MUNGERIE PARK HERITAGE STUDY

Report to

the Department of Urban Affairs and Planning

May 1997

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Haglund and Associates, Cultural Heritage consultants
Note on terminology:

To avoid confusion, we have consistently used the term site to refer to an archaeological entity (refer Glossary) and the term 'study area' to what DUAP in briefs and correspondence refers to as 'the (development) site'.

Acknowledgements

Archaeologists involved in this project were:

for the component of the project relating to Aboriginal heritage:
    Dr Helen Brayshaw and Dr Laila Haglund;
    and

for the component of the project relating to European heritage:
    Ms Anne Bickford.

The Daruk Local Aboriginal Land Council was represented in the field by Messrs. Kevin Cavanagh, Philip Kahn and Steve Randall.
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SUMMARY

Archaeological studies within the MPTC area have identified locations and areas with heritage values, as well as the presence of extensive areas, not yet investigated for such values and therefore in need of investigation. Though some heritage values will clearly suffer and/or be diminished by the proposed development, it would be possible to minimise impacts and turn at least aspects of such loss into positive contributions to heritage values, e.g. through investigation and interpretation.

The evidence identified relates to the presence and activities of Aboriginal inhabitants as well as of Europeans who settled in the area in recent centuries. Together they contribute to the history of the area and should be regarded as a major asset, able to contribute to the creation of a ‘Sense of Place’.

Any such use should build on and involve expert advise but be tempered and enriched through community consultation. There should be a clear policy to create and encourage community interest and participation, e.g. via an advisory committee representing groups and individuals who take an interest in heritage matters (preferably also the natural heritage).

To be effective, management actions should as far as possible emanate from such community interest.

The recommendations focus on:

• the retention of the historic house known as 'Mungerie' and surrounding hilltop curtilage to promote the European heritage of the site and provide a prominent, open space knoll which is a major viewing area and orientation landmark;

• the retention of known Aboriginal sites within Open Space, i.e. largely the broad strip to be retained as Floodway;

• integration of Aboriginal and European heritage items and values within one unified management strategy, providing a set of educational features within open space areas linked in space as well as via interpretation.
1. INTRODUCTION

1.1 Project overview

Mungerie Park Town Centre (MPTC), the present study area, is located north and east of the junction of Windsor and Old Windsor Roads (Figs. 1.1 - 1.2). It is to be established as the social, cultural, recreational, employment and retail focus for the Rouse Hill Development Area (RHDA) at Rouse Hill (SREP No.19, 1989). The latter is proposed to accommodate some 250,000 people into the next century as the major urban land release for Sydney's North West Sector. The town centre is proposed to accommodate office and retail development, medium to high density housing, roads, schools, community facilities and open space and is to become the focus for transport to the RHDA. The area is administered by the Baulkham Hills Shire Council (BHSC).

Infrastructure works for trunk water, lead-in water, recycled water and trunk storm water drainage (the Rouse Hill Infrastructure Stage 1 works) have been completed (Devine Erby Mazlin 1995:14, Fig 12).

1.2 Project scope

The project was commissioned by the Department of Urban Affairs and Planning (DUAP), which currently owns the majority of the land. The remainder of the land is held by various public and private land holders.

The purpose of the present study was primarily to identify archaeological sites within the proposed Mungerie Park town centre and to advise on the protection of sites of particular heritage significance. However, identification of sites/areas of likely archaeological significance was included, the aim being to provide a basis for a strategy allowing the development of the study area as a town centre whilst providing adequate protection from the impacts of development. The assessments would relate to archaeological aspects of heritage values of Aboriginal and European sites within the study area.

DUAP asked that the study should address broad issues of identification and location, categorisation as to significance and likely development implications; this has been interpreted as a request for practical advice combined with insightful discussion of broad issues relevant to the proposed development. Neither detailed archaeological investigations nor detailed management plans were required for this study. Where relevant, such would be completed or prepared prior to actual development.

A considerable amount of archaeological investigation has been completed within the area. The study was therefore limited to an overview of existing documentation. Additional and possibly varying aspects and evaluations of Aboriginal and European heritage sites will be sought from Aboriginal representatives and members of relevant interest groups, including land holders.

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The final brief, modified somewhat after discussion with DUAP, has been summarised in 1.3 below but is included in full as Appendix A. Our response to the initial brief is included as Appendix B.

1.3 Project objectives and study tasks

The objectives of this study, as stated by DUAP, were:

- to prepare an archaeological assessment of the development area;
- to identify sites of known or likely European and Aboriginal archaeological heritage significance;
- to assess the relative significance of those sites identified.

DUAP also listed a series of tasks understood to form essential components of the study, some of these to be undertaken by DUAP:

- initial liaison with relevant Aboriginal and non-Aboriginal historical and community organisations on the purpose and nature of the study and with private land-holders prior to commencement;

others to be undertaken by the consultants:

- compiling an inventory of the location of known and likely European and Aboriginal archaeological sites and artefacts within the Mungerie Park town centre boundary;
- preparation of a statement of significance for the sites individually and as a whole, using standard assessment criteria and of their relative values at a local, regional and State level;
- identification of those sites which should be conserved in situ for their known or likely archaeological or other value;
- provision of preliminary advice on the likely impact of identified sites on surrounding development potential;
- provision of advice as to which sites require more detailed investigation to be carried out prior to development;
- inspect the site to investigate the current condition of known sites;
- circulation of the final report to the relevant Aboriginal and non-Aboriginal heritage organisations inviting them to submit comments to the DUAP.

It was noted by the consultants that a field inspection and assessment of the present condition of known Aboriginal sites was to be carried out jointly by the consultants and the Daruk Local Aboriginal Land Council (DLALC).

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1.4 Consulting team

The main responsibility for the study was undertaken jointly by Dr. Helen Brayshaw of Helen Brayshaw Heritage Consultants Pty Ltd and Dr. Laila Haglund of Haglund & Associates Pty Ltd, Cultural Heritage Consultants. The team was joined by Ms Anne Bickford of Anne Bickford Heritage Consultants who would investigate and advice on European heritage aspects.

Drs Brayshaw and Haglund were both involved in an extensive study of the RHDA conducted by Brayshaw McDonald during 1993 in relation to the provision of infrastructures. Brayshaw also took part in the initial survey for that project. Ms Bickford has conducted a number of investigations in the general Rouse Hill area. Here may be noted that members of the DLALC were extensively involved in the surveys and investigations mentioned above (see list of references).

1.5 Report structure

The report

- outlines the main legislative provisions that may form constraints on future development of the MPTC area;
- provides brief summaries of the environmental and archaeological contexts within which assessments of significance will be made;
- provides brief summaries of the results of previous investigations, noting their relevance to future developments but also their limited extent of coverage and remaining gaps;
- provides an inventory of Aboriginal cultural items which have been identified in the MPTC area, and related archaeological investigations which have been carried out, by reference to the National Parks & Wildlife Service site register, consultant reports and other relevant literature;
- provides assessments of the archaeological resource in the MPTC area, and outlines requirements for further survey or plans of management;
- outlines the results of the joint field inspection and of discussions with the DLALC regarding their interests in the MPTC area;
- makes management recommendations on the basis of proposed development within the MPTC and requirements of the National Parks & Wildlife Act of 1974 (as amended).

Note that the joint field inspection with the Daruk Local Aboriginal Land Council took place 27.2.1997. The DLALC will be providing a separate report with management recommendations. Additional background information is provided in Appendices A - E.
2. LEGISLATIVE CONTEXT

2.1 Introduction

Most cultural heritage legislation is in Australia enacted at a State level and administered at State and local government levels.

In NSW Aboriginal and historic heritage matters are covered by separate legislation though there is some overlap. Some Federal legislation is relevant also at a State level.

The various relevant Acts are summarised in Appendix C; some important points, issues and implications are noted below.

2.2 Federal legislation - Aboriginal and European aspects

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 and the Native Title Act, 1993, though important in themselves, are unlikely to become relevant to the present project partly because of the past history of the land holdings and, in relation to the former Act because its aims seem achievable within existing State legislation.

Nor is the Australian Heritage Commission Act 1975 likely to become relevant unless some location(s) within the area is/are deemed suitable for inclusion in the Register of the National Estate. The AHC act has influence only on Commonwealth owned properties. If the site is on the Register of the National Estate then under Section 30 of the Act the Commonwealth agency should refer its proposed action to the AHC as it is prevented from taking any action which might adversely effect the site except when there is no "prudent or feasible" alternative.

Other federal legislation relevant to heritage matters appears even less likely to apply here.

2.3 State legislation - Aboriginal and Historic Heritage aspects

Within NSW, the Acts most relevant to the present project are likely to be:


The National Parks and Wildlife Act 1974 (as amended) vests the responsibility for Aboriginal heritage with the NSW National Parks and Wildlife Service (NPWS). The Act protects 'Aboriginal relics and places'. 'Relics' are defined as deposit, objects or material evidence related to Indigenous and non-European occupation both prior to and concurrent with European occupation. An 'Aboriginal place' is any place declared to be an Aboriginal place under the Act and is, or was, of special significance with respect to Aboriginal Culture.
Declaring a location an 'Aboriginal Place' bestows on that land the same protection as that of a 'relic'. This provision is generally used to afford protection to land which contains no physical relics but contains a site/sites of great importance to Aboriginal people, such as mythological sites.

Under this Act it is an offence to damage, deface or destroy 'Aboriginal relics or places' without a consent issued by the Director of the NPWS. Also, a person who is aware of the location of a 'relic' is required to report its existence to the Director unless it is, on good grounds, believed to have been reported. The NPWS expects consultation with the relevant Local Aboriginal Land Council (see below) to have been undertaken and reported before decisions are made with regard to Aboriginal heritage matters.

Note that planning legislation (see below) also protects Aboriginal heritage but indirectly through the application of principles and provisions which apply more widely and which start taking effect at earlier stages of the official process. The NPWS becomes involved largely with regard to its duties of 'care and control' over actual Aboriginal heritage items, i.e. when these are under some threat; but may become involved somewhat earlier through its influence on criteria and policies for identification of and testing for the presence heritage items exercised as part of overseeing the Environmental Impact Assessment process in relation to Aboriginal sites (and historic sites within national parks).

The Aboriginal Land Rights Act 1983 enables claims for vacant Crown land which is not required for an essential public purpose and provides funds for the purchase of lands. It does not protect heritage places and makes no provision for them to be claimed by Aborigines. However, provision was made for the establishment of a system of elected Land Councils responsible for dealing with land and monies flowing from actions under this Act.

A resulting system of Local Aboriginal Land Councils (LALCs), linked by Regional Land Councils under a State Land Council, covers NSW and provides a means of formal contact with Aboriginal communities. LALCs are actively advocating Aboriginal rights to involvement in decision making about their heritage, taking an active part in the identification aspects of this heritage, and increasingly, in its management.

The NSW Heritage Act 1977, was enacted to ensure that the environmental heritage of New South Wales would be adequately identified and conserved. The Act established the Heritage Council (HC), an independent body advising the Minister for Urban Affairs and Planning on the implementation of the Act. It includes various provisions for protecting identified heritage items, such as various conservation instruments or 'orders' and the 'relics' provisions. 'Relics' are defined 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...'

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Disturbance and excavation of land likely to contain ‘relics’ requires a formal permit from the HC; in addition the Act requires that the HC must be informed as soon as possible if a ‘relic’ is discovered.

(Traditionally both the general public and relevant authorities have directed more interest and protective action towards extant early buildings and material associated with these, but recent decades have seen a trend towards sub-surface investigation of deposits with potential to contain material remains from the last centuries, regardless of their ethnic associations.)

The Environment Planning and Assessment Act 1979 enables the preparation of environmental planning instruments to guide land use and management at State, regional and local levels. It requires environmental assessment of development proposals and provides a mechanism for inclusion of heritage conservation provisions in planning instruments.

Such local planning instruments must include provisions for the conservation of buildings, works, relics, places or areas of heritage significance and can be put to good use to achieve outcomes of benefit to an area and its future inhabitants, particularly if they encourage and provide opportunities for public awareness and sensitivity with regard to local heritage and public involvement.
3. ENVIRONMENTAL AND ARCHAEOLOGICAL CONTEXT

3.1 Environmental context

3.1.1 Geology, topographic setting and general environment

The MPTC site is situated near the northern extremity of the Cumberland Plain. The topography consists of flat to undulating landforms varying in elevation from RL38 along the creekline to RL41 along Windsor Road to RL68 at the Country Club golf club house to the east, just outside the MPTC site. Gradients range between 0.5% and 10%. Sizeable valleys (with Quaternary alluvium) have been formed by two major creeks which join within the area, Caddies Creek and Smalls Creek #2 (following terminology used in McDonald & Rich 1993c, refer also Fig. 3.1. Caddies Creek runs south to north with the valley side slopes facing east and west, and numerous minor drainage lines have incised the slopes.

The MPTC area is at a geological boundary where Hawkesbury sandstone formations are partially exposed (mostly as low shelves; shelters occur further north in the RHDA) along creek lines but over lain on the slopes and crests by Ashfield shale. The gently undulating relief is a result of a gradual wearing down of the shale (Fig. 3.2). Occasional exposures of Mittagong sandstones also occur along creeklines.

Within the study area soils have developed largely on shale or alluvium (comments below are based on Bannerman & Hazelton 1990, McDonald & Rich 1993c, Rawson 1993). The shale soils are principally of a duplex nature, a buff silty loam (A) overlying yellow/red basal clay (B). On hills/hill slopes they tend to be shallow (< 30cm) but may be deeper in slight depressions and on lower footslopes. Alluvial deposits tend to be fine, showing varying degrees (depending on levels of floodplain activity) of soil development towards a fine silty A unit over a more clayey B unit.

