Guidelines for the preparation of Archaeological Management Plans

HERITAGE BRANCH
Department of Planning

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Introduction

1.1 PURPOSE OF THESE GUIDELINES

Archaeological Management Plans (AMPs) identify areas of European occupation where high concentrations of potential archaeological remains are expected to be present. In New South Wales archaeological sites are protected under the Heritage Act, 1977. The Act requires that historical archaeological sites and 'relics' are managed in accordance with permits issued by the Heritage Council of NSW. The consent of the Heritage Council is required before any archaeological 'relics' are disturbed. This is particularly relevant in the event of site redevelopment or rehabilitation.

This guideline aims to help government authorities, property owners, developers and archaeologists to identify, assess and manage the future development of sites that contain significant historical archaeological remains and deposits. Archaeological Management Plans contain management recommendations and policies for the archaeological resource and identify the procedures to be followed. This can avoid delays to development through unanticipated finds, additional costs, expanded project scope, physical restrictions, redesign and other issues which may result from inadequate planning, poor risk management and lack of knowledge about archaeological requirements.

These guidelines aim to assist those who commission, prepare and use AMPs. They can also facilitate preparation of AMP project briefs. The guidelines explain an appropriate scope of works, timeframe and the support requirements needed for a useful and viable AMP. The guidelines help to ensure that AMPs provide the information required to assist in determining the identification, significance and appropriate management of sites and items included in their study areas. They also encourage consistent standards and approaches.

The guidelines and model brief remain general to ensure that individual plan methodologies do not become prescribed, but may be adapted to particular circumstances, different locations and requirements. The guidelines and model brief ensure that AMPs are prepared in a manner consistent with the methodology used in the preparation of conservation management plans (CMPs).

A comprehensive Archaeological Management Plan for an area will assist in establishing mechanisms and priorities to enable the early identification, assessment and conservation of urban archaeological resources. The resource represented by archaeological sites and 'relics' is becoming rarer, especially in areas where successive phases of urban development have resulted in varying degrees of impact on the physical remains of earlier occupation. This is particularly the case for cities where Central Business District tower developments since the 1970s have removed the evidence of former land use.

These guidelines cover places that relate to Australia's post–contact history after 1788. They outline the process and procedures for undertaking Archaeological Management Plans (AMPs) and provide a model brief to guide the preparation of such plans. The guidelines also include comprehensive appendices and schedules of additional information. This guideline document is a companion to several other publications available from the Heritage Branch, Department of Planning. These include:

- *Historical Archaeological Sites: Investigation and Conservation Guidelines* (1993)
- *Historical Archaeology Code of Practice* (second edition, 2006)
- *Archaeological Assessment Guidelines* (1996) update in preparation
- *Skeletal Remains Guidelines* (1998)
- *Assessing Heritage Significance* (2001)
- *Guidelines for Nominations to the State Heritage Register* (2006)
- *Statements of Heritage Impact* (2002).

The *Archaeological Assessment Guidelines* are a particularly helpful companion document to refer to when considering or producing an AMP. In particular, they provide information relevant to:

- physical assessment procedures to determine the intactness/potential of sites
- significance assessment to determine the importance of areas and individual sites

Significance assessment is also considered in the document:

- *Assessing Significance for Historical Archaeological Sites and 'Relics'* (2009)

1.2 THE GUIDELINES DO NOT COVER

These AMP guidelines do not apply to:

- Aboriginal places or heritage items which are covered by separate legislation administered by the Department of Environment & Climate Change. Some places, such as sites of contact between Aboriginal and non-Aboriginal people and sites which are significant to both Aboriginal and non-Aboriginal people, cross these administrative and legal boundaries, such as Mungo National Park, Kunderang Homestead and Byron Bay Lighthouse. Often in these cases, separate but complimentary AMPs are created for the Aboriginal and non-Aboriginal heritage of the same site or they are assessed separately in the same AMP and the information is then integrated in the policy and recommendations sections.
- heritage items that are significant for reasons other than archaeological significance.
- the conduct of archaeological excavations or procedures required when archaeological sites or 'relics' are accidentally disturbed.

1.3 WHO ARE THESE GUIDELINES FOR ?

These guidelines are for heritage administrators, local and state government officers, developers, site owners, project managers, archaeologists and the general public.

Archaeological Management Plans will usually be commissioned by state or local government authorities in order to:

- Identify areas of archaeological sensitivity so that planning decisions can take these aspects into account;
- Inform prospective developers, site owners and managers about the archaeological sensitivity of their land at the earliest opportunity;
- Ensure that resources (human, physical and financial) are directed to the most sensitive areas and important sites;
- Allow archaeologists the time for proper assessment and investigation of significant archaeological sites.

Comprehensive AMPs will avoid delays to development caused by the inadvertent discovery of archaeological 'relics' and the need to halt work whilst notification of the finds are made, appropriate actions are discussed and the necessary approvals are sought from consent authorities.

1.4 WHEN ARE ARCHAEOLOGICAL MANAGEMENT PLANS HELPFUL?

Archaeological management plans (AMPs) may be undertaken when:

- a land zone (ranging from an individual site to a whole landscape or local council area) retains a high likelihood of significant archaeological remains that need to be well managed, such as an early Historic town precinct
- information about archaeological resources is required as part of broad scale land use planning or management activities, such as subdivision plans , metropolitan strategies or tourism impacts
- a heritage study, heritage register or environmental planning instrument is being prepared for an area and potential archaeological sites are to be included
- a local council or a government agency wishes to provide some level of certainty to land owners, developers and prospective purchasers regarding potential archaeological features.

1.5 WHAT IS AN ARCHAEOLOGICAL ZONING PLAN (AZP) ?

Since the mid–1990s archaeological zoning plans (AZPs) have largely been replaced by the more detailed AMP study format as described in these guidelines. The change of name reflects the methodology of the AMP, which now mirrors that used for conservation management plans (CMPs).

The term Archaeological Zoning Plan derived from an early emphasis on mapping gradings or 'zones' of historical archaeological sensitivity. This predicts the likelihood of an area/site to retain physical evidence in the form of archaeological 'relics' and deposits.

AZPs tended to provide broad–scale archaeological assessment of a large area. They combined historical research and physical assessment to identify potential archaeological resources and map their location. Unlike more recent AMPs, many older AZPs did not necessarily assess the significance of identified sites usually due to limited time and funding. They may still form a useful management tool for basic identification of sensitive sites or 'relics' within broader landscapes where it is important that these be identified to reduce the risk of inadvertent disturbance or inappropriate development.

Archaeological zoning plans have functioned primarily as an early warning system for site owners and future developers as well as for heritage advisors and local government officers, to assist in understanding the archaeological issues which may arise from specific development proposals.

1.6 WHAT IS AN ARCHAEOLOGICAL MANAGEMENT PLAN (AMP) ?

At its most basic, an AMP is a document that identifies the potential for archaeological heritage in a specific location and provides management strategies and recommendations on how to manage that archaeology. In an AMP, identified sites are divided into different areas or zones, which are explained in text and displayed in map format.

However, a comprehensive AMP can result in a contextual study that provides an understanding of the nature and extent of the archaeological resource within the study area

and clearly indicates future archaeological requirements for landowners, land managers, property purchasers, property lessees, developers, local council officers and others.

AMPs may be prepared for a wide range of geographical areas such as an individual site, a precinct, a proposed subdivision or larger land zone such as a local council area or regional park. They may also be used for large single sites or complex properties where staged development is planned and any potential archaeological requirements need to be identified prior to the commencement of works, to ensure that these are integrated into development assessment and determination processes.

These plans identify and facilitate the management of archaeological resources, particularly where they may be affected by development pressure. In particular, AMPs can help to identify which sites are likely (or not) to yield informative research outcomes, thereby assisting to direct funding and effort into those that will provide the most benefit for all stakeholders.

AMPs identify the location and significance of potential archaeological sites and provide recommendations for their management. Identified sites are usually divided into different units or zones, which are explained in text and indicated in map format.

These predictive, broad scale studies are undertaken to:

- provide councils and other agencies with a mechanism that allows more timely consideration and integration of archaeological requirements into planning processes;
- appraise the existing resource in a inclusive rather than piecemeal approach;
- utilise the cumulative knowledge base of past archaeological projects;
- guide and refine the research base of site-specific projects;
- assist understanding of the character and history of settlement in NSW;
- determine the likely significance of archaeological sites and relics – whether local, state, national, international or none;
- define the appropriate management for sites and relics, having regard to significance and statutory requirements;
- provide early indication of the potential nature and significance of sites to enable their appropriate management;
- identify ways to promote recognition and positive management of archaeological resources;
- allow State heritage agencies to focus resources on the most deserving sites.

AMPs will generally provide more comprehensive information regarding surviving remains than that in AZPs. AMPs usually include several maps to graphically present data about potential archaeological sites. In addition, AMPs should also:

- include a history of the study area;
- identify relevant historic phases and/or themes;
- indicate the potential significance of the resource as a whole and/or of individual sites and precincts (whether local, State, national or international);
- provide an inventory of identified archaeological sites;
- identify where previous archaeological investigations have occurred and their results;
- provide a research framework to guide and refine the research basis of site–specific projects and locate them within a broader and more meaningful context;
- recommend archaeological actions to manage the sites and items they identify;
- provide graphics and diagrams to illustrate these different findings.

1.7 USING THE GUIDELINES

These guidelines are intended to set out the general process for preparing an archaeological management plan. They are not intended as prescriptive procedures.

Archaeological management plans do not have independent legal status. They are an advisory tool and early warning mechanism designed to assist those with an obligation to responsibly manage archaeological remains. However, they should lead to the formulation of archaeological provisions, schedules and graphics within local planning instruments such as local environmental plans (LEPs) or development control plans (DCPs).

Preparing an AMP

This section outlines a general set of guidelines for archaeological management plans that can be used as a checklist. Not all tasks will be relevant to every AMP project, so the process must be adjusted to suit each particular circumstance. The *Archaeological Assessment Guidelines* (Heritage Office & DUAP 1996) are also a useful reference for the details of some of these stages.

2.1 PROJECT INITIATION & BRIEF

Whether independently or in collaboration, a local council, property or land management agency and/or the Heritage Branch may determine that development pressures are having a considerable impact on the historic and archaeological significance of a particular area or region.

Once a decision has been made to have an AMP prepared for an area the following tasks are usually undertaken:

- prepare and issue brief (see model brief in Appendix A for guidance)
- receive tenders/offers of service
- appoint consultant.

This preparation process is similar to that undertaken for an archaeological assessment, only on a broader scale. When considering the different tenders it is important to ensure that the successful project team has a range of skills that cover at least the following areas of expertise:

- historical archaeology
- historical research and writing
- cultural significance assessment
- Geographical Information Systems (GIS)/mapping
- Understanding of local planning instruments and mechanisms.

It is useful to include a copy of the project brief and the accepted response proposal (minus financial and other sensitive information) as an appendix in an AMP. These documents can provide an understanding of the original intentions, aims and needs of commissioning agents and AMP authors, and any modifications and improvements evident in the completed plan. This information can be especially useful when revising an AMP at a future time.

2.2 STATEMENT OF BENEFITS

This component highlights the range of positive outcomes that are possible when necessary archaeological involvement in development or other projects is included in a timely fashion. This section enables AMPs to promote and foster awareness of public and commercial benefits available to stakeholders by providing examples of past projects where the archaeological component has successfully promoted the commercial profile of companies and corporations undertaking site developments, and/or encouraged mutually beneficial and enduring links between these businesses, local community and society more generally.

2.3 RECORDING THE PROJECT PROCESS

This section of the AMP records the particular methods and procedures used when deciding on key components and methods, especially the research themes and questions, management recommendations and implementation strategies. This explanation of the particular focus or origin of ideas and approaches has a number of benefits:

- it enables end–users to understand how and why particular decisions were made in an AMP
- people viewing an AMP in the future can understand its historical context and the issues and concepts that were being developed and pursued at the time – knowledge that helps to inform sound resource management decisions
- it facilitates a plan's review and update process as it records the processes used to produce the data
- it provides clearer understanding for archaeologists who examine existing AMPs when developing future frameworks.

2.4 DATA COLLECTION AND REVIEW

The process of data collection should be divided into a number of logical steps.

This initial stage is to locate and consult secondary sources, including reports and studies. They include the following sources, where available:

- archaeological assessments, research designs and completed investigations
- heritage and local history studies
- heritage, property and archaeological inventories (including LEPs, DCPs etc)
- geotechnical surveys, geological and soil data.

These secondary sources should provide a foundation for the study:

1. to refine the extent of the study area,
2. to establish priorities for further research,
3. to further refine or define the goals of the AMP.

Historical research of primary sources is an essential element of the AMP, particularly maps and plans.

Useful primary references are often provided in secondary source reports and studies. These resources generally include directories, rate books, Lands Title Office records, statutory authority records, historical maps, plans and images. They can be located through primary source repositories such as Mitchell Library, State Records NSW, Royal Australian Historical Society and local history collections and resources including Sydney Water and the NSW Department of Lands. Oral history may also be useful in some circumstances.

Detailed assessment and review of collected sources can assist in determining a study area's research requirements. Analysis of previous excavation reports and studies also informs the research agenda framework, the broad study area history and the likely nature of the surviving resource. This may indicate differences between the current study area and areas covered by other AMPs. Fieldwork data from prior reports and geotechnical surveys can also assist at the site survey stage, providing evidence that can be cross–checked against the existing physical condition of the area's archaeological resource.

