Kempsey to Eungai
Upgrading the Pacific Highway

Heritage Assessment

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A Report to Parsons Brinckerhoff
for the NSW RTA

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EXECUTIVE SUMMARY

Background

The Roads and Traffic Authority (RTA) proposes to upgrade the Pacific Highway from Kempsey to Eungai. The Proposal involves the construction of approximately 40 kilometres of four-lane divided carriageway (capable of being upgraded to six lanes). The proposal includes bridging over the Macleay River and its flood plain, provision of grade separated interchanges at three locations, and construction of a flood levee at Frederickton.

A cultural heritage route selection study was conducted in 2002-2003 by Navin Officer Heritage Consultants. Numerous Aboriginal and historic sites were identified within a broadly defined study area, including a number of areas with special Aboriginal cultural heritage significance. The study concluded that the eastern shortlisted route option would have the least impact on cultural heritage values. It was recommended that a detailed cultural heritage assessment of the preferred alignment be conducted as part of the environmental assessment of the proposal.

The proposed Upgrade follows the eastern shortlisted option identified in the route selection study. This option was considered to have least impact on places of cultural significance identified by the local Aboriginal community.

This report documents the results of a cultural heritage assessment of the proposed Upgrade. It forms part of an Environmental Assessment under *Part 3A of the Environmental Planning and Assessment Act 1979*.

Methodology

The assessment included a review of previous heritage assessments, historical documentary sources and heritage registers, consultation with local historical society and Aboriginal community representatives, and comprehensive archaeological field survey.

The field survey was conducted over a period of four days across the anticipated and approximate construction footprint. Survey was conducted with the participation of representatives of the Kempsey Local Aboriginal Land Council and the Dunghutti Elders Council.

Aboriginal Heritage Recordings

Four Aboriginal archaeological sites and twelve potential Aboriginal archaeological deposits occur within the construction footprint and would be subject to direct impacts. A further two sites are located in close proximity to the construction footprint.

The Aboriginal sites subject to direct impact all consist of open context artefact scatters, most with the potential to be larger. Some of the sites also have the potential for subsurface archaeological deposits (KE14, 15, 16 and 42).

A possible Aboriginal scarred tree (KE23) and an open artefact scatter (30-3-111) occur approximately 80 metres from the development area.

Low ground surface visibility was encountered across a significant proportion of the survey area. This meant that many areas with predicted archaeological sensitivity could not be effectively assessed due to the absence of ground exposures. As a consequence, twelve areas of potential Aboriginal archaeological deposit (PAD) were identified within the extent of the construction footprint (KE PAD1-12). These areas typically consist of locally elevated, well-drained and level ground adjacent to existing or former riparian, estuarine and coastal margins.

A program of subsurface archaeological testing will be required to assess the potential heritage significance of these deposits prior to the commencement of construction activities.

European Historic Heritage Recordings

Five European heritage recordings occur within the approximate construction footprint and would be subject to direct impacts. A further four sites are located in close proximity to the approximate construction footprint. Some of these recordings are the subject of draft heritage listing proposals by the Kempsey Shire Council.

The European historic sites subject to direct impacts consist of the Frederickton Memory Avenue along Frederickton Ferry Road (KEH1a), an early twentieth century house on the Pacific Highway just east of Frederickton (KEH2), the former Frederickton Ferry ramp on the northern bank of the Macleay River (KEH6), the rear platform of the Frederickton Butter Factory (KEH7), and the remnants of a post and rail fenceline (KEH9) northeast of Tamban.

A former farmhouse site (KEH3), the Macleay River Hotel (KEH5), and structures belonging to the former Jamieson timber mill (KEH8), all at Frederickton, occur in close proximity to proposed works. In addition, the Frederickton War Memorial is located approximately 60 metres from proposed works. Of these, only the Macleay River Hotel (KEH5) is currently listed on a heritage schedule or register (Kempsey Local Environmental Plan 1987).

Impact will be substantial in two cases. The proposed Upgrade would cross the Frederickton Memory Avenue (KEH1a) towards the eastern end of Frederickton Ferry Road. This would necessitate direct impact to an approximate 65 m section of the avenue, and require the removal of three original plantings (one now dead). The carriageway would also affect the visual and structural integrity of the avenue by permanently dividing it into two separate sections. The early twentieth century house at Frederickton (KEH2) would be demolished for the construction of a roundabout associated with the Frederickton interchange.

Impacts to European historic items elsewhere would be relatively minor. The proposed Upgrade would require the removal of a remnant and poorly preserved section of post and rail fencing north of Collombatti Creek (KEH9). The construction of the Frederickton levee bank would partially cover the former Frederickton Ferry ramp (KEH6). The current integrity of the site as a boat ramp would be compromised. Elsewhere, levee construction would have a variety of low level impacts including impact to the landscape context and rear grounds of some Frederickton buildings. The levee embankment would be placed between the bank of the Macleay River and the Macleay River Hotel buildings (KEH5), the Frederickton Butter Factory (KEH7), and the former Jamieson Timber Mill (KEH8).

Heritage Impact Mitigation Strategies

Mitigation of potential impacts to cultural heritage values at these sites would be realised by implementing the following management strategies:

Aboriginal Heritage

- A salvage collection program for Aboriginal artefacts would be conducted at each of the Aboriginal artefact scatters subject to direct impact (KE14, 15, 16 and 42), both prior to the commencement of construction impacts, and between vegetation removal and top soil stripping.

- Prior to the commencement of construction activities, a program of archaeological subsurface investigation would be conducted at the potential Aboriginal archaeological deposits KE PAD1-12. In the event that archaeological material is encountered, appropriate management strategies would be developed according to the assessed significance of the finds.

- All recovered Aboriginal artefacts would be subject to archaeological description and analysis (as appropriate and according to their significance), prior to their permanent curation according to the wishes of stakeholder Aboriginal groups.

- Where it is anticipated that there is a risk of accidental damage to Aboriginal sites situated in close proximity to the construction footprint (KE23 and 30-3-111), a temporary fence would be installed between the site and construction zone.

- Consultation with local Aboriginal stakeholder groups would be conducted throughout the design and construction phases of the Upgrade project. The participation of representatives of Aboriginal stakeholder groups would be conducted according to RTA guidelines and the DEC's *Interim Community Consultation Requirements for Applicants*.

European Historic Heritage

- The zone of the construction footprint in the area of the Frederickton Memory Avenue (KEH1a) would be kept to a minimum, as far as practical. An archival recording of the avenue would be conducted prior to construction. An appropriate form of pedestrian access would be constructed between the two separated portions of avenue. Following a review of the condition of the avenue trees, an appropriate level of restoration would be conducted to the significant elements of the avenue. Consideration would be given to erecting a permanent memorial and signage at the avenue. Input from appropriate stakeholder groups would be sought prior to finalising the management of the avenue.

- A full assessment of the early twentieth century house (KEH2) would be conducted following the arrangement of access protocols with the property owner. Appropriate management strategies would be developed according to the assessed significance of the site.

- A site survey of the former house site (KEH3) would be conducted following the arrangement of access protocols with the property owner. Where it is anticipated that there is a risk of accidental damage to this site, a temporary fence would be installed.

- The Frederickton levee would be designed and constructed so that significant structures are avoided. The impact of the levee on the landscape context of adjacent heritage items would be minimised as far as practical. Where necessary, temporary fencing would be erected to prevent inadvertent damage to the heritage items. This strategy includes the Macleay River Hotel (KEH5), the former Frederickton ferry ramp (KEH6), and the Frederickton Butter Factory (KEH7).

- An archival record of the former Frederickton ferry ramp (KEH6), and the effected areas of the Frederickton Butter Factory would be conducted prior to the construction of the Frederickton levee.

- Public pedestrian access to the former Frederickton ferry ramp (KEH6), would be maintained, and the existing heritage interpretive signage would be preserved and, where necessary, re-positioned.

- No heritage impact actions would be required for the former Jamieson Timber Mill (KEH8), and remnant post and rail fenceline (KEH9).

- The RTA would liaise with the Kempsey Shire Council regarding the management of, and potential impacts to places in the area of the Upgrade works which are currently the subject of draft heritage listing proposals.

- The construction of the Macleay River Bridge may involve the excavation of river bed sediments. Where the construction methodology allows, the content of these excavated sediments would be monitored by a suitably qualified archaeologist. The objective of this program would be the recording and collection of any excavated maritime relics considered to be of local or state significance or that have archaeological research value. The discovery of any such relics would be reported promptly to the NSW Heritage Office.

General

- All heritage recordings with conservation management requirements, situated within or in close proximity to the construction footprint would be identified on appropriate construction documentation such as the environmental management plan.

- Any previously unsurveyed areas proposed for works depot or construction compound activities within the preferred route study area would require an assessment of archaeological risk. Subsequent archaeological survey and in-field assessment of archaeological potential prior to development may be required. If sites or areas of subsurface archaeological potential are

identified, then appropriate management strategies would be instigated, or where necessary, alternative areas selected for development.

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1. INTRODUCTION

1.1 The Proposed Upgrade

The NSW Roads and Traffic Authority (RTA) proposes to upgrade the Pacific Highway from Kempsey to Eungai on the NSW mid-north coast. The proposed Upgrade of the Pacific Highway involves the construction of approximately 40 kilometres of four-lane divided carriageway (capable of being upgraded to six lanes) from the existing section of dual carriageway south of Kempsey to the existing section of dual carriageway north of Eungai Rail. The route of the proposed Kempsey to Eungai Pacific Highway Upgrade '*the proposed Upgrade'* is shown in Figure 1.1.

The proposed Upgrade would diverge east from the existing highway south of Kempsey, passing over the Macleay River flood plain and crossing the Macleay River northeast of Frederickton. From Frederickton the proposed Upgrade moves to the west of the existing highway through Collombatti, the edge of the Tamban State Forest and north through Barraganyatti to join the existing highway at Eungai Rail.

Features of the proposed Upgrade include:

- The construction of bridging over the Macleay River and it's flood plain in the Frogmore area providing 20 year flood immunity for the highway south of the Macleay River crossing and 100 year flood immunity for the highway north of the Macleay River crossing.

- Provision of grade separated interchanges at three locations:

    - South Kempsey – south of the South Kempsey industrial area providing access to the town of Kempsey;

    - Frederickton – adjacent to Frederickton golf course and sewage treatment works, providing access to the town of Frederickton, Smithtown and Gladstone; and

    - Stuarts Point Road – at the intersection of the existing Pacific Highway and Stuarts Point Road south of Eungai Rail connecting Barraganyatti and Eungai Rail areas to the highway and providing access to Stuarts Point Road.

- Construction of a flood levee at Frederickton providing 100 year flood immunity to residential and commercial premises with Macleay River frontage.

1.2 Background to the study

A cultural heritage route selection study for the proposed Kempsey-Eungai Pacific Highway Upgrade was conducted in 2002-2003 by Navin Officer Heritage Consultants (2003). Numerous Aboriginal and historic sites were identified within a broadly defined study area, including a number of areas with special Aboriginal cultural heritage significance. The study concluded that the eastern shortlisted route option would have the least impact on cultural heritage values. It was recommended that a detailed cultural heritage assessment of the preferred Upgrade alignment should be conducted as part of required environmental assessment of the proposed Upgrade.

The proposed Upgrade generally follows the eastern option identified in the route selection study. This option was considered to have least impact on places of cultural significance identified by the local Aboriginal community.

This report documents the results of a cultural heritage assessment of the proposed Upgrade. It forms part of an Environmental Assessment under Part 3A of the *Environmental Planning and Assessment Act 1979.*

The report was commissioned by Parsons Brinckerhoff Pty Ltd on behalf of the NSW RTA.

1.3 Study Aims

The aims of this study were:

- To identify surface and potentially occurring subsurface cultural heritage sites and places which may be subject to impact from the proposed Upgrade;
- The inclusion of appropriate levels of participation and consultation with stakeholder groups;
- To assess the cultural heritage significance of those sites and places, and the potential impact of the proposed Upgrade on those values; and
- To draft appropriate management strategies which promote the conservation management of significant cultural heritage values and minimise their loss or diminution.

1.4 Report Outline

This report:

- Documents consultation conducted with the local Aboriginal community in the context of the project (Section 2).
- Documents the methodology implemented for the study (Section 3).
- Describes the environmental setting of the study area (Section 4).
- Provides a background of local and regional archaeology and history for the study area and provides predictive models for the area (Sections 5 and 6).
- Documents the results of the study (Section 7).
- Assesses the significance of the study area sites (Section 8).
- Provides information regarding cultural heritage statutory obligations (Section 9).
- Defines the anticipated impact of the proposed Upgrade on the identified and potential archaeological resource and discusses mitigation and management strategies (Section 10).
- Provides recommendations for all sites and areas of archaeological potential located within or in close proximity to the preferred option (Section 11).

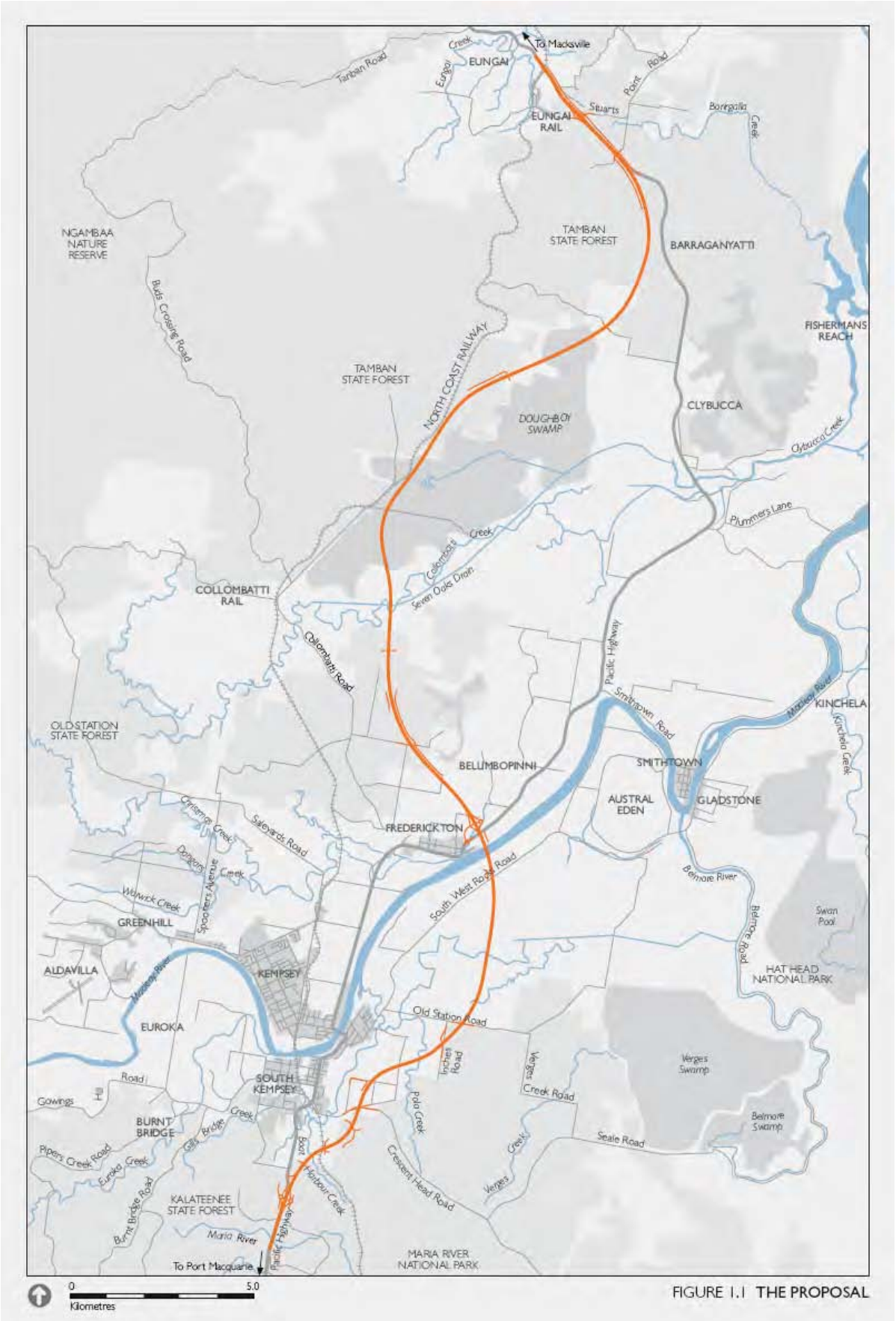

Figure 1.1 Location of the Kempsey-Eungai proposed Upgrade.

2. ABORIGINAL PARTICIPATION

The majority of the study area falls primarily within the boundaries of the Kempsey Local Aboriginal Land Council which is based at Kempsey. The northern most 1.5km of the upgrade occurs within the area of the Unkya Local Aboriginal Land Council, based at Macksville. The area also falls within the area of custodial interest of the Dunghutti Elders Council.

Consultation with each of these organisations occurred as part of the route selection phase of the project, prior to the development of the current alignment of the proposed Upgrade. This included pre-fieldwork meetings, participation in fieldwork, and the review of draft recommendations. The results of this consultation program have been reported previously (Navin Officer Heritage Consultants 2003). In the course of the consultation process various community members and Elders contributed information about known and reported places of special or cultural significance (See Figure 5.1). (This project was conducted prior to the introduction of the draft *DEC Interim Community Consultation Guidelines*). These included the following:

- The *former Aboriginal Reserve lands* at *Euroka Creek-Burnt Bridge* and *Greenhills*.
- The *former Burnt Bridge Seventh Day Adventist Aboriginal Mission* on *Pipers Creek Road,*
- The sites and surviving features of the *former Aboriginal Mission and government Reserve buildings at Burnt Bridge on old portion 165* (Gowings Hill Road).
- The *forest lands to the south and west of Burnt Bridge* were regularly used by community members for hunting and the gathering of bush tucker.
- Existing *Aboriginal community housing* and community areas.
- Existing *Aboriginal owned lands*, including Land Council lands.
- The general locations of *historic family encampments*, some known to include burials and many are suspected of including burials, in numerous locations in the Burnt Bridge region.
- Reported *burial locations,* including the Burnt Bridge, Double Bridge, South Kempsey and Greenhill regions
- Early *ceremonial places and sites* (some of which are recorded on the DEC AHIMS - NPWS site nos. 30-3-25, 27, 21-6-31).
- Areas of former settlements, burials and Mission buildings along *Pipers Creek Road*.
- **'***Gravelly Hill'*, on the way to Burnt Bridge, the home and haunts of the *'Gravelly Dog'*; a large and potentially dangerous dog-like spirit animal with large red eyes and the ability to change its shape.
- *Areas where the 'Hairy Man' or 'Bunjuck' may be encountered.* The Hairy Man is a potentially malevolent spirit being who frequents the forests adjacent to Pipers Creek Road, and the Euroka and Gills Bridge Creeks, it is also known to frequent a 'cave' on the western side of Euroka Creek downstream of Gowings Hill Road;
- Places that the *'blue light'* or Min Min have been seen, especially around the Burnt Bridge area;
- The *Clybucca region*, including adjacent stretches of the Clybucca Creek and associated wetlands. This area is known to have been culturally significant and a place where children were told not to go. It is important for the large number of middens which survive there. Prior to the draining of the lowland swamps, freshwater could always be gained at Clybucca Swamp, even during drought;

- Many local Aboriginal people were employed as timber and sleeper cutters in the Tanban Forests where they regularly camped in the forest (40-50 years ago);
- The rail line around Collombatti where Aboriginal workers were employed;
- The Bellimbopinni region; and
- Other *archaeological sites* in the Kempsey region

Consultation with, and the participation of, Aboriginal community representatives in the current investigation continued and extended the work completed during the route selection phase.

Based on consultation with representatives of the Unkya Local Aboriginal Land Council (ULALC) during the route selection phase, it was determined that Council circumstances did not allow for effective field representation during survey of the 1.5km section of the upgrade within the land Council boundary. (This portion of the upgrade involves the duplication of the existing road corridor and no sites were recorded during survey of the proposed construction zone). It was proposed to include the ULALC in all subsequent consultation following re-commencement of normal ULALC operations.

Field survey of the proposed Upgrade took place over four days during February 2005. The survey methodology, results and management implications of the survey were discussed with each representative prior to and during the field program. Community representatives who participated in the field survey included Vincent Cook, Isaac Campbell-Cook, Michael Edwards and Harry Vale.

A field trip for interested members of the Aboriginal community was conducted on the 23 March 2005 and consisted of an inspection of the proposed Upgrade route, the proposed interchange areas, and a number of archaeological sites and areas of archaeological potential. The aims of the field trip were to:

- Provide an opportunity for interested community members to see the proposed Upgrade route first hand;
- Provide a forum where questions and issues could be raised;
- Provide information to the community on the results of the archaeological survey, and
- Invite feedback and comments on the study results so far, and on any other relevant issues requiring consideration.

Participants in the field trip included Ruth Campbell, Janet Smith and Cissy Flanders of the Dunghutti Elders Council, Roger Fenner (RTA), Bruce Lean and other project team members (Parsons Brinckerhoff), and Lindsay Smith and Vanessa Myles (Navin Officer Heritage Consultants). The field trip included inspection of site KE42 (Plate 2.1), the Frederickton boat ramp, and sections of the Upgrade route in the Cooks Lane area.

Lindsay Smith and Vanessa Myles outlined the results of the recent archaeological survey and discussed the issue of low ground surface visibility across much of the study area. It was explained that archaeological test pits might be required at some locations where there was predicted archaeological potential in order to establish the nature of any archaeological deposits that may be present.

The following points were made by the Aboriginal community members who were present:

- The southern Macleay River bank opposite Frederickton (in the area of Ferry Lane) was remembered as a place where many Aboriginal groups used to camp and was known by locals as *Blackwater*.
- The proposed Upgrade route is well west of, and does not impact upon, significant sites situated in the Clybucca area (see Figure 5.1).

- The proposal to undertake archaeological test pitting in areas of archaeological potential along the Upgrade route was strongly endorsed.

- The location of the three proposed interchanges accounted appropriately for the community's needs.

- The consultation process to date was strongly endorsed and the commitment to further consultations as the project proceeds was affirmed.

It was agreed by the project team members present that nothing will be disturbed until after the Environmental Assessment is completed. It was further agreed that all decisions relating to potential impacts to Aboriginal sites and places of significance will be made in consultation with the Dunghutti Elders, the Kempsey Local Aboriginal Land Council, and their Site Officers.

Plate 2.1 Aboriginal community representatives during archaeological survey at site KE42

3. STUDY METHODOLOGY

3.1 Literature and Database Review

A range of documentation was used in assessing archaeological and historical knowledge for the Kempsey, Frederickton and Eungai areas and the surrounding region. Where relevant, data from the *Cultural Heritage Assessment for the Kempsey to Eungai Pacific Highway Upgrade Route Selection Study* (Navin Officer Heritage Consultants 2003) have been incorporated into this EIS report.

Aboriginal literature sources included the NSW Department of Environment and Conservation Aboriginal Heritage Information Management System, associated files and catalogue of archaeological reports.

Sources of historic information included Macleay River Historical Society records, parish maps and portion plans, monographs and newspaper records held at the National Library of Australia.

This background research was used to determine if known Aboriginal sites or listed historic sites were located within the area under investigation, to facilitate site prediction on the basis of known regional and local site patterns, and to place the area within an archaeological and research management context.

The following heritage registers and schedules were searched:

- The National Heritage List (Australian Heritage Council).
- The Commonwealth Heritage List (Australian Heritage Council).
- The Register of the National Estate (Australian Heritage Council).
- Aboriginal Heritage Information Management System (AHIMS) (NSW Dept Environment and Conservation).
- The State Heritage Register (NSW Heritage Office).
- The State Heritage Inventory (NSW Heritage Office).
- Maritime Heritage Online (NSW Heritage Office).
- Kempsey Local Environmental Plan (1987) as amended - Heritage schedule.
- North Coast Regional Environmental Plan (2001) – Heritage schedules
- The NSW Roads and Traffic Authority - Section 170 Heritage and Conservation Register.
- The State Rail Authority (Rail Heritage Unit) - Section 170 Heritage and Conservation Register.
- Register of the National Trust of Australia (NSW).

3.2 Consultation

Consultation with local Aboriginal community representatives continued on from the route selection study (see Section 2, above). Aboriginal representatives participated in the field survey of the proposed Upgrade route, a field trip to view the study area and sites, and discussions about the results of the study and mitigative and management measures.

The consultation aimed to determine if sites of special Aboriginal cultural value occurred within the study area and to identify any contemporary Aboriginal issues related to cultural heritage values. Local site knowledge and views regarding sites recorded during the project field surveys were also documented.

Consultation with local landowners and residents, and the Macleay River Historical Society was conducted in relation to local history and possible historic site locations.

A meeting of RTA, Kempsey Shire Council and Parson Brinckerhoff personnel with members of the Kempsey RSL Sub-Branch was held on 5 October 2005 to discuss the management of potential impacts of the proposed Upgrade on the Frederickton Memory Avenue of trees along Frederickton Ferry Road.

Draft heritage listing proposals currently under consideration by Kempsey Shire Council were discussed with Tony Blue, Manager for Planning, Kempsey Shire Council.

3.3 Fieldwork

A 39.6 kilometre corridor measuring approximately 50 metres either side of the alignment centreline formed the study area for archaeological survey. Comprehensive field survey of the proposed Upgrade alignment and construction footprint was conducted in February 2005 by Navin Officer Heritage Consultants and Aboriginal representatives from the Kempsey Local Aboriginal Land Council and the Dunghutti Elders Council. The survey aimed to identify all visible Aboriginal and historic sites and features in the defined study area and to identify areas of archaeological potential that may require subsurface testing.

Survey for Aboriginal sites involved walking the length of the highway upgrade route with personnel spaced approximately 50 metres either side of the alignment centreline. Traverses were also conducted along adjacent micro-topographic features considered to have archaeological potential (such as creek banks, crest lines and terrace edges). All existing natural ground surface exposures were inspected. All examples of old growth native trees in the survey area were inspected for possible Aboriginal scarring. Where access to private property within the impact area was denied, or where the nature of local geography precluded entry on foot, sections of the preferred route were assessed from nearby access roads. A graphic approximation of the survey coverage achieved by the survey is shown in Figure 7.6.

Three locations identified for geotechnical testing were surveyed in April 2005 using the same methodology. Each location was found to have negligible archaeological potential.

Following the completion of the field survey program, some minor changes were made to the proposed alignment, and twenty five potential works depot or construction compound areas were identified.

There were several changes made to the alignment of the proposed Upgrade route north of Frederickton, between Seven Hills and Spankers Flat Roads. Much of this amended alignment was surveyed during monitoring of geotechnical testing areas. It was therefore decided not to resurvey the areas affected by the re-alignment due to the virtually zero ground surface visibility within these areas. Additionally, many of the potential archaeological deposits identified in this area were selected on the basis of their topographic locations and remain unaffected by minor changes to the road alignment.

The potential works depot or construction compound areas were identified at an advanced stage in the cultural heritage assessment. Consequently, an assessment of the archaeological sensitivity of each area has been made, and corresponding recommendations generated. If any changes are made to these locations or new/additional areas identified, there may be a need for further investigation of the proposed sites.

3.4 Project Personnel

Field survey was conducted by archaeologists Lindsay Smith and Vanessa Myles, with the field assistance of Daniel Powell. Michael Edwards, Harry Vale (Kempsey Local Aboriginal Land Council) Vincent Cook and Isaac Campbell-Cook (Dunghutti Elders Council) also participated in the field survey of the study area.

This report was prepared by Kelvin Officer, Kerry Navin and Vanessa Myles.

3.5 Aboriginal Site Recording Parameters

The Aboriginal archaeological survey aimed to identify material evidence of Aboriginal occupation as revealed by surface artefacts and areas of archaeological potential unassociated with surface artefacts. Recording parameters relevant to this study are isolated finds, sites and PADs.

3.5.1 Isolated Finds

An isolated find is a single stone artefact, not located within a rock shelter, and which occurs without any associated evidence of Aboriginal occupation within a radius of 60 metres. Isolated finds may be indicative of random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or subsurface artefact scatter.

Except in the case of the latter, isolated finds are considered to be constituent components of the *background scatter* present within any particular landform.

The distance used to define an isolated artefact varies according to the survey objectives, the incidence of ground surface exposure, the extent of ground surface disturbance, and estimates of *background scatter* or *background discard* densities. In the absence of baseline information relating to background scatter densities, the defining distance for an isolated find must be based on methodological and visibility considerations. Given the varied incidence of ground surface exposure and deposit disturbance within the study area, and the lack of background baseline data, the specification of 60 metres is considered to be an effective parameter for surface survey methodologies. This distance provides a balance between detecting fine scale patterns of Aboriginal occupation and avoiding environmental biases caused by ground disturbance or high ground surface exposure rates. The 60 metre parameter has provided an effective separation of low density artefact occurrences in similar southeast Australian topographies outside of semi-arid landscapes.

3.5.2 Sites

A site is defined as any material evidence of past Aboriginal activity that remains within a context or place that can be reliably related to that activity.

Most Aboriginal sites on the NSW mid north coast are identified by the presence of three main categories of artefacts: stone or shell artefacts situated on or in a sedimentary matrix, marks located on or in rock surfaces, and scars on trees. For the purposes of this section, only the methodologies used in the identification of site types recorded in the Kempsey-Eungai study area are outlined below.

Artefact Scatters

Artefacts situated within, or on, a sedimentary matrix in an open context are classed as a site when two or more occur no more than 60 metres away from any other constituent artefact. The 60 metre specification relates back to the definition of an isolated find.

This site type may occur almost anywhere that Aborigines have travelled and may be associated with hunting and gathering activities, short or long term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools, but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of ‘background scatter’ rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'. Artefact scatters commonly occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands.

Scarred Trees

Scarred trees may be described as a tree, or its remains, which contains a scar indicating the removal of bark (and sometimes wood) by Aborigines in the past. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed as a consequence of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting or bark removal. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any particular example of bark removal.

Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal in origin can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginals for both their own purposes and for roofing on early European houses. Consequently the distinction between European and Aboriginal scarred trees may not be clear.

Each tree is normally considered to be a separate site. The identification of a scar as Aboriginal in origin is dependent on a set of inter-related interpretive criteria. The credibility of alternative causal explanations such as natural traumas and other types of human scarring must be tested for each scar.

A range of diagnostic criteria has been developed to assist in the identification of Aboriginal scarred trees. The following numbered criteria are based on archaeological work conducted by Simmons (1977) and Beesley (1989). It should be noted that these criteria have never been quantitatively tested or quantified using non-relative criteria such as absolute dating or an analysis of pre-occluded scar morphologies. This is because radiocarbon dating or dendrochronology is mostly inconclusive, and the removal of regrowth exposes trees to further damage.

1. *The scar does not normally run to ground level:* (scars resulting from fire, fungal attack or lightning nearly always reach ground level). However, ground termination does not necessarily discount an Aboriginal origin (some ethno-historic examples of canoe scars reach the ground).

1(a). *If a scar extends to the ground, the sides of the original scar must be relatively parallel:* (natural scars tend to be triangular in shape.

2. *The scar is either approximately parallel sided or concave, and symmetrical:* (few natural scars are likely to have these properties except fire scars which may be symmetrical but are wider at the base than their apex. Surveyors marks are typically triangular, and often adzed).

3. *The scar should be reasonably regular in outline and regrowth:* scars of natural origin tend to have irregular outlines and may have uneven regrowth.

4. *The ends of the scar should be 'shaped', either squared off, or poin*ted (often as a result of regrowth): (a 'keyhole' profile with a 'tail' is suggestive of branch loss).

5. *A scar which contains adze or axe marks* on the original scar surface is likely to be the result of human scarring. Their morphology and distribution may lend support to an interpretation of an Aboriginal origin: (marks produced after the scarring event may need to be discounted).

6. *The tree must date to the time of Aboriginal bark exploitation within its region*: (on the NSW mid north coast a scar age of at least 100 years is prerequisite).

7. *The tree must be endemic to the region:* (and thus exclude historic plantings).

Field based identification of Aboriginal scars is based on surface evidence only and will not necessarily provide a definitive classification. In many cases the possibility of a natural origin cannot be ruled out, despite the presence of several diagnostic criteria or the balance of interpretation leaning toward an Aboriginal origin. For this reason interpretations of an Aboriginal origin are qualified by the recorder's degree of certainty. The following categories were used:

Definite Aboriginal scar - This is a scar that conforms to all of the criteria and/or has in addition a feature or characteristic that provides definitive identification, such as diagnostic axe or

adze marks, or an historical identification. All conceivable natural causes of the scar can be reliably discounted.

Aboriginal scar - This is a scar where an Aboriginal origin is considered the most likely. The scar conforms to all of the criteria and a natural origin is considered unlikely and improbable.

Probable Aboriginal scar - This is a scar that conforms to all of the criteria and where an Aboriginal origin is considered to be the most likely. Despite this, a natural origin cannot be ruled out.

Possible Aboriginal scar - This is a scar that conforms to all or most of the criteria and where an Aboriginal origin cannot be reliably considered as more likely than alternative natural causes. The characteristics of this scar will also be consistent with a natural cause.

3.5.3 Potential Archaeological Deposits

A PAD is defined as any location where the potential for subsurface archaeological material is considered to be moderate or high, relative to the surrounding study area landscape. Archaeological potential is assessed using criteria developed from the results of previous surveys and excavations relevant to the region. The boundaries of PADs are generally defined by the extent of particular landforms known to have high correlations with archaeological material. A PAD may or may not be associated with surface artefacts. In the absence of artefacts, a location with potential will be recorded as a PAD. Where one or more surface artefacts occur on a sedimentary deposit, a PAD may also be identified where there is insufficient evidence to assess the nature and content of the underlying deposit. This is mostly due to poor ground surface visibility.

4. ENVIRONMENTAL CONTEXT

4.1 Study Area Location

The study area for the proposed Kempsey to Eungai Upgrade comprises a 39.6 kilometre long corridor, with a nominal width of 100 metres (approximately 50 metres either side of the alignment centreline), and a maximum width of up to 350 metres at interchanges. The corridor extends from Eungai Rail in the north (2.3 kilometres northwest of the intersection of the Pacific Highway and Stuarts Point Road), to the Pacific Highway crossing of Boundary Road, south of the Kempsey township (Figure 1.1).

An appreciation of the study area environment can be gained by looking at the broader context of the lower Macleay River catchment, and by characterising the study area into two landform groupings, the valley floor and the fringing coastal ranges. An appreciation of the geomorphology and evolution of the study area landscape assists in the prediction and understanding the archaeological resource. The accumulation and erosion of sediments effects the creation and survival of archaeological deposits, and the recession and transgression of the sea through time dramatically influenced optimal camp sites and resource zones.

4.2 The Macleay River and Catchment

The study area is dominated by the catchment and valley floor of the Macleay River. The Macleay River flows in a roughly northeasterly direction to its current mouth at Trial Bay. The river mouth has formerly been active at the northern end of the Bay at Grassy Head. The entire river course within the study area is estuarine.

