

Godden Mackay Logan

Heritage Consultants



Penrith Lakes Scheme
Puddledock Archaeology Handbook
(Part of Appendix A—Archaeological Management Plan)
Draft Report

Report prepared for Penrith Lakes Development Corporation
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Report Register

The following report register documents the development and issue of the report entitled Penrith Lakes Scheme—Archaeological Management Plan (Puddledock Archaeology Handbook), undertaken by Godden Mackay Logan Pty Ltd in accordance with its quality management system. Godden Mackay Logan operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2000.

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Figure 2 Puddledock from the north.

Key References

Stendinger Associates 2007, Assessment and Relocation Plan for the Cottage Puddledock, July 2007, for PLDC.

Bently F and J Birmingham 1981, Penrith Lakes Scheme Regional Environmental Study: History of European Settlement, report prepared for PLDC.

Britton G and C Morris 1999, Castlereagh Cultural Landscape Study, report prepared for PLDC.

Fox and Associates 1987, Heritage Study of the City of Penrith, prepared on behalf of Penrith City Council.

Lavelle, S, A Bickford & Assoc and the Nepean District Historical Archaeology Group, 1997, DA4 Management Study Heritage Assessment, Penrith Lakes Scheme Area, Castlereagh, NSW, Inventory Sheet, for PLDC.



Figure 3 Puddledock from Castlereagh Road (from the east).

The cottage is in very poor condition and is structurally failing—the ceiling and verandah roofs are collapsing, and the annexe has badly deteriorated. Termite damage is visible throughout the building and the entire structure is overgrown with wisteria. No extant garden features or plantings are associated with the building. A citrus orchard is situated near the banks of the Nepean, at the apparent original location of Puddledock cottage.

The twentieth century fibro cottage north of Puddledock is surrounded by an overgrown garden, including established trees. A parking area is located at the rear.

3.0 Phases of Development

| Date | Event |
|---------------|--|
| | Mulgoa country, the traditional land of the Mulgoa people. |
| 1803 | 80 acre land parcel along the Nepean River is granted to ex-New South Wales Corps soldier Gilbert Goodlet (Goodlit). |
| 1806 | All 80 acres leased to First Fleeter, John Herbert. |
| 1825 | Original 80 acre grant is subdivided into five 16 acre allotments, for each of John Herbert's five sons. |
| 1860/1870s | Possible date of construction for Puddledock Cottage (James Herbert?). |
| 1873 | James Herbert dies. |
| 1912 | Possible date of cottage relocation from original site close to the Nepean River (orchard site). |
| 1947 | Linus Dudley Perkins purchases Allotment 1. |
| 1986 | Perkins negotiates lease agreement with PLDC to stay on Allotment 1 until 1991. |
| 1990s–current | Puddledock Cottage is used for storage purposes and falls into disrepair. |

4.0 Archaeological Potential

4.1 Introduction

'Archaeological potential' refers to the likelihood of archaeological remains to survive at a site. It should be distinguished from 'archaeological significance' which refers to the heritage values of any remains that may prove to have survived. Thus, there may be 'low potential' for certain remains to survive, but if they do survive, they might be assessed as being of 'high significance' (for example, if they are rare examples from the convict period).

The potential for relics to survive at a site depends on the 'site formation processes' that have operated there. These processes include the physical development of the site (for example, the phases of building construction) and the activities that occurred there.

Ask: Have parts of the site been subject to actions that may have deposited relics (on the one hand) or which might have destroyed relics (on the other hand)?

For example, a site that has been graded by earthmoving machinery may have low archaeological potential because grading works often disturb or remove archaeological evidence. Some archaeological remains are more vulnerable to disturbance (for example, botanical remains), while others are more robust (for example, wall footings).



Figure 4 Wallpaper inside Puddledock.

Gradients of Archaeological Potential

High

Historical research indicates that there was previous human activity or development in the area and that physical evidence of this activity would have been created. There has been little or no evidence of subsequent ground disturbance. There is a very good chance that physical evidence of this previous activity or development (archaeological remains) will survive in situ.

Moderate

Historical research indicates that there was previous human activity or development in the area and that physical evidence of this activity may have been created. There has been some ground disturbance in the area. There is some chance that physical evidence (archaeological remains) will survive in situ.

Low

Historical research indicates that there has been no human activity or development in the area, or that there would be little or no physical evidence of any former activity or development. The area has been subject to significant ground disturbance. It is unlikely that any physical evidence of previous activity or development (archaeological remains) would be present.

| Activity | Potential Remains | Integrity of Remains | Archaeological Potential | Archaeological Significance at Local Level |
|---|--|--|--------------------------|--|
| Early land clearing | Tree roots, charcoal deposits, artefact scatters, soil deposits, evidence of camp sites etc. | Likely to have been removed/disturbed by subsequent activities. | Low | High |
| Domestic life | Under-floor deposits within the footprint of the cottage and annex, and in close proximity to kitchen. | Localised disturbance associated with subsequent activities or structures in these areas. | High | High |
| Ancillary buildings | Post holes, footings, deposits relating to outhouses, sheds, etc in the vicinity of the cottage. | Likely to have been removed or disturbed by subsequent buildings/structures. Footings associated with more recent sheds represent only moderate disturbance (500mm depth). | Moderate | Moderate |
| Original site of Puddledock homestead | Post holes, footings, deposits. | Likely outside the study area. | Low | High |
| Service infrastructure and water supply | One well is visible northwest of the cottage; later ceramic and metal pipes may connect the house to services. | Deeper subsurface features are likely to survive relatively intact. The well is visible and extant. | High | High |
| Waste disposal | Garbage pits, refuse dumps and privies. | May have been periodically removed or disturbed by subsequent activities or structures. Deeper subsurface features more likely to survive. | Moderate | High |
| Former landscaping | Paths, steps, edging, driveways (including unsealed surfaces). | May have been obscured or disturbed/removed by subsequent landscaping or activities or structures. The cottage was always a modest structure and unlikely to have been furnished with elaborate landscaping. | Moderate | Moderate |
| Dairying activities | Post holes, slabs, soil deposits. | Some disturbance associated with subsequent activities or structures in this area. | Moderate | Low-to-Moderate |
| Animal management | Post holes on fence lines where stockyards once existed. | Some disturbance associated with subsequent activities or structures in this area. | Moderate | Low |
| Artefact scatters | Miscellaneous fragments of ceramics, glass, bone, etc. | May have been disturbed by subsequent activities or structures in the complex, or by flooding of the Nepean. | Moderate | Moderate |

5.0 Archaeological Significance

5.1 Introduction

'Archaeological significance' refers to the heritage significance of archaeological relics (known or potential).

Assessments of heritage significance endeavour to establish why a place or item is considered important and why it is valued by a community. Significance assessments are carried out applying a range of criteria expressed in a variety of documents including *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 1999* (for general application), the *NSW Heritage Manual* (for assessing State and local significance) and the *Environment Protection and Biodiversity Conservation Act 1999* (Cwth) (for places of National significance).

While all of the assessment criteria may be applied to archaeological remains, the most relevant criteria relate to the research potential of the remains (that is, their ability to provide information), as well as their associations with significant historical places, events or people. Remains that have higher research potential would generally have greater heritage significance.

Archaeological remains should be managed according to their significance, which can influence the degree of impact that may be acceptable, or the level of investigation and recording that may be required. In some cases, the most appropriate management strategy may be to protect the remains from any impact or to retain any exposed archaeological remains in situ.

5.2 Summary Statement of Significance

Puddledock is significant at the local level because it:

- Demonstrates the early settlement of the Castlereagh area (historical significance).
- Has strong associations with the original land grantee (Goodlet), and the Herbert and Perkins families (associative significance).
- Is located in a compromised but still picturesque rural setting, is an interesting example of a vernacular building type and is something of a local landmark (aesthetic significance).
- Is the subject of local community interest (social



Figure 5 Puddledock from the east.