Central Research Archive
The documentation generated by the AMP should be lodged in a central research archive, preferably in the library of the main local council or other authority responsible for the AMP. This resource can greatly assist heritage specialists when undertaking investigations and preparing reports for sites and places in the area. Consequently, reduced duplication of research benefits developers and landowners by decreasing the time and financial expenditure needed for individual projects. The research archive can also assist local council educational programs and provide publicly accessible information.

2.5 STUDY AREA HISTORY

A detailed history of the study area utilises the resources noted above. If a relevant, comprehensive area history already exists an outline history can be adapted from that source document. Pre–existing historical accounts may not provide thematic detail that correlates directly with the current defined national, State or local historical themes. AMPs that incorporate established themes and values in their historical analyses will integrate more easily into broader heritage frameworks. They are also better able to emphasise the ability of archaeological remains to contribute to understanding of the cultural identity of a region or area.

Site Area History – Geographic Landscape
The physical landscape displays attributes relating to topography, geology, geomorphology, soils and vegetation, as well as the impact of development. Assessment of these attributes can define their effect on archaeological characteristics such as site survival and relative intactness or level of physical disturbance. This overall understanding may assist when devising mitigation strategies for the archaeological resource of an area, either through future archaeological excavations or other outcomes.

The assessment process is not only about defining the current status of the archaeological resource in a study area; it is about presenting a strategy to manage the remaining resource through predictive procedures. This 'modelling' may be as simple as generating a cross–section transect of an area by superimposing data from maps and plans, or as technical as GIS. Mapped data can support this component, illustrating attributes of the study area's topography, geology, geomorphology, soils and vegetation.

Case Study: The Hill End Images- *An Archaeological Landscape inPhotographs***.**

Hill End is a small town 90 minutes north of Bathurst. A gold mining boom town in the 1870s, it has had a large shifting population for much of its history. Its population peaked around 8000 in the early 1870s and rapidly declined after 1874 when payable gold ran out. At its peak "it had more than a kilometre of shops, five banks, two newspapers, a brewery, twenty seven pubs, over two hundred mining companies in the field and stamper batteries working 24 hours a day. By 1873 there were four churches, a hospital, a public school, improved roads and substantial brick, weatherboard and corrugated iron buildings had replaced the makeshift wattle-and-daub slab huts" (http://hillendfamilyhistory.com/hillend/hill_end.php). Today, its current population is around 200 and most of Hill End is a protected Historic Site under the National Parks and Wildlife Act and by listing on the NSW State Heritage Register. The towns landscape is dotted with un touched empty lots and areas where buildings once stood- it is a true archaeological landscape.

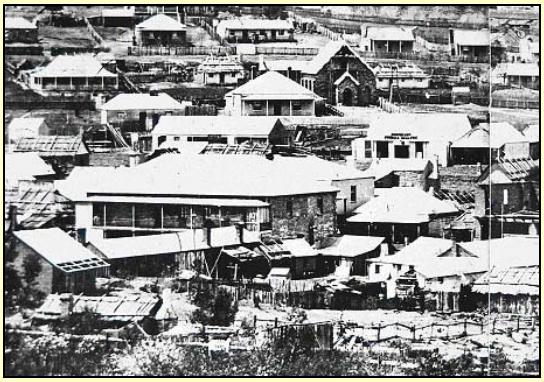
As part of Hill End's management, an Archaeological Zoning Plan was commissioned as part of the overall Master Plan to identify areas of archaeological potential to inform future management decisions and works.

As part of the research for the management of the archaeology at Hill End, many photographic images of Hill End were used. Hill End was the subject of a famous series of photographs taken by Beaufoy Merlin, called the Holtermann Collection. Merlin took photos of every single family and building in Hill End during 1872, giving us a complete picture of what Hill End looked like at that time. We know which building was located where and who lived in it. In effect, there exists a complete town layout in images, from a time when photographs were a rarity.

The challenge when researching an Archaeological Zoning or Management Plan is to take this photographic town layout from the 1870s and overlay it with images of Hill End today to identify areas of archaeological potential– locations of once standing buildings, rubbish tips, mines and other sites which can now only be identified archaeologically.

The three landscape shots of Hill End below indicate the number and variety of buildings that have come and gone throughout Hill Ends history in the vicinity of the Methodist Church, all of which would have left archaeological traces.

Panoramic view of Hill End, looking east from Sargent's Hill- American & Australasian Photographic Company- 1872. Image Courtesy of the Mitchell Library NSW.

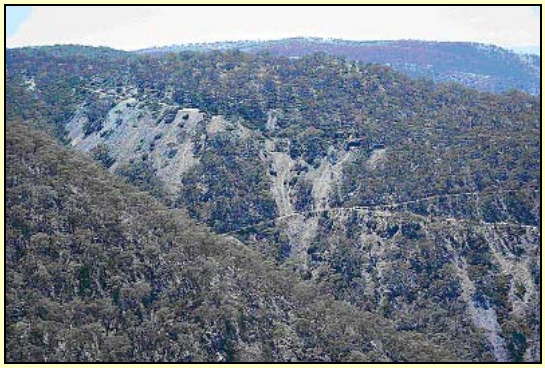


Detail from *Panoramic view of Hill End from a hill south of Germantown, looking east*. Image Courtesy of Mitchell Library NSW.

Aerial Shot Hill End- Circa 1980s. Image courtesy of DECCW.

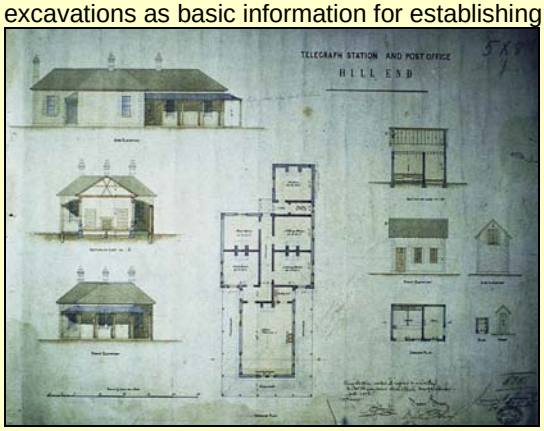
Apart from photographic images, the use of maps and comparative photographs is also helpful. The mining plan which details the main claims along the Hawkins Hill line of reefs provides detail which can then be compared with a current landscape image of the same area. This in turn allows the identification of areas of archaeological potential.

Diagram of the main claims and their earnings along the Hawkins Hill Line of Reefs up to 1879. Image courtesy of DECCW.



Hawkins Hill, circa 2000. Image courtesy of DECCW

Architectural plans are also available for use when researching the potential archaeology of the town. Understanding building dimensions, configuration and the location of ancillary structures will be of benefit to assess areas of archaeological potential. They can also be used when undertaking excavations as basic information for establishing archaeological trench location and scope.



Plans for Hill End Post Office. Image courtesy of DECCW.

An archaeological investigation of former residential & commercial sites near Hosies Bed and Breakfast, Hill End. Image courtesy of DECCW.

2.6 SYNTHESIS OF PREVIOUS STUDY AREA ARCHAEOLOGY

AMPs provide an opportunity to undertake and present detailed analysis, review and synthesis of data collected from previous archaeological studies and isolated investigations. This evaluation process has significant bearing on the plan's research framework and ensuing management recommendations for the surviving area archaeology, enabling preliminary consideration of a site's survival and capacity to contribute to contextual research themes and questions.

A synthesis of past project results (as opposed to discrete summaries of each previous investigation) provides a useful context for broader interpretation of the area's archaeology, suggesting how, together, these investigation results can contribute to and compare with the knowledge base of urban resources beyond the study boundary. While not all AMPs will have the scope to undertake detailed cross–site comparison studies, study area syntheses that analyse and compare material evidence from past investigations can provide an indispensable background study for future plans and individual projects.

Questions posed in the research designs of previous area investigations may be evaluated during this project stage to determine whether, for example, sufficient evidence has been accumulated to respond to them, or whether they remain relevant and should be reflected in the plan's research framework.

Review of evidence exposed during past projects can indicate the general preservation pattern of an area's archaeological resource. In combination with physical survey and available geotechnical data this also informs the more detailed discussion of resource survival rates (or 'archaeological potential') provided in the AMP.

2.7 PHYSICAL ASSESSMENT

Visual assessment of each study area allotment is undertaken to determine and record whether or not archaeological relics and deposits are likely to survive, and if so, their potential level of intactness. Recording or inventory forms should be designed to document the individual site survey data; specific details then being transferred to individual site sheets in the AMP database. Upon completion this database may be incorporated into other broader data sets such as the State Heritage Inventory.

The site survey method is also described in this section of the AMP document and the results reflected throughout the study's findings.

2.8 CHARACTER OF THE ARCHAEOLOGICAL RESOURCE

This component synthesises data gathered for the physical assessment, history and previous investigation components of the AMP to suggest the nature, location and extent of the area's surviving resource. This important data source can significantly increase the existing knowledge base and indicate appropriate management requirements in advance of new developments. A key component of the model, the character profile can:

- develop a picture of the study area's archaeological character
- utilise past investigation records to build comparative analysis
- determine areas that can fill knowledge gaps
- suggest priority research areas requiring either in situ preservation or investigation based on assessment of depleted resource levels, site type and significance
- reveal whether sites associated with important historic phases or precincts of known significance correlate with particular categories of archaeological potential
- indicate geographical and chronological 'zones' to address specifically formulated research questions.

Evaluation of the Surviving Resource
Analysis of the surviving archaeological resource can provide statistical data that helps to:

- determine its overall survival rate
- provide a breakdown according to intactness level for each identified site
- indicate research potential levels on an across–the–resource basis.

This evaluation identifies the main types of surviving sites and patterns of distribution to assist in suggesting areas and sites that require prioritised research. Establishing the percentage of surviving remains facilitates appropriate management responses to potential destruction as it clearly indicates the limited nature of what remains and why it requires conservation or investigation.

Study Area Character Profile
Combining data from the surviving resource evaluation with analysis of previous investigations and available historical information will provide an overarching analysis of the historic character of the area. This will facilitate a wider focus for individual investigations by identifying relevant research and management priorities. This analysis can also assist in the development and discussion of urban development theories.

2.9 ASSESSMENT OF HERITAGE SIGNIFICANCE

Assessing the heritage significance of the study area and the sites within it affects decisions about how these are to be managed and/or preserved. Clear assessment of archaeological heritage significance within an AMP assists in determining sound, timely and appropriate management actions for the study area overall and for the potential archaeological resource within it. A general summary statement of cultural significance for the study area distinguishes what it is about the potential archaeological resource that makes it valuable not only to archaeological professionals but also to the general community. The statement summarises the archaeological values of the study area and as such forms the basis of management decisions for the area's surviving resource. It must therefore express all relevant significance values, in explicit language, to encourage well–founded decisions.

The area's heritage significance may also be addressed through a series of preliminary significance statements that address each of the evaluation criteria established by the Heritage Council of NSW under the *Heritage Act, 1977*. Those seven criteria, include the values of history or historic association (Criteria a and b), aesthetic (Criterion c), social or spiritual (Criterion d) and information potential (Criterion e) plus rarity (Criterion f) and representative ability to demonstrate (Criterion g). The seven criteria (a to g) allow an item to be assessed against two levels within NSW, those of State and Local significance. They also encompass the four values historic, aesthetic, scientific and social used in the *Burra Charter* of Australia ICOMOS which also functions as a national guideline document.

2.10 ARCHAEOLOGICAL RESEARCH FRAMEWORK

Archaeological research frameworks provide a coordinated approach to archaeological research and investigation developed for a large area or precinct, incorporating research questions and themes that apply to a number of sites. The research framework provides a context to guide the research questions and management decisions for individual projects and sites to encourage maximum research benefit from the resource for the community.
This component is explained in more detail in Section 4 of these guidelines.

2.11 RECOMMENDED SITE REQUIREMENTS

The AMP database indicates the specific actions recommended for each archaeological site or area identified in the study. This may also be presented graphically, in accordance with the Requirements for Archaeological Mapping provided in Appendix B of this guideline.

For sites that require some level of archaeological investigation the initial recommendation will usually be to carry out an archaeological assessment. A specific assessment will then provide more detailed analysis of requirements for individual sites. The Site Requirements section of an

AMP describes the range of archaeological actions which may be applied at individual sites. Requirements may include:

- archaeological assessment
- survey/remote sensing/non–intervention options (which do not involve the disturbance or excavation of land)
- archaeological test trenching
- monitoring
- sampling of evidence
- large–scale, controlled archaeological (open area) excavation
- in situ conservation
- no further archaeological action.

There may also be a combination of the above requirements.

As AMPs have the advantage of providing early indication of potentially significant sites across a study landscape, this enables them to present a recommendation, if warranted, for undisturbed, in situ preservation of selected sites with high archaeological research potential or other significance values, such as representativeness or rarity. This enables a more even balance between development pressures and achievement of sound conservation and preservation practice by identifying archaeological management requirements before new development is proposed, so that, if necessary, in situ retention strategies can be more readily incorporated into design and construction programs at a pre–development application stage. In this way, AMPs may be able to support long–term archaeological research priorities.