Deposits vary in origin, including overbank deposits, levee banks and alluvial fans. Some alluvial deposits appear to contain stratified archaeological material. Others, and the shallower shale soils, appear more likely to contain artefact horizons/distributions resulting from a gradual downward movement of artefacts and/or bioturbation. In addition to such (mainly) vertical movement, there may be evidence of horizontal movement due to wash, soil creep and water transport along creeks.

In relation to resources relevant to past Aboriginal land use, neither bedrock nor sediments within the study area appear to contain rock suitable for knapping or grinding into artefacts. All/most such materials appear to have been imported. However, the outcropping sandstone, suitable for shaping and sharpening tools, and as a surface for engravings, provided a resource of value to the Aborigines (and, as building stone, later on also to European settlers). Fresh water would generally have been available in the creeks, on or near the surface, and from various springs and swampy areas. Such generally adequate water supplies would have supported also animals and plants providing important food resources.

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Early European settlers valued the water supplies but also the shale soils as being more fertile than soils developed on sandstone. Extensive clearing and past farming practices soon caused severe erosion and degradation and (in conjunction with other economic forces) repeated changes in landuse (Dallas Mackay Karskens 1989, Proudfoot 1987).

Extensive clearing has occurred across the site, with remnant vegetation restricted principally to the drainage lines or isolated pockets on the shale slopes. On Wianamatta soils open forest/woodland is typically dominated by forest red gum (Eucalyptus tereticornis), ironbark (E. fibrosa and E. crebra) and grey box (E. moluccana). Isolated specimens occur in cleared areas, and introduced pines have been planted in the area of the golf course. On alluvial soils along drainage lines the riparian community includes swamp oak (Casuarina glauca) and paperbark (Melaleuca decora).

In his study within the Rouse Hill Development area Rawson (1993) found that previous land uses were difficult to ascertain. The area has been cleared for more than 100 years, and aerial photographs taken over the years indicate areas previously under cultivation to be presently grazed and many hectares of furrows left by even earlier orchards, vineyards or market gardens. A series of overlapping, different uses create and obscure the remnant patterning. Further, some forested areas were clearly areas of regrowth following clearance.

Most surfaces now carry grass, regrowth/weeds/other introduced plants, or have been modified through landscaping or carry built development. On the whole, surface visibility allowing the detection of archaeological material is extremely poor and available mainly in areas of erosion or other disturbance, i.e. in conditions that are detrimental to the archaeological context. This does not necessarily mean that disturbance has been deep enough to affect sub-surface archaeological material. For example, plough zones (particularly the early ones) may not have cut down to levels with Aboriginal archaeological material.

A study of the general geomorphology of the RHDA was completed by Rawson (1993) as part of the infrastructure investigations. The study, in itself concise, need not be summarised. However, Rawson also mapped areas interpreted as having archaeological potential (Fig. 3.3) and noted several points of direct relevance to the Aboriginal heritage potential of the present study area, and to some extent relevant to the European heritage potential. Major points are listed/summarised below (with page references to his report; note that 'artefacts' = Aboriginal stone artefacts):

- the assessment of European landuse or its probable effect on the retention of archaeological material is incomplete due to its complexity and relatively long history; 1970 air photographs show overlapping or partly obliterated episodes of varying landuse. Site-by-site assessments of potential surface disturbance was recommended (pp.4, 6);

- the area is on the edge of an extensive rain shadow; the moderate rainfall is unlikely to have varied much during the period of human presence. Extreme climatic variability is, however, a common feature, allowing for very large rainfall events and severe flooding (p.7);

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the original vegetation would have been open Eucalyptus woodland, but most of
this was cleared early in European settlement; this clearing probably worsened the
gullying erosion in many areas (p.7). The 'flood-out' zones of such gullies may contain
buried and preserved artefacts (p.17), but their matrix would have been recently
reworked (p.26);
the Hawkesbury Sandstone tends to be resistant to erosion, the strength of the
surface layer sometimes being increased by exposure to oxidation, and therefore to
be an excellent rock for the preservation of grinding grooves and engravings
(p.12);
Ashfield Shale is relatively soft, tending to form hills with convexo-concave profiles.
Sheet erosion is common. Slopes of more than 11° are rare and unstable (p.14);
a large deposit of Quaternary alluvium on Caddies Creek (upstream of a valley
constriction, p.16) was probably a stable centre of alluvial deposition over long
periods of the Quaternary. Open sites would have a good chance of preservation,
possibly as deposits buried under overburden derived from upstream. The area
would have been a good source of food and water and probably too water­
logged in recent times for extensive cultivation (p.26). This appears to be the only
area within which archaeological material considerably older than the material
commonly present in Aboriginal sites on the Cumberland Plain could be present and
retained (p.27);
some alluvial deposits in Caddies Creek have formed as flood flows backed up
along tributary arms, releasing and depositing sediment (p.16);
layering of alluvium is usually depositional, and the floodplains tend to be active. In
older alluvial soils layering may be masked by soil development (p.21);
there is a lack of sizeable terraces, i.e. no evidence of former high level floodplain
surfaces, probably because the areas was isolated from sealevel fluctuations and
having a catchment too limited to reflect major climatic changes (p.18);
a probability of colluvial transport down slope and winnowing of clays and silts to be
washed down slope is mentioned, noting that on the typically gentle slopes, only the
largest rainfalls would have been able to shift the largest artefacts down slope, and
that some may remain at the base of A1 horizons (p.19).

3.1.2 Approach to selection of study units
Several approaches appear useful and will be applied during the
presentation and discussions below. Note that these differ from those used
by McDonald & Rich (1993c:9), due to the different focus of the present
study.
In terms of past landuse, Aboriginal and European, and its implications for
the presence and retention of heritage material, the area can be divided
into crests, slopes and valley floor, with archaeological sites and
archaeologically sensitive areas quite likely to straddle their boundaries.
However, in terms of the proposed development and its possible impacts
on heritage material, another basic division needs to be considered, the
boundary provided by the 100 year flood line (refer Fig. 5.1). Certain types of
development and thereby certain types of direct impact may only occur
above this line, impacts below the line will differ in character. This division will
guide the discussion of potential impacts.
Two points need to be noted here:

- developments above this line may have considerable indirect impact also below it, e.g. through run-off, erosion and increased visitation;

- the line was not easy to establish; it may shift in response to increased deposition, siltation etc. as, for example, more and more of the higher land here and upstream gets covered by development upstream and/or minor climatic variations/cycles affect the rainfall pattern.

3.2 Archaeological context

3.2.1 Introduction: cultural overlap

Over large parts of the study area, evidence of past Aboriginal and European landaus is overlapping and intermingled. This is not just a matter of more or less accidental juxta-position of physical evidence; there is some documentation of interaction of European settlers and local Aborigines, as well as a strong oral tradition of Aboriginal presence and involvement in events normally seen as belonging to European aspects of local history, e.g. the Battle of Vinegar Hill (DLALC, pers.comm.).

The RHDA is located within an area which in 1788 was recognised as part of Daruk territory. In spite of some dislocation of the Aboriginal population, and considerable reduction in numbers due to disease, warfare and punitive measures, descendants of the Daruk present at that time form part of the present Aboriginal community which shares their concerns with regard to the heritage of the area. Awareness of this continuity of involvement needs to be present in any strategic plan developed for the MPTC area. However, for administrative reasons deriving from the existence of separate legislation for Aboriginal and European heritage items, documentation and discussion of these aspects will largely be kept separate below.

3.2.2 Aboriginal heritage context

Aborigines have been present in the Sydney region for at least 20,000 years and probably more; i.e. from periods preceding the climax of the last glaciation. Evidence of such early use is rare; populations may have been small and sites few and scattered; many early sites are likely to have disappeared from present surfaces, removed by e.g. surface erosion or disturbance, or covered by later sedimentation. During this period there have been changes in technology and probably in aspects of social behaviour, to meet the challenges posed by changing climate and resources and, in the last centuries, European competition for vital resources and gradual political domination (refer McDonald & Rich 1993c:14).

Technological changes will not be detailed here (refer McDonald & Rich 1993:12, and references given) but the Aboriginal archaeological material so far identified within the study area appears to belong to the Bondaian.
phase of the Eastern Regional Sequence (ERS), i.e. probably the last five millennia (and probably the latter half of this). This Bondalain phase is characterised by a major shift in raw material use and gradual predominance of smaller implements (but see also Balme et al. 1995 for further discussion). This change has been interpreted as implying a greater use of hafting and composite tools involving organic components (wood, bone, resins etc.). Possible changes in population size (a marked increase in recent millennia?) and hunting strategies (more co-operative strategies?) have also been suggested, as well as greater strategic use of fire. Such use may have produced a generally more open vegetation, though burn-off appears to traditionally have been well controlled to avoid initiating erosion.

3.2.3 European heritage context

European settlement of the area commenced with land grants to the study area's south in the 1790s. The south-eastern side of the study area was granted to settlers by 1813, and the western half by 1822. The settlers cleared the bush and planted wheat or maize. The north east segment of the study area was the least fertile, and was not settled until the 1860s. From the 1850s onward the cultivated fields were replaced by orange groves. The most intensive settlement was along the Windsor Road. A map showing the road as surveyed in 1885 shows inns and houses dotted along the western boundary of the study area (Karskens in Dallas, Karskens & Mackay 1989:28-37).
4. PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

4.1 Aboriginal heritage investigations

By now more than 900 Aboriginal sites have been recorded on the Cumberland Plain (McDonald, pers.comm.) However, these have mostly been recorded and investigated in relation to development proposals and this normally means that at least a proportion was destroyed during such development. It is rare indeed that development does not proceed because of, or avoids an Aboriginal site; detailed recording, and, possibly, salvage of samples of the archaeological material, is the normal outcome.

We do not know how big a proportion of the recorded heritage has been retained, at least in part, nor how much more remains to be recorded and, perhaps, protected. The progressive development of the Cumberland Plain is gradually removing information, frequently without any, or after very limited investigation.

This said, a number of archaeological surveys and investigations have included the study area as part of a wider area, e.g. some large scale planning studies for local government (Dallas, Mackay & Karskens 1989, Dallas & Sullivan 1993). Field investigations formed a small component only of such studies, but within the MPTC, Dallas inspected (for the 1989 study) surfaces bordering Caddies Creek just south of Commercial Road, and at its junction with Smalls Creek #2. Areas adjoining the creek lines were assessed as archaeologically sensitive whilst slopes and crests (not surveyed) were judged to be too disturbed to retain any potential, an assessment later reconsidered (see below).

A second major planning study involved data base clarification and predictive planning; field inspection was limited to selected areas under the direct control of the client. Topographic units were defined within which Aboriginal sites are known to occur. Those most relevant here include: shale capped ridge lines, shale slopes and plains and sandstone/shale creek lines, that is, pretty well all of the study area (Dallas & Sullivan 1993:9-10).


Most archaeological investigations carried out within or in the vicinity of the MPTC area related to the Rouse Hill Infrastructure (Stage 1) works. Extensive archaeological investigations (refer McDonald & Rich 1993a-c, and many other reports listed in the reference section of this report) preceded this development (Fig. 4.1). These investigations focussed on areas to be affected by works associated with provision of trunk water, lead in water, recycled water and trunk storm water drainage. They did not therefore cover the entire the MPTC site, mainly areas where existing services (Devine Erby Mazlin 1995:14, Fig 12) were to be constructed.

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Three archaeological sites (RH/CD5, RH/CD6, RH/CD7) were initially recorded along Caddies Creek. Subsequent investigations, including test excavation, resulted in the identification of a further three sites (RH/CD8, RH/CD10, RH/CD12). All of these sites contained stone artefacts, and grinding grooves occurred on associated sandstone at four of the sites (RH/CD5, RH/CD6, RH/CD7, RH/CD8). Test excavations were carried out at all sites except RH/CD5, which was not to be affected by the proposed infrastructure development (Douglas & McDonald 1993, McDonald & Rich 1993c).

Note: summary site descriptions and previous recommendations relating to these sites are listed and discussed in section 5 below; copies of original site forms are included as Appendix D.

However, here should be noted and stressed that although the amount of archaeological survey and sub-surface testing reported for the MPTC site is impressive, it has been quite narrowly focussed on creek lines and adjacent surfaces, including a small amount of lower slopes, partly because they were judged to have most archaeological potential (Dallas, Karskens & Mackay 1989), partly because investigation was driven by infrastructure requirements (refer e.g. Douglas & McDonald 1993, McDonald & Rich 1993c). This means that a major part of the study area has neither been systematically surveyed nor tested for sub-surface material (see discussion in section 6 below).

4.2 European heritage investigations

Only two historic sites have been recorded within the study area (Fig. 4.2). The most substantial is ‘Mungerie’ - a weatherboard cottage built about 1861 and added on to in the 1920s (Site 19 in Dallas, Karskens & Mackay 1989). The other is an archaeological site showing a series of mounds of brick and other building rubble (Ibid., Site 36). Both are shown in the 1885 survey, and border the eastern side of Windsor Road.

There have been two surveys of European heritage sites in the MPTC:

The first was carried out in 1989 and results reported in the archaeological study by Dallas, Karskens & Mackay 1989. This study recorded the two sites mentioned above.

A subsequent study (Casey & Lowe 1993b) dealt only with the roads. It included Site 36 of the previous study and two sandstone culverts under Windsor Road. Culvert Site 56, in the northern part of the study area has been compromised by being rebuilt during recent road works, while Site 57 appears to be intact. Site 57 was plotted by the surveyor in 1885. Two sites of sandstone outcrops (Sites 61 and 62) demonstrating the quarrying of the living sandstone rock for building materials by Europeans were located in the centre of the study area and within areas of Aboriginal heritage value (sites RH/CD6 and RH/CD7).