Gradings of Archaeological Significance

Archaeological remains are generally graded as being of Local, State or National significance.

These grades are sometimes further subdivided so that a place can be of low, moderate or high Local, State or National significance.

Burra Charter

Article 1.2—Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.



Figure 6 Puddledock interior.



Figure 7 Fibro house north of Puddledock.

NSW Heritage Manual Criteria

Criterion (a)—Important in the course, or pattern, of our cultural history.

Criterion (b)—Strong or special association with the life or works of a person, or group of persons.

Criterion (c)—Demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement.

Criterion (d)—Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Criterion (e)—Potential to yield information that will contribute to an understanding of cultural history.

Criterion (f)—Possesses uncommon, rare or endangered aspects of cultural history.

Criterion (g)—Important in demonstrating the principal characteristics of a class of cultural places.

Other Assessment Criteria

1. Can the site contribute knowledge that no other resource can?
2. Can the site contribute knowledge that no other site can?
3. Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?

(Bickford A and S Sullivan 1984²)

significance).

- Has the potential to yield information through its potential archaeological resource (scientific significance).
- Is a rare example of an early slab cottage (rarity significance).
- Is characteristic of the early modest rural dwellings of the area and of Depression era improvisation (representative significance).
- The twentieth century fibro cottage north of Puddledock is not a heritage building.

6.0 Archaeological Research Design

The following research framework should be applied to any archaeological investigation undertaken within/around the Puddledock precinct.

6.1 Research Questions—General

- What physical evidence of former activities survives at the site?
- What is the extent of the surviving archaeological evidence?
- What is the nature of extant archaeological features?
- What is the date of the identified features?
- What can the cultural evidence contribute to our knowledge about this site or other sites?

6.2 Research Questions—Penrith Lakes District

- What evidence is there of the pre-European landscape?
- Is there physical evidence of Aboriginal and non-Aboriginal contact?
- What does the archaeological evidence tell us about the types of people that lived and worked in the area (in terms of socio-economic groups, race, religion, nationalities etc)?
- How did the inhabitants of the area respond to the environment? What evidence is there of strategies for survival in a difficult environment?
- What does the archaeological evidence tell us about the diet of the inhabitants of the rural area? Can

comparisons be made between rural and urban communities based on the archaeological evidence?

- Does the archaeological resource shed any light on relations between convicts and free settlers in the area?
- What does the archaeological record tell us about nineteenth century links between the rural west and Sydney city?
- What evidence is there of the nineteenth century floods and local responses to them?

6.3 Research Questions—Specific to Puddledock

- Is there any archaeological evidence for the cottage having been relocated from its original site? Does the archaeological record provide a date for the relocation of the cottage?
- What does the archaeological record tell us about the phases and kinds of modifications made to the built form of the cottage?
- What can the archaeological record tell us about Depression-era domestic life in the Penrith area?
- What archaeological evidence is there for the varying phases of site use (for example, dairy farming, animal husbandry, etc)?
- Is there any archaeological evidence of former landscaping around the house?

7.0 Archaeological Management

7.1 Roles and Responsibilities

- Penrith Lakes Development Corporation (PLDC) has ultimate responsibility for the appropriate management of archaeological resources within the Penrith Lakes Scheme.
- PLDC should appoint a Heritage Officer as the primary point of contact and communication for the management of heritage issues within the Penrith Lakes Scheme.
- The PLDC Heritage Officer should be consulted before ground disturbance is undertaken in areas identified as being of archaeological sensitivity. If in doubt—ask.
- The PLDC Heritage Officer must be responsible for applying the principles and policies in this document.



Figure 8 Wallpaper inside Puddledock.

Need for a Research Framework

The archaeological remains at a site are a finite resource. Where subsurface disturbance or excavation is required and remains cannot be retained in situ (not disturbed or destroyed), it is essential that the research potential of the archaeological resource be fully realised.

An Archaeological Research Design (ARD) helps to ensure that this occurs. It provides a research framework for the archaeologist, including a range of 'research questions' that help the archaeologist formulate excavation methodologies prior to work commencing. A number of research 'historic themes' have been developed to provide a framework for developing these research questions.

An ARD sets out the appropriate excavation methodologies for a proposed excavation. Excavation methodologies should be designed to best answer the research questions posed by the ARD, and to contribute to interpretation and other mitigative strategies.



Figure 9 Rear wall of Puddledock.

Historic Themes Relevant to Puddledock

Peopling Australia, which incorporates the sub-themes of: Peopling Australia—Migration and Promoting settlement.

Developing Local, Regional and National Economies, which incorporates the sub-themes of: Environmental Cultural Landscape—Altering the environment; Utilising natural resources; Agriculture—Developing primary production; Mining—Developing an Australian engineering and construction industry; Accommodation and Domestic Life—Lodging People.

Building Settlements, Towns and Cities, which incorporates the sub-themes of: Land Tenure—Making settlements to serve rural Australia, and remembering significant phases in the development of settlements, towns and cities.

Labour, which incorporates the sub-theme of: Working—Working on the land.

The PLDC Heritage Officer should consult with relevant heritage professionals and, where appropriate, the Heritage Branch, NSW Department of Planning if in doubt.

- Contractors involved in ground disturbance in archaeologically sensitive areas must be informed of their obligations in relation to archaeological issues by the PLDC Heritage Officer. A copy of this Archaeology Handbook must be provided to site contractors. Contractors are also responsible for the appropriate management and treatment of the archaeological remains, in consultation with the PLDC Heritage Officer.
- Where the development of the site is determined to be a 'major project' under Part 3A of the *Environmental Planning and Assessment Act 1979* (NSW), the Minister for Planning would be the consent authority for the project. The AMP should be submitted with the Concept Application and related Project Applications. Consents should be conditioned such that works carried out in accordance with the provisions of this document require no further consents.

7.2 General Policies—Archaeological Management

The following policies form the basis of archaeological management at the site.

Prioritise Management of Historical Archaeological Relics—Appropriate management of historical archaeological relics (known and potential) should be given high priority in the management of the site's heritage values.

Minimise Archaeological Impacts—Ground disturbance should be minimised or avoided in areas of archaeological potential, where possible.

In Situ Retention—Archaeological relics of State significance should be retained in situ, where possible.

Site Protection—Strategies should be put in place to minimise or avoid uncontrolled disturbance of areas of archaeological potential (for example, restricted movement of heavy machinery across these areas).

Archaeological Investigation—Where disturbance of areas of archaeological potential is proposed, this disturbance should be preceded by, or undertaken in

conjunction with, archaeological investigation and recording.

Underground Utility Services—Excavation or ground disturbance for the purpose of exposing or accessing underground utility services infrastructure is generally appropriate where the excavation or disturbance would occur within an existing trench and the excavation or disturbance would not affect known or potential archaeological remains (other than the service infrastructure itself).

Suitably Qualified Personnel—Any archaeological investigation or recording should be undertaken by suitably qualified personnel. The archaeologist on site (Excavation Director) must have the authority to stop or redirect works, as required, to allow archaeological relics to be appropriately investigated or recorded.

Contractors and Subcontractors—Suitable clauses should be included in all contractor and subcontractor contracts to ensure that on-site personnel are aware of their obligations in relation to the site's archaeological significance. Site inductions should include a heritage component. Relevant contracts should include provision for potential delays related to the discovery of unexpected archaeological remains.

Notification—The Heritage Branch, NSW Department of Planning, should be notified of the commencement and completion of any archaeological investigations.

Reporting—The results of any archaeological investigation should be presented in an Archaeological Excavation Report within 12 months of completion of the investigation and a copy of the report should be submitted to the Heritage Branch, NSW Department of Planning and Mitchell Library.