CASE STUDY: THE GOVERNMENT HOUSE SITE, PORT MACQUARIE
Identification, Investigation and Importance – from an AMP to the SHR

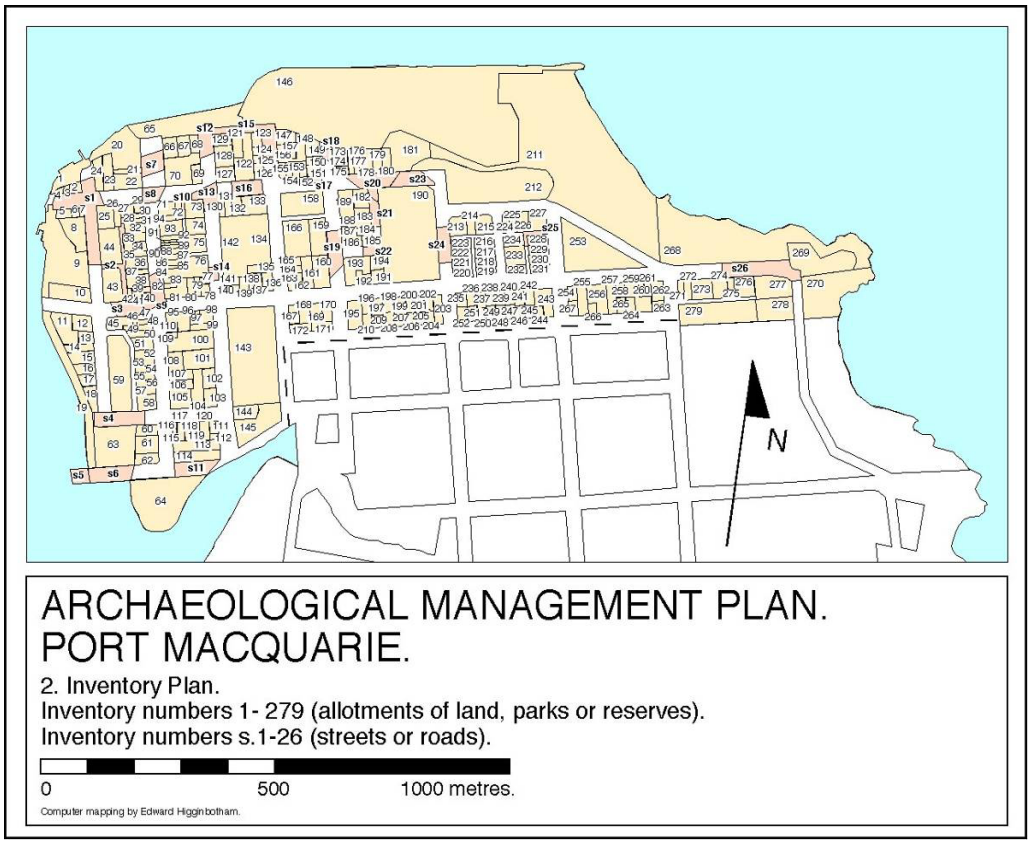
In 1994-95 Hastings Council prepared an Archaeological Management Plan (AMP) for the historic Port Macquarie Central Business District. Preparation of an AMP was jointly funded by the Heritage Council of NSW. The AMP arose from prior heritage studies which had identified the likelihood of a significant historical archaeological resource (sites and 'relics') surviving in Port Macquarie.

Governor Lachlan Macquarie resolved to establish a settlement for secondary punishment on the Hastings River because the port of Newcastle in the Hunter Valley was being overtaken by the spread of free settlement from Sydney. On 21 March 1821, the 'Prince Regent' left Sydney with an advance party to establish a settlement at Port Macquarie commanded by Captain Allman. In May 1821, Allman reported that the prisoners were busy building huts and their behaviour had been good. A 'Commandants House' was built by 1822.

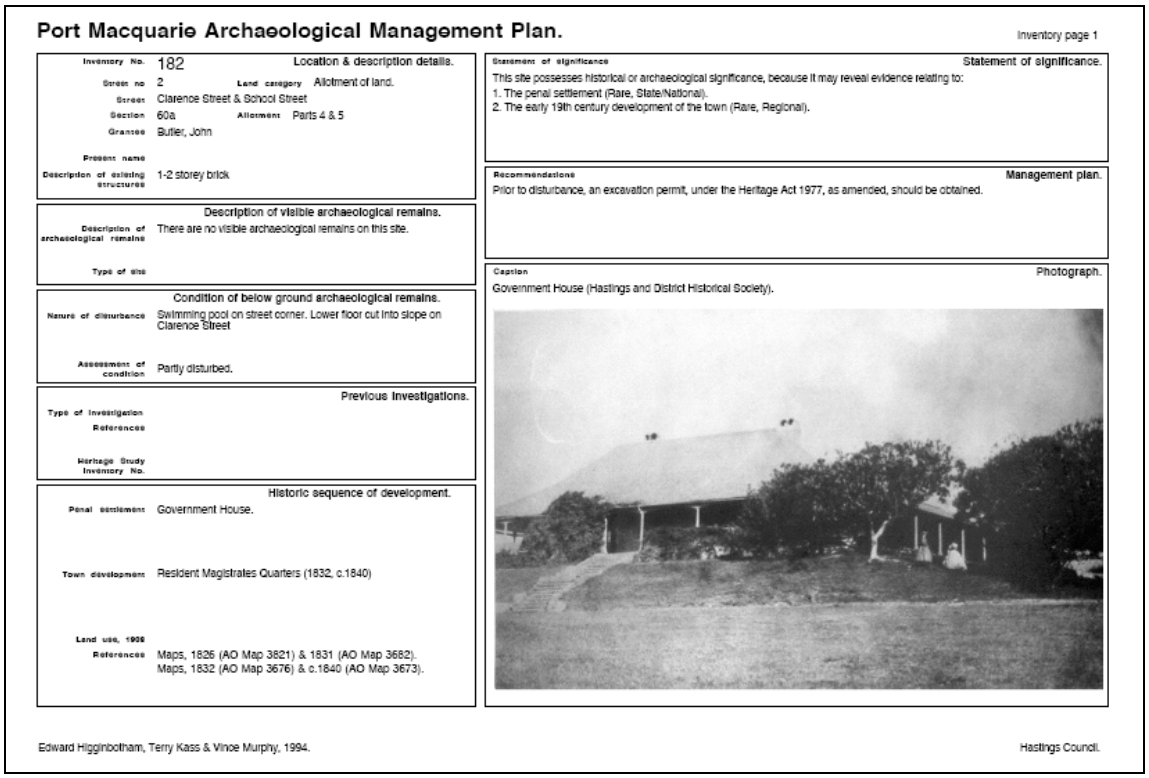
The 1994-95 AMP for Port Macquarie identified some 300 sites likely to survive within the CBD. After reviewing the history of Port Macquarie, the AMP then makes a Statement of Significance about its archaeological resources. The most important aspect of this significance relates to the establishment of Port Macquarie as a convict settlement in the 1820s. Archaeological sites and 'relics' associated with that era are considered to be rare within NSW and Australia as a whole.
With the assessment of a rare archaeological resource of significance to the State, came both the obligation to appropriately manage the resource and opportunities to exploit its unique identity.

One site identified in the AMP was that of the 'Commandants House' built in the 1820s. Port Macquarie ceased to be a government centre in the 1840s. The former Government House had survived in an increasingly dilapidated state until its demolition in the late 1880s - early 1890s. In the 1940s tourist and guest accommodation was built on the site. The Panorama Guest House was later re-modelled into the Central Views Motel, which stood on the site until 2001.

In 2001 the site was subject to a major archaeological excavation, which exposed the full extent of the remains, including the footings of the four room 1821 Government House with two rear wings and service areas constructed in 1826; a cellar with standing walls and ancillary elements such as drains and privies. The building footings sit at 45 degrees to the current street alignment on a block adjacent to the CBD. The discovery of highly intact remains led to requests to 'save' the site from the local and wider community. The archaeological site was subsequently listed on the State Heritage Register. It is one of only 25 SHR listed historical archaeological sites.



Base Plan for Port Macquarie, showing the archaeological sites identified in the Inventory. Note that some 300 sites were identified by the AMP. *Source:* E. Higginbotham.



Port Macquarie Archaeological Management Plan. Inventory page 1

Location & description details.

Inventory No. 182
Street no 2 Land category Allotment of land.
Street Clarence Street & School Street
Section 60a Allotment Parts 4 & 5
Grantee Butler, John
Present name
Description of existing structures 1-2 storey brick

Description of visible archaeological remains.

Description of archaeological remains There are no visible archaeological remains on this site.
Type of site

Condition of below ground archaeological remains.

Nature of disturbance Swimming pool on street corner. Lower floor cut into slope on Clarence Street
Assessment of condition Partly disturbed.

Previous investigations.

Type of investigation
References
Heritage Study Inventory No.

Historic sequence of development.

Penal settlement Government House.
Town development Resident Magistrates Quarters (1832, c.1840)
Land use, 1908
References Maps, 1826 (AO Map 3821) & 1831 (AO Map 3682).
Maps, 1832 (AO Map 3676) & c.1840 (AO Map 3673).

Statement of significance. Statement of significance

This site possesses historical or archaeological significance, because it may reveal evidence relating to:
1. The penal settlement (Rare, State/National).
2. The early 19th century development of the town (Rare, Regional).

Recommendations Management plan.

Prior to disturbance, an excavation permit, under the Heritage Act 1977, as amended, should be obtained.

Caption Photograph.

Government House (Hastings and District Historical Society).

Edward Higginbotham, Terry Kass & Vince Murphy, 1994. Hastings Council.

Inventory Sheet for site #182, the Government House Site at the corner of School Street and Clarence Street, Port Macquarie. The 1994 AMP recommended an archaeological investigation.

The Heritage Council worked with the site owners, local government, the community and the State government to investigate options for the future of the site. An option was agreed which allowed the capping of the archaeological site in a manner that retains the ruins in-situ for future conservation and interpretation, with a new development over the top. That development was the 'Focus' Apartments which features two interpretative foyers with artefact displays and information about the history and archaeology of the site. There is also a dedicated 'resource room' for artefact storage.

2.12 SITE INVENTORY/DATABASE

The format of the sites database will depend on whether or not an AMP has a GIS component. Where a GIS based AMP is provided to end–users, the inclusion of a CD–ROM containing the maps and relational database software can reduce the need for multiple copies of a printed version of the Inventory.

Where a CD_ROM is provided, an appendix to the AMP only needs to list the sites by name and database number, as an inventory rather than a full database. This reduces volume size and printing requirements.

AMP copies held in public institutions will generally include a printed version of the database to assist reader access.

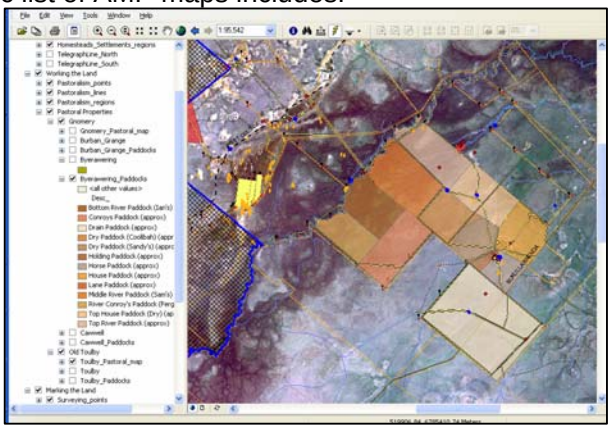
Whether or not AMPs provide a GIS component which integrates the sites database and maps, individual site entries from the database may also be included on the web–accessible State Heritage Inventory of the Heritage Branch, Department of Planning. This is the case for the Archaeological Management Units for the City of Parramatta (Sydney region). This requires a systematic, consistent format for all AMP databases, which will also assist cross–comparative research at local, State and/or national levels.

2.13 MAPPING

Hard-copy colour coded or monotone textured (dots, stripes, hatching, shading etc) versions of all maps should be provided as overlays. A basic list of AMP maps includes:

- Study Area
- Historic Maps & Aerial Photos
- Physical Condition of the Archaeological Resource (also known as 'archaeological potential')
- Integrity of the Archaeological Resource
- Sites according to Historic Phases
- Archaeological Research Potential
- Significance of Sites
- Site Requirements

Additional maps are listed in Appendix B.