The nature and location of the Macleay River bed has changed over time and this will have influenced the survival and location of archaeological sites. The Macleay River of 170 years ago has been described as narrower as and deeper than the present river course. The current broad watercourse with its frequent shallows is attributed to siltation from increased sediment loads generated by land clearance, and the destabilisation of the riverbanks due to forest clearance. ‘The river in 1830 was bordered by forests, huge stands of cedar and redwood, majestic Eucalypts’ (MRHS 1884:1). Early European observations suggest that an extensive band of rainforest abutted the coastal fringe in the Macleay valley (Hodgkinson 1845, in McBryde 1982:31). From the mid-twentieth century, the decreasing depth of the river was increasingly cited as a hazard to the remaining riverboat traffic and a cause for the abandonment of the river wharves (c.f. MRHS 1984:45).

The banks of the modern river are predominantly cleared of forest and are subject to both erosion and aggradation. Significant erosion has occurred on the outside of river bends and downstream reaches, and this is evidenced by the truncation of nineteenth century cadastral boundaries. The accretion of new lands on the inside of river bends and reaches is similarly evidenced (Figure 4.1). The dynamic nature of the river corridor can also be seen in changes to the mouths of tributaries. Pola Creek formerly entered the Macleay River 3.5 kilometres downstream of its present entrance (Kempsey 1:63,360 topographic map 1942). Its former alignment may have been a former course of the Macleay River and is now a mostly infilled lagoon. Changes in fluvial banks during the historic period are suggestive of even greater instability over the much longer period of Aboriginal occupation. It is probable that this has had a significant impact on surviving archaeological riverbank deposits. Erosion has probably removed many archaeological deposits, and conversely, some sites may now be situated well away from the current bank due to a build up of sediments.

Within the study area, the Macleay River catchment is drained by a number of tributaries, including Pola, Boat Harbour, Collombatti, Barraganyatti and Borirgalla Creeks. These streamlines have headwaters in the adjacent rangelands and quickly develop mature meandering courses when they traverse the valley floor and the Macleay flood plain. Typically the tributaries are associated with extensive wetland basins at the rangeland-flood plain boundary, and behind levees created by the Macleay River. Smaller wetland basins are associated with the lower reaches of Christmas Creek north of Kempsey, and the Gills Bridge and Pola Creeks that feed the East Kempsey Swamp. The

resources associated with these wetlands are likely to have been a focus for Aboriginal occupation and archaeological deposits are likely to be found on adjacent locally elevated landforms.

Following major flooding events in the 1950s, the lower Macleay flood plain was the subject of a major flood mitigation program that included the construction of an extensive network of drainage channels. All of the major wetland basins have been impacted by these drains, increasing the amount of dry land, reducing areas of inundation, and supplanting the natural meandering drainage courses and flood channels. The Seven Oaks Drain was constructed across 11.25 kilometres of the Collombatti Creek, networking a series of drains across the former Clybucca Swamp (including Christians Drain) and draining to Clybucca Creek. Major drains were also constructed east of Kempsey (Lancasters and Frogmore Drains) that drain eastwards to the Belmore River. Drains were also constructed through the natural levee banks of the Macleay River, preventing intermittent wetland formation after flooding. Drainage works continued into the 1960s (McDonald 1967, Lee 1969). A consequence of these changes is that modern patterns of water retention and drainage are unlikely to relate to prehistoric patterns. Locally elevated landforms suitable for camp sites and which once fringed wetlands and fluvial corridors may now be situated well away from modern water sources.

4.3 The Valley Floor

The valley floor of the lower Macleay River has formed from Late Quaternary sediments that represent a geomorphological sequence from a former marine embayment, then coastal estuary, to a river delta and the current alluvial flood plain (Hails 1965, 1968).

During the Pleistocene epoch sea levels fluctuated with a series of global ice ages. At around 120,000 years ago, the sea level was at a similar height to today and a marine embayment occupied the position of the modern lower Macleay River valley floor. This former Pleistocene marine shoreline can be identified by tracing the current interface between bedrock slopes and the alluvial valley floor. Former coastal cliffs and scarps can be traced around the bedrock 'peninsulas' now occupied by Frederickton and Clybucca, and the northwestern margins of the Doughboy/Clybucca Swamp (Hails 1968, Walker 1970). During the last glacial period sea levels receded further east towards the continental shelf. From around 18,000 years ago the sea level began to rise, and at around 6000 years ago stabilised to within one metre of the present level (Thom and Chappell 1975). The embayment formed by this rise would have been characterised by a shoreline with numerous small sandy bays interspersed with protruding rocky headlands and low bedrock cliffs. The Macleay River entered the bay at about the location of Kempsey.

A consequence of this landform history is that Aboriginal sites which date prior to the sea level rise may only occur along the margin or upslope of the former embayment. This former shoreline may have been a focus for Aboriginal occupation and any surviving sites may now be buried and their content unrelated to modern resource zones.

Towards the end of the sea level rise, around 7000 years ago, a sand barrier began to form between Korogoro Point and Smoky Cape, both of which were off-shore islands at the time. The establishment of the barrier created an estuary behind. Between present day Kempsey and the present outfall on Trial Bay, the Macleay River formed an estuary which was gradually infilled by alluvial and deltaic sediments. The sediment types which make up the valley floor include estuarine, paludal and alluvial facies of sands, silts, muds, gravels and natural shell beds (Dorrigo – Coffs Harbour 1:250,000 geological map 1st Ed 1971). Today the flood plain is relatively flat, generally less than 6 metres above mean sea level, with gradients of less than three degrees. The plain is characterised by numerous low lying wetland basins, active and former drainage channels, flood channels, levee deposits, and other deltaic microtopographic features. The hydrology and drainage regimes of the wetland basins have been substantially modified by an extensive network of agricultural drainage channels.

Aboriginal sites situated on these estuary infill deposits can therefore be expected to be no older than 7000 years old, and in most cases considerably younger depending on their relationship to former shorelines, and the development of delta and basin infills.

4.4 The Fringing Coastal Ranges

Low coastal ranges are situated at the northern and southern portions of the study area. The basal slopes of these ranges consist of low and descending spurlines which extend to varying extents across the intervening valley floor.

The Macleay Range, located to the northwest of the study area, forms a watershed with the Warrell Creek – Nambucca River catchment. It ranges in height from 40 to 100 metres AHD. The proposed Upgrade crosses this watershed at a low point just east of Eungai Rail township, at an approximate elevation of 40 metres AHD.

The Maria River – Hastings River watershed crosses the study area at its southern end. This section of the range varies in height from 45 to 110 metres AHD. The proposed Upgrade crosses the watershed 1.5 kilometres north of the Maria River, also at an approximate elevation of 40 metres AHD. The only other high point on the Upgrade alignment is a further 1.5 kilometres to the northeast where it traverses a northern spur descending from Church Trig Station, this elevation is also approximately 40 metres AHD.

The complex of ridges and spurlines associated with each of these watersheds form low coastal ranges that fringe the lower Macleay River flood plain. Most of these slopes retain a cover of native forest. The rangelands traversed in the southern and middle portions of the study area are characterised by lower gradients and broad crests. Many of the terminal spurlines of these rangelands extend into the flood plain, forming narrow peninsulas of higher ground surrounded by wetlands and flood plain topography. These topographies may have provided optimal camp locations around 7 to 5000 years ago, when these spurs formed peninsulas extending into ocean and estuary embayments. Similarly, after the infilling of the estuary, they would have provided an excellent base for the exploitation of adjacent wetland resources and fluvial corridors.

Most of the ranges fringing the lower Macleay valley have formed from metamorphosed sedimentary rocks belonging to the Kempsey Beds. These are Lower Permian in age and consist of greywacke, sandstone, mudstone, siltstone, and conglomerate. Conglomerate beds have been mapped and quarried just north of Frederickton. The high terrain forming the watershed to the south of the study area has formed from more resistant greywackes. The ranges in the far north of the study area, extending to Tamban, (but excepting the southern portion of the Clybucca peninsula), have also formed from lower Permian rocks, but display a higher degree of regional metamorphism of the greywacke, sandstone and conglomerate beds. Rock types include slate, phyllite and schist (Dorrigo – Coffs Harbour 1:250,000 geological map 1st Ed 1971). Some of these rock types may potentially have been quarried and used by Aborigines in the manufacture of stone tools These include metamorphic rocks such as greywacke and chert, and hard siliceous rocks found in the conglomerates such as quartz, quartzite and chalcedony.

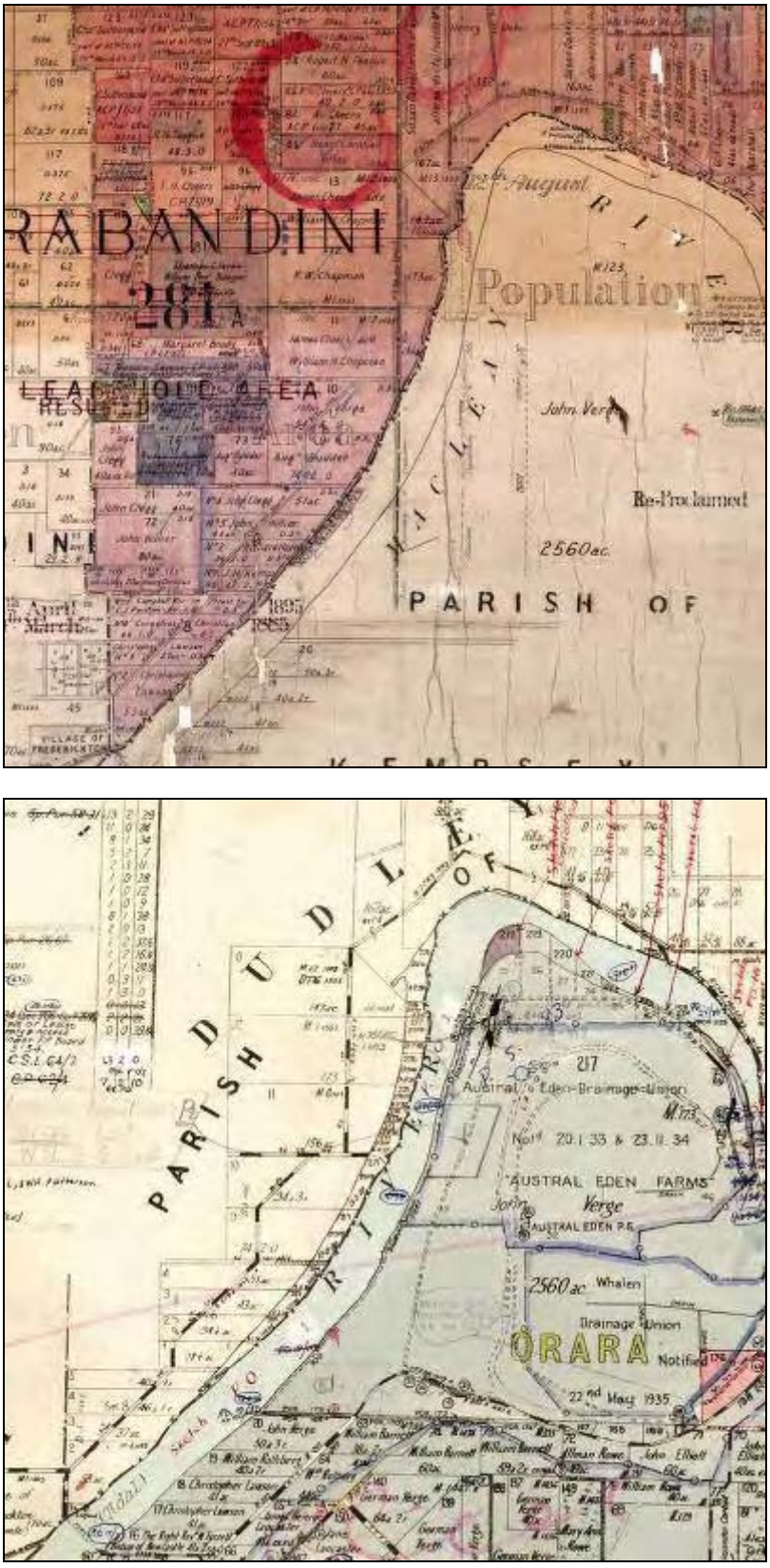

Figure 4.1 An example of how cadastral boundaries illustrate the erosion and accretion of the banks of the Macleay River. The top illustration is an excerpt from the Parish map of Cooroobongatti 1st Ed c.1886. The bottom illustration is an excerpt from the parish map of Kempsey, 8th Ed 1954. Note the aggradation of the left river bank (and new portions on the new ground), and the corresponding erosion on the right bank.

5. ABORIGINAL CULTURAL CONTEXT

5.1 Tribal Boundaries and Early History

The pattern of Aboriginal subsistence in the Macleay Valley in prehistory was similar to that described elsewhere for the NSW coast. Men hunted and fished, and women collected shellfish (Egloff and Oxley 1989).

Tindale (1974) places a Jaiku (Ngaku) tribe in the Kempsey-Eungai area. At the time of contact three languages were spoken by the Macleay valley Aborigines. Ngaku and Ngamba were spoken on the coast and Djangadi was spoken further inland. The latter was a distinct language that shared only 20 per cent of its vocabulary with Gumbaynggir to the north (Eades 1979: 250-251).

Early historical references to the Aborigines of northeastern NSW vary greatly, both in quality and quantity, from area to area. In a survey of relevant sources for the region, Lane (1970) found that Hodgkinson (1845) and Henderson (1851) were the two most useful sources.

First reference to the local inhabitants of the region was made in 1770 by Captain Cook who saw smoke at the mouth of the Macleay River at an area he referred to as Smoky Cape (Blomfield 1981:21). In September of 1816 a group of 13 convict escapees stole the brig *Trial* along with some crew members and three women. Whilst sailing north from Sydney they were wrecked at the mouth of the Macleay River at Trial Bay. Following reports of the wreck by Aborigines in February 1817, a party of soldiers in the *Lady Nelson* searched the area and questioned Aborigines for several unsuccessful days for survivors. Some of the crew appear to have drowned, having put to sea on a raft, while others set off on foot in a southerly direction and not heard of again (Richards 1996:11). One woman reportedly lived with the Aborigines and had two sons. Both were later noted to be ‘troublesome’ to cedar getters in 1836, one was captured and the other shot (Blomfield 1981:21-2, Weingarth 1924:142).

Cedar cutters were some of the first white people to exploit the northern rivers region. Reports documenting relations between the Aborigines and the sawyers vary considerably. In 1843 the Commissioner for Crown Lands reported that the Nambucca and Bellinger Aborigines

> 'steadily avoid all intercourse with the white population. This arises from the wanton aggressions committed on them by the sawyers upon their first going to the Nambucca' (Massie 1842:652).

> '... the cedar cutters ... were at first exposed to murderous attacks from the native tribes on its banks, who killed and wounded several sawyers; and as retaliatory expeditions were undertaken ... a great number of blacks were killed ... and they gradually became more peaceably inclined' (Hodgkinson 1845).

After reprisals in the early 1840's, the Aborigines generally avoided the sawyers. However in the late 1840's Aboriginal attacks were renewed, with three sawyers on the Bellinger River being attacked (Prentis 1972:123).

Rich (1990:106,112) has identified eleven sites associated with Aboriginal–European warfare within the Macleay and Bellinger Valleys, including Yarrahapinni and Yessabah Caves (approximately 10 kilometres west of the study area). The Yarrahapinni massacre occurred in the early 1840s when Commissioner Sullivan with a party of police came on a camp of Aborigines and ‘dispersed them with some slaughter’ (Blomfield 1981:36). The Yessabah Caves are remembered as a place where Aboriginal raiding parties are said to have hid (no date).

The encroachment of white settlers into traditional Aboriginal lands saw a dramatic decline in the Aboriginal population. The first white settlers moved into the Macleay valley in 1836 and by 1841 there were about 15 pastoral stations. The whole of the upper Macleay was taken over for sheep and cattle in the following years (Murray – Prior 1973:51). Although early population estimates are vague, Hodgkinson (1845) estimated that by 1842 only 200 of the original 500-600 Aborigines living on the Macleay River at first contact had survived.

Augustus Rudder, son of Enoch Rudder, the first European settler in Kempsey, noted that

> '…the blacks about us were always well and fairly treated and, in return, we almost invariably found them trustful and confiding and shall always treasure their memory' (Blomfield 1981:22, 25).

Rich notes that instances of friendship were far outnumbered by violent clashes between Aborigines and Europeans. Aboriginal resistance to European movement into the Upper Macleay significantly delayed their settlement of the upper valley (Rich 1990:112).

In the early 1850's, some fifteen years after the first settlers had arrived, it was estimated that only 500 Aborigines remained in the area which stretched from Kempsey north to Grafton (Commissioners of Crown Lands for the Macleay: Report 1850, 2).

References to Aborigines from the Macleay River Valley indicated that they

> '... continue to traverse the Coast during the season favourable for fishing, and the interior during the hunting season' (Oakes 1842:65).

Hodgkinson (1845:26) implies that the Macleay River Aborigines had little contact with groups to the north in the Nambucca Valley, but there existed a widespread tradition of contact with the tablelands.

From the evidence available from historical sources, the material equipment of the Aborigines of northeastern NSW in the mid-1800's comprised:

> 'a wide range of wooden artefacts, nets and bags of plant and animal fibres, as well as tools made of stone, bone, and shell. For the coastal areas we have records of spears, clubs, paddy-melon sticks, boomerangs, and shields made in wood. Stone implements included axes, and 'flint knives'. There were also scrapers and knives of shell and of glass where available. Bones were used to make needles for sewing the possum skin rugs...' (McBryde 1974:10).

The equipment of the Aborigines as described by Ebsworth (1826), Dawson (1830), Backhouse (1843) and Threlkeld (in Gunson 1974) included -

> 'huts made with sticks and melaleuca bark, forked poles for climbing trees, eucalypt bark canoes, spear throwers, clubs, yamsticks, shields, hatchets, hunting, fishing and war spears, tea tree bark baskets and water vessels, nets and bags for carrying food and equipment, string made from bark, *Acacia* sp. and *Xanthorrhea* sp. resin, shell fish hooks and fish weirs constructed from plant material' (Dean-Jones 1990:64).

The Belgrave Falls Aboriginal Reserve west of Kempsey may have been established during the 1850s following the general cessation of Aboriginal resistance to European Settlement in the Macleay Valley (Rich 1990:113).

In 1883 the Aborigines Protection Board of New South Wales was established and 133 reserves or stations were established state-wide by 1900 (Attenbrow 1992:12). Government control increased and Aboriginal peoples, sometimes from different tribes, were forced together and their land released to white farmers.

Sixteen Aboriginal Reserves were established in the Bellinger and Macleay River valleys between 1883 and 1908. The earliest of these included Stuarts Island Reserve near the mouth of the Nambucca River, and a reserve on the Macleay River at Arakoon (both gazetted in 1883).

In the Macleay River valley the territory of the Dunghutti people was originally 2800 square kilometres. In 1885 they were confined to 40 hectares on the Bellbrook reserve (Creamer 1980:89).

The Macleay Valley today has one of the largest concentrations of Aboriginal people in New South Wales. The community is dispersed throughout the Shire, and most of the local people consider themselves to be descendants of Macleay Valley Dunghutti people or Gumbaynggir people, the

group to the north. The former government reserves of Bellbrook, Burnt Bridge, Green Hills and Kinchela, all located in the Shire of Kempsey are now Aboriginal land and form the nucleus of Aboriginal residential communities (McGuigan nd).

Table 5.1 is a summary of Aboriginal Reserves in the Kempsey region as listed by McGuigan (nd) and Rich (1990).

Table 5.1 Summary of Aboriginal Reserves in the Kempsey Region

Reserve Name	Specific Location	Recorded
Arakoon Reserves	incl. Shark Island	gazetted 1899, re-gazetted 1924, 1959, 1972
Beranghi Reserve		gazetted 1968
Burnt Bridge Reserve	Euroka Creek	AR20865 (pn 40) gazetted 1894, revoked 1956 AR27273 (pns 91, 92 & 93) gazetted 1894 (or 1892) revoked 1956
Burnt Bridge Station	Portion 165	AR27279 1935-, then AR68441/2 gazetted 1939-
Clybucca	on the Macleay River	AR17537 gazetted 1893 revoked 1919
Kempsey	Yarravel Street	gazetted 1956-7
Kempsey		AR86751 gazetted 1960/61, 1968
Kempsey		AR82773/83090 gazetted 1960-1
Sherwood Reserve		gazetted 1906 revoked 1960
Greenhills Reserve		AR79176 (pns 238, 239, 240, Sn 17) gazetted 1956 and 1957 AR 84710 gazetted 1967 (Pn 242, 243, 245, 267, 271) Sp Pur 59.13 United Aborigines Mission, (pn276) Aboriginal Lands Trust, (pn 281)

5.2 Settlement Patterns

There are a number of differing models that attempt to explain original patterns of Aboriginal movement within the coastal zone of northern NSW. Belshaw (1978) postulates a semi-settled pattern of occupation for the northern rivers of NSW that is based on the availability of particular resources, for example fish, shellfish and certain vegetable foods.

McBryde (1976:53) sees movement on a seasonal basis with groups spending winter hunting in the foothills and moving down to the coast in spring to take advantage of good fishing. Shellfish also spawn in spring and this is the season when they are at their best.

Coleman (1980) sees the coastal alignment of tribal territories, which were relatively small and densely settled, as forming a block to movement by groups inhabiting the inland-foothills territory. In a review of ethnographic material Coleman found that observed movements appeared to be parallel to the coast. These movements involved large groups of people, but were made to attend gatherings for fighting, initiation etc, rather than to take up seasonal residence in another location.

Sullivan (1978) postulates limited movement between riverine and coastal areas bordering the rainforest belt. Higher country inland may have been used only in times of flood.

Patterns of site location identified in archaeological surveys carried out by Byrne (1985) and Navin Officer Heritage Consultants (1998, 1999, 2000a) tend to confirm that the major river corridors served as a focus of activity in the region.

All of these models suggest that potentially large populations were supported along the main river corridors and the coastal plain, and that intercommunication, either within or between different groups, was very important for economic and/or ceremonial reasons. Natural topographical access routes, both along and across the coastal plain, would therefore have been important components of Aboriginal land use.

The coastal hinterland acted as both a focus for economic activity, and for ceremonial gatherings which were supported by an abundance of coastal plain resources. The Kempsey-Eungai study area, which is located in an ecologically diverse and resource-rich landscape when taken in a broader regional context including forest and riverine habitat, could be expected to have supported a substantial Aboriginal population.

5.3 Archaeological Research in the Region

The mid north coast of NSW has been the subject of extensive archaeological research over the past thirty years. To date almost three hundred Aboriginal sites have been recorded in a 190 square kilometre area centred on the Kempsey-Eungai study area. Site types include scarred trees, burials, shell middens, stone arrangements, artefact scatters, isolated finds, rockshelters with deposit, and natural mythological sites.

Much of the archaeological research has concentrated on the coastline and associated estuaries (for example Campbell 1969, 1972; 1978a 1978b; Connah 1975, 1976; Sullivan 1973; Sullivan 1974; Sullivan & Hughes 1978, Coleman 1978, 1979; Callaghan 1980, Knuckey 1999).

More recently, the upgrading of the Pacific Highway has generated considerable archaeological research in what was previously a relatively archaeologically unknown area. Such investigations are mostly limited to an overview/assessment of a defined broad area (in the route selection process) followed by detailed assessment of a narrow, preferred route alignment, often including subsurface archaeological testing programs.

The results of such investigations as a whole are of limited archaeological value as they have studied in detail a narrow, arbitrary easement that in fact represents a line drawn across the landscape. However the investigations do provide a glimpse of the remaining Aboriginal archaeological resource and continue to add data to the growing corpus of archaeological information for the NSW mid and north coast.

Exceptions are broad area heritage studies or conservation plans which review a regional corpus of data and present interpretative and research themes followed by management strategies. The Aboriginal and Prehistoric Heritage Conservation Plan for the Kempsey Shire Heritage Study, conducted by Egloff and Oxley in 1989 is an example (Egloff and Oxley 1989).

Systematic research into the prehistory of the Macleay River valley commenced in 1969 with a survey of coastal middens by Campbell. Radiocarbon dates for some of these sites ranged from 1210+/- 90 BP [**B**efore **P**resent] (Macguires Crossing) to 4850+/-160 BP (Connection Creek).

Excavations were conducted by Campbell (1972) and Connah (1975, 1976) in an Aboriginal midden deposit situated two kilometres northwest of Clybucca ('Clybucca 3', NPWS site no. 21-6-35). This site is situated 14 kilometres inland from the present coastline, on a former beach sand ridge which now forms the basal slopes of a low spurline to its east. This spur projects southwards and would have formed a peninsula dividing the former estuary. The beach ridge would have been situated at the head of a small bay. The midden deposit was situated below the present surface and revealed in two excavation tranches. The total deposit was estimated to be 120 metres by 30 metres in area.

The deposit provided evidence for Aboriginal occupation at the edge of a former estuarine embayment from around 5000 years ago. Archaeological material was dominated by shell, with two main species present, *Anadara trapezia* (Sydney Cockle) and *Crassostrea commercialis* [Saccostrea glomerate] (Sydney rock oyster). Also present were 1488 stone artefacts (135 of which were retouched), and vertebrate bone material including terrestrial, non terrestrial and bird groupings. Stone types included basalt, chert, siltstone, greywacke, sandstone, conglomerate and quartz. The

fragmentary remains of human skeletal material was found in both trenches, including the remains of two adults from a burial pit.

An analysis of the excavated material by Knuckey (1999) concluded that the archaeological deposit appeared to reflect the exact period of time through which the estuary itself existed, between 5000 and 2300 years BP. The earliest occupation suggests a dependence on shellfish resources, with greater diversity including more frequent fish remains and small to medium sized terrestrial mammals occurring from 3300 years. Retouched and backed artefacts occur from approximately 4200 years BP.

The deltaic transformation of the estuarine environment into a freshwater wetland and valley floor plain is postulated by Knuckey to have prompted the abandonment of the site at around 2300 years ago (Knuckey 1999). This interpretation is based on the loss of the estuarine scale and shellfish resource due to the change to a freshwater dominated environment.

David Bell's (1980) report on carved trees includes references to carved trees in the Kempsey Shire. Stone arrangements have been recorded in the Macleay region (Brayshaw 1978), and ceremonial sites in the Kempsey Shire have been documented by Kelly and Creamer in Sutton (1985). Kelly (1974) documented Aboriginal sites in the Bellbrook area near Kempsey.

Site surveys have also been conducted in the gorge country immediately to the west of Kempsey Shire (Godwin 1983, 1985) and in the mid-reaches of the Macleay River valley, in the Kempsey area (Egloff & Oxley). Sites were found 'on flat areas of ridge lines leading into the valley bottoms and on moderate slopes above creeks and swampy lands' (Egloff & Oxley 1989:24). Some of these sites were isolated artefacts, and others, particularly on ridgelines, had between two and four artefacts per square metre.

Packard's 1992 surveys in the State Forests in the Kempsey and Wauchope Forest Management Areas sampled five landform types – ranges, escarpment, plateau, broad valleys and coastal ranges. He located some fifty five sites, comprising twenty one single artefacts, thirty three open artefact scatters and one shelter with an artefact. He noted that sites were recorded at 'varying densities from virtually the full range of environmental circumstances' (Packard 1992:1) and he predicted that sites would occur in State Forests across his study area at a mean density of 1.4 sites per square kilometre.

Craib and Bonhomme (1995) conducted a desktop assessment of Aboriginal and European heritage for the Coffs Harbour to Kempsey 132kV transmission line. Then in 1997 Mills conducted an archaeological survey for the proposed 132kV transmission line. The 112 kilometre long easement was generally located within four to five kilometres of the coastline and passed through Kempsey, Nambucca, Bellingen and Coffs Harbour. Four Aboriginal sites and thirty eight areas of potential archaeological sensitivity were identified by Mills. The sites were identified by Aboriginal informants and comprised a bora ground, an extension to a known burial ground, an unidentified sacred site, and a fringe camp. There were no physical manifestations of the sites (Mills 1997, 2000).

Mills subsequently conducted a limited program of archaeological test excavation at the PAD locations (Mills & Kelton 2001). This involved mostly testing only the actual pole location with an auger. No artefacts were identified in the test pits in the Nambucca, Coffs Harbour and Unkya LALC areas. Aboriginal cultural material was identified at five pole locations within the Kempsey LALC area. This report was reviewed by McIntyre-Tamwoy in 2001.

Surveys for the Mid North Coast Correctional Centre at Kempsey were conducted in 2000 and 2001. The subject area was at Aldavilla, some six kilometres west of Kempsey and comprised approximately 80 hectares of low gradient spurline slopes and undulating ground. No Aboriginal archaeological sites or areas of archaeological potential were identified with the area, however it was noted that ground surface visibility was generally poor and was limited to tracks and discrete areas of devegetation. It was concluded that the landforms within the area did not represent archaeologically sensitive topographic units (Navin Officer Heritage Consultants 2000b, 2001).

5.4 Route Selection Study

An Aboriginal cultural heritage assessment of a broad area of land under consideration as the location of various Kempsey to Eungai Pacific Highway route options was conducted in 2003 (Navin Officer Heritage Consultants 2003). The assessment included literature review and site register searches, targeted field survey and consultation with local Aboriginal groups and local informants. Two possible route options, referred to as the Western and Eastern Option, were identified as the route selection study progressed. A comparison of these routes was prepared, based on the cultural heritage data collected in the study.

5.4.1 Aboriginal Sites

Thirty-six previously recorded Aboriginal sites occurred within the route selection study area (Navin Officer Heritage Consultants 2003). These comprised fifteen artefact scatters, seven isolated finds, eight middens, and one shelter with deposit, two burials, one stone arrangement, one mission/burial site and one historic burial site.

Forty one Aboriginal site recordings were made in the course of the field surveys for the Kempsey to Eungai Route Selection Study (KE1-KE41) (Navin Officer Heritage Consultants 2003). These comprised sixteen surface scatters of stone artefacts in open contexts, thirteen isolated finds and three scarred trees. A further nine sites were documented on the basis of oral testimony from Aboriginal community members and included site types such as stone arrangements, former historic encampments, burial locations, bora (initiation) grounds, and places of cultural significance.

Five of the archaeological sites identified in the Route Selection Study - KE14, KE15, KE16, KE23, and 30-3-111 - are relevant to the proposed Upgrade alignment.

5.4.2 Areas of Reported Aboriginal Cultural Significance

Three broad-area identifications of Aboriginal cultural significance were consistently reported to the consultants by members of the Kempsey Aboriginal community in the course of consultation for the Route Selection Study. The general locations of these areas are shown in Figure 5.1. The boundaries are approximate in character and were progressively drafted and refined following the accumulation of information from informants over the course of the project. It was stressed by informants that these areas contained both specific places of high cultural value, and broad areas with high cultural significance and amenity. For some places, specific locations and cultural information are known. In other cases, locations were generalised and exact locations no longer remembered. The consultants communicated the fact that culturally sensitive or restricted information need not be provided, but that adequate locational information was needed to ensure that areas of high significance could be avoided.

Burnt Bridge and Surrounds

This area includes the following places of cultural significance:

- The former Burnt Bridge government Aboriginal Reserve lands dating from the 1890s.
- The sites of the former Seventh Day Adventist church mission dating from the late nineteenth century.
- The sites of the former government Reserve at ‘Burnt Bridge Station’ dating from the 1930s.
- The existing Burnt Bridge Aboriginal settlement, community housing and associated Aboriginal owned lands.
- ‘Gravelly Hill’ and the territory of the ‘Gravelly Dog’ (recording KE36).
- Numerous historic encampments situated around the Reserve lands.
- Burials associated with historic encampments.
- Ceremonial and ritual places located away from the normal residential areas.
- The territory and haunts of the ‘Hairy Man’ or ‘Bunjuck’.
- places where the ‘blue light’ or *Min Min* has been seen.
- Bush tucker hunting and foraging areas used and maintained by Burnt Bridge community residents.
- Archaeological sites.

Clybucca Region

This area is identified as having high cultural significance for the following reasons:

- The Clybucca area is known to have been important as a place for tribal gathering, food collection, trading and ceremony.
- many people as children were warned by their parents to keep away from this area.
- The area is acknowledged to be a spiritual place.
- The area has a high density of midden sites which are highly valued for their cultural and scientific values.
- The area is linked with initiation places further to the east, and with major access routes from the coast into the hinterland.
- The area is reported to form part of songlines that link to other significant places within Bundjalung and adjacent tribal territories.

The main determinants of the boundary locations are the following:

Northern Boundary

- The incidence of archaeological sites associated with the northern bank of Clybucca Creek.

Western and Southern Boundaries

- The inclusion of the main riparian zones associated with creeklines.

Eastern Boundary

- The boundary of the study area (the area of significance extends further eastward beyond the study area).

Greenhill

This area surrounds the former government reserve lands at Greenhill. It includes current Aboriginal community housing and land,; various activity areas associated with the immediate vicinity of the Aboriginal settlement, and reported burial locations.

The boundaries of this area are likely to be conservative (i.e. encompassing an area which could be larger), especially given the range over which hunting and the gathering of bush tucker is likely to have occurred (particularly to the north into Warwick, Dangars and Christmas Creeks).

Other Areas

In addition to these three broad areas, a number of other less specific areas were mentioned by individual sources. These are places of significance for their use as bush tucker and hunting areas, and/or places associated with eighteenth and nineteenth century Aboriginal habitation and employment. These consist of the forests in the Collombatti region, west of the rail line; some forest areas of the Eastern Macleay Range; and the Bellimbopinni region.

The location of these areas has been considered in the design of the Kempsey-Eungai proposed Upgrade (see Figure 5.1).

5.5 Predictive Model for Aboriginal Archaeological Sites in the Study Area

Prior to the Kempsey to Eungai route selection study in 2003 only limited archaeological assessment had been conducted in and near the study area. There was, however, an extensive body of archaeological research from throughout the central/north coast region of NSW which had established a set of generalised criteria for predicting the location of Aboriginal sites within the landforms represented in the Kempsey to Eungai study area (e.g. Hall & Lomax 1993, Klaver & Heffernan 1991, Navin & Officer 1990, Mills 1997).

This data, together with the results of the route selection study and an appreciation of its geomorphological evolution (refer section 4), can be applied to the present study area to facilitate the formulation of a predictive model for the area

The results of archaeological investigations to date indicate that along the NSW coast, rocky shore, sandy beach, estuarine and hinterland environments were each exploited by Aborigines. The densest and most diverse archaeological remains are generally found along the coast where food resources were richer. Exploitation of estuarine and immediate hinterland environments was probably more sporadic and shorter term, possibly using freshwater swamps as a key resource zone.