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These results are useful as indicators of the presence of historic heritage material, but they give no conclusive evidence as to its extent or frequency, as the archaeologists have covered only about 20% of the MPTC (Dallas, Karskens & Mackay: Map 7). This report suggested that ‘Mungerie’ and the house site on Windsor Road (Site 36) are the only significant sites in the area, and that the area to its east has ‘some archaeological potential’, grading into ‘low archaeological potential’, with a small area with ‘no archaeological potential’.

Their assessments may well be revised if a larger portion of the study area were surveyed.
5. THE KNOWN CULTURAL HERITAGE: DESCRIPTIONS AND ASSESSMENTS

5.1 Registered heritage items: summary

Previous recommendations made as a result of the 1993 investigations are noted and discussed below. We have developed a somewhat different management approach, discussed in section 6 below.

Here should be noted that consents to destroy all/part of some Aboriginal sites were issued by the Director of the NPWS in relation to the 1993 Rouse Hill Infra-structure Project. Such consents are valid for a two year period from the date of issue. However, within the MPTC area, construction of the infrastructure has caused only limited damage. Most of the Aboriginal heritage material identified by 1993 remains unaffected and all consents issued by the NPWS and not acted upon are now void.

Table A: Aboriginal sites.
Summary of 1993 assessments and present conservation status
(Columns 7-8 expanded in notes below)

<table>
<thead>
<tr>
<th>Site Code</th>
<th>NPWS #</th>
<th>Site Type</th>
<th>Sign. Level in 1993</th>
<th>Tested in 1993</th>
<th>Consent Granted?</th>
<th>Other 1993 Recommendation</th>
<th>Present Status/Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>RH/CD5</td>
<td>45-5-138</td>
<td>GG &amp; Open</td>
<td>?</td>
<td>No</td>
<td>Not required</td>
<td>Not at risk in 1993</td>
<td>Not affected by construction</td>
</tr>
<tr>
<td>RH/CD6</td>
<td>45-5-908</td>
<td>GG &amp; Open</td>
<td>M-G, L</td>
<td>Yes</td>
<td>Partial CD granted 1993</td>
<td>Preserve &amp; protect the rest</td>
<td>Construction complete, some destruction?</td>
</tr>
<tr>
<td>RH/CD7</td>
<td>45-5-909</td>
<td>GG &amp; Open</td>
<td>High</td>
<td>Yes</td>
<td>No</td>
<td>Preserve &amp; protect site</td>
<td>Not affected by construction</td>
</tr>
<tr>
<td>RH/CD7</td>
<td>45-5-2291</td>
<td>GG &amp; Open</td>
<td>Low-Mod.</td>
<td>Yes</td>
<td>Salvage initially recommended, but project proposal altered 1993</td>
<td>Salvage not conducted?</td>
<td></td>
</tr>
<tr>
<td>RH/CD10</td>
<td>45-5-926</td>
<td>Open</td>
<td>Low</td>
<td>Yes</td>
<td>CD granted 1993</td>
<td>Salvage recommended</td>
<td>Construction complete, level of destruction? Site extent not known; condition requires assessment.</td>
</tr>
<tr>
<td>RH/CD12</td>
<td>45-5-932</td>
<td>Open</td>
<td>Mod.</td>
<td>Yes</td>
<td>CD not required for pipeline, but required for dumping fill</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes for Column 7:

RH/CD5 - requires further assessment if impact is likely, and protection of sandstone platform with grinding grooves;
RH/CD6 - consent to destroy to cover sewerline impact corridor, further archaeological assessment required if impingement to occur in unexcavated areas uphill of this, including Area 2, sandstone platform with grinding grooves to be preserved.
RH/CD7 - protect entire site, proposed plan of management prepared to this end;
RH/CD8 - consent to destroy with limited salvage (of a knapping floor), DLALC to retrieve damaged slabs of sandstone with remnant grinding grooves;
RH/CD10 - application for consent to destroy;
RH/CD12 - if required, application for consent to destroy along sewerline impact corridor; archaeological salvage at southern end of site where dumping of fill proposed.

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Note that historical heritage items within the MPTC were not affected by the 1993 works. "Mungerie" is so far the only historic site within the study listed on an official register (Baulkham Hills Shire Council).

5.2 Known Aboriginal sites registered by the NSW NPWS: summary descriptions and comments.

Note: To avoid repetition, our management recommendations have not been included below, though some reference to appropriate management has been included with regard to historic heritage items; refer instead to our discussion of management needs and possibilities in section 6 and our recommendations in section 7. Nor have we included significance assessments here; refer instead to our assessments and discussion in section 6. The management approach suggested here surmounts earlier 'site-by-site' recommendations.

The descriptions below have been included mainly to bring together data relevant to the area/sites and practical management, data which otherwise would need to be repeatedly extracted from a number of original reports (refer also Fig.4.1).

Note that the heading Aboriginal Interest summarises our understanding of what was stated during the joint field inspection with the DLALC. However, this is to be taken as indicative only; the DLALC will prepare their own statement on these issues.

5.2 Known Aboriginal sites registered by the NSW NPWS: summary descriptions and comments.

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The descriptions below have been included mainly to bring together data relevant to the area/sites and practical management, data which otherwise would need to be repeatedly extracted from a number of original reports (refer also Fig.4.1).

Note that the heading Aboriginal Interest summarises our understanding of what was stated during the joint field inspection with the DLALC. However, this is to be taken as indicative only; the DLALC will prepare their own statement on these issues.

Location:
South western side of Caddies Creek, 235 metres south of Commercial Road, on golf course built in 1950s.

Landform:
5m -20m from Caddies Creek, 1m - 2m above creek, 35m above AHD. Shale with scattered sandstone outcrops.

Description:
The site consists of grinding grooves (8) on a sandstone slab, and artefacts on an erosion scour (Refer Fig.5.1). Two exposures were noted, 15m x 4m and 25m x 2.5m, the extent of actual artefact scatter being 2m x 5m. Only small debitage was seen - no cores or retouched pieces (silcrete = 80%, mudstone = 20%). Maximum density: 2 artefacts/m².

Previous Assessment: The site has not been tested, as no impact was likely from Rouse Hill Stage 1 development. Surface assessment indicated potential for archaeological deposit as areas of intact but thin Unit A occur on flat ground adjacent to the creek, and associated with grinding grooves.

Current Considerations: This site need not be directly affected by the MPTC project since it is close to the creek and in an area designated for open space. It appears to be on land belonging to Sydney Water. However,
indirect impact from increased visitation must be considered. And is the creek to be retained in its natural form? Any landscaping just here could affect archaeological material. The adjoining lower slopes have been severely modified during the construction of the existing golf course, but impact appears to stop short of the block with grooves and immediately adjoining surfaces.

It would be technically possible to excavate archaeological deposit in surfaces adjoining the grinding grooves and to lift and remove the latter for safe-keeping. However, such measures would be expensive as well as detrimental to the context of the material.

Aboriginal Interest: The DLALC expressed a clear preference for preservation within open space.

RH/CD6 #45-5-908 Open Site/Grinding Grooves

Grid Ref: 308320 6269630

Location: On the western side of Caddies Creek, upstream of the Smalls Creek No.2 confluence, and opposite the club house of the Kellyville Country Club golf course on Mungerie Road.

Landform: Toeslope, up to 130m from the creek, at 43m above AHD. Some slopewash is present, and some redeposited sediment, notably in area 3 near the grinding grooves (refer Figs. 5.2a-b). Hawkesbury sandstone bedrock is overlain by alluvial and colluvial shale soils.

Description: The total site is 500m long and up to 130m wide. Three areas of archaeological deposits have been identified. Area 1 (80m x 80m) is at the northern end, close to Caddies Creek and immediately north of a partly infilled drainage line. Area 2 extends from south of a the drainage line to a fence line (320m x 120m). Area 3, south of the fence, extends approximately 120m x 80m. It is near a sandstone platform where 12 grinding grooves were recorded. Part of this platform has been quarried in historic times, truncating some of the grooves.

Previous Assessment: The sewer line corridor was interpreted as an area of lower artefact density than elsewhere, and disturbed. However, only a small fraction of the total corridor was tested. Area 1, more elevated than the rest, was tested via a few shovel and backhoe trenches. Area 2 was tested via three grader scrapes (two along the proposed sewer line, the third at right angle to this) and a small number of shovel trenches. Within Area 3, some excavation by hand was carried out over and near the rock with grooves and some backhoe excavation nearby. Stone artefacts were recovered from all three areas, but artefact densities were generally low in the parts tested. Area 1 in particular appeared to have a low density of artefacts, i.e. to represent a background scatter.

However, although up slope areas have been ploughed, they are on the same contour as the focal area of RH/CD7, and have the potential to be,
like this, part of a large archaeological site. The investigation report relating to RH/CD6 was completed prior to that of RH/CD7, and the potential of these slopes possibly not fully recognized at the time of testing (McDonald, pers. comm.). The RH/CD6 area was at the time assessed as having moderate to high archaeological significance in relation to the Aboriginal heritage content of its deposits. The truncated sandstone platform bearing the grinding grooves was assessed as being of high public significance.

**Current Considerations:** The grinding grooves may be in the drainage corridor, and therefore not necessarily directly affected by the proposed development. However, could they, in such a central position and with increased visitation, survive without active management measures? Note also that the up slope area with its potential archaeological deposit would, at least in part, be affected by the proposed development. As it retains some depth of soil, ploughing may not have obliterated archaeological contexts. Note that parts of the slope (above the tested areas) form extensive, more level surfaces and contain areas of seepage (potentially rich in food sources in the past).

As noted, sub-surface testing in 1993 was very limited and the apparently low artefact density reported may not be typical of areas away from the sewer line or beyond the lines of testing. Further sub-surface testing appears called for prior to decisions regarding appropriate development type and extent.

**Aboriginal Interest:** The DLALC expressed concern with regard to the limited testing carried out and stressed the need for further testing, noting also that the slopes above the narrow sewer line corridor had not been inspected.

RH/CD7 #45-5-909 Open Site/Grinding Grooves

**Grid Ref:** 308480 6296200 - 308500 6269400

**Location:** Between the Kellyville Country Club golf house and Caddies Creek.

**Landform:** On a gently sloping footslope above the eastern bank of Caddies Creek immediately downstream of the Smalls Creek confluence. The geology is Hawkesbury sandstone, although shale geology occurs further up slope and further upstream.

**Description:** The site comprises a large number of grinding grooves (182 visible grooves have been recorded), on several sandstone exposures (Figs. 5.3 - 5.4). The grooves are associated with an extensive open camp site. The site is approximately 250m long by 200m wide, 25m to 130m away from the creek and 2m to 6m above it, at 38m - 44m above the AHD.

**Previous Assessment:** A total of 236 artefacts were collected from the surface, and another 1,000 artefacts retrieved by sub-surface excavation (a sample representing ~ 0.05% of the estimated total site area and a wide range of activities). The site was assessed as being of high archaeological
Aboriginal Interest: The DLALC noted the high value attributed to site and their strong interest in its protection and preservation.

Current Considerations: The site is seen as being of high significance and will require active protection; its extent, visibility and central location contributing to make preservation a major problem. What measures can be taken, what could constitute an appropriate buffer zone and what could this achieve?

Aboriginal Interest: The DLALC noted the high value attributed to site and their strong interest in its protection and preservation.

Current Considerations: The site is seen as being of high significance and will require active protection; its extent, visibility and central location contributing to make preservation a major problem. What measures can be taken, what could constitute an appropriate buffer zone and what could this achieve?

Aboriginal Interest: The DLALC noted the high value attributed to site and their strong interest in its protection and preservation.

Current Considerations: The site is seen as being of high significance and will require active protection; its extent, visibility and central location contributing to make preservation a major problem. What measures can be taken, what could constitute an appropriate buffer zone and what could this achieve?

Aboriginal Interest: The DLALC noted the high value attributed to site and their strong interest in its protection and preservation.

Current Considerations: The site is seen as being of high significance and will require active protection; its extent, visibility and central location contributing to make preservation a major problem. What measures can be taken, what could constitute an appropriate buffer zone and what could this achieve?
particularly in view of the depth of the alluvial deposit (refer Rawson 1993:27). If there is risk of some disturbance, further test excavation would be warranted. The future of the grinding groove slabs needs to form part of any management plan/decisions.

Aboriginal Interest: The DLALC expressed a clear preference for preservation within open space.

RH/CD10 #45-5-926 Open Site

Grid Ref: 307990 6270180 - 308080 6270080

Location: 430m - 600m south of Commercial Road, approximately 20m-100m west of Caddies Creek.

Landform: On a toe slope 2m - 5m above the creek and at 36m - 39m above the AHD. Site matrix consists of colluvial and alluvial deposits of Ashfield shale.

Description: An extensive site, approximate area 175m x 100m (refer Fig.5.7), consisting of a low density scatter of stone artefacts in apparently fairly disturbed matrix. Some artefacts may have been washed in from further upstream. A total of 85 artefacts were excavated from 31 test trenches.

Previous Assessment: The site, largely within proposed impact corridor, was assessed as being of low archaeological and public significance. Consent to destroy the site was granted in 1993.

Current Considerations: Pipeline exists, ergo the consent was activated and site effectively destroyed. This general area appears extremely eroded and disturbed.

Aboriginal Interest: The DLALC expressed concern that archaeological material might remain beyond the zone affected by the pipe line.

RH/CD12 #45-5-932 Open Site

Grid Ref: 30380 6269360 - 308440 6268640

Location: 5m -100m from Smalls Creek, 38m - 41m above the AHD.

Landform: On Quaternary alluvium at the confluence of Smalls Creek #2 with Caddies Creek.