Conservation and Storage of Artefacts—PLDC (or its successors) is responsible for the safekeeping of relics recovered from the site unless alternative arrangements are negotiated with the Heritage Branch, NSW Department of Planning. 'Safekeeping' may include cleaning, stabilising, labelling, cataloguing and storing in an appropriate repository.

Interpretation—Interpretation of archaeological remains should occur within the Penrith Lakes Scheme where appropriate and should be undertaken in accordance with the policies and recommendations identified in the Penrith Lakes Scheme Interpretation Strategy (2008) and relevant

Statutory Framework

If relics of National significance would be significantly impacted by works, it may be necessary to refer the matter to the Australian Government Minister for Environment, Water, Heritage and the Arts (applying the *Environment Protection and Biodiversity Conservation Act 1999*).

The Penrith Lakes Scheme has been declared a 'major project' governed by Part 3A of the *Environmental Planning and Assessment Act 1979* (NSW). In most cases, the Minister for Planning will be the consent authority.

The Penrith Lakes Scheme is implemented under the provisions of *Sydney Regional Environmental Plan 11* (SREP 11). The Minister for Planning is also the consent authority under the SREP.

The Minister for Planning can approve works and can condition that approval such that the works are undertaken in accordance with this AMP.

For all other circumstances, the provisions of the *Heritage Act 1977* (NSW) would apply.

The Heritage Act provides automatic statutory protection to 'relics'. The Heritage Act defines a 'relic' as:

Any deposit, object or material evidence relating to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and which is 50 or more years old.

Sections 139–145 of the Heritage Act prevent the excavation of a relic, except in accordance with a gazetted exception or an excavation permit issued by the Heritage Council of NSW (except where specified by other prevailing legislation).

The Puddledock site has the potential to contain historical archaeological relics as defined by the Heritage Act.

The management of the Penrith Lakes Scheme heritage resource is also governed by the provisions of a confidential Deed entered into between PLDC and State government in 1987, and the conditions of consent attaching to a number of DAs. Always consult these before commencing works that may impact on the archaeological resource.



Figure 10 Well northwest of Puddledock.

Consultation and Liaison

If Aboriginal objects are exposed by ground disturbance, consult with those parties identified in the Aboriginal Cultural Heritage Management Plan (this may include the Department of the Environment and Climate Change, Aboriginal community representatives and others). Consult the guidelines for consultation published by the DECC.

The PLDC Heritage Officer should consult with heritage professionals and/or the Heritage Branch, NSW Department of Planning, as appropriate.

The PLDC Heritage Officer may wish to involve community groups in the management of the archaeological resource.



Figure 11 Fibro house north of Puddledock.

Special Element Interpretation Plans.

Unexpected Aboriginal Archaeological Objects—If any unexpected Aboriginal archaeological objects are exposed during site works, work should cease and consultation with relevant Aboriginal community representatives and the Department of the Environment and Climate Change should be initiated.

Unexpected Relics of National Significance—If any unexpected remains of potentially National heritage significance are encountered during site works, work should cease until a proper assessment has been made by a heritage professional. It may be necessary to make a ‘referral’ to the Australian Government Minister for the Environment, Water, Heritage and the Arts.

Disputes and Uncertainty—Should disagreement or uncertainty arise concerning the application of this AMP, the matter should be referred to the Heritage Branch, NSW Department of Planning for determination.

7.3 Specific Management—Management Zones

Figures 12 and 13 below illustrate the location and layout of the Puddledock site.

The site has also been divided into a number of management zones (Figure 14). For each management zone the following is provided:

- A summary of potential archaeological relics and their significance.
- Research questions that the potential archaeology in the zones might be used to address, and which should guide future excavation methodologies.
- Management recommendations for the various zones, based on likely and anticipated actions, and the identified potential relics.

Remember: if a specific circumstance is not covered in this Archaeology Handbook use the policy framework in the Archaeological Management Plan for guidance.

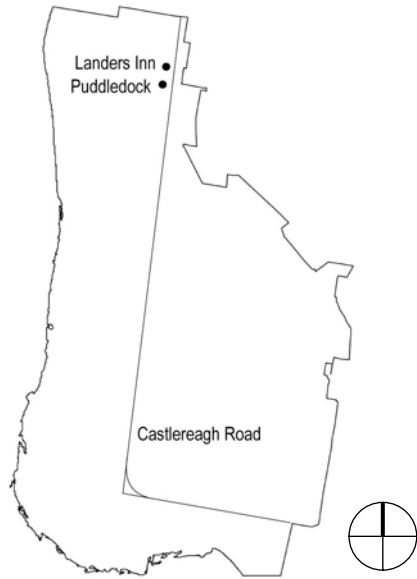


Figure 12 Thumbnail plan showing site location (not to scale)

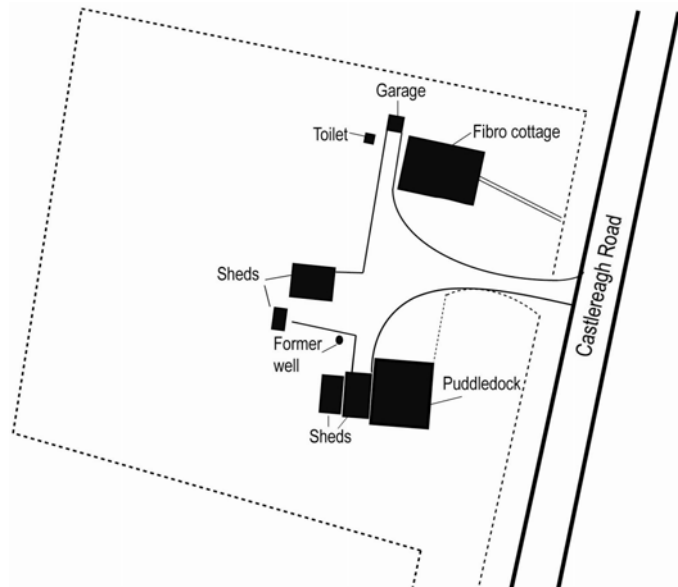


Figure 13 Plan showing approximate site layout (not to scale).



Figure 14 Aerial site photo showing archaeological management zones. Puddledock cottage is in Zone 1 and the fibro house in Zone 5. (Base: Google Earth)

Zone 1—Footprint of Puddledock Cottage

Potential Relics

| Potential Relics | Possible Archaeological Evidence | Archaeological Potential | Archaeological Significance |
|----------------------|--|--------------------------|-----------------------------|
| Under-floor deposits | Artefacts located in discrete areas under the floors. These are commonly small artefacts (buttons, pins, coins, etc) that have slipped between ill-fitting floor boards or impressed into dirt floors. | High | High |
| Structural elements | Piers, post holes, impressions of floor joists and bearers, wall footings. Defunct services. | High | Moderate |

Research Questions Specific to Puddledock Cottage

- Is there any archaeological evidence for the cottage having been relocated from its original site? Does the archaeological record provide a date for the relocation of the cottage?
- What does the archaeological record tell us about the phases and kinds of modifications made to the built form of the cottage?
- What can the archaeological record tell us about Depression-era domestic life in the Penrith area?
- Is there any archaeological evidence of former landscaping around the house?
- What evidence is there of the activities that took place in the structure?
- What evidence is there of the occupants in the structure? Are there any artefacts that can be dated to the original inhabitants of the structure?