General patterns of site location according to terrain and vegetation were described in the City of Greater Taree Heritage Study (Klaver & Heffernan 1991a, b and c). Site densities obtained by combining the existing sites on the NPWS Site Register (now AHIMS) with the results of limited field survey indicated that:

- 8% of sites were found in rugged terrain, predominantly in dry sclerophyll eucalypt forest;
- 3% were found in hilly to steep terrain;
- 19% were located in undulating to hilly terrain either in dry sclerophyll eucalypt forest, along estuarine stream bank corridors, or in coastal heath; and
- 70% were located in flat terrain, predominantly in coastal heath, and also along estuarine stream bank corridors, woodland, dry sclerophyll eucalypt forest and in subtropical rainforest.

Based on previously modelled regional patterns of site occurrence, there is a high likelihood of the existence and discovery of Aboriginal sites in the widening flood plains of rivers such as the Macleay as they merge into the coastal plain.

Predictive Statements for the Study Area

- The crests and basal slopes of low spurlines that extend into and are situated adjacent to the flood plain valley floor are the most sensitive landform within the Kempsey-Eungai study area. Sites most likely to occur in these contexts are stone artefact occurrences such as open artefact scatters and isolated finds. Midden deposits may occur subsurface on former beach ridges and other alluvial or colluvial deposits which fringe the bedrock slopes that border the valley floor. These mark the former shoreline of the marine embayment and subsequent estuary which formed following the last sea level rise at around 6000 years BP.
- Open artefact scatters (or campsites) are most likely to occur on relatively level, well-drained ground, adjacent to sources of freshwater (e.g. swamps and creeks) and estuarine lakes and wetlands, or along the crests of ridgelines.
- Ridge and spurline crests on relatively higher topographies are likely to have sites that have smaller numbers of artefacts than those in the lower ranges and valley floor margins than previously predicted.
- Watershed ridgeline crests, which afford effective through-access across, and relative to, the surrounding landscape are likely to contain small and low density artefact occurrences including isolated finds and artefact scatters with low numbers of surface artefacts. Subsurface artefacts are also predicted to be relatively low in density.
- Basal slopes on spurlines that border the valley floor are likely to be associated with low numbers of detected surface sites. However where slopes correspond to existing or former riparian zones or former estuarine and coastal shorelines, there is the potential for significant subsurface archaeological deposits.
- Micro-topographic landform features in basal slope contexts such as remnant beach and dune deposits, or remnant former sea cliffs, are of high archaeological sensitivity and have high potential for sites such as artefact scatters middens and burials.

- There are no recorded Aboriginal archaeological sites on the present banks of the Macleay River within the study area. This is thought to be at least the partial consequence of the dynamic nature of the riverbanks and the impacts of forest clearance and flooding. It is probable that former riverbank sites survive as subsurface archaeological deposits. These deposits are most likely to be found on former channel alignments in areas characterised by sediment accumulation and bank progradation.

- It is probable that activities that resulted in midden spoil, and which were related to the present river estuary environment, were focused further downstream, downstream from Clybucca. Older midden deposits within the study area are now likely to be subsurface and obscured.

- Scarred trees survive in the area, despite a long history of logging. Scarred trees may occur wherever old-growth trees remain. Potential locations include road reserves, remnant riparian vegetation on farmlands, and isolated trees within the state forests. Recordings with a high confidence interpretation of an Aboriginal origin are likely to be rare.

- Prehistoric burial sites are most likely to be found in locally elevated landforms with a relatively deep profile of soft sediments such as aeolian or beach ridge sand and levee bank alluvium. Burials can also occur in the deposits of occupation sites such as middens.

- Isolated finds may occur anywhere in the landscape and may represent the random loss or deliberate discard of artefacts, or the remains of dispersed artefact scatters. Isolated finds are more likely to occur in areas of predicted sensitivity. Isolated finds may be indicative of more artefacts and a larger distribution in adjacent sediments and soil profiles. However on the crests of ridgelines and upper topography spurlines, good visibility levels suggest that the potential for larger sites is limited.

- Quarry or stone procurement sites are likely to be found in association with natural outcrops or accumulations of suitable rock types such as fine-grained igneous rocks, quartzite and silcrete. Exposures of greywacke, Tertiary gravels, conglomerate and fluvial channel gravels are the most likely exploited stone sources within the study area.

- Sites such as grinding grooves and engravings are unlikely to be present in the study area, and rock shelters with occupation deposit are likely to be extremely rare. This is due to the relative absence of suitable sandstones and of bedrock exposures which support substantial overhangs. Shallow rock overhangs are most likely to occur along the former pre and post estuarine shoreline that corresponds to the edge of the bedrock slopes fringing the current valley floor.

- The locations of mythological sites or story places can be identified from oral histories and remembered traditional knowledge.

- Rare and fragile site types such as stone arrangements and ceremonial places are difficult to predict, beyond the criteria for relatively undisturbed and stable land surfaces.

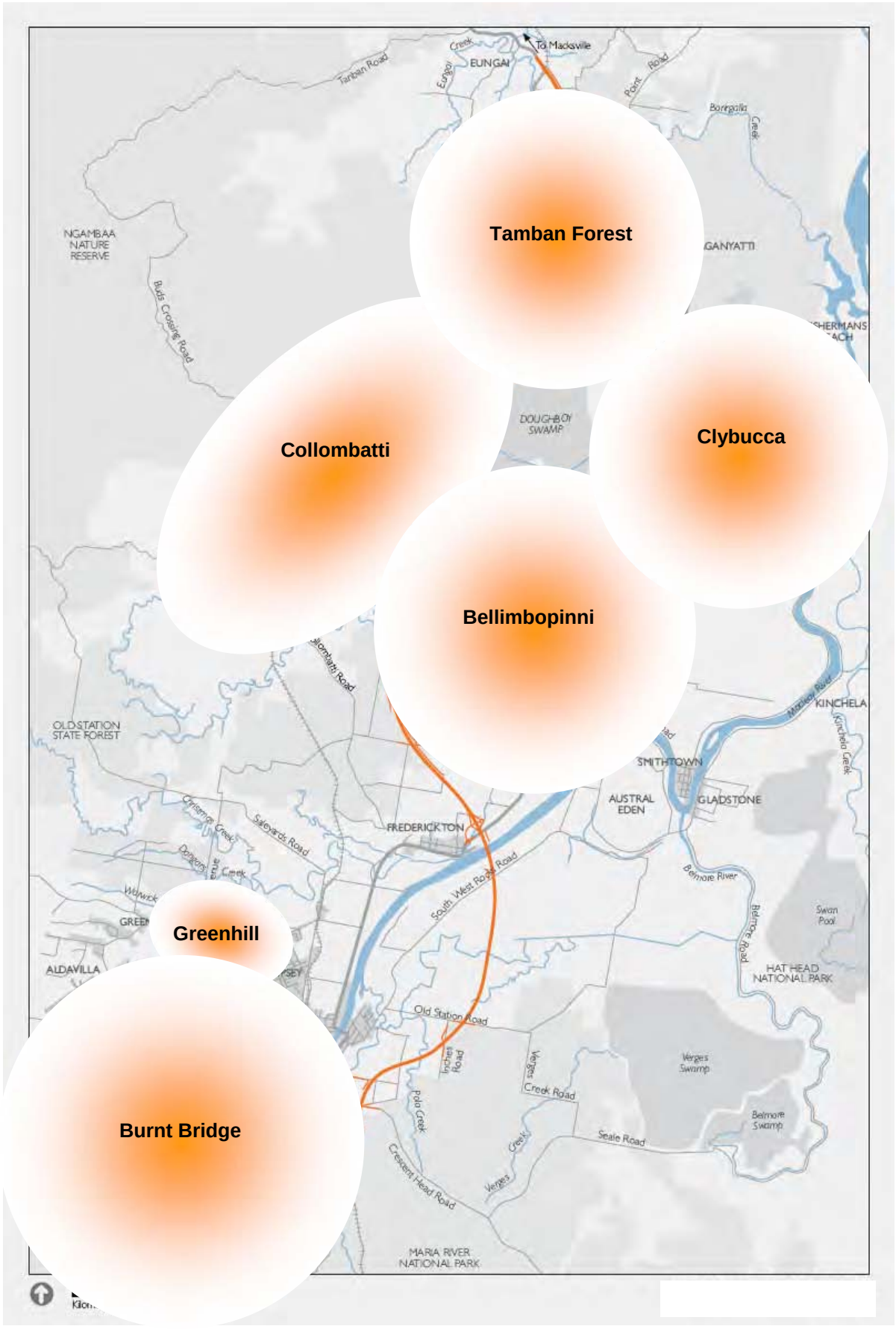

Figure 5.1 General locations of significant Aboriginal cultural heritage areas – shaded yellow
Base map supplied by Parsons Brinckerhoff (after Figure 4.13 in Parsons Brinckerhoff 2003

6. EUROPEAN HISTORIC OVERVIEW

6.1 Early History

Exploration of this part of the north coast region began in 1770 when Captain Cook travelled along the eastern coast and noted smoke at the mouth of the Macleay River at an area he referred to as *Smoky Cape*.

The town of Kempsey is the main European settlement in the Macleay River Valley and the history of its district is indivisible from that of the river and its valley.

The first recorded European visitors to the valley occurred in 1817 when the *Trial*, a small sailing vessel, sank in a coastal embayment now named after it - Trial Bay (Neil 1972, Riggs 1988). The *Trial* had been seized in Sydney by a group of escaped convicts and was wrecked on 14th January 1817 (Thorpe 1968). European attention was drawn to the existence of the Macleay River when a party of soldiers under Commander White on board the *Lady Nelson* came to the area in search of the missing convicts. It appears that several survivors lived with the local Aboriginal people for a number of years. The next European visit to the river occurred in 1818 when John Oxley passed through the lower reaches of the river valley during a survey expedition (Neil 1972, Thorpe 1968). Oxley reported in December 1820 that the country was of poor quality being sandy and infertile. Oxley's exploration appears to have been near the mouth of the river, which consisted of coastal dunes and swamplands.

In 1825 Captain A.C. Innes, the commandant at the Port Macquarie Penal Settlement, sent a party overland to explore the region of the Macleay River Valley. The party was responding to reports by an escaped convict of an extensive, fertile river valley north of Port Macquarie. The party on reaching the river in the vicinity of Commandant Hill rowed down the river to Trial Bay before proceeding back to the penal settlement. As a result of favourable reports from the party Innes in 1827 established a cedar collecting station just to the north of Euroka Creek on the Macleay (Neil 1972). This was the first white settlement in the Macleay Valley.

Between 1825 and 1830 at least ten escapees from Moreton Bay traversed the area as they travelled south to Port Macquarie. Other escaped convicts arrived in the area in the 1830's. In 1835 Constable John Mackintosh explored the area from the Clarence River south to Port Macquarie (Prentis 1972: 108-110, 115).

Many of those who were resident at Port Macquarie were well off and well connected with the upper levels of Colonial society (Neil 1972). As such they had extensive knowledge of the regulations in force in the colony and had some influence in determining that policy. Many of these people were the first to take up land in the Macleay Valley. The Government refused to allow settlement until 1835 when the Governor extended the Limits of Settlement to the southern bank of the Macleay River. It is highly likely that these early landowners influenced the decision of the Governor, and due to their position at Port Macquarie were able to prevent or hinder others from taking up land until they were ready. Surveys of the forest grants were undertaken in 1835 with the size of each grant varying. Squatters also moved to the north side of the river driving both cattle and sheep overland from Port Macquarie (Thorpe 1968).

The Governor finally gave approval for settlers to move north of the river on 1 October 1836, and by 1841 land had been taken up as far as Cunderong with settlers utilising all land within a few miles of the river. The big sheep stations within the valley were the largest employers at the time. A census at this time indicated that there were 87 free settlers (both male and female) of all ages and 111 assigned convicts (Neil 1972:28). Only one of the convicts was a woman.

6.2 First Settlers and Town Subdivisions

Among the first settlers to take up land grants in the Macleay Valley was Samuel Onions who received a grant of 812 acres on the south bank of the Macleay River in 1836 (Figure 6.1). This grant was at the site of the present East Kempsey (Neil 1972, Riggs 1988, Richards 1996:14). Onions had arranged to sell his grant to Enoch W. Rudder, a Sydney Spring Street merchant originally from

Birmingham who had arrived in the Colony in 1834. Rudder named the land Kempsey after a valley in Worcestershire, England. Rudder came to the Macleay Valley in March 1835 in search of cedar, and planned to use his holding in the Macleay Valley as a base for his operations (Riggs 1988). During his 1835 visit, Rudder noted that he and his companions (John H. and Benjamin Sullivan) were the only three Europeans in the area (Richards 1996:14).

John H. Sullivan took up a selection he called 'Calatina' on the south side of the river a few miles above Kempsey. Rudder commenced clearing, cultivating and rearing stock on his land and brought his wife and nine children to live at Kempsey in 1837. He was assigned a group of convicts to assist in the labour. Following exploitation of the local cedar, and experiments with various crops including the first wheat crop for the district, he decided that he would also turn a profit by subdividing his grant into an urban subdivision for a town called Kempsey.

In November 1836 the first sale of town allotments was carried out with the riverside blocks being the first to sell. The advertisement in the Herald (14 Nov 1836) somewhat imaginatively stated that 'The highroad to New England and Liverpool Plains runs through the Village of Kempsey'. However, the first bullock team did not reach Armidale till 1855, a journey of three months (Richards 1996:14). Despite the early and favourable start of the sale, by 1839 only five buildings stood in the fledgling town – Rudder's own house, an Inn and adjacent house, and two other houses. The major difficulty confronting Rudder was getting his timber to market (Riggs 1988). This was achieved by establishing a small port in Trial Bay. Once Rudder was established, his property at Kempsey became the main centre of activity within the valley (Thorpe 1968).

Among the first settlers on the north side of the river, known as Central Kempsey, was Thomas Bradbury, who built and opened the first store, and James Thompson who built and opened the first inn in 1840. Central Kempsey was situated on subdivisions of part of land grants to William Smith (1850) and John Verge. In 1842 the settlements on either side of the river were linked by a ferry that was owned by Rudder, who charged four pence for each crossing (Richards 1996:15).

In 1856 a government surveyor laid out the township of West Kempsey, effectively making three settlements including Rudder's East Kempsey and Central Kempsey. By 1859 the population of East Kempsey was 150, West Kempsey was 212 and the remainder of the river included 1001 (Richards 1996:15). The village was proclaimed a municipality in 1886 that incorporated East, West and Central Kempsey.

6.3 The Valley Economy and Development

Sawyers arrived in the Macleay Valley in 1836 and cedar gathering became the major occupation in the valley for the first 20 years of its settlement. Cedar cutting on unallocated Crown land was illegal and sawyers had to have a license to cut the timber. The process was also a revenue raiser for the Colonial Government as a duty was imposed on the collected timber (Neil 1972:29). In May 1839 a new act allowing for access to timber provided a license costing £4 (about $8.00) was obtained from a Police Magistrate or Lands Commissioner. The issuer of the license could decide who was worthy of receiving such a license (Neil 1972:31).

By 1853 all the cedar along the Lower Macleay (below Belgrave Falls) had been cut and the land subsequently occupied for cultivation and grazing. The economy of the Macleay Valley was severely affected between 1841 and 1844 following the exodus and movement of cedar loggers to the north. Although Red Cedar was the main target of the sawyers that came into the valley, other timbers were also available including Flooded Gums, White Cedar, Mahogany, Rosewood and Sassafras (Thorpe 1968).

The development of the Macleay Valley was somewhat different to other areas of Colonial NSW in that mining played no part in its development. Gold was not found in any great quantities with the only significant mining activity being Antimony mining at Corangula in the 1880s (Thorpe 1968).

Despite the extensive logging conducted in the Macleay Valley, the earliest and most extensive land use consisted of agricultural and grazing activities (Thorpe 1968). Large stations had been established grazing both sheep and cattle. Failures were frequent during the early years and the living was hard. Due to the requirements of the licenses, the early dwellings on the properties were single room shacks. Many of the owners were absent with managers and workers tending their lands.

Figure 6.1 Extract from Parish map of Kempsey 2nd Ed 1880s, showing Samuel Onions original land grant of 812 acres and subsequent town subdivisions. Verge and Smith owned the portions on the opposite bank of the river.

In 1841 experiments were carried out into the viability of growing sugar cane in the area (Thorpe 1968). These experiments were conducted by the Colonial Sugar Refining Company, which had established a large mill at Darkwater. Despite some early success the cane production failed, as did similar experiments to grow rice. Many growers did not wish to be bound to one operator and opened their own mills. These small mills were set up at a cost of about £25 ($50), and could turn out between a quarter and half a ton of sugar a week. The CSR mill at Darkwater crushed at a loss for the first three seasons and shortly after, in 1873 moved to the Clarence District. With the loss of the big mill, many cane producers went bust. The plantations decreased in number and within a few years most of the smaller mills had closed down (Neil 1972:72-73).

Coastal shipping via the river corridor was important to the economy of the Macleay Valley (Thorpe 1968). In the early years this was the only means of getting commodities, especially cedar, in and out of the valley. The alternative was an arduous and expensive overland trip to Port Macquarie. The first shipment of cedar was sent out in early 1837, and by 1859 there was a regular service to and from the Macleay River Valley. Small schooners and ketches were the first on the river.

Mr W. Marshall is attributed with opening up the Macleay with his wooden paddle steamer the *Fire King*, (of 221 tons) that was built on the Macleay in Marshall's own yard in 1866 (Richards 1996:10). The Clarence and Richmond River Steam Navigation Company, later known as the North Coast Steamship Navigation Company entered the traffic in the 1860s. Initially the loading and unload was carried out at wharves on the southern side of the Macleay River. These wharves were in what is now known as East Kempsey. The steep banks of the river hindered the access to and from the wharves. East Kempsey was built on high ground above the flood levels. To overcome these problems new wharves and storage areas were laid out on the flood-prone areas on the northern bank of the river. (Figure 6.2). Timber was not the only commodity sent out – tallow, hides, wheat and maize were included in the list of goods carried (Neil 1972:43). The main shipping centres in the valley were Kempsey, Darkwater (later Gladstone) and Warneton. Darkwater was established at the junction of the Macleay River and Darkwater Creek in 1864.

Figure 6.2 Excerpt from the Town map of West Kempsey 7th Ed 1956, showing the government and private wharves on the Macleay, immediately upstream of the former bridge crossing.

Shipbuilding was an industry that developed along side the cedar loggers. Several shipyards operated along the Macleay River from the mid-1830s onwards. In 1837 for example three shipbuilding stations were active on the Macleay River, the largest being Hay and Co. This company received its license to build ships as early as December 1835. Yards on the Macleay included those established by W. Marshall, D. O'Callaghan, a Mr Bartly, Messrs Newton, Ferrier & Malcolm, and John Stuart who established a Yard just inside Grassy Head around 1840 (Richards 1996:16).

The town of Frederickton was surveyed in 1852 by surveyor Drake who was commissioned by Frederick Chapman to subdivide a portion of his 1849 station at Yarrabandini for a town on the high ground at the junction of Christmas Creek with the Macleay. The land taken up in grants and used for grazing kept small farmers out of the valley (Thorpe 1968). This was partially remedied in 1851 when 'brush land' away from the river was cleared and divided into small farm blocks. Situated on high ground on the north bank of the Macleay, Frederickton after the passing of the Robertson Land Acts between 1861 and 1871 was also becoming important with a population of 188. By 1890 the population of Kempsey was 2000 and the town had three banks operating. In 1877 the first major

construction in the Valley took place – the construction of Trial Bay Jail. The first prisoner entered the Jail in 1886.

The first 50 years of settlement in the Macleay Valley saw dependence on timber, maize growing and grazing of beef cattle (Thorpe 1968). By 1885 the limits of expansion had been reached. Prior to the large scale clearance of the forests on the valley lowlands, historic accounts of the Macleay River note a deeper and narrower corridor fringed by forests including Eucalyptus, Cedar and Redwood (MRHS 1984:1). Following land clearance for agriculture and dairying, consequential changes in flooding patterns, hydrology and silt loads formed the wider and shallower river course present today.

After 1886 a major change occurred in the land use and economy of the valley with the introduction of dairying. The expansion of dairying gathered momentum from 1890 onwards. Cream separating stations were established in the valley at Bellimbopinni, Kinchela, Smithtown, Clybucca, Turners Flat, Frederickton, Warneton, Belmore River and West Kempsey (Neill 1972:77). By 1898 there were 29 such stations operating. About 1897-1898 the introduction of small separators enabled farmers to separate their own cream and the daily carting of milk to the separators ceased. Some of the separator owners replaced their machines with separator churns and established butter factories. Butter factories were established at Frederickton and Warneton. By 1916 there were 1,200 registered dairies operating in the Macleay Valley. The first Cheese Factory was established at Warneton in 1890 followed by others at Smithtown, Frederickton, Kinchela, and Kempsey. Pig raising was a valuable sideline for the dairy farmers who were able to feed the pigs on the waste from the dairies.

Changes to the distribution of the population in the Macleay valley were brought about by the change to dairying. These included a concentration of the population in the main towns and villages. By 1900 the pattern of land utilisation in the Macleay Valley had been set (Thorpe 1968). The lowlands and valley floor flood plain were cleared for dairying and agriculture. The forested valley slopes continued to support logging and local timber mills based on native hardwoods products such as poles, sleepers, girders, and fencing posts and rails (MRHS 1984:27). Much of the cut timber was hauled by horses, bullock teams and later by truck to river wharfs, such as at Kempsey and Frederickton, where they were loaded onto droghers or ocean going vessels for transport to markets and clients.

By the mid twentieth century the timber industry, resourced by a network of forest reserves and private lands, supported a record number of local mills with the number of private mills outnumbering the crown mills. In 1948 there were a reported 1000 men employed in the industry and over 100 mills operating in the forestry district extending between Urunga, Telegraph Point and the Carrai Plateau (MRHS 1984:41). Local timber mills included Dangar & Watt in Prince Street; Hennessy's Mill on River Street (1860s-1958-); Jamieson's Mill at Frederickton (1911-1982); McIlwain's (later owned by Allen Taylor & Co.) on Crescent Head Road, South Kempsey; Eungai Sawmill at Eungai Rail (Miles & Sheridan); O'Learys and Eversons at Kundabung; and Ricketts at Rudders Lagoon (MRHS 1984:15, 32, 45-50).

From the turn of the century, major changes in the valley involved improvements in transport, amenities, and services. There was a slow expansion of the dairying industry, while some beef cattle grazing continued. There was some decline in the level of cropping and an expansion of some minor forms of production such as bananas, vegetables and tourism. Tourism especially has expanded in the later half of the 20th Century with improvements brought about in transport.

6.4 Rail, Road and River Transport

The railways reached Kempsey in 1917, and the Pacific Highway was established by the 1930s (anon 1952). The railway slowly replaced the river as the main transport route for incoming and outgoing commodities such as timber and farm produce. The primacy of rail would slowly be replaced by the highway following the asphalting of the Pacific Highway in the 1950s.

Maritime traffic on the Macleay River continued well into the twentieth century. An example is the construction of the *Arakoon,* a steamer of 873 tons, 190 feet in length with twin screw, which was built by the North Coast Steamship Navigation Company (NCSNC) in 1926 especially for the Macleay River. She ran for most of her life on the River and was finally sold in 1955 to John Manners & Co and renamed the *Glebe Breeze.* The NCSNC went into voluntary liquidation in 1954 (Richards 1996:113, 154, 157). Wharfs and jetties were an essential part of the economic infrastructure of the

Macleay and survived as party of the river landscape well into the 1950s. Private wharves were established by factories such as mills and dairies, and townships maintained both government and private passenger wharves.

The first roads in the district originated as rough tracks for the hauling of logs to the riverbanks. From that point the logs were floated down river to the mouths where ships waited to load (Anon 1952:44). The Pacific Highway, which now forms the major road through the Kempsey district, and which provides a link between Sydney and Brisbane, developed and changed over time. (Figure 6.3). In 1857 Captain Martindale the Commissioner for Internal Communication, published a map that showed the coast road running from Raymond Terrace to Kempsey. The road then followed the Macleay River Valley to Armidale. From there it dropped back to the coast near Grafton. By 1866 the coast road had been extended north of Kempsey to Frederickton. By the 1880s the portion of the road within the study area approximated its current corridor. Subsequent changes included: shifted the Maria River crossing 750 metres downstream; removing right angle bends near Bellimbopinni and on the Clybucca ridgeline; and bypassing the small settlement at the Travellers Rest Inn, east of Eungai Rail.

In the 1880s the road was reported as being in a primitive state. By 1895 the road had been extended to Coffs Harbour. Despite this it was still considered quicker in 1909 to travel by sea between Sydney and the North Coast. A survey of the road alignment in 1909 documents a variously gravelled roadway, with a bridge at Kempsey, and ungravelled hilly sections north of Clybucca, passing via the Traveller's Rest Hotel on the current Stuart's Point Road. In the 1920s when motor vehicles became more common, much of the road was considered primitive, being little more than a cleared earth formation. During summer the road caused major dust problems and after rain became a quagmire. By 1952 the Pacific Highway had been sealed for it's entire length. Up until at least the 1930s most of the rivers along the road, including the Macleay River, were crossed by punt or ferry. (Figure 6.4).

The Macleay River was one of the earliest to be bridged. The original bridge, a modified Allan Timber Truss Bridge, was opened to traffic on Easter Monday 1900 (Allen 1924). At the time of its construction it was the largest timber truss bridge in Australia (*Macleay Argus* June 10th, 1969). The bridge was replaced in 1959.

The arrival of the railway, and improvements to roads in the Macleay River Valley District and the North Coast as a whole, saw the demise of coastal shipping north of Newcastle.

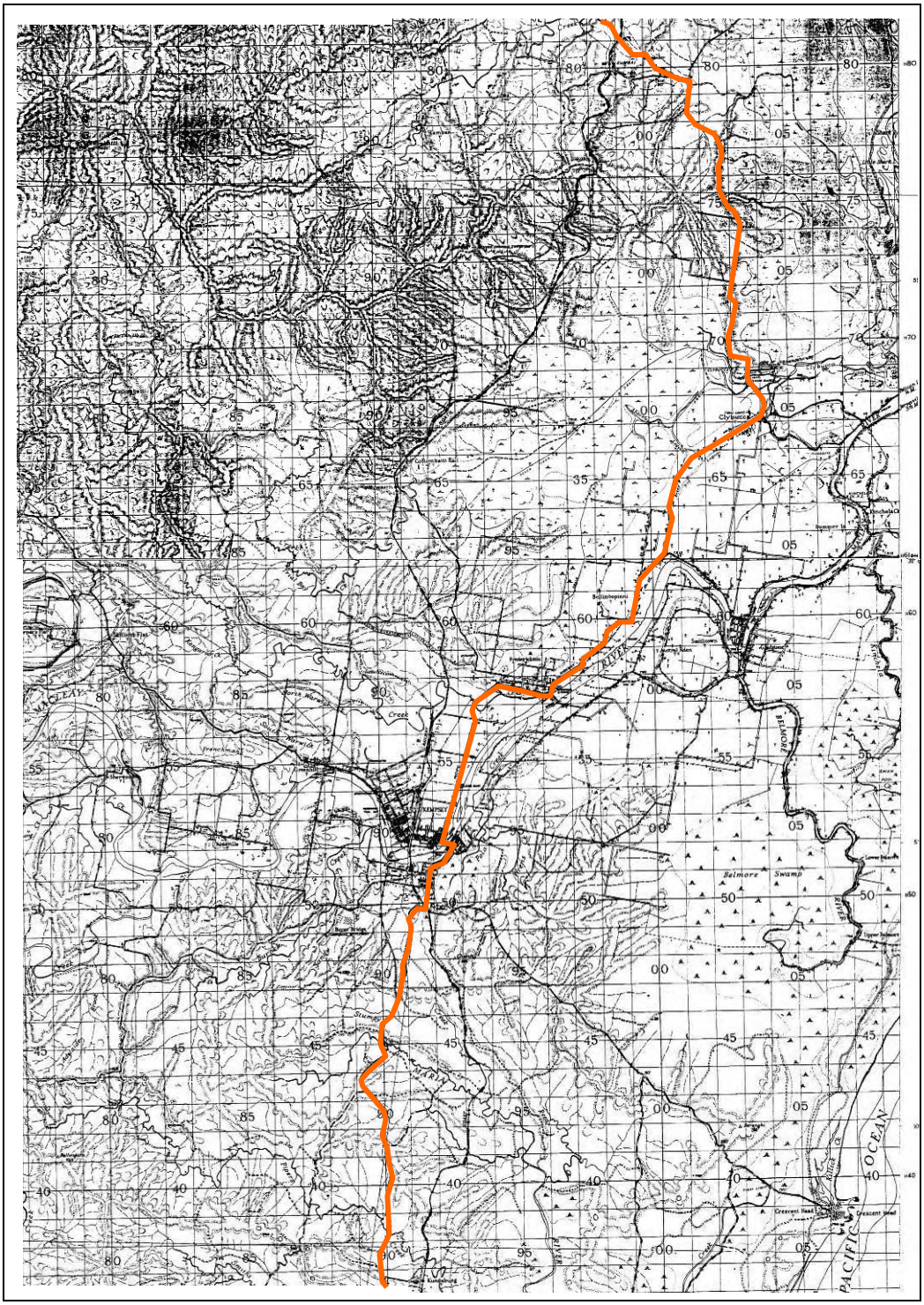

Figure 6.3 Extracts from the 1942 Kempsey and Bellbrook 1:63,360 topographic maps (reduced), showing the extent of settlement at that time and the former Pacific Highway alignment (red).

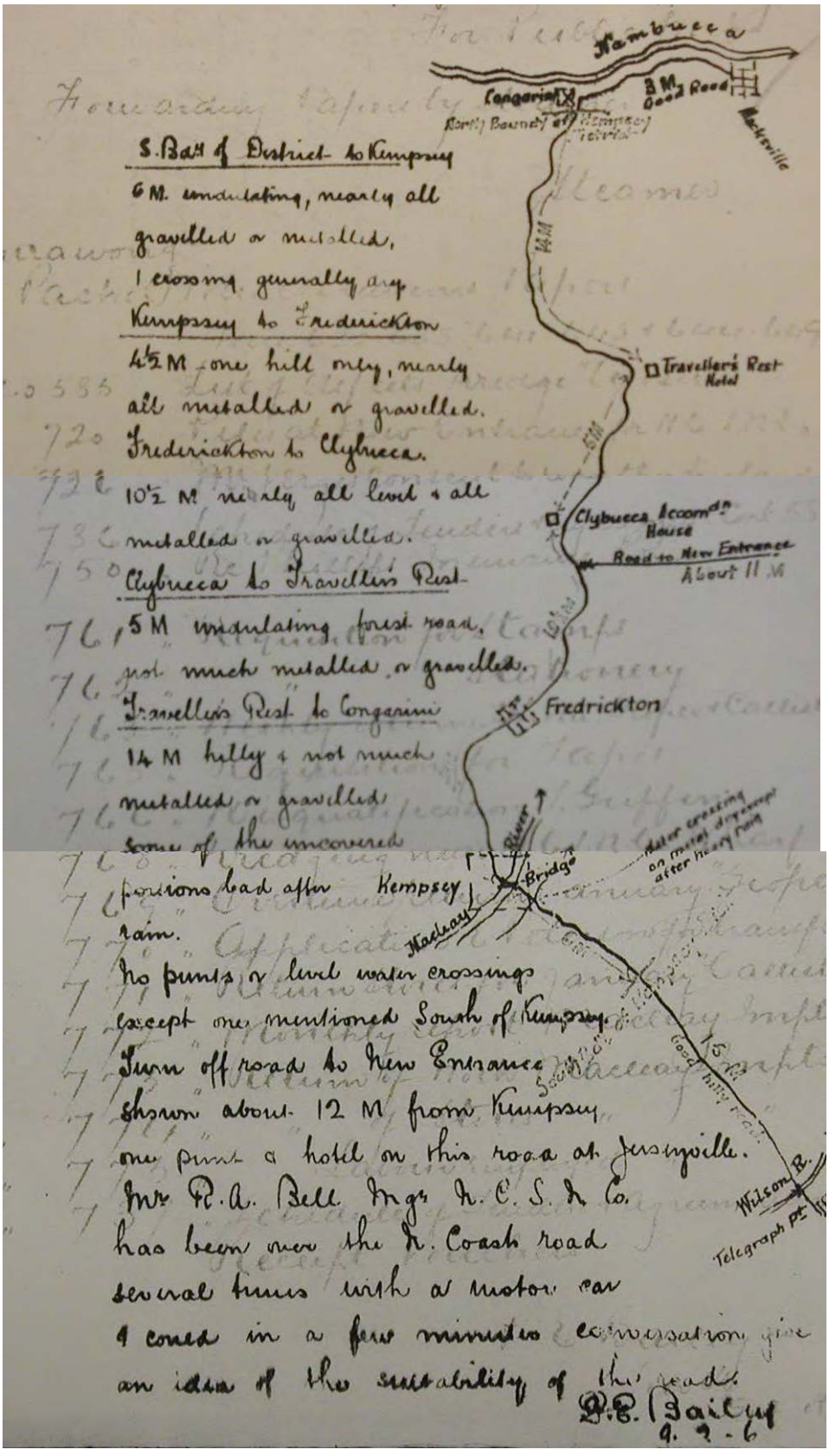

Figure 6.4 A page from a survey of the road conditions between the Nambucca and Wilson Rivers by D. E. Bailey 1906 (courtesy Macleay River Historical Society).

6.5 Route Selection Study

An historic cultural heritage assessment of a broad area of land under consideration for various Kempsey to Eungai Pacific Highway route options was conducted in 2003 (Navin Officer Heritage Consultants 2003). The assessment included literature review and heritage register searches, targeted field survey and consultation with local landowners, residents and the Macleay River Historical Society.

6.5.1 Historic Sites

One hundred and nine historic sites or features were identified as occurring in the route selection study area. These identifications were based mostly on existing heritage listings, limited field survey, and a limited review of published sources, historic maps and sources held by the local historical society. The resulting site inventory could not be considered to be comprehensive or definitive as existing heritage registers, and consequently the inventory, are biased towards the built environment (standing buildings), public and church buildings, and sites within towns and population centres. The majority of the sites were located within, and close to, the town of Kempsey.

Site types included in the inventory were commercial, administration, farm and residential buildings, conservation areas/precincts, churches and schools, railway infrastructure, brickworks, parks, memorials, bridges, post and rail fencing, docks, wharves, ferry crossings and shipyards, and cemeteries. A number of potential archaeological sites were also identified.

Site types that were poorly represented by the inventory included archaeological sites and the location of former structures, the built environment outside of the main towns, rural homesteads and outbuildings, agricultural infrastructure (such as fencing and drainage systems), Aboriginal historic sites, and sites relating to the dairy and forestry industry.

6.6 Predictive Statements for Historic Sites in the Study Area

The main historic themes identified in the lower Macleay Valley are:

- Early Aboriginal history.
- Early European exploration and settlement.
- Forest exploitation and the development of the forestry and milling industries.
- The development of agricultural land, the history of various crops and the impact on the environment.
- The drainage of the wetlands.
- The development of the dairy industry.
- The formation and development of the towns, including Kempsey, Frederickton, Clybucca, Collombatti, Collombatti Rail and Eungai Rail.
- The maritime industry on the Lower Macleay.
- The development of transport infrastructure including the river, roads and railway.