Description: An extensive Aboriginal site, potentially covering most of the single largest area of alluvium within the MPTC area. It is approximately 650m long by 90m - 450m wide, bounded to the north by the creek confluence, to the east by the eastern-most channel of Smalls Creek #2, to the south by existing residential and commercial development and to the west by the low-lying and active flood plain of Caddies Creek. The site has, except for a

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few large trees, been cleared of its original vegetation. The central part has been cultivated and the southeast carries woodland regrowth (Figs. 5.8 - 5.10).

The area was divided into several units for the purpose of assessment; Fig. 5.8 shows location of units, Fig. 5.9 the location and extent of sub-surface testing:

A. Caddies Creek levee bank - discontinuous levee banks on both sides of creek;

B. Levee bank of old channel - a low bank along east side of former channel;

C. Area under 4 large gum trees on slightly elevated ground near old channel - ground surface appears fairly undisturbed;

D & E. Islands within Smalls Creek #2. Disturbance extensive but intact areas do exist;

F. Across confluence, at northern end, slightly elevated area with billabong;

G. West bank of Smalls Creek #2, well elevated above current bed of creek, may have had over bank deposit;

H. The flat within the middle of the site, relatively low-lying, cultivated and apparently heavily disturbed.

For a number of reasons sub-surface testing was limited; though much work was done, the fraction covered was minute, considering the size of the area.

Even so, several areas of stone artefact concentrations were identified and a number of points noted which indicate that the area may be of considerable archaeological potential:

- stone artefact assemblages differ from those found in RH/CD8 nearby, and

- there appears to be variation across the area with regard to raw material usage, artefact size and artefact types.

Also, the levee bank along Caddies Creek appeared to have stratified deposit indicating at least two phases of occupation, with the upper levels dominated by silcrete and the lower levels having a wider range of raw materials.

Previous Assessment: Recommended application for consent to destroy along the sewer line impact corridor if this was required, but also archaeological salvage at southern end of site where dumping of fill was proposed, if this was to go ahead.
Current considerations: The area is below the 100 year floodline and so could not be subject to large-scale housing or industrial construction. However, even use for passive recreation (e.g. construction of sports field and amenities, drainage lines, general landscaping and planting) could interfere with heritage material unless carefully planned and managed. Suggestions will be discussed in section 6 below.

Aboriginal Interest: The DLALC expressed a clear preference for preservation within open space.

5.3 Historic heritage

Note: for location, refer Fig.4.1. Illustrations are included in Appendix E.

'Mungerie'

Item No.: RH/19.

Location: Property Lot 62 DP 589837. East side of Windsor Rd.

Description: A typical weatherboard cottage with bullnosed verandahs, hipped corrugated iron roof and two corbelled brick chimneys. Area to North and East of cottage is clearly former site of earlier house and/or other activities.

Previous Assessment: Recommended to conserve the house and fully investigate the areas to the N and E of the site including historical research and possible archaeological investigation prior to considering development of site.

Current Considerations:
The house is chiefly in two parts; the front is the 1860 weatherboard cottage, and further large rooms were added on to its rear in brick in the 1920s. There is a well, probably original, at the rear of the present kitchen. There would have been an external kitchen, now demolished, behind the weatherboard house. The building is in good sturdy condition, with all of the original shutters to the French doors and most of the original chimneys.

Site 36

Item No.: RH/36

Location: Lots 37, 38 DP 13822, East side of Windsor Rd.

Description: A low series of mounds, brick, and other building rubble, a row of Yucca plants along the Windsor Rd. fence. Local informants suggest the site has been used as a rubbish dump.
Previous Assessments:
Date Pre 1885. The 1885 Old Windsor Rd survey shows a house on this site. 1989 report recommended to investigate the site fully, including historical research and possible archaeological investigation prior to considering development of the site. 1993 report recommended that historical research be done on the site together with a baseline archaeological assessment.

Current considerations:
Before the site is impacted by development an archaeological assessment should be carried out to assess the significance of the site and assess whether an excavation is necessary to remove the remains.

The site was searched for this report but visibility was nil, as the grass in the paddock was knee to waist high.

Sites 56 and 57

Item Nos.: RH/56 and RH/57

Location: 56 is north of Schofields Rd and 57 south of Merriville Road in front of the James Ruse Hotel.

Description: Sandstone culverts under Windsor Rd.:
No. 56 is a sandstone culvert 6 courses high with a concrete drainage channel. Some of the sandstone blocks have tooled faces. The west side was sand-bagged. This culvert was rebuilt during modern road works.

No. 57 is a sandstone-sided culvert with sandstone blocks as the floor. Timber decking covered by road surface forms the top. The sandstone sides are covered by cement render about 10cm thick. The culvert appears on the 1885 survey.

Previous assessments:
No. 56 was classified as of 'some' significance. Its retention was recommended but if this was not possible it was to be recorded and monitored during works carried out.

No. 57 was assessed as being of 'considerable' significance. Its retention was recommended, and recording if this was not possible.

Current considerations: As it was not clear whether these sites were within the area affected by future development of the MPTC, they were not surveyed for this report. The recommendations quoted above from the 1993 report are appropriate for them.

Sites 61 and 62

Item Nos.: RH/61 and RH/62.

Location: On either side of Caddie's Creek in the centre of the study area.
Description: Rock outcrops cut vertically by metal tools in quarrying by Europeans.

Note: Site 62 on the western side of the Creek has several groups of Aboriginal axe grinding grooves on it (refer RH/CD6).

Previous assessments: Both were assessed in the 1993 report as of being of low significance, as many such places were seen.

Current considerations: RH/62 is a rare site because it contains marks of both Aboriginal and European activities. It is therefore very useful for community education. As it exists in an area close to the Creek which is zoned for passive recreation, it is recommended that this site be interpreted to the public with signs.
6. HERITAGE VALUES: POTENTIAL CONSTRAINTS - OR OPPORTUNITIES?

6.1 Known versus unknown heritage values; a summary

6.1.1 Introduction

Recording and salvage of 'sites' with physical evidence of heritage values however well intentioned and productive, implies destruction of evidence. Such work may provide information of great value to current questions but can never be expected to predict and meet the needs of future research questions, as yet unthinkable, nor is it likely to extract as much information out of the material as some future research might. Methods of excavation and analysis are constantly - even if patchily - developing and improving.

The progressive development of the Cumberland Plain is removing potential archaeological information at an increasing pace. Some aspects of this information may be repetitive, but others are likely to be irreplaceable and essential to an understanding of local Aboriginal history. Recent political pressures favouring development appear to be hastening the destruction of what has long been recognised, at least in principle if not always in action, as a 'non-renewable resource'.

As development is under most circumstances clearly likely to proceed even where there are heritage values, there is a growing need for imaginative approaches to heritage management (recording, investigation, protection and interpretation), so that such values can be recognised as an assets rather than constraints. We know from experience that protective measures are likely to end up being both expensive and inefficient unless they, and their purpose, are acknowledged and embraced by the local residents, the people actually moving through and using the area as well as the broader community.

Whatever is done in relation to the heritage values of the MPTC is going to be of little use in the long run unless future residents and present stake-holders become involved in their management from the very beginning.

6.1.2 Known - or at least partially recorded - heritage aspects

The situation is similar for both Aboriginal and historic heritage aspects; we know of some locations which definitely contain archaeological material and/or heritage structures but large portions of the MPTC have not been surveyed for either aspect. Fig. 4.1 shows the listed heritage locations as well as approximate areas within which limited sub-surface investigation has been completed.

All six locations registered as 'Aboriginal sites' contain as an important aspect, clusters and scatters of stone artefacts, made, used and discarded in relation to past Aboriginal activities in the area, but now mostly embedded in the surface unless exposed by erosion or disturbance. Four of the sites contain also a far more visible, and to the public more approachable type of evidence, sandstone slabs with grinding grooves,
most of these probably resulting from past preparation and sharpening of e.g. stone hatchets.

Some of these slabs are extensive and the total number of grooves large. The presence of such sandstone shelves, on the edge of extensive areas of shale plain totally lacking in sharpening rocks, was probably one important factor attracting Aborigines to this area. Combined with rich resources of food and water they seem to provide good reasons why the area around the junction of Caddies Creek and Smalls Creek #2 should appear to have been a major focus of activity in the past.

Though the locations have been listed as six separate ‘sites’ (mainly due to breaks in visibility/artefact presence due to vegetation, erosion, disturbance etc.), and this division may need to be kept for administrative reasons, they appear best interpreted as part of one single, extensive area of Aboriginal presence and activity. This focal area is probably largely confined to/centred within surfaces below the 100 year flood level, but this remains to be established.

Of the locations within or on the borders of the study area (and potentially affected) and listed as of historic interest, ‘Mungerie’ is the only ‘standing structure’. Others include a location with remains of a building, sandstone culverts and sandstone slabs with evidence of quarrying. A suggested proximity to Vinegar Hill adds historic interest to the whole Mungerie Park area.

Note that the former Divine Word Mission house from c. 1850 A.D., pre-dates ‘Mungerie’ and is seen as of considerable heritage interest (Dallas, Karskens and Mackay 1989). Its surroundings are likely to have archaeological potential but were not inspected for this study. This location which was not included within the present study area, is on the very fringes of the proposed MPTC (Fig. 4.2).

6.1.3 Unknown heritage aspects

To glean some understanding of what may be present on ridges/hills and slopes we may look at studies from some adjoining areas, but these are unfortunately few, limited in scope and not necessarily representative of the potential archaeological resource (Fig. 4.1).

Surveys relating to the RHDA (Corkill 1992, McDonald 1993a) recorded Aboriginal sites, mostly a few artefacts scattered on disturbed or eroded surfaces of ridge lines, slopes and saddles. Few locations were tested, or tested extensively, to see if such scatters did extend below the surface and what they did represent. One ridge top (Bella Vista #1) and one hill slope site (OWR #8) were found to contain low density artefact scatters, whilst one hill slope site (OWR #7) contained a major knapping floor. (Note that these sites were all 300m - 500m from the nearest creek.)

According to these few examples, artefact densities appear to be, on the whole, lower on hills and upper slopes, the greatest densities being found

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on foot and toe slopes (refer e.g. McDonald & Rich 1993: Fig. 6.5 and Table 6.11). The excavators all note that this result may reflect, at least to some extent, previous disturbance and/or erosion and the fact that if past activity areas were small and linked by background scatter, excavated sample areas may well have happened to represent mainly the latter.

Byrne (1993) carried three transects of test pits along upper hill slopes and one of these onto a ridge top near the southern end of the RHDA. Artefacts were retrieved, but the density was less than expected indicating the presence, in this area, of a sparse background scatter.

However, Byrne (1993b:1) comments in relation to sites with low artefact densities that these '... would, individually have less archaeological information content but, nevertheless, were an essential part of the story of prehistoric landuse on the Cumberland Plain...' In an earlier report Byrne (1993a:7), stated: '...the view of the archaeological record being continuous in space leads to a certain redundancy of the site concept, the alternative being to look at artefacts and other remains (charcoal from fires, food remains etc.) as being distributed at greater and lesser densities over the whole landscape.'

This is an approach which will be considered further below in relation to significance assessments. However, the concept 'archaeological site' versus 'relic' is still a matter for debate. Recent archaeological investigations pay increasing attention to such questions and tend to pursue the concept of continuity in space, an approach often called 'off-site archaeology.'

However, the fluid boundaries that make sense in terms of archaeological interpretation spell problems for determining authorities and administrators. Definitions used by the NPWS in relation to the Aboriginal heritage have varied over time, from a loose term 'artefact scatter' to two artefacts within 100m to 2 artefacts within 50m of each other. On the other hand, present procedures recognise that the legislation relates to 'relics' and that even single items from sparse background scatters require recording if noted.

Though the Aboriginal heritage potential of crests and slopes may well, in terms of past Aboriginal activities, seem lower than that of creek banks and flood plains, archaeological material has been identified in such locations. Nor need later usage have obliterated all traces of such use. Ploughing can move artefacts small distances without causing much horizontal dispersal; plough zones did not always reach down into artefact horizons, particularly if the ploughing was done with older types of plough. (Note that in the duplex soils on the Cumberland Plain, stone artefacts, or a large portion of the artefacts, have frequently gradually moved downwards to form an horizon at the interface of A and B soil horizons, particularly if the latter has a considerable clay component.) To what degree orchards or gardens were destructive of archaeological evidence depends on individual circumstances, but large-scale landscaping as for golf courses, terracing for vineyards and extensive levelling for construction purposes will generally remove or demolish archaeological remains and contexts.
With regard to historic aspects, the recognition of archaeological potential from surface indications can be extremely difficult in areas away from standing structures or visible ruins. Hidden below tall grass, weeds or rubble, there could be wells, probably by now filled with 'rubbish' (a potentially rich source of heritage information), private burials (from before the time of designated cemeteries), and places where 'rubbish' was buried, in the past as now, probably some convenient hollow or gully. Records indicating the exact location of old buildings and a thorough knowledge of what were common behaviour patterns may give clues to where to look for such material evidence.

6.2 Broad outline of the proposed development and possible impacts

A concept plan and implementation strategy has been prepared (Devine Erby Mazlin 1995). This outlines a number of options which have some broad similarities, some driven e.g. by social/administrative needs, others imposed by the terrain. The preferred option which appears to have advantages also with regard to heritage values (refer section 6.4 below), suggests that housing, retail, offices, medical facilities etc. would be located mainly on higher ground - hill tops and upper to mid slopes (ibid. p.57). A broad area of parkland would surround 'Mungerie', and low-lying areas, in particular the land below the 100 year flood line, would be retained as a floodway = open space. The area defined as a major focus of past Aboriginal activity would be flanked by educational establishments and open space (Fig. 6.1).