Archaeological Management Regime—Footprint of Puddledock Cottage

In Situ Retention and Conservation Works at Puddledock Cottage

- If undertaking in situ retention and conservation of the cottage, seek an option for the floor that will involve no ground disturbance. The most desirable archaeological outcome would be for any archaeological relics in this area to be retained undisturbed and in situ as part of the conserved cottage.
- Do not disturb the deposits under the floors of the cottage except for overwhelming conservation reasons (for example, to ascertain and rectify structural and physical conservation problems) or overwhelming health and safety reasons (for example, to prevent structural failure). Where ground disturbance would result in the physical conservation of the cottage this is appropriate.
- Where ground disturbance is required:
 - If this AMP has been endorsed by the Heritage Council of NSW, proceed with the works by observing the methodology below.

Zone 1

- If the works do not form part of a Part 3A Major Project, and the AMP has not been endorsed by the Heritage Council of NSW, proceed by way of an Exception application to the Heritage Branch, NSW Department of Planning (the application should provide for the excavation methodology presented below).
- If the works form part of a Part 3A Major Project, and if the provisions of the Heritage Act do not apply, proceed by way of the methodology below.
- Prior to the works commencing, a site induction of all relevant personnel should be undertaken by a qualified archaeologist, who will explain the obligations of all personnel and the appropriate excavation methodology for the management of the archaeological resource.
- Where ground disturbance must occur, this should be undertaken by an archaeologist.
- Given the significance of the potential archaeological resource within the footprint of the timber cottage, it would be undesirable to archaeologically investigate it in a piecemeal manner. Therefore, if conservation of the timber cottage would cause significant ground disturbance of the cottage's floor area (ie greater than 9m²), the works should be preceded by an open area research excavation across the entire building footprint.
- Minor ground disturbance (for example, exploratory excavation in a total area not exceeding 9m²) may be undertaken, but only by an archaeologist, treating the discrete disturbance as an opportunity for controlled archaeological sampling (for example, excavate in controlled 1m x 1m squares).
- The archaeologist should excavate the deposits, applying the principles of stratigraphic excavation.
- All under-floor deposits should be sieved and finds provenanced by context.
- Any artefacts that are recovered should be washed, labelled and stored. Arrangements should be made for appropriate conservation to occur where artefacts with particular conservation requirements are found (for example, leather and metal artefacts). Artefacts should be logged in a database that reflects current best-practice archaeological data recording.
- Wherever subsurface disturbance can be restricted, this should be done in order to reduce the impact on any potential archaeological relics at the site.
- Where historic structural remains are exposed, those remains should be left in situ unless this is impossible for overwhelming conservation or health and safety reasons. In any case, the location, nature, function, dimensions etc of these remains should be archaeologically recorded (in words, photography, survey and measured drawing).
- If archaeological evidence relating to Aboriginal use of the site is discovered, the Director of the NSW National Parks and Wildlife Service must be notified, in accordance with Section 91 of the *National Parks and Wildlife Act 1974* (NSW). Appropriate Aboriginal consultation must be undertaken consistent with Department of Environment and Climate Change guidelines.
- On completion of the works, a succinct report should be prepared and submitted to the Heritage Branch, NSW Department of Planning that presents the results of the excavation, illustrated by photographs, survey plans and other drawings as appropriate. It should include a CD-ROM

containing an artefact database (if relevant) and any photographic images taken during the works, and a catalogue of those images.

Demolition of Puddledock Cottage and Bulk Excavation of the Area

If it is proposed that Puddledock Cottage be demolished and the area of its footprint be bulk excavated into natural deposits, the site's research potential should first be fully realised using the following methodology.

- Observe any recommendations for the archival recording of the structure contained in the Conservation Management Plan or conditions of consent.
- Where ground disturbance is required:
 - If this AMP has been endorsed by the Heritage Council of NSW, proceed with the works by observing the methodology below.
 - If the works do not form part of a Part 3A Major Project, and the AMP has not been endorsed by the Heritage Council of NSW, proceed by way of an Exception application to the Heritage Branch, NSW Department of Planning (the application should provide for the excavation methodology presented below).
 - If the works form part of a Part 3A Major Project, and if the provisions of the Heritage Act do not apply, proceed by way of the methodology below.
- Prior to the works commencing, a site induction of all relevant personnel should be undertaken by a qualified archaeologist, who will explain the obligations of all personnel and the appropriate excavation methodology for the management of the archaeological resource.
- Where ground disturbance must occur, this should be undertaken by an archaeologist.
- The archaeologist should excavate the deposits, applying the principles of stratigraphic excavation.
- All under-floor deposits should be sieved and finds provenanced by context.
- Any artefacts that are recovered should be washed, labelled and stored. Arrangements should be made for appropriate conservation to occur where artefacts with particular conservation requirements are found (for example, leather and metal artefacts). Artefacts should be logged in a database that reflects current best-practice archaeological data recording.
- The location, nature, function, dimensions etc of archaeological relics should be archaeologically recorded (in words, photography, survey and measured drawing).
- If archaeological evidence relating to Aboriginal use of the site is discovered, the Director of the NSW National Parks and Wildlife Service must be notified, in accordance with Section 91 of the *National Parks and Wildlife Act 1974* (NSW). Appropriate Aboriginal consultation must be undertaken consistent with Department of Environment and Climate Change guidelines.
- On completion of the works, a succinct report should be prepared and submitted to the Heritage Branch, NSW Department of Planning that presents the results of the excavation, illustrated by photographs, survey plans and other drawings as appropriate. It should include a CD-ROM

Zone 1

containing an artefact database (if relevant) and any photographic images taken during the works, and a catalogue of those images.

Demolition of Puddledock Cottage to Ground Level and the Introduction of Fill

If it is proposed that Puddledock Cottage be demolished to ground level and the area levelled by the introduction of fill:

- Observe any recommendations for the archival recording of the structure contained in the Conservation Management Plan or conditions of consent.
- Minimise impacts on the archaeological resource. Do not cause any ground disturbance beyond what is absolutely necessary for the demolition of the structure.
- If demolition would result in ground disturbance, it should be monitored by an archaeologist and the results presented in a succinct written report. Any artefacts recovered should be appropriately conserved, labelled and stored.
- Cover the potential archaeological resource with fill. This will seal any archaeological deposits for future investigation should that be desirable.

Flooding of Puddledock Cottage

If it is proposed that the Puddledock Cottage area be flooded (for example, in the creation of new lakes):

- Observe any recommendations for the archival recording of the structure contained in the Conservation Management Plan or conditions of consent.
- Minimise impacts on the archaeological resource. Do not cause any ground disturbance beyond what is absolutely necessary.
- Before the flooding occurs, archaeologically investigate the footprint of Puddledock Cottage using the methodology described above for the demolition of Puddledock Cottage and bulk excavation of the area.

Zone 2—Puddledock Cottage Front Garden

Potential Relics

| Potential Relics | Possible Archaeological Evidence | Archaeological Potential | Archaeological Significance |
|--|---|--------------------------|-----------------------------|
| Former landscaping—flower beds, kerbs and edging, garden paths, etc | <p>Soil deposits (eg introduced loams in the otherwise clayey substrate).</p> <p>Cuts (eg pits excavated for the introduction of plantings).</p> <p>Stone and/or brick edging/kerbs (in situ and ex situ).</p> <p>Remains of tree roots or 'shadows' in the soils reflecting decayed roots.</p> <p>Artefact fragments (eg broken flower pots, gardening tools etc).</p> <p>Earlier driveway levels.</p> | Low-to-Moderate | Low-to-Moderate |
| Evidence of former plantings—macrofossils and microfossils | <p>Botanical remains are sometimes preserved as:</p> <ul style="list-style-type: none"> macrofossils (seeds, fruits, charcoals etc)—evidence of tree fruits and berry fruits such as peaches, apples and raspberries (all of which have notably hardy seeds) are most common; and microfossils (pollen and phytoliths, ie silica microfossils). <p>With respect to macrofossils, these can be preserved in anaerobic sediments (usually permanently waterlogged/dry) and if charred (partially burnt) or mineralised (fossilised). There is low potential for such fossils to have survived within the front garden.</p> <p>With respect to microfossils, pollen requires anaerobic (usually permanently waterlogged/dry) conditions to persist. Given that the site has been subject to repeated wetting and drying there is a low potential for pollens to survive.</p> <p>Phytoliths are persistent in all conditions and may therefore survive at the site of the front garden.</p> | Low | Low |
| Evidence of former occupants and their activities—gardens are areas commonly used for work, play and entertainment | Isolated artefacts that have been lost or discarded (coins, marbles, toys, gardening tools etc). | Moderate | Moderate |
| Services—sewer and water pipes etc | <p>Metal and terracotta pipes.</p> <p>Trenches—cuts and fills.</p> | Moderate-to-High | Low |
| Former structures—gardens were often furnished with temporary and light-weight permanent structures such as gazebos, trellises etc | <p>Post holes.</p> <p>Compacted surfaces.</p> | Low | Low-to-Moderate |