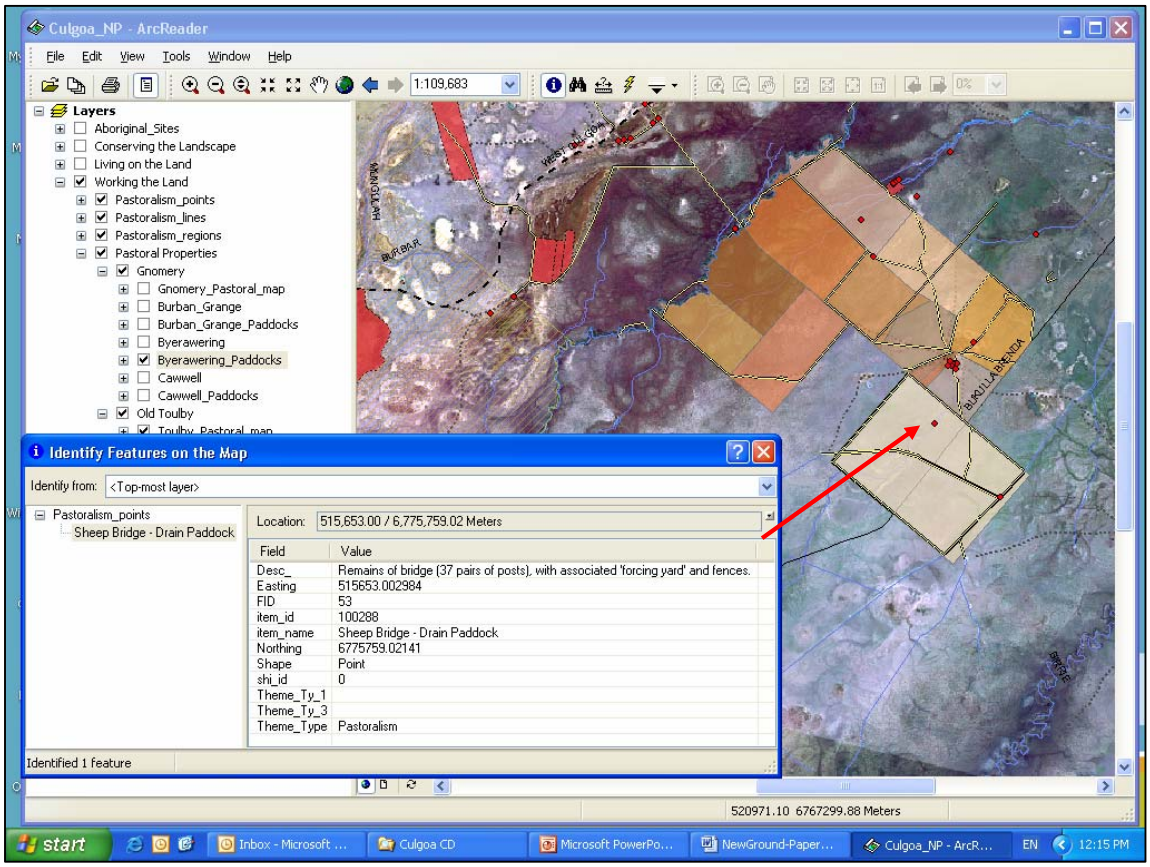


Mapping Example: Culgoa National Park Atlas image showing the paddocks that made up Byerawaring Station (as at 1995 when it was acquired by the NSW NPWS). Image courtesy of DECCW.

Appendix B also explains the purpose of providing each of the above maps in an AMP where funding and information is available to produce these. Many of the maps prepared as part of the study that may be usefully reproduced within the body of the AMP document itself.

The method of site mapping must be given consideration during preparation of the AMP and needs to be fully discussed with the client or project partner. Key questions are:
Where is your AMP located? Who will be using the maps? Where will they be stored? How will they be displayed?

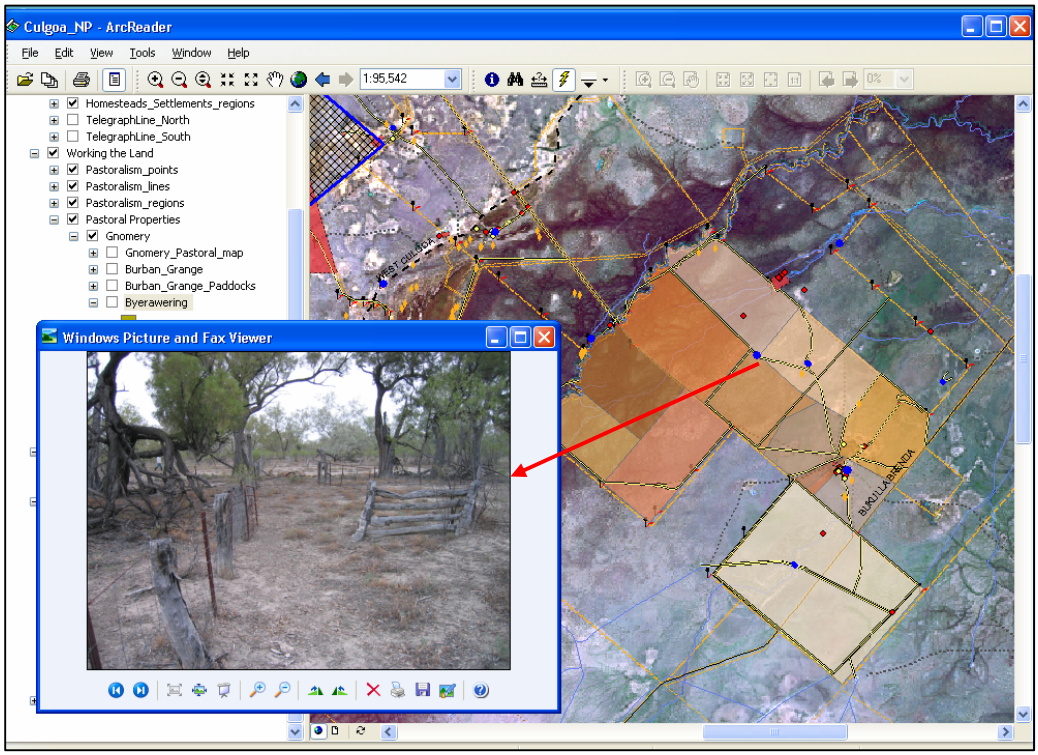
These questions will determine how the results of the research and surveys will be accessed and understood. If an AMP is being prepared for a CBD, town or suburban area, mapping using the Cadastre layer and by Lot and DP will usually be appropriate, but be aware that in a number of historic early towns, sites may be found in areas such as streets or unalienated Crown Lands and reserves. For an AMP which covers a rural or National Park area it will be necessary to adjust the mapping technique to suit the terrain.



Mapping Example: Culgoa NP Atlas showing Byerwarering Station with a feature description for a sheep bridge located within Drain Paddock. Image courtesy of DECCW.

GPS coordinates such as Eastings and Northings work best as they can be downloaded into GIS programs such as ArcGIS that can display the sites over a number of other layers of information. Using Latitude/Longitude in either decimal or degrees/minutes/seconds for mapping has also been common in the past, but new technologies mean that better options are usually available. Not all AMPS will have sufficient budget to enable GIS to be used. In that case public software such as Google Earth may be of assistance for mapping. Less sophisticated mapping programs may also provide a basic mapping tool.

When using computer programs to display and house AMP mapping information a brief thought about the technology wouldn't go astray. Will the mapping program being used be superseded by a new version soon? Can the original mapping information be transferred to this new program? Can the data be exported to other formats?



Mapping Example: Culgoa NP Atlas showing Byerawaring Station (1995) with a image of the Middle Yard sheep yards. Image courtesy of DECCW.

The important thing to think about is longevity. Most AMPs will be used for up to 10 years before being updated or revised – will the mapping technology last that long?

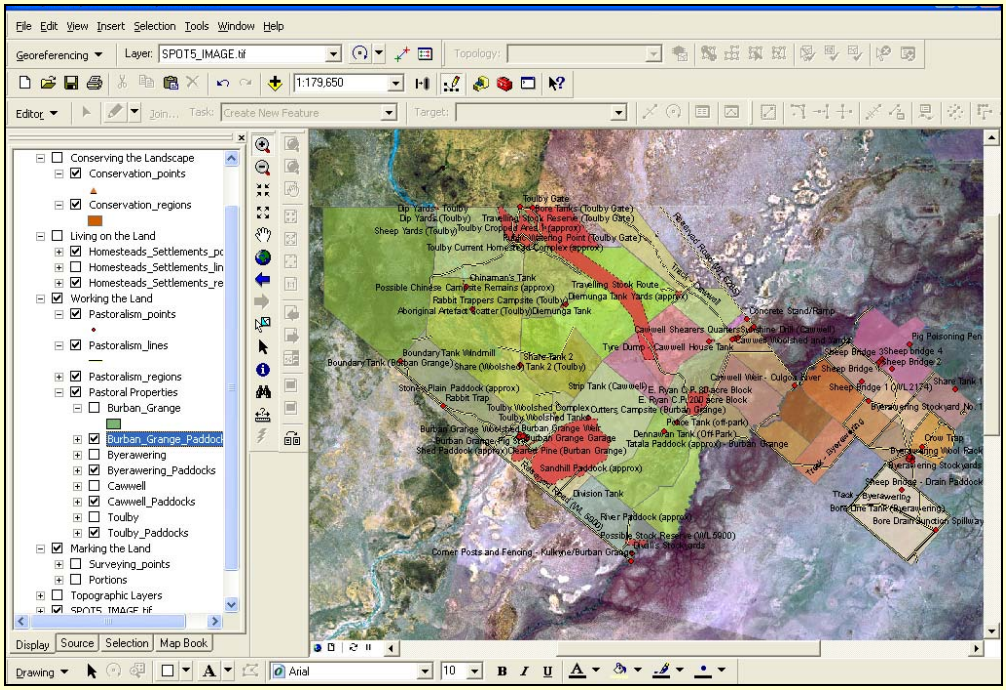
MAPPING CASE STUDY: *Representing all the landscape as cultural*

Many government and non-statutory registers utilise point datasets to represent cultural heritage places. An effect of this approach is to emphasise that cultural heritage comprises a series of spatially discrete material remains or 'sites' or archaeological deposits, suggesting discrete locations which are somehow disconnected from their broader historical and landscape contexts. The Department of Environment, Climate Change & Water (DECCW) has been developing an alternative approach in which spatial representation of heritage is set within a cultural landscape framework, acknowledging that all parts of the landscape have inter-connected cultural histories, associations and meanings resulting from long-term and ongoing human-environmental interactions.

The following 'screens' illustrate the use of spatial concepts and information to represent cultural heritage at a landscape-scale for the purpose of more effective management of protected areas or parks. The case study used here Culgoa National Park (Culgoa NP), located north of Bourke in north-western NSW. The park was reserved in 1996 and covers over 36,000 hectares. The mapping products produced for Culgoa NP comprise an interactive electronic DVD-Atlas and hard copy maps. Both focus on meeting the management needs of field-based park-staff.

The history of, and heritage items (objects, places or landscapes) identified for, Culgoa NP is organised through the adoption of historical themes. Five historic themes have been identified for this purpose. These are: 'Muruwari country' (Aboriginal heritage); 'Marking the land' (surveying); 'Working the land' (pastoralism); 'Living on the land' (settlement); and 'Conserving the landscape' (conservation).

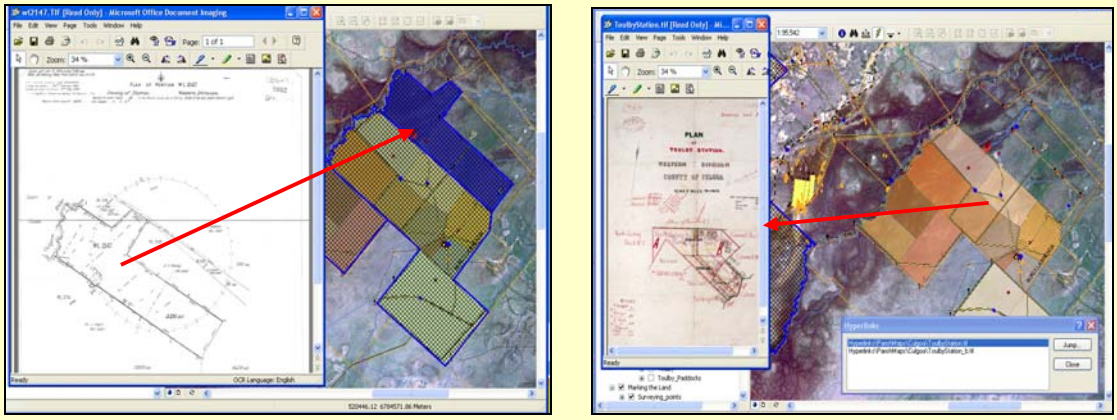
The themes are not inclusive and they aid in making connections between people and places both within and outside of the park landscape. Further reading is listed at the end of these guidelines.



Culgoa National Park Atlas showing heritage items across five historic themes. Image courtesy of DECCW.

The Atlas concept was devised in order to address a number of agency-specific needs. These include:

- to illustrate through spatial representation that all of the landscape (not just 'sites') has cultural values;
- to visually illustrate the complexity and extent of cultural heritage values in a way that is compelling to staff (who are unlikely to be easily engaged through a lengthy text-based planning document); and
- the need to have an operational focus: it should be easily utilized for park planning purposes and for field-based management activities. That is, the Atlas should be a practical management tool that facilitates and invites staff participation.



Culgoa NP Atlas showing Cawwell Station with a hyperlinked Portion Plan for part of the property and a hyperlink to historic plan of Toulby Station. Images courtesy of DECCW.

2.14 FLOW CHARTS

Although AMPs function as broad-scale, preliminary identification tools rather than as site-specific mechanisms, an indicative flow chart can help to explain the general stages that may occur for different archaeological sites. If AMPs clearly explain how they should be applied, they can provide more certainty about individual site requirements. In addition to explaining the stages that lead up to the archaeological assessment process for a given site, it is also helpful if AMPs clarify what occurs after that stage (i.e. beyond the initial function of an AMP) in order to explain broader archaeological processes more explicitly.