Historic sites and features of heritage significance that may occur within the Kempsey/Eungai study area include:

- Buildings and structures focused in Kempsey and along the early centres and corridors of occupation, industry, travel and transport.
- Standing commercial and public buildings, most likely within the towns and urban landscapes.
- Nineteenth century structures such as farm dwellings, outbuildings, selector's and timber-getters huts surviving as standing buildings, ruins or archaeological deposits and most likely to survive on less developed rural properties, on early portion numbers, and in or near established farm building complexes.

- Former timber mills and associated infrastructure such as timber pole structures, remains of machinery, tracks and tramways surviving within State forests, in valley clearings adjacent to forest areas, and on the banks of the Macleay River.

- Traces of agricultural and industrial processing or extractive sites such as dairies, factories, and quarries found throughout agricultural lands on the valley floor and adjacent low ranges.

- Railway sites, features and infrastructure focused along the rail corridor.

- Sites associated with early roads will be closely associated with early cadastral road reserves, watershed ridgelines, and related to early river and creek crossing point.

- Archaeological sites such as the remains of former dwellings including homesteads, houses and huts, distributed in close association with land settlement patterns, and correlated with favourable agricultural lands, trading nodes and transport corridors.

- Transport and access routes such as bridle paths, stock routes, and highway alignments of varying forms and ages, surviving as abandoned remnants adjacent to modern transport routes, or as alignments now followed by more modern or upgraded road and track infrastructure.

- Old fence lines (such as post and rail fencing) occurring along road easement boundaries and farmlands. Other indications of field systems such as drainage channels and ridge and furrow ploughlands are likely to survive in low lying agricultural ground, especially in areas which are now used for grazing, rather than cropping.

- Shipwrecks and the submerged remains of other structures or deposits such as from wharves, jetties and piers likely to occur on the banks and bed of the Macleay River. Jetty wharf locations tend to cluster at towns and adjacent to industrial sites.

6.7 Existing and Proposed Heritage Listed Items

There are currently no heritage listed places or items within the proposed Upgrade easement.

One listed item, the Frederickton Public School group, is situated to the west of a proposed entry and exit road for the proposed Frederickton interchange. This item will not be directly impacted. The proposed roadway comes within 30m of the northeastern corner of the school property, and 50 m of school buildings. The Frederickton Public School group is listed on the Regional Environmental Plan 1994, the Kempsey Local Environmental Plan 1987, and the State Heritage Inventory (database no. 7723), and has also been entered on the Register of the National Estate and on the Register of the National Trust of Australia (NSW).

The proposed construction of a flood levee at Frederickton along the northern bank of the Macleay River would traverse the listed property of the former Frederickton Hotel (now the Macleay River Hotel). This property is listed in Schedule 1 of the Kempsey Local Environmental Plan 1987. This item is further described as site KEH5 in Section 7.1.2.

A review of cultural heritage items is currently being undertaken by the Kempsey Shire Council. A number of listing proposals have been drafted as a consequence of this review and are still under consideration by Council. Six of these draft proposals are of relevance to the proposed Upgrade and associated works. These are listed in Table 6.1.

Table 6.1 Draft heritage listing proposals by the Kempsey Shire Council of relevance to the proposed Upgrade

Item	Location	Relationship to proposed Upgrade
Frederickton Conservation Area	Includes river frontage lots east of Creek Street to the end of Lawson St, and land to the east of the Public School grounds	▪ Flood levee works would be situated within some river frontage lots ▪ The Frederickton interchange entry and exit roadway would impact upon lands to the east of the school grounds.
Frederickton War Memorial	Cnr of Great North Road and Pacific Highway	▪ No direct impact
Residences/Timber Mill/Ship Builders	Lawson St	▪ Flood levee works would be situated on these lots in close proximity to the river bank
Butter Factory	1-5 Pacific Highway	
Boat Ramp and associated Park	Macleay St	
Residences	1-3 Macleay St	

7. RESULTS

7.1 Heritage Recordings

7.1.1 Aboriginal Heritage

Five previously recorded archaeological sites (identified in the Kempsey-Eungai Route Selection Study) are located within or near the proposed Upgrade and associated area of construction. These sites are KE14, KE15, KE16, KE23 and 30-3-111.

One Aboriginal site, KE42, and twelve areas of potential archaeological deposit (PAD), KEPAD1-12, were identified in the course of the 2005 field survey of the proposed Upgrade study area.

To maintain the security of site locations, and in accordance with the wishes of the local Aboriginal community, only generalised locations for these recordings are presented in Figure 7.1. Map grid references and site location maps for Aboriginal sites and PADs are provided in Appendices 3 and 4. These are Confidential Appendices and access to them is restricted to Aboriginal stakeholder groups, relevant statutory and government authorities and their authorised agents.

Previously Recorded Sites

KE14 Artefact Scatter

This site is an open artefact scatter located on an unsealed (and unnamed) vehicle track on the crest of a southeast trending ridgeline on the eastern edge of the Macleay Range. Thirty one artefacts were visible on a vehicle track over an area 300 x 100 metres. Deposit in the area was gravelly sandstone and natural quartz gravels were ubiquitous in the area. The area was generally forested.

Exposure incidence in the site area was 80 percent. Visibility in the exposures was 65 percent. Visibility away from the exposures was nil. The potential for the site to be larger than recorded and to contain more artefacts is high. It is possible that sites KE14, KE15 and KE16 are exposures of the same artefact occurrence. The potential for the site to be associated with subsurface *in situ* deposit is low.

This site will be directly impacted by the proposed Upgrade.

Artefacts (sample)

1. dark grey fine grained siliceous (chert?) flake, secondary flaking along one margin, 15 percent pebble cortex, some recent edge damage, 33 x 27 x 13 mm
2. milky quartz microblade core, three platforms, 5 percent non alluvial cortex, 27 x 20 x 10 mm
3. grey chert flake, broken, distal end missing, 16 x 12 x 4 mm
4. green/grey volcanic flake, 27 x 22 x 6 mm
5. milky quartz bipolar microblade core, 17 x 11 x 8 mm
6. light grey chert flake, broken, distal and proximal ends missing, 16 x 15 x 6 mm
7. green/grey volcanic flake, broken, proximal end missing, 21 x 25 x 9 mm
8. grey fine grained chert flake, platform preparation on dorsal side, 34 x 20 x 13 mm
9. grey patinated chert flake, recent edge damage, 33 x 27 x 12 mm
10. grey banded chalcedony flake, broken, distal end missing, 16 x 13 x 6 mm
11. dark grey chalcedony flaked piece, 10 percent alluvial pebble cortex
12. dark grey fine grained volcanic flake, broken, proximal end missing, 13 x 16 x 3 mm
13. light grey/brown patinated chert flake, 31 x 27 x 9 mm
14. dark grey/green very fine grained volcanic scraper, secondary retouch along 70 percent of margin including distal end, 42 x 35 x 12 mm

KE15 Artefact Scatter

This site is an open artefact scatter located on the crest of a north trending ridgeline on the eastern edge of the Macleay Range. Three artefacts were visible on a vehicle track over an area 2 x 1.5 metres. Deposit in the area was fine gravelly loam and vegetation was open forest.

Exposure incidence in the site area was 60 percent. Visibility in the exposures was 70 percent. Visibility away from the exposures was 15 percent. The potential for the site to be larger than recorded and to contain more artefacts is moderate. It is possible that sites KE14, KE15 and KE16 are exposures of the same artefact occurrence. The potential for the site to be associated with subsurface *in situ* deposit is low.

This site will be directly impacted by the proposed Upgrade.

Artefacts

1. fine grained grey/green volcanic flake, some secondary flaking (possibly recent damage from cars), platform consists of c. 5 percent alluvial cortex, 43 x 40 x 10 mm
2. fine grained grey/green volcanic flake, c. 20 percent alluvial cortex, 26 x 19 x 5 mm
3. milky quartz core, two platforms, 22 x 24 x 12 mm

KE16 Artefact Scatter

This site is an open artefact scatter located on the basal slopes of a north trending spurline. Three artefacts were visible on a vehicle track/log dump area (4 metres x continuous). Deposit in the area was fine gravelly loam and vegetation was woodland.

Exposure incidence in the site area was 70 percent. Visibility in the exposures was 80 percent. Visibility away from the exposures was 15 percent. The potential for the site to be larger than recorded and to contain more artefacts is moderate. It is possible that sites KE14, KE15 and KE16 are exposures of the same artefact occurrence. The potential for the site to be associated with subsurface *in situ* deposit is low.

This site will be directly impacted by the proposed Upgrade.

Artefacts

1. grey patinated banded fine grained grey/green chert flake, broken – distal end missing and some edge damage, 20 x 20 x 6 mm
2. milky quartz broken flake, broken - distal end missing, secondary flaking or use wear along one margin, 18 x 12 x 7 mm
3. fine grained light grey/green patinated volcanic flake, recent edge damage, 44 x 24 x 15 mm

KE23 Possible Aboriginal Scarred Tree

This site is a possible Aboriginal scarred tree located in open forest on the basal slopes of a shoulder on a watershed ridgeline crest. The tree is a Blackbutt Eucalypt and is in excellent condition. The scar is in excellent condition, although the scar surface has been burnt. There is a faint metal axe mark across the scar.

approximate height of tree:	25-30m
girth of tree (at breast height)	4.45m
inside scar length (excluding regrowth):	43cm
scar length (including regrowth):	120cm
maximum width of regrowth	45cm
maximum depth of regrowth	11cm
maximum scar width (excluding regrowth):	15cm
maximum scar width (including regrowth):	95cm
height of inside scar above ground:	2.2cm
scar faces	NE
axe marks?	yes (metal)

This tree is considered only a 'possible' scarred tree (on a scale of possible, probable, definite – see Section 3.5.2). An alternative interpretation is that the scar has been created as a surveyors mark. The tree is located on the cadastral parish boundary. The scar may be too fresh to be of an age that could confidently place the scarring event within a timeframe when Aborigines may have been traditionally exploiting the forests of the Kempsey area. The scar is also irregular in shape.

This site is located 80 metres northeast of the proposed Upgrade and should not be impacted by the development works.

30-3-111 Artefact Scatter

This site is an open scatter of around twelve quartz and chert artefacts originally recorded by Egloff in December 1988. The site was located on a spurline crest adjacent to a valley floor. Artefacts were visible in the ruts of an access track that was used to service an electricity line.

This site is located 80 metres east of the proposed Upgrade and should not be impacted by the development works.

Sites Recorded in the Current Study

KE42

Site KE42 is an open artefact scatter located on a bench on the basal slopes of a spurline. Eight artefacts were recorded within a 10 x 150 metre area on an unsealed railway access road. (Plates 7.1 and 7.2). A cutting for the railway which drops immediately to the west of the road has been heavily disturbed by earthmoving activity. Deposit in the area was compacted sandy loam and vegetation comprised sparse woodland.

Exposure incidence in the site area was 100 percent. Visibility in the exposures was 95 percent. Visibility away from the exposures was 5 percent. The potential for the site to be larger than recorded and to contain more artefacts is moderate. The potential for the site to be associated with subsurface *in situ* deposit is low.

This site will be directly impacted by the proposed Upgrade.

Artefacts

1. cream/yellow tuff flake, 28 x 24 x 3 mm
2. light grey tuff small core, 28 x 35 x 24 mm
3. light grey tuff flake , 30 x 21 x 4 mm
4. cream/yellow tuff small core, 31 x 37 x 30 mm
5. cream/yellow tuff flake piece, 41 x 22 x 12 mm
6. cream/yellow tuff flake, 36 x 35 x 27 mm
7. cream/yellow tuff flake, 24 x 21 x 4 mm
8. cream/yellow tuff flake piece, 24 x 21 x 4 mm

Plate 7.1 General view of site KE42

Plate 7.2 Five of the artefacts recorded at site KE42

PADs Recorded in the Current Study

The following potential archaeological deposits (PADs) have been assessed as having moderate or greater archaeological potential. These assessments have been based on previous archaeological findings and the predictive model presented in this report. The PAD locations have been identified based on field observations, and the interpretation of topographic mapping and aerial photography.

All of these PADs will be directly impacted by the proposed Upgrade. Each PAD forms part of a continuous landform zone and is defined as that portion which will be directly impacted by the proposal. Given that the zones extend to either side of the proposed Upgrade alignment, it is not possible to avoid impact by amending the alignment.

KEPAD1

CH5940 – CH6420

This PAD is located on either side of Pola Creek at Inches, about 1.5 kilometres east of East Kempsey. The PAD consists of locally elevated ground, including alluvial terrace and point bar deposits within a 100 metre margin of the creek banks. Due to the angled traverse of the proposed highway, the PAD includes an alignment interval approximately 140 metres west of the creek, and 330 metres to the east. An isolated find (KE10) was recorded during the route selection study, on the same landform, 570 metres downstream of the proposed creek crossing.

The archaeological potential of this location is based on the presence of well drained, level, and locally elevated ground adjacent to a major freshwater creekline and swamp basin.

KEPAD2

CH8770 –CH9420

This PAD consists of a spurline crest, associated north facing slopes and an adjoining former wetland basin margin, located just south of the Frogmore flood plain. Prior to the agricultural draining of the swamp basin the basal slopes of this spurline would have formed the riparian margin to an intermittent swamp. The present swamp basin represents the most recent phase in a long-term process of sedimentation which has infilled a former Pleistocene aged Macleay River estuary. The basal slopes of the spurline adjoining the basin represent the former shoreline of the estuary. The spurline which now extends across the Macleay River flood plain would have formerly been a small peninsula and headland. The PAD consists of an approximately 650 metre interval of the proposed Upgrade alignment. It is about 2.5 kilometres north of KEPAD1.

The archaeological potential of this location is based on the presence of well drained, level, and locally elevated ground adjacent to a wetland basin; an elevated crest on a low, valley floor spurline; and the potential for aggrading sedimentary deposits associated with a former estuarine and subsequent freshwater wetland shoreline.

KEPAD3

CH12230 - CH12420

This PAD is located on the southern bank of the Macleay River. It includes, at its southern end, an elevated rise adjacent to a flood channel, and extends northward across lower alluvial flats and a levee deposit to the modern river bank. The PAD consists of an approximately 200 metre interval of the proposed Upgrade alignment. It is about 3.5 kilometres north of KEPAD2.

The archaeological potential of this location is based on the presence of: locally elevated, alluvial deposits forming the banks of a major estuarine river; and high, well drained ground in close proximity to the river and a wetland basin/flood channel.

KEPAD4

CH12760 – CH12860

This PAD is located on the northern bank of the Macleay River. It consists of a locally elevated levee deposit and associated alluvial flats adjacent to, and extending west of, a distinct break-of-slope. This break-of-slope represents the edge of the nineteenth century river bank. The current river bank is now some 73 metres to the southeast of this feature due to an accumulation of flood sediments associated with a slow south easterly movement of the river course (refer Figure 4.1). The PAD consists of an approximately 100 metre interval of the proposed Upgrade alignment and includes the full width of the proposed construction zone.

The archaeological potential of this location is based on the presence of locally elevated, aggrading alluvial deposits forming the banks of a major estuarine river.

KEPAD5

CH13220 - CH13400

This PAD consists of a crest, associated southeast facing slopes, and an adjoining wetland margin located on a spurline extending to the northeast of Frederickton. The basal slopes of the spurline include a relatively continuous rocky scarp which is an erosion feature of a former Pleistocene shoreline. This paleo-shoreline may have originally defined a marine embayment, prior to forming the aggrading edge of a now infilled estuary.

The associated spurline would have formed a low promontory into the former bay and subsequent estuary. An artefact scatter (30-3-108) was recorded by Clemens and Silcox in June 1988 on the crest of this spurline. Downslope of the scarp, basal slopes merge with a swampy creekline and periodic flood channel.

This PAD is approximately five hundred metres northeast of Frederickton and includes an approximately 180 metre interval of the proposed Upgrade alignment. An interchange is proposed for this area and the total width of the construction zone may amount to 260 metres. It is about five hundred metres north of KEPAD4.

The archaeological potential of this location is based on the presence of: level and locally elevated ground adjacent to a wetland basin; an elevated crest on a low, valley floor spurline; and the potential for aggrading sedimentary deposits associated with a former marine, estuarine and subsequent freshwater wetland shoreline.

KEPAD6

CH14400 – CH14900

This PAD consists of the crest and associated slopes on both faces of a spurline, similarly orientated and approximately one kilometre further northwest of the PAD5 spurline. A poorly drained valley floor is situated between the two spurs. The slopes on the southeastern side of the spur are steeper than those on the northwest. The basal slopes associated with each may have formed part of a former sheltered estuary shoreline.

This PAD is located about one kilometre north of KEPAD5 and includes an approximately 500 metre interval of the proposed Upgrade alignment. Some sections of this interval however would have low archaeological potential due to high gradients.

The archaeological potential of this location is based on the presence of: level and locally elevated ground adjacent to a wetland basin; an elevated crest on a low, valley floor spurline; and the potential for aggrading sedimentary deposits associated with a former estuarine shoreline.

KEPAD7

CH20880 - CH21600

This PAD consists of south and southwest facing basal slope and valley floor deposits associated with a low valley floor spurline situated on the northern margin of the Collombatti Creek flood plain. Like PADs 2, 5 and 6, these bedrock slopes mark the probable former shoreline of a now infilled estuary. A curvilinear complex of wetland depressions to the south and west of the PAD follows a former channel of Collombatti Creek. The basal slope deposits which constitute the PAD form a locally elevated riparian margin to the adjacent wetlands and may potentially include older deposits associated with the former estuary shoreline.

This PAD is located about seven kilometres north of KEPAD6 and includes an approximately 720 metre interval of the proposed Upgrade alignment.

The archaeological potential of this location is based on the presence of: level and locally elevated ground adjacent to a wetland basin; and the potential for aggrading sedimentary deposits associated with a former estuarine shoreline.

KEPAD8

CH24030 - CH24200

This PAD consists of the crest and upper slopes of a spurline saddle, situated on a low, valley floor spurline. The spur terminates 400 metres to the east where it abuts an open-water, meander of a creekline within the Collombatti Creek flood plain and Doughboy Swamp complex.

This PAD is located about two kilometres north of KEPAD7 and includes an approximately 170 metre interval of the proposed Upgrade alignment. A previously recorded isolated find, 21-6-148, is located 750 metres to the northwest on the crest of the same spurline.

The archaeological potential of this location is based on the presence of locally elevated and level crest on a low, valley floor spurline adjacent to a major drainage line and associated wetland basin.

KEPAD9

CH24900 – CH25300

This PAD consists of the crest and associated south facing slopes of a spurline, situated one kilometre north of KEPAD8, on the opposite side of a small valley. The spurline extends low across the valley floor and terminates 250 metres to the east. The basal slopes of the southern face of this spurline mark a probable former shoreline of a now infilled estuary. Deposits associated with these slopes may include former shoreline sediments. A previously recorded artefact scatter site, 21-6-149 is located on the crest of the same spur about one kilometre west of KEPAD9.

This PAD is located about one kilometre north of KEPAD5 and includes an approximately 400 metre interval of the proposed Upgrade alignment. Some mid-slope sections of this interval would have low archaeological potential due to high gradients.

The archaeological potential of this location is based on the presence of: an elevated crest on a low, valley floor spurline; and the potential for aggrading sedimentary deposits associated with a former estuarine shoreline.

KEPAD10

CH27300 - 27700

This PAD consists of the crest of a north-south orientated spurline, and its associated descending northeast facing slopes to a minor tributary gully. These slopes form the bedrock margin to the Doughboy Swamp and Collombatti Creek flood plain. Three artefact scatters (KE14, KE15 and

KE16) were previously recorded during the route selection study on adjacent slopes and crests within 500 metres of the PAD.

This PAD is located about two kilometres north of KEPAD9 and includes an approximately 400 metre interval of the proposed Upgrade alignment.

The archaeological potential of this location is based on the proximity of previously recorded sites; and the presence of a locally elevated terrain adjacent to the valley floor.

KEPAD11

CH29700 – CH30250

This PAD consists of basal slope and valley floor deposits on the southeastern side of a low valley floor spurline located on the northern most margin of the Doughboy Swamp. Like PADs 2 5, 6 and 7, the bedrock slopes adjacent to this PAD mark the probable former shoreline of a now infilled estuary. The now substantially drained Doughboy Swamp basin is situated about 300 metres to the south of the PAD. In prehistory the retention of water within the basin was probably more extensive and the wetland edge much closer. A tributary stream adjoins the eastern end of the PAD interval. The PAD consequently forms a locally elevated riparian margin to the adjacent wetland basin. It may also include older deposits associated with the former estuary shoreline and its early progradation.

This PAD is located about 2.5 kilometres north of KEPAD10 and traverses an approximately 350 metres interval of the proposed Upgrade alignment.

The archaeological potential of this location is based on the presence of level and locally elevated ground adjacent to a wetland basin; and the potential for aggrading sedimentary deposits associated with a former estuarine shoreline.

KEPAD12

CH30600 – CH30720

This PAD consists of the crest of a low spurline located on the opposite side of the tributary stream situated to the east of KEPAD11. It is located about 450 metres northeast of KEPAD 11 and includes an approximately 120 metre interval of the proposed Upgrade.

This spurline extends three kilometres to the south of this location across the valley floor and the now substantially drained Doughboy Swamp basin. It terminates within a kilometre of the Collombatti Creek line. As such, this valley floor spurline would have provided an important dry-land access route across the northern basin and its resources. It is one of two such spurlines, the other, two kilometres to the east, provides the current route for the Pacific Highway and an elevated context for the settlement of Clybucca.

An isolated find (KE26), and an artefact scatter (KE27) were previously recorded during the route selection study on the crest of this spurline, 500 metres and one kilometre south of this PAD. Close to the southern end of the spurline and 2.5 kilometres south of the PAD, an excavation into basal slope, former estuary shoreline deposits revealed Aboriginal midden deposits dating from around 5000 to 2300 years ago (Campbell 1972, Connah 1975, 1976, Knuckey 1999) (refer Sections 4.4 and 5.3).

The archaeological potential of this location is based on the presence of locally elevated and level crest topography, situated on a valley floor spurline, close to drainage lines and which may have served as an access route into the Doughboy Swamp basin.

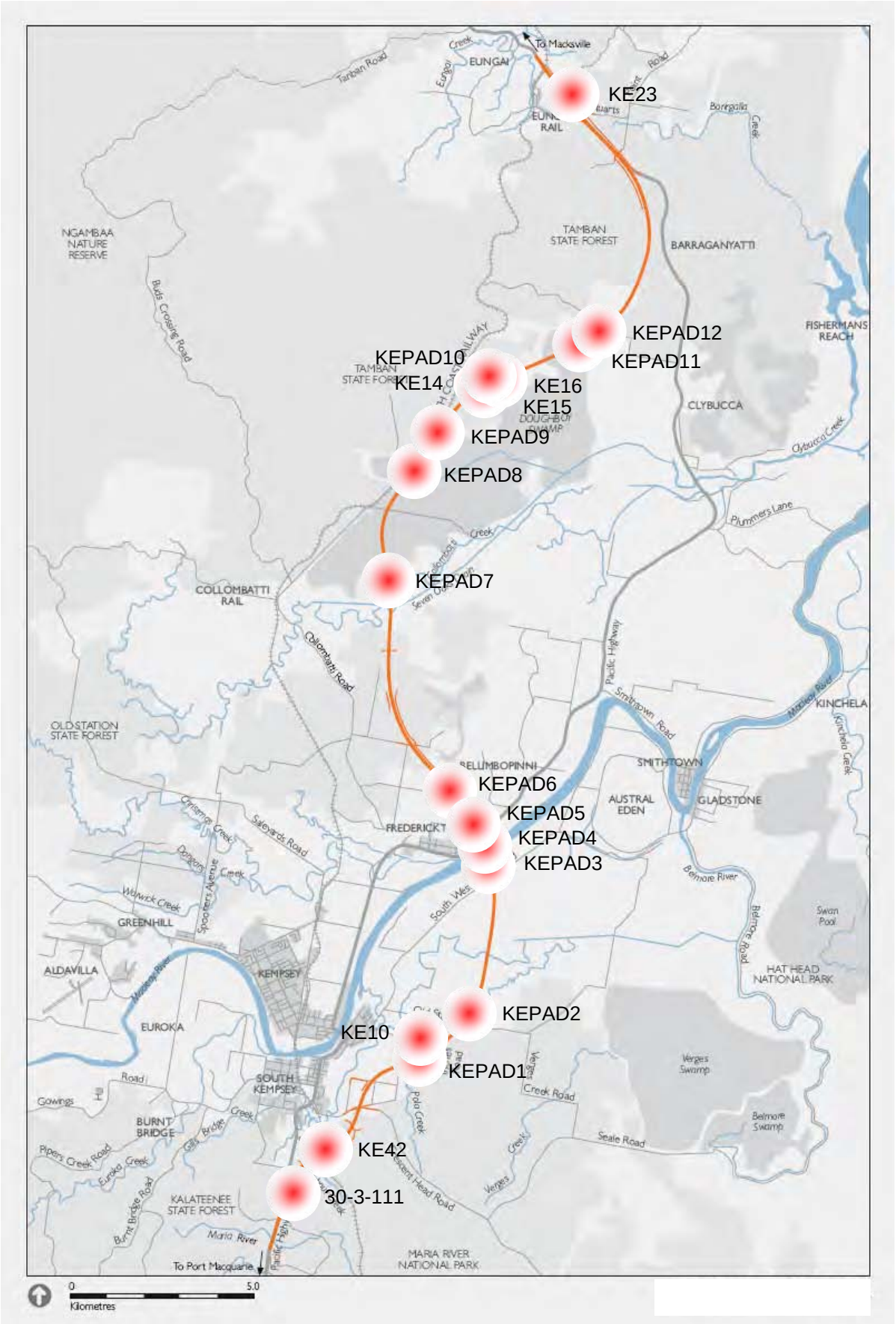

Figure 7.1 Generalised location of Aboriginal Heritage recordings.
Base map supplied by Parsons Brinckerhoff

7.1.2 European Heritage

Eleven European sites (KEH1-KEH11) were identified within the area of the proposed Upgrade route through literature research, local historical consultation and field survey of the proposed impact area. Sites comprised a memorial avenue of trees, the Frederickton War Memorial, a former house site and plantings, an early twentieth century house, the Macleay River Hotel, a ferry ramp, a Butter Factory, a former timber mill; the site of a former inn, the footings of an inn, and post and rail fence remnants. Site locations are shown in Figure 7.5.

KEH1 Frederickton Memory Avenue

KEH1a: South of Macleay River MGA 489528.6565750 to 489048.6565849 (GDA)
KEH1b North of Macleay River MGA 488485.6566230 to 488524.6566450 (GDA)

The Frederickton Memory Avenue of Camphor Laurel trees was planted by Frederickton townspeople in 1919 to honour the town's World War 1 veterans. The plantings formed an avenue of trees on the southern approach to the Frederickton ferry across the Macleay River, and continued from the crossing along the current highway to the war memorial. The avenue now survives in two parts, an avenue along Frederickton Ferry Road on the south side of the river (Plates 7.3 – 7.8), and an alignment of trees on the west side of the Pacific Highway within Frederickton (Plate 7.9).

On either side of the Frederickton Ferry Road, the avenue extends for approximately 500 metres between its intersection with South West Rocks Road and a high flood channel bank. The road continues without trees across lower flats for a further 300 metres to the riverbank and ferry ramp. The avenue appears to include ten surviving original mature trees on the northern side, and six mature trees along the southern side of the lane. The identification of original trees or of any subsequent replacement plantings is however complicated by the potential for variable growth rates and by the presence of dense suckering. There may be more surviving formal plantings than identified here. The Kempsey RSL Sub-Branch understand that twenty two of an original 27 plantings remain along Frederickton Ferry Road. The plantings on each side of the lane are approximately 40 metres apart, and staggered so that a tree occurs on alternative sides of the road, every 20 m.

All the trees are around 10 metres tall. Camphor laurel suckers are growing between most of the mature trees, forming an almost continuous line of trees. There are however some spaces where regrowth has been controlled. (Plates 7.3 - 7.5). Remnants of a wooden post and two rail fence line are evident along the northern boundary of the road easement (Plate 7.8).

No evidence could be found during the field survey of the commemorative plaques that marked the original plantation trees (The Macleay Chronicle, 6 August, 1919:3).

The avenue recommences on the opposite side of the Macleay River near the northwest ferry landing. Here it borders the Pacific Highway for two town blocks, until it reaches the Frederickton war memorial, which itself is associated with plantings including Camphor Laurels and Norfolk Island Pines. Many of these trees have been incorporated into the suburban landscape, and the mature trees have been well maintained and suckers controlled. Urban development has resulted in the removal of some of the avenue trees, including all on the eastern side of the current Pacific Highway.

The Frederickton Ferry Road portion of the Memory Avenue will be partially impacted by the proposed Upgrade. The new carriageway will be situated on a raised embankment and will directly impact an approximate 65 m section of the avenue, necessitating the removal of three original plantings, one dead, and two live. The embankment will divide the avenue into two separate sections, and significantly impact the visual and structural continuity of the avenue. A new vehicle access track from South West Rocks Road will join Frederickton Ferry Road to the west of the new carriageway. The existing spacing between the trees will allow construction of the access road without the need to remove original tree plantings (Plate 7.3 and Figure 7.2).

Plate 7.3 Panorama view of the Frederickton Memory Avenue (KEH1a), along Frederickton Ferry Road, looking north from South West Rocks Road. The interval between the arrows shows the area subject to direct impact by the proposed Upgrade carriageway.

Figure 7.2 The proposed Kempsey-Eungai road alignment where it crosses Ferry Road and the Frederickton memorial avenue of trees
(Base aerial photograph provided by Parsons Brinckerhoff).

Plates 7.4 and 7.5 Views along the Memory Avenue showing extensive suckering and some loss of original plantings

Plates 7.6 and 7.7 View of original camphor laurel trees, showing extensive trunk growth and establishment of a parasitic fig.

Plate 7.8 A remnant portion of post and rail fenceline along northern boundary of Memory Avenue and Frederickton Ferry Rd.

Plate 7.9 View of the surviving trees in the Memory Avenue within Frederickton, along the Pacific Highway, looking north.

KEH2 Early Twentieth Century House

MGA 488650.6566635 (GDA)

This recording consists of a weatherboard house, outbuildings and associated yard plantings situated on the north side of the Pacific Highway on the eastern edge of Frederickton. The house building appears to date to the early twentieth century and includes a relatively high-pitched roof and bull nose veranda. Access to this property was denied at the time of the investigation and a detailed assessment of the site could not be made.

This house was originally owned by Stella Mary Sophia Lawrence (nee Weldon) (1900-1990) and Albert Adolphus Lawrence (1895 – 1966). The Lawrences had one son, Albert John (1933-1998) who apparently owned the house until he died. It was then purchased by the current owner.

A group of buildings in this location can be seen on the Kempsey 1942 1:63,360 topographic map (Figure 7.3). The grouping shown on this map suggests that this building may be related to and contemporary with recording KEH3.

This site is situated in the proposed location of a roundabout forming part of the Frederickton interchange link road. It would be directly impacted by the proposed Upgrade (Figure 7.4).

KEH3 Former Farmhouse site, entrance and plantings

MGA 488570.6566558 to 488600.6566695 (GDA)

This recording consists of a number of tree plantings, a building earth platform, and a remnant driveway associated with a former farmhouse, presumed to date from the nineteenth century. Access to this property was denied at the time of the investigation and a detailed assessment of the site could not be made.

The remnant driveway retains an avenue of Camphor Laurel trees and ascends from the southern boundary of the land portion on a similar alignment to the Pacific Highway which turns to the northeast at this point. The driveway has been cut and benched across the slope of a spurline and it is presumed that it leads to an earth platform on the crest of the spur where a farmhouse formerly stood. A pair of tall Norfolk Island pines has been planted to the west of the driveway (Plate 7.10). These appear to mark an end to the Memory Avenue of memorial Camphor Laurel trees which extend to the south along the Pacific Highway. It is not known if these trees were intended to form part of the memorial plantings.

The tree plantings appear to be younger in age than those planted in the Memory Avenue to the south. This suggests that the age of this site fits within the nineteenth century. A group of buildings in this location can be seen on the Kempsey 1942 1:63,360 topographic map (Figure 7.3). The grouping shown on this map suggests that this building may be related to and contemporary with recording KEH2

None of the tree plantings or the building platform will be directly impacted by the proposed Upgrade. The site is situated immediately adjacent to western boundary of the Upgrade works (Figure 7.4).

Plate 7.10 Site KEH3 looking north from the Pacific Highway. A former driveway is situated between the avenue of Camphor Laurels on the right.

Figure 7.3 An extract from the 1942 Kempsey 1:63,360 topographic map, showing a group of buildings (in red circle) in the general location of sites KEH2 and 3.

Figure 7.4 The location of sites KEH2, 3 and 4 relative to a proposed traffic circle (yellow lines) and easement boundary (red) associated with an approach ramp to the Frederickton interchange. (Base map provided by Parsons Brinckerhoff).

KEH4 Frederickton War Memorial

MGA 488522.6566563 (GDA)

The Frederickton War Memorial is located on the northwestern corner of the Pacific Highway and the Great North Road (Figure 7.4). Erected in 1920, this monument honours those men from Frederickton who enlisted and died in World War 1.

The memorial is a 2.8 metre high concrete and sandstone monument. It consists of a three-tiered base of concrete measuring 2.45 x 2.45 metres, atop which sits a tapering, four-sided plinth, each face bearing an inscription. These inscriptions read:

eastern face	– 'Sacred / to the memory of / our boys who paid the / SUPREME SACRIFICE'
northern face	– '1920'
western face	– 'In honor [sic] / of our boys / who enlisted from FREDERICKTON'
southern face	– 'Fallen Heroes / M. BOWEN / H. BRENTON / H. BURNESTIN / W. COLEMAN / A. COOPER / F. CHARTERS / L. DORNAN / L. MILES / B. DORNAN / Les DORNAN / G.KEAST / G. LAVERS / L. MILES / G. WIXTED / 'LEST WE FORGET'

The monument is enclosed by a white two-rail wooden fence located 12 metres from the southwestern side and eight metres from the northeastern side of the concrete base. A pair of Norfolk Island Pines situated immediately to the northeast of the monument appear to be positioned to mark the northern end of the Memory Avenue (the avenue of camphor laurel trees which extends south along the Pacific Highway - refer site KEH1b) (Plate 7.10).

This site is 60 metres west of the proposed Upgrade construction zone and will be not be directly impacted by the proposed works.

Plate 7.11 View of the eastern face of the Frederickton War Memorial.

Plate 7.12 View of the Frederickton War Memorial- looking north. The photograph shows the monument within the white wooden fencing enclosure, and its proximity both to the Great North Road in the foreground and to two pines in the background.