Zone 2

Research Questions Specific to Puddledock Cottage Front Garden

- How extensive was the original/early front garden? Where were its 'boundaries'?
- What was the layout of the original/early front garden? How was it landscaped? Did it have garden paths, garden beds etc, and where were they located?
- Was the front garden ever furnished with structures (such as gazebos, trellises)?
- What plants did the garden contain?
- What activities were carried out in the front garden?

Archaeological Management Regime—Puddledock Cottage Front Garden

Minimise ground disturbance in the area of the front garden. If the following works are proposed they should be undertaken in the manner specified below.

Reinstating the Historic Garden Form/Introducing New Landscaping

- As a general principle, archaeological relics should be left undisturbed where possible. However, the reinstatement of the original/early garden form in this area, or the general improvement of the front garden landscaping, is a desirable heritage outcome that would justify the disturbance or destruction of the potential archaeological resource, provided the research potential of the garden's archaeology is met.
- Avoid incremental destruction of the archaeological resource in the front garden (for example, excavation of multiple root pits and garden beds over a long period). If there is an expectation that the reinstatement of historic landscaping or improved landscaping will involve significant ground disturbance, data from the archaeological resource is best obtained in a controlled manner in a single ground disturbance episode.
- If ground disturbance is proposed as part of landscaping works:
 - If this AMP has been endorsed by the Heritage Council of NSW, proceed with the works by observing the methodology below.
 - If the works do not form part of a Part 3A Major Project, and the AMP has not been endorsed by the Heritage Council of NSW, proceed by way of an Exception application to the Heritage Branch, NSW Department of Planning (the application should provide for the excavation methodology presented below).
 - If the works form part of a Part 3A Major Project, the following methodology should be observed.
- Prior to the works commencing, a site induction of all relevant personnel should be undertaken by a qualified archaeologist, who will explain the obligations of all personnel and the appropriate excavation methodology for the management of the archaeological resource.
- The proposed works should be monitored by a qualified archaeologist in order to ensure that potential archaeological relics are identified, investigated and appropriately recorded.
- If unexpected relics of local significance or relics in disturbed contexts are encountered, they can be removed after being appropriately recorded (in words, photography, survey and measured

drawings, as appropriate), and then conserved and stored. This decision should be made only after a full significance assessment has been prepared by an archaeologist. However, relics of State or National significance should be kept in situ. This may require the redesign of landscape designs etc. (Note: if the works do not form part of a Part 3A Major Project, for significant damage to State-significant relics it may be necessary to apply to the Heritage Branch, NSW Department of Planning, for an Excavation Permit.)

- On completion of the works, a succinct report should be prepared and submitted to the Heritage Branch, NSW Department of Planning that presents the results of the excavation, illustrated by photographs, survey plans and other drawings as appropriate. It should include a CD-ROM containing an artefact database (where relevant) and the photographic images taken during the works, and a catalogue of those images.
- Any artefacts that are recovered should be washed, labelled and stored. Arrangements should be made for appropriate conservation to occur where artefacts with particular conservation requirements are found (for example, leather and metal artefacts).
- Wherever subsurface disturbance can be restricted, this should be done in order to reduce the impact on any potential archaeological relics at the site.
- If archaeological evidence relating to Aboriginal use of the site is discovered, the Director of the NSW National Parks and Wildlife Service must be notified immediately, in accordance with Section 91 of the *National Parks and Wildlife Act 1974* (NSW). Appropriate Aboriginal consultation must be undertaken consistent with Department of Environment and Climate Change guidelines.
- Given the low potential for archaeo-botanical remains in the front garden, and assessed levels of significance, archaeological investigations need not include a soil sampling strategy.

Garden Maintenance and Minor Miscellaneous Ground Disturbance (for example, for the Introduction of New Services)

So far as archaeology is concerned, minor ground disturbance for the purpose of garden maintenance etc can take place without further consents or the need for archaeological monitoring.

However, if unexpected archaeological relics are encountered works must cease and an archaeologist should be engaged to assess the likely extent and significance of the relics. Archaeological relics should be left in situ unless this is prevented by overwhelming conservation or occupational health and safety considerations.

Where unexpected relics of local significance or in disturbed contexts are exposed and unavoidable ground disturbance would disturb or destroy them:

- If this AMP has been endorsed by the Heritage Council of NSW, proceed with the works by observing the methodology below.
- If the AMP has not been endorsed by the Heritage Council of NSW, and the works do not form part of a Part 3A Major Project, notify the Heritage Branch, NSW Department of Planning of the discovery and proceed by way of an Exception application to the Heritage Branch. The application should recommend the following methodology.

Zone 2

- If the works form part of a Part 3A Major Project, and if the provisions of the Heritage Act do not apply, the works should be undertaken observing the following methodology.

Where the proposed unavoidable works would disturb or destroy the unexpected relics, the recommended ground disturbance methodology is as follows.

- If relics of local significance or relics in highly disturbed contexts are encountered, they can be removed after being appropriately recorded (in words, photography, survey and measured drawings, as appropriate), then conserved and stored. This decision should be made only after a significance assessment has been prepared by an archaeologist. However, relics of State or National significance (for example, an in situ early nineteenth century well, nineteenth century refuse pit etc) should be kept in situ. This may require the redesign of landscape designs, re-routing of trenches etc.
- If in situ retention of State-significant relics is impossible for overwhelming conservation, health or safety reasons, they may be removed only after this has been demonstrated, by a qualified archaeologist observing the principles of stratigraphic excavation, and ensuring appropriate recording (in words, photography, survey and measured drawings, as appropriate) and conservation and storage of relics. (Note: if the works do not form part of a Part 3A Major Project, for significant damage to State-significant relics it may be necessary to apply to the Heritage Branch, NSW Department of Planning, for an Excavation Permit.)
- On completion of the works, a succinct report should be prepared and submitted to the Heritage Branch, NSW Department of Planning that presents the results of the excavation, illustrated by photographs, survey plans and other drawings as appropriate. It should include a CD-ROM containing an artefact database and the photographic images taken during the works, and a catalogue of those images.
- Any artefacts that are recovered should be washed, labelled and stored. Arrangements should be made for appropriate conservation to occur where artefacts with particular conservation requirements are found (for example, leather and metal artefacts).
- Wherever subsurface disturbance can be restricted, this should be done in order to reduce the impact on any potential archaeological relics at the site.
- If archaeological evidence relating to Aboriginal use of the site is discovered, the Director of the NSW National Parks and Wildlife Service must be notified immediately, in accordance with Section 91 of the *National Parks and Wildlife Act 1974* (NSW). Appropriate Aboriginal consultation must be undertaken consistent with Department of Environment and Climate Change guidelines.

Bulk Excavation of the Front Garden Area

If it is proposed that the Puddledock Cottage front garden area be bulk excavated into natural deposits, the site's research potential should first be fully realised using the following methodology.