The following flow charts outline two common scenarios likely in areas where Archaeological Management Plans have been prepared.

Figure 2.1 shows the process when redevelopment is proposed for an allotment within an AMP area. In many cases preparation of an Archaeological Assessment will be required, especially in an historic town or for an early and intact rural property which has not previously been developed.

Figure 2.2 shows the process for Archaeological Assessments ahead of Development Applications to Local Government Authorities. It is usually preferable, especially when an AMP exists , to ensure that the archaeological resources and the impact of the proposal are assessed prior to the granting of DA consent. In some cases, the requirement for an Archaeological Assessment is imposed as part of the Consent conditions for the DA. This is not the preferred approach because it may limit the range of options subsequently available to manage a significant archaeological heritage resource.

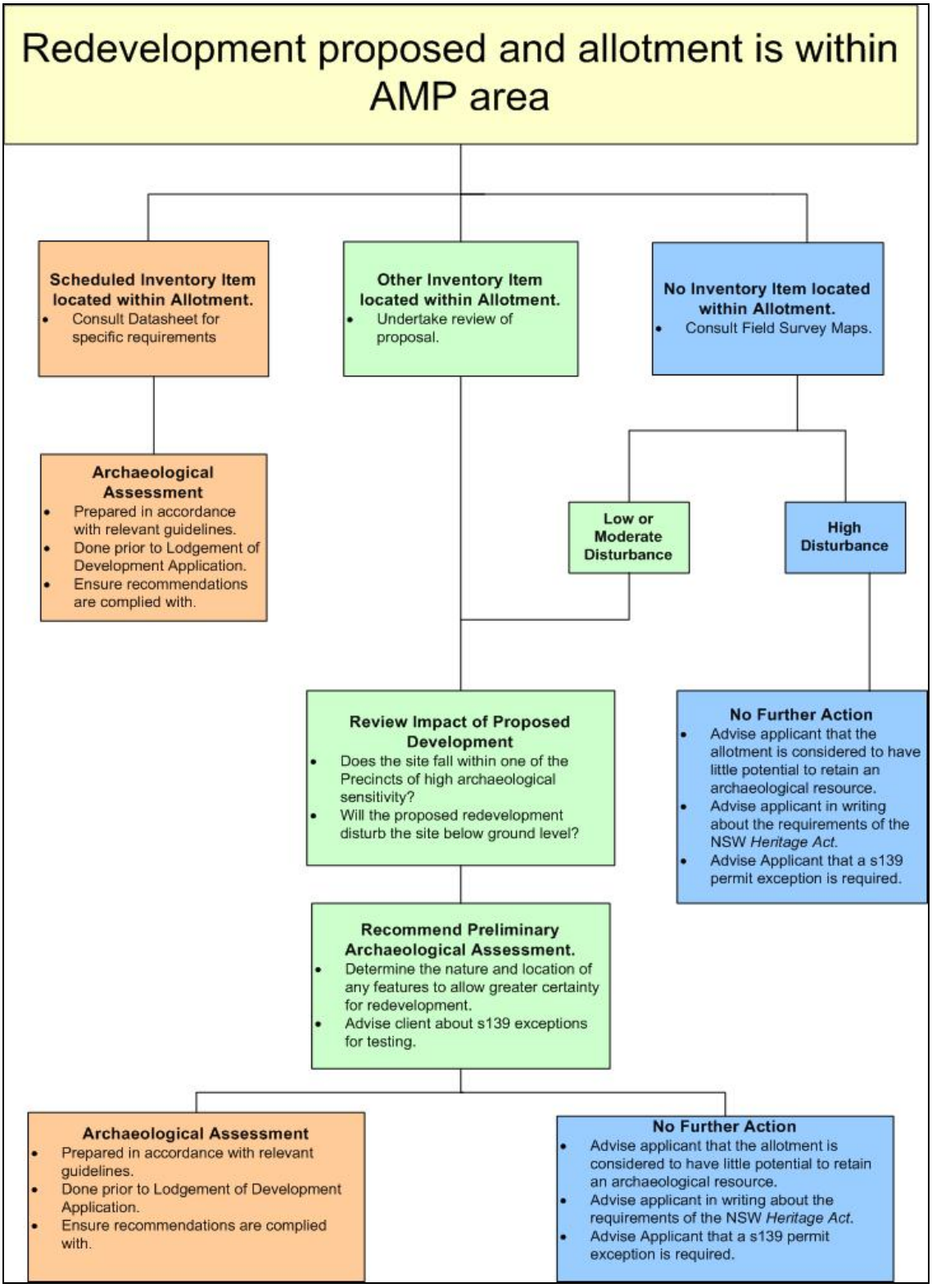


FIGURE 2.1 REDEVELOPMENT PROPOSED & ALLOTMENT IS IN AMP AREA FLOW CHART.

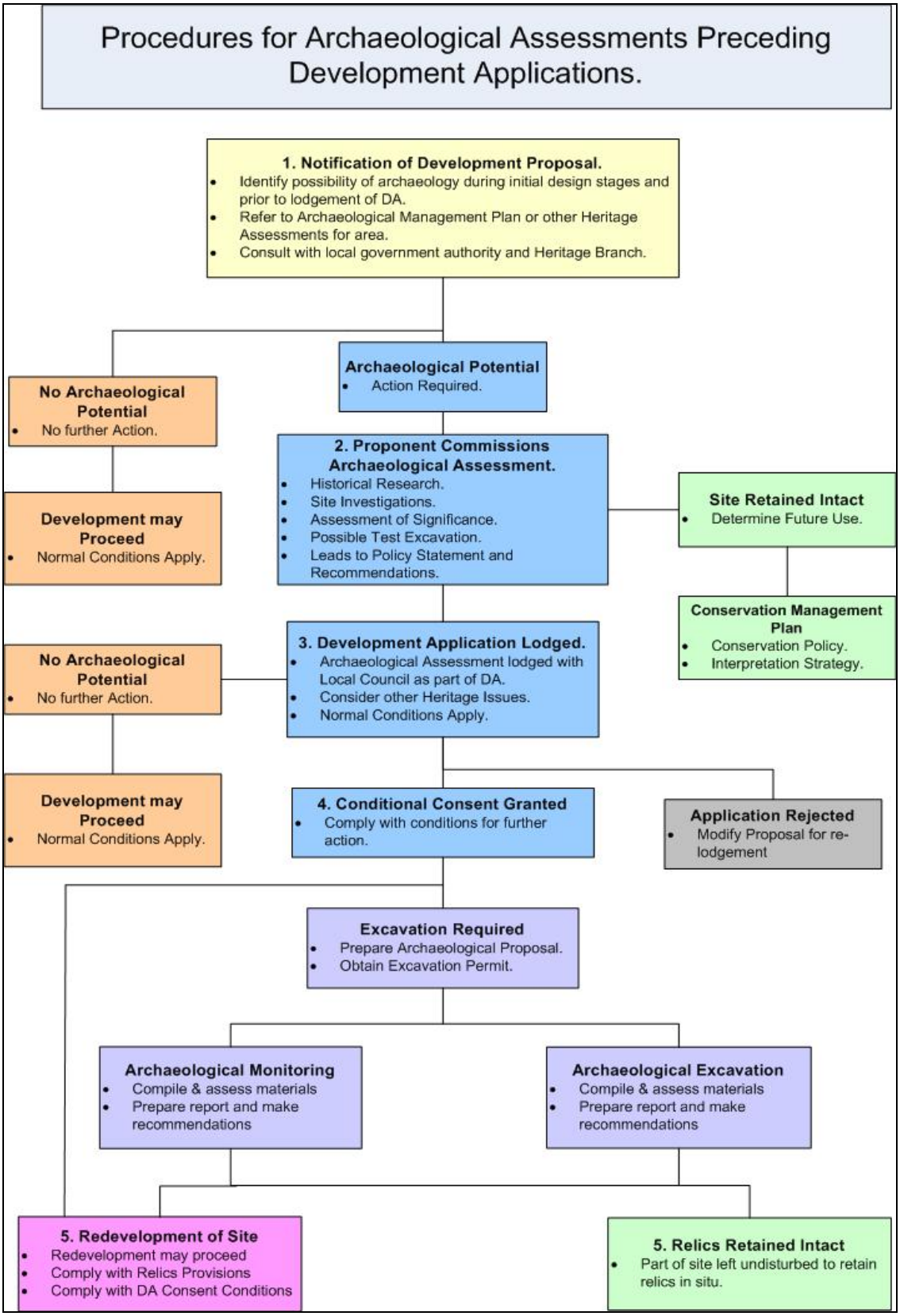


FIGURE 2.2 PROCEDURES FOR ARCHAEOLOGICAL ASSESSMENT PRECEDING A DA FLOW CHART.

Managing an AMP

3.1 AMP IMPLEMENTATION

Many local councils include archaeological provisions in their local environmental plans (LEPs). These provisions help to trigger awareness of archaeological matters associated with proposed development. AMP data, particularly their schedule of potential sites should be added into LEPs or other appropriate local government planning instruments and over–the–counter processes. This assists local council officers to routinely consider archaeological requirements at a pre–DA stage and provide the Heritage Branch, Department of Planning with timely advice about the prospect of archaeological disturbance, as the approval mechanism for sites affected by proposed developments sits with State heritage agencies, in the form of permit consent processes.

Local government adoption of individual AMPs facilitates the inclusion of archaeological heritage management as a standard planning consideration within local councils, particularly AMP recommendations to integrate archaeological requirements and site schedules into local planning instruments.

AMPs may provide an opportunity to foster an environment of cooperation between different levels of government because their effective management and review relies upon ongoing collaboration between local councils and State heritage agencies, since both are usually involved in the development consent process which triggers most historical archaeological investigations and requirements.

3.2 MAINTENANCE & REVIEW RESPONSIBILITIES

As archaeological projects reveal new information, and because different communities will reassess what they consider valuable and important over time, the questions posed through a research framework can change. This in turn can alter the perceived significance of sites and their management needs.

The AMP is a tool to guide research enquiries and archaeological resource management within a given study area. As such, like any tool, it needs to be maintained and updated if it is to function effectively. Certain AMP components need particular attention in this regard. This section outlines the processes that are required to maintain the AMP, including its research framework, GIS and/or database.

AMP Database/GIS
An AMP's site schedule (list of identified potential sites) may be included on the State Heritage Inventory (SHI), accessible on the Heritage Branch/Heritage Council website at: www.heritage.nsw.gov.au . Ideally, identified sites of State significance will also be nominated for inclusion on the State Heritage Register.

Local councils that have an AMP should provide a website link or reference to its site records stored in the SHI. To assist the site record revision process, those who produce investigation reports that result in new site record data should be required to update individual site records, as a condition of archaeological studies or permit approval.

Research Framework
Research frameworks should develop through time. Some research questions are answered, while others develop out of current work. For this reason research frameworks should be regularly updated.

As research frameworks represent the views of their creators at a certain point in time, they can become rigid and invalid if not revisited and revised. Inadequate maintenance of the intellectual content in an AMP research framework can lead archaeological projects to propose outmoded, ineffective and/or unprofitable research approaches. Particularly susceptible are the urban centres where archaeological investigation projects should provide research designs that address and are consistent with an overarching research framework, or else should justify why deviation is proposed. Each new archaeological investigation should address the existing research framework, but should also propose new research themes, as appropriate.

The following mechanisms assist the process of research framework update and maintenance:

Mandatory Update by Major Study Area Archaeological Projects
Major projects, especially those that affect places assessed as being of 'State' significance should provide a review of recent work in the area surrounding the site under investigation and/or similar study area sites. They should indicate how the project results contribute to the existing research framework, what new research questions have arisen and how the research framework should be updated to reflect these new findings.

Collaborative Research Avenues
Making the AMP's research framework available on the Web can provide a more informal yet accessible way to promote discussion and feedback. Other partnership or collaborative projects might be established for particular high priority regions. This would require liaison between State and Local government or other authorities who have commissioned AMPs.

3.3 INTEGRATION INTO WIDER PLANNING POLICY AND PRACTICE

Landowners require accurate information about their properties, including potential archaeological constraints and opportunities. In many cases, owners are not concerned that properties in their ownership contain archaeological remains, but rather that they are not formally advised of this, particularly at the point of purchase. This highlights the need to expand timely access to archaeological information beyond AMPs alone, by embedding archaeological considerations into the wider planning process through the range of available mechanisms that local and State government authorities use to provide planning advice, as occurs for other issues such as heritage items, heritage conservation areas, curtilage, contaminated land, critical habitat or building height restrictions.

