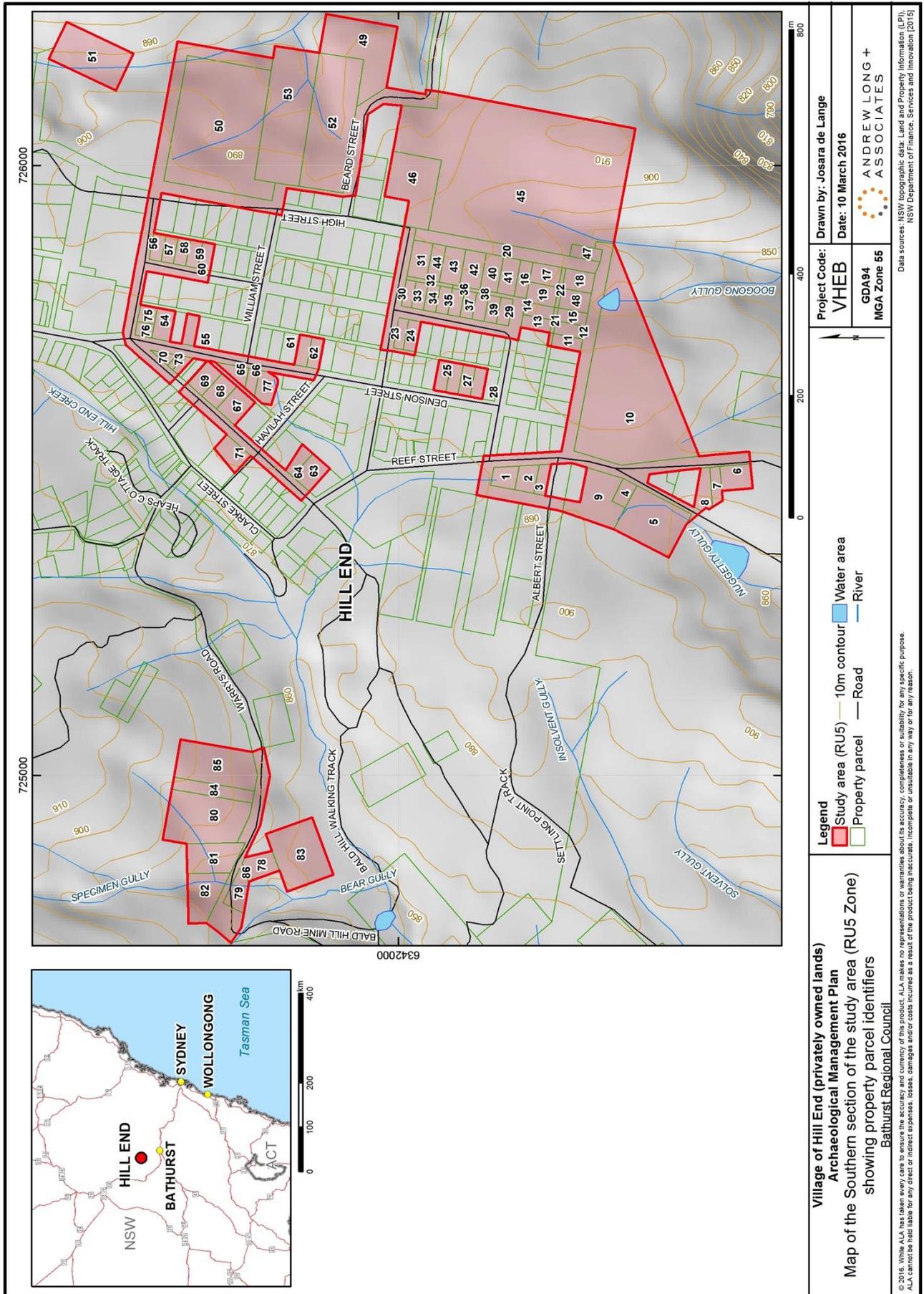


Figure 11: Map of southern section of study area, showing parcel identifiers (ALA ID)

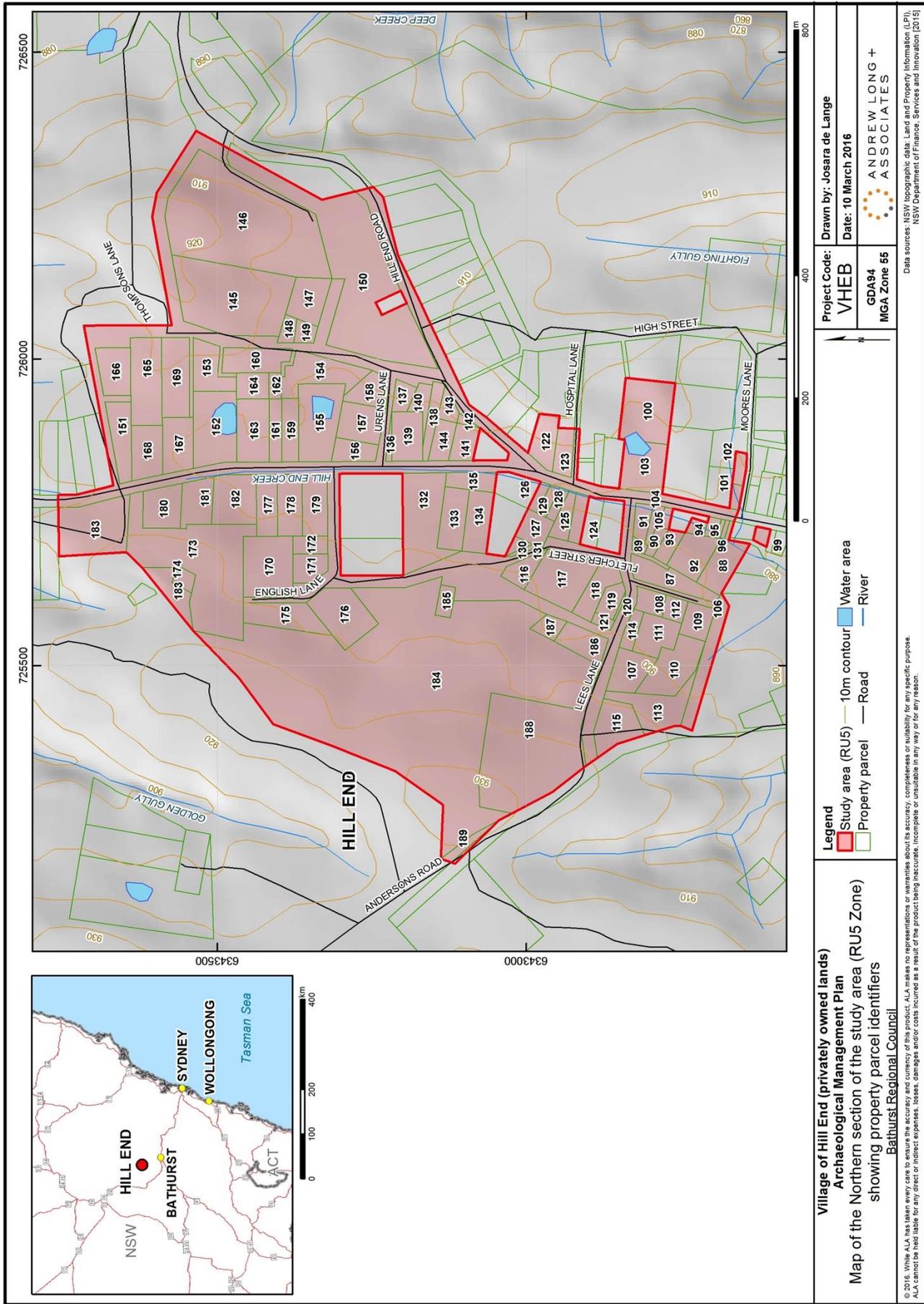


Figure 12: Map of northern section of study area, showing parcel identifiers (ALA ID)

Table 1: Property information and Parcel Identifiers

ALA ID	Archaeological Precinct	Parcel No.	Lot	Section	Area	Plan No.	Property Address	Ownership Information
0	All	N/A	N/A	All	179353.69	N/A	All	Road reserves and miscellaneous (Public)
1	4	31053	1	13	1389.10	758517	43 Reef Street	Private
2	4	31054	2	13	1363.57	758517	37 Reef Street	Private
3	4	31055	4	13	944.12	758517	37 Reef Street	Private
4	4	31288	210		1014.50	756905	17 Reef Street	Private
5	4	31248	111		8082.31	756905	15 Reef Street	Private
6	4	39912	188		2020.67	756905	Reef Street	National Parks and Wildlife Service
7	4	31326	1		1023.61	716584	3 Reef Street	Private
8	4	31327	2		1548.96	716584	5 Reef Street	Private
9	4	89552			5680.41			Hill End & Tambaroora Common Trust
10	4	89552			36990.15			Hill End & Tambaroora Common Trust
11	4	40554	11	4	1033.57	758517	Albert Street	Public
12	4	31147	10	4	1034.00	758517	1 High Street	Private
13	4	31144	7	4	1029.51	758517	1 High Street	Private
14	4	31145	8	4	1029.32	758517	1 High Street	Private
15	4	31146	9	4	1034.09	758517	1 High Street	Private
16	4	31137	1		1221.76	250785	1 High Street	Private
17	4	31149	18	4	1602.54	758517	1 High Street	Private
18	4	31150	19	4	1610.81	758517	1 High Street	Private
19	4	31148	17	4	1602.44	758517	1 High Street	Private
20	4	31136	1		6089.01	241091	1 High Street	Private
21	4	31138	2		257.57	250785	1 High Street	Private
22	4	31159	10		400.74	131477	1 High Street	Private
23	4	31001	17	5	834.58	758517	17 Bowen Street	Private
24	4	31000	16	5	1010.64	758517	17 Bowen Street	Private
25	4	30989	4	5	1012.38	758517	10 Denison Street	Private
26	4	30990	5	5	1012.36	758517	10 Denison Street	Private
27	4	30992	6	5	1012.55	758517	10 Denison Street	Private
28	4	30993	7	5	1012.43	758517	10 Denison Street	Private

ALA ID	Archaeological Precinct	Parcel No.	Lot	Section	Area	Plan No.	Property Address	Ownership Information
29	4	30981	9	3	882.01	758517	Bowen Street	Private
30	4	31140	1	3	727.81	758517	1 High Street	Private
31	4	31135	1	25	1945.57	758517	1 High Street	Private
32	4	31158	9		464.34	131477	1 High Street	Private
33	4	31141	2	3	881.03	758517	1 High Street	Private
34	4	31142	3	3	882.44	758517	1 High Street	Private
35	4	31143	4	3	882.44	758517	1 High Street	Private
36	4	30978	5	3	882.01	758517	4 Bowen Street	Private
37	4	30979	6	3	882.44	758517	4 Bowen Street	Private
38	4	30980	7	3	882.44	758517	4 Bowen Street	Private
39	4	40555	8	3	882.44	758517	Bowen Street	Private
40	4	31155	5	25	1729.38	758517	1 High Street	Private
41	4	31156	6	25	1720.28	758517	1 High Street	Private
42	4	31154	4	25	2025.15	758517	1 High Street	Private
43	4	31153	3	25	2010.42	758517	1 High Street	Private
44	4	31152	2	25	1296.86	758517	1 High Street	Private
45	4	31139	2		73347.15	776864	1 High Street	Private
46	4	31322	1		7676.15	776864	2 High Street	Private
47	4	31157	10	27	1035.62	758517	1 High Street	Private
48	4	31151	20	4	1610.42	758517	1 High Street	Private
49	4	31261	276		9969.12	756905	Beard Street	Private
50	4	31260	221		30783.44	756905	Beard Street	Private
51	4	30991	136		8111.03	756905	High Street	Private
52	4	37825	2		16183.49	1074552	Beard Street	Private
53	4	37826	1		16211.91	1074551	William Street	Private
54	2	31016	2	7	1518.86	758517	52 Denison Street	Private
55	2	31018	B		1033.96	329801	48 Denison Street	Private
56	4	30962	1	1	882.32	758517	Bowen Street	Private
57	4	30963	2	1	882.45	758517	Bowen Street	Private

ALA ID	Archaeological Precinct	Parcel No.	Lot	Section	Area	Plan No.	Property Address	Ownership Information
58	4	30964	3	1	883.53	758517	54 Bowen Street	Private
59	4	30965	4	1	883.35	758517	52 Bowen Street	Private
60	4	30966	5	1	882.89	758517	52 Bowen Street	Private
61	4	31006	4	6	1011.60	758517	30 Denison Street	Private
62	4	31007	5	6	1011.62	758517	30 Denison Street	Private
63	4	31063	4	16	1871.63	758517	39 Tambaroora Street	Private
64	1	31062	3	16	961.01	758517	39 Tambaroora Street	Private
65	4	31034	10	8	938.73	758517	19 Tambaroora Street	Private
66	4	31033	9	8	705.05	758517	19 Tambaroora Street	Private
67	4	31031	4	8	2010.67	758517	19 Tambaroora Street	Private
68	4	31030	3	8	1602.83	758517	19 Tambaroora Street	Private
69	4	31029	2	8	1497.61	758517	19 Tambaroora Street	Private
70	1	31027	11	8	441.27	758517	Tambaroora Street	Private
71	1	31074	8	17	1797.20	758517	34 Tambaroora Street	Private
72	1	31028	1		75.02	723947	19 Tambaroora Street	Private
73	4	35203	2		400.04	903027	Tambaroora Street	Private
74	1	35204	1		292.45	903027	Tambaroora Street	Private
75	4	31015	1		762.15	1109205	19 Belmore Street	Private
76	4	31014	1		638.95	662582	19 Belmore Street	Private
77	4	35005	2		1537.43	1003190	Denison Street	Private
78	4	31221	185		1839.05	756905	71 Warrays Road	Private
79	4	31275	178		1689.72	756905	85 Warrays Road	Private
80	4	31285	201		10025.98	756905	70 Warrays Road	Private
81	4	31263	147		4047.96	756905	78 Warrays Road	Private
82	4	31262	146		4047.34	756905	82 Warrays Road	Private
83	4	31220	81		8082.58	756905	71 Warrays Road	Private
84	4	31286	1		2674.35	820974	70 Warrays Road	Private
85	4	31222	202		8114.77	756905	Warrays Road	Public
86	4	39970			217.39	.	Warrays Road	National Parks and Wildlife Service

