Aboriginal & European Cultural Heritage Assessment

For
Le Clos Verdun

At
Sancrox NSW

Prepared for
Hopkins Consulting
PO Box 1556
Port Macquarie NSW 2444

Job Reference 25290 - December 2008

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PROJECT: ABORIGINAL & EUROPEAN CULTURAL HERITAGE ASSESSMENT – LE CLOS VERDUN, SANCROX	
CLIENT:	*HOPKINS CONSULTING*
OUR REFERENCE:	*25290*
DATE:	*DECEMBER 2008*
APPROVED BY:	*LARAINE NELSON*
SIGNATURE:	
CHECKED BY:	*DARRELL RIGBY*
SIGNATURE:	

EXECUTIVE SUMMARY

RPS Harper Somers O'Sullivan (RPS HSO) was commissioned by Hopkins Consultants to provide an Aboriginal and European Cultural Heritage Assessment for the land known as "Le Clos Verdun" at Sancrox, near Port Macquarie, New South Wales. The proposal is to seek Project Approval for a 144 lot rural residential subdivision.

The wider Sancrox area has been rezoned for rural residential development. In seeking this Project Approval for "Le Clos Verdun" the Department of Planning requires all environmental factors, including archaeological be assessed. This report will form the archaeological assessment component of the Environmental Assessment required by the Department of Planning under Part 3A of the *Environmental Planning and Assessment Act* (1979).

The requirements of the Department of Environment and Climate Change Interim Community Consultation Guidelines were adhered to with a full description of the process followed in Section 1.4. This assessment was conducted in conjunction with the local Aboriginal interest groups, Birpai Local Aboriginal Land Council and Bunyah Local Aboriginal Land Council.

The archaeological pedestrian survey of the Le Clos Verdun area was conducted in clear conditions on Wednesday 8 October, 2008. The majority of the survey area comprises cleared land previously cultivated for grape production and currently used for grazing cattle. The landform consists of low hills bounded on the east by the margins of Haydons Creek and rural residential properties; to the north by the Hastings River and its flood plain; the western boundary is Riverbend Road; with Sancrox Road providing the southern boundary.

The pedestrian survey of Le Clos Verdun (Section 6) uncovered neither Aboriginal nor European cultural heritage items.

With regard Aboriginal cultural heritage there were no AHIMS (Section 4.4) listed sites inside the study area. The predictive model (Section 5) developed for the area indicated a medium propensity for Aboriginal cultural heritage items to be present.

With regards European cultural heritage the record shows that the Sancrox area was the location of one of the early government farms of nearby Port Macquarie. The exact location of the farm is not known. No remnant of that farm was located and it is considered highly unlikely given the temporary nature of the farm and the changing landscape of the Hastings River that any record would remain if it was in the vicinity of the study area.

This study concludes that there are no impediments, on Aboriginal or European cultural heritage grounds, to the proposed rezoning of the Le Clos Verdun development progressing.

One copy of this report will be sent to the following organisations:

Birpai Local Aboriginal Land Council
PO Box 433
Wauchope NSW 2446

Bunyah Local Aboriginal Land Council
PO Box 287
Wauchope NSW 2446

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APPENDICES

1 INTRODUCTION

RPS Harper Somers O'Sullivan have been engaged by Hopkins Consultants to carry out a cultural heritage assessment for the Le Clos Verdun property, located on Sancrox Road, Sancrox in the Port Macquarie - Hastings Local Government Area (LGA) (Figure 1-1). The study area is located in an area that has recently been identified for rural residential development, and this archaeological assessment is required by the Department of Planning when considering all environmental assessment factors, in determining if the study area should be approved for subdivision.

This report will form the archaeological assessment component of the Environmental Assessment required by the Department of Planning under Part 3a of the Environmental Planning and Assessment Act (1979).

This assessment was conducted in conjunction with the local Aboriginal interest groups - Birpai Local Aboriginal Land Council, and Bunyah Local Aboriginal Land Council. This report presents the findings of the archaeological survey and presents recommendations following research conducted as part of this report.

1.1 Background

The study area is located wholly within the Port Macquarie – Hastings Local Council's Rural Residential Strategy, which has recently rezoned sections of the wider Sancrox area to rural residential development. The majority of the area is currently zoned 1(r1) Rural Residential, with stands of remnant vegetation zoned 7(h) Environmental Protection – Habitat. An area of 6(a) Open Space zone covers an approximate 30 metre wide Crown Reserve on the edge of the Hastings River. The Le Clos Development Board, which manages the study area, has proposed to subdivide the study area into 144 rural residential lots for development. This archaeological assessment will form part of the environmental assessment required by the Department of Planning to determine if the proposed subdivision can proceed.

1.2 Study Area

The study area is named 'Le Clos Verdun' and is a rural estate located on the northern side of Sancrox Road, Sancrox approximately 15 km west of Port Macquarie. The study area is approximately 1km wide by approximately 2km long, and is irregularly shaped. It is bordered by Riverbend Road to the west, Sancrox Road to the south, Hastings River to the north and another rural residential property to the east (Figure 1-2)

Examination of the study area from an aerial photo (Google Maps) indicates that the area was once heavily forested, but has since been predominantly cleared. The study area is currently privately owned and has had a multitude of past and present uses, including viticulture, agricultural activities and rural residential estate. A private sealed road (Le Clos Verdun Road) has also been constructed through the centre of the property.

The study area covers:

Lot 51 DP775871, Lots 1-13, 15-66, 68, 70-72, 74-80, 83-84, 86-88 DP791199 and Lots 90-95 DP805549, Sancrox Road, Sancrox.

1.3 Legislative Context

It is incumbent on any land manager to adhere to legislative requirements that protect Indigenous cultural heritage in NSW. The Department of Environment and Climate Change (DECC), formerly the Department of Environment and Conservation (DEC), is the governing body that has the responsibility for managing and administering all facets of Aboriginal cultural heritage sites in New South Wales. The legislative policy that forms the structure for the care and management of Aboriginal sites in NSW is the *National Parks and Wildlife Act of 1974* (NPW Act). The Director General of the DECC oversees the care, protection and appropriate management of these sites in accordance with the *NPW Act* (1974). Section 90 of the *NPW Act* stipulates that it is an offence if a person does not obtain the consent of the Director-General before disturbing an Aboriginal site, place or object, and people will be prosecuted by the DECC.

Under Part 3A of the *Environmental Protection and Assessment Act* (EP&A Act 1979), the requirements to obtain a Section 90 Permit for a site or Section 87 Permit for conservation/research are not required.

At the national level the *National Heritage List* and the *Commonwealth Heritage List* (for those items under the control of the Commonwealth Government) records and protects those items that are accorded National Significance. The extensive *Register of the National Estate* lists those items considered of value for future generations. Extracts of the relevant legislation can be found in Appendix A.

1.4 Scope of the Assessment

To conduct the assessment the following tasks were completed:

- Advertisements were placed in the Port Express (6 August 2008) and the Port News (1 August 2008);
- Separate contact was made with the Birpai LALC (6 August 2008) and Bunyah LALC (6 August 2008);
- A review of all relevant documentation and statutory requirements with regard to indigenous cultural heritage, including consulting the DECC's Aboriginal Heritage Information Management System (AHIMS), for known Aboriginal sites, the State Heritage Register for non Aboriginal heritage sites, the Register of National Estate, the Hastings Council Local Environment Plan (LEP) and the Register of the National Trust;
- An investigation of regional and local historical and environmental information to ascertain the probability of archaeological sites occurring, the type of sites likely to occur and the likelihood of disturbances that may affect the integrity of such sites;
- A log of all consultation with Aboriginal stakeholders (see Appendix E);
- A pedestrian survey.

1.5 Aboriginal Consultation and Fieldwork