The potential impact of proposed building and associated activities would vary in potential impact on heritage values:

- All activities relating to the construction of housing, retail, offices, medical facilities etc. and associated roads, powerlines and other facilities, are likely to be totally destructive of heritage material unless deliberate effort is made to avoid this, e.g. through prior systematic survey, possibly followed by sub-surface investigation and assessment. Protection and preservation in situ of heritage items would clearly conflict with the desired extent of development.

- The construction of schools and associated facilities, e.g. sportsgrounds, could also be quite destructive, but would allow greater flexibility with regard to how such impacts might be avoided or reduced. Prior systematic survey, possibly followed by sub-surface investigation and assessment would indicate what areas contain hitherto unrecognised heritage values requiring consideration and management measures.

- The retention of a floodway - with possible use for recreation and construction of sporting facilities etc. - may also cause destruction of heritage values through the construction work, drainage works, landscaping etc. Parts of this area is likely to require further systematic survey, possibly followed by sub-surface investigation and assessment of their management requirements.

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Actual construction activities are likely to be most damaging to sub-surface heritage material, the items which may be suspected/indicated but can only be found through systematic investigation or accidentally, during construction processes, and then usually too late for preservation or full investigation of their context.

Visible heritage items, be they grinding grooves or buildings, may be protected by law but will normally suffer from vandalism and/or wear and tear caused by increased visitation, unless some local group/organisation, preferably within or adjoining the location, takes an active and responsible protective role. Official rangers from e.g. the NPWS or the BHSC are unlikely to keep constant watch over the rocks with grinding grooves, nor can staff watch all parts of a building and its surrounds at all times. And there can be little doubt that visitation will be extensive once development is in progress.

6.3 Significance assessment

‘Heritage significance’ is a mutable quality, with various states/facets dependent on viewpoint. In cultural resource management, significance assessment has come to mean provision of arguments which determining authorities may decide to use in support of/as a basis for their decisions with regard to management measures.

As archaeologists we may reasonably comment on our views with regard to aspects such as:

• possible potential to contribute to archaeological knowledge, local or relating to a broader view, through further investigation, or

• potential for use as an educational tool, a means of illustrating such knowledge through interpretation or even

• potential to be seen as of public value, e.g. as a symbol of some important concept or understanding. However, other stakeholders are likely to contribute their views on the public value and may hold particular views on the others.

The significance of Aboriginal sites to Aborigines is not necessarily based on or limited to assessments of archaeological content or information potential; it can only be assessed by the Aboriginal community and no attempt will be made here to pre-empt their assessments.

‘Archaeological potential’ is usually interpreted as potential to provide data that can be used to extend our archaeological information or body of models and theories, at present and/or in the future. To suggest that such assessments are anything but tentative would be naive.

The information potential of a site, particularly an archaeological deposit, depends to some extent on its ‘integrity’, that is whether there has been much disturbance/change in physical condition since the material was left

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by whoever made/used it. We cannot know what data might be extracted from an archaeological deposit unless we excavate it; we therefore make certain judgments about the probable integrity of e.g. an archaeological deposit on the basis of records of past land use, surface indications etc. From these judgments and what we know about archaeological work in the area and the types of questions being discussed, we hazard guesses with regard to possible contributions to present concerns of our discipline/field of studies.

There is a big leap from this to estimates of potential to contribute data of value to future archaeological concerns. As noted above, methods will undoubtedly improve and questions change. It is likely that material which now seems quite intractable will be found to give vital information; it has happened before and will happen again.

From a scientific point of view, backed by legislative requirements, determining authorities have a responsibility to ensure that extensive and representative samples of heritage material are kept for the future, for the descendants of past inhabitants as well as the broader population - and that the definition of 'representative' is generous enough to recognise that we may not yet be aware of subtle differences that may be important to future analysis. This mutability affects also assessments of educational and public value; until concepts have entered a discussion they cannot be considered and often not imagined.

Table B: Aboriginal sites. Assessment of archaeological, educational and public significance

<table>
<thead>
<tr>
<th>Site Code</th>
<th>NPWS Code</th>
<th>Archaeological significance</th>
<th>Educational significance</th>
<th>Public significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RH/CD5</td>
<td>45-5-138</td>
<td>Fair; Limited potential for sub-surface investigation</td>
<td>Good: Grinding grooves visible; but these as well as subsurface material require interpretation.</td>
<td>By itself - medium? as part of site complex - high</td>
</tr>
<tr>
<td>RH/CD6</td>
<td>45-5-908</td>
<td>Fair-to-good; Potential for sub-surface investigation; a range of topography, deposit depth and resources present</td>
<td>Good: Grinding grooves visible; but these as well as subsurface material require interpretation, using e.g. information from test programs.</td>
<td>By itself - medium? as part of site complex - high</td>
</tr>
<tr>
<td>RH/CD7</td>
<td>45-5-939</td>
<td>Good: Considerable potential for additional sub-surface investigation</td>
<td>Good: Grinding grooves visible; but these as well as subsurface material require interpretation, using e.g. information from test programs.</td>
<td>By itself - high? as part of site complex - very high indeed</td>
</tr>
<tr>
<td>RH/CD8</td>
<td>45-5-2291</td>
<td>Fair to good; Parts of the site likely to retain archaeological horizon(s), alluvial sediments deep, cf. RH/CD12</td>
<td>Good: Grinding grooves visible; but these as well as subsurface material require interpretation, using e.g. information from test programs.</td>
<td>By itself - medium? as part of site complex - high</td>
</tr>
<tr>
<td>RH/CD10</td>
<td>45-5-926</td>
<td>May be totally destroyed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RH/CD12</td>
<td>45-5-932</td>
<td>Fair to good; contains varied and widely scattered material, some probably stratified. Deep alluvium may contain early archaeological horizons.</td>
<td>Requires interpretation using information from the tests.</td>
<td>Destroyed but some symbolic value?</td>
</tr>
</tbody>
</table>

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However, such mutability makes life difficult for authorities and administrators who are expected to make decisions about proposed developments. Decisions have to be made, some development has to go ahead and some heritage values will necessarily be lost. Few would dispute this, but choices and procedures can be more or less detrimental to heritage aspects. Rote official assessment by tick box and assigned levels of value seems less likely to provide good long term solutions than decisions resulting from broad and ongoing debate.

Hence, if individual assessments are required, a number of aspects need to be considered for each, as suggested in the table above. Note that the ‘sites’ are also assessed as acquiring considerable additional ‘significance’ through their proximity to each other and their location in the landscape. This applies to all three aspects discussed and listed in the table. Their future archaeological potential in particular was assessed as increasing markedly if such an extensive area of apparently diverse and closely associated sites can be kept relatively intact.

The historic items (refer section 5.3) are seen as meriting consideration as having potential to contribute to the heritage value of the area, with ‘Mungerie’ singled out as being of particular interest.

Our preferred approach, regardless of our individual fields of interest and expertise, is to think of the known Aboriginal sites as part of a whole and as linked with the historic heritage (section 6.4 below).

6.4 Suggested approaches

The concept plan notes as a major objective for the proposed town centre, the creation of ‘a sense of place’ and notes landscape opportunities (Devine Erby Mazlin 1995, p. 12).

To this ‘sense of place’ heritage values inherent in the area and its long history could make a major contribution. A list of opportunities (ibid. p.12) recognises the presence of ‘Mungerie’ as a heritage value, noting a need for a broad curtilage as well as the visual advantage of its location on a hill with potential for retaining a field of sight over parts of the valley and the open space below. Also the proximity to the probable location of the ‘Battle of Vinegar Hill’ is noted as an heritage asset.

Aboriginal heritage values have, as is common, been left out of the discussion, listed neither as constraints nor opportunities (ibid., p.12). However, if protected and appropriately interpreted, known Aboriginal ‘sites’ could be integrated in most of the points listed as opportunities; such integration would enhance the value of e.g. the proposed open space corridor and adjoining areas and bring a greater sense of time-depth to the awareness of the historic heritage of which Aboriginal history forms a part.

We recommend that an advisory committee be formed and maintained over the years, which can represent and/or liaise with administrative authorities such as the BHSC and the NPWS, but which also represents stake-
holders with regard to heritage interests e.g. the Aboriginal community, historical societies and local residents, and that this committee should be involved in the initial and ongoing planning of future development and appropriate management measures.

Early public awareness of proposed actions, be it building, road construction, drainage, the siting of sports ovals etc. would allow heritage values to be considered at the very start of any planning, and relevant investigation and protective management measures to be built into both planning and implementation processes.

Values relating to the natural environment should if possible be brought into the ambit of such management advice and consultation for a series of reasons, e.g.:

- the present environment is the result of long and varied human use of the land; preservation of some aspects/examples showing this and provision of imaginative discussion would be an important part of any interpretation and the creation of a 'Sense of Place';

- planning for the 'beautification' and management of open space and the general surrounds could to advantage consider the relevance of past landscapes and habitats;

- identified heritage sites would be best conserved within some form of Open Space as this would allow environments to be created and maintained which could be sensitive to and enhance their character and value with regard to educational aspects and public interest.

Though detailed management plans are not required at this stage, we wish to draw attention to schemes of public involvement, such as:

- in the US, the adoption of sections of highway by various organisations which take on caring for the adjoining verges;

- as a local example, at Narellan a local school impinges on an extensive Aboriginal site, with agreement from the relevant LALC. This has led to extensive cooperation and interaction between the LALC and the school. The children learn about Aboriginal culture and history and learn to see themselves as sharing in responsibility for the protection of this site.

With regard to items recorded as part of the historic heritage it was noted that even though it may be some time before the MPTC is completed, sites to be retained need to be protected and researched from now on.

We would suggest that the known heritage be considered as the core of the body of heritage values, to be enriched over time by information resulting from investigations carried out prior to/in relation to development processes. Whether further areas and locations are added to the body of protected heritage, e.g. to complement this, can then be a matter for discussion, informed decision, and public involvement.

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7. CONCLUSIONS, RECOMMENDATIONS, POLICIES AND IMPLEMENTATION

7.1 Conclusions

Archaeological studies within the MPTC area have identified locations and areas with heritage values, as well as the presence of extensive areas, not yet investigated for such values and therefore in need of investigation (Fig. 7.1). Though some heritage values will clearly suffer and/or be diminished by the proposed development, it would be possible to minimise impacts and turn at least aspects of such loss into positive contributions to heritage values, e.g. through investigation and interpretation.

The evidence identified relates to the presence and activities of Aboriginal inhabitants and of Europeans who settled in the area in recent centuries. Together they contribute to the history of the area and should be regarded as a major asset, able to contribute to the creation of a ‘Sense of Place’.

Any such use should build on and involve expert advice but be tempered and enriched through community consultation. There should be a clear policy to create and encourage community interest and participation, e.g. via an advisory committee representing groups and individuals who take an interest in heritage matters (preferably also the natural heritage).

To be effective, management actions should as far as possible emanate from such community interest.

Clearly, some thought must be given at an early stage to the allocation of responsibilities, e.g. within DUAP or Baulkham Hills Shire Council (BHSC) for initiating or approving, coordinating and supervising such schemes of community involvement.

7.2 Recommendations

7.2.1 Basis for recommendations

The following recommendations are made on the basis of:

- legislation noted in section 2 and summarised in Appendix C;
- a preliminary assessment of existing and previous landuse in the MPTC area and the effect this may have had on the condition of different types of heritage material;
- a broad assessment of the scientific (archaeological) research potential and general heritage significance of different types of heritage material;
- discussions with representatives of the DLALC;
- provisions of the National Parks and Wildlife Act of 1974 (as amended);
- the relics provisions of the NSW Heritage Act 1977.
7.2.2 General recommendations - policies

On this basis we recommend that:

- the relevant body/bodies (DUAP and/or BHSC) allocate to one or more staff members responsibility for initiating and supervising consultation processes recommended below;

- the establishment of an advisory committee to consider initial and ongoing management needs and potential, preferably also aspects relating to the natural heritage. It is suggested that such a committee would need to represent/could contain (but could be over time modified/sub-divided according to need):
  - DUAP, BHSC, NPWS, the NT and/or HC;
  - representatives of Aboriginal organisations such as the DLALC, a Local Studies Librarian, local historical societies, local schools and voluntary associations;
  - organisation(s) relevant to natural heritage management;
  - representatives of the local community, including groups with specific interest in the heritage, e.g. the Aboriginal community, within and adjoining the MPTC;
  - individual specialists volunteering their input.

- copies of this report should be forwarded to organisations, interest groups and other stake-holders identified by DUAP.

7.2.3 Comments on implementation of recommendations

With regard to such policies and associated actions considered essential to the heritage values of the area, we recommend that

- certain parts of the MPTC be considered available for development without prior investigation but subject to monitoring of development activities that might exposed sub-surface heritage material;

- certain parts of the MPTC be preserved and managed for heritage values;

- certain parts of the MPTC be investigated prior to any management decisions or development and that

- a plan of action be prepared as a matter of priority and in consultation with appropriate specialists and stake-holders.

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Our interpretation of the extent and location of such areas is shown in Fig. 7.1. The key to this map is elaborated below:

**Type A Areas** (white areas = no colour or symbols):
These areas require archaeological survey prior to any development decisions as they have not yet been systematically inspected.

However, they appear to have some potential for development as
- they comprise largely slopes and crests above the 1:100 year flood line;
- no heritage items have been reported so far;
- the potential for extensive Aboriginal archaeological sites to occur appears to decrease with increased distance from water;
- if the horizontal extent of heritage sites is likely to be smaller than for sites closer to water this would make it easier to accommodate them in the planning.