Archaeological Precinct		Property Address				Ownership Information	
ALA ID	Parcel No.	Lot	Section	Area	Plan No.	Property Address	Ownership Information
87	4	31173	20	4319.97	756905	11 Lees Lane	Private
88	4	31176	103	3957.86	756905	11 Lees Lane	Private
89	4	31174	75	435.34	756905	Lees Lane	Private
90	4	31187	267	839.23	756905	11 Lees Lane	Private
91	4	31186	249	1473.41	756905	Beyers Avenue	Private
92	4	31175	102	3962.66	756905	11 Lees Lane	Private
93	4	31177	142	1450.02	756905	11 Lees Lane	Private
94	4	31185	248	690.77	756905	11 Lees Lane	Private
95	4	31183	246	644.15	756905	11 Lees Lane	Private
96	4	31180	234	220.58	756905	Beyers Avenue	Private
97	4	31181	235	221.95	756905	Beyers Avenue	Private
98	4	31182	236	215.50	756905	Beyers Avenue	Private
99	4	31179	233	612.85	756905	Beyers Avenue	Private
100	4	31215	B	8073.23	903858	36 Beyers Avenue	Private
101	4	31325	194	668.65	756905	Beyers Avenue	Private
102	4	31324	359	1013.63	756905	18 Moores Lane	Private
103	4	31214	A	5664.15	903858	36 Beyers Avenue	Private
104	4	31184	247	581.30	756905	11 Lees Lane	Private
105	4	31188	268	835.72	756905	Beyers Avenue	Private
106	4	88127		184.77		National Parks and Wildlife Service	
107	4	31292	375	3807.44	728826	27 Lees Lane	Private
108	4	31171	5	1754.73	756905	Lees Lane	Private
109	4	31276	183	2504.48	756905	13 Lees Lane	Private
110	4	31293	376	6145.57	728826	27 Lees Lane	Private
111	4	31178	165	3829.69	756905	Lees Lane	Private
112	4	31172	6	1317.97	756905	Lees Lane	Private
113	4	40559	7321	5770.60	1165262	Lees Lane	Public
114	4	40557	7322	1382.86	1165262	Lees Lane	Public
115	4	40558	7012	4774.41	93436	Lees Lane	National Parks and Wildlife Service

Archaeological Precinct		Parcel No.	Lot	Section	Area	Plan No.	Property Address	Ownership Information
116	4	31236	92		2064.27	756905	18 Fletcher Street	Private
117	4	31234	91		7300.99	756905	12 Lees Lane	Private
118	4	31235	220		3289.63	756905	12 Lees Lane	Private
119	4	31280	195		1740.46	756905	18 Lees Lane	Private
120	4	31281	358		179.92	756905	18 Lees Lane	Private
121	4	31282	298		607.78	756905	Lees Lane	Public
122	4	31295	301		3160.04	756905	Hospital Lane	Private
123	4	31294	251		2194.30	756905	Hospital Lane	Private
124	4	31233	252		1697.65	756905	Beyers Avenue	Public
125	4	31232	250		1811.23	756905	Beyers Avenue	Public
126	4	31230	213		803.01	756905	Fletcher Street	Private
127	4	31228	90		2365.11	756905	Fletcher Street	Private
128	4	31231	218		883.13	756905	Fletcher Street	Private
129	4	31229	217		843.03	756905	Fletcher Street	Private
130	4	31283	200		586.55	756905	18 Fletcher Street	Private
131	4	31284	363		269.02	756905	18 Fletcher Street	Private
132	4	31246	1		9998.18	830375	Hill End Road	Private
133	4	31216	77		4043.87	756905	Hill End Road	Private
134	4	31217	78		4044.65	756905	Hill End Road	Private
135	4	31218	167		2278.30	756905	Hill End Road	Private
136	4	31208	85		404.70	756905	3664 Hill End Road	Private
137	4	31210	141		1437.47	756905	3664 Hill End Road	Private
138	4	31209	139		2010.27	756905	3664 Hill End Road	Private
139	4	31207	24		4046.90	756905	3664 Hill End Road	Private
140	4	31211	242		1549.07	756905	3664 Hill End Road	Private
141	4	31224	87		2248.44	756905	Hill End Road	Private
142	4	31225	117		310.13	756905	Hill End Road	Private
143	4	31226	140		1207.50	756905	Hill End Road	Private
144	4	31223	86		2182.46	756905	Hill End Road	Private

ALA ID	Archaeological Precinct	Parcel No.	Lot	Section	Area	Plan No.	Property Address	Ownership Information
145	4	31313	318		19319.33	756905	22 Thompsons Lane	Private
146	4	31297	319		35355.61	756905	3538 Hill End Road	Private
147	4	31303	275		4122.13	756905	18 Thompsons Lane	Private
148	4	31296	253		1018.23	756905	Thompsons Lane	Private
149	4	31298	317		1119.00	756905	Hill End Road	Private
150	4	90795	10		32289.33	1135025	Hill End Road	Private
151	4	31170	170		4109.35	756905	3714 Hill End Road	Private
152	4	31212	54		8398.27	756905	3700 Hill End Road	Private
153	4	31307	296		4017.89	756905	Thompsons Lane	Private
154	4	31197	295		6003.14	756905	9 Thompsons Lane	Private
155	4	31193	58		8229.55	756905	9 Thompsons Lane	Private
156	4	31194	74		2364.88	756905	Thompsons Lane	Private
157	4	31189	18		4297.61	756905	Thompsons Lane	Private
158	4	31196	241		2934.93	756905	9 Thompsons Lane	Private
159	4	31192	57		2799.26	756905	9 Thompsons Lane	Private
160	4	31304	288		4120.48	756905	27 Thompsons Lane	Private
161	4	31191	56		2073.68	756905	9 Thompsons Lane	Private
162	4	31198	311		850.65	756905	9 Thompsons Lane	Private
163	4	31190	55		5400.83	756905	9 Thompsons Lane	Private
164	4	31195	169		2229.68	756905	9 Thompsons Lane	Private
165	4	31169	138		7181.39	756905	3714 Hill End Road	Private
166	4	31166	1		3985.68	756905	3714 Hill End Road	Private
167	4	31167	17		4402.74	756905	3714 Hill End Road	Private
168	4	31168	53		4293.62	756905	3714 Hill End Road	Private
169	4	31308	297		5800.28	756905	45 Thompsons Lane	Private
170	4	31240	95		7977.88	756905	26 English Lane	Private
171	4	31250	113		2418.77	756905	English Lane	Private
172	4	31249	112		1658.24	756905	English Lane	Private
173	4	31300	260		23473.11	756905	3709 Hill End Road	Private

ALA ID	Archaeological Precinct	Parcel No.	Lot	Section	Area	Plan No.	Property Address	Ownership Information
174	4	31329	373		1010.73	42898	3711 Hill End Road	Private
175	4	31321	340		5069.59	756905	24 English Lane	Private
176	4	34836	368		6690.68	756905	English Lane	Public
177	4	31201	60		3451.51	756905	Hill End Road	Private
178	4	31202	61		4057.50	756905	Hill End Road	Private
179	4	31200	21		4062.12	756905	Hill End Road	Private
180	4	40643	24		4134.00	1116427	Hill End Road	Private
181	4	40642	23		3705.41	1116427	3703 Hill End Road	Private
182	4	40641	22		5647.49	1116427	3693 Hill End Road	Private
183	4	89552	7318		12479.37	1184639	Warrys Road	Hill End & Tambaroora Common Trust
184	4	31301	261		122639.09	756905	Andersons Road	Public
185	4	31305	290		1242.82	756905	Fletcher Street	Private
186	4	31302	270		3266.68	756905	26 Lees Lane	Private
187	4	31330	374		1406.90	725038	Lees Lane	Private
188	4	88127	7320		25478.79	1165262	Lees Lane	Public
189	4	89552			1060.22			Hill End & Tambaroora Common Trust

Appendix 2: Project Brief (Bathurst Regional Council)

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Village of Hill End (Privately owned
lands) - Archaeological
Management Plan

20.00287

REQUEST FOR QUOTATION

1.0 Introduction

Bathurst Regional Council is seeking a quotation to undertake an archaeological management plan of the privately owned lands in and around the village of Hill End. Council is pleased to invite you to submit a quotation to complete the study in accordance with the project brief requirements set out below and in accordance with relevant NSW Heritage Division guidelines and publications.

2.0 Project Purpose

The aim of the study is to identify and assess the relative likelihood for and significance of archaeological resources to exist on privately owned land at Hill End and to provide guidance to Council on how those archaeological resources are best managed into the future.

Council seeks to use the findings of the study to primarily develop planning provisions in its LEP/DCP to protect the potential archaeological resources on privately owned land in a manner similar to that which has already been completed for lands owned/controlled by the Office of Environment and Heritage (National Parks and Wildlife Service).

The findings of the study may also be used for additional interpretation of the history of the village of Hill End.

Non-invasive field assessments of all sites is proposed by this study. Physical investigations are not required as part of this study.

3.0 Background

Hill End is located at the north western boundary of the Bathurst Regional local government area. The village has a current population of approximately 46 permanent residents although during the gold rush era of the late 1800s the population of the locality reached nearly 30,000.

The village is zoned RU5 Village and E1 National Parks and Nature Reserves under Bathurst Regional Local Environmental Plan 2014. Low population growth is expected within the village in future years. New development is likely to occur as infill development or ancillary structures to existing dwellings (e.g. sheds). Tourism remains the principal industry of the village.

Much of the village is in the care and control of the Office of Environment and Heritage – OEH (National Parks and Wildlife Service). For these lands the OEH is the consent authority. Bathurst Regional Council is the consent authority for the privately owned land.

The Hill End historic site is listed on the NSW State Heritage Register. The NSW Heritage Division of OEH is the consent authority with respect to section 60 of the Heritage Act 1977 for the Hill End Historic Site. The site is also listed as a heritage conservation area on Bathurst Regional LEP 2014.

Five individual buildings are also listed as heritage items in schedule 5 of the Bathurst Regional LEP 2014.

Attachment 1 provides the Bathurst Regional DCP Map No. 21 which shows the relevant consent authority at Hill End and the historic site boundaries. It also shows other environmental constraints identified by Council for the future development of the Hill End Village.

The Bathurst Region Heritage Study 2007 developed the following statement of significance for Hill End.

Hill End is a place of national cultural significance due to its aesthetic, historic, scientific and social value to past, present and future generations of Australians. From the period of its settlement and principal development in the early 1870s, Hill End retains a unique collection of buildings, relics, artefacts, structures, archaeological sites and landscape elements which are, individually and collectively, of outstanding architectural, aesthetic and research value.

The village is set along a gold bearing quartz seam within a tablelands landscape of rolling hills, accentuating the feelings of peaceful isolation. From the hectic gold rush era and subsequent years of decline, to the period of NPWS intervention, the village, buildings, vacant sites and gardens continue to reflect the social and economic forces which continue its survival.

Many surviving cottages, small commercial buildings and their settings form part of the landscape of Hill End and are representative of the ongoing development of the town as a gold boom settlement and a subsistence mining area. They are also representative of the resilience of the community of Hill End, with its culturally diverse population, and of the life and works of prominent former Hill End residents such as Mayor Hugo Louis Beyers.

A key objective of Bathurst Regional DCP 2014 as it applies to Hill End is:

To preserve archaeological remains and relics, both above and below ground, including building foundation remains, kerbs and gutters, roads and retaining walls, fences and posts.

Some years ago the National Parks and Wildlife Service (NP&WS) engaged Andrew Long and Associates to undertake archaeological investigations of land in their care and control. This report is provided electronically on the CD **enclosed**. Council subsequently included a sensitive land map in the Bathurst Regional DCP 2014 (DCP Map No. 22) in response to the outcomes of this report, see **attachment 2**.

The NP&WS report does not extend beyond land under their care and control. The aim of this Study is to fill this gap in knowledge for the remaining settlement area.

At a minimum the study will consider the privately owned land at Hill End zoned RU5 Village (see map at **attachment 3**). The final study area boundaries will be dependent upon the outcomes of 5.1 below.

5.0 Scope of Works

The scope of works is to include, as a minimum, the following matters.

- 5.1 Determine the key historic boundaries of settlement of Hill End. This may extend beyond the RU5 Village and E1 National Parks and Nature Reserve zones under the Bathurst Regional LEP 2014. The extent of the boundaries of the study area is to be agreed with by Council before further study commences. Note that the study will not extend beyond the boundaries of the Bathurst Regional local government area.

5.2 Prepare a brief thematic history of the settlement focussing on its physical history to assist in the identification and assessment of potential archaeology. This should encompass the identification (mapping) of different thematic archaeological landscapes within the study area and the sites associated with these to distinguish natural and cultural landscapes, patterns of settlement/activity and the elements that define these. The history is to be incorporated into the final study document.

5.3 Undertake non-invasive field assessments of all sites within those boundaries (excluding land owned/controlled by the National Parks and Wildlife Service – that is land zoned E1 National Parks and Nature Reserves) to identify the relative likelihood and significance for archaeological resources. The assessment (including relevant mapping) is to include, at a minimum those matters outline in 5.3.1 to 5.3.4 below.

5.3.1 The physical condition of the archaeological resource. The report is to identify those sites with archaeological potential, based on the assessed physical condition of the archaeological resource of the area. The potential physical condition of sites, (intactness level), is to be indicated via a grade range that might include:

- Undisturbed
- Minor Disturbance
- Partly Disturbed
- Mostly Disturbed
- Mixed Disturbance
- Destroyed and
- Archaeologically Removed

Note that this grading is used in the National Parks and Wildlife report and for consistency should be used in this study.

5.3.2 The Integrity of the archaeological resource indicating the assessed presence/absence of (known) in-situ archaeology. The likely depth of archaeological deposits below current ground surfaces at given points across the study area is to be assessed. Where possible, historic building footprints and evidence of other items or objects on each site should be mapped.

Indicating deposit depths can inform decisions regarding appropriate building and footing designs that need not impact *in situ* archaeological deposits located below. Alternatively, when those sites require excavation or exposure of archaeological remains providing deposit depths assists development projects by advising where bulk landfill removal may be able to be undertaken, saving time and resources.

5.3.3 The archaeological research potential of each site. The archaeological research potential of each site is determined by combining evidence of physical condition and significance. The levels of potential are generally indicated as:

- Exceptional
- High
- Moderate
- Little, or
- None

This research provides an instant, early indication of where sites of exceptional research potential are located. Concentrations of these sites can denote “priority” areas to indicate where resources may best be focused, to determine research and management requirements before development is proposed.

- 5.3.4 The archaeological significance of the sites (state, local, none) based on its cultural significance assessment. In addition to the importance of the archaeology, significance assessment should also consider any standing structures and the site in its landscape setting where these aspects are relevant for other significance assessment criteria . The Study should also outline any recommended archaeological actions or heritage listings for each site.

Note: Refer to the NSW Heritage Division documents *Guidelines for Assessing Significance for Historical Archaeological Sites and Relics* (2009), *Guidelines for the Preparation of Archaeological Management Plans* (2009) and *Archaeological Assessment Guidelines* (2006).

- 5.4 Make recommendations as to the preferred method of development controls to enable the future identification of archaeological remains on-site and their protection when land is proposed for future development. This is to include the information requirements that Council should request upon receipt of a DA and the approval and information requirements of the NSW Heritage Division.
- 5.5 Identify those sites that should be considered for future interpretation either by Council or the National Parks and Wildlife Service or by private owners when sites are redeveloped.
- 5.6 Update the State Heritage Inventory database for the Bathurst Regional Local Government area based on the findings of the study.