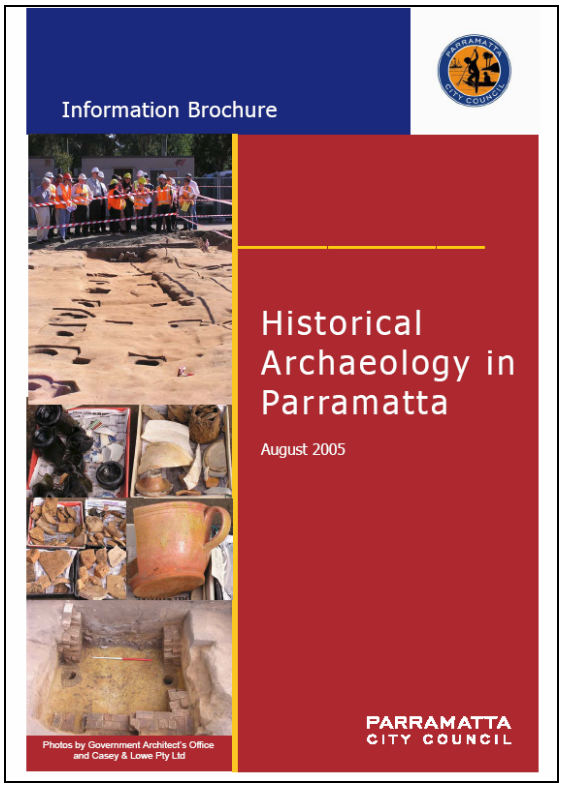
Local councils can take the following actions to assist the integration of AMPs into relevant planning policies. These should also be reflected in the recommendations made by AMPs:

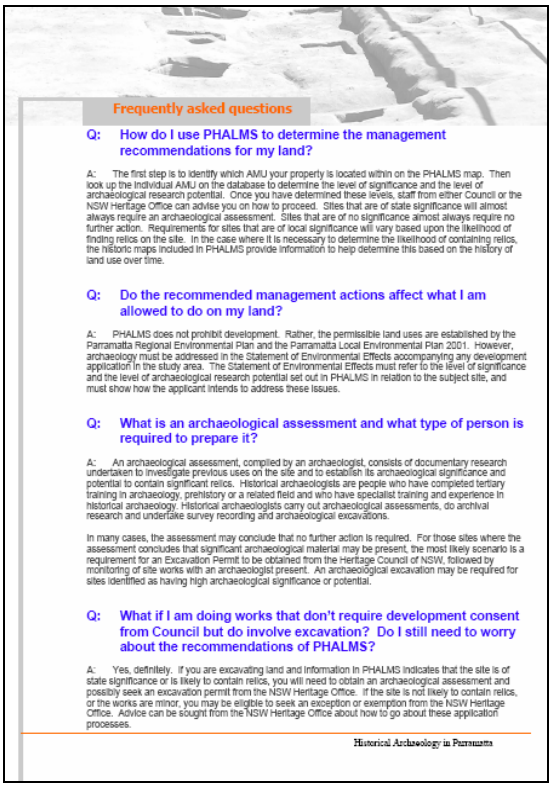
- Inclusion of archaeological sites identified in AMPs into schedules of local planning instruments, such as LEPs or DCPs
- Reference to existing AMPs and/or to potential archaeological constraints (as generic or property specific information) on Section 149 Property Certificates
- Training for non–heritage council officers and use of in–house training to provide refresher courses about implementing and using AMPs

If a local council has an AMP, then it is preferable that this is translated into a planning instrument in the same manner as above ground heritage studies. Section 146 of the NSW Heritage Act 1977 requires the reporting of all relics, making it advisable to list all archaeological

sites once they are known. If councils choose not to do this, then it is imperative to integrate the information into “over the counter” processes so that archaeological issues are identified when development proposals are first discussed, to ensure that necessary archaeological involvement can be programmed into overall project timetables.

Although some Councils now request that archaeological assessments accompany development application (DA) documentation, more often this occurs later as a consent condition of a DA, by which stage project budgets, designs and work schedules have been set and historical archaeology becomes an ‘after the event’ consideration. The omission of archaeological advice early in development planning and design stages can seriously compromise the retention of the archaeological resource and/or inconvenience property owners. This also means that development projects may rarely consider in situ retention or incorporate preserved significant fabric without significant delays and added expenditure. This is particularly so when developments are approved prior to submission of construction details such as engineering designs that locate the position of footings and piers, which may be left to the Construction Certificate stage.

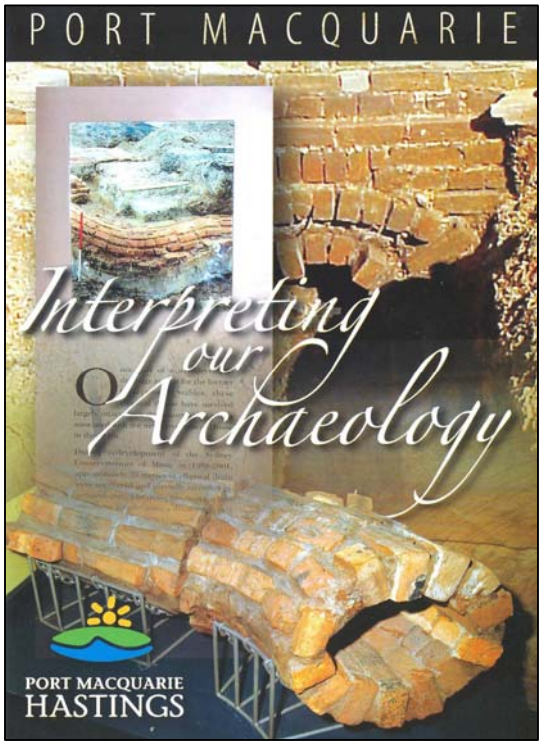


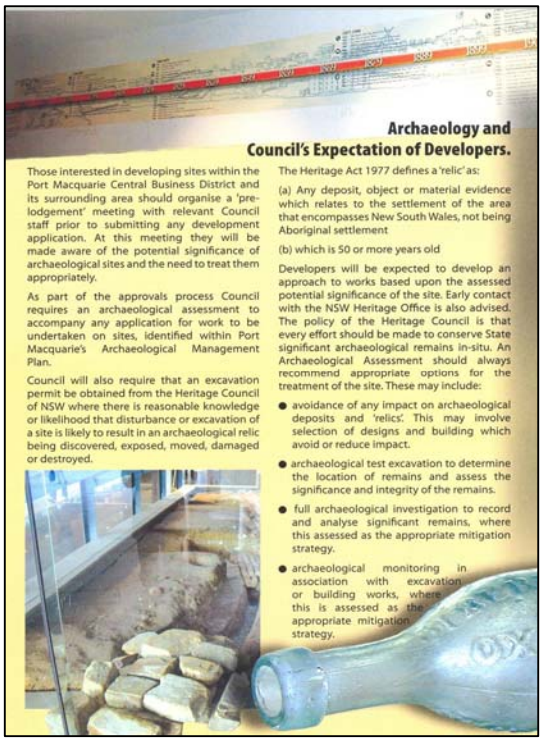


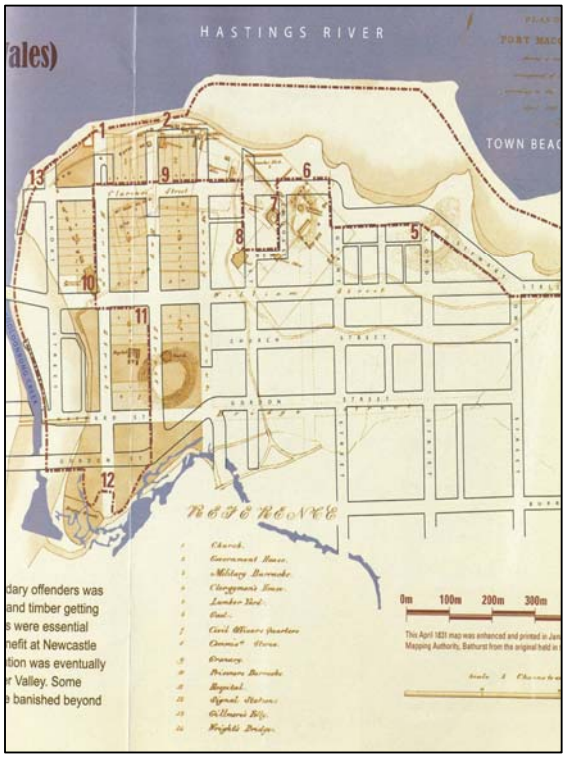
The PHALMS (Parramatta Historical Archaeological Landscape Management Study) brochure above is an example of a Local Council integrating archaeology in to the planning process. The brochure helps stakeholders such as ratepayers, property owners and developers in the community to understand the need to consider archaeology when planning new works at properties identified as having archaeological heritage significance.

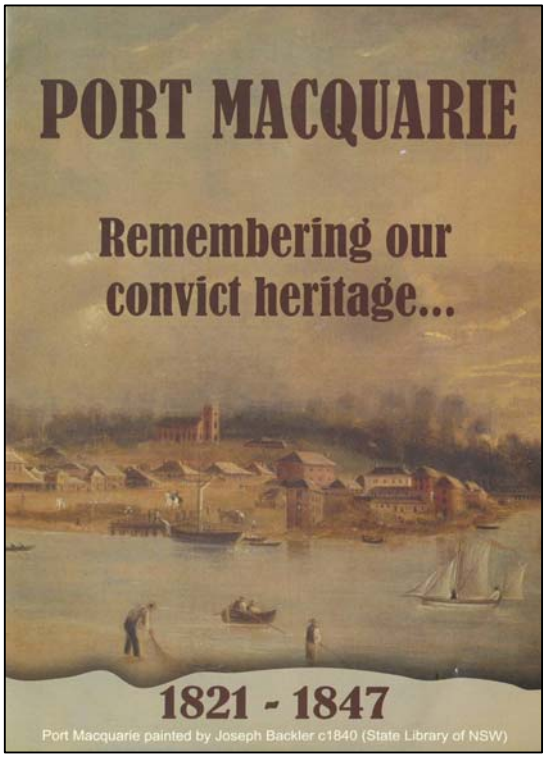
For Port Macquarie, the Council has prepared a number of brochures related to tourism, history and archaeology at this important Convict-era settlement. The Interpretation brochure (below) advises potential developers that Port Macquarie-Hastings Council will expect them to allow for, and consider, archaeological heritage aspects when planning new development. The brochure provides information and examples of how archaeology has been incorporated into new developments so that the public can see and understand this heritage layer. A separate Convict

Heritage brochure allows residents and visitors to take a self-guided walking tour through the CBD and adjacent areas to trace the historic remains of the town's past.









3.4 AMP ACCESSIBILITY

When commissioning an AMP, local councils need to consider the following actions to ensure that property owners and others also have adequate information access to consider potential archaeological requirements:

- include historical archaeology clauses in the local planning policy, ensuring that these reflect available 'model' provisions and mention data available in the existing AMP;
- provide a check box on Development Application forms to indicate that archaeological issues are adequately considered and
- enable public access to the AMP, or mention its availability on council's web site, as a front–desk service and through other means of public information dissemination such as brochures.

AMP Application Training

Training sessions are essential for the promotion, understanding and effective use of AMPs. As staff changes within local councils are inevitable, training needs to be included as an AMP brief requirement and/or reinforced as a plan recommendation.

An arrangement should be made for plan authors or an appropriate archaeological advisor or heritage consultant, to provide a follow up program, including refresher training sessions at appropriate intervals. Most local councils have in–house training syllabuses that can potentially be used as the means to deliver refresher courses about applying their AMP. Local heritage advisors should also be encouraged to look for such opportunities.

Research Frameworks

All archaeological work, irrespective of its context, has research as its focus, including investigations and fieldwork undertaken through the planning and development process. This is because archaeology is about enhancing our knowledge of the past and communicating that understanding to others.

These guidelines remain general to ensure that individual AMP methodologies do not become prescribed, their purpose being to guide AMPs and regulate their format for consistency rather than to inflexibly set their research agendas and strategies.

A detailed archaeological research framework is not proposed in these guidelines because the questions formulated for research frameworks need to be appropriate for the specific region or area in which the study is conducted. Development of broad-scale research frameworks would also benefit from the considered input of various specialists and professionals and a consensus amongst archaeology practitioners. The following sections explain the difference between research framework and a research design.

4.1 WHAT IS A RESEARCH FRAMEWORK ?

A research framework is a coordinated, overarching approach to archaeological research and investigation developed for a large area, such as a neighbourhood or precinct; a broader study area such as an LGA; or even a region. These frameworks incorporate research questions and themes that apply to a number of sites. Like research designs prepared for individual sites, research frameworks provide a viable, realistic and effective basis for undertaking archaeological investigation, whether for development purposes or to guide future research designs.

4.2 WHAT IS A RESEARCH DESIGN ?

A research design is an important prerequisite for an archaeological investigation (see Glossary). In NSW all applications for an excavation permit under the Heritage Act must be accompanied by a research design. This ensures that archaeological investigations are problem-oriented and focused on research needs and outcomes.

4.3 WHY PREPARE A RESEARCH FRAMEWORK ?

Research frameworks can provide a range of benefits:

- Refine the requirements for individual sites, providing up–front identification of whether or not a site needs further archaeological involvement.
- Guide individual site investigations by providing background data that stimulate (not replace) and refine a project's theoretical and methodological research base, thus helping to situate it within a broader and more meaningful context.
- Bring together cumulative information from a range of smaller projects across a geographical area or landscape to provide broader regional implications for site–specific investigations.
- Provide an opportunity to gain maximum benefit from the resources invested in archaeological projects, enabling projects to assist inter-site analyses and promote broader syntheses for public delivery.
- Contribute knowledge by guiding archaeological work within the concepts of current research themes and theoretical perspectives.