**Type B Areas** (white with black dots):
These areas have not been surveyed and are heavily modified by development. They require field assessment of disturbance effects prior to development decisions as
- modification may not have affected all surfaces equally; and
- parts adjoin/frame areas of known heritage potential.

However, they appear to have some potential for development as
- they comprise largely slopes and crests above the 1:100 year flood line;
- no heritage items have been reported so far;
- potential for extensive Aboriginal archaeological sites to occur appears to decrease with increased distance from water;
- if the horizontal extent of heritage sites is likely to be smaller than for sites closer to water this would make it easier to accommodate them in the planning.

**Type C Areas** (coloured yellow):
These areas may require (additional) sub-surface investigation prior to development decisions as
- previous investigation has been insufficient; or
- parts adjoin/frame areas of known heritage potential.

Note: The need for, location and extent of such sub-surface testing will depend on the character, extent and probable impacts of the development proposed for any particular location or part.

However, of these areas a proportion may have potential for certain types of development e.g. housing, institutions, recreational facilities etc. Note that parts
- adjoin areas where previous investigations have found little in the way of heritage material;
- are above the 1:100 year flood line; and

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• areas below the 1:100 year floodline may contain lenses/concentrations of heritage material separated by extensive areas or covered by a layer of sediment without such archaeological material.

Type D Areas (coloured green):
These areas should be actively preserved as
• they comprise most of the locations known to contain material of cultural heritage relevance, particularly that portion relating to Aboriginal culture;
• if located below the 1:100 year floodline (= close to water) this increases their potential to contain additional unidentified heritage material;
• if located on crests or spurs, this increases their potential for historic heritage material.

Note: The need for and position of any sub-surface testing will depend on the character and probable impacts of the development proposed for any part of these areas.

These areas are not available for development other than in direct relation to their heritage values.

Type E Areas (coloured orange):
These have been partly/extensively covered by previous surveys and investigations. Due, in part, to past landuse practices they appear to have little or no heritage value.

These areas are considered available for development and do not require prior investigation. However, they do require monitoring at the construction and development stage, and may, if sub-surface heritage material is encountered, require sub-surface investigation.

Note: The location of known heritage sites is shown in Figs. 4.1, 4.2 and 4.3. What development can take place near these and where will have to be decided on a site by site basis through consultation with relevant stakeholders.

In terms of a program of practical action, urgently required steps include:

• engaging a suitably qualified archaeologist to organise a joint meeting between DUAP, the planning consultant, the archaeological consultant and the DLALC to discuss present planning proposals and the timing, location, extent and scope of broader consultation and archaeological investigations relevant to these proposals;

Note: Survey/inspection of type A and B areas are likely to be priorities. However, as sub-surface investigations require considerable lead time (to obtain permits from the relevant authority, possibly also consents to destroy, to complete fieldwork, analyses and documentation) it is prudent to consider at an early stage what developments might suit areas with some archaeological potential, and to what extent proposed locations for e.g. sub-surface facilities could/should be selected as locations for sub-
surface testing. Whose responsibility will this be, if housing is unlikely to be approved, and who will pay?

- entering into discussion with relevant heritage bodies regarding possible additional investigation required to **establish appropriate management measures for areas/locations to be preserved.**

- entering into discussion with relevant heritage bodies regarding **zones of curtilage** appropriate for sites/areas to be preserved. Wherever possible, identified heritage sites should be conserved within some form of Open Space.

With regard to particular aspects of the **historic heritage** and on the basis of existing information, we recommend that:

- **'Mungerie' (RH/19)** be conserved in situ, with a sufficient curtilage to make it viable for local council or community use;

- that a **Conservation Management Plan for 'Mungerie'** be produced, to give guidance to protecting the place in the present and future. A Maintenance Report by an architect should be produced as soon as possible so that issues of materials failure, damp, and possible damage by vegetation can be addressed and resolved. The property should remain tenanted, as responsible tenants can keep a building in good repair;

- **other items** noted in section 5.3 as to be retained need to be **protected and researched** from now on;

and

- the potential presence of items of **'historic interest'** - Aboriginal or European - (if historic be interpreted as relating to the last couple of centuries only) needs to be addressed during future investigations within the MPTC area.

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Fig. 1.1 General location of Rouse Hill Development Area. (The star marks the location of the MPSRC area).
Fig. 1.2. Extent of study area: map provided by DUAP for the brief. (Note: Disregard the zonings; they refer to draft plans.)
Preferred open sites
• Rock shelters and grinding grooves.

Figure 2
LIKELY LOCATIONS OF ARCHAEOLOGICAL SITES BASED ON GEOMORPHOLOGICAL ANALYSIS
Sheet 1

Potential archaeological locations:
- Preferred open sites
- Rock shelters and grinding grooves
- Only grinding grooves

Fig. 3.3 Likely locations of (Aboriginal) archaeological sites, from Rawson 1993, Fig. 2.
Fig. 3.1 Location of creeks and larger drainage lines showing terminology used for the Rouse Hill Infrastructure (Stage 1) studies.
Fig. 3.2 Geomorphology of study area, from Rawson 1993, Fig. 1.
Aboriginal Sites in the Rouse Hill Development Area i.e. including the study area. Note that the listing of historic sites/items is incomplete. Note also that actual site locations are shown by an X preceding the site code symbols following the site code simply indicate site type.
- **STANDING STRUCTURES**
  1. "Heywood", now Castle Hill Country Club
  2. "Lowanna"
  3. Victoria Road Cottage
  4. Maryland Stud Gates
  5. Maryland Stud Barn
  6. Wright's Road Weatherboard Cottage
  7. Wright's Road Shed/Hut/Barn
  8. "Winslow"
  9. Slab Hut
  10. Green Road Cottage
  11. President Road Weatherboard Cottage
  12. St Stephen's Anglican Church
  13. President Road Cottage
  14. Windsor Road/President Road Cottage
  15. Kellyville Public School
  16. "Buena Vista"
  17. Mt St Francis
  18. Former Divine Word Mission
  19. "Mungerie"
  20. Royal Oak Inn
  21. Hezlett Road Weatherboard Cottage
  22. "Wellgate" (Formerly Linton)
  23. Christ Church Rouse Hill
  24. Hair Salon (Former House)
  25. Rouse Hill Cemetery
  26. Aberdeen House
  27. Aberdeen Slab Outbuilding
  28. Mile End Road Weatherboard Cottage
  29. Stone Bridge Piers
  30. Rouse Hill Public School
  31. Copenhagen Farm
  32. "Stone Farm House"
  33. Old Windsor Road
  34. Private Burial Ground

- **ARCHAEOLOGICAL SITES**
  35. Former House Old Windsor Road
  36. Former House
  37. House Sites
  38. Potential House Site
  39. Former House
  40. Rouse Hill Police Station
  41. Former House Site Cottage

- **SITES OF FORMER STRUCTURES**
  42. Emu Inn Site
  43. Former Butcher's Shop Site
  44. House Site
  45. Seath's Inn Site
  46. Rouse Hill Post Office Site
  47. Seymours House Site
  48. House Site
Fig. 5.1 RH/CD5 site plan

KEY
- foot bridge
- grinding grooves
- grass
- tree

sandstone outcrop

1.5m
1.4m
1.4m
0.3m
0.3m
2m

5m to creek

After field drawing
Not to scale

artefact scatter
20m up creek
Fig. 5.2a. RH/C6, site plan showing investigation areas and test locations. Joins Fig. 5.2b.

LEGEND
(I) Rock Fill Trench
(II) Shovel Trench
(III) Trees
(IV) Exposed Rock
(V) Septic/Drainage Line

AREA 1

AREA 2
overlaps with Map 4a

Grader Scrape A

TO PAD 17

Caddies Creek

drainage line in shallow gully

--- ---- -- --- ---- --- -
LEGEND

- Back Hoe Trench
- Shovel Trench
- Trees
- Excavated Race
- Sewerage/Drainage Line

Fig. 5.2b. RHCD6, site plan showing investigation areas and test locations. Johns Fig. 5.2a.
Fig. 5.3 RH/CD7 site plan showing distribution of rock shelves with grooves and test locations.
Figure 5.4a. RH/CD7, rock A showing grinding grooves, excavated patches and rock with evidence of quarrying (RH/61).
Fig. 5.4b RH/CD7, details of rock A with grinding grooves.
Fig. 5.4c RH/CD7, rocks B and C with grinding grooves.
Fig. 5.4d  RH/CD7, rocks D, E and F with grinding grooves.
Site RH/CD7: Map of core area of site to be protected within the buffer of the more general site boundaries.

- Main site focus which must be protected
- Site boundary and buffer zone

Fig. 5.5 RH/CD7. McDonald's suggested management area.

- Fence
- Blackberries
- Sandstone shelf
- Shovel trench
- Tree
- Watercourse
- Historic quarrying

Indications of low artefact density
Fig. 5.6 RH/CD8, site plan showing tested areas.
Fig. 5.7 RH/CD10, site plan showing tested areas.

Legend:
- BLM Back Mea Trench
- Shovel Trench
- Trees
- Exposed Rock
- Water/Drainage Line
- Fossil Artefacts
- 1-9 Artefacts
- 10-19 Artefacts

EXPOSED RACK

LEGEND

PROPOSED SEWER CENTRE LINE

PROPOSED SEWER CENTRE LINE

DAM

GULLY

BM

alluvial fan

EXPOSED RACK
Fig. 5.9 RH/CD12 schematic distribution of artefact densities, based on evidence from test pits.

- 0 artefacts/m²
- 1-10 artefacts/m²
- 11-20 artefacts/m²
- 21-50 artefacts/m²
- 51-100 artefacts/m²
- >100 artefacts/m²

- active channels
- former drainage lines

North
proposed sewer line
consent to destroy without further work recommended

Fig. 5.10 RH/CD12: preliminary interpretation of site indicating main areas with potential for future investigation.
Fig. 6.1 Concept plan for proposed development from Devine Erby Mazlin 1995: Fig.5
Areas to be preserved

Areas within which subsurface testing is required

Areas where archaeological survey is required

Areas where archaeological field assessment of disturbance effects of existing land use is required

Areas where no further archaeological work is required

Grading grooves

Stre "Mungi" & our buildings

Existing Services (water, sewerage etc.)

1:100 flood line

Fig. 7.1 The MPSRC area: recommendations for preservation and further investigation
DEPARTMENT OF URBAN AFFAIRS AND PLANNING
CONSULTANT STUDY BRIEF
(Amended 12th December 1996)

MUNGERIE PARK TOWN CENTRE
ARCHAEOLOGICAL STUDY

1. PURPOSE

The purpose of this study is to identify archaeological sites within the proposed Mungerie Park town centre and to advise on the protection of sites of particular significance.

The study will involve assessment of the European and Aboriginal archaeological heritage value of sites within the study area and will be used in developing a strategy for the development of the site as a town centre.

2. BACKGROUND

Mungerie Park has been identified in Sydney Regional Environmental Plan (SREP) No. 19 - Rouse Hill Development Area in 1989 as the sub-regional centre for the Rouse Hill Development Area (RHDA). The RHDA will accommodate approximately 250,000 people into the next century as the major urban land release for Sydney's North West Sector. The town centre is proposed to accommodate office and retail development, medium to high density housing, roads, schools, community facilities and open space and is to become the focus of public transport for the RHDA. Before a strategy for the development of Mungerie Park can be commenced, any sites of known or likely archaeological significance need to identified so as to adequately protect them from the impacts of development.

3. SITE DESCRIPTION

The site is located within the Rouse Hill Development Area at Rouse Hill, north and east of the junction of Windsor and Old Windsor Roads. The boundaries of the site are shown on the attached map.

The majority of the land is currently owned by the Department of Urban Affairs and Planning, with the remainder held by various public and private landholders. There are a number of private residences, as well as numerous other buildings and structures located on the site.

The western portion of the site consists of predominantly cleared undulating hills which are presently used as a golf course. The land is bisected by Caddies Creek which is surrounded by a corridor of largely uncleared vegetation.

Most of the site has been surveyed previously and a number of archaeological sites have been identified by the National Parks and Wildlife Service (NPWS). These include items of both European and Aboriginal archaeological significance, of which
some have been issued with a 'consent to destroy' by the NPWS while others have been identified as requiring further investigation.

4. OBJECTIVES

The objectives of this study are:
(a) to prepare an archaeological assessment of the development area;
(b) to identify sites of known or likely European and Aboriginal archaeological heritage significance;
(c) to assess the relative significance of those sites identified.

5. STUDY TASKS

It is envisaged that the following tasks will form the basis for the Mungerie Park Archaeological Study:

(1) liaison with the relevant Aboriginal and non-Aboriginal historical and community organisations on the purpose and nature of the study and with private landholders prior to commencement (to be undertaken by the Department of Urban Affairs and Planning);
(2) compiling an inventory of the location of known and likely European and Aboriginal archaeological sites and artefacts within the Mungerie Park town centre boundary;
(3) a statement of the significance for the sites individually and as a whole using standard assessment criteria and of their relative values at a local, regional and State level;
(4) identification of those sites which should be conserved in situ for their known or likely archaeological or other value;
(5) preliminary advice on the likely impact of identified sites on surrounding development potential;
(6) advise as to which sites require more detailed investigations to be carried out prior to development;
(7) inspect the site to investigate the current condition of known sites;
(8) circulating the report to the relevant Aboriginal and non-Aboriginal heritage organisations inviting them to submit comments to the Department.

The study should address broad issues of identification/location, categorisation as to significance and likely development management implications. As such, neither detailed archaeological investigations nor detailed management plans will be required. The site inspection should be carried out with a representative of the Daruk Local Aboriginal Land Council in attendance. The Land Council will be engaged and paid by the Department.