6.0 Consultation

The study is to be prepared in consultation with the Office of Environment and Heritage (National Parks and Wildlife Service), including the Manager of the Hill End historic site. A copy of the draft Study is to be referred to the Office of Environment and Heritage for comment and where required those comments addressed prior to the finalisation of the report.

At the commencement of the study the consultant is to address the Hill End and Tambaroora Progress Association with a brief presentation of the study.

7.0 Administrative Considerations

- a) The Study will be in the form of a written report, including appropriate maps and diagrams.
- b) The contents and results of the study are to remain confidential until otherwise authorised by Council. The public release of the plan will be at Councils discretion.
- c) Copyright of the study is to be vested in Bathurst Regional Council, unless Council resolves otherwise.
- d) Upon acceptance of the final draft by Council, the Consultant is to provide, 2 bound copies and 1 electronic disc of the study, all maps and the State Heritage Inventory Database.
- e) Bathurst Regional Council reserves the right to use the study as part of funding applications and ongoing reviews without necessarily referring to the consultant used.
- f) The following plans/studies will be made available to the successful consultants:
 - Bathurst Regional LEP 2014
 - Bathurst Regional DCP 2014
 - Bathurst Region Heritage Study 2007
 - Bathurst Region Archaeological Management Plan 2011
 - Andrew Long and Associates, 2002, Hill End Historic Site, Archaeological Landscape Management Plan
 - Aerial imagery and cadastre mapping for the study area and surrounds.
- g) The consultant is to provide a curriculum vitae of all persons involved in the study and must nominate the project manager. Any quotation to this brief must include the following:
 - cost for the study,
 - preferred method of payment, and
 - timeframe for the completion of the study.
- h) Terms of Engagement will be as per the Australian Standard AS 4122-2010 "General conditions of contract for engagement of consultants", or as negotiated and including any conditions outlined in this brief.

8.0 Project Management

Council's steering committee is:

- Project Manager – Janet Bingham, Manager Strategic Planning
- Barbara Hickson – Council Heritage Advisor
- Hill End Historic Site Manager, National Parks and Wildlife Service

The appointed consultant must attend a project establishment meeting with the Council project manager, and members of the steering group, at the Civic Centre on a mutually agreed date, as soon as practical after a letter of offer has been received by the consultant.

The appointed consultant must attend project progress meetings, as required, with the Council project manager and steering group at the Civic Centre or on site.

Council Staff will be made available to provide ongoing assistance throughout the study process, such as the preparation of a correspondence list of property owners, assistance with site visits and arranging community meetings.

Council Staff will be available to attend site visits to ensure that a sound working relationship is formed with the consultant. From past experience Council finds this method to be beneficial with the knowledge transfer between the consultant and Council staff regarding the region's history.

When the consultant team is visiting Bathurst, telephone, office space, computer and digital camera can be made available upon request.

9.0 Lodgement and Closing Date

Expressions of interest must be addressed to:

Bathurst Regional Council Private Mail Bag 17

BATHURST NSW 2795

and will be received up until 4pm on **Friday 6 February 2015**.

The lobbying or liaison with Councillors prior to the consideration of the expressions of interest by Council will lead to the rejection of the expressions of interest.

The lowest or any quotations will not necessarily be accepted by Council.

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Appendix 3: Methodology (Archaeological Zoning Plan)

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Introduction

This appendix presents the methodology employed in formulating the Archaeological Zoning Plan. This methodology is described in detail as a single, continuous process to allow other researchers the opportunity to check the fine detail contained in the individual title zoning plans, and as such act as a blueprint for future refinements.

The methodology is sub-divided into four stages:

- Stage 1: Built history analysis.
- Stage 2: Field survey.
- Stage 3: Define archaeological sensitivity variables.
- Stage 4: Classify archaeological sensitivity.

Stage 1: Overview of the Built History

The built history component of the study was developed using commonly available sources of information only, and cannot be viewed as fully comprehensive on an individual title basis. There are considerable discrepancies between the various map and textural sources, which it has not been possible to resolve in this overview.

The following primary sources were used:

Maps:

- 1859. 'Plan Shewing the Proposed Boundaries for a Village at the Bald Hills Within Them, 1859, Now Village of 'Forbes' (AO 2723)
- 1862. 'Design for the Village of Hill-End, County of Wellington, New South Wales, 1859' (AO 114 and later redrawn in 1870 as AO 10634).
- ? 1863 (date not clear on copy). 'Plan of part of the Village of Hill-End, Shewing the Widths of the Carriage and Footways proposed to be aligned under the Act of Council 2 Vic: No. 2, after having been opened under the Act of Council Will: XI' (nb: black and white copy only. The original is in colour, showing the fabric of different building types in Clarke and Tambaroora Streets.)
- 1871. 'Plan of the Village of Hill-End, Parish of Tambaroora. County of Wellington. N.S.W. 1871.
- 1874. 'Plan of the Village of Hill-End, Parish of Tambaroora. County of Wellington. N.S.W. 1874' (AO 18721).

The 1859 and 1871-1874 map series comprise the single most useful record of the built history of the *southern* part of the present township, though the documented timeframe is very narrow. Unfortunately, no later map sources identifying individual buildings have been identified and the process of decline in the early 20th century has not been documented. The absence of detailed map-based source for the northern parts of the township is a distinct problem for the interpretation of this area.

Conservation and Archaeological Management Plans:

In addition to the CMPs and AMPs consulted in Long's (2002) previous study, the following resources were consulted:

- Hill End Historic Site: Archaeological Landscape Management Plan (Long 2002)
- Haefliger's Cottage (Thorp 2008)
- Bridle Track (Hickson 2009)
- Bathurst Regional Council, Archaeological Management Plan. Volumes 1 and 2. (Higginbotham 2011)
- Conservation Management and Cultural Tourism Master Plan for Hill End Historic Site (Conybeare Morrison International 2013)
- Hill End Interpretation Plan (GML et. al. 2014)

The recent CMPs and AMPs present both in-depth and broad-brush landscape analyses for individual sections, portions and wider areas, which have largely been adopted for this study. It should be noted that discrepancies and differences of interpretation do exist, which have been highlighted where appropriate.

Other Secondary Sources:

- Register of Land Occupancy (Johnson 1989)
- Local Histories (Charles 1989a; 1989b; 1989c; Goodwin 1992; Hammond 1988; Hodge, B. 1982; 1988; Hodge, H. 1980; 1986a; 1986b; 1987; Mullins *et al* 1987; Murray 1953; Purser 1981)

The register of land occupancy ('Land Register'; Johnson 1989) is a valuable source of information, though again this is far from complete. A number of discrepancies have also been identified, indicating that this secondary source is not entirely dependable. The local histories are primarily of use in defining construction and or demolition dates for buildings not represented in other sources.

Stage 2: Field Survey

The field survey methodology consisted of a broad characterisation of the archaeological landscape based on a rapid inspection of the 'core' Village Precinct and outlying areas. This information could be used as a comparative data set to the previous survey of non-Historic Site allotments (Bairstow 1993) and Long's (2002) AMP which focused on the core precinct. It should be noted that some of the allotments investigated by Bairstow have since been acquired by NPWS, most of which have been re-examined by Long (2002), and a number of these were approached during this project. In some instances, the results of this assessment differ from the earlier study, presumably due to differences in ground surface conditions engendered by variations in visibility or the influence of subsequent activities.

The primary aims of this assessment were to determine the extent of variable levels of archaeological site preservation across the township, rather than to attempt a comprehensive, systematic examination of archaeological features on each allotment or portion. This was considered impractical given the largely sub-surface nature of the archaeological record and variable surface visibility conditions at the time of survey. This will undoubtedly have affected the identification of buried or shallow topographic features. It is considered that greater resolution will be gained through future archaeological assessments on a title or development specific basis (such as heritage impact assessments or watching briefs), as guided by the ALMP (Sections 8 and 9).

The area assessed in this manner corresponds precisely to the parts of the Historic Site included in the AMP (Figure 2).

The field survey was undertaken over a five-day period between 27th and 31st July, 2015. Ground surface visibility varied considerably depending on vegetation cover (forest litter, long grass, mown grass or lawns), land use (residential gardens, vacant land and regenerated bushland) and variations in sedimentary stability (slope wash deposition, gullyng), though in general it was not possible to examine the structure and content of sub-surface deposits.

The majority of the Village Precinct was characterised by overgrown or mown grass surfaces, either vacant or actively used as pasture, with a significant component of urban development, residential gardens and areas of regenerated woodland. Residential, Crown and other leasehold allotments were directly accessed where consent was granted (Bathurst Regional Council), though their general attributes were assessed from the perimeter.

Some outlying parts of the Village were considered to be peripheral to the precinct's main functions and included mining dominated landscapes in the western margin of the township. This area contained a significant proportion of mineshafts and evidence for soil mounds presumably established for the purposes of water retardation.

Where visibility allowed their identification, surface archaeological features (cf. ruins, artificial topography and historical artefact deposits) were recorded by DGPS and also plotted on a series of survey maps. A basic sketch or location plan was noted for each feature and, where justifiable given lighting conditions and obtrusiveness, a photographic recording was also made. During analysis, the recorded DGPS data was post-processed, resulting in a series of georeferenced site plans each containing mapped locations of all recorded archaeological features. Where property access could not be attained and where GPS data was not recorded, items of interest were digitised (plotted) on georeferenced aerial maps via DGPS. These detailed recordings, whilst not definitive, serve as primary indicator for locations where sub-surface preservation conditions were sufficiently high to allow some surface expression of the form and complexity of the underlying deposits.

Items of heritage value were identified as *Archaeological Features* (AF) and assigned individual identification registration numbers (AF ID), recorded within the study area. These AF ID's were attributed to features that were classed according to one or more categories that define the character of the evidence. These consist of:

- *Extant/modified heritage buildings* - occupied structures pre-dating 1920;
- *Ruins* - dilapidated buildings and other surface evidence of structural remains (i.e. posts, footings and rubble);
- *Relics* – any deposit, object or material evidence relating to non-indigenous settlement which is more than 50 years old;
- *Topography* – artificial undulations in the ground surface caused by buried structural remains, earthworks or the subsidence of excavations;
- *Mineshafts* – a sub-class of *Topography*; openings to tunnels established for the mining of gold from the 1850s;

- *Modern* – post-1920 features that may resemble ruins or historical structures which were reclassified during analysis; and
- *Repurposed* – a sub-class of *Modern*; objects or other structures modified for modern use which may be more than 50 years old (i.e. water tank and well).

If the chronological phasing for an AF who's potential to hold heritage value could not be definitively determined, it was recorded under the appropriate category (i.e. modified historical structures repurposed features). In addition, a number of archaeological features were identified post-survey and were included for the purposes of this analysis. The majority of these were possible heritage/modified structures that were assessed retrospectively in conjunction with the Johnson's Land Register (1987) and the Bairstow Survey (1993).

The known AFs are presented in Figure 5 and the individual allotment plans with their unique AF identification number (AF ID) and listed in Volume 3: Table 1. They are also cross-referenced in Volume 2: Table 1 and Table 2 to structures known to have occupied those locations.

Stage 3: Define Archaeological Sensitivity Variables

This section defines the individual variables employed in the calculation of archaeological sensitivity ratings in the AZP. These values are based on an evaluation of both historical research and physical remains (Heritage Office 1996a: 34), in this case through the built history analysis (Section 3) and the field assessment (Section 4).

Archaeological sensitivity is a compound value based on a comparison between three principal variables: *archaeological potential*, *archaeological imprint* and *landscape integrity*.

- *Archaeological Potential* – this variable reflects the distribution of locations within the study area that have the potential to create archaeological deposits. As such archaeological potential is an unrealised, latent form of sensitivity that defines the spatial extent of known historical activity sites at Hill End. Given the types of primary sources available (e.g. maps and photographs), these activity sites are generally architectural features such as buildings, though other less documented types are undoubtedly present in the landscape (e.g. rubbish tips). It may be found on further investigation that the influence of as yet undocumented factors will have negated the predicted archaeological potential, resulting in a lower archaeological sensitivity rating.
- *Archaeological Imprint* – this variable reflects the durability and obtrusiveness of archaeological features (AFs), and the relative extent to which they retain *structure* given post-depositional processes. This has been based on historical documentation for the materials used in building construction (e.g. stone, brick, timber, bark or galvanised iron clad), as well as any physical evidence for the feature visible on the ground today (e.g. footings). If known, the intensity of occupation could also be used as qualifying variable (e.g. where a site is used for an extended period for an activity that results in an extensive build-up of archaeological deposits).
- *Landscape Integrity* – this variable reflects the general type and extent of post-depositional processes in the landscape, and their potential for preserving archaeological deposits. These consist of a range of natural and human activities, including erosion, sedimentary deposition, land development and agriculture. These activities have the potential to either destroy, modify or obscure archaeological features. The extent to which these processes affect the identification or survival of an archaeological feature is determined by its *archaeological imprint*.

These values are reflected in a series of overlays in the individual title zoning plans (Volume 4), which are compared to determine variations in archaeological sensitivity. These values are discussed in more detail below.

Archaeological Potential

This value is a factor of the known extent of historical activity, and as such defines the distribution of locations where potential archaeological deposits (PADs) are more likely to form. Given the limited availability of map-based documentation for activities at Hill End, PADs generally equate to the predicted location of historical structures. In general terms, structures formed the primary focus for production, use and disposal activities, resulting in the deposition of structural or artefactual fabric, and also represent the most comprehensively documented form of activity node.

Other activities which resulted in the formation of an archaeological record, such as rubbish disposal are less well documented. These cannot be predicted with certainty, and are likely to occur throughout the landscape, pending the appropriate preservation conditions.

For the purposes of this study, archaeological potential is represented by a single value incorporating the predicted location of a structure and its locale, irrespective of age and historical themes (Table 3, Volume 2). Potential modifying factors include the date and significance of the activities, and whether they resulted in extensive material deposition. For example, religious activities are less likely to result in a rich and diverse archaeological record, than places of consumption, such as a hotel.

A further distinction has been made on the basis of the age and archaeological significance of each structure (Table 1, Volume 3). For the purposes of this study, structures pre-dating 1920 are considered to contribute to the archaeological record, and thus have archaeological potential. Later structures are classed as *intrusive* elements in the archaeological landscape, and are not considered to have archaeological potential at this stage. Although this definition may be revised at a future date, it is intended at this stage to isolate the period of greatest archaeological significance (the growth and initial decline of the township in the mid 19th to early 20th century) from evidence of later activities of currently lesser value.³⁰

Areas of the Historic Site that have no *archaeological potential* value reflect an absence of evidence for historical activity, rather than an absence of activity *per se*.

Archaeological Imprint

Archaeological imprint refers to the likely scale and durability of the physical evidence associated with each structure or activity, which will influence the extent of deterioration through impacts and natural degradation, and the type of investigative techniques required to identify the features in archaeological terms. Again, these imprints correlate most closely to structural remains, though they can also refer more widely to other types of accumulation of archaeological fabric, such as earthworks and artefacts.