KEH5 Macleay River Hotel, Frederickton

MGA 488385.6566152 (GDA)

The Macleay River Hotel, formerly known as the Frederickton Hotel, is located on the southern side of Macleay Street (the Pacific Highway), Frederickton, on a block which fronts the Macleay River. The original building was built of brick in 1887, has two storeys and retains a well preserved double balcony and Victorian façade (Plate 7.13). Modern weatherboard and brick extensions have been appended to the rear and western side of the building. An open and grassed yard is situated behind the hotel building and a modern picnic area has been placed close to the riverbank. The bank appears to have been benched in the past, to level the yard and provide for the construction of a riverbank jetty, of which there are no obvious above ground remains (Plate 7.14). A series of modern brick-edged concrete steps provide access to river level (Plate 7.15).

Plate 7.13 The Macleay River Hotel, Frederickton (KEH5), and the former Frederickton Post Office (now a residence) in the background. Both of these buildings are heritage listed.

The Frederickton Hotel is listed as a heritage item on the Kempsey Local Environmental Plan 1987.

As part of the Upgrade, it is proposed to construct a levee bank between the riverbank and existing structures situated on the river flats on the southeastern margin of Frederickton. The proposed levee would be located in the open grounds to the rear of the hotel building and would not directly impact on the existing structures. The levee may have an indirect impact on the riverside landscape setting of the hotel. However, the levee would not impact upon the hotel building, which is listed on the Kempsey LEP heritage register. The land around the hotel is not listed. The levee would be designed in sympathy with the character of the hotel building, as discussed in Chapters 6 and 19 of the Environmental Assessment.

Plate 7.14 The rear grounds of the Macleay River Hotel (formerly the Frederickton Hotel) at Frederickton. A proposed levee bank would be constructed across the foreground open space.

Plate 7.15 View of the concrete steps leading to a former wharf at the rear of the hotel

KEH6 Frederickton Ferry Ramp

MGA 488490.6566125 (GDA)

This recording consists of the former Frederickton ferry ramp situated on the northern bank of the Macleay River. It is located at the eastern end of Macleay Street, just west of the Frederickton Butter Factory, and adjacent to the Frederickton Bushfire Brigade Building (Figure 7.3 and Plate 7.16). It now serves as the town boat ramp. The site consists of an angled, gravel surfaced, earth ramp which has been cut down through the bank for a length of over 30 metres. A small public park and picnic area is situated immediately upstream, which includes an interpretative sign on the history of Frederickton and its use of the river.

The ferry operated between this and the opposite bank ramp from the late 19th century until the 1930s, providing transport between Frederickton and the landowners on the southeastern side of the River. A similar landing is located on the opposite bank (Plate 7.17). The ramp has been maintained since its ferry operation, having last been resurfaced with concrete in 1967.

This site will be directly impacted by the proposed levee at Frederickton. A substantial portion of the descending ramp would be filled for the construction of a levee bank.

Plate 7.16 The former Frederickton ferry ramp (KEH6) on the northern bank of the Macleay River. The Memory Avenue of Camphor Laurel trees can be seen in the distance (middle).

Plate 7.17 The former ferry ramp on the southern river bank .

KEH7 Frederickton Butter Factory

MGA 488519.6566200 (GDA)

This recording consists of an industrial complex of surviving buildings and yards which constituted the former Frederickton Butter Factory. The complex is located on the northern bank of the Macleay River, at the intersection of Lawson St and the Pacific Highway.

By 1898 the Kempsey region supported twenty nine creameries which serviced the regional dairy industry. One of these separators was located at Frederickton, and with the dissolution of creameries by the turn of the century, the Frederickton creamery converted to the production of butter. In 1905 the Macleay River Cooperative Dairy Company bought the Frederickton butter factory (Neil 1972: 78). The present factory building dates from this time.

The butter factory building is a weatherboard and fibro structure surrounded on the western and southern sides by a wide concrete slab probably associated with the transportation of produce via the Macleay River immediately to the south (Plates 7.18 and 7.19). The structure stands in close proximity to the present day dairy cooperative buildings, however only the weatherboard and brick building fronting the current Pacific Highway to the northwest is currently in use.

In its present state the butter factory building is unused and derelict. A two-storey brick boiler house within the same complex, and immediately to the southeast of the weatherboard and fibro structure, also stands largely unused. The boiler comprises a pair of adjacent large brick fireboxes with cast iron doors supporting a large cylindrical iron boiler resting on its side. Attached is a complex of steel tubing to duct the water supply (Plate 7.20). The pattern of brickwork used in construction and the design of the cast fittings indicate that it was an early to mid twentieth century construction.

Remains of a service wharf are located on the riverbank behind the butter factory. These comprise two large upright star posts and a crossbar projecting from the water, with a number of large stones and a section of large iron girder lying beneath the water in a ruined state. This represents the most substantial remnant of the wharves along this section of the Macleay. (Plate 7.22).

Plate 7.18 The Frederickton Butter Factory - front entrance to what is presently the Frederickton Dairy Co-op – looking southeast

Plate 7.19 Side view of the derelict weatherboard Butter Factory building with the brick building to the rear – looking northeast

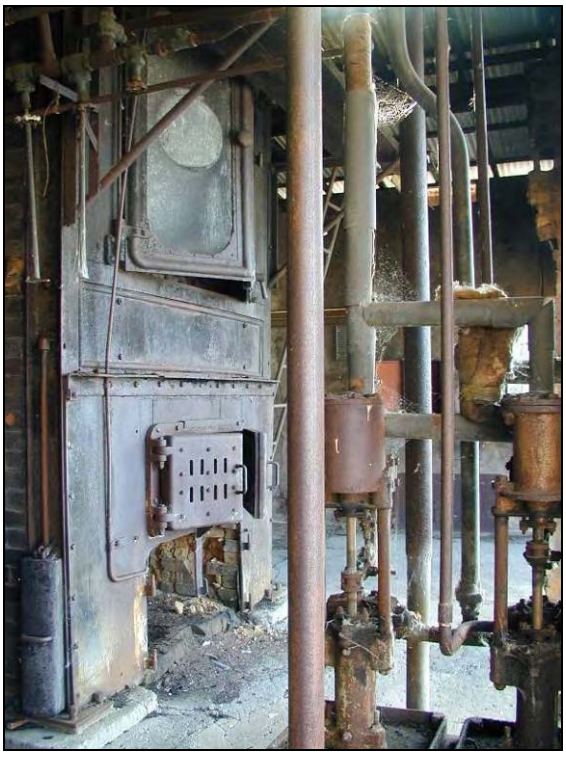

Plate 7.20 A brick and iron boiler plant within the Butter Factory group of buildings. An abandoned cheese crate (below)

Plate 7.21 The rear platform behind the Butter Factory complex, looking northeast. A levee bank is proposed for construction between the bank and the structures.

As part of the Upgrade, it is proposed to construct a levee bank between the riverbank and existing structures situated on the river flats on the southeastern margin of Frederickton. The proposed levee would be located in the platform to the rear of the Butter factory group of buildings but would not directly impact existing structures. The levee may have an indirect impact on the riverside landscape setting of the complex.

Plate 7.22 Ruins of the service wharf to the rear of the Frederickton Butter Factory

KEH8 Former Jamieson's Timber Mill

MGA 488750.6566340 (GDA)

This recording consists of a group of sheds, a residential cottage and the associated grounds which were formerly part of Jamieson's Timber Mill. The site is situated on the northern bank of the Macleay River at Frederickton, off Lawson Street (Figure 7.3).

Steam-powered saw milling commenced on the Jamieson property in 1911 under the ownership of R.J. Jamieson. In 1941 an electric-powered mill was built adjoining the original steam mill. Fire destroyed the original mill in 1945, and a newly constructed mill was extended in 1947. The mill operated until 1977 when the new mill was also destroyed by fire. Jamieson's son and grandson rebuilt the complex and continued to saw timber there until 1981 when the mill was sold to the Allen Taylor Company. In 1982 the mill was closed (MRHS 1984: 46).

The complex is still used as a series of storage and machinery sheds, however very little remains of the mill itself.

As part of the Upgrade, it is proposed to construct a levee bank between the riverbank and existing structures situated on the river flats on the southeastern margin of Frederickton. The proposed levee would be located across open grounds at the rear of this site. No existing structures would be impacted. The levee may have an indirect impact on the riverside landscape setting of this site.

Plate 7.23 Former Jamieson's Timber Mill (KEH8). View of semi-collapsed building, looking northeast from the riverbank margin of the lot. This is the latest in a line of replacement sheds since the original mill was destroyed by fire in 1945.

Plate 7.24 View of small residential cottage and sheds (KEH8), looking northwest.

Plate 7.25 View from Lawson St of storage sheds at KEH8, looking south.

KEH9 Post and rail fenceline remnants

MGA 489754.6581130 (GDA)

This recording consists of a remnant section of a hand split, two-rail timber post and rail fence that has been incorporated into a modern, barbed wire fence. The fence divides the Blair and Watts properties off the Spankers Flat Road north east of Tamban rail siding. This short length of fence line is characteristic of several examples of post and rail fences located in adjacent areas outside of the study area.

This fenceline section would be directly impacted by the proposed Upgrade.

KEH10 Former site of the Travellers Rest Inn

MGA 493072.5686543 (GDA)

This recording consists of level earth platform which marks the site of the former Travellers Rest Inn (Plate 7.26), located at Barraganyatti, on the southern approaches to Yarrahapinni.

The site of the former Travellers Rest Inn is located on the eastern side of the former 'T' intersection of Joneses Road, Stuarts Point Road, and Thurgood Lane at Barraganyatti. A 1906 sketch map of the highway (Figure 6.4), shows the Travellers Rest situated on the eastern side of the old Pacific Highway, which at that time turned from south to west at this intersection, from Thurgood Lane into

Joneses Road (Bailey, 1906). (This intersection has subsequently been modified so that Stuarts Point Road is now a through-road which occupies Joneses Road in the west, and curves from west to north onto its original namesake).

The original hotel was a timber structure built flat on the ground surface. Few surface remnants of the hotel survive - the current site is distinguishable as a micro topographic platform approximately 10 metres north of the roadside. (Plate 7.26).

The site is not located in an area which will be subject to construction impact.

Plate 7.26 The ground platform below the break of slope marks the approximate location of the former Travellers Rest Inn - looking north.

KEH11 Hotel Footings, Stuarts Point Road, Barraganyatti

MGA 493011.6586510 (GDA)

This recording consists of the abandoned construction site of an intended hotel building to replace the Travellers Rest Hotel, at Barraganyatti, on the southern approaches to Yarrahapinni. The site is marked by a series of concrete foundations, an elevated platform with concrete entrance steps, a low wall and a surface scatter of miscellaneous metal construction fittings (Plates 7.27 – 30).

The site is located on the southwestern side of the former intersection of Stuarts Point, Jones Roads and Thurgood Lane at Barraganyatti. The footings are 15 metres wide and 30 metres long and up to 60cm thick at the exterior walls. Construction of the new hotel commenced during the early 1930s, however the new hotel proprietors apparently ran out of resources before the building could be completed (pers. Comm. June Gainge, 2005).

The site is not located in an area which will be subject to construction impact.

Plate 7.27 Front entrance to the planned replacement for the Travellers Rest (KEH11), facing southwest

Plate 7.28 An example of the hotel footings (KEH11), following a gradual clean up by the present owners

Plate 7.29 Concrete steps at KEH11

Plate 7.30 Miscellaneous metal fittings at KEH11

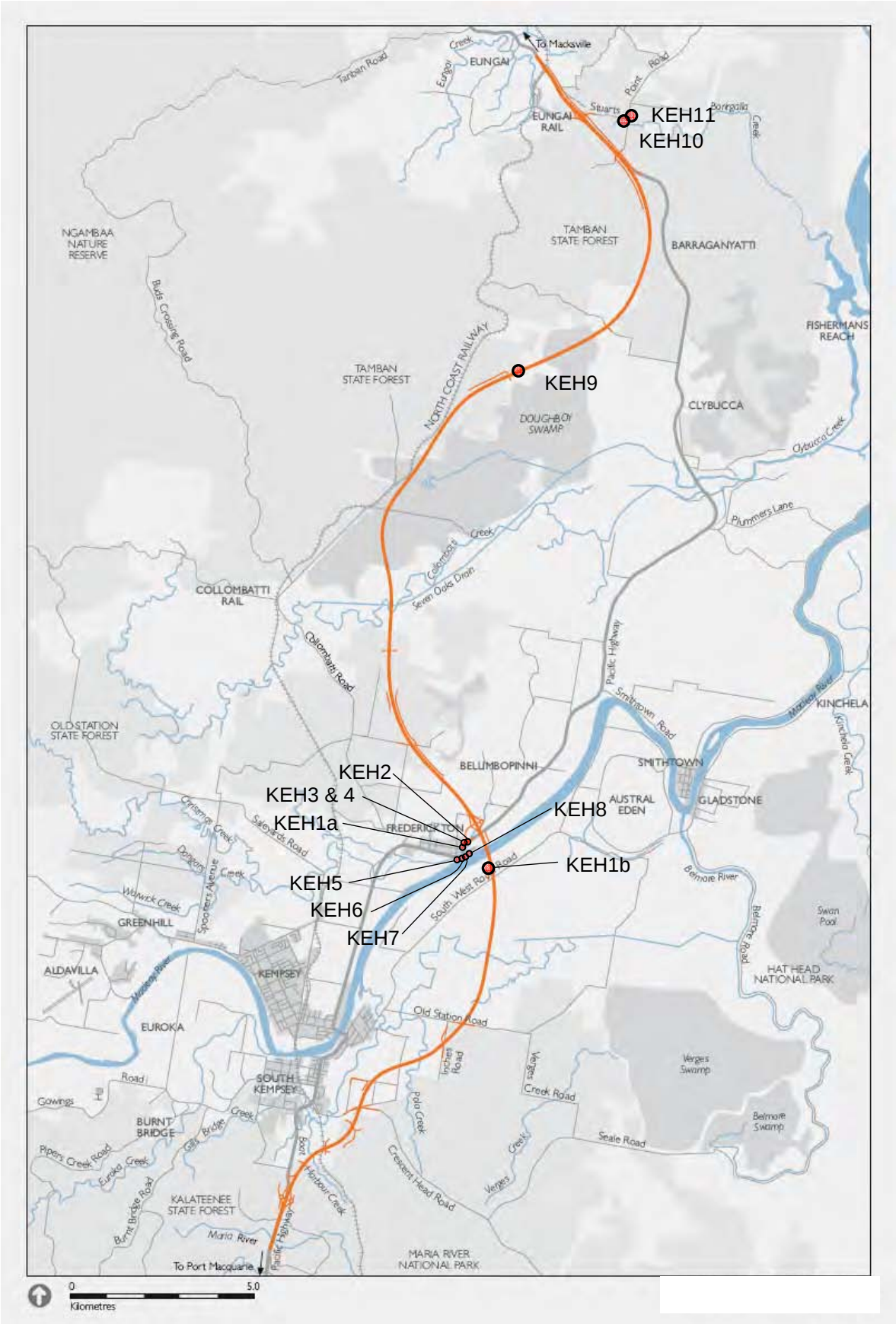

Figure 7.5 Location of European heritage recordings
Base map supplied by Parsons Brinckerhoff

7.2 Site Inventory

Aboriginal Heritage Recordings		
Recording Code	**Recording Type**	**MGA Reference**
KE14	open artefact scatter	refer Appendix 3
KE15	open artefact scatter	
KE16	open artefact scatter	
KE23	possible Aboriginal scarred tree	
30-3-111	open artefact scatter	
KE42	artefact scatter	
KE PAD1	Potential Archaeological Deposit	
KE PAD2	Potential Archaeological Deposit	
KE PAD3	Potential Archaeological Deposit	
KE PAD4	Potential Archaeological Deposit	
KE PAD6	Potential Archaeological Deposit	
KE PAD7	Potential Archaeological Deposit	
KE PAD8	Potential Archaeological Deposit	
KE PAD9	Potential Archaeological Deposit	
KE PAD10	Potential Archaeological Deposit	
KE PAD11	Potential Archaeological Deposit	
KE PAD12	Potential Archaeological Deposit	

European Heritage Recordings		
Recording Code	**Recording Type**	**MGA Reference**
KEH1a	Frederickton Memory Avenue, Frederickton Ferry Road	489528.6565750 to 489048.6565849
KEH1b	Frederickton Memory Avenue. Pacific Highway	488485.6566230 to 488524.6566450
KEH2	early twentieth century house	488650.6566635
KEH3	house site, entrance and plantings	488570.6566558 to 488600.6566695
KEH4	Frederickton War Memorial	488522.6566563
KEH5	Macleay River Hotel, Frederickton	488385.6566152
KEH6	Frederickton Ferry Ramp	488490.6566125
KEH7	Frederickton Butter Factory	488519.6566200
KEH8	Former Jamieson's Timber Mill	488750.6566340
KEH9	post and rail fenceline	489754.6581130
KEH10	Former Travellers Rest Inn	493072.5686543
KEH11	Hotel Footings, Barraganyatti	493011.6586510

7.3 Survey Coverage and Visibility Variables

The effectiveness of archaeological field survey is to a large degree related to the obtrusiveness of the sites being looked for and the incidence and quality of ground surface visibility. Visibility variables were estimated for all areas of comprehensive survey within the study area. These estimates provide a measure with which to gauge the effectiveness of the survey and level of sampling conducted. They can also be used to gauge the number and type of sites that may not have been detected by the survey.

Ground surface visibility is a measure of the bare ground visible to the archaeologist during the survey. There are two main variables used to assess ground surface visibility, the frequency of exposure encountered by the surveyor and the quality of visibility within those exposures. The predominant factors affecting the quality of ground surface visibility within an exposure are the extent of vegetation and ground litter, the depth and origin of exposure, the extent of recent sedimentary deposition, and the level of visual interference from surface gravels. Two variables of ground surface visibility were estimated during the survey:

- a percentage estimate of the total area of ground inspected which contained useable exposures of bare ground

- a percentage estimate of the average levels of ground surface visibility within those exposures. This is a net estimate and accounts for all impacting visual and physical variables including the archaeological potential of the sediment or rock exposed.

The obtrusiveness of different site types is also an important factor in assessing the impact of visibility levels. For example, artefacts made from locally occurring rock such as quartz may be more difficult to detect under usual field survey conditions than rock types that are foreign to the area. The impact of natural gravels on artefact detection was taken into account in the visibility variable estimates outlined above.

Table 7.1 summarises estimates for the degree to which separate landforms within the study area were examined and also indicates the exposure incidence and average ground visibility present in each case. A total of 82 per cent of the ground area in the study area was inspected during the survey, with 8.6 per cent providing useable archaeological exposures.

A graphic approximation of the surface survey coverage achieved within the study area is shown in Figure 7.6.

Taking into account survey coverage, archaeologically useable exposures, and visibility variables, the effective survey coverage (ESC) was 1.6 per cent of the total survey area. The ESC attempts to provide an estimate of the proportion of the total study area that provided a net 100 per cent level of ground surface visibility to archaeological surveyors.

The ESC calculation is defined and required by the DEC and stated to be of use in assessing and cross comparing the adequacy of archaeological surface surveys. The actual utility of the ESC calculation however is challenged by many archaeologists. The limitations of the ESC calculation are emphasised by differences in the subjective assessment of exposure and visibility levels, variations in how survey units are defined and measured, and differences in how and which variables are estimated and combined. In reality, ESC results tend only to be meaningful when compared across surveys conducted by the same surveyors and ESC measurers.

Table 7.1 Effective Survey Coverage

Survey unit	Landform	Survey mode	Main exposure types	Unit area (ha)	Proportion of unit surveyed	Area of unit surveyed (ha	Exposure incidence %	Average exposure visibility %	Net effective exposure (ha)	ESC of survey unit %	Archaeological recordings
Grass Tree Road to Pattersons Lane	basal slopes	foot	vehicle tracks road easements erosion scalds	40.92	70	28.644	12	40	1.3749	3.4	KE42
Pattersons Lane to East Kempsey Swamp	basal slopes	foot	vehicle tracks road easements erosion scalds	34.74	75	26.055	8	35	0.7295	2.1	
Creek	riparian zone	foot	erosion scalds	35.29	80	28.232	5	20	0.2823	0.8	KE PAD1
Pola Creek to MacPhersons Lane	basal slopes	foot	vehicle tracks road easements	16.91	90	15.219	2	30	0.0913	0.5	
MacPhersons Lane to Ducketts Lane	basal slopes/ riparian zone	foot	erosion scalds	29.41	75	22.0575	5	25	0.2757	0.9	KEPAD2
Ducketts Lane to Frederickton Ferry Road	valley floor/ riparian zone	foot	vehicle tracks road easements	29.41	95	27.9395	10	30	0.8382	2.9	
Frederickton Ferry Road to Sewage Works	riparian zone	foot	vehicle tracks road easements	79.08	70	55.356	2	25	0.2768	0.4	KEPAD3, 4 and 5
Sewage Works to Mill Lane	basal slopes/ riparian zone	foot	vehicle tracks road easements	30.88	80	24.704	5	30	0.3706	1.2	KEPAD6
Mill Lane to 4864.65723		foot	vehicle tracks	48.53	75	36.3975	2	30	0.2184	0.5	
4864.65723 to 4866.65755	basal slopes/ riparian zone	foot	vehicle tracks erosion scalds rock outcrop	55.15	80	44.12	10	30	1.3236	2.4	KEPAD7
4866.65755 to 4885.65784	basal slopes/ riparian zone	foot	vehicle tracks erosion scalds	54.41	90	48.969	15	30	2.2036	4.1	KEPAD8 and 9
4885.65784 to Cooks Lane	basal slopes riparian zone	foot	vehicle tracks erosion scalds	71.04	85	60.384	5	20	0.6038	0.9	KEPAD10, 11 and 12
Cooks Lane to Hills Lane	mid slope to valley floor	foot	vehicle tracks	32.25	75	24.2625	5	20	0.2426	0.8	

Survey unit	Landform	Survey mode	Main exposure types	Unit area (ha)	Proportion of unit surveyed	Area of unit surveyed (ha	Exposure incidence %	Average exposure visibility %	Net effective exposure (ha)	ESC of survey unit %	Archaeological recordings
Hills Lane to Stuarts Point Rd	basal slopes	foot	vehicle tracks road easements	69.85	90	62.865	4	30	0.7544	1.1	
Barraganyatti to 4905.62879	basal slopes	foot	road easement	70.59	95	67.0605	2	20	0.2682	0.4	
Totals				525.8		*418.0775*			8.6	1.6	

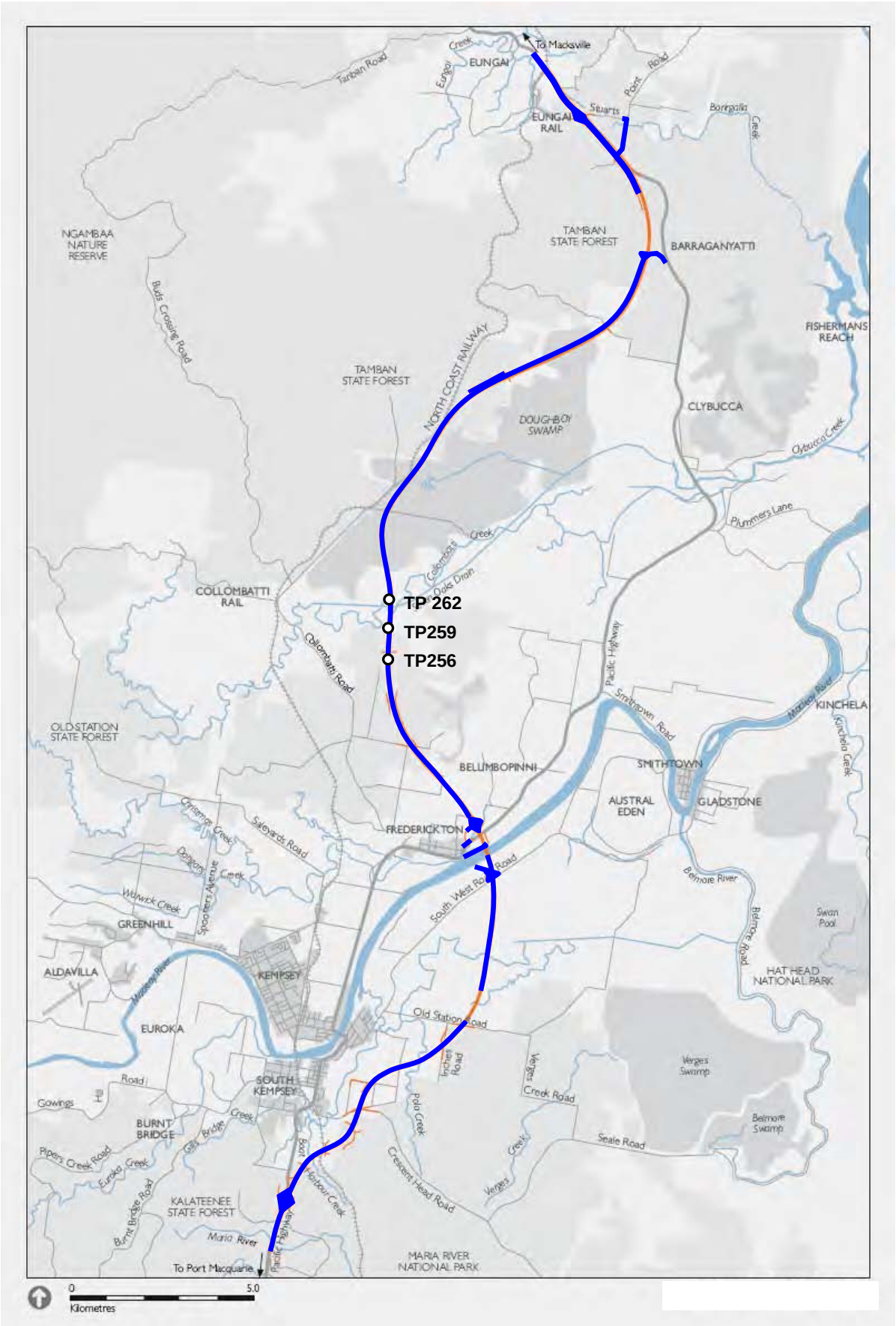

Figure 7.6 A graphic approximation (in blue) of the surface survey coverage achieved within the study area. Also indicated are the locations of three geotechnical test pits where field survey was conducted. Base map supplied by Parsons Brinckerhoff.

7.4 Predicted Sensitivity of Potential Construction Compound Areas

Twenty five potential works depot and construction compound areas have been identified on lands adjacent to the proposed highway alignment. These areas are shown in yellow on the orthophotomaps attached as Appendix 4. These areas were identified after completion of the archaeological field program and, as a result have not been subject to field survey.

The following table provides an assessment of the predicted archaeological sensitivity of each location, based on their level of disturbance, and the results and predictive modeling presented in this report (Table 7.2). The areas are numbered consecutively from south to north.

Six of the 25 areas are considered to have moderate sensitivity regarding Aboriginal sites (Areas 3, 12, 17, 20, 24 and 25). This is due to their locally elevated contexts and relative proximity to a water source. A further nine have low to moderate sensitivity, based mainly on the lesser order of creekline involved or greater slopes. All others are rated as having low sensitivity.

Two areas have low to moderate sensitivity for European/historic sites (11 and 25). This is due to their proximity to settlement areas, to nineteenth century access routes and their agricultural history. All others areas are rated as having low sensitivity.

None of these predictive assessments are of an order which justifies the abandonment of any areas from further consideration. However following the approval of the project any previously unsurveyed areas proposed for works depot or construction compound activities may require archaeological survey and in-field assessment of archaeological potential prior to development of the site for such purposes. If sites, or areas of subsurface archaeological potential are identified, then further work may need to be conducted or alternative areas selected.

Table 7.2 Predicted archaeological sensitivity of potential construction compound areas.

Area	Location	Archaeological sensitivity	
		Aboriginal	European/Historic
1	east side of CH700	low-moderate	low
2	Recreation Centre, west side of CH900	low-moderate	low
3	east side of CH2000, west of railway	moderate	low
4	east side of CH2400, trackway	low	low
5	west side of CH4200	low to moderate	low
6	east side of CH5300, East Kempsey Swamp	low to moderate	low
7	east of CH6500, east of Pola Creek	low	low
8	East of CH6750	low	low
9	west of CH7500, south of Old Station Road	low	low
10	east of CH7700, north of Old Station Road	low	low
11	west of CH12800, northern flood plain of Macleay River, east of Frederickton	low to moderate	low to moderate
12	west of CH13800, north of Frederickton Golf Course	moderate	low

Area	Location	Archaeological sensitivity	
		Aboriginal	European/Historic
13	east of CH15100,	low to moderate	low
14	east of CH16900, south of Mill Lane	low to moderate	low
15	west of CH16300, north of Mill Lane	low	low
16	east of CH18450	low	low
17	west of CH22900, south of Tanban	moderate	low
18	east of CH26250	low	low
19	east of CH28200	low to moderate	low
20	west of CH30500	moderate	low
21	west of CH30750, south of Cooks Lane	low	low
22	west of CH31200, north of Cooks Lane	low	low
23	east of CH34300, west of Pacific Highway	low to moderate	low
24	east of CH35400, south of Pacific Highway, transmission line easement	moderate	low
25	east of CH3900, east of Pacific Highway adjacent to Eungai Rail	moderate	low to moderate

8. SIGNIFICANCE ASSESSMENT

8.1 Aboriginal Heritage

8.1.1 Assessment Criteria

The Burra Charter of Australia defines cultural significance as 'aesthetic, historic, scientific or social value for past, present and future generations' (Australia ICOMOS 1987). The assessment of the cultural significance of a place is based on this definition but often varies in the precise criteria used according to the analytical discipline and the nature of the site, object or place.

In general, Aboriginal archaeological sites are assessed using five potential categories of significance:

- Significance to contemporary Aboriginal people.
- Scientific or archaeological significance.
- Aesthetic value.
- Representativeness.
- Value as an educational and/or recreational resource.

Many sites will be significant according to several categories and the exact criteria used will vary according to the nature and purpose of the evaluation. Cultural significance is a relative value based on variable references within social and scientific practice. The cultural significance of a place is therefore not a fixed assessment and may vary with changes in knowledge and social perceptions.

Aboriginal significance can be defined as the cultural values of a place held by and manifest within the local and wider contemporary Aboriginal community. Places of significance may be landscape features as well as archaeologically definable traces of past human activity. The significance of a place can be the result of several factors including continuity of tradition, occupation or action; historical association, custodianship or concern for the protection and maintenance of places, and the value of sites as tangible and meaningful links with the lifestyle and values of community ancestors. Aboriginal cultural significance may or may not parallel the archaeological significance of a site.

Scientific significance can be defined as the present and future research potential of the artefactual material occurring within a place or site. This is also known as archaeological significance.

There are two major criteria used in assessing scientific significance:

1. The potential of a place to provide information which is of value in scientific analysis and the resolution of potential research questions. Sites may fall into this category because they contain undisturbed artefactual material, occur within a context which enables the testing of certain propositions, are very old or contain significant time depth, contain large artefactual assemblages or material diversity, have unusual characteristics, are of good preservation, or are a constituent of a larger significant structure such as a site complex.

2. The representativeness of a place. Representativeness is a measure of the degree to which a place is characteristic of other places of its type, content, context or location. Under this criterion a place may be significant because it is very rare or because it provides a characteristic example or reference.

The value of an Aboriginal place as an educational resource is dependent on the potential for interpretation to a general visitor audience, compatible Aboriginal values, a resistant site fabric, and feasible site access and management resources.

The principal aim of cultural resource management is the conservation of a representative sample of site types and variation from differing social and environmental contexts. Sites with inherently unique

features, or which are poorly represented elsewhere in similar environment types, are considered to have relatively high cultural significance.

The cultural significance of a place can be usefully classified according to a comparative scale which combines a relative value with a geographic context. In this way a site can be of low, moderate or high significance within a local, regional or national context. This system provides a means of comparison, between and across places. However it does not necessarily imply that a place with a limited sphere of significance is of lesser value than one of greater reference.

The following assessments are made with full reference to the scientific, aesthetic, representative and educational criteria outlined above. Reference to Aboriginal cultural values has also been made where these values have been communicated to the consultants. It should be noted that Aboriginal cultural significance can only be determined by the Aboriginal community, and that confirmation of this significance component is dependent on written submissions by the appropriate representative organisations.

8.1.2 The Study Area

Other than to record their locations and content, small and/or highly disturbed artefact scatters are generally not considered to have archaeological significance under the categories defined above.

Taking account of the limited number and range of artefacts present at sites **KE15**, **KE16** and **KE42,** their disturbed contexts, and the low potential for these sites to be associated with subsurface *in situ* deposit, these sites are assessed as having low archaeological significance within a local context. Each of these sites has moderate or greater potential to be larger and extend beyond their present recorded boundaries. Despite this, the topographic contexts and low recorded surface artefact densities strongly suggest that these sites will not contain scientifically accessible assemblages with research value.

The recordings for **KE14** and **30-3-111** include 31+ and 12 surface artefacts. Despite the shallow soil contexts of these sites, these larger surface assemblages provide greater potential for recoverable assemblages and therefore have a greater degree of scientific and cultural value. During a site visit to this site community Elders contemplated strategies for the recovery of artefacts prior to construction. These sites are assessed as having low to moderate significance within a local context.

The cause of the scar on the tree recorded as a possible Aboriginal scar **KE23** is uncertain. The site is tentatively assessed as having moderate archaeological and cultural significance within a local. This is primarily based on the uncommon to rare status of this site type in the region.

The archaeological and cultural heritage significance of the potential archaeological deposits KEPAD1 - KEPAD 12 cannot be adequately determined without conducting a program of subsurface archaeological testing. All of the identified PADs are considered to have moderate or greater potential for the presence of archaeological material.

8.2 European Heritage

8.2.1 Assessment Criteria

The NSW Heritage Office has defined a methodology and set of criteria for the assessment of cultural heritage significance for items and places, where these do not include Aboriginal heritage from the pre-contact period (NSW Heritage Office & DUAP 1996, NSW Heritage Office 2000). The assessments provided in this report follow the Heritage Office methodology.

The following heritage assessment criteria are those set out for Listing on the State Heritage Register. In many cases items will be significant under only one or two criteria. The State Heritage Register was established under Part 3A of the Heritage Act (as amended in 1999) for listing of items of environmental heritage that are of state heritage significance. Environmental heritage means those places, buildings, works, relics, moveable objects, and precincts, of state or local heritage significance (section 4, Heritage Act 1977).

An item will be considered to be of State (or local) heritage significance if, in the opinion of the Heritage Council of NSW, it meets one or more of the following criteria:

Criterion (a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (b) an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area);

Criterion (d) an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons;

Criterion (e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (g) an item is important in demonstrating the principal characteristics of a class of NSW's

cultural or natural places; or
cultural or natural environments

(or a class of the local area's

cultural or natural places; or
cultural or natural environments).

An item is not to be excluded from the Register on the ground that items with similar characteristics have already been listed on the Register. Only particularly complex items or places will be significant under all criteria.

In using these criteria it is important to assess the values first, then the local or State context in which they may be significant.