4.4 FORMULATING A RESEARCH FRAMEWORK

A framework that is broadly applicable within different urban centres is a first consideration as this can reduce the costs associated with producing area specific frameworks within AMPs. This requires devising a strategy to:

- identify national and State level research objectives, criteria and priorities
- establish a regional framework
- co-ordinate site specific investigations within these broader research contexts.

Most existing AMPs include a research framework or model, especially those for major urban centres such as Parramatta or Newcastle. Reference should be made to the reports and studies listed in the Further Reading section of these guidelines. Most of the AMPs and similar studies listed are available in the Library of the Heritage Branch, Department of Planning. Other references are available on-line as indicated by the hyperlinks.

A research framework will be guided by data in the physical landscape assessment, thematic area history, previous archaeological investigation analysis archaeological theory and current research trends and cultural significance assessment sections of an AMP.

Project Panel, Peer Review and Consultation Workshops
Whether formulating a generic or an area specific framework, certain aspects may require detailed, professional consideration. It may be beneficial to seek input from interested archaeologists and other specialists, and when feasible the project team should include two or more independent expert peer reviewers to provide review and input at various stage of the framework's evolution and for the project generally. The Heritage Branch of the Department of Planning may also provide assistance in this regard.

Once an AMP project team has generated a preliminary research framework, a program of workshops and consultation could help to evaluate its themes, questions and approaches and see that it has the support and input of other practitioners. The project team and selected project reviewers may then distil the workshop discussion results to refine the framework. When applying the model, continual review and input is necessary as new information is gathered and existing data are verified or invalidated.

4.5 APPLYING A RESEARCH FRAMEWORK

A research framework needs to function as a guide rather than a rigid or compulsory structure. It must present a clear process to guide research enquiries for archaeological investigations of any scale and is a vital management tool. The detail of the framework allows users to choose whether to base their project's research design entirely on the framework, or use it as a prompt to check whether their own research design and investigation strategy considers relevant questions and/or collection and analysis methods suggested by the framework.

As a condition of an archaeological permit consent under the NSW Heritage Act, the Heritage Branch will require that applicants and their archaeologists provide a research design that acknowledges the research framework questions of an applicable AMP (where one exists) or else must provide an alternative and justifiable agenda for the proposed archaeological work. This approach encourages more consistent, explicit research designs, useful site-specific results and also benefits broader research objectives. The research framework 'requirement' serves to stimulate archaeologists to consider new and different questions and strategies which will help to improve and evolve the agenda of the overall research framework to provide new data and meaningful outcomes for the public.

Further Reading

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Glossary

Area Excavation – an archaeological excavation, often following test-trenching, which exposes a larger area of a site in order to provide information about spatial relationships between archaeological features and deposits.

Archaeological Assessment – A study undertaken to establish the heritage values and archaeological significance (research potential) of a particular site and to identify appropriate management actions. Often prepared in response to development proposals. This type of study is the archaeological equivalent of a heritage impact statement (HIS) (refer to Archaeological Assessment guidelines).

Archaeological Feature – Any physical evidence of past human activity. Archaeological features may include buildings, works, relics, structures, foundations, deposits, cultural landscapes and shipwrecks. On archaeological excavations the term 'feature' may be used in a specific sense to refer to any item that is not a structure, a layer or an artefact (for example, a post hole).

Archaeological Management Plan (formerly known as Archaeological Zoning Plan) – A set of conservation and management provisions that may apply to individual sites, precincts, areas or regions. The AMP is the archaeological equivalent of a conservation management plan. Archaeological sites or items, which may be described as units or zones. These units or zones are normally indicated graphically in an archaeological 'zoning' plan or map. The provisions of an archaeological management plan may be included within a heritage study or environmental planning instrument.

Archaeological Potential – The degree of physical evidence present on an archaeological site usually assessed on the basis of physical evaluation and historical research. It refers to the surviving condition of archaeological sites).
Common terms for describing archaeological potential are:

- known archaeological features/sites (high archaeological potential);
- potential archaeological features/sites (medium archaeological potential); and
- no archaeological features/sites (low archaeological potential).

Archaeological Research Agenda – This sets out what archaeologists would like to know in order to understand the past of a region or city, often provided as a set of questions.

Archaeological Research Framework – In AMPs, this section indicates the state of present knowledge and present strategies for acquiring it. An Archaeological Research Agenda may also be included in this section of an AMP.

Archaeological Sensitivity – A term used by some archaeologists to refer to archaeological potential.

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

Archaeological Site – A place that contains evidence of past human activity. Below ground archaeological sites may include building foundations, occupation deposits, features, artefacts and relics. Above ground archaeological sites may include buildings, works, or industrial structures that are intact or ruined.

Archaeological Zoning Plan – 1) A graphic plan of a place, which indicates the relative archaeological potential of different areas or zones. More recently the term AZP refers to the mapping component of an AMP, but in the past a number of Archaeological Zoning Plans were prepared by undertaking broad-scale archaeological assessment of large study areas with the results subsequently incorporated into the provisions of environmental planning instruments. An example was the Sydney AZP prepared in 1992. 2) Formerly a set of conservation and management provisions that apply to individual sites, precincts, areas or regions, now defined as Archaeological Management Plan. see *Archaeological Management Plan*.

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 occupation deposits. The term may also encompass food or plant remains and ecological features (for example, pollen).

Building Application (BA) – An application under the Local Government Act 1993 for approval to construct or alter a building.

Burra Charter and Guidelines – Charter adopted by Australian ICOMOS which established the nationally accepted standard for the conservation of places of heritage significance.

Conservation – All the processes of looking after a place so as to retain its heritage significance. Includes maintenance and may, according to circumstances, include preservation, restoration, reconstruction and adaptation and will be commonly a combination of more than one of these.
Conservation Management Plan - 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

Contact Sites – Sites which are associated with interaction between Aboriginal and non–Aboriginal people.

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.

Cultural Significance – A term frequently used to encompass all aspects of significance, particularly in guidelines documents such as the Burra Charter. Also one of the categories of significance listed in the Heritage Act 1977 (NSW). The Burra Charter refers to value for past, present or future generations. The Charter also notes that cultural significance may be embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.

DOP – Department of Planning (NSW)

DUAP – Department of Urban Affairs and Planning (NSW). Former name of the Department of Planning (NSW).

Demolition Application – Application to a local government authority to demolish a building or other item.

Development Application (DA) – An application under the EP&A Act for consent or permission to carry out development.

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.

Environmental Planning and Assessment Act 1979 (EP&A Act) – The Act under which planning in New South Wales takes place, and which includes provision for the management of local heritage items, including archaeological sites and relics.

Environmental Planning Instrument – Another term for statutory planning controls made by a council or the State Government under the EP&A Act. These can include Local Environmental Plans and State Environmental Planning Policies.

Excavation Permits – A permit to disturb or excavate a relic issued by the Heritage Council of New South Wales under section 60 or 140 of the Heritage Act 1977 (NSW).

Feature – See Archaeological Feature.

Geoarchaeology – An earth–science approach to archaeological interpretation.

GIS – Geographical Information System. GIS software is a combination of database, computer-aided mapping and spatial analysis software. A range of techniques using the graphic capabilities of computers for an integrated analysis of maps, images, sites and finds. In Britain GIS is widely used in the interpretation of fieldwork data to interpret the landscape and assess an area's potential for archaeology.

Heritage Act – The NSW Heritage Act, 1977 (as amended).

Heritage Council of NSW – The NSW Government's heritage advisory body established under the Heritage Act 1977. It provides advice to the Minister for Planning and others on heritage issues. It is also the determining authority for applications made under the NSW Heritage Act 1977.

Heritage Significance – A term used to encompass all aspects of significance (see Cultural Significance). Defined in the Heritage Act 1977 (Section 4A) as being of State or Local significance in relation to historical, scientific, cultural, social, archaeological, natural or aesthetic value of the item.

Heritage Value – Term often used interchangeably with "heritage significance".

Heritage Study – A conservation study of an area, often commissioned by the local council for its area; The study usually includes a historical context report, an inventory of heritage items within the area and recommendations for conserving their significance.
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.

International Council on Monuments and Sites (ICOMOS) – An international organisation linked to UNESCO that brings together people concerned with the conservation and study of places of cultural significance; There are also national committees in sixty countries including Australia (see Australia ICOMOS).

Item – A building, structure, work, relic, work, place or group. The generic term used to describe objects under consideration for heritage significance.

Landscape Archaeology – placing sites into a wider context using a full range of archaeological, environmental and historical information to interpret them on a regional basis on a long time scale

Local Environmental Plan (LEP) – A plan prepared by a local council under the EP&A 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.

Local Government Authority (LGA) – A City or Shire Council.

Occupation Deposits – Accumulations of cultural material that result from human activity; They are usually (but not always) associated with domestic sites (for example, under floor or yard deposits).

Open Area Excavation - an archaeological excavation, often following test-trenching, which exposes a larger area of a site in order to provide information about spatial relationships between archaeological features and deposits– see **Area Excavation**.

Place – A term often used interchangeably with "item" in describing matters under heritage assessment consideration; (Does not include movable items).

Post–contact – A term used to refer to study of archaeological sites dating after European occupation of Australia in 1788.

Post–Excavation – The stage of an archaeological investigation that occurs after completion of on–site excavation. The post–excavation phase may include further research, artefact cataloguing and analysis, physical conservation, synthesis of findings, presentation and reporting.

Potential – see Archaeological Potential and Research Potential.

Potential Archaeological Site – A place which may contain physical evidence of past human activity (see Archaeological Site).

Property Certificate – provides information on the development potential of a parcel of land, including any planning restrictions that apply.

Proponent – The person or organisation who proposes building a development activity at a site. (Often, but not always the owner of the site).

Relic – defined in Section 4(1) of the NSW Heritage Act, 1977, as any deposit, object or material evidence relating to non Aboriginal settlement which is more than 50 years old.

Refers to historical archaeological items.

Regional Framework – A coordinated approach to archaeological research and investigation developed for a large area or precinct incorporating research questions and themes that apply to a number of sites.

Research Design – A set of questions, which can be investigated using archaeological evidence and a methodology for addressing them. A research design is intended to ensure that archaeological investigations focus on genuine research needs. It is an important tool which ensures that when archaeological resources are destroyed by excavation, their information content can be preserved and can contribute to current and relevant knowledge (refer to Section 4 of these guidelines).

Research Potential – The ability of a site or feature to yield information through archaeological investigation; The scientific significance of archaeological sites is assessed according to their ability to contribute information to substantive research questions. See Scientific Significance.

Scientific Significance – A term used to summarise the 'research potential' criterion as defined under the NSW Heritage criteria. Items meeting this criterion are significant because of their potential to contribute to an understanding of the history of New South Wales.

Section 60 Application – Application made under section 60 of the Heritage Act to carry out activities to an item listed on the State Heritage register (SHR) or to which an interim heritage order (IHO) applies.

Section 140 Application – Application made under section 140 of the Heritage Act for a permit to excavate archaeological relics (see Excavation Permit).

State Heritage Inventory (SHI) – A publicly-available, electronic database of all statutorily protected heritage items in New South Wales maintained by the Heritage Branch, Department of Planning.

State Heritage Register (SHR) – a statutory list which protects items of State significance. The SHR is established under the NSW Heritage Act, 1977 (as amended).

Test Trench – a small-scale archaeological excavation, with trenches located to expose a representative sample of the archaeological resource within the site.

Zoning – The system of categorising land uses as prohibited, requiring consent or not requiring consent within particular areas. Zones (such as residential or commercial) are shown in plan or graphic form and further explained in environmental plans.

Appendix A

DRAFT Model Consultant's Brief for the preparation of an AMP

This model brief is provided as a guide only. It is not intended to be prescriptive. It is comprehensive and detailed so as to cover all types and sizes of assessment. The brief should be adapted to suit the particular study area and local council requirements.
A table included at the end of the Brief summarises suggested stages and components for an Archaeological Management Plan.

LOGO

[NAME OF LOCAL GOVERNMENT AREA]

Dear

Tender for the Preparation of [name] Local Government Area
Archaeological Management Plan for [study area]

This council and the Department of Planning Heritage Branch have agreed to jointly fund this project. I am pleased to invite you to submit a tender for the above project addressing the project brief requirements set out in this letter and the Heritage Branch publications, including the *Archaeological Assessment Guidelines*, 1996 and other documents (see attachments).

Project purpose
The Archaeological Management Plan (AMP) will assist Council in the identification, assessment and management of the archaeological resources within the study area based on its significance and statutory requirements.

Study area and history
The study area for the project is bounded by [XX]. A map of the study area is included in Attachment 1.

[Council to include a paragraph summary about the history of the study area.]

Project scope The scope of the project focuses on post contact archaeological sites and remains within the identified study area. The history of the local area may suggest that some aspects should be favoured over others.

The Project Scope will include the following tasks: [Council to list here tasks required for this specified project scope according to identified needs.]

Refer to Attachment 2 for a summary table: AMP project scope, stages and processes.

[Council will need to decide on the scope of the project depending on its requirements for archaeological identification and management. The AMP could be a general AMP or a comprehensive AMP, or a stage of a comprehensive AMP]

For example:

- *A general AMP will be a simplified document with no or limited mapping or individual site data included in the AMP.*
- *A comprehensive AMP will involve a fully researched and documented project with GIS mapping and completed individual site data inventory forms.*

Background materials

A list of reference documents, reports and software to be used in the preparation of the AMP is included in Attachment 3.