Three levels of imprint have been defined at both a structural and artefactual level (see Table 3, Volume 2 and Table 1, Volume 3).

³⁰ In New South Wales a 'relic' is defined as any deposit, object or material evidence relating to non-indigenous settlement that is more than 50 years old, which technically gives structures and deposits dating to 1952 archaeological potential.

High imprint (H) structures are built of stone, brick and concrete, which survive in the archaeological record in the form of foundations. These footings act as buffers to impacts in wider locale, and enhance the preservation of any associated deposits and infrastructure which they may contain. Substantial earthworks are also considered to have high archaeological imprint. On a smaller scale, ceramic, stone and glass artefacts have high durability, and will remain visible in the landscape despite substantial impact

Moderate imprint (M) structures are of solid timber construction (e.g. weatherboard, slab or log), which survive in the archaeological record as timber post stubs, postholes and slots. The platforms on which such structures were erected are also recognisable, as are the accumulations of wind and waterborn sediment that accumulate around the base of the walls. Various forms of metalwork, in particular iron and copper alloy, are considered moderate imprint artefacts given the process of oxidation which progressively corrodes and changes the form of the objects, engendering them a lower level of interpretative value.

Low imprint (L) structures are ephemeral or flimsy buildings (e.g. tents, bark or iron huts), which may only be preserved in the form of compaction surfaces, stake holes, variations in artefact distribution, residues or other trace indicators. Artefacts made from some organic materials (e.g. leather and bark) and ecofacts are considered low imprint materials, that are only likely to survive in specific forms of preservation conditions, such as a waterlogged environment.

For the purposes of this study, potential archaeological deposits associated with extant buildings are considered to have a *high* imprint, irrespective of their construction type. Artefactually rich sub-floor deposits have been discovered in previous investigations (e.g. Krohmann/Ackermann Cottage; Denis Gojak pers. comm. 2001), and it is predicted that further archaeological deposits of high significance will be located in or adjacent to other extant 19th and early 20th century buildings. It should be noted that the sustained use and modification (e.g. floor or service renewal and damp proofing) of a building can significantly *reduce* archaeological potential.

In archaeological terms it is possible to identify all three types of imprint; however, the preservation of low-moderate imprint structures and materials depends largely on the *integrity of the landscape*, and may at best only be recognisable through a meticulous process of systematic open area excavation.

High imprint structural remains, such as brick or stone footing are more resistant to disturbance, and are more likely to remain intact below later structures or disturbed soil horizons (e.g. plough soil). These footings will also engender less durable elements associated with a building, such as artefact deposits and stake holes, a greater level of protection from later impacts.

It was frequently not possible to define the level of archaeological imprint from the available documentary sources. By default, these have been assigned a *moderate* imprint value.

Landscape Integrity

This value is a reflection of three factors that influence the survival of archaeological deposits, and the level of resultant significance. These are:

- subsequent land use, that is the type and intensity of later activities that affect the fabric of an archaeological place.

- the influence of natural processes, in particular the relative influence of erosion and sediment deposition; and
- predicted sub-soil conditions, which dictate the rate of degradation for different types of archaeological fabric.

In combination, these processes provide a gauge for predicting the likelihood that various types of archaeological material will survive, both as surface (i.e. above ground) or sub-surface features. For example, a depositional environment is high suitable for the survival of sub-surface deposits, though surface remains are less likely to be evident or easily interpretable from a surface inspection alone. Conversely, an erosional environment is not conducive to the survival of either surface or sub-surface remains, though very deep deposits may partially survive.

For the purposes of this study, these various factors have been defined in three broad categories:

High preservation environments (H) constitute either depositional environments (sub-surface preservation) or demonstrably undisturbed landscape units (surface-preservation – e.g. ruins or surface topography). Relatively deep ‘sealed’ deposits are also likely to provide high value material preservation conditions.

Moderate preservation environments (M) constitute landscape units where there has been some compromise to the archaeological record in the form of a shallow land use or natural disturbance. At Hill End these typically consist of minor landscaping (e.g. domestic garden), natural revegetation, the construction of small buildings and the later use of extant historical structures. Locations where there is no indication of either an active or past process are also included in this ‘neutral’ category.

Low preservation environments (L) constitute landscape units where there has been an almost complete removal or redistribution of archaeological materials through major building construction, landscaping, erosion or cultivation. There is still some possibility of the intact preservation of deep deposits, but by and large archaeological materials will consist of disturbed scatters of durable, redeposited artefacts only.

It is important to note that some historical activities, notably mining, are highly destructive, both in terms of their impact to the existing land surface and their limited potential to form archaeological deposits. Ultimately mining landscapes create very low preservation environments, particularly where the extent of exposed sub-soil results in accentuated erosion. However, vacant hollows and pits were commonly used for rubbish disposal, sometimes resulting in well preserved archaeological deposits deep below the land surface.

Figure 6 presents a general plan of variations in landscape integrity at Hill End, based on the documentary research and field inspection.

Stage 4: Classify Archaeological Sensitivity

A comparison between *archaeological potential*, *archaeological imprint* and *landscape integrity* allows the definition of spatially defined areas categorised by archaeological sensitivity ratings, termed the Archaeological Zoning Plan (AZP). This overlay can be used to predict the general location of archaeological deposits on an intra-title basis given the historical use and current condition of a block of land. The AMP report presents a general overview of these sensitivity values on a title-by-title basis (Figure 7), while intra-title variations are presented in the individual title zoning plans (Volume 4).

For the purposes of this study four ratings of archaeological sensitivity have been defined;

Zones of high archaeological sensitivity (H) – these consist of PADs with moderate to high archaeological imprint (e.g. stone and brick buildings), contained in areas of overall high landscape integrity.

This value also applies to locations with standing building remains and other high significance archaeological features.

Zones of moderate archaeological sensitivity (M) – these consist of PADs with low to moderate archaeological imprint (e.g. substantial timber buildings), contained in areas of overall moderate landscape integrity.

This value also applies to locations with no documented PADs, but with *high* landscape integrity that could preserve as yet undocumented deposits.

Zones of low archaeological sensitivity (L) – these consist of PADs with low to moderate archaeological imprint (e.g. bark huts and other insubstantial timber buildings), contained in areas of generally low landscape integrity.

This value also applies to locations with no documented PADs but with *moderate* landscape integrity.

Archaeologically sterile zones (0) – these consist of PADs with low imprint (e.g. tin sheds) and/or with no documented archaeological potential, contained in areas of overall low landscape integrity. It should be noted that pockets of archaeological deposit *may* still be preserved in otherwise sterile zones.

The following table determines how archaeological sensitivity ratings are calculated in the AZP:

		Archaeological Imprint			
		H	M	L	0
Landscape Integrity	H	H	H	M	M
	M	H	M	L	L
	L	M	L	0	0

Calculating Archaeological Sensitivity (Arch Sensitivity) appearing in Table 3, Volume 2 and Table 1, Volume 3

The first stage involves applying archaeological imprint ratings (*High, Moderate and Low*) to the areas defined through the built history analysis and field inspection as potential archaeological deposits (PADs). The remaining areas with no known archaeological potential are considered to have ‘Zero’ imprint, though they may still contain as yet unknown archaeological deposits.

The second stage involves comparing the imprint ratings with the landscape integrity ratings for each defined area to determine the sensitivity value (H, M, L or 0) in the AZP. These values are used to determine the management response towards archaeology in the Village Precinct (Section 8.5).

Archaeological features pre-dating 1920 that are not recorded by documentary sources are given a *high* sensitivity rating, if they attest to the presence of *in situ* archaeological remains. Indefinite archaeological indicators (e.g. planted conifers and vague surface topographic features which need not necessarily relate to a historical structure) have not been included in the AZP at this stage, though they could be incorporated in a future review.

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Appendix 4: Archaeological Feature Detail Maps (See Figure 5)

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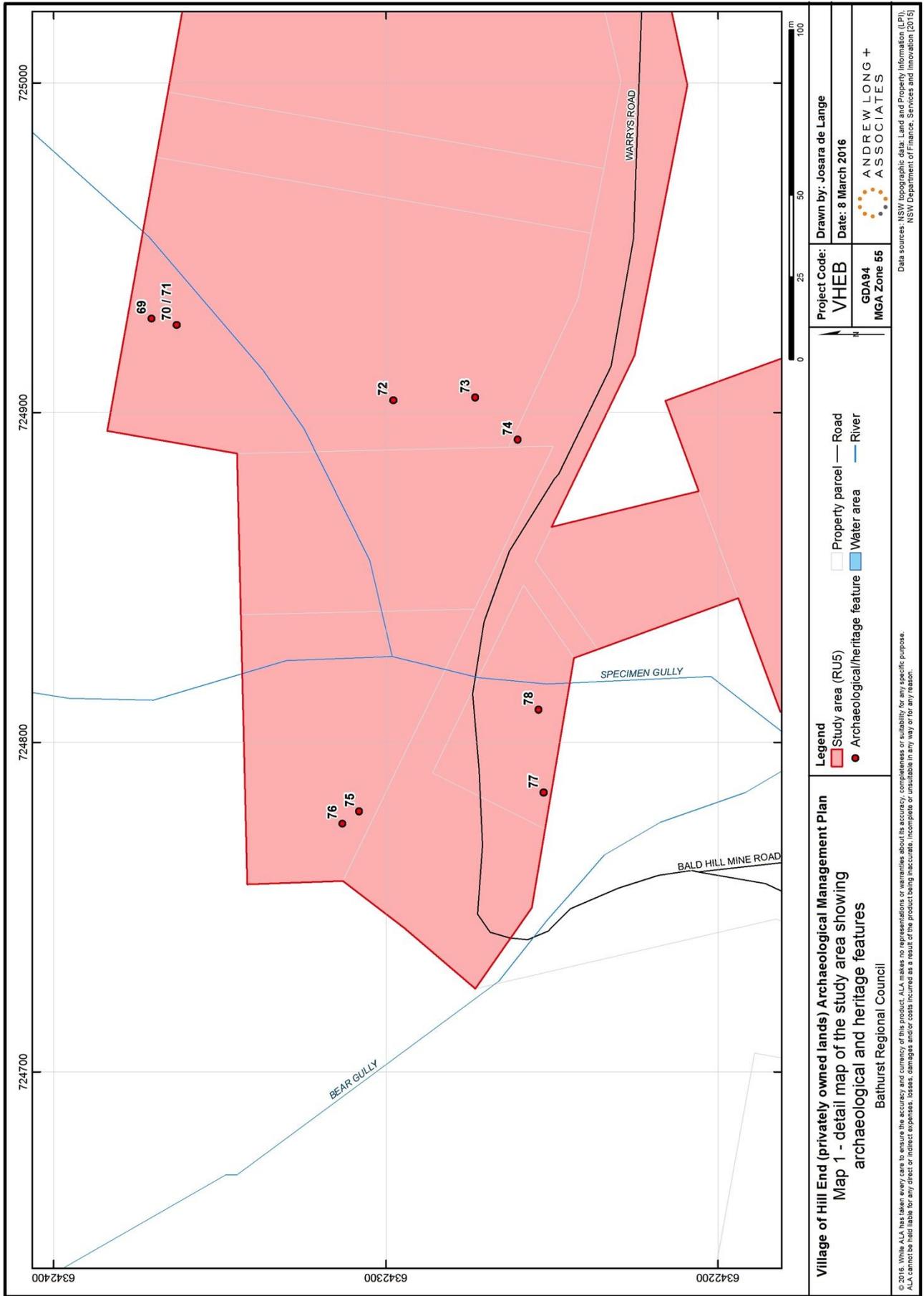