Different components of a place may make a different relative contribution to its heritage value. For example, loss of integrity or condition may diminish significance. In some cases it is constructive to note the relative contribution of an item or its components. Table 8.1 below provides a guide to ascribing relative value.

Table 8.1 Relative Value in Historical Significance Assessment

Grading	Justification	Status
Exceptional	Rare or outstanding item of local or State significance. High degree of intactness Item can be interpreted relatively easily.	Fulfils criteria for local or State listing.
High	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfils criteria for local or State listing.
Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or State listing.
Little	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for local or State listing.
Intrusive	Damaging to the item's heritage significance.	Does not fulfil criteria for local or State listing.

8.2.2 The Study Area

Historical sites identified during the survey were assessed in accordance with the NSW Heritage Office criteria set out above. The results of this assessment are shown below and summarised in Table 8.2.

KEH1 Frederickton Memory Avenue

The Frederickton Memory Avenue of Camphor Laurel trees was planted by Frederickton townspeople in 1919 to honour the town's World War 1 veterans. The plantings formed an avenue of trees on the southern approach to the Frederickton ferry across the Macleay River, and continued from the crossing along the current highway to the war memorial.

The Memory Avenue has strong and special association with the life of a group of persons of importance, Frederickton World War I veterans, in the cultural history of the local area (NSW Heritage Office Criterion b). It also has strong and special association with the Frederickton community for social, cultural and spiritual reasons (Criterion d). The Avenue has a high degree of original fabric, which is a key element of the item's significance, and the alterations (that is, loss of some of the trees) do not detract from its significance. It is therefore considered that the Avenue fulfils the NSW Heritage Office criteria for local heritage listing.

KEH2 Early twentieth-century house

This recording consists of a weatherboard house, outbuildings and associated yard plantings situated on the north side of the Pacific Highway on the eastern edge of Frederickton. The house building appears to date to the early twentieth century and includes a relatively high-pitched roof and bull nose veranda. Although access to this property was denied at the time of the investigation and a detailed assessment of the site could not be made, based on the form and probable age of this building, an indicative assessment is that the house may:

- Be important in the course, or pattern, of the cultural history of the local area (Criterion a);

- Have potential to yield information that will contribute to an understanding of the cultural history of the local area (Criterion e); and

- Be important in demonstrating the principal characteristics of a class of the local area's cultural places (Criterion g).

As the house appears to have some altered or modified elements, elements with little heritage value but which contribute to the overall significance of the item, it is considered to have moderate heritage significance and therefore it may fulfil the criteria for local heritage listing.

KEH3 Former house site, entrance track and plantings

This recording consists of a number of tree plantings, a building earth platform, and a remnant driveway associated with a former farmhouse, presumed to date from the nineteenth century. As with KEH2 above, although access to this property was denied at the time of the investigation and a detailed assessment of the site could not be made, based on the form and probable age of this site, an indicative assessment is that it may:

- Be important in the course, or pattern, of the cultural history of the local area (Criterion a); and

- Have potential to yield information that will contribute to an understanding of the cultural history of the local area (Criterion e); and

As the site has altered or modified elements, elements with little heritage value but which contribute to the overall significance of the item, it is considered to have moderate heritage significance and therefore it may fulfil the criteria for local heritage listing.

KEH4 Frederickton War Memorial

The Frederickton War Memorial, located on the northwestern corner of the Pacific Highway and the Great North Road, was erected in 1920 to honour those men from Frederickton who enlisted and died in World War 1.

It is important in the course, or pattern, of the cultural history of the local area (Criterion a); has strong and special association with the life of a group of persons of importance, Frederickton World War I veterans, in the cultural history of the local area (NSW Heritage Office Criterion b); and also has strong and special association with the Frederickton community for social, cultural and spiritual reasons (Criterion d). The Memorial is considered to have high heritage significance – it has a high degree of original fabric, which is a key element of the item's significance, and no obvious alterations. The Memorial therefore fulfils the criteria for local heritage listing.

KEH5 Macleay River Hotel

The Macleay River Hotel, formerly known as the Frederickton Hotel, located on the southern side of Macleay Street (the Pacific Highway), Frederickton, was originally built of brick in 1887, has two storeys and retains a well preserved double balcony and Victorian façade. Modern weatherboard and brick extensions have been appended to the rear and western side of the building.

The Hotel is important in the course, or pattern, of the cultural history of the local area (Criterion a) and is also important in demonstrating the principal characteristics of a class of the local area's cultural places (Criterion g). As the site has altered or modified elements, elements with little heritage value but which contribute to the overall significance of the item, it is considered to have moderate heritage significance and therefore fulfils the criteria for local heritage listing.

KEH6 Frederickton Ferry Ramp and Wharves

The former Frederickton ferry ramp, situated on the northern bank of the Macleay River at the eastern end of Macleay Street, now serves as the town boat ramp. The ramp has been maintained since its ferry operation, having last been resurfaced with concrete in 1967.

The ferry ramp and wharves are important in the course, or pattern, of the cultural history of the local area (Criterion a) and important in demonstrating the principal characteristics of a class of the local area's cultural places (Criterion g). As the ferry ramp and wharves have altered or modified elements, elements with little heritage value but which contribute to the overall significance of the items, they are considered to have moderate heritage significance and therefore fulfil the criteria for local heritage listing.

KEH7 Frederickton Butter Factory

This item consists of an industrial complex of surviving buildings and yards which constituted the former Frederickton Butter Factory. It is located on the northern bank of the Macleay River, at the intersection of Lawson St and the Pacific Highway.

The butter factory building is a weatherboard and fibro structure surrounded on the western and southern sides by a wide concrete slab probably associated with the transportation of produce via the Macleay River immediately to the south. The structure stands in close proximity to the present day dairy cooperative buildings, however, only the weatherboard and brick building fronting the current Pacific Highway to the northwest is currently in use. In its present state the butter factory building is unused and derelict.

The Butter Factory is considered to be important in the course, or pattern, of the cultural history of the local area (Criterion a) and is also important in demonstrating the principal characteristics of a class of the local area's cultural places (Criterion g). As the site has altered or modified elements, elements with little heritage value but which contribute to the overall significance of the item, it is considered to have moderate heritage significance. It therefore fulfils the criteria for local heritage listing.

KEH8 Former Jamieson's Timber Mill

This item consists of a group of sheds, a residential cottage and the associated grounds which were formerly part of Jamieson's Timber Mill. Steam-powered saw milling commenced on the Jamieson property in 1911 under the ownership of R.J. Jamieson. In 1941, an electric-powered mill was built adjoining the original steam mill. Fire destroyed the original mill in 1945, and a newly constructed mill was extended in 1947. The mill operated until 1977 when the new mill was also destroyed by fire. Jamieson's son and grandson rebuilt the complex and continued to saw timber there until 1981 when the mill was sold to the Allen Taylor Company. In 1982 the mill was closed. The complex is still used as a series of storage and machinery sheds, however, very little remains of the mill itself.

The timber mill has little original fabric remaining, which detracts from its significance, and therefore it does not fulfil any of the NSW Heritage Office criteria for local or State heritage listing.

KEH9 Post and Rail Fencing, Tamban

This item consists of a remnant section of a hand split, two-rail timber post and rail fence that has been incorporated into a modern, barbed wire fence.

This section of post and rail fencing has little original fabric remaining, which detracts from its significance, and therefore it does not fulfil any of the NSW Heritage Office criteria for local or State heritage listing.

KEH10 Travellers Rest Inn Site

This site consists of level earth platform which marks the site of the former Travellers Rest Inn, located at Barraganyatti, on the southern approaches to Yarrahapinni. The original hotel was a timber structure built flat on the ground surface. Few surface remnants of the hotel survive - the current site is only distinguishable as a micro topographic platform approximately 10 metres north of the roadside.

The site has little original fabric remaining, which detracts from its significance, and it is difficult to interpret. It therefore it does not fulfil any of the NSW Heritage Office criteria for local or State heritage listing.

KEH11 Hotel Footings, Stuarts Point Road

This site consists of the abandoned construction site of an intended hotel building to replace the Travellers Rest Hotel, at Barraganyatti, on the southern approaches to Yarrahapinni. The site is marked by a series of concrete foundations, an elevated platform with concrete entrance steps, a low wall and a surface scatter of miscellaneous metal construction fittings.

The site has no original fabric remaining, which detracts from their significance, and it is difficult to interpret. It does not fulfil any of the NSW Heritage Office criteria for local or State heritage listing.

Table 8.2 Summary of the Heritage Significance of European Sites

Site Name	Description	Grading under Significance Criteria							Summary
		a	b	c	d	e	f	g	
KEH1	Frederickton Memory Avenue		H		H				Local heritage significance
KEH2	early twentieth century house	M				M		M	Local heritage significance [Indicative]
KEH3	former house site, entrance track and plantings	M						M	Local heritage significance [Indicative]
KEH4	Frederickton War Memorial	H		H	H				Local heritage significance
KEH5	Macleay River Hotel	M						M	Local heritage significance
KEH6	Frederickton Ferry Ramp and Wharves	M						M	Local heritage significance
KEH7	Frederickton Butter Factory	M						M	Local heritage significance
KEH8	Former Jamieson's Timber Mill								Nil heritage significance
KEH9	post and rail fence, Tanban							L	Nil heritage significance
KEH10	Travellers Rest Inn Site					L		L	Nil heritage significance
KEH11	Hotel Footings, Stuarts Point Road	L						L	Nil heritage significance

H = high; M = moderate; L = Little

9. STATUTORY OBLIGATIONS[1]

9.1 The National Parks and Wildlife Act 1974

The following summary is based on:

- The provisions of the current National Parks and Wildlife Act 1974 (NPW Act) as amended. It should be noted that amendments to this Act were passed by both houses of the NSW State Government in 2001 (no.130, assented 19/12/2001). Some of these amendments are yet to be proclaimed.

- Department of Environment and Conservation policy as presented in the 1997 Standards and Guidelines Kit for Aboriginal Cultural Heritage provided by the NSW NPWS, and as communicated orally to the consultants on a periodic basis. The 1997 Standards and Guidelines Kit is currently under review and subject to change in the near future.

The guideline documents presented in the 1997 Standards and Guidelines Kit were stated to be working drafts and subject to an 18 months performance review. The Standards Manual was defined not to be a draft and subject to periodic supplements.

With the exception of projects subject to the provisions of Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act), the National Parks and Wildlife Act 1974 (as amended) provides the primary basis for the legal protection and management of Aboriginal sites within NSW. The implementation of the Aboriginal heritage provisions of the Act is the responsibility of the Department of Environment and Conservation (DEC).

The rationale behind the Act is the prevention of unnecessary or unwarranted destruction of relics, and the active protection and conservation of relics that are of high cultural significance.

With the exception of some artefacts in collections, or those specifically made for sale, the Act generally defines all Aboriginal artefacts to be 'Aboriginal objects' and to be the property of the Crown. An Aboriginal object has a broad definition and is inclusive of most archaeological evidence The Act then provides various controls for the protection, management and disturbance of Aboriginal objects.

An Aboriginal object is defined as:

> 'any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.' [Section 5(1)].

In practice, archaeologists use a methodology that groups 'Aboriginal objects' into various site classifications according to the nature, occurrence and exposure of archaeological material evidence. The archaeological definition of a site may vary according to survey objectives, however a site is not recognised or defined as a legal entity in the Act. It should be noted that even single and isolated artefacts are protected as Aboriginal objects under the Act.

The investigation, use or destruction of Aboriginal objects is managed through a system of Permits and Consents under the provisions of Sections 87 and 90 of the Act. Section 87 relates to actions which do not involve direct damage to Aboriginal objects, and Section 90 relates to damage or defacement of Aboriginal objects.

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[1] The following information is provided as a guide only and is accurate to the best knowledge of Navin Officer Heritage Consultants. Readers are advised that this information is subject to confirmation from qualified legal opinion.

Under Section 87 of the Act, it is an offence to do any of the following without a Permit from the Director-General of the Department of Environment and Conservation: disturb or excavate any land for the purpose of discovering an Aboriginal object; disturbing or moving an Aboriginal object; take possession of or removing an Aboriginal object from certain lands; and erecting a building or structure to store Aboriginal objects on certain land (Section 86). The maximum penalty is $11,000 for individuals and $22,000 for corporations.

Under section 90 of the Act, a person who, without first obtaining the consent of the Director-General knowingly destroys, defaces or damages, or knowingly causes or permits the destruction or defacement of or damage to, an Aboriginal object or Aboriginal Place is guilty of an offence against the Act.

Where salvage actions (such as collection or re-positioning) are proposed in conjunction with an application to destroy Aboriginal objects, then an application for a section 87 permit must accompany the section 90 application. This is because a consent issued solely under section 90 of the Act is not considered to permit actions other than those which destroy, deface or damage Aboriginal objects.

In January of 2005, the DEC introduced interim guidelines for Aboriginal Community Consultation with regard to the preparation of applications for a consent or permit under Part 6 (section 87 and 90) of the NPW Act. The DEC anticipate that the guidelines will be replaced with a more detailed policy later in 2005 following consultation with the Aboriginal community and other stakeholders. The interim guidelines include a required process of notification of intended applications in the local media, an invitation for stakeholder groups to register interest, and various time periods providing an opportunity for registered stakeholders to comment and review proposed methodologies and assessments. A transition phase has been specified for the application of the Interim guidelines. Any project where a Planning Focus Meeting was held before the 1st of January 2005, or where the proponent can demonstrate that cultural heritage assessment work commenced prior to this date, may continue to prepare Part 6 applications according to the former processes. Alternatively a proponent may choose to comply with the new guidelines.

It should be noted that section 75U of the Environmental Planning and Assessment Amended Infrastructure and Other Planning Reform Act 2005 establishes an exception to the application of sections 87 and 90 of the NPW Act. It states that a Permit under section 87 or Consent under section 90 of the NPW Act 1974 is not required for an approved project subject to the provisions of Part 3A of the EP&A Act.

Section 175B of the NPW Act outlines circumstances where corporation directors may be taken to have contravened these provisions, based on the acts or omissions of that Corporation.

The processing and assessment of Permit and Consent applications is dependent upon adequate archaeological review and assessment, together with an appropriate level of Aboriginal community liaison and involvement (refer Standards for Archaeological Practice in Aboriginal Heritage Management in 1997 NPWS Standards and Guidelines Kit).

The Minister may declare any place which, in his or her opinion, is or was of special Aboriginal significance with respect to Aboriginal culture, to be an Aboriginal place (Section 84). The Director-General has responsibility for the preservation and protection of the Aboriginal place (Section 85). An area declared to be an Aboriginal place may remain in private ownership, or be acquired by the Crown by agreement or by a compulsory process (Section 145).

The Director General may make an interim protection order and order that an action cease where that action is, or is likely to, significantly affect an Aboriginal object or Aboriginal place. Such an order is current for 40 days (Section 91AA, Schedule 3[10]). Such an order does not apply to certain actions, such as where they are in accordance with development consents or emergency procedures.

9.1.1 General Management Constraints and Requirements

Except where a project is subject to the provisions of Part 3A of the EP&A Act, the NPW Act, together with the policies of the Department of Environment and Conservation provide the following constraints and requirements on land owners and managers:

- It is an offence to knowingly disturb an Aboriginal object (or site) without an appropriate permit or consent (Sections 87 and 90);

- Prior to instigating any action which may conceivably disturb an Aboriginal object (this generally means land surface disturbance or felling of mature trees), archaeological survey and assessment is required (refer Standards for Archaeological Practice in Aboriginal Heritage Management in 1997 NPWS Standards and Guidelines Kit).

- When the archaeological resource of an area is known or can be reliably predicted, appropriate landuse practices should be adopted which will minimise the necessity for the destruction of sites/Aboriginal objects, and prevent destruction to sites/Aboriginal objects which warrant conservation (refer Standards for Archaeological Practice in Aboriginal Heritage Management in 1997 NPWS Standards and Guidelines Kit).

- Documented and appropriate consultation with relevant Aboriginal Community representatives is required by the Department of Environment and Conservation as part of the prerequisite information necessary for endorsement of consultant recommendations or the provision of Consents and Permits by the NPWS (refer Standards for Archaeological Practice in Aboriginal Heritage Management in 1997 NPWS Standards and Guidelines Kit).

9.1.2 Statutory constraints arising from artefacts which constitute background scatter

Background scatter is a term used generally by archaeologists to refer to artefacts that cannot be usefully related to a place or focus of past activity. There is no single concept for background 'scatter' or discard, and therefore no agreed definition. The recognition of background material within a particular study area is dependent on an appreciation of local contextual and taphonomic factors. Artefacts within a ‘background’ scatter can be found in most landscape types and may vary considerably in density.

Standard archaeological methodologies cannot effectively predict the location of individual artefacts within background scatters. Surface survey may detect background material either as individual artefacts (‘isolated finds’), or even as small, low-density ‘sites’. Subsurface testing may sample, and through analysis, characterise background material. However, beyond the scope of archaeological sampling, the potential to encounter background artefacts within the context of development related ground disturbance will always remain.

Most previous cultural resource management archaeological methodologies have acknowledged that there is little scientific justification for the conduct of archaeological salvage or ground disturbance monitoring to effect the recovery of background artefacts. The intrinsic scientific value of any recovered artefacts does not, in general, outweigh the expense of conducting the monitoring. However, low density distributions of artefacts are a current subject of interest by some heritage practitioners and DEC policy regarding this issue may change in the future. The monitoring of construction related ground works by Aboriginal groups is now increasingly practiced. The recovery of background scatter artefacts is often a probable outcome of such monitoring exercises.

Given the nature of statutory and DEC policy requirements in NSW (refer Section 9), the detection of background artefacts during monitoring can be problematic. Except where a project is subject to the provisions of Part 3A of the EP&A Act, or where an Aboriginal object is covered by a current Consent or Permit (or Heritage Impact Permit (HIP)), from DEC, all further impact to an Aboriginal object detected during development works, and to the ground in its immediate vicinity, must cease until an appropriate Permit or Consent is gained. It may take up to eight weeks for this to occur. In the past, however, DEC has not as a general rule granted Consents to cover artefacts within background scatters which remain undescribed and undetected. This is because DEC only provide Consents

where the significance and location of the Aboriginal objects to be impacted can be reliably defined. By their very nature, this may not be possible for artefacts that constitute a background scatter.

The present application of policy by the DEC does not provide for a consistent or proactive means of dealing with the statutory constraints posed by the detection of background scatter artefacts during development works. One option is the provision by the DEC of a section 87 Permit or section 90 Consent which includes all Aboriginal objects situated within the defined development site rather than specific sites or finds within it. This approach has been adopted by some DEC branch jurisdictions where an assessment has been provided which suitably investigates the known and predicted incidence of Aboriginal objects potentially subject to disturbance. Other DEC jurisdictions do not accept this approach and only provide Permits and Consents for known and defined Aboriginal object occurrences.

It should therefore be noted, that in the event that an Aboriginal artefact ('Aboriginal object') is detected during ground disturbance within a development study area, and that area or Aboriginal object is not covered by a Permit or Consent to Destroy (or Heritage Impact Permit), there may be considerable delays to development works while an application for a Consent to Destroy is processed.

9.2 The National Parks and Wildlife Amendment Bill 2001

Although this Act was passed by both houses of the NSW parliament in 2001, a number of its provisions with regard to Aboriginal cultural heritage have yet to be gazetted and are not yet law. These include the following provisions:

- The requirement for a section 90 'Consent to Destroy' from the Director General will be replaced by a 'heritage impact permit' (Schedule 3[1], 3[3-8]).

- The offence under section 90 of the Principal Act of 'knowingly' destroying, defacing or damaging Aboriginal objects and Aboriginal Places without Consent will be changed so that the element of knowledge will be removed (Schedule 3 [2]). The amended section 90, subsection 1 will read:

  > 'A person must not destroy, deface, damage or desecrate, or cause or permit the destruction, defacement, damage or desecration of, an Aboriginal object or Aboriginal place.'

- Section 90 subsection 1 will not apply when an Aboriginal object or Aboriginal place is dealt with in accordance with a heritage impact permit issued by the Director-General (Schedule 3[3], Section 90(1B) in amended Act).

- It will be a defence to a prosecution for an offence against subsection 1 if the defendant shows that:

  (a) 'he or she took reasonable precautions and exercised due diligence to determine whether the action constituting the alleged offence would, or would be likely to, impact on the Aboriginal object of Aboriginal place concerned, and

  (b) the person reasonably believed that the action would not destroy, deface, damage or desecrate the Aboriginal object or Aboriginal place.' (Schedule 3[3], Section 90(1C) in amended Act)

- A court will be able to direct a person to mitigate damage to or restore an Aboriginal object or an Aboriginal place in appropriate circumstances when finding the person guilty of an offence referred to in section 90 of the Principal Act (Schedule 3[9]).

- Schedule 4[8] of the Bill provides for the Director-General to withhold in the public interest specified documents in the possession of the NPWS which relate to the location of Aboriginal objects, or the cultural values of an Aboriginal place or Aboriginal object.

9.3 The NSW Heritage Act (1977)

Overview

The purpose of the NSW Heritage Act 1977 is to ensure that the heritage of New South Wales is adequately identified and conserved. In practice the NSW Heritage Act has focused on items and places of non-indigenous heritage to avoid overlap with the NP&W Act, 1974 which has primary responsibilities for nature conservation and the protection of Aboriginal relics and places in NSW.

The *Heritage Amendment Act 1998* came into effect in April 1999. This Act instigated changes to the NSW heritage system, which were the result of a substantial review begun in 1992. A central feature of the amendments was the clarification and strengthening of shared responsibility for heritage management between local government authorities, responsible for items of local significance, and the NSW Heritage Council. The Council retained its consent powers for alterations to heritage items of state significance.

The Heritage Act is concerned with all aspects of conservation ranging from the most basic protection against damage and demolition, to restoration and enhancement. It recognises two levels of heritage significance, State significance and Local significance across a broad range of values. Some key provisions of the Act are:

- The establishment and functions of the Heritage Council (Part 2),
- Interim heritage orders (Part 3), the State Heritage Register (Part 3A),
- Heritage Agreements (Part 3B),
- Environmental planning instruments (Part 5),
- The protection of archaeological deposits and relics (Part 6), and
- The establishment of Heritage and Conservation Registers for state government owned and managed items (Part 7).

Generally this Act provides protection to items that have been identified, assessed and listed on various registers including State government section 170 registers, local government LEPs and the State Heritage Register. The Interim Heritage Order provisions allow the minister or his delegates (local government may have delegated authority) to provide emergency protection to threatened places which have not been previously identified.

In addition, the Act includes provisions which relate to the definition and protection of relics.

Protection of Relics and Archaeological Deposits

Section 139 of the Act specifically provides protection for any item classed as a relic. A relic is defined as "...any deposit object or material evidence -

(a) Which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; and

(b) Which is 50 or more years old."

(Heritage Act 1977, Part 1, Section 4)

Section 139 of the Act disallows disturbance of a relic unless in accordance with an 'excavation permit' from the Heritage Council. This section also allows the Heritage Council to create exceptions to the requirement for an excavation permit with respect to certain types of relic, contexts, or types of disturbance (refer below).

Section 146 of the Act requires that the discovery of a previously unknown relic be reported to the Heritage Council within a reasonable time of its discovery.

Current policy and interpretation by the NSW Heritage Office (Department of Planning) limits the scope of the 'relic' definition to exclude above ground structures and a range of ground features or 'works' which may include roads, embankments and other forms of constructed ground relief.

Permits and Approval Requirements

The Act includes two key approval requirements;

- A permit must be obtained for works which have the potential to interfere with a heritage item or place which is either listed on the State Heritage Register or the subject of an interim heritage order (Section 57); and

- A permit must be obtained to disturb or excavate land where it is known (or there is reasonable cause to suspect) that such action will or is likely to uncover or affect a relic (Section 139). This permit is known as an excavation permit and can be applied for under section 140 of the Act. Current interpretation of the Act by the Heritage Office indicates that excavation permits are only applicable to relics which are situated below the ground surface.

It should be noted that section 75U of the EP&A Act 1979 (as amended) establishes an exception to the requirement for an excavation permit. It states that an approval under Part 4, or an excavation permit under section 139 of the Heritage Act 1977 is not required for an approved project subject to the provisions of Part 3A of the EP&A Act.

Exemptions for works requiring Heritage Council Approval

Certain activities which may be conducted on heritage item listed on the State Heritage Register are exempted from the Section 57 approval requirements. Such exemptions are granted by the Minister and fall into two groups, standard exemptions and site specific exemptions.

A schedule of section 57 standard exemptions has been formulated which includes activities such as certain types of maintenance and repair, minor excavations, changes of use, some temporary structures and 'anything which in the opinion of the Director is of a minor nature and will not adversely affect the heritage significance of the item'. In many cases notification of such proposed activities must be made by the applicant to the Director, and written notification from the Director received regarding his satisfaction that the exemption criteria have been met.

Exceptions from Excavation Permit Requirements

Certain activities are excluded from the 139 permit approval requirements.

A series of exceptions have also been established for Section 139 Permit approval requirements. This includes demolition and maintenance of bridges not listed on the State Heritage Register, some forms of excavation and maintenance of underground services, conservation and repair of monuments and grave markers, and the exposing of survey marks in the course of survey operations.

On the 5th March of 2003, the following section 139 exceptions were notified:

> Excavation or disturbance of the following land does not require an excavation permit under Section 139, provided that the Director is satisfied that the criteria in (a), (b) or (c) have been met and the person to undertake the excavation or disturbance has received a notice advising that the Director is satisfied:
>
> (a) Where an archaeological assessment has been prepared in accordance with Guidelines published by the Heritage Council of NSW which indicates that there is little likelihood of there being any relics in the land or that any relics in the land are unlikely to have State or local heritage significance;
>
> (b) Where the excavation or disturbance of land will have a minor impact on the archaeological resource; and

(c) Where the excavation or disturbance of land involves only the removal of fill which has been deposited on the land.

A person proposing to excavate or disturb land according to the above criteria must write to the Director and describe the proposed excavation or disturbance and set out why it satisfies the criteria. The Director shall notify the applicant if he or she is satisfied that one or more of the criteria have been met.

The Heritage Council of NSW

The role of the Heritage Council is to provide the Minister with advice on a broad range of matters relating to the conservation of the heritage of NSW. It also has a role in promoting heritage conservation through research, seminars and publications. The membership of the Heritage Council is designed to reflect a broad range of interests and areas of expertise.

Interim Heritage Orders

Under the provisions of Part 3 of the Act, the Minister can make an interim heritage order (IHO). A recommendation with respect to an order can come from the Heritage Council, either based on a request for the Minister, or the Council's own considerations. The Minister can also authorise Local Councils to make IHOs within their area. An interim conservation order may remain in force for up to 12 months, until such time as it is revoked or the item is listed on the State Heritage Register. A heritage order may control activities such as demolition of structures, damage to relics, places or land, development and alteration of buildings, works or relics.

The State Heritage Register

Changes to the Heritage Act in the 1998 amendments established the State Heritage Register which includes all places previously protected by permanent conservation orders (PCOs) and items identified as being of state significance in heritage and conservation registers prepared by State Government instrumentalities. Sites or places which are found to have a state level of heritage significance should be formally identified to the Heritage Council and considered for inclusion on the State Heritage Register.

Heritage Agreements

Under Section 39 of the Act, the Minister can enter into an Agreement with the owner of a heritage item listed on the State Heritage Register to ensure its conservation. Such an Agreement can cover a range of responsibilities including financial or specialist assistance and can be attached to the title of the land.

Environmental Planning Instruments

Part 5 of the Act gives the Heritage Council the authority to request that an environmental planning instrument be prepared covering certain lands. It also directs that the Heritage Council shall be consulted by others when preparing a draft planning instrument affecting land to which an interim heritage order applies or which includes an item listed on the State Heritage Register. In addition it gives the Heritage Council the authority to produce guidelines for the preparation of such planning instruments.

Heritage and Conservation Registers

Section 170 of the Act requires all state government instrumentalities to establish and maintain a Heritage and Conservation Register that lists items of environmental heritage. The register is to include items which are, or could potentially be, the subject of a conservation instrument, and which are owned, occupied or otherwise under the control of that instrumentality.

9.4 Environmental Planning & Assessment Act (1979)

The Environmental Planning & Assessment Act 1979 (EP&A Act) and its regulations, schedules and associated guidelines require that environmental impacts are considered in land use planning and decision making. Environmental impacts include cultural heritage assessment. The Act was recently reformed by the passage of the Environmental Planning and Assessment Amendment (Infrastructure and other Planning Reform) Act in June 2005.

There are four main areas of protection under the Act:

- Planning instruments allow particular uses for land and specify constraints. Part 3 governs the preparation of planning instruments. Both Aboriginal and Historic (Non-Indigenous) cultural heritage values should be assessed when determining land use.

- A separate streamlined and integrated development assessment and approvals regime for major infrastructure and other projects of significance to the State is defined by Part 3A.

- Section 90 lists impacts that must be considered before development approval is granted. Part 4 relates to the development assessment process for local government authorities. Impact to both Aboriginal and Historic (Non-Indigenous) cultural heritage values are included.

- State Government agencies which act as the determining authority on the environmental impacts of proposed activities must consider a variety of community and cultural factors in their decisions, including Aboriginal and Historic (Non-Indigenous) cultural heritage values. Part 5 relates to activities which do not require consent but still require an environmental evaluation, such as proposals by government authorities.

Under the *Environmental Planning & Assessment Act (1979*) the Minister for Infrastructure and Planning may make various planning instruments such as regional environmental plans (section 51) and local environment plans (section 70). The Minister may direct a public authority such as a Local Council, to exercise certain actions within a specified time, including the preparation of draft Local Environmental Plans and appropriate provisions to achieve the principles and aims of the Act (section 117).

These planning instruments may identify places and features of cultural heritage significance and define various statutory requirements regarding the potential development, modification and conservation of these items. In general, places of identified significance, or places requiring further assessment, are listed in various heritage schedules that may form part of a Local Environmental Plan (LEP) or a Regional Environmental Plan (REP). Listed heritage items are then protected from certain defined activities, normally including demolition, renovation, excavation, subdivision, and other forms or damage, unless consent has been gained from an identified consent authority. The consent authority under a LEP is normally the local Shire or City Council.

There are two Environmental Planning Instruments which contain provisions for the protection of heritage items within the project study area. These are the Kempsey Local Environmental Plan 1987 and the North Coast Regional Environmental Plan (1988).

In addition to the development of these environmental planning instruments, the Director of the Department of Infrastructure, Planning and Natural Resources (Department of Planning) or a local Council may prepare a Development Control Plan (DCP), where it is considered that more detailed provisions or guidelines are required over any part of land covered by an REP, LEP or their Drafts (sections 51A and 72).

Recent amendments to the Act require a single LEP to be prepared according to a standard template, for each local government area within the next five years

In determining a development application (DA), a consent authority, such as a local Council, must take into consideration any of the following which are relevant to the subject application (section 79C(1) Potential Matters for Consideration):

- the provisions of any environmental planning instrument, or draft environmental planning instrument (which has been placed on public exhibition); any development control plan; and the regulations;
- the likely impacts of that development on the natural and built environments, and the social and economic impacts on the locality;
- the suitability of the site for the development;
- any submissions made in accordance with the Act or the regulations; and
- the public interest.

Best Practice Guidelines were issued by Department of Planning on the use of section 79C(1) and include an assessment of how the proposed development will affect the heritage significance of the property, or adjacent properties, in terms of the historic, scientific, cultural, spiritual and archaeological of Aboriginal, non-Aboriginal and natural heritage.

If a development consent is required from council under the provisions of a LEP and a permit or license is also required from a State Government Agency an integrated development must be submitted to the consent authority. A development is an 'integrated development' if it requires an approval under section 90 of the *NSW National Parks & Wildlife Act, 1974* or if the Director General of NPWS is of the opinion that consultation with an Aboriginal group or organisation should be consulted prior to a determination being made. Any development approval issued for an integrated development of this kind must be consistent with the general terms of approval or requirements provided by the relevant State Government Agency.

The *Environmental Planning & Assessment Act, 1979*, as amended, provides for the listing of heritage items and conservation areas and for the protection of these items or areas through environmental planning instruments (like LEPs and REPs) at the local government and State planning levels. These statutory planning instruments usually contain provisions for the conservation of these items and areas as well as an assessment process to reduce the impacts of new development on the heritage significance of a place, building or conservation area.

Part 3A of the Act is a recent amendment and establishes a separate streamlined and integrated development assessment and approvals regime for major State government infrastructure projects, development that was previously classified as State Significant development, and other projects, plans or programs declared by the Minister for Infrastructure and Planning.

Part 3A removes the stop-the-clock provisions and the need for single-issue approvals under eight other Acts, including the National Parks and Wildlife Act 1974 and the Heritage Act 1977. Environmental planning instruments such as the heritage provisions within LEP and REPs, (other than State environmental planning policies) do not apply to projects approved under Part 3A.

As the Macleay River Hotel and Frederickton Post Office are listed heritage items under Schedule 1 of the Kempsey LEP Council consent under Part 4 of the EP & A Act would ordinarily be required for works affecting those items. However, as the proposed levee development is required in connection with the construction of a completely new road the Model Provisions (Clause 35(a) and Schedule 1 item 8), which are adopted by Kempsey LEP, would operate to remove these consent requirements. In turn this makes way for the operation of the Minister for Planning's Section 75B(1) Order of 29 July 2005 and the assessment of the proposal under Part 3A of the EP & A Act 1979.

Where warranted the Minister may declare any project subject to Part 3A to be a critical infrastructure project. These projects only require a concept approval in contrast to other Part 3A projects which require project approval. In most circumstances, a concept approval will be obtained to establish the environmental performance requirements and consultation requirements for the implementation of the subsequent stages of the project.

Under the provisions of Part 3A, proponents of major and infrastructure projects must make a project application seeking approval of the Minister. The application is to include a preliminary assessment of the project. Application may be for concept plan approval or full approval. Following input from relevant agencies and council(s), DoP will issue the proponent with requirements for the preparation

of an Environmental Assessment and a Statement of Commitments. The Statement of Commitments will include how the project will be managed in an environmentally sustainable manner, and consultation requirements.

Following submission of an Environmental Assessment and draft Statement of Commitments to Department of Planning, these documents are variously evaluated, reviewed, circulated and exhibited. The proponent may modify the proposal to minimise impacts in response to submissions received during this process. The proponent then provides a Statement of Commitments and, following any project changes, a Preferred Project Report. An assessment report is then drafted by the Director-General and following consultation with relevant agencies, a final report with recommendations for approval conditions or application refusal is submitted to the Minister. The Minister may refuse the project, or approve it with any conditions considered appropriate.

9.5 Native Title Act, 1993

'Native title' is the name given by the High Court to Indigenous property rights recognised by the court in the *Mabo* judgment (3 June 1992). The Mabo judgment overthrew the legal fiction of *terra nullius* – that the land of Australia had belonged to no one when the British arrived in 1788.

The judgment found that a native title to land existed in 1788 and may continue to exist provided it has not been extinguished by subsequent acts of government and provided Indigenous groups continue to observe their traditional laws and customs.