- If ground disturbance is proposed as part of bulk excavation:
 - If this AMP has been endorsed by the Heritage Council of NSW, proceed with the works by observing the methodology below.
 - If the works do not form part of a Part 3A Major Project, and the AMP has not been endorsed by the Heritage Council of NSW, proceed by way of an Exception application to the Heritage Branch, NSW Department of Planning (the application should provide for the excavation methodology presented below).
 - If the works form part of a Part 3A Major Project, the following methodology should be observed.
- Prior to the works commencing, a site induction of all relevant personnel should be undertaken by a qualified archaeologist, who will explain the obligations of all personnel and the appropriate excavation methodology for the management of the archaeological resource.
- The proposed works should be monitored by a qualified archaeologist in order to ensure that potential archaeological relics are identified, investigated and appropriately recorded.
- If unexpected relics of local significance or relics in disturbed contexts are encountered, they can be removed after being appropriately recorded (in words, photography, survey and measured drawings, as appropriate), and then conserved and stored. This decision should be made only after a full significance assessment has been prepared by an archaeologist. However, relics of State or National significance should be kept in situ. This may require the redesign of landscape designs etc. (Note: if the works do not form part of a Part 3A Major Project, for significant damage to State-significant relics it may be necessary to apply to the Heritage Branch, NSW Department of Planning, for an Excavation Permit.)
- On completion of the works, a succinct report should be prepared and submitted to the Heritage Branch, NSW Department of Planning that presents the results of the excavation, illustrated by photographs, survey plans and other drawings as appropriate. It should include a CD-ROM containing an artefact database (where relevant) and the photographic images taken during the works, and a catalogue of those images.
- Any artefacts that are recovered should be washed, labelled and stored. Arrangements should be made for appropriate conservation to occur where artefacts with particular conservation requirements are found (for example, leather and metal artefacts).
- Wherever subsurface disturbance can be restricted, this should be done in order to reduce the impact on any potential archaeological relics at the site.
- If archaeological evidence relating to Aboriginal use of the site is discovered, the Director of the NSW National Parks and Wildlife Service must be notified immediately, in accordance with Section 91 of the *National Parks and Wildlife Act 1974* (NSW). Appropriate Aboriginal consultation must be undertaken consistent with Department of Environment and Climate Change guidelines.

Zone 2

- Given the low potential for archaeo-botanical remains in the front garden, and assessed levels of significance, archaeological investigations need not include a soil sampling strategy.

The Introduction of Fill to the Front Garden Area

If it is proposed that the area of the front garden be levelled by the introduction of fill:

- Minimise impacts on the archaeological resource. Do not cause any ground disturbance beyond what is absolutely necessary for the introduction of the fill.
- Cover the potential archaeological resource with fill. This will seal any archaeological deposits for future investigation, should that be desirable.

Flooding of the Front Garden Area

If it is proposed that the front garden area be flooded (for example, in the creation of new lakes):

- Minimise impacts on the archaeological resource. Do not cause any ground disturbance beyond what is absolutely necessary.
- It is not necessary to archaeologically investigate the front garden prior to any possible future flooding.

Zone 3—Puddledock Cottage Rear Yard

Potential Relics

| Potential Relics | Possible Archaeological Evidence | Archaeological Potential | Archaeological Significance |
|---|--|--------------------------|--|
| A well | The top of a well is visible at grade c10m northwest of Puddledock Cottage. | High (Extant) | Moderate-to-High, depending on its possible contents |
| Former landscaping—flower beds, kerbs and edging, garden paths, etc | Soil deposits (eg introduced loams in the otherwise clayey substrate). Cuts (eg pits excavated for the introduction of plantings). Stone and/or brick edging/kerbs (in situ and ex situ). Remains of tree roots or 'shadows' in the soils reflecting decayed roots. Artefact fragments (eg broken flower pots, gardening tools etc). Earlier driveway levels. | Low-to-Moderate | Low-to-Moderate |
| Evidence of former occupants and their activities—such areas are commonly used for work, play and entertainment | Isolated artefacts that have been lost or discarded (coins, marbles, toys, gardening tools etc). | Moderate | Moderate |
| Services—sewer and water pipes etc | Metal and terracotta pipes. Trenches—cuts and fills. | Moderate-to-High | Low |
| Former structures—work sheds etc | Post holes. Compacted surfaces. | Moderate | Low-to-Moderate |

Research Questions Specific to Puddledock Cottage Rear Yard

- What activities took place in the rear yard?
- Was the rear yard ever furnished with structures (work sheds etc)?
- Is there any evidence to clarify the date at which the cottage was relocated?

Archaeological Management Regime—Puddledock Cottage Rear Yard

The Introduction of Fill to the Rear Yard or Flooding of the Area

- Minimise impacts on the archaeological resource. Do not cause any ground disturbance beyond what is absolutely necessary.
- If the area must be made level by the introduction of fill or flooded (for example, by the creation of new lakes), record the precise location of the well before it is buried or flooded. It is not necessary to excavate the well prior to this occurring.

Zone 3

Introducing New Landscaping and Miscellaneous Ground Disturbance (for example, for New Services)

- As a general principle, archaeological relics should be left undisturbed where possible. However, the general improvement of the site's landscaping, drainage and services is a desirable heritage outcome that would justify the disturbance or destruction of the potential archaeological resource, provided the research potential of the area is met.
- If ground disturbance is proposed in the rear yard, take care to avoid impacts on the well to the cottage's northwest. Observe a 'buffer zone' around the well of 1.5m. If disturbance of the well is necessary see 'The Well' below.
- With the exception of the well, works involving ground disturbance in this area can be carried out without the need for further consultation or consents (insofar as archaeology is concerned). However, if unexpected archaeological relics are encountered works must cease and an archaeologist should be engaged to assess the likely extent and significance of the relics.
- Where unexpected relics of local significance or in disturbed contexts are exposed, and the proposed ground disturbance would disturb or destroy them:
 - If this AMP has been endorsed by the Heritage Council of NSW, proceed with the works by observing the methodology below.
 - If the AMP has not been endorsed by the Heritage Council of NSW, and the works do not form part of a Part 3A Major Project, notify the Heritage Branch, NSW Department of Planning of the discovery and proceed by way of an Exception application to the Heritage Branch. The application should recommend the following methodology.
 - If the works form part of a Part 3A Major Project, and if the provisions of the Heritage Act do not apply, the works should be undertaken observing the following methodology.
- The recommended ground disturbance methodology is as follows.
 - If relics of local significance or relics in highly disturbed contexts are encountered, they can be removed after being appropriately recorded (in words, photography, survey and measured drawings, as appropriate), then conserved and stored. This decision should be made only after a full significance assessment has been prepared by an archaeologist.
 - If in situ retention of State-significant relics is impossible for overwhelming conservation, health or safety reasons, they may be removed only after this has been demonstrated, by a qualified archaeologist observing the principles of stratigraphic excavation, and ensuring appropriate recording (in words, photography, survey and measured drawings, as appropriate) and conservation and storage of relics. (Note: if the works do not form part of a Part 3A Major Project, for significant damage to State-significant relics it may be necessary to apply to the Heritage Branch, NSW Department of Planning, for an Excavation Permit.)
- On completion of the works, a succinct report should be prepared and submitted to the Heritage Branch, NSW Department of Planning that presents the results of the excavation, illustrated by

photographs, survey plans and other drawings as appropriate. It should include a CD-ROM containing an artefact database and the photographic images taken during the works, and a catalogue of those images.