Figure 5C: Detail Map 1 showing archaeological features across the study area



Figure 5D: Detail Map 2 showing archaeological features across the study area

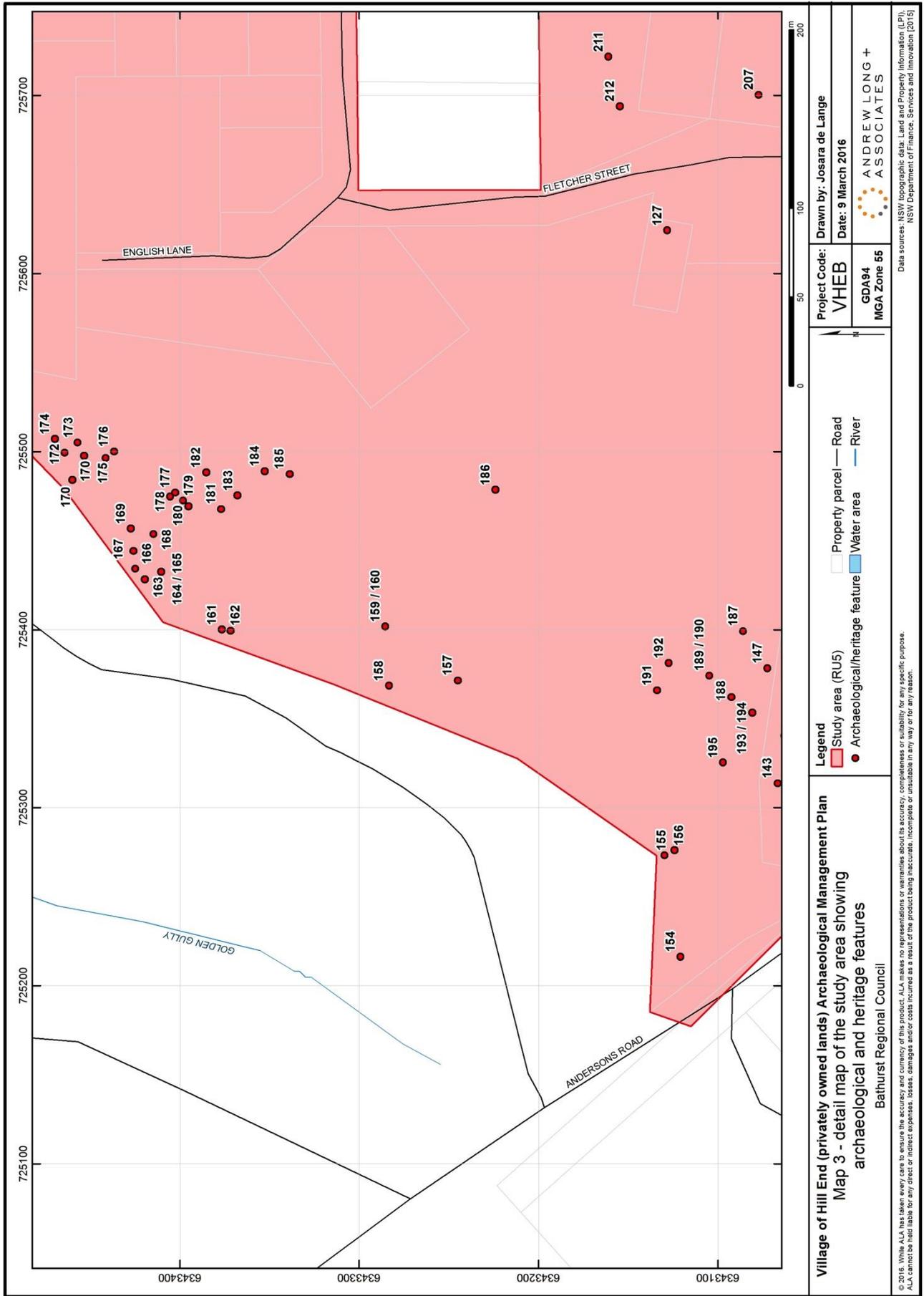


Figure 5E: Detail Map 3 showing archaeological features across the study area

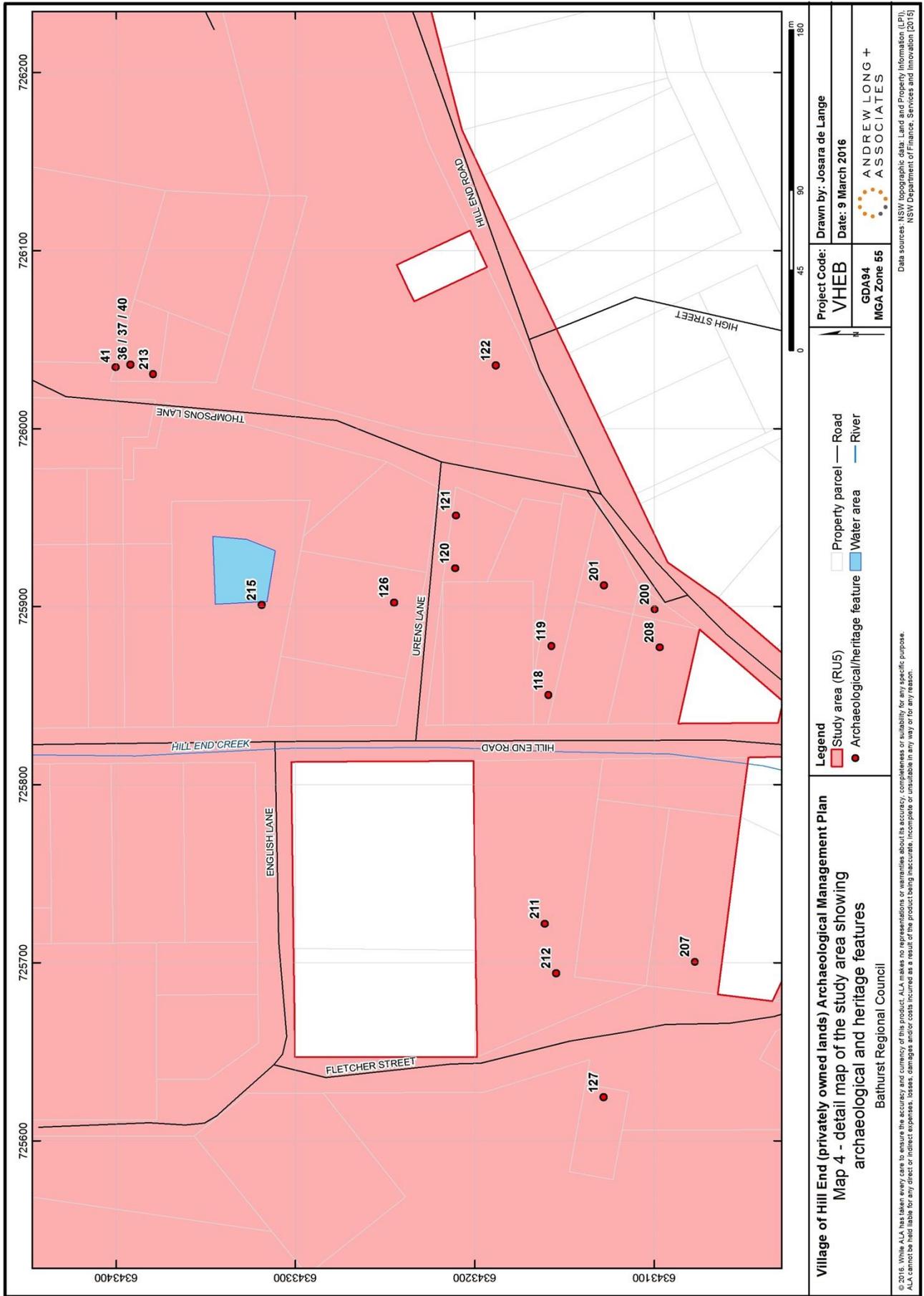


Figure 5F: Detail Map 4 showing archaeological features across the study area

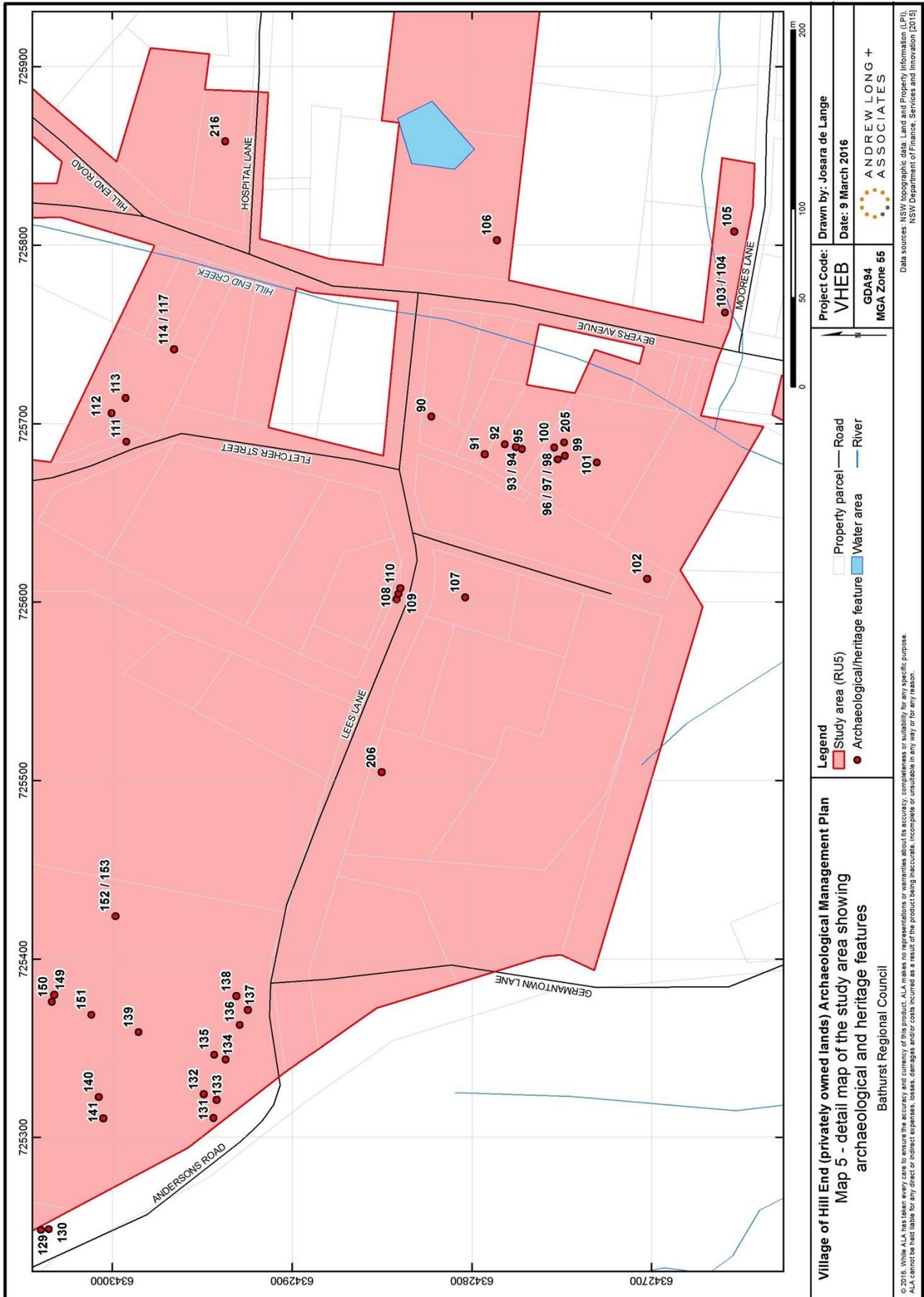


Figure 5G: Detail Map 5 showing archaeological features across the study area