The main purpose of the Act is to recognise and protect Native Title, which can be defined as the 'rights and interests in land and waters that Aboriginal and Torres Strait Islander people have under laws and customs and that are recognised by the common law' (Section 223). The traditions of Aboriginal and Torres Strait Islander peoples can change with time and sometimes people stop following a tradition. Therefore, the Act states that native title rights can change or even finish.

The Act contains a process for determining whether native title exists, what rights and interests native title holders have, and whether people who have title have 'exclusive possession' (Sections 13, 61 and 225).

The Act states that native title is only extinguished in a few cases where it is necessary to make past acts legal. The Act provides for the validation of various categories of past government acts and grants of rights to use or own land or waters (prior to 1/1/94), which might have been invalid because the land or waters was native title land or waters at the time (Sections 14 and 19). As a consequence, native title does not exist over grants of freehold land, private freehold, all exclusive possession leases (residential, commercial, agricultural and some pastoral leases, defined in Sections 246 to 249), roads, and the construction of a public work (defined in Section 253). Other forms of leasehold interest, licences and permits do not extinguish native title, or may only extinguish native title tights where these cannot co-exist with the granted rights and interests (as in the case of some leasehold rights). The determination of where and when native title rights have been extinguished by past acts is complex and remains subject to court interpretation

The Act establishes the National Native Title Tribunal which has various responsibilities regarding the hearing and processing of native title claims. The Tribunal maintains a public Register of Native Title Claims and Claimants (Part 7) and a Register of Native Title Determinations (Part 8). The Register of Native Title Claims provides a useful means of identifying individuals and organisations that claim traditional cultural links and associations. It should not however be considered in any way to provide a definitive or comprehensive compilation of such potential claimants.

The Act empowers the states and territories to legislate their own native title regimes. This includes the setting up of alternative state/territory-based claims mediation bodies, replacing the Commonwealth's National Native Title Tribunal.

Some future acts of governments can affect native title. The 'non-extinguishment principle' will apply to most future acts (section 238). This means that those acts will not extinguish native title. If there is a conflict between the rights and interests under native title and those granted by a government, the act or grant will win. But once the interests are finished native title can again have full effect. The

non-extinguishment principle will not apply when people choose to give up their native title (section 21) or a government compulsorily acquires native title land (section 23(3)b)) and pays compensation. In those cases native title is extinguished or lost forever.

In order to demonstrate native title rights to a piece of land, claimants must be able to prove that:

- they owned the land under Aboriginal or Torres Strait Islander customs and laws;
- they have not lost their traditional links with the land; and
- Governments have not used the land or given it to anyone else in a way which 'extinguishes' native title.

Following the 1998 amendments to the Native Title Act, every native title application is a proceeding in the Federal Court.

An administrative test is applied to all Native Title claims to determine if a claim can be considered to be registered. A registered claim entitles the claimants to certain procedural rights, including the right to negotiate, pending the making of a determination of native title. Despite this, if an application fails the registration test, the applicant may still pursue the application for determination of native title. The conditions of the registration test are set out in sections 190B and 190C of the amended Native Title Act 1993. An application must comply with each of the conditions specified.

Under the Act, registered native title holders and registered native title claimants have a right to negotiate before certain 'permissible future acts' happen (Subdivision B of Division 3 of Part 2). These acts may involve mining or other development activities, and compulsory acquisition of native title for the alienation of crown lands. The right to negotiate is not a 'veto' or right to reject.

Where the right to negotiate applies to a future act, a state or territory government cannot validly do the future act unless it has complied with the right to negotiate provisions of the Native Title Act. Unless the grant can be fast-tracked (Section 32), this means that:

- the government party must give the native title party an opportunity to make submissions to it about the future act; and

- the negotiation parties must negotiate in good faith with a view to reaching agreement on the doing of the act with or without conditions.

If these obligations are not met, an activity carried out by a government party may be invalid and the authority may be exposed to claims for damages and compensation. Where negotiation fails to provide agreement between the parties, the Act provides various means for an arbitrated decision to be made (Sections 27, 35 and 39). The Tribunal may be requested to assist the parties by mediation. If the parties are unable to reach agreement then any one of them may make a future act determination application to the Tribunal. This is an application for the Tribunal to make a determination whether the future act can be done and if so whether any conditions should be imposed. These determinations can be overridden in certain circumstances by State, Territory of Commonwealth Ministers (Section 42).

The Act allows 'non-claimants' with an interest in land to ask for a determination about native title. If no one opposes a non-claimant application, future acts over the lands or waters are valid (Sections 61, 67 and 24).

The Act also allows for and defines procedures for the acquisition of native title lands for public purposes.

9.6 Implications for the Proposed Upgrade

Four known sites with Aboriginal objects would be directly impacted by the proposed Upgrade. In addition, twelve PADs occur within the Upgrade easement.

Prior to, and until the proposed Upgrade is approved under the provisions of Part 3A of the EP&A Act, the NPW Act requires that any disturbance to Aboriginal objects, or program of archaeological test excavation or salvage must first be preceded by the receipt of Consents or Permits under section 90 and/or section 87 of that Act. In the event that the project is approved under the provisions of Part 3A of the EP&A Act, there would be no requirement to apply for, or receive Permits or Consents under sections 87 or 90 of the NPW Act.

One listed European historic place would be partially impacted by the proposed flood levee works at Frederickton. This is the Macleay River Motel property (KEH5) which is a listed as an item of environmental heritage in the Kempsey Local Environmental Plan 1987 (Schedule One). The proposed placement of the levee is within the rear and side grounds of the hotel property and no standing structures would be directly affected.

Prior to, and until the proposed Upgrade is approved under the provisions of Part 3A of the EP&A Act, the consent of the Kempsey Shire Council would be required to construct the levee on the listed hotel property (Kempsey Local Environmental Plan 1987 Part 3, section 26(1)). In the event that the project is approved under the provisions of Part 3A of the EP&A Act, the provisions of the Local Environmental Plan would not apply.

The management strategies formulated in this report should be submitted to Department of Planning as part of a draft Statement of Commitments for its consideration and approval. If approved these commitments will form part of a required cultural heritage impact mitigation program for the project.

10. DEVELOPMENT IMPACT AND MANAGEMENT STRATEGIES

10.1 Aboriginal Heritage

Four known sites containing Aboriginal stone artefacts (Aboriginal objects) occur within the approximate construction footprint and would be directly impacted by the proposed Upgrade. These sites are KE14, KE15, KE16 and KE42 and are all open artefact scatters. The local context, low or low to moderate significance assessment of these sites does not warrant amendment of the proposed Upgrade alignment or the *in situ* conservation of their deposits. In order to mitigate the impact of construction on the cultural and scientific values of these sites, it is considered appropriate to conduct a salvage collection of artefacts within these site areas, both prior to the commencement of construction impact, and following vegetation removal and top soil stripping. This program would involve field workers walking the subject areas and visually inspecting the ground surfaces and relevant spoil stockpiles.

In order to manage scientific values, all recovered Aboriginal artefacts should be subject to archaeological description and analysis (as appropriate and according to their significance), prior to their permanent curation according to the wishes of stakeholder Aboriginal groups.

Potential options for curation include:

- Re-placement of the material outside the construction zone but as close as possible to their original locations;
- Placement within an appropriate local keeping place; or
- Placement with the Australian Museum Sydney.

The conduct of such a salvage program and the management of the recovered material would be subject to the agreement and participation of representatives of the local Aboriginal stakeholder groups.

Two Aboriginal sites occur approximately 80 metres from the anticipated construction zone. These are sites KE23 and 30-3-111. In the event that it is anticipated that there is a risk of accidental impact to these sites, the erection of a temporary fence between the site and construction zone would be an appropriate precaution with the aim of defining a no-go area.

Twelve potential Aboriginal archaeological deposits would be directly impacted by the proposed Upgrade (KEPAD1-12). These deposits have been identified using a predictive model and are all considered to have moderate or higher potential for containing subsurface archaeological material.

It should be pointed out that the nature of any possible constraint (if any) posed by these deposits remains unknown until subsurface investigation is conducted. Each PAD forms part of a sensitive landform zone which in most cases extends to either side of the proposed Upgrade alignment. This makes impossible, the avoidance of these sensitive zones, but also has the consequence that any archaeological resources detected within the PADs may also be represented in the zone extensions outside of the development corridor.

The number and location of the identified PADs are in part a consequence of the low ground surface visibility encountered during surface archaeological survey, and the lack of local or regionally comparable subsurface archaeological test results.

In order to clear the PAD areas for construction, a program of archaeological subsurface investigation should be conducted at each location prior to the commencement of construction activities. The program should aim to determine the nature and significance of any archaeological deposits present. In the event that archaeological material is encountered, appropriate management strategies would be developed according to the assessed significance of the finds. Given that the PADs occur on landforms which extend beyond the proposed easement and are well represented in adjoining areas, it is a reasonable expectation that any archaeological finds within the PADs could be effectively managed through salvage and would not pose an absolute constraint to the development.

Possible exceptions to this could be the discovery of *in situ* Aboriginal burials or extensive and stratified archaeological deposits of high regional significance.

10.2 European Heritage

Five European heritage items occur within the approximate extent of construction and would be subject to direct impacts. A further four sites are located in close proximity to the approximate extent of construction.

Road construction would directly impact the Frederickton Memory Avenue along Frederickton Ferry Road (KEH1a), an early twentieth century house on the Pacific Highway just east of Frederickton (KEH2), the rear platform of the Frederickton Butter Factory (KEH7), and the remnants of a post and rail fenceline (KEH9) northeast of Tamban. The construction of a levee bank around some Frederickton town lots upstream of the proposed river crossing would directly impact the former Frederickton Ferry ramp (KEH6). The levee bank would partially cover the ramp and the integrity of the site as a functional boat ramp would be compromised.

Elsewhere, levee construction would have a variety of low level impacts on the landscape context and rear grounds of some Frederickton buildings. The levee embankment would be placed between the Macleay River bank and the Macleay River Hotel buildings (KEH5), the Frederickton Butter Factory (KEH7), and the former Jamieson Timber Mill (KEH8).

A former farmhouse site (KEH3), the Macleay River Hotel (KEH5), and structures belonging to the former Jamieson timber mill (KEH8), all at Frederickton, occur in close proximity to proposed works. In addition, the Frederickton War Memorial (KEH 4) is located approximately 60 metres from proposed works.

10.2.1 Direct Impacts from the Upgrade Carriageway

Frederickton Memory Avenue

The Frederickton Memory Avenue is assessed as having local heritage significance.

The proposed Upgrade involves the construction of a dual carriageway on an elevated embankment which would directly impact and bisect the Memory Avenue of trees along the Frederickton Ferry Road. In addition a new access track would connect Frederickton Ferry Road with South West Rocks Road. The existing spacing between the trees will allow construction of the access road without the need to remove original tree plantings. The construction of the embankment would however directly impact an avenue interval of approximately 65 m. This would involve the removal of three original tree plantings (one of which is now dead). The new carriageway would separate the remaining avenue into two parts, and truncate the longitudinal vista along the avenue. The Upgrade would significantly impact the cultural heritage values of the avenue, through the direct loss of trees, and the disruption to the visual and structural continuity of the avenue.

These potential impacts should be considered in parallel with an understanding of the current condition of the Avenue. This can be summarised by the following points:

- A substantial number of the original plantings are now dead or missing;
- Some of the original plantings are now parasitised by strangler figs and/or are in poor condition;
- Much of the current form and structure of the Avenue is the result of regrowth and suckering;
- Apart from substantial efforts to maintain the avenue by members of the Rowe family, the Avenue has suffered from a lack of attention or maintenance from local and government authorities;
- There are no visitor facilities or on-site interpretation of the Avenue. No commemorative plaques are evident;
- The original conception for the functional placement of the Avenue along the main southern approach to Frederickton has been compromised by the cessation of the ferry service. The Frederickton Ferry Road no longer provides through-access, and its tree avenue is now only experienced by local residents and motivated visitors.

- The portion of the remaining Avenue along the Pacific Highway within Frederickton has been substantially altered and trees removed as a result of past highway upgrades and adjacent urban development and maintenance pressures;
- The Avenue poses a continuing maintenance commitment which is complicated by its use of a species now classified as a weed variously requiring control or eradication.

The local significance of the Avenue presents an obligation to consider an option of avoidance. In order to avoid the Avenue, an Upgrade alignment following the preferred eastern route would need to be shifted at least to either end of the avenue. Both scenarios pose substantial and largely unacceptable impacts to Frederickton, its infrastructure and the placement of an interchange.

In the absence of a viable alternative alignment for the Upgrade, a program of appropriate impact mitigation measures must be considered.

A meeting of RTA, Kempsey Shire Council and Parson Brinckerhoff personnel with members of the Kempsey RSL Sub-Branch was held on 5 October 2005 regarding the management of potential impacts to the avenue. The following common issues were identified:

- The importance of retaining a significant memorial.
- The importance of retaining planting as a major feature of the memorial.
- The importance of retaining as many of the original trees as possible.
- The desirability of replacing plantings lost to date as well as those to be lost as a result of the proposed Upgrade.
- The need to make people aware of the significance of the memorial.
- The need to make people want to visit the memorial.
- The need to clean-up existing plantings.
- The need to establish a plan for ongoing maintenance and replacement of any retained plantings and other possible feature of any future memorial.
- The need to involve the RSL Sub-Branch, Kempsey Shire Council and local interested residents in future planning.

The meeting identified the following objectives regarding the management of the avenue:

- Maintenance of long term memorial planting. Such maintenance would be the responsibility of appropriate stakeholder groups, such as the Kempsey Macleay R.S.L. Sub Branch, adjoining landowners and Kempsey Shire Council.
- Appropriate interpretive heritage signposting on South West Rocks Road.
- A substantial memorial at a suitable location possibly incorporating interpretive signage:
  - Detailing the names of those recognised by the memorial
  - Communicating the story of the memorial avenue
  - Possibly incorporating a photograph of the original planting if one can be located
- Establishment of a proposed action plan involving the local community, Kempsey RSL Sub-Branch, Kempsey Shire Council and the RTA.

Taking into consideration the extent of potential impact posed by the Upgrade, the relevant areas of RTA jurisdiction, and the views of the local community, the following impact mitigation strategies could be adopted by the RTA to minimise the loss of heritage values, and augment the values which will continue.

- The zone of construction impact in the area of the Avenue (KEH1) would be kept to a minimum, as far as practical.

- An archival recording of the avenue could be conducted prior to construction. This would provide a record of the Avenue in its current form.

- An appropriate form of pedestrian access could be constructed between the two separated portions of avenue. This would reduce the effect of the highway bisecting the avenue into two parts.

- Following a review of the condition and health of the remaining avenue trees, an appropriate level of restoration could be directed at the significant elements of the avenue. This may include pruning, the removal of weeds and unwanted vegetation, and the planting of replacement trees in former locations. The RTA could provide assistance to identify more suitable species to replace those to be removed and for use by local groups in their longer-term replacement program. Restoration could also involve a 'compensatory' extension of the avenue involving new planting positions.

- Consideration could be given to erecting an appropriate form of permanent memorial at the avenue which highlights the trees, their meaning and lists the names of the individuals commemorated by the avenue.

- Input from appropriate stakeholder groups, such as the Kempsey Macleay R.S.L. Sub-Branch, the Macleay River Historical Society, the Kempsey Shire Council and interested local residents should be sought prior to finalising the management of potential impacts of the Upgrade on the Avenue.

- Consideration be given to facilitating the development of a plan of management for the long term maintenance of the avenue by the relevant local stakeholders.

- As the treetops of the camphor laurels would be visible from the proposed Upgrade carriageways, the new highway has the potential to restore a degree of the intended function of the Avenue as a southern 'entrance-way' to Frederickton. There is an opportunity to highlight the trees by the placement of a sign on the new highway directing attention to the avenue of trees and their memorial function. The Avenue would also then act as a southern marker for the Frederickton locality.

- The placement of the proposed Upgrade through the Avenue provides an opportunity to raise the profile of the Avenue to local and non-local highway users. This would increase awareness of the Memorial and provide an opportunity to reverse the past trend of tree loss and official neglect.

The Early Twentieth Century House (KEH2)

The demolition of this site, an early twentieth century house (KEH2), would be required for the construction of a traffic circle and an entry and exit carriageway for the Frederickton interchange.

A full assessment of the house, its associated structures and plantings should be conducted following the arrangement of access protocols with the property owner. Appropriate management strategies could then be developed according to the assessed significance of the site. Based on the form and probable age of this building, an indicative assessment of low to moderate significance in a local context has been made. Appropriate management of this site may involve the conduct of an archival recording prior to construction impact. If a higher level of significance is determined, consideration could be given to dismantling and reconstructing the significant structure(s) at a new and nearby appropriate location.

Other Direct Impacts from the Upgrade Carriageway

The low heritage value of the remnant post and rail fenceline (KEH9) does not warrant the conduct of any impact mitigation actions.

10.2.2 Places in Close Proximity to the Upgrade Carriageway

Due to access restrictions to the land, this site was not assessed. A survey of the former farmhouse site and associated tree plantings (KEH3) should be conducted following the arrangement of access protocols with the property owner. This site is situated immediately adjacent to planned works on the Frederickton interchange. Where it is anticipated that there is a risk of accidental damage to any significant elements of this site, a temporary fence should be installed between the site and construction zone with the aim of defining a no-go area.

Despite the 60 m proximity of the Frederickton war memorial (KEH4) to the proposed construction works on the existing highway carriageway for the Frederickton interchange, this site is not considered to be at risk due to its elevated and set-back position, and its fenced perimeter. Precautionary protective measures are not considered necessary.

10.2.3 Impact from the Proposed Levee

The proposed Frederickton levee would be designed and constructed so that above-ground structures with heritage significance are avoided. No existing buildings would be directly impacted by its construction.

Despite this, the former Frederickton ferry ramp (KEH6) would be partially infilled and would no longer function as a boat ramp. Its original function as a ferry landing would also be substantially obscured. Similarly, the rear platform and yard associated with the Frederickton Butter Factory (KEH7) would be directly impacted. The ferry ramp and the Butter Factory are assessed as having local heritage significance.

There is no effective alternative to the construction of the levee, or reasonable challenge to its primary function as an aid to protecting life and property during flood. Indeed, its construction would aid in the long term conservation of the heritage values of the adjacent structures by mitigating future flood impacts. The most effective means of mitigating the loss of heritage values is to conduct an archival record of the ramp and effected parts of the Factory yards prior to the construction of the levee. Public pedestrian access to the ramp site should be maintained, and the existing on-site heritage interpretive signage should be preserved and, where necessary, improved.

Elsewhere, levee construction would have a variety of low level impacts such as to the landscape context and rear grounds of adjacent buildings. The levee would also place a barrier between the buildings and the remains of their former riverbank jetties and wharves. This was formerly a crucial economic link to river trade, transport and passengers. The proposed levee embankment would be situated between the Macleay River bank and the Macleay River Hotel buildings (KEH5), the Frederickton Butter Factory (KEH7), and the former Jamieson Timber Mill (KEH8). Of these, the Hotel has the greatest significance, having significance within a local context. This Hotel is listed as an item of environmental heritage in the Kempsey Local Environmental Plan 1987 (Schedule One). No curtilage is defined in the LEP listing. The construction of the levee would not impact upon the heritage building. As far as practicable, the levee would be designed in character with the listed building, as detailed in Chapters 6 and 19 of the Environmental Assessment.

Consideration should be given in the design and landscaping of the levee to minimising impacts to heritage values, particularly visual and contextual values. Where necessary, temporary fencing should be erected between the construction zone and adjoining heritage items. This strategy relates to the Macleay River Hotel (KEH5), the former Frederickton ferry ramp (KEH6), and the Frederickton Butter Factory (KEH7).

The low heritage significance of the Jamieson Timber Mill (KEH8), does not warrant the conduct of heritage impact actions.

10.2.4 Existing and Proposed Heritage Listed Places

The only European heritage place currently listed and subject to impact is the Macleay River Hotel property (KEH5) (Kempsey Local Environmental Plan 1987). As outlined above, the grounds of the Hotel would be subject to impact from flood levee construction and the design of the levee would aim

to minimise impact to visual and contextual values. The consent of the Kempsey Shire Council to impact this property would not be required if the proposed Upgrade is approved under Part 3A of the EP&A Act.

There are six draft heritage listing proposals currently being considered by Kempsey Shire Council, which are relevant to the proposed Upgrade works. These consist of a proposed Frederickton Conservation Area, the Frederickton War Memorial (KEH4), the Butter Factory (KEH7), Boat Ramp and Park (includes KEH6), residences along Lawson Street (includes KEH8), and residences at 1-3 Macleay Street. These proposed listings do not currently pose statutory constraints on the proposed Upgrade. When and if they are accepted and gazetted by Council, under the provisions of the Kempsey Local Environmental Plan (Part 3 s26(1)), approval must be gained from Council prior to their impact. In the event that the proposed Upgrade is approved under Part 3A of the EP&A Act, the provisions of the Local Environmental Plan would not apply to the Project. Despite this, the intention of the Part 3A amendments is for environmental assessments to remain sensitive to local values whilst facilitating State level development priorities. Consequently, the proposed Upgrade project should recognise the potential for future listing of these places and adopt measures to mitigate any potential impacts to heritage values subject to impact.

The proposed flood levee works would impact the Boat Ramp and Park, and the rear yards of the Lawson Street Lots, the Butter Factory, and the Macleay Street residences. These properties are also included within a section of the proposed Frederickton conservation area. As outline above, the levee bank would be constructed in such a way as to avoid direct impact to all standing structures with heritage significance where possible. In addition, the levee would be designed and landscaped with the aim of minimising impacts to heritage values, particularly visual and contextual values. Although it is the negative impacts of the levee construction which are addressed here, it is important to realise that the levee would have a long term positive influence on the conservation of these properties through the mitigation of future flood impacts.

The freehold lots to the east of the Frederickton public school are also included in the proposed Frederickton conservation area. These lands include a former farmhouse site, entrance and plantings (KEH3) and an early twentieth century house (KEH2), (refer Figure 7.4). The former would not be directly impacted, however demolition of the latter would be required for the construction of a traffic circle and an entry and exit carriageway for the Frederickton interchange. The construction of the carriageway would directly impact the eastern end of the proposed conservation area. This land consists of cleared pasture grassland and provides an agricultural landscape setting for the early twentieth century house (KEH2). The proposed demolition of the house would substantially limit the remaining heritage values of the adjacent lands, which would be further impacted by construction of the carriageway.

10.2.5 Maritime Relics

The section of the Macleay River which would be spanned by the proposed Upgrade was extensively utilised in the past as a maritime corridor for trade and transport. Despite the absence of recorded ship wrecks or jetty locations on the actual proposed Upgrade alignment, a number of former wharves and jetties are known from the northern and southern banks, both upstream and downstream of the proposed bridge location. As a consequence, there is some archaeological potential for the river bed sediments in the location of the proposed Upgrade Bridge to contain maritime relics. The construction of the Macleay River Bridge may involve the excavation of river bed sediments. Where the construction methodology allows, the content of these excavated sediments would be monitored by a suitably qualified archaeologist. The objective of this program would be the recording and collection of any excavated maritime relics considered to be of local or state significance or that have archaeological research value. The discovery of any such relics would be reported promptly to the NSW Heritage Office. Provided that the project has approval under Part 3A of the EP&A Act, an excavation permit under section 140 of the Heritage Act would not be required to recover such finds.

11. RECOMMENDATIONS

11.1 Management Strategies to form part of a Statement of Commitments

The following strategies should form part of the Statement of Commitments for the proposed Upgrade project:

Aboriginal Heritage

1. A salvage collection program for Aboriginal artefacts (Aboriginal objects) would be conducted at each of the Aboriginal artefact scatters subject to direct impact (KE14, KE15, KE16 and KE42), both prior to the commencement of construction impact, and following vegetation removal and top soil stripping.

2. Prior to the commencement of construction activities, a program of archaeological subsurface investigation would be conducted at the potential Aboriginal archaeological deposits KE PAD1-PAD 12 to determine the nature and significance of any archaeological deposits located within the approximate extent of construction. In the event that archaeological material is encountered within these areas, appropriate management strategies would be developed according to the assessed significance of the finds.

3. All recovered Aboriginal artefacts (Aboriginal objects) would be subject to archaeological description and analysis (as appropriate and according to their significance), prior to their permanent curation according to the wishes of stakeholder Aboriginal groups. Potential options for curation include re-placement of the material outside of the construction zone but as close as possible to their original locations, placement within an appropriate local keeping place, and placement with the Museum of Australia, Sydney.

4. Where it is anticipated that there is a risk of accidental damage to Aboriginal sites situated within relative proximity to the extent of construction impact (KE23 and 30-3-111), a temporary fence would be installed between the site and construction zone with the aim of defining a no-go area.

5. Consultation with local Aboriginal stakeholder groups regarding Aboriginal cultural heritage issues and the management of Aboriginal sites would be conducted, as required, throughout the design and construction phases of the proposed Upgrade project. In accordance with the requirements of the DEC, the participation of representatives of Aboriginal stakeholder groups in Aboriginal cultural heritage management strategies would be conducted according to the RTA guidelines on Aboriginal participation.

European Historic Heritage

6. The extent of the construction footprint in the area of the Frederickton Memory Avenue (KEH1a) would be kept to a minimum, as far as practical. An archival recording of the avenue would be conducted prior to the commencement of construction impacts. An appropriate form of pedestrian access would be constructed between the two portions of avenue separated by the proposed Upgrade works.

   Following a review of the condition and health of the remaining avenue trees, an appropriate level of restoration would be directed at the significant elements of the avenue. This may include pruning, the removal of weeds and unwanted vegetation, and the planting of suitable replacement tree species. Consideration would be given to erecting signage and an appropriate form of permanent memorial at the avenue which highlights the trees, their meaning and lists the names of the individuals commemorated by the avenue. Input from appropriate stakeholder groups, such as the Kempsey Macleay R.S.L. Sub Branch, adjoining landowners and Kempsey Shire Council, would be sought prior to finalising the management of the Avenue. Consideration would also be given to facilitating the development of a plan of management for the long term maintenance of the avenue.

7. A full assessment of the early twentieth century house (KEH2) would be conducted following the arrangement of access protocols with the property owner. Appropriate management strategies would be developed according to the assessed significance of the site. These may include the conduct of an archival recording prior to construction impact and, if warranted, dismantling and reconstructing the significant structure(s) to an appropriate location nearby.

8. A site survey of the former farmhouse site and associated tree plantings (KEH3) would be conducted following the arrangement of access protocols with the property owner. Where it is anticipated that there is a risk of accidental damage to significant elements of this site from construction activity, a temporary fence would be installed between the site and construction zone with the aim of defining a no-go area.

9. The Frederickton levee would be designed and constructed so that above-ground structures with heritage significance are avoided where possible. The impact of the levee on the landscape context of adjacent heritage items (including river bank jetty remains) would be minimised and mitigated as far as practical. Where necessary, temporary fencing would be erected between the construction zone and adjoining heritage items. This strategy includes the Macleay River Hotel (KEH5), the former Frederickton ferry ramp (KEH6), and the Frederickton Butter Factory (KEH7).

10. An archival record of the former Frederickton ferry ramp (KEH6) and the affected areas of the Frederickton Butter Factory would be conducted prior to the construction of the Frederickton levee.

11. Public pedestrian access to the former Frederickton ferry ramp (KEH6) would be maintained with consideration of public safety and security, and the existing heritage interpretive signage would be preserved and, where necessary, re-positioned.

12. No heritage impact actions would be required for the former Jamieson Timber Mill (KEH8), and remnant post and rail fenceline (KEH9).

13. The RTA would liaise with the Kempsey Shire Council regarding the management of, and potential impacts to the heritage values of places in the area of the proposed Upgrade works which are currently the subject of draft heritage listing proposals.

14. In the event that the construction of the bridge over the Macleay River will involve the excavation of river bed sediments, where the excavation methodology allows, the content of these excavated sediments would be monitored by a suitably qualified archaeologist. The objective of this program would be the recording and where warranted, collection, of any exposed maritime relics. The discovery of any relics would be reported promptly to the NSW Heritage Office.

General

15. All heritage recordings with conservation management requirements, situated within or in close proximity to the extent of construction works would be identified on appropriate construction documentation such as the Environmental Management Plans. All management requirements such as disturbance prevention or boundary fencing should be identified on such documentation.

16. All previously unsurveyed areas proposed for works depot or construction compound activities would require assessment of archaeological potential prior to development. If sites or areas of subsurface archaeological potential are identified, then appropriate management strategies would be instigated, or where necessary, alternative areas selected for development.

11.2 Aboriginal Stakeholder Distribution of this Report

One copy of this report and the Environmental Assessment document should be forwarded to each of the Dunghutti Elders Council, and the Kempsey and Unkya Local Aboriginal Land Councils and the Unkya people with an invitation to comment on the report findings, the Aboriginal heritage recordings, and the proposed heritage impact mitigation strategies:

Ms Ruth Campbell
Dunghutti Elders Council
John Street
Kempsey NSW 2440

Ms Tracey Edwards
Kempsey Local Aboriginal Land Council
John Street
Kempsey NSW 2440

Unkya Local Aboriginal Land Council
PO Box 319
Macksville, NSW 2447

Mary-Lou Buck
Aboriginal Cultural and Heritage Advisor, Northern
Elbow Street
West Kempsey, NSW 2440

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APPENDIX 1

CONTEMPORARY NEWSPAPER REPORTS CONCERNING THE CREATION OF THE FREDERICKTON MEMORY AVENUE

Transcription from the Macleay Argus, 15 May, 1919

FREDERICKTON MEMORY DRIVE

A meeting of Frederickton citizens, convened by the Women Workers, for the purpose of arranging details in connection with a Memory Drive previously decided upon, for commemorating the services rendered the Empire by our boys of Frederickton who assisted in the Great War, was held in the School of Arts, on Wednesday Evening last.

The question of an Honor (sic) Drive, being a suitable memorial, has been for a considerable time in the minds of our women workers, having been broached by Miss Debenham some 12 months ago, but owing to pressure of war work had to be deferred.

The meeting was presided over by Mr. R. Jamieson, and Miss Debenham performed the secretarial duties.

The lists handed in by the collectors, Mesdames Lancaster and Russell and Miss Johnston, previously appointed, showed that the movement was a popular one, £20 having been readily subscribed.

Fifty trees supplied from the Government nurseries, free of charge, are to form a Drive commencing at the School corner and extending along the main road to Macleay-street, also along Edgar-street for some distance, and on East Frederickton side from the punt some distance in the direction of Gladstone-Kempsey Road.

It was suggested by Miss Lancaster, and the suggestion is a good one, that to each tree be attached a brass plate with the name of the soldier intended to perpetuate, suitably inscribed, but this matter, together with the tree-planting and ceremony in conjunction, was deferred for consideration at some future meeting.

The preparation of the soil for each tree and the erection of tree-guards was left in the hands of a committee of men, and as this work entails some expense, it was decided not to close the lists, so that those who wish to assist may do so by calling on the collectors, the secretary or R. H. Johnston, hon. Treasurer.

It was also decided, on the motion of Messrs. Jamieson and Matear, that any person wishing to honor (sic) a returned soldier other than a Frederickton boy, or plant a tree to the memory of one who has made the supreme sacrifice, may do so, providing the guard is erected at his or her own expense.

Transcription from the Macleay Chronicle, 6th August 1919 (p. 3)

A FREDERICKTON MEMORIAL
TREE PLANTING CEREMONY

Frederickton, placid, somnolent little village, nestling between two hills that afford splendid panoramic views of the Macleay valley, held a tree planting function on Wednesday last [Wednesday, 30 July 1919] in memory of soldiers who fell; and in honour of soldiers returned. The day was a sample of glorious springtime, and seemed in keeping with an occasion when white-robed Peace might hand to rustic Agriculture the broken instruments of war. However, this poetic fancy was subjective to the dusky shadow of sorrow mounting high in the breasts of those present as they recalled the short-dated lives of noble, generous soldiers who fell in their hardy prime.

The fitting function was controlled by the Chairman of the Committee, Mr. R. J. Jamieson; Miss Tina Debenham was Hon. Secretary, and Mrs. S. R. J. Lancaster (President of Frederickton Welcome Home Committee) was also an active worker. Mr. W. J. Sergeant had the trees all planted in readiness for the formal ceremony, and Messrs S. Wedlock. Geo. Keast and others helped in a dozen different ways. The extent of the preliminary work can be gauged by the fact that 58 trees were planted in all – 26 at East Frederickton and 32 in the town proper. Each tree-guard comprised 20 rails, and the corner posts were obtained by cutting 10 x 5 railway sleepers down the centre.

On East Frederickton road trees were planted to the sacred memory of the following fallen soldiers: - Lieut. R. E. Egan, Mrs. Lancaster; to Ptes. C. Wheeldon, by Mrs. Wheeldon; Les. Dornan, by Mrs. Lancaster; Bert Dornan, by Mrs. C. Dornan; W. Skimmings, Mrs. Lancaster; Len Dornan, Mrs A. Dornan.

Trees in honour of the following soldiers were also planted on the East Frederickton road: - Ptes. W. Barnett, by Mrs. Wheeldon; Gus. Dornan, Miss Elsie Dornan; H. Thurgood, Miss Ruby Thurgood; J. Denning, Miss Elsie Dornan; J. Riordan, Mrs. A. Dornan; B. Denning, Miss M. Dornan; H. O'Dell, Miss Maggie Rowe; G. Hayes, Miss T. Debenham; J. O'Dell, Miss Ethel Dornan; P. Hayes, Mrs. Lancaster; G. Ainsworth, Miss Effie Dornan; W. Gorman, Mrs. Ern. Dornan; S. T. Rowe, Miss Maggie Rowe; S. Dunn, Miss Hilliar; G. Rowe, Mrs. Tom Rowe; H. Lancaster, Miss Debenham; C. Craig, Miss Maggie Rowe; M. Cheers, Miss Gladys Lee; D. Rowe, Mrs. Tom Rowe; Lyle Dornan, Miss Effie Dornan.

The first nine trees on the Great Northern road were planted in sacred memory of the following fallen soldiers: - Ptes. Albert Cooper, M.M., Miss L. Miles; Frank Charters, Miss Connie Ling; Monte Bowen, Miss Hilliar; Horace Brenton, Mrs. Brenton; Len. Miles, Mrs. Miles; Roy Moore, Mrs. C. Matear; Geo. Keast, Mrs. Earnest Keast; Guy Johnston, Mrs. C. Matear; H. Burniston, Mrs. H. Burniston.