The study should not be confined strictly to these points but rather should address the general considerations outlined above, the objectives of the study and other impacts seen as important in creating a coherent and useful study report.
6. METHODOLOGY

It is envisaged that the study will be based primarily on a review of existing literature. The historical archaeological assessment is to be completed in accordance with the draft Archaeological Assessment Guidelines produced by the Heritage Council of NSW. Whilst some field work will be necessary in order to determine the condition of known sites, the archaeological heritage significance values of the area should be able to be determined by reviewing existing research and past studies and surveys. Extensive field surveys will not be required. A list of references to be used as a starting point for this research will be provided to the consultant, together with information regarding the present status of Aboriginal sites within the study area.

7. REPORT PREPARATION

The consultant will be required to prepare a final report detailing the findings of the study. The content of the report should reflect the study tasks outlined above and should include maps and diagrams as necessary. For the final report, the consultant shall provide one (1) unbound original set of documents and four (4) bound copies. Text and tables together with any other material put on to computer shall be provided with the final on 3½ inch floppy disk compatible to Microsoft Word for Windows Version 6.0 or Microsoft Excel Version 5.0.

8. ROLE OF THE DEPARTMENT OF URBAN AFFAIRS AND PLANNING

The Department will be responsible for overseeing the progress of the consultant study. Specifically, the Department will:

- provide a planning officer responsible for monitoring the consultancy and to function as a contact point with the Department; and
- assist in the provision of base information where required.

9. TENDERS

Selection of Tenders

The Department of Urban Affairs and Planning will select a consultant who will be asked to tender for the study. Tenders must be received by close of business on Friday 15th November, 1996.

Tenders will be evaluated by the Department in terms of the value of the response to the brief.

Study Budget

The consultant's tender should include a fixed, all inclusive fee for the conduct of the study including all labour costs and the preparation of a final report including plans, maps and sketches as necessary. The quality of production for various materials (plans, maps, sketches, report) should also be indicated. The total budget of the study is a maximum of $5000.
**Project Work Program**

The consultant is required to describe the methodology and work program for the project, detailing:
- the stages and components of the study and the timing of their undertaking; and
- the consultant staff responsible for these work components.

**Payments**

A payment schedule should be included in the tender document and should be specifically related to the approved project work program. Payments will be made after the Department has satisfied itself that the work complies with the agreed brief and work program. The final payment will be made after the Department has received, and is satisfied with, the final report.

**Conflict Of Interest**

A statement of any existing or potential conflicts of interest of the firm or of primary personnel working on this study is required.

**Consultant's Role And Expertise**

The consultant will need to indicate the firm's experience relative to the objectives and tasks identified in the brief, including reference to any previous studies completed in both historical and Aboriginal archaeological studies.

**10. PROJECT COMMENCEMENT AND COMPLETION**

The anticipated date for commencement of the study is Monday 23rd December, 1996. It is anticipated that from commencement to completion of the study and presentation of reports should take 2 months, with the final report ready to be submitted to the Department by Friday 14th February 1997.

**11. ADMINISTRATION REQUIREMENTS**

**Copyright**

Copyright is to be vested in the Department of Urban Affairs and Planning from the date of the consultancy agreement. The consultant may publish or use only the pure research material gained in undertaking the study in the following circumstances:
- after publication of the Final Report; or
- after the Director-General decides not to publish the Final Report; or
- twelve months after the submission of the Final Report if no decision has been made within that period and prior written approval has been obtained.

**Confidentiality**

The consultant will be expected to treat all material seen or handled during the project as confidential.
APPENDIX B: COMMENTS ON ORIGINAL BRIEF AND PROPOSAL

HAGLUND & ASSOCIATES, Cultural Heritage Consultants
1 Cameron St, Balmain, NSW 2041, Australia
the Haglund Harrison Group
Sydney - Minneapolis - Malmö
A.C.N. 002 382 952

Charles Hill, Manager, Sydney North
Department of Urban Affairs and Planning
Box 3927 GPO,
Sydney 2001

Your ref.: S91/07263/005

Archaeological study of the proposed Mungerie Park town centre
at Rouse Hill.

Dear Mr Hill,

Thank you for your invitation to tender for an archaeological
study of the proposed Mungerie Park town centre at Rouse Hill.

As noted in my telephone discussions with Mr. Leijten of your department, I
will tender jointly with two of my colleagues, Dr Brayshaw and Ms Bickford,
but with some hesitation. Comments below outline our main concerns with
regard to the brief.

The proposed funding would not cover all tasks outlined in the brief. However,
two of us have been involved in previous studies for the Rouse Hill project, Dr.
Brayshaw as part of the team carrying out the original survey, and all three have
completed relevant studies in the general area. From this background we consider
the proposed study to be important and that we could make a useful contribution.

We believe that some aspects of the objectives and tasks outlined in the
brief cannot be completed at a consultant level as suggested, or would be
better handled by the Department of Urban Affairs and Planning (DUAP). If
the brief can be modified according to our proposal, and DUAP can assist
as suggested below, we would be willing to carry out the study within the
$5,000 budget, taking the risk that some aspects may carry the cost across
that limit.

With regard to the Objectives we would undertake to complete items a-c.
However, with regard to point ‘d’, the first part is covered under ‘c’. The
second part, ‘balancing their archaeological significance with the
commercially viable development of the site’, is surely a matter for
negotiation between your Department, the NSW National Parks and Wildlife
Service (NPWS) and various stakeholders and interest groups, once the
latter have responded to our report?
With regard to the study tasks listed:

- given the level of funding available, initial consultation would have to be limited to the circulation of a letter of notification and explanation of the project; this letter should be circulated by DUAP.

- we would require DUAP to provide a list of relevant landholders, Aboriginal and non-Aboriginal historical and community organisations, to contact the landholders to allow access for a field inspection of heritage items and to request relevant information on e.g. present site status, from the NPWS.

- the time-frame suggested does not allow time to give the relevant organisations an opportunity to study and respond to our report. It would be unrealistic to expect anything in this line to happen in December or January when most of their members would be involved in festivities or away on holiday. Also, some of these organisations would almost certainly wish to hold meetings with representatives of DUAP and the NPWS.

- we would therefore complete a report and circulate this to the groups identified on your list and ask them to respond directly to DUAP. This makes also practical sense, since DUAP would handle the balancing of significance and values, and any negotiation with the NPWS and various interest holders.

We are concerned that the Daruk Local Aboriginal Land Council has not, as far as we can see from the brief, been given an early, active and paid role in the project. They had considerable input in the earlier studies of the area and would, we believe, expect to be involved in a consultant role, not merely comment on the archaeological report.

We are also concerned that the brief does not seem to take into account that, as indicated in reports on previous work, with regard to some sites/areas further archaeological investigations may be required prior to the framing of appropriate management recommendations.

Since we do not know e.g. how many organisations/individuals would need to be contacted, how many report copies would have to be prepared and circulated, we have treated this as a lump sum tender based on an hourly fee of $85 for the individual consultants plus estimated expenses.

Yours sincerely

Laila Haglund

Sydney 15.11.1996
Archaeological study of the proposed Mungerie Park town centre at Rouse Hill.

PROPOSAL

1. Background

Previous archaeological surveys and test excavations have identified a number of Aboriginal and historic sites and areas of potential heritage significance within the proposed Mungerie Park Town Centre (refer Brayshaw McDonald 1993). The proposed study would attempt to locate and assess such sites and areas so that appropriate management and protective measures can, in consultation with relevant interest groups, be developed prior to any further development of the study area.

2. Personnel

The various tasks would be completed by Ms A. Bickford (historical archaeology), Dr H. Brayshaw and Dr L Haglund (Aboriginal archaeological sites). All three have considerable experience of the general area, Brayshaw and Haglund also having had direct involvement in the earlier archaeological investigations at Rouse Hill. Dr Brayshaw took part in the initial surveys and in the direction and organisation of the subsequent testing program; Dr Haglund directed a number of test excavations.

Curricula Vitae are appended.

3. Scope and Methods

The completion of some tasks will require assistance from the Department of Urban Affairs and Planning (DUAP); some aspects have been noted below in italics, others may emerge during the study.

1. DUAP: notify private landholders of the proposed study and obtain access for the team.

   DUAP: notify landholders, relevant Aboriginal and non-Aboriginal historical and community organisations of the proposed study, its purpose and nature, and provide a list of these organisations for the further consultation.

2. DUAP: request from the NPWS a listing of the present status of Aboriginal sites within the study area; what sites have a consent to destroy and when this was issued.

Consultants: consult relevant registers for historic sites, review the information from the NPWS and previous reports on the study area; compile an inventory of Aboriginal and non-Aboriginal sites within the study area;
3. Consultants: inspect known sites and potential sites to assess their present condition; prepare a statement of significance for the sites individually and as a whole using appropriate assessment criteria, and of their relative values at a local, regional and State level (to the extent that this can be done from surface evidence and previous testing);

4. Consultants: identify those sites/areas which we consider should be conserved in situ because of their apparent or probable archaeological significance;

5. Consultants: Prepare a report on our findings, setting these in context and discussing, to the extent that background information allows, potential impacts of the proposed development.

6. Consultants: Circulate the report to the organisations listed as relevant, inviting them to respond to DUAP with regard to their concerns relating to the archaeological or other heritage significance of the sites/areas discussed and the proposed development.

7. Consultants: Provide copies of the report (hard copy and on disk) to DUAP according to the specifications in the brief.

4. Work Program

Some aspects of the study, such as the review of earlier reports, could start on appointment. Other aspects depend on a prompt response from the NPWS. It is, for example, essential to know what sites have been given a consent to destroy, the timing of this (to know whether the consents would still be valid by the start of various stages of the proposed development) and the physical extent of the areas covered by such consents.

If we have such information from the NPWS before Christmas, we see no problem with completing the tasks listed in our proposal, by the end of January. We have the necessary equipment and skill to prepare and produce the reports to the requested high standard.

5. Conflict of Interest.

None of us would have any conflict of interest with regard to this project.

6. Copyright

We do not normally relinquish copyright. However, we accept the vesting of copyright in DUAP as the brief specifies that we would be able to use the research material.
7. Payment schedule

We would suggest an establishment fee of $1,000 followed by two payments of $2,000, invoiced at the end of each month. The last invoice would follow the submission of the report.

Sydney 15.11.1996

Laila Haglund
APPENDIX C:

RELEVANT LEGISLATION - SUMMARY

1. INTRODUCTION

Most cultural heritage legislation is in Australia enacted at a State level and administered at State and local government levels.

In NSW Aboriginal and historic heritage matters are covered by separate legislation though there is some overlap. Some Federal legislation is relevant also at a State level.

2. FEDERAL LEGISLATION

2.1 The Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The Department of Aboriginal Affairs is, through its Heritage and Legal Division, responsible for the administration of the Aboriginal and Torres Strait Islander Heritage Protection Act 1984. The purpose of this Act is to protect 'areas and objects of significance' to Aborigines if under threat of injury or desecration, notably for example areas of particular significance to Aborigines in accordance with Aboriginal tradition. A 'significant object' is defined as an object of particular significance to Aborigines in accordance with Aboriginal tradition. 'Objects' include skeletal remains.

The Act empowers the Minister to declare areas and objects as significant in accordance with Aboriginal tradition to prevent activities which may threaten these areas and objects. It applies to all States and Territories but operates concurrently with existing State or Territory legislation in so far as such legislation is consistent with the Act.

2.2 The Native Title Act 1993

This Act, the administration of which is still surrounded by uncertainty and dispute, focuses on the present and past administrative status of land and on Aboriginal continuity of links with this. Where the latter can be demonstrated Aborigines of local derivation and ancestry will have a case for making claims for land interests arising from it (Butt & Eagleson 1993, Edmunds 1994).

2.3 The Australian Heritage Commission Act 1975.

This Act establishes the Australian Heritage Commission. The Commission as its main tasks:
- identifies places in the National Estate and maintains a register of such places,
- provides advice relating to conservation, improvement and presentation of the National Estate, and
- encourages public interest in the National Estate and furthers training and education in fields related to this.
The Act also constrains the actions of Federal Ministers in relation to matters which may affect places on the Register of the National Estate.

The AHC act has influence only on Commonwealth owned properties. If the site is on the Register of the National Estate then under Section 30 of the Act the Commonwealth agency should refer its proposed action to the AHC as it is prevented from taking any action which might adversely effect the site except when there is no "prudent or feasible" alternative.

2.4 Other relevant Federal legislation

The World Heritage Properties Conservation Act 1983 enables the Federal Government (as a signatory to the UNESCO World Heritage C which lays down a general code for the protection, conservation and study of places of natural and cultural significance) to proclaim an identified place as natural or cultural heritage within the meaning of the Convention. Proclamation does not alter land status or land use providing land use is consistent with the preservation of the natural and cultural values of the proclaimed area.

The Protection of Movable Cultural Heritage Act 1986 enables regulation of the export and import of significant moveable cultural heritage items.

Some other acts may possibly be relevant to projects of this kind, e.g.:

- Australian Archives Act 1983
- Environment (Financial Assistance) Act 1977
- National Museum of Australia Act 1980

3. STATE LEGISLATION

3.1 National Parks and Wildlife Act 1974 (as amended)

This vests the responsibility for Aboriginal heritage with the NSW National Parks and Wildlife Service (NPWS).

The Act protects 'Aboriginal relics and places'. 'Relics' are defined as deposit, objects or material evidence related to indigenous and non-European occupation both prior to and concurrent with European occupation. An 'Aboriginal place' is any place declared to be an Aboriginal place under the Act and is, or was, of special significance with respect to Aboriginal Culture.

Under this Act it is an offence to damage, deface or destroy 'Aboriginal relics or places' without a consent issued by the Director of the NPWS. Also, a person
who is aware of the location of a 'relic' is required to report its existence to the Director unless it is, on good grounds, believed to have been reported.