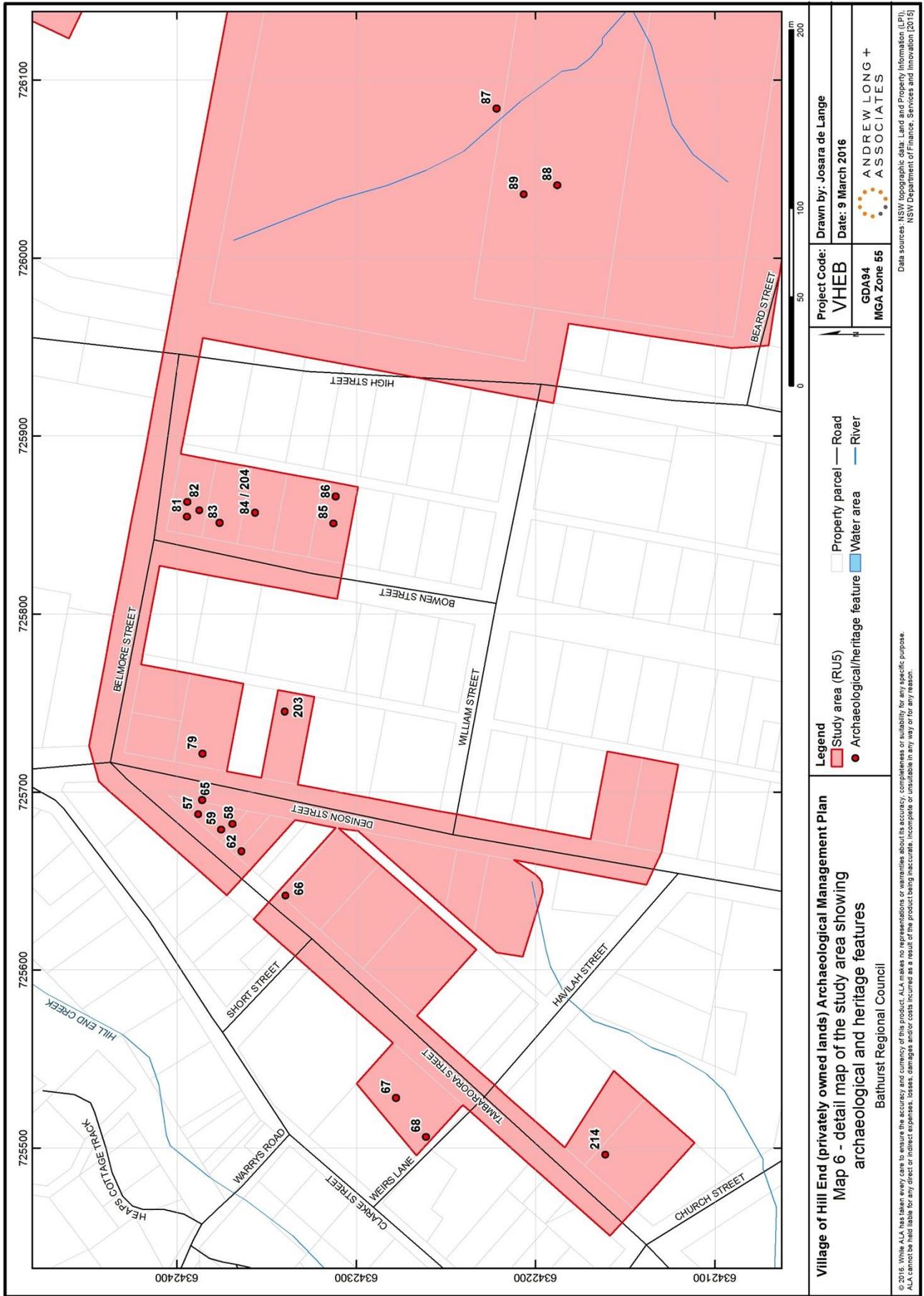


Figure 5H: Detail Map 6 showing archaeological features across the study area

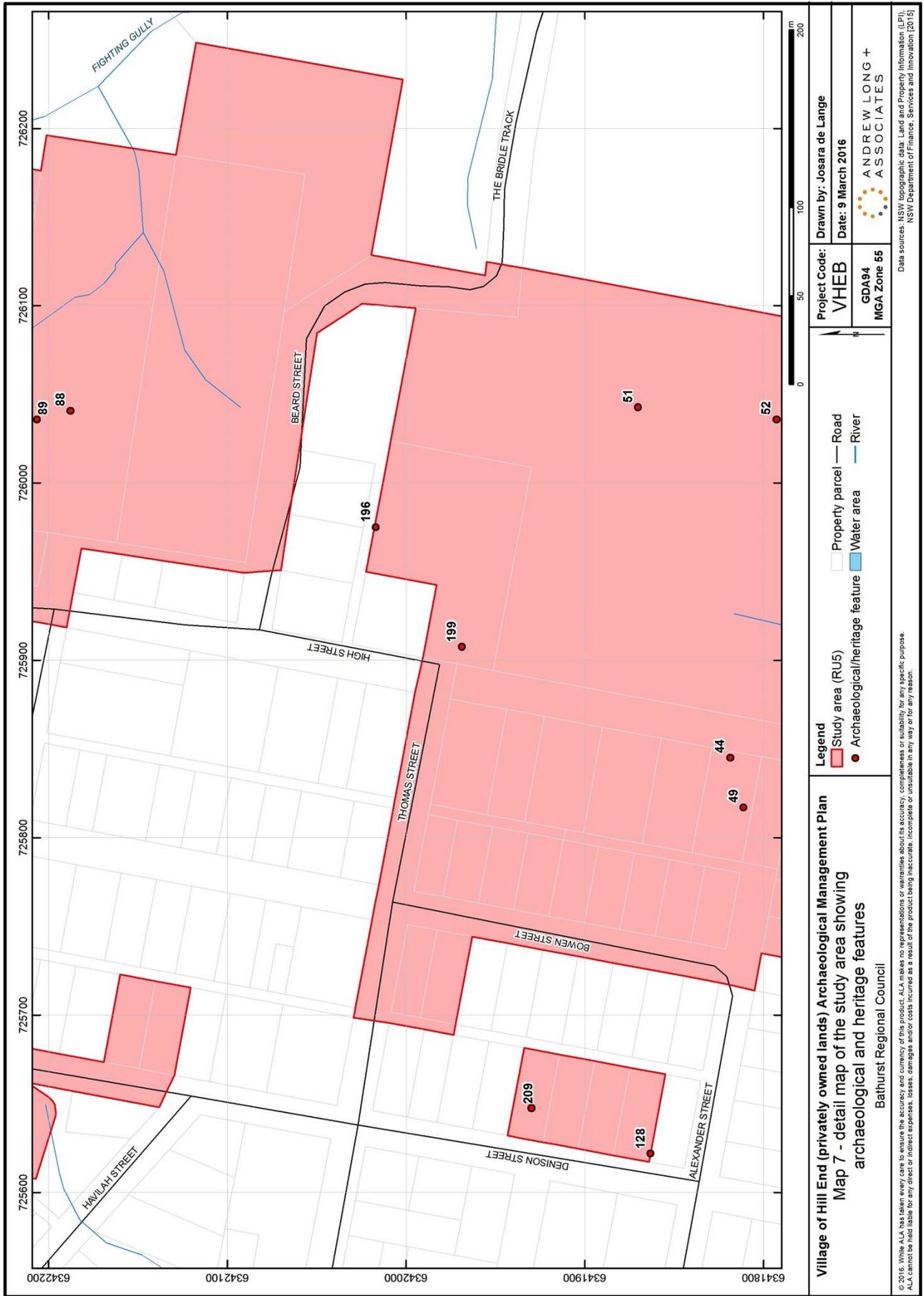


Figure 51: Detail Map 7 showing archaeological features across the study area

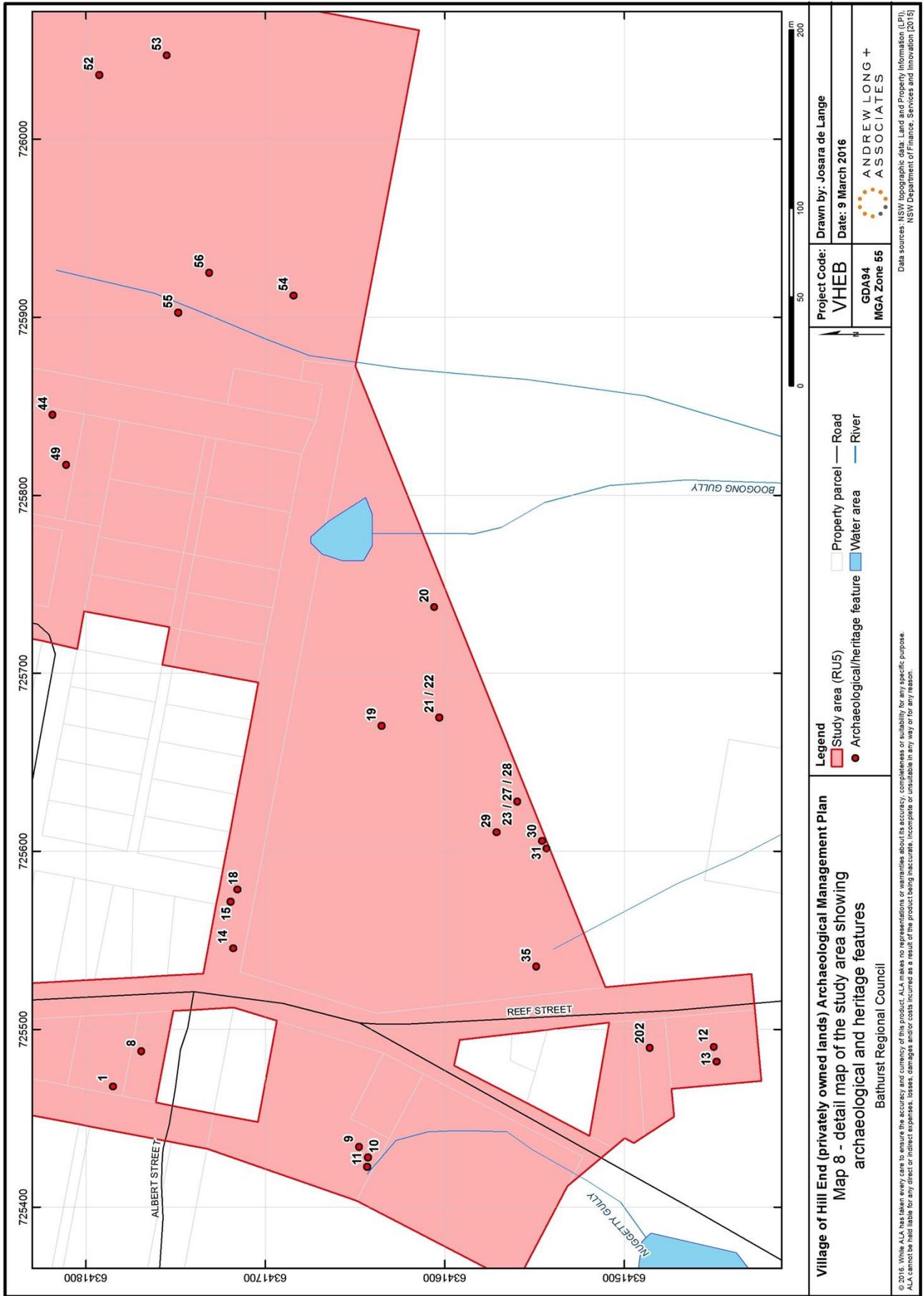


Figure 5J: Detail Map 8 showing archaeological features across the study area

Appendix 5: Archaeological Sensitivity Detail Maps (See Figure 7)

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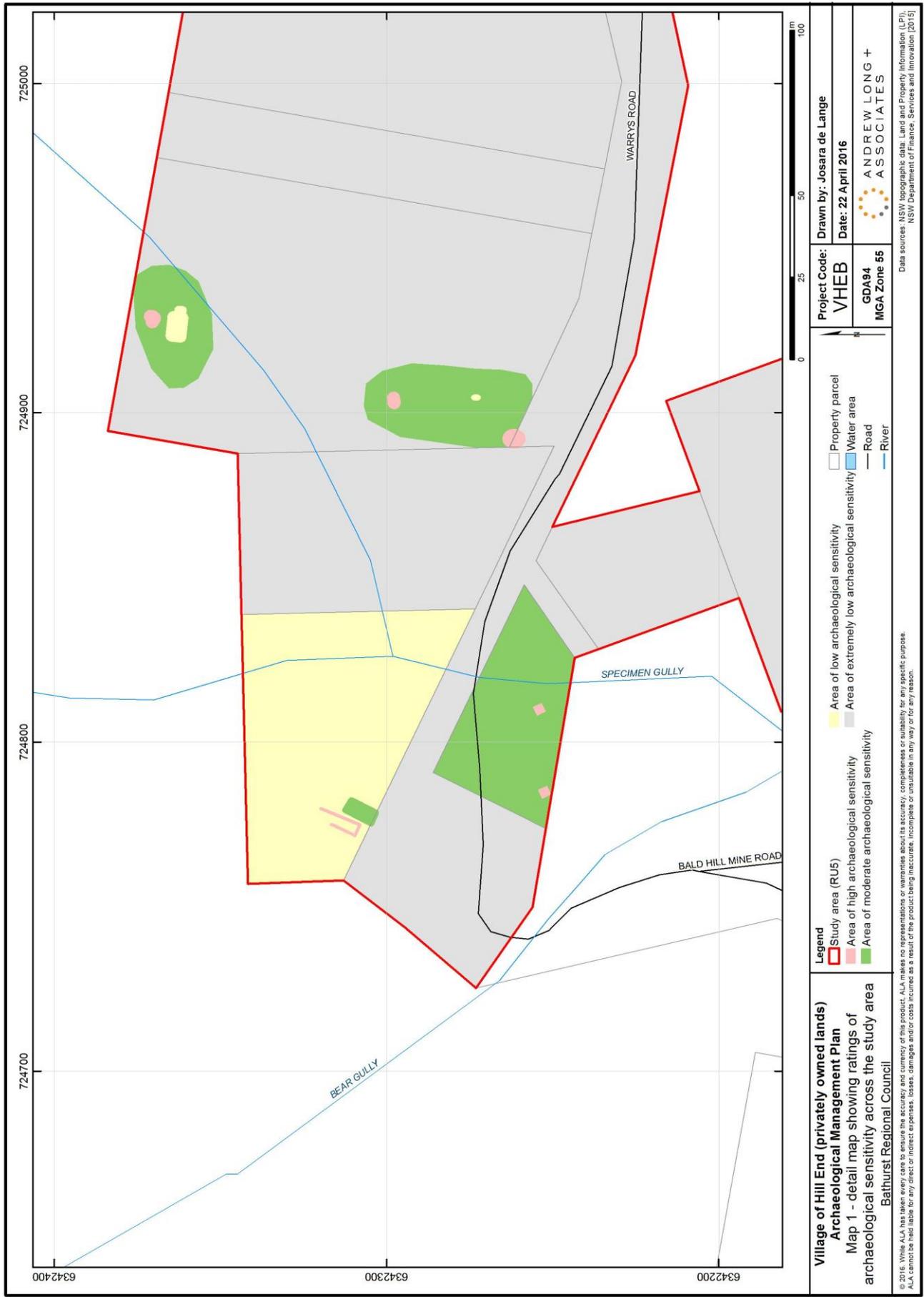