Trees planted on the Great Northern road and in Edgar-street to honour of the following soldiers: - Ptes. L. Hilliar, Miss Hilliar; Ted Debenham, Miss Agnes Debenham; Clyde Young, Miss Jean Young; Lester Cheers, Miss Ella Cheers; A. and B. Coleman, Miss Minnie Miles; Arthur Pike, Miss Grace Pike; W. J. Lowe, Miss Mabel Sheppard; Lloyd Cook, Mrs. Cook; Cuthbert Knauer, Miss Knauer; H. C. Garner, Miss Elsie Sheppard; Felix Garner, Miss Lettie Sheppard; Stan. Hickson, Miss Myrtle Benson; Roy Hickson, Miss Alma O'Connor; Percy Hickson, Mrs. Lancaster; Tom Hickson, Mrs Ethel Bevett; Leslie Scott, Miss T. Debenham; Selwyn Knauer, who did service in the danger zone in the mercantile marine, Mrs. Geo. Knauer; Stan. Ennis, M. M., Miss Keast; Reg. Keast, Mrs. Reg. Keast, wife; Major Scott, D.S.O., Mrs. Oakes; R., C. and L. Scott, Miss Gwen Knauer; Laurie Jamieson, Mr. Hector Jamieson; and to the memory of the late Pte. J. H. Saul, who enlisted in Queensland, Mrs. Jamieson.

The names of the ladies and gentlemen following those of the soldiers intimate the formal planters of the various trees. A large number of the trees were camphor laurels, and silky oaks; buttonwoods and white cedar comprised the remainder.

An adjournment was then made to the fine school grounds, where the ladies had made complete arrangements for afternoon tea. Mr. R. J. Jamieson acted as chairman and read

apologies from Member Morton, Rev. Father Gunn, Rev. M. L. Bembrick, Shire President Lancaster, Cr. J. A. Mannix, Mr. J. Riordan, and Mr. Jas. Skimmings and family.

After explaining several minor matters in connection with the function, Mr. Jamieson expressed the hope that the trees would grow and honour and beautify the town as the boys had honoured and perpetuated the towns of Australia for all time.

The Rev. David Smith, M.A., said the occasion was a memorable one and Frederickton citizens had taken care that it should be so. All the trees would be watched as they grew, and they would likely be tell-tale trees about the time that some of the little girls before him were grandmothers. It might be said that the roots of those trees were away on the other side of the world, for it was in Palestine, France and elsewhere that the soldiers who were being memorialised and honoured served their country and died for their country. Tennyson, speaking of an old yew-tree in connection with the death of his friend, Arthur Haslam, said, 'Thy roots wrapped around his head'. That was a poetic idea; but still, in a very real sense, the roots of these trees would be wrapped about the heads of the fallen heroes as a halo of memory, while they wore a crown of honour to the lads returned. The speaker added a word about the loyalty of Frederickton; and in speaking of the quiet beauty of the township he said he hoped the 'lake' in the centre would soon be got rid of. In pay a tribute to the 60,000 Australians who had fallen in freedom's cause, he addressed a special word to the younger members of his audience to do their best for Australia in the course of their own advancement.

Cr. Kissane felt it a duty to be present at the function of dedicating the trees to the immortal memory of the fallen heroes, and in gratitude to the boys returned. He paid a high tribute to the loyalty of Frederickton men and women, and appealed for support to the forthcoming war loan.

Mr. E. C. Hollow, Secretary of the local R.S.S.I.L., remarked that this was a sad occasion for him when he thought of his comrades being commemorated. He could not say much, because the people of Frederickton already knew his opinion of them: but he would ask them to keep in memory that the fallen soldiers had left 10,000 children behind them; and there were many cripples among the returned. The trees were all right, but they should bear some fruit for those who could not help themselves. On behalf of the League he thanked the Committee for the invitation to be present.

Mr. Gooud (Headmaster of Federation School) took the opportunity to outline a scheme for putting a monument on the hill near the public school. He would call a public meeting later on and ask for support to the idea. (Applause.)

The Chairman announced that the name of Pte. Lavers had been omitted, but the omission would be made good. If any person desired to honour a soldier, whether enlisted from Frederickton or not, they could have a tree planted, and properly guarded, by sending 10s to the Committee. This did not cover the full cost, but the Committee was bearing portion of the expense. Mr. Jamieson appealed to the children to assist in caring for the trees, not to allow any harm to come to them. Copper name-plates would be part of each tree-guard.

The singing of the National Anthem preceded the handing round of choice refreshments; and thus closed a pleasant function.

Tables A1.1 & A1.2 ***Inventory of Individuals commemorated in the Frederickton Memory Avenue***

The tables below present information provided in the Macleay Chronicle, 6th August, 1919. The numbers indicated in the left hand column refer to the order in which the names were quoted in the newspaper article and do not necessarily reflect the order in which the trees were dedicated.

Tree Planting - East Frederickton

South of the Macleay River, on the road from Gladstone to the former ferry crossing [now known as Rowe's Lane or Frederickton Ferry Road]

No.	In Memory of:	Planted by
1	Lieutenant R. E. Egan	Mrs. Lancaster
2	Private C. Wheeldon	Mrs. Wheeldon
3	Private Les. Dornan	Mrs. Lancaster
4	Private Bert Dornan	Mrs. C. Dornan
5	Private W. Skimmings	Mrs. Lancaster
6	Private Len. Dornan	Mrs. A. Dornan
7	Private W. Barnett	Mrs. Wheeldon
8	Private Gus. Dornan	Miss Elsie Dornan
9	Private H. Thurgood	Miss Ruby Thurgood
10	Private J. Denning	Miss Elsie Dornan
11	Private J. Riordan	Mrs. A. Dornan
12	Private B. Denning	Miss M. Dornan
13	Private H. O'Dell	Miss Maggie Rowe
14	Private G. Hayes	Miss T. Debenham
15	Private J. O'Dell	Miss Ethel Dornan
16	Private P. Hayes	Mrs. Lancaster
17	Private G. Ainsworth	Miss Effie Dornan
18	Private W. Gorman	Mrs. Ern. Dornan
19	Private S. T. Rowe	Miss Maggie Rowe
20	Private S. Dunn	Miss Hilliar
21	Private G. Rowe	Mrs. Tom Rowe
22	Private H. Lancaster	Miss Debenham
23	Private C. Craig	Miss Maggie Rowe
24	Private M. Cheers	Miss Gladys Lee
25	Private D. Rowe	Mrs. Tom Rowe
26	Private Lyle Dornan	Miss Effie Dornan

Tree Planting - Frederickton

North of the Macleay River on the Pacific Highway and Edgar Street

No.	In Memory of:	Planted by
1	Private Albert Cooper, M.M.	Miss L. Miles
2	Private Frank Charters	Miss Connie Ling
3	Private Monte Bowen	Miss Hilliar
4	Private Horace Brenton	Mrs. Brenton
5	Private Len. Miles	Mrs. Miles
6	Private Roy Moore	Mrs. C. Matear
7	Private Geo. Keast	Mrs. Earnest Keast
8	Private Guy Johnston	Mrs. C. Matear
9	Private H. Burniston	Mrs. H. Burniston
10	Private L. Hilliar	Miss Hilliar
11	Private Ted Debenham	Agnes Debenham
12	Private Clyde Young	Miss Jean Young
13	Private Lester Cheers	Miss Ella Cheers
14	Privates A. and B. Coleman	Miss Minnie Miles
15	Private Arthur Pike	Miss Grace Pike
16	Private W. J. Lowe	Miss Mabel Sheppard
17	Private Lloyd Cook	Mrs. Cook
18	Private Cuthbert Knauer	Miss Knauer
19	Private H. C. Garner	Miss Elsie Sheppard
20	Private Felix Garner	Miss Lettie Sheppard
21	Private Stan. Hickson	Miss Myrtle Benson
22	Private Roy Hickson	Miss Alma O'Connor
23	Private Percy Hickson	Mrs. Lancaster
24	Private Tom Hickson	Mrs Ethel Bevett
25	Private Leslie Scott	Miss T. Debenham
26	Selwyn Knauer M.M.	Mrs. Geo. Knauer
27	Stan. Ennis, M.M.	Miss Keast
28	Private Reg. Keast	Mrs. Reg. Keast, wife
29	Major Scott, D.S.O.	Mrs. Oakes
30	Private R., C. and L. Scott	Miss Gwen Knauer
31	Private Laurie Jamieson	Mr. Hector Jamieson
32	Private J. H. Saul	Mrs. Jamieson

APPENDIX 2

RECORD OF ABORIGINAL PARTICIPATION

Record of Aboriginal Representative Participation*

Project Name: **Kempsey to Eungai Pacific Highway Upgrade EIS - Archaeological Survey**

Client Name: Parson Brinckerhoff Australia Pty Ltd, Locked Bag 248, Rhodes NSW 2138 ph: 9743 0333 fx: 9736 1568

Archaeologist(s): Navin Officer Heritage Consultants, 4/71 Leichhardt Street, Kingston ACT 2604 ph: 6282 9415 fx: 6282 9416

Name of Representative	Organisation	Date	Type of Participation	Start time	Finish time	Total hours (excluding lunch break)	Sign off
MICHAEL EDWARDS	Kempsey LALC	21.2.2005	Field Survey	8.00AM	5.00pm	M. Edwards	
HARRY VALE	Kempsey LALC	21.2.2005	Field Survey	8.00AM	5.00pm	H. Vale	
MICHAEL EDWARDS	Kempsey LALC	22.2.2005	Field Survey	8.00AM	5.00pm	M Edwards	
HARRY VALE	Kempsey LALC	22.2.2005	Field Survey	8.00AM	5.00pm	H Vale	
MICHAEL EDWARDS	Kempsey LALC	23.2.2005	Field Survey	8.00AM	5.00pm	M. Edwards	
HARRY VALE	Kempsey LALC	23.2.2005	Field Survey	8.00AM	5.00pm	H. Vale	
MICHAEL EDWARDS	Kempsey LALC	24.2.2005	Field Survey	7.00AM	5.00pm	M. Edwards	
HARRY VALE.	Kempsey LALC	24.2.2005	Field Survey	7.00AM	5.00pm.	H. Vale.	

Issues raised: Artefact site at railway cutting recommended for salvage.

Signed ***(archaeologist)***: ..... ***Aboriginal representative(s)***: M Edwards **Date** 24/2/05

Record of Aboriginal Representative Participation*

Project Name: **Kempsey to Eungai Pacific Highway Upgrade EIS - Archaeological Survey**

Client Name: Parson Brinckerhoff Australia Pty Ltd, Locked Bag 248, Rhodes NSW 2138 ph: 9743 0333 fx: 9736 1568

Archaeologist(s): Navin Officer Heritage Consultants, 4/71 Leichhardt Street, Kingston ACT 2604 ph: 6282 9415 fx: 6282 9416

Name of Representative	Organisation	Date	Type of Participation	Start time	Finish time	Total hours (excluding lunch break)	Sign off
VINCENT COOK	Dunghutti Elders Council	21.2.2005	Field Survey	8.00 AM	5.00 PM		
ISSACC CAMPBELL-COOK	Dunghutti Elders Council	21.2.2005	Field Survey	"	"		
VINCENT COOK	Dunghutti Elders Council	22.2.2005	Field Survey	"	"		
ISSACC CAMPBELL-COOK	Dunghutti Elders Council	22.2.2005	Field Survey	"	"		
VINCENT COOK	Dunghutti Elders Council	23.2.2005	Field Survey	"	"		
ISSACC CAMPBELL-COOK	Dunghutti Elders Council	23.2.2005	Field Survey	"	"		
VINCENT COOK	Dunghutti Elders Council	24.2.2005	Field Survey	7.00 AM	5.00 PM		
ISSACC CAMPBELL-COOK	Dunghutti Elders Council	24.2.2005	Field Survey	"	"		

Issues raised: Artefact site near railway cutting recommend salvage

Signed *(archaeologist)*: ..... *Aboriginal representative(s)*: ..... Date 24/2/05

Record of Aboriginal Representative Participation*

Project Name: **Kempsey to Eungai Pacific Highway Upgrade Preferred Option EIS - Archaeological Survey**

Client Name PPK Environment & Infrastructure, PO Box 248, Concord West NSW 2138 ph: 9743 0333 fx: 9736 1568

Archaeologist(s ..... Vanessa Myles/Lindsay Smith, Navin Officer Heritage Consultants, 4/71 Leichhardt St, Kingston ACT 2604 ph: 6282 9415 fx: 6282 9416

Name of Representative	Organisation	Date	Type of Participation	Start time	Finish time	Total hours (excluding lunch break)	Sign off
I. CAMPBELL COOK	Dunghutti Elders Cncl	11/04/05	Survey	9.30AM	3.30PM.		

Issues raised:.....

Signed ***(archaeologist)***:..... ***(Aboriginal representative(s))***:..... **Date** 11/04/05.

Record of Aboriginal Representative Participation*

Project Name: **Kempsey to Eungai Pacific Highway Upgrade Preferred Option EIS - Archaeological Survey**

Client Name: PPK Environment & Infrastructure, PO Box 248, Concord West NSW 2138 ph: 9743 0333 fx: 9736 1568

Archaeologist(s): Vanessa Myles/Lindsay Smith, Navin Officer Heritage Consultants, 4/71 Leichhardt St, Kingston ACT 2604 ph: 6282 9415 fx: 6282 9416

Name of Representative	Organisation	Date	Type of Participation	Start time	Finish time	Total hours (excluding lunch break)	Sign off
RICHARD SMITH	Kempsey LALC	11/04/05	Survey	9.00AM	3.30pm.		

Issues raised:.....

.....

Signed ***(archaeologist)***:..... ***(Aboriginal representative(s))***: Richard Smith **Date** 11/4/05.

APPENDIX 3

(RESTRICTED ACCESS)

SUMMARY OF CULTURAL HERITAGE RECORDINGS SIGNIFICANCE AND IMPACT ASSESSMENT AND IMPACT MITIGATION

(Including Aboriginal Heritage Recordings)

Access to the information in this Appendix is restricted to Aboriginal stakeholder groups, relevant statutory and government authorities and their authorised agents

Table A3.1 Summary of Cultural Heritage Recordings, Significance and Impact Assessment and Impact Mitigation

NPWS Site No.	Site Name	Site Description	Map Reference MGA (GDA)	Map Reference AMG (AGD)	Significance	Direct Impact?	Impact Mitigation Commitment
	KE14	open scatter of 31+ Aboriginal stone artefacts	488703. 6579147	488599.6578959 – 488880.6578740	low-moderate local	yes	conduct salvage collection of surface artefacts prior to impact, and following topsoil stripping
	KE15	open scatter of 3 Aboriginal stone artefacts	489109. 6579140	489005.6578952	low local	yes	conduct salvage collection of surface artefacts prior to impact, and following topsoil stripping
	KE16	open scatter of 3 Aboriginal stone artefacts	489318. 6579174	489214.6578986	low local	yes	conduct salvage collection of surface artefacts prior to impact, and following topsoil stripping
	KE23	possible Aboriginal scarred tree	491465.6587190	491361.6587002	moderate local	no – 80 metres northeast of development	where necessary, ensure site not impacted through temporary fencing
30-3-111		open scatter of 12 Aboriginal stone artefacts	48377.655678	483666.6556592	low-moderate, local	no - 80 metres east of development	where necessary, ensure site not impacted through temporary fencing
	KE42	open scatter of 8 Aboriginal stone artefacts	484682.6558304		low local	yes	conduct salvage collection of surface artefacts prior to impact, and following topsoil stripping
	KE PAD1	PAD - Pola Creek	487180.6560600 – 487490.6560750			yes	conduct archaeological subsurface investigation prior to development impact
	KE PAD2	PAD -southern edge of flood plain	489000.6562665 – 489150.6563330			yes	conduct archaeological subsurface investigation prior to development impact
	KE PAD3	PAD - southern bank of Macleay River	489290.6566065 – 489250.6566250			yes	conduct archaeological subsurface investigation prior to development impact
	KE PAD4	PAD – northern bank of Macleay River	489115.6566570			yes	conduct archaeological subsurface investigation prior to development impact
	KE PAD5	PAD - ridge crest and former shoreline east of Frederickton Golf Course	488950.6567000 – 488965.6567260			yes	conduct archaeological subsurface investigation prior to development impact

NPWS Site No.	Site Name	Site Description	Map Reference MGA (GDA)	Map Reference AMG (AGD)	Significance	Direct Impact?	Impact Mitigation Commitment
	KE PAD6	PAD - ridgecrest and former shoreline north of Frederickton	488340.6568000 – 488000.6568265			yes	conduct archaeological subsurface investigation prior to development impact
	KE PAD7	PAD - basal slopes and former shoreline north of Collombatti Creek		486445.6573725 – 486258.6574400		yes	conduct archaeological subsurface investigation prior to development impact
	KE PAD8	PAD - ridgeline crest		487100.6576640		yes	conduct archaeological subsurface investigation prior to development impact
	KE PAD9	PAD - ridgeline crest and basal slope bench		487470.6577315 – 487660.6577650		yes	conduct archaeological subsurface investigation prior to development impact
	KE PAD10	PAD - spurline associated with KE14-16		488948.6579010 – 489390.6579200		yes	conduct archaeological subsurface investigation prior to development impact
	KE PAD11	PAD - basal slopes and former shoreline north of Doughboy Swamp		491380.6579950 – 491855.6580148		yes	conduct archaeological subsurface investigation prior to development impact
	KE PAD12	PAD - ridgeline crest		492238.6580380		yes	conduct archaeological subsurface investigation prior to development impact
	KEH1	Frederickton Memory Avenue	S of Macleay R (a) 489528.6565750 - 489048.6565849 N of Macleay R (b) 488485.6566230 – 488524.6566450		high local	yes, partial impact to avenue on southern side of Macleay River	minimise impact by reducing as far as practical the spatial extent of construction, conduct archival recording prior to impact, appropriate level of restoration of remaining avenue, maintain pedestrian through access along whole avenue
	KEH2	early twentieth century house	488650.6566635		low-moderate local [indicative]	yes	archival recording prior to impact
	KEH3	former farmhouse site, entrance track and plantings	488570.6566558 – 488600.6566695		low local [indicative]	no - adjacent to western boundary of	where necessary, ensure site not impacted through temporary fencing

NPWS Site No.	Site Name	Site Description	Map Reference MGA (GDA)	Map Reference AMG (AGD)	Significance	Direct Impact?	Impact Mitigation Commitment
						development	
	KEH4	Frederickton War Memorial	488522.6566563		high local	no – 60 metres west of development	no action required
	KEH5	Macleay River Hotel, Frederickton	488385.6566152		moderate local	no - adjacent to levee works	ensure structures and significant features not impacted by effective placement of levee works and temporary fencing
	KEH6	Frederickton Ferry Ramp	488490.6566125		moderate local	yes - approach impacted by levee	archival recording prior to impact
	KEH7	Frederickton Butter Factory	488519.6566200		low-moderate local	yes - ground platform adjacent to buildings impacted by levee	archival recording prior to impact
	KEH8	Former Jamieson's Timber Mill	488750.6566340		below threshold	no (structures adjacent to levee works)	no action required
	KEH9	post and rail fenceline remnants	489754.6581130	489650.6579250	below threshold	yes	no action required
	KEH10	Former Travellers Rest Inn	493072.5686543	492968.6586355	below threshold	no	no action required
	KEH11	Hotel Footings, Barraganyatti	493011.6586510	492907.6586322	below threshold	no	no action required

Notes: 1. It should be noted that Aboriginal cultural significance can only be determined by the Aboriginal community, and that confirmation of the significance assessment component of this table is dependent on written submissions by the appropriate representative organisations.

APPENDIX 4

(RESTRICTED ACCESS)

PROPOSED UPGRADE MAPS SHOWING SITE AND PAD LOCATIONS

Access to the information in this Appendix is restricted to Aboriginal stakeholder groups, relevant statutory and government authorities and their authorised agents

Map-1

PCCA = potential construction compound area

Map - 2

Map-2

PCCA = potential construction compound area

Map-3

PCCA = potential construction compound area

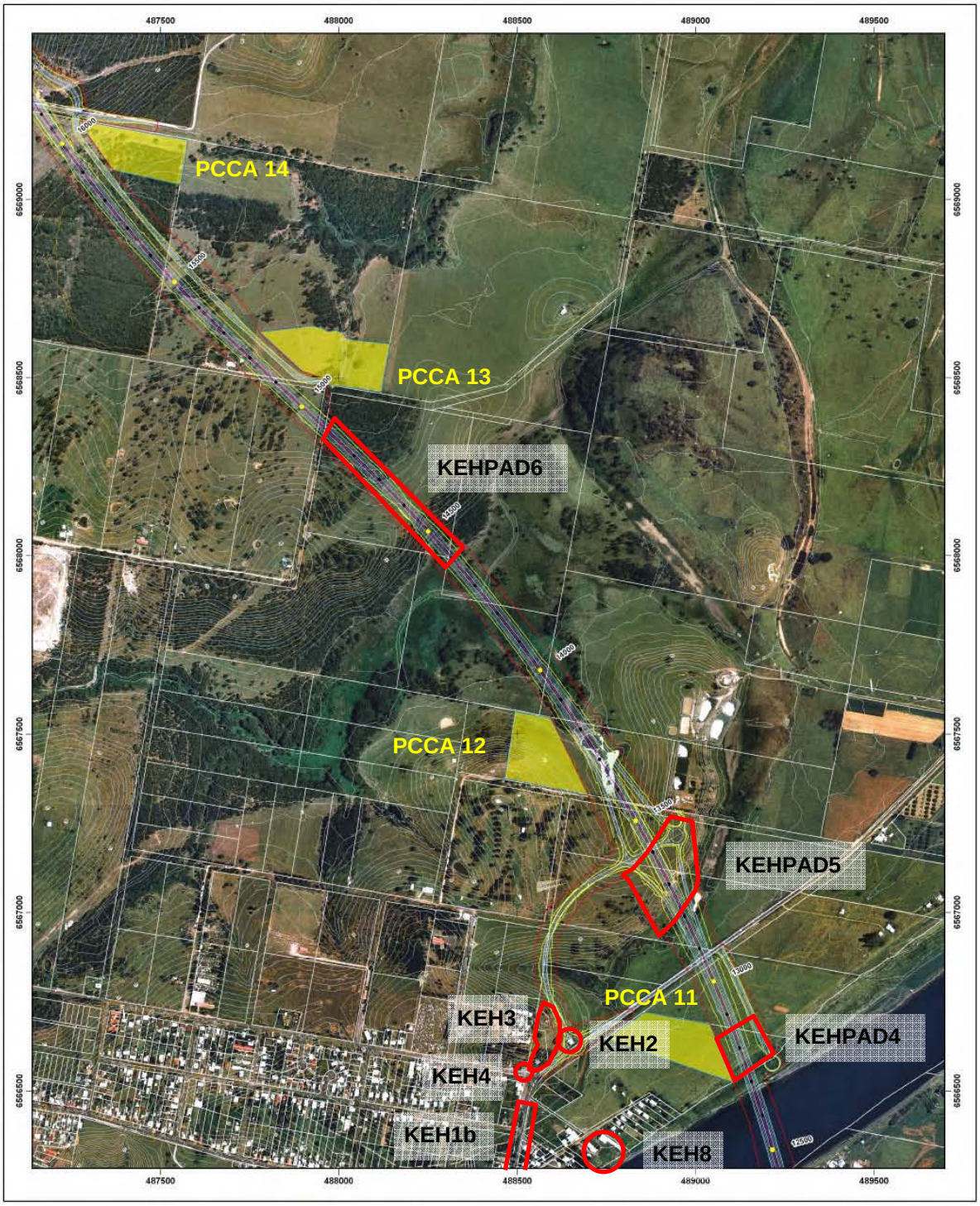
0 200 m

N

Map-4

Map - 4

PCCA = potential construction compound area



Map-5

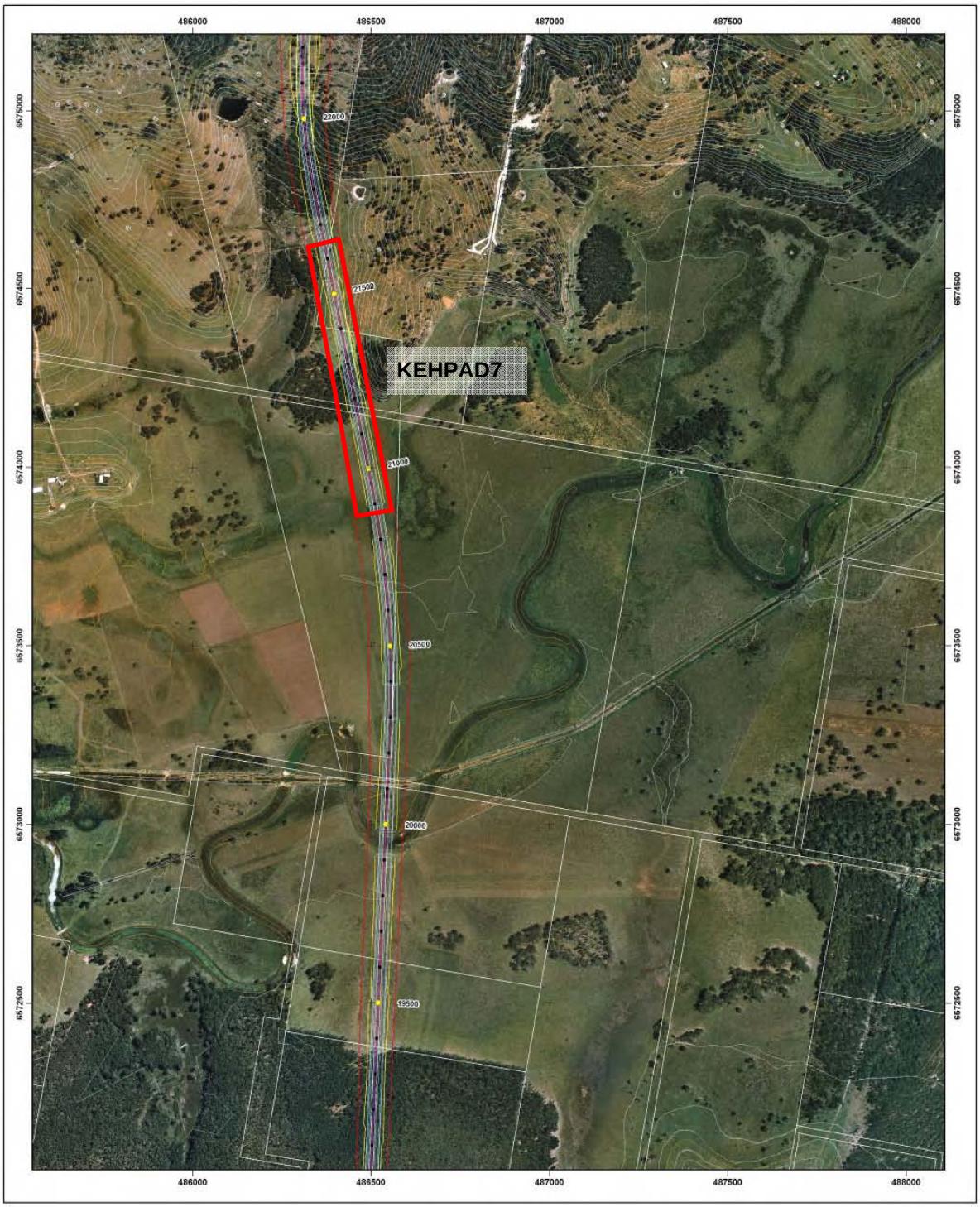
PCCA = potential construction compound area

0 200 m

N

PCCA = potential construction compound area

Map-6



0 200 m

N

Map-7

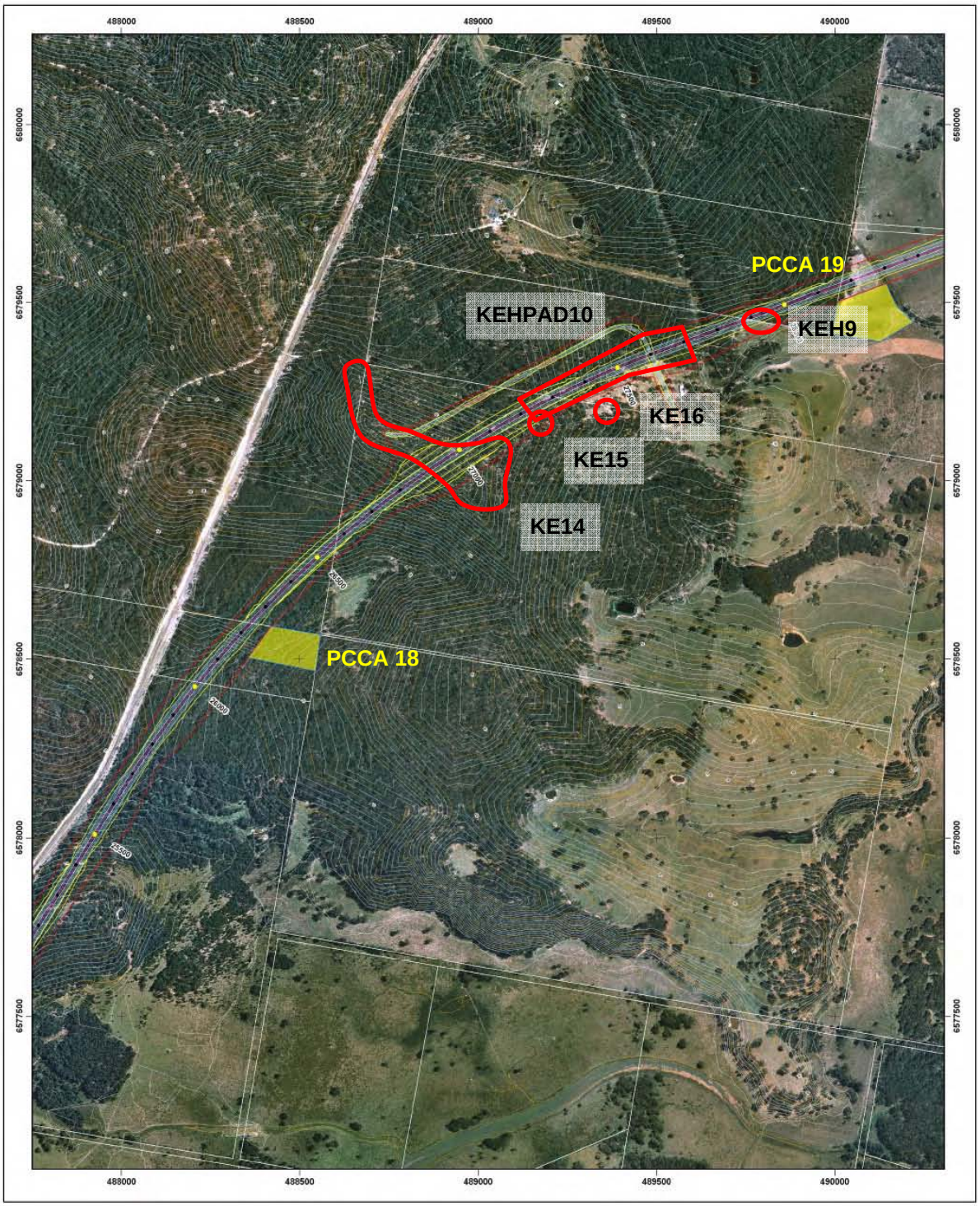
PCCA = potential construction compound area

0 200 m

N

Map-8

PCCA = potential construction compound area

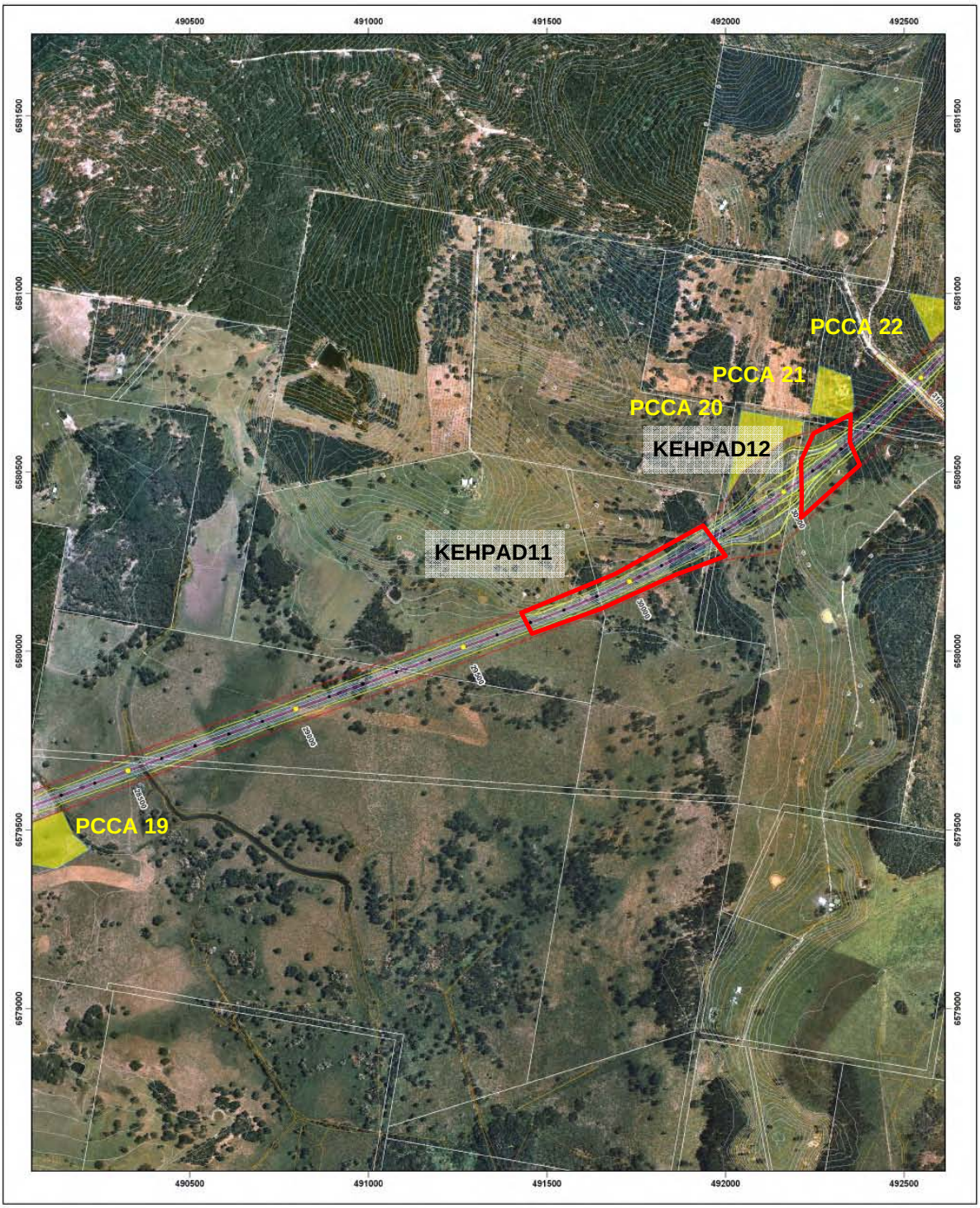


0 200 m

N

Map-9

PCCA = potential construction compound area



0 200 m

N

PCCA = potential construction compound area

Map-10

0 200 m

N

Map - 11

Map-11

PCCA = potential construction compound area

0 200 m

N

Map-12

PCCA = potential construction compound area

Map-13

PCCA = potential construction compound area