Consultant team

The consultant team will have demonstrable professional qualifications and expertise in the preparation of AMPs with appropriate experience to undertake this project and be able to provide recent examples of similar projects.

The consultant team will include and not be limited to the following skills:

- Archaeologist
- Historian
- Project management
- Planner (optional) to assist with translating the AMP into statutory planning requirements for the local environmental planning processes

Project management and progress meetings

The AMP will be project managed by XX *[name, position and contact details]* Project oversight will also be provided by a project steering group. *[Council to decide if having a project steering group and appropriate representatives]*

The consultant team must allow toattend a project establishment meeting with the Council project manager [and project steering group] at the Council office on *[insert date, time and location].*

The consultant team must also allow to attend XX project progress meetings with the Council project manager [and project steering group] at the Council office on *[insert dates, times and locations].*

Consultation and training

The consultant team should also allow to attend and facilitate community consultation workshops and/or discussions with specific stakeholder groups as required to facilitate the AMP preparation.

Relevant stakeholders to be consulted are: *[Council to add a list of stake holders to be consulted as part of this project and contact details].*

The consultant should allow to provide XX training sessions for XX people at the Council offices to instruct Council staff in use of the AMP and mapping and data provided and web-related aspects of the AMP as required.

Project deliverables

The consultant team will provide the following:

- XX copies of the progress report *[Council to indicate which stages of the project these will be required refer to Attachment 2]*
- XX bound copies of the draft report
- XX bound copes of the final report (or CD)
- Report to be provided in XX format [*Council to confirm format]*

- Heritage Branch SHI database software completed data sheets
- (Optional) Mapping and database information in format compatible with Heritage Branch SHI software.
- Training sessions for use of AMP, mapping and databases and web-related AMP information

Project budget and payment schedule
An amount of $[XX] as a lump sum fee is available for the preparation of this AMP. This fee is to include all costs including project disbursements.

[Council to decide if the following will be available for the consultant teams use; telephone, office space, computer, appointment taking facilities and digital camera will be provided by council. The council will also provide a vehicle for your use while in the area on this study.]

Project timeframe and payments
[Council to insert appropriate dates suitable for your project requirements]]
It is anticipated that the AMP will take XX [weeks/months] to prepare and will meet the following project timetable.

- Week one [insert preferred start date here] Establishment meeting and submission of project work program
- Week XX [insert date] Progress meeting #1 and submission of progress report on completion of research and site evaluation
- Week XX [insert date] Progress meeting #2 and submission of draft AMP
- The draft AMP will be circulated for [comment/public consultation] by Council for XX weeks. The consultants will have XX weeks of receiving this feedback to incorporate comments into the final report.
- Week XX [insert date] Progress meeting #3
- Week XX submission of AMP final report.

Progress payments will be provided in accordance with the project stages included in Attachment 2 as follows. *[Council to confirm the following]*

- XX% on project establishment
- XX% on submission of 1st progress report
- XX% on submission of draft report, mapping and database
- XX% on submission of final report

Terms of engagement of consultant team
The proposed terms of engagement for this project and Council's contract for services are included in Attachment 4. *[Council to provide a copy of proposed project contract for services in Attachment 4].*

Project tender submissions and closing date

All tenders should addresses the following:

- Proposed project scope and plan with timeframes for stages;
- Description of proposed method for undertaking each project stage;
- The proposed consultant team including project manager and sub-consultants;
- A brief statement outlining the consultant's team appropriateness for this project with reference to the skills and tasks outlined above;
- Proposed project fee and fee breakdown into stages;
- Indication of, and justification for, any additional consulting tasks and/or fees that may be applicable, eg attendance at additional meetings;

- Acceptance of proposed project terms of engagement;
- Indicate earliest available starting date, required notice of commencement or any other constraints on availability;
- Curriculum vitas for all team members, including formal heritage qualifications and experience;
- Two referees for previously successfully completed local government AMPS or similar recent projects.

Please send your tender submission to [name] at the above before [date]. [Include Council tender box details.]

To discuss this project further and for any other queries, please contact the project manager [name] at the council on [phone number] or email [include here].

Yours sincerely

[name]
General Manager

Attachments:
1. Study area location plan
2. Summary table: AMP stages and processes
3. Background reference materials
4. Terms of Engagement for Consultancy

Attachment 1: Study Area

[Council to provide study area location plan with study area boundary and north point.]

Attachment 2: Summary table: AMP project scope, stages and processes

Note: This summary table outlined the project scope, stages and processes for the preparation of a comprehensive AMP. Not all stages and tasks will be required or relevant for every AMP.

The actual tasks and stages that Council selects as part of their project will depend on Council's overall requirements for the AMP, study areas and management issues.

VOLUME 1

Introduction	Volume Identification Background Study Area Location Study Aims Project Constraints Project Participants, Author Identification Acknowledgements AMP Use Guide Statement of Benefits	
Plan Structure & Format		
Record of Project Process		
Stage 1		
Legislative Framework	Relevant Statutory & Planning Controls	
	Scope of work	*Undertaken to*
Data Collection & Review	Research – Previous reports & studies Existing Databases & Inventories Borehole Data	Develop an account of the study area resource
Study Area History	Research – Primary sources Secondary sources Previous reports & studies	Develop an area history to assist identification of relevant research framework enquiries
Previous Study Area Archaeology	Research – Previous reports & studies	Analyse physical condition, research potential, results & interpretation from previously investigated sites to develop draft Research Framework

Stage 2		
Physical Assessment	Research – Previous reports & studies Geomorphology Geology Soil Borehole Data Undertake – Site survey	Analyse study area landform evolution to determine archaeological potential (surviving condition of archaeological sites), describe influence of topographic features on human activity & settlement patterns, & inform research questions
Archaeological Potential (Character of the Resource)	Synthesise physical assessment, historical research and prior studies	Develop a character profile of the study area and quantitative data about the surviving resource
Stage 3		
Research Framework	Research – Heritage Study themes Previous archaeological work Develop understanding of - Historic Phases Land use & development	Guide archaeological investigations and produce maximum research benefit from the resource for the community
Cultural Significance Assessment	Prepare – General Area Statement of significance. Individual site assessments for each AMP database entry	Identify the cultural significance of the study area
Management Strategy	Prepare Recommendations for – Appropriate levels of archaeological investigation. Conservation and management. Interpretation and display. Review of study. Other Actions (as needed)	Identify archaeological site requirements, methods to interpret & disseminate investigation results & upkeep and review processes
Policy Implementation Strategy	Research – Statutory Requirements. Integrate AMP conservation and management processes into planning framework.	Integrate archaeological management requirements into planning policy
Issues for Consideration	Further research required Obligations of owners/developers/local council/archaeologist	
Bibliography		
Report Terminology	Glossary	
Central Research Archive	Relevant generated documentation	Create extensive, publicly accessible centralised research source
Appendices	Project Brief Accepted Proposal List of Potential Sites Relevant Brochures/LGA Website text Glossary of AMP terminology	

VOLUME 2

Stage 4 (optional, subject to available funding)		
GIS/Maps	Prepare mapping for AMP – see list of maps in Appendix B.	Create graphic aids to understanding the archaeological resource, its surviving condition, significance, conservation and management.

VOLUME 3

CD-ROM	GIS: relational AMP database and maps

Attachment 3: Background reference materials

The following is a list of documents, reports and software to be used in the preparation of the AMP.

[Council needs to identify any documents, reports and/or computer software that are to be used to produce the AMP in general or any of its specific components.]

Council should include:

Relevant heritage documents, eg
The Burra Charter and Guidelines
Heritage Council of NSW/Heritage Office Department of Planning
Guideline documents, such as
Historical Archaeological Sites: Investigation and Conservation Guidelines, Department of Planning, Sydney, 1993
Archaeological Assessment Guidelines, 1996
Assessing Heritage Significance, 2001
Historical Archaeology Code of Practice, revised edition, 2006.

Relevant LGA documents, eg
Heritage Study
Previous archaeological reports

Attachment 4: Terms of engagement for consultancy

The proposed terms of engagement for this project are based on the Consultant's Brief for the preparation of an Archaeological Management Plan and Council's contract for services.

[Council to include Council contract for services for this project here.]

Appendix B

GUIDE TO MAPPING FOR INCLUSION IN AMPs

The following text indicates the range and extent of mapping that may be prepared for an AMP.

Maps numbered 1 to 8 are considered essential for a comprehensive AMP. These, and other maps in the following list, may also be usefully reproduced within the main AMP.

Map 1: Study Area (Location)

This map forms the base plan on which the others overlay to extract required information. It identifies the study area boundary, individual allotment boundaries and potential archaeological sites and areas according to their AMP database Inventory number. For AMPs where the study area extends beyond a city's central business district, a second base plan can provide closer detail of the CBD, if necessary.

Map 2: Historic maps and aerial photos

A series of available historic maps and aerial photographs would illustrate historical land use with the study area.

Map 3: Physical Condition of the Archaeological Resource

These maps shows sites identified as having archaeological potential, based on the assessed physical condition of the archaeological resource of the area. The potential physical condition of sites ('intactness level') is indicated via a grade range provided in the map's key. The grades may include descriptions such as: Undisturbed; Minor Disturbance; Partly Disturbed; Mostly Disturbed; Mixed Disturbance; Destroyed and Archaeologically Removed. This information correlates with data in the AMP database (inventory sheets).

Map 4: Integrity of the Archaeological Resource

This map is similar to the above, but indicates the assessed presence/absence of (known) in-situ archaeology. The depth of archaeological deposits below current ground surfaces may also be determined at given points across the study area using data collected from previous site investigations and underground services and infrastructure studies.

Indicating this information graphically, as archaeological deposits between 1-2 metres below current ground surfaces, those 2-4 metres below, and so on, can provide useful information, for example, about where low-lying areas around drainages and shorelines have been subject to landfill, effectively burying archaeological landscapes, sites and relics.

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.

Map 5: Sites According to Historic Phases

A series of maps might also be generated that identify different thematic archaeological landscapes within the study area and the sites associated with these to distinguish natural and cultural landscapes, patterns and the elements that define these.

Such maps demonstrate graphically how sites across a landscape connect to one another through association. They suggest prevailing themes that arise from studying the overall archaeological landscape of the area, identifying particular types of remains that have the potential to answer questions related to those themes. Although peripheral to the management aspect of an AMP, the maps present an interpretative component, each one telling a story, through a theme, about the connection between different archaeological elements, with its context based in historic map evidence.

Map 6: Archaeological Research Potential

The archaeological research potential of each site is determined by combining evidence of physical condition and significance. This graphic data correlates with the 'Archaeological Research Potential Level' field in each database record. The levels of potential are indicated as Exceptional, High, Moderate, Little, or None.

This map 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.

Map 7: Significance of Sites

This map identifies the heritage significance level (State, local or none) accorded to each site based on its cultural significance assessment and correlates with the 'Assessed Significance' field in each AMP database record (site inventory). 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. See 12 below.

Map 8: Site Requirements

This map illustrates the recommended archaeological actions identified for each site. These may include archaeological assessment, test trenching, monitoring, sampling of evidence, open area excavation, no further archaeological action and *in situ* conservation.

Map 9: Previously Investigated Sites (including Bore Logs if available)

This identifies the location of archaeologically investigated sites and the extent of previous examination (whether assessed only, fully excavated, monitored or tested etc). The map key should explain whether the whole allotment or site area is indicated, and/or the precise location of test trenches or other archaeological excavation when known. The explanation would also note that the 'Previous Study Area Archaeology' section of the AMP discusses some of these locations, but that original reports need to be read for precise details (referenced in the bibliography).

Where information is availabl,e the map should also indicate bore log locations to provide useful data relating to the area's stratigraphy. As geotechnical reports can be difficult to access, this graphic data also saves valuable research time for site-specific projects, by alerting researchers to the existence of reports for particular areas. Existing reports would be sought during the AMP data collection and review phase (occasionally they are included or referenced in investigation reports).

Map 10: Descriptive Geology/Geomorphology/Soils/ Landscape Development

Information about the underlying geology, geomorphic processes and soil types that characterize the physical landscape of study areas may beincluded here as overlays to provide details for relative stratigraphic chronologies and natural raw material sources as graphic data.

Additional maps may indicate the natural and modified landforms and vegetation species typical of the study area. These maps provide graphic details relating to research themes about how the study area has looked at different times; how its topographic features have influenced human activity and settlement patterns and how these features have been exploited, altered or retained.

Map 11: Infrastructure & Below-Street Features (including Basements)

A map identifying underground services, utilities and related structures provides the location and depth of these below-street features. However, this graphic should only be included if it is regularly updated to reflect ongoing changes to below-street features and services, as street works are regular undertakings. Depending on the extent of available records, this map may be able to indicate the extent of disturbance to archaeological remains by underground structures. Government and private agencies sometimes undertake surveys for insurance and other purposes that record property descriptions, including the existence of basements. The AMP project team should search for such surveys and incorporate this data where possible.

Map 12: Identified Heritage Items and/or Other Values

Identifying heritage items (sourced from heritage studies, local planning schedules etc) can provide a helpful trigger for end-users, particularly planners. Overlaying these with maps indicating potential archaeological remains can show whether the landscape surrounding a heritage item may include associated archaeological remains. It may be appropriate to include other values (if known) for example Aboriginal heritage values.