- Any artefacts that are recovered should be washed, labelled and stored. Arrangements should be made for appropriate conservation to occur where artefacts with particular conservation requirements are found (for example, leather and metal artefacts).
- Wherever subsurface disturbance can be restricted, this should be done in order to reduce the impact on any potential archaeological relics at the site.
- If archaeological evidence relating to Aboriginal use of the site is discovered, the Director of the NSW National Parks and Wildlife Service must be notified immediately, in accordance with Section 91 of the *National Parks and Wildlife Act 1974* (NSW). Appropriate Aboriginal consultation must be undertaken consistent with Department of Environment and Climate Change guidelines.

The Well

- Seek to retain the well in situ unless this is impossible for overwhelming conservation or occupational health and safety issues.
- As noted above, if the area must be made level by the introduction of fill or flooded (for example, by the creation of new lakes), record the precise location of the well before it is buried or flooded. It is not necessary to excavate the well prior to this occurring.
- If the well must be disturbed or destroyed (for example, by bulk excavation):
 - If this AMP has been endorsed by the Heritage Council of NSW, proceed with the works by observing the methodology below.
 - If the AMP has not been endorsed by the Heritage Council of NSW, and the works do not form part of a Part 3A Major Project, notify the Heritage Branch, NSW Department of Planning of the discovery and proceed by way of an Exception application to the Heritage Branch. The application should recommend the following methodology.
 - If the works form part of a Part 3A Major Project, and if the provisions of the Heritage Act do not apply, the works should be undertaken observing the following methodology.
- Prior to the works commencing, a site induction of all relevant personnel should be undertaken by a qualified archaeologist, who will explain the obligations of all personnel and the appropriate excavation methodology for the management of the archaeological resource.
- Where ground disturbance must occur, this may be undertaken by machine excavation, monitored by an archaeologist. Seek to excavate the well in stages, lowering the surrounding landform incrementally. A flexible approach to the excavation of the well may be required, depending on health and safety requirements. Record the deposits in the well observing the principles of stratigraphic excavation.

Zone 3

- If the level required for bulk excavation is shallower than the depth of the well, leave the lower levels of the well in situ and undisturbed. Disturb no more of the well than is necessary for bulk excavation purposes.
- Any artefacts that are recovered from within the well should be washed, labelled and stored. Arrangements should be made for appropriate conservation to occur where artefacts with particular conservation requirements are found (for example, leather and metal artefacts). Artefacts should be logged in a database that reflects current best-practice archaeological data recording.
- Retain a representative sample of the bricks used in the construction of the well should they prove to be archaeologically significant.
- The location, nature, function, dimensions etc of archaeological relics should be archaeologically recorded (in words, photography, survey and measured drawing).
- If archaeological evidence relating to Aboriginal use of the site is discovered, the Director of the NSW National Parks and Wildlife Service must be notified, in accordance with Section 91 of the *National Parks and Wildlife Act 1974* (NSW). Appropriate Aboriginal consultation must be undertaken consistent with Department of Environment and Climate Change guidelines.
- On completion of the works, a succinct report should be prepared and submitted to the Heritage Branch, NSW Department of Planning, that presents the results of the excavation, illustrated by photographs, survey plans and other drawings as appropriate. It should include a CD-ROM containing an artefact database (if relevant) and any photographic images taken during the works, and a catalogue of those images.

Zone 4—Work Area West of Puddledock Cottage

Potential Relics

| Potential Relics | Possible Archaeological Evidence | Archaeological Potential | Archaeological Significance |
|---|--|--------------------------|---|
| Evidence of farm activities carried out in the existing structures, and modifications to those structures over time | A number of farm structures exist in this zone, including work and storage sheds. Archaeological evidence of the activities undertaken in these areas may survive as isolated artefacts (discarded or lost), soil deposits, compacted surfaces, brick piers etc. | High | Low-to-Moderate depending on date and levels of disturbance |
| Evidence of former structures and activities undertaken in them | This area has been historically used for a variety of farm activities and there is the potential for the remains of previous structures to survive here. These might include: <ul style="list-style-type: none"> brick piers, post holes, slabs, brick and concrete wall footings; defunct services; and soil deposits, compact surfaces etc. Archaeological evidence of the activities undertaken in these areas may also survive, eg as isolated artefacts. | High | Low-to-Moderate depending on date and levels of disturbance |
| Pits and discard | Work areas often became locations for discarded objects and were sometimes used for waste disposal, eg in pits. There is potential for such pits to exist in this zone. The pits would be represented in the archaeological record by cuts in the natural deposits and artefact-rich fill. Other artefacts may have been dumped on the surface and subsequently covered by soil deposits. These would be shallow concentrations of artefacts. | Moderate | Low-to-Moderate |

Research Questions Specific to the Work Area West of Puddledock Cottage

- What evidence is there of the farm activities that took place on the property? What agricultural products were produced in the early periods of occupation, especially the Depression era?
- What evidence of Depression era diet is there in this area?
- What evidence of early agricultural technologies is there in the area?
- What evidence is there of the site's physical development and change over time?

Archaeological Management Regime—Work Area West of Puddledock Cottage

- Works involving ground disturbance in this area can be carried out without the need for further consultation or consents (so far as archaeology is concerned). However, if unexpected archaeological relics are encountered works must cease and an archaeologist should be engaged to assess the likely extent and significance of the relics.

Zone 4

- Where unexpected relics of local significance or in disturbed contexts are exposed, and the proposed ground disturbance would disturb or destroy them:
 - If this AMP has been endorsed by the Heritage Council of NSW, proceed with the works by observing the methodology below.
 - If the AMP has not been endorsed by the Heritage Council of NSW, and the works do not form part of a Part 3A Major Project, notify the Heritage Branch, NSW Department of Planning of the discovery and proceed by way of an Exception application to the Heritage Branch. The application should recommend the following methodology.
 - If the works form part of a Part 3A Major Project, and if the provisions of the Heritage Act do not apply, the works should be undertaken observing the following methodology.
- The recommended ground disturbance methodology is as follows.
 - If relics of local significance or relics in highly disturbed contexts are encountered, they can be removed after being appropriately recorded (in words, photography, survey and measured drawings, as appropriate), then conserved and stored. This decision should be made only after a full significance assessment has been prepared by an archaeologist. Seek to retain relics of State or National significance in situ.
 - If in situ retention of State-significant relics is impossible for overwhelming conservation, health or safety reasons, they may be removed only after this has been demonstrated, by a qualified archaeologist observing the principles of stratigraphic excavation, and ensuring appropriate recording (in words, photography, survey and measured drawings, as appropriate) and conservation and storage of relics. (Note: if the works do not form part of a Part 3A Major Project, for significant damage to State-significant relics it may be necessary to apply to the Heritage Branch, NSW Department of Planning, for an Excavation Permit.)
- On completion of the works, a succinct report should be prepared and submitted to the Heritage Branch, NSW Department of Planning that presents the results of the excavation, illustrated by photographs, survey plans and other drawings as appropriate. It should include a CD-ROM containing an artefact database and the photographic images taken during the works, and a catalogue of those images.
- Any artefacts that are recovered should be washed, labelled and stored. Arrangements should be made for appropriate conservation to occur where artefacts with particular conservation requirements are found (for example, leather and metal artefacts).
- Wherever subsurface disturbance can be restricted, this should be done in order to reduce the impact on any potential archaeological relics at the site.
- If archaeological evidence relating to Aboriginal use of the site is discovered, the Director of the NSW National Parks and Wildlife Service must be notified immediately, in accordance with Section 91 of the *National Parks and Wildlife Act 1974* (NSW). Appropriate Aboriginal consultation must be undertaken consistent with Department of Environment and Climate Change guidelines.