A 'relic' may be the property of the Crown or private property (depending on e.g. date of collection), but most 'relics' which are 'Aboriginal sites' (engraving and other rock art sites, archaeological deposits etc., are real property and so belong to the land owner, but with the proviso they may not be disturbed or destroyed without written official permission. Moveable 'relics' are the property of the Crown and have long been curated by the Australian Museum. Now there is a growing tendency for archaeological material to be returned (with permission from the Director of the NPWS) to a relevant Aboriginal community for safe-keeping, research, educational use etc.

The Act allows the NPWS to acquire land with significant 'relics'. These may be dedicated as 'Aboriginal areas' or 'historic sites'. It can enter into 'conservation agreements' with landowners for the protection of 'relics'. Sensitive areas can, with consent of the owners, be declared 'protected archaeological areas' while remaining in private ownership.

An area of land can also be declared an 'Aboriginal Place'. This bestows on that land the same protection as a 'relic'. This provision is generally used to afford protection to land which contains no physical relics but contains a site/sites of great importance to Aboriginal people, such as mythological sites.

In addition a 1987 amendment allows the Minister responsible for administering the Act to make interim conservation orders over land of cultural significance. Such orders last twelve months and impose restrictions on the development of land.

3.2 The Aboriginal Land Rights Act 1983.

The Aboriginal Land Rights Act 1983 is administered through the NSW Premiers Department and enables claims for vacant Crown land which is not required for an essential public purpose. It also provides funds for the purchase of lands. The Act does not protect heritage places and makes no provision for them to be claimed by Aborigines. However, under this Act provision was made for the establishment of a system of elected Land Councils given as a prime responsibility, the task of dealing with land and monies flowing from actions under this Act.

A system of Local Aboriginal Land Councils (LALC), linked by Regional Land Councils under a State Land Council, covers NSW and provides a means of formal contact with Aboriginal communities. The NPWS has been using this Land Council system as the main link for contacting Aboriginal communities with regard to matters concerning the management of Aboriginal 'relics'.

Local Aboriginal Land Councils are actively advocating Aboriginal rights to involvement in decision making about their heritage. Many take an active part in the identification aspects of this heritage, and, to some extent but increasingly, in its management. Many have appointed Sites Officers who liaise with archaeologists, take part in and organise Aboriginal components of field work and report to their Executive and/or Cultural Heritage Committee.
3.3 The NSW Heritage Act 1977

The Heritage Act 1977 was enacted to ensure that the environmental heritage of New South Wales would be adequately identified and conserved. The Act established the Heritage Council of NSW, an independent advisory body of 12 members, which makes recommendations to the Minister for Urban Affairs and Planning on matters effecting the environmental heritage and on the implementation of the Heritage Act.

The Heritage Act includes various provisions for protecting identified heritage items. These include various conservation instruments (or 'orders') and the 'relics' provisions. The Heritage Act provides automatic statutory protection for historical archaeological "relics" which are defined as:

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

Sections 139-145 prevent the excavation or disturbance of land for the discovering, exposing, or moving of archaeological relics except in accordance with an approved excavation permit. Thus, the disturbance or excavation of land containing, or likely to contain, relics may only take place after an excavation permit has been granted by the Heritage Council or its delegate. In addition Section 146 of the Act requires that if a relic is discovered the Heritage Council must be notified of its existence as soon as possible.

The Heritage Office which serves the Heritage Council, and the Heritage Council itself, report directly to the Minister for Urban Affairs and Planning (Lavelle 1996).

3.4 The Environment Planning and Assessment Act 1979

This Act, administered by the Department of Planning, enables the preparation of environmental planning instruments to guide land use and management at State, regional and local levels. It provides a code for making and determining development applications. Particularly relevant to cultural heritage aspects is its requirement for environmental assessment of development proposals and its provision of a mechanism for inclusion of heritage conservation provisions in planning instruments.

All 'designated developments' require environmental assessment. This must include a review of impacts upon both the Aboriginal and the built cultural environment. Both Environmental Impact Statements (EIS) and Reviews of Environmental Factors (REF) require identification and assessment of Aboriginal heritage within the subject area.

'G.21. Conservation of Environmental Heritage and Ecologically Significant Items and Areas' (Circular No. 84), issued in 1985 by the then Department of Environment and Planning, outlined the role of Local Government in various aspects of heritage management. This document notes that a major, general responsibility for conservation rests with local government, State government authorities e.g. the HC or the NPWS have specific conservation responsibilities.
Local planning instruments must include provisions for the conservation of buildings, works, relics, places or areas of heritage significance. A step by step process for heritage conservation is set out, including the identification of local heritage, through the use of studies, and registers, analysis and assessment of local heritage, and the statutory implementation of conservation objectives. If a draft planning instrument is found to be inconsistent with this directive, the local government authority must justify the inconsistency before final approval of the instrument can be made.
APPENDIX D: ABORIGINAL SITES - NPWS SITE FORMS
**MUNGARIE**

**ROUSE HILL DEVELOPMENT AREA - ARCHAEOLOGICAL/HERITAGE STUDY**

**ITEM IDENTIFICATION SHEET**

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<th>ITEM NO: RH/19</th>
<th>TYPE: Standing Structure</th>
<th>DATE: c1860</th>
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<tr>
<td>PROPERTY: Lot 62 DP 589837</td>
<td>Potential Archaeological Site</td>
<td></td>
</tr>
<tr>
<td>LOCATION: Windsor Rd, E Side</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONDITION: Good</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LISTED: NW Sector, BHSC Heritage Register</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DESCRIPTION:**
A typical weatherboard cottage, with bullnosed verandahs, hipped corrugated iron roof and two corbelled brick chimneys. Area to N and E of cottage is clearly former site of earlier house and/or other activities.

**SIGNIFICANCE ASSESSMENT**

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<th>Category</th>
<th>Score</th>
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<tr>
<td>Aesthetic Value</td>
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</tr>
<tr>
<td>Historic Association</td>
<td>(3)/5</td>
</tr>
<tr>
<td>Technological Importance</td>
<td>(3)/5</td>
</tr>
<tr>
<td>Structural Integrity</td>
<td>(3)/5</td>
</tr>
<tr>
<td>Interpretive Ability</td>
<td>(3)/5</td>
</tr>
<tr>
<td>Social Significance</td>
<td>(-)/5</td>
</tr>
</tbody>
</table>

**RECOMMENDATIONS:**

- Conserve house.
- Fully investigate areas to N and E including historical research and possible archaeological investigatic prior to considering development of site.

**REFERENCES:** BHSC Heritage Register

**PHOTOGRAPHS:** RH/E/14

**INFORMANTS:** Owner
DESCRIPTION:
The 1885 Old Windsor Road survey shows a house on this site. Today there are a series of mounds, brick and other building rubble, a telegraph pole and a row of yucca plants along the Windsor Road post and rail fence. Local informants suggest the site has also been used as a rubbish dump, and any remains may therefore be disturbed.

SIGNIFICANCE ASSESSMENT
Aesthetic Value (3)/5
Historic Association (4)/5
Technological Importance (3)/5
Structural Integrity (-)/5
Interpretative Ability (-)/5
Social Significance (-)/5

REFERENCES: R Baylis Mackenzie 1885.
Survey of Road Parramatta to Windsor.
Sheets 3–5, Crown Lands Office.

RECOMMENDATIONS:
Investigate fully, including historical research and possible archaeological investigation, prior to considering development of site.

INFORMANTS: Mr George Neeves

PHOTOGRAPHS: RH/E/
### ROUSE HILL ARCHAEOLOGICAL STUDY 1993
For Rouse Hill Pty Ltd

<table>
<thead>
<tr>
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<th>House site</th>
<th>Site Number:</th>
<th>RH/36</th>
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<tr>
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<tr>
<td>Location:</td>
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<tr>
<td>Date:</td>
<td>27/6/93</td>
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<tr>
<td>Recorder:</td>
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<td>Site Number:</td>
<td>RH/36</td>
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</tbody>
</table>

**Description:** Very little visible except for some sandstock brick fragments. Fruit trees and yuccas.

**History/Comments:** House shown here on 1885 survey. Area higher than roadway at this point.

**Date:** Pre-1885

**Themes:**

<table>
<thead>
<tr>
<th>Assessment of Cultural Significance:</th>
<th>Rare</th>
<th>Associative</th>
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<tr>
<td>Other:</td>
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</table>

**Level of Cultural Significance:** Of some significance pending further assessment

**Nature of Impact:**
- Potted Water
- Reclaimed Water
- RTA Road
- Retarding Basin
- Sewerage

**Heritage Listings/Planning Instruments:**
- SREP 19
- BKTN LEP
- BH LEP
- NAT. TRUST
- RHAS
- OTHERS

**Recommendations:** Undertake further historical research/Baseline Archaeological Assessment

**Caption:** Site RH/36 with pole in background.

**Informants:**

**Photographs:** 5:19A

**References:**
- MacKenzie, 1885 Road Survey
- Casey & Lowe Associates June 1993
- RHIP (Stage 1) Works
## ROUSE HILL ARCHAEOLOGICAL STUDY 1993

**Name:** Culvert  
**Site Number:** RH/56

**Type of Item:** Culvert  
**Date:** 4/6/93

**Location:** Windsor Road, North of Schofields Road  
**Recorder:** MC, AL

**Grid Ref:** E:307310 / N:6270050

**Description:** East side - sandstone culvert six courses high with concrete drainage channel. Some of the sandstone blocks have tooled faces. Top courses of broken stone. c2 x 2.5m wide. West side - sandbagged.

**History/Comments:** Rebuilt during modern road works.

### Themes:

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### Level of Cultural Significance:

**Nature of Impact:**
- Potted Water
- Reclaimed Water
- Retarding Basin
- Sewerage
- Dept of Housing
- RTA Road
- Dump

**Heritage Listings/Planning Instruments:**
- SREP 19
- BKTN LEP
- BII LEP
- NAT. TRUST
- RHAS
- OTHERS

**Recommendations:** Retain; if not possible record and monitor during works

**Caption:** View of culvert from the east.

**Informants:**

**Photographs:** 9:8

**References:**

Casey & Lowe Associates June 1993  
RHIP (Stage 1) Works
Name: Sandstone Culvert  
Site Number: RH/57

Type of Item: Culvert  
Date: 2/6/93

Location: Windsor Road, in front of James Ruse Hotel  
Recorder: MC, AL

Grid Ref: 307940 6268950  
Site Number: RH/57

Description: Quarry faced sandstone culvert, extending under road. Timber decking covered by road surface. Sandstone block flooring of culvert. Sandstone sides of culvert covered by 10cm thick cement render. Would appear to be intact.

History/Comments: Appears on 1885 survey, Sheet 5.

Date: Pre-1885

Themes: Transport, Communication

Assessment of Cultural Significance:

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Level of Cultural Significance: Of considerable significance

Nature of Impact:

- Potted Water
- Dept of Housing
- Reclaimed Water
- RTA Road
- Retarding Basin
- Dump
- Sewerage

Heritage Listings/Planning Instruments:

- SREP 19
- BKTN LEP
- BH LEP
- NAT. TRUST
- RHAS
- OTHERS

Recommendations: Retain if possible; record and monitor works if not.

Caption: Sandstone culvert with timber decking from eastern side.

Informants:  
Photographs: 5:20A

References: MacKenzie, 1885 Road Survey

Casey & Lowe Associates June 1993  
RHIP (Stage 1) Works
**ROUSE HILL ARCHAEOLOGICAL STUDY 1993**  
For Rouse Hill Pty Ltd

<table>
<thead>
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<td>Date: 3/6/93</td>
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<td>Location: near RH/CD7</td>
<td>Recorder: MC, AL</td>
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<td>Grid Ref: E308341 / N6269650</td>
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**Description:** Area along eastern side of Caddies Creek with numerous rock platforms, some of which have quarried rock faces.

**History/Comments:**

**Date:**

**Themes:**

<table>
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**Level of Cultural Significance:** Of low significance

**Nature of Impact:**

- Potted Water
- Reclaimed Water
- Retarding Basin
- Dump
- Sewerage

**Heritage Listings/Planning Instruments:**

- SREP 19
- BKTN LEP
- BH LEP
- NAT. TRUST
- RHAS
- OTHERS

**Recommendations:** Retain if possible

**Caption:** Edge of sandstone platform with quarried face.

**Informants:** J. McDonald  
**Photographs:** 1:15

**References:**

Casey & Lowe Associates June 1993  
RHIP (Stage 1) Works
ROUSE HILL ARCHAEOLOGICAL STUDY 1993
For Rouse Hill Pty Ltd

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<td>Date: 3/6/93</td>
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<td>Recorder: MC, AL</td>
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<td>Grid Ref: 3083600 6269640</td>
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</tbody>
</table>

**Description:** Rock platform with cut face on north side in open field some 80m west of Caddies Creek. Near RH/CD6.

**History/Comments:** There is no evidence of quarry debris.

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**Themes:**

**Assessment of Cultural Significance:**

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**Level of Cultural Significance:** Of low significance

**Nature of Impact:**

- Potted Water
- Reclaimed Water
- Dept of Housing
- RTA Road
- Retarding Basin
- Dump
- Sewerage

**Heritage Listings/Planning Instruments:**

- SREP 19
- BKTN LEP
- BH LEP
- NAT. TRUST
- RHAS
- OTHERS

**Recommendations:** Retain if possible.

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**Caption:** View of rock platform showing quarried face.

**Informants:**

<table>
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<tr>
<th>Photographs:</th>
<th>1:17</th>
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</table>

**References:**

Casey & Lowe Associates June 1993

RHIP (Stage 1) Works