Figure 7B: Detail Map 1 showing archaeological sensitivity across the study area

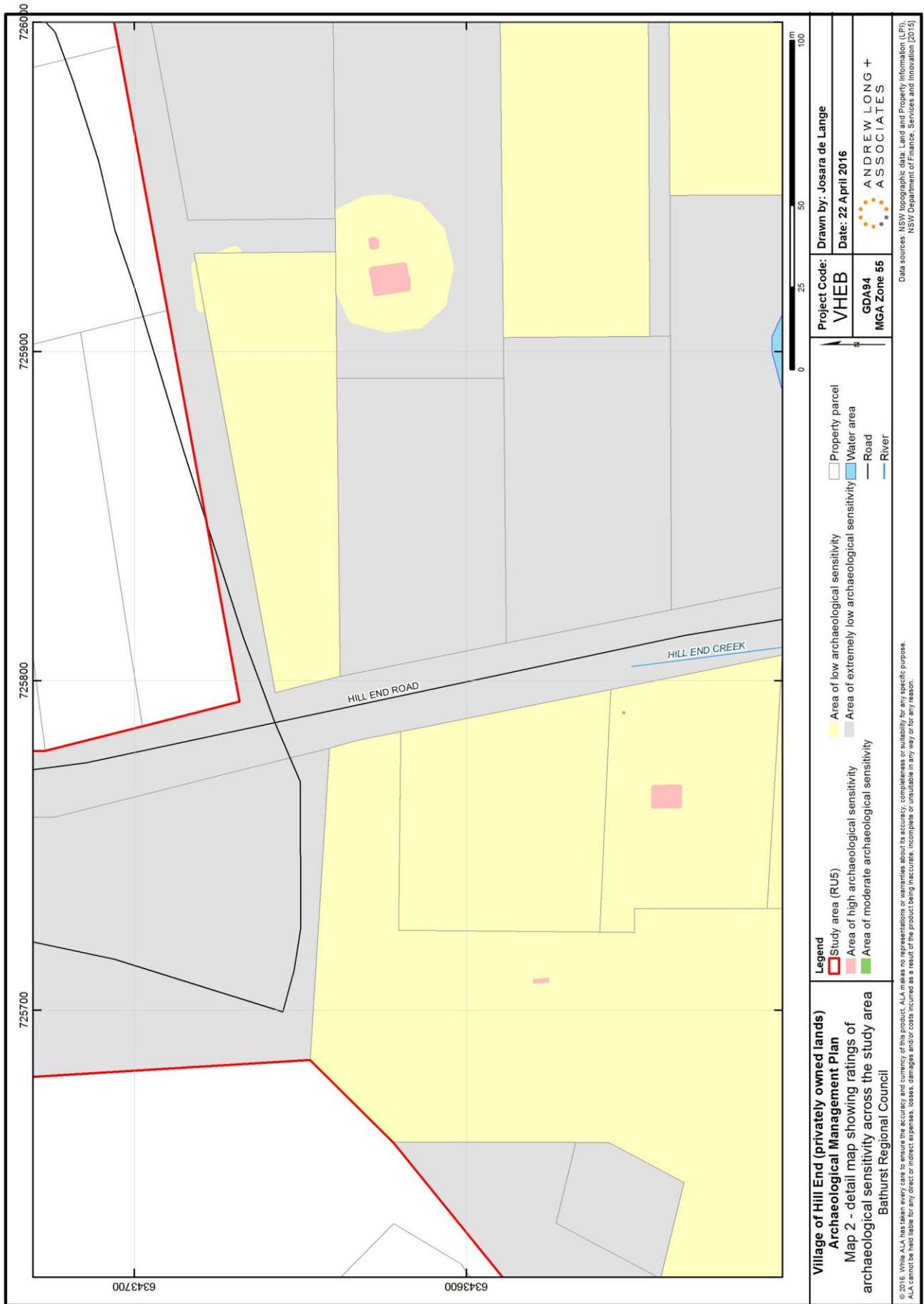


Figure 7C: Detail Map 2 showing archaeological sensitivity across the study area

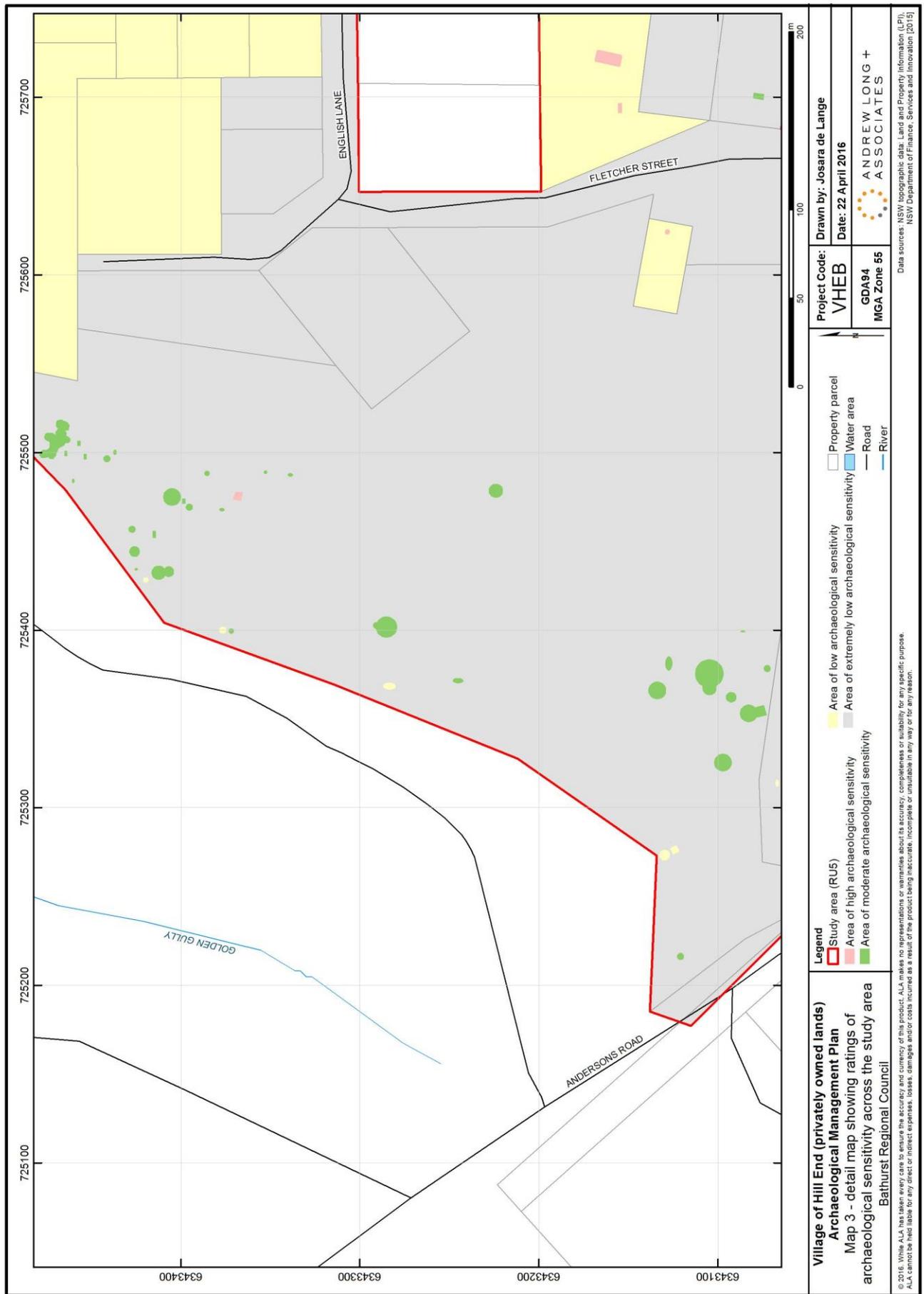


Figure 7D: Detail Map 3 showing archaeological sensitivity across the study area

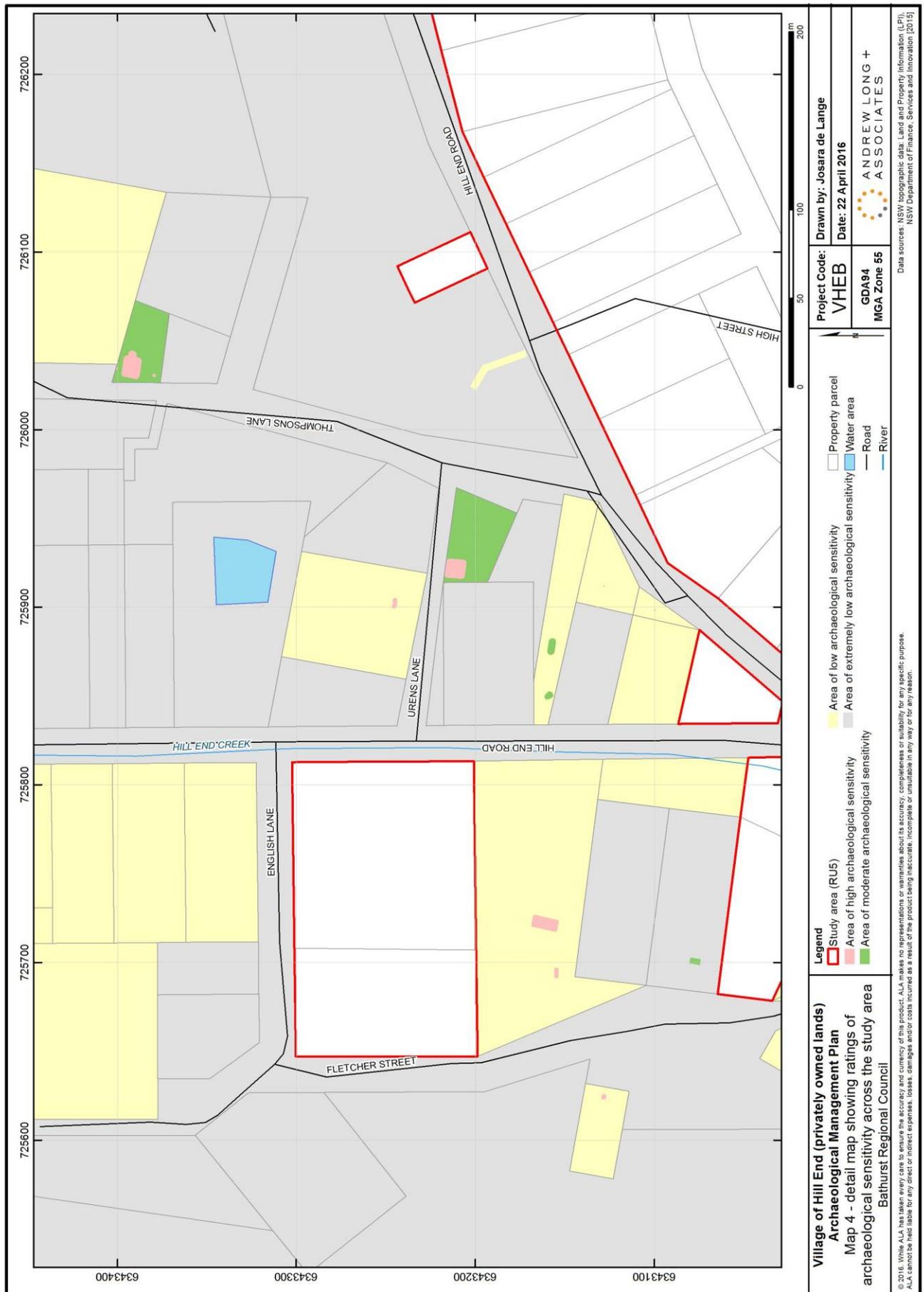


Figure 7E: Detail Map 4 showing archaeological sensitivity across the study area

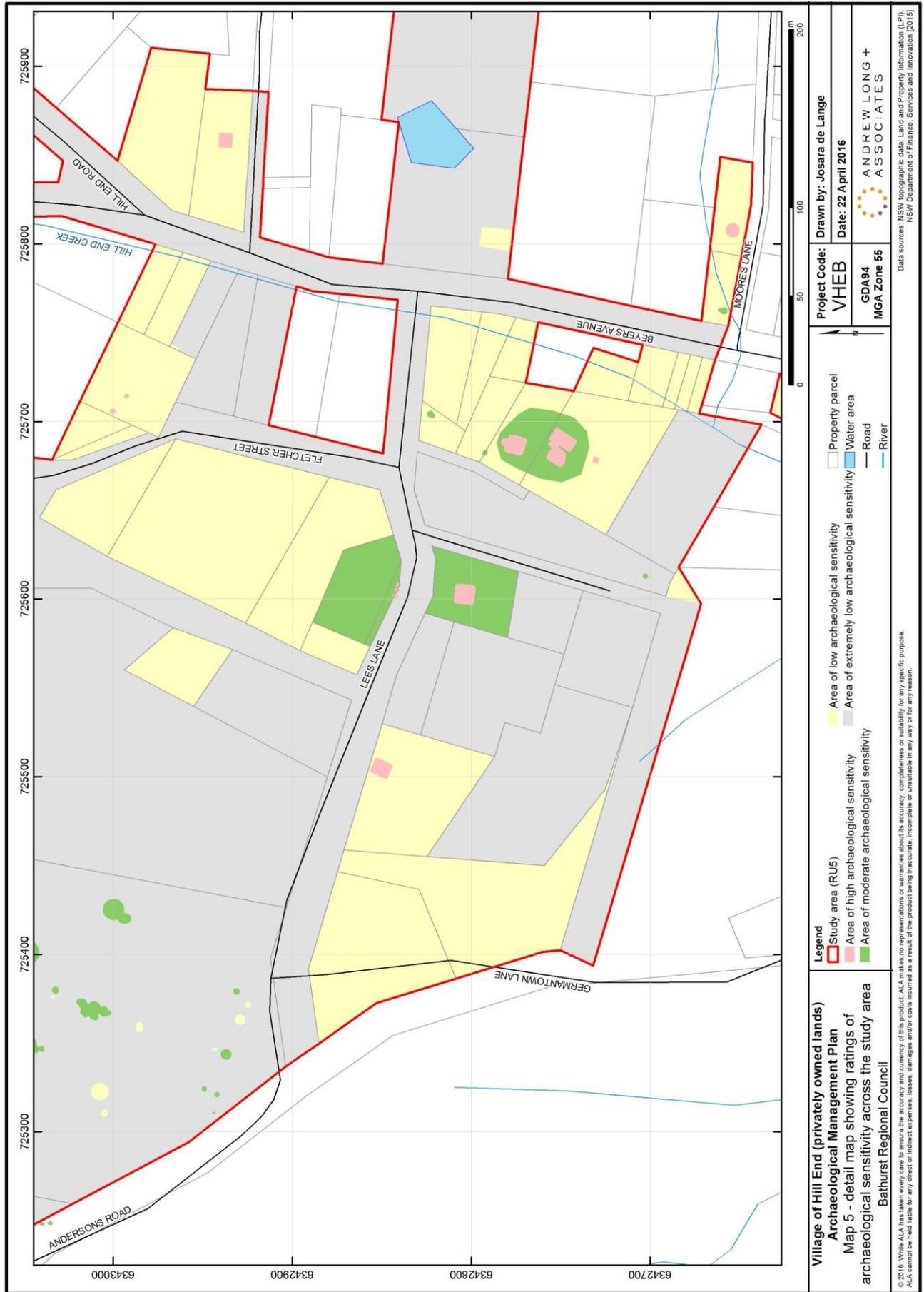


Figure 7F: Detail Map 5 showing archaeological sensitivity across the study area

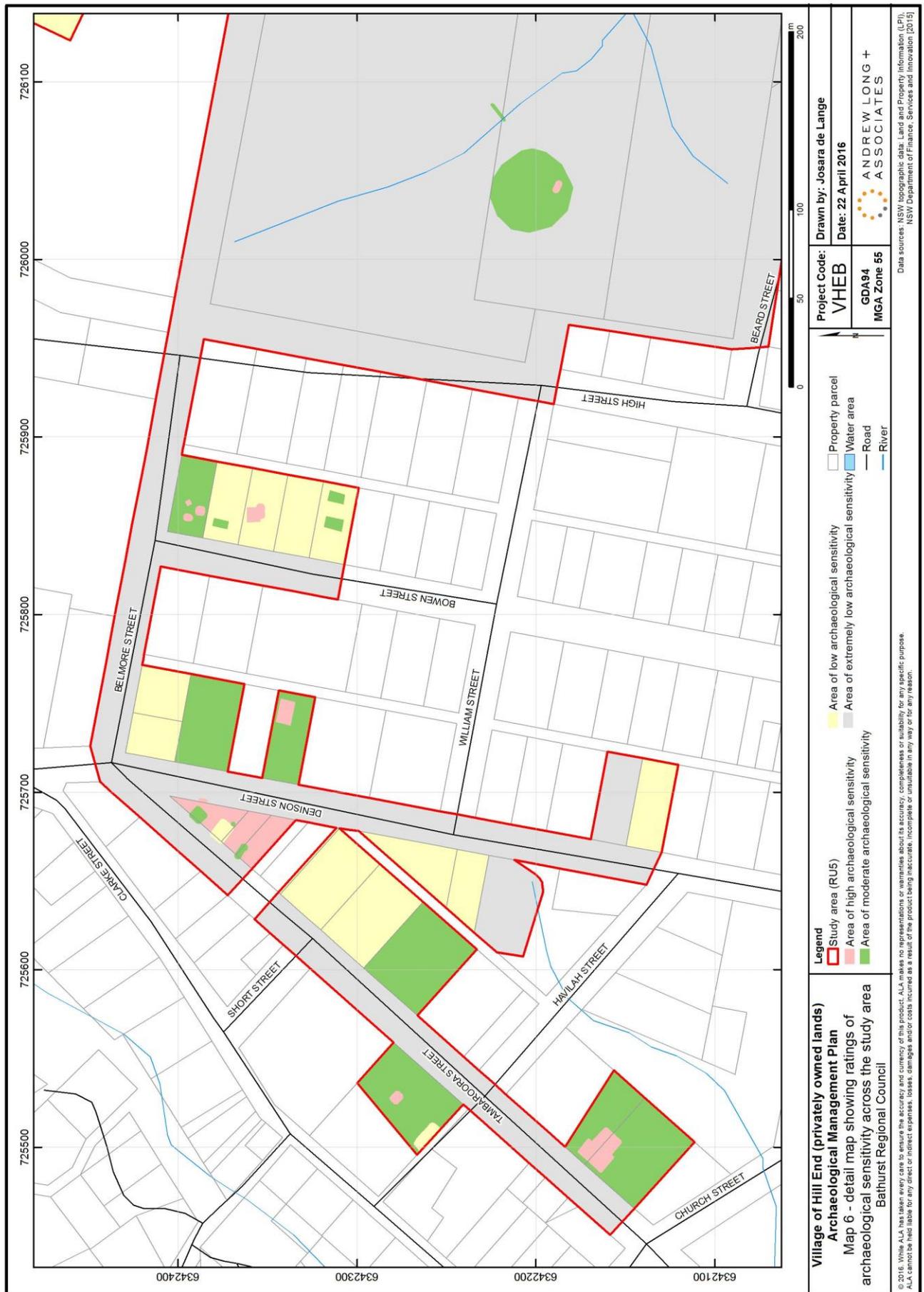


Figure 7G: Detail Map 6 showing archaeological sensitivity across the study area

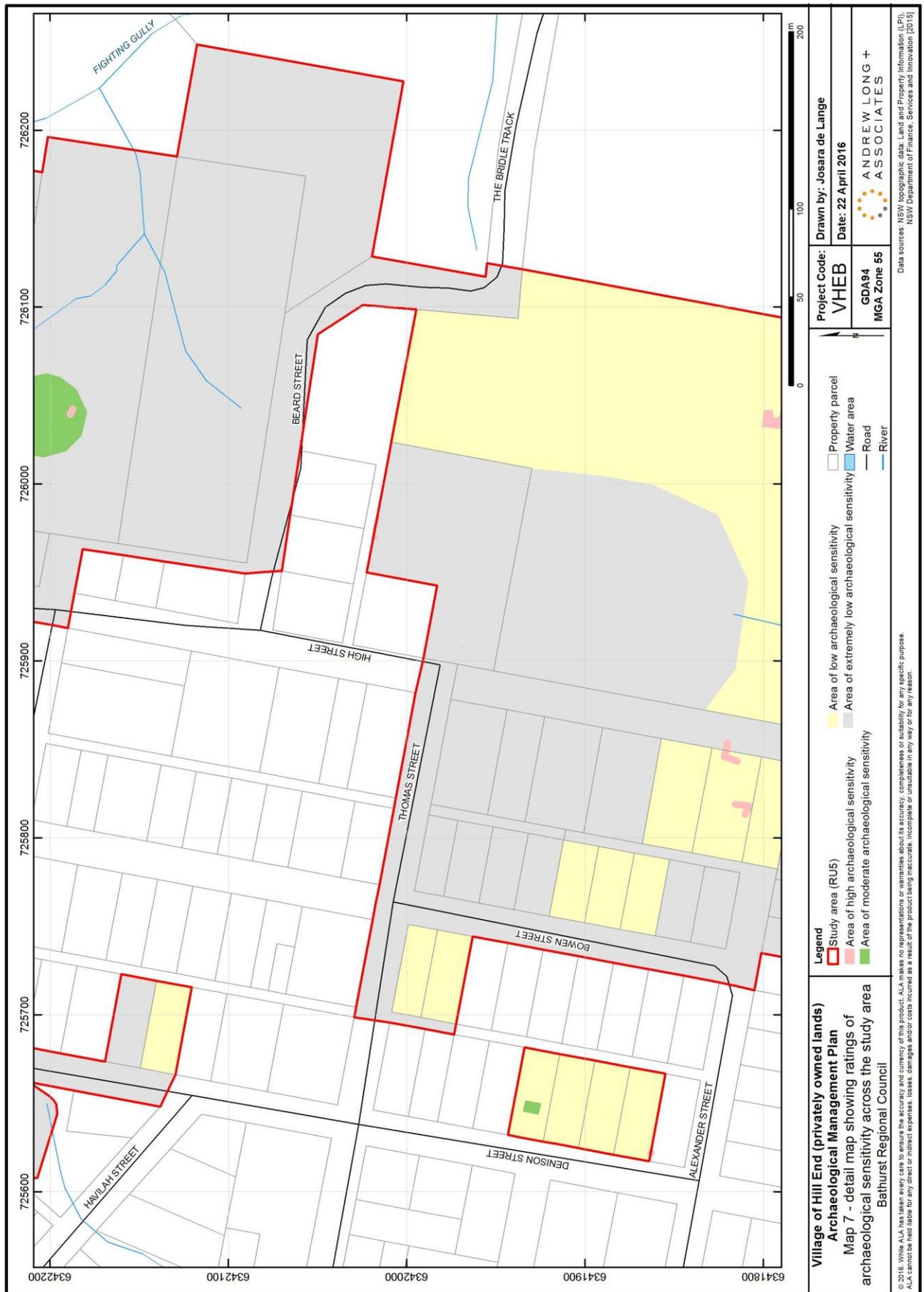


Figure 7H: Detail Map 7 showing archaeological sensitivity across the study area

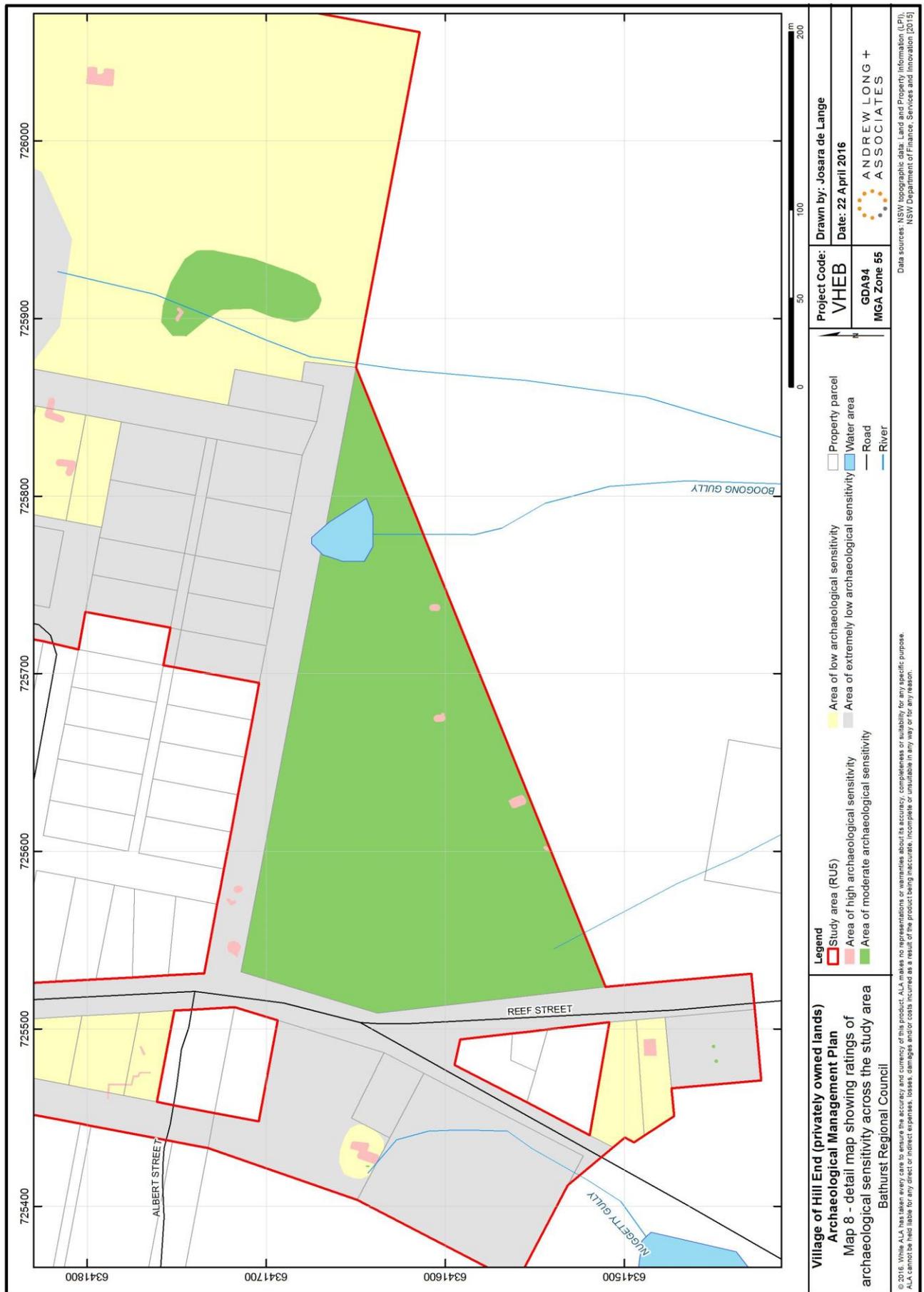


Figure 71: Detail Map 8 showing archaeological sensitivity across the study area

Appendix 6: Bathurst Regional Development Control Plan (Sections 7.8 and 10.9)

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Bathurst Regional Council

Bathurst Regional Development Control Plan 2014

Adopted: 16 December 2013

Effective: 19 November 2014



Area	Description
Hill End Historic Site	This area is listed on the NSW State Heritage Register pursuant to the NSW Heritage Act 1977. This listing requires Council or OEH to refer any Development Application to the NSW Heritage Branch for approval under Section 60 of the Heritage Act 1977, where required.
Development Area A - Land under the control of the NSW Office of Environment and Heritage (OEH)	The OEH is the Consent Authority This area is owned/controlled by the OEH and subject to the provisions of the <i>National Parks and Wildlife Act 1974</i> . This development area includes properties which are located within the historic site area that were owned by the National Parks and Wildlife Service on 2 April 1999. <u>Note:</u> Development which is prohibited within Zone RU5 - Village pursuant to the LEP or development identified as <i>prescribed development</i> in this area would be referred to Council for comment by the OEH as part of their assessment. <u>Note:</u> No subdivision of land is permitted within Development Area A.
Development Area B - Other	Council is the Consent Authority All land is subject to the development standards set out in this Plan. This development area includes properties which are located within the historic site area and that were freehold on 2 April 1999.

Note: Should the OEH request comments from Council in relation to an application for development within Development Area A, Council will provide comment consistent with the development standards as set out in this Plan.

7.8 ARCHAEOLOGY

7.8.1 Hill End

- a) Council must not grant consent to any building or subdivision work on land identified as being of either high or moderate, or unknown archaeological significance on DCP Map No. 22 - Hill End Archaeology, unless it has considered an archaeological report which examines the likelihood of archaeological remains being located on the site.
- b) Council must not grant consent to any building or subdivision works within the **Hill End Historic Site** or on land identified as "archaeologically unknown" on DCP Map No 22 – Hill End Archaeology unless it imposes a condition of consent that requires the applicant to stop works immediately and notify the NSW Heritage Branch and Council if any archaeological remains or relics are discovered. If relics are discovered a Section 140 permit under the NSW Heritage Act will need to be obtained from the Heritage Branch (see also section 10.9 – *Archaeological Permits*) of this Plan.

7.8.2 Other villages

- a) If archaeological remains or relics are likely to be located on a site, Council will impose the condition outlined in 7.8.1(b) above in relation to any building or subdivision work (see also section 10.9 – *Archaeological Permits* of this Plan).

7.9 DEVELOPMENT CONTROL PLAN MAPS

7.9.1 Land to which this Section applies

This section applies to land within Zone **RU5** - Village as shown on the following DCP Maps.

- DCP Map No. **16** - Trunkey Creek
- DCP Map No. **18** - Wattle Flat
- DCP Map No. **21** - Hill End
- DCP Map No. **23** - Sofala
- DCP Map No. **24** - Rockley
- DCP Map No. **25** - Georges Plains
- DCP Map No. **26** - Peel
- DCP Map No. **27** – Yetholme

7.9.2 Objectives

- a) To ensure that the natural features and the environmentally sensitive areas of the land are not adversely affected by future development.
- b) To ensure protection and conservation of the scenic value, rural amenity and heritage qualities of rural villages.
- c) To provide appropriate vegetated buffers between village areas and agricultural areas to prevent land use conflict.

7.9.3 Use of land

Development Standards

- a) Council may grant consent only to those developments listed in the table below within the Land Use Areas specified by the table and shown on the relevant DCP Maps.

Land Use Area	Development to which Council may grant consent
Housing (single or double storey)	Single storey or double storey housing and other ancillary buildings.
Housing (single storey)	Single storey housing and other ancillary buildings.
Traditional Village Centre	Commercial development is restricted to this area only.

10.9 ARCHAEOLOGICAL PERMITS

10.9.1 General

If the applicant or Council knows of former historical uses on a site, such as former mining sites, buildings which have been demolished or former uses, then it may be likely that relics will be on the site.

A *relic* is any deposit, artifact, object or material evidence that:

- a) relates to the settlement of the area of the Bathurst Regional LGA, not being Aboriginal settlement, and
- b) is of State or local heritage significance.

Development Standards

- a) If Council is of the opinion that a site is highly likely to contain archaeological relics, it must not grant consent to any building or subdivision work on land unless it has considered an archaeological report which examines the likelihood of archaeological remains being located on the site. In granting consent Council may require an excavation permit be obtained from the NSW Heritage Division, Office of Environment and Heritage.

- b) If Council is of the opinion that it is likely that a site might contain archaeological relics, it must include a condition of the consent as follows:

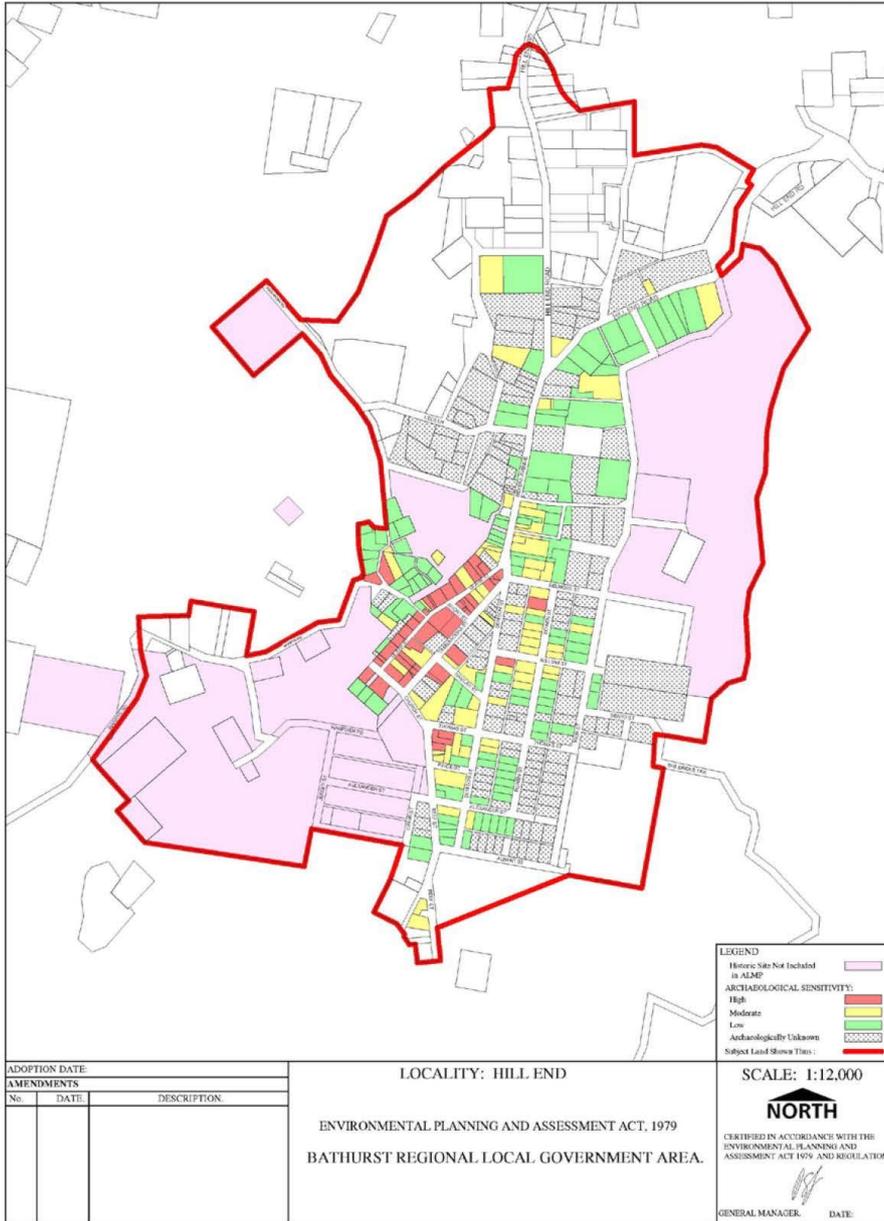
- i) *During the development, if any archaeological remains are discovered, the developer is to stop works immediately and notify the NSW Heritage Division and Council. Any such find is to be dealt with appropriately, in accordance with the Heritage Act 1977, and recorded, and details given to Council prior to the continuing of works.*

Note: A Section 140 permit will need to be obtained to disturb archaeological relics. This permit is to be obtained from the NSW Heritage Division, Office of Environment and Heritage, prior to the disturbance of the archaeological relics.

- ii) The applicant is to lodge, prior to the issue of a construction certificate, a Construction Heritage Management Plan to Council which addresses the following:
 1. Mitigation measures in relation to the likely archaeology onsite;
 2. The proposed monitoring that will be in place for any archaeological relics uncovered;
 3. Training, resources and consultation for staff on the site during excavation;
 4. Incident management protocol; and
 5. Methods dealing with unexpected finds during works.

MAP No 22 – HILL END ARCHAEOLOGY

BATHURST REGIONAL DEVELOPMENT CONTROL PLAN 2014
 MAP No. 22 - HILL END ARCHAEOLOGY



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