Zone 5—House and Garden North of Puddledock Cottage

Potential Relics

| Potential Relics | Possible Archaeological Evidence | Archaeological Potential | Archaeological Significance |
|--|---|--------------------------|-----------------------------|
| Structural elements | Earlier floors/paving, piers, post holes, wall footings etc. | High | Low |
| Former landscaping—flower beds, kerbs and edging, garden paths, tree roots etc | Soil deposits (eg introduced loams in the otherwise clayey substrate). Cuts (eg pits excavated for the introduction of plantings). Stone and/or brick edging/kerbs (in situ and ex situ). Artefact fragments (eg broken flower pots, gardening tools etc). | Moderate | Low |
| Evidence of former occupants and their activities | Isolated artefacts that have been lost or discarded (coins, marbles, toys, gardening tools etc). | Moderate | Low |
| Services—sewer and water pipes etc | Metal and terracotta pipes. Trenches—cuts and fills. | Moderate-to-High | Low |

Archaeological Management Regime—House and Garden North of Puddledock Cottage

- Works involving ground disturbance in this area can be carried out without the need for further consultation or consents (so far as archaeology is concerned). However, if unexpected archaeological relics are encountered works must cease and an archaeologist should be engaged to assess the likely extent and significance of the relics.
- Where unexpected relics of local significance or in disturbed contexts are exposed, and the proposed ground disturbance would disturb or destroy them:
 - If this AMP has been endorsed by the Heritage Council of NSW, proceed with the works by observing the methodology below.
 - If the AMP has not been endorsed by the Heritage Council of NSW, and the works do not form part of a Part 3A Major Project, notify the Heritage Branch, NSW Department of Planning of the discovery and proceed by way of an Exception application to the Heritage Branch. The application should recommend the following methodology.
 - If the works form part of a Part 3A Major Project, and if the provisions of the Heritage Act do not apply, the works should be undertaken observing the following methodology.
- The recommended ground disturbance methodology is as follows.
 - If relics of local significance or relics in highly disturbed contexts are encountered, they can be removed after being appropriately recorded (in words, photography, survey and measured drawings, as appropriate), then conserved and stored. This decision should

Zone 5

be made only after a full significance assessment has been prepared by an archaeologist. Seek to retain relics of State or National significance in situ.

- If in situ retention of State-significant relics is impossible for overwhelming conservation, health or safety reasons, they may be removed only after this has been demonstrated, by a qualified archaeologist observing the principles of stratigraphic excavation, and ensuring appropriate recording (in words, photography, survey and measured drawings, as appropriate) and conservation and storage of relics. (Note: if the works do not form part of a Part 3A Major Project, for significant damage to State-significant relics it may be necessary to apply to the Heritage Branch, NSW Department of Planning, for an Excavation Permit.)
- On completion of the works, a succinct report should be prepared and submitted to the Heritage Branch, NSW Department of Planning that presents the results of the excavation, illustrated by photographs, survey plans and other drawings as appropriate. It should include a CD-ROM containing an artefact database and the photographic images taken during the works, and a catalogue of those images.
- Any artefacts that are recovered should be washed, labelled and stored. Arrangements should be made for appropriate conservation to occur where artefacts with particular conservation requirements are found (for example, leather and metal artefacts).
- Wherever subsurface disturbance can be restricted, this should be done in order to reduce the impact on any potential archaeological relics at the site.
- If archaeological evidence relating to Aboriginal use of the site is discovered, the Director of the NSW National Parks and Wildlife Service must be notified immediately, in accordance with Section 91 of the *National Parks and Wildlife Act 1974* (NSW). Appropriate Aboriginal consultation must be undertaken consistent with Department of Environment and Climate Change guidelines.

Zone 6—Agricultural Areas West and South of Puddledock Cottage

Potential Relics

| Potential Relics | Possible Archaeological Evidence | Archaeological Potential | Archaeological Significance |
|--|---|--------------------------|---|
| Isolated artefacts | This part of the site has been the subject of ongoing and repeated ground disturbance for agricultural purposes for over 100 years. The potential for in situ relics to survive here is low. Any relics that may survive are likely to be isolated finds with unclear relationships to the main house. | Low | Low (although very early artefacts may be of high significance even if in disturbed contexts) |
| Evidence of former plantings—macrofossils and microfossils | This part of the site has been the subject of ongoing and repeated ground disturbance for agricultural purposes for over 100 years. The potential for the survival of macrofossils or microfossils to survive that reflect agricultural practices in the early and mid nineteenth century is low. It would be difficult to relate any that may survive to a clear historical phase and therefore their research potential would be limited. | Low | Low given disturbed context |

Research Questions Specific to the Agricultural Areas West and South of the Cottage

- What evidence is there of the agricultural activities that took place on the property?

Archaeological Management Regime—Agricultural Areas West and South of the Cottage

- Works involving ground disturbance in this area can be carried out without the need for further consultation or consents (so far as archaeology is concerned). However, if unexpected archaeological relics are encountered works must cease and an archaeologist should be engaged to assess the likely extent and significance of the relics.
- Where unexpected relics of local significance or in disturbed contexts are exposed, and the proposed ground disturbance would disturb or destroy them:
 - If this AMP has been endorsed by the Heritage Council of NSW, proceed with the works by observing the methodology below.
 - If the AMP has not been endorsed by the Heritage Council of NSW, and the works do not form part of a Part 3A Major Project, notify the Heritage Branch, NSW Department of Planning of the discovery and proceed by way of an Exception application to the Heritage Branch. The application should recommend the following methodology.
 - If the works form part of a Part 3A Major Project, and if the provisions of the Heritage Act do not apply, the works should be undertaken observing the following methodology.

Zone 6

- The recommended ground disturbance methodology is as follows.
 - If relics of local significance or relics in disturbed contexts are encountered, they can be removed after being appropriately recorded (in words, photography, survey and measured drawings, as appropriate), then conserved and stored. This decision should be made only after a full significance assessment has been prepared by an archaeologist. Seek to retain relics of State or National significance in situ.
 - If in situ retention of State-significant relics is impossible for overwhelming conservation, health or safety reasons, they may be removed only after this has been demonstrated, by a qualified archaeologist observing the principles of stratigraphic excavation, and ensuring appropriate recording (in words, photography, survey and measured drawings, as appropriate) and conservation and storage of relics. (Note: if the works do not form part of a Part 3A Major Project, for significant damage to State significant relics it may be necessary to apply to the Heritage Branch, NSW Department of Planning, for an Excavation Permit.)
- On completion of the works, a succinct report should be prepared and submitted to the Heritage Branch, NSW Department of Planning that presents the results of the excavation, illustrated by photographs, survey plans and other drawings as appropriate. It should include a CD-ROM containing an artefact database and the photographic images taken during the works, and a catalogue of those images.
- Any artefacts that are recovered should be washed, labelled and stored. Arrangements should be made for appropriate conservation to occur where artefacts with particular conservation requirements are found (for example, leather and metal artefacts).
- Wherever subsurface disturbance can be restricted, this should be done in order to reduce the impact on any potential archaeological relics at the site.
- If archaeological evidence relating to Aboriginal use of the site is discovered, the Director of the NSW National Parks and Wildlife Service must be notified immediately, in accordance with Section 91 of the *National Parks and Wildlife Act 1974* (NSW). Appropriate Aboriginal consultation must be undertaken consistent with Department of Environment and Climate Change guidelines.

8.0 Endnotes

- ¹ Stedinger Associates, European Heritage within the Penrith Lakes Scheme, A Conservation Management Plan (Master Plan), for Penrith Lakes Development Corporation Ltd, December 2006, p 175.
- ² Bickford, A and S Sullivan 1984, 'Assessing the Research Significance of Historic Sites', in Sullivan S and S Bowdler (eds) *Site Surveys and Significance Assessment in Australian Archaeology* (Proceedings of the 1981 Springwood Conference on Australian Prehistory), Department of Prehistory, Research School of Pacific Studies, The Australian National University, Canberra.



Site plan with management zones overlaid. Puddledock Cottage is in Zone 1 and the fibro house in Zone 5. (Base photo: Google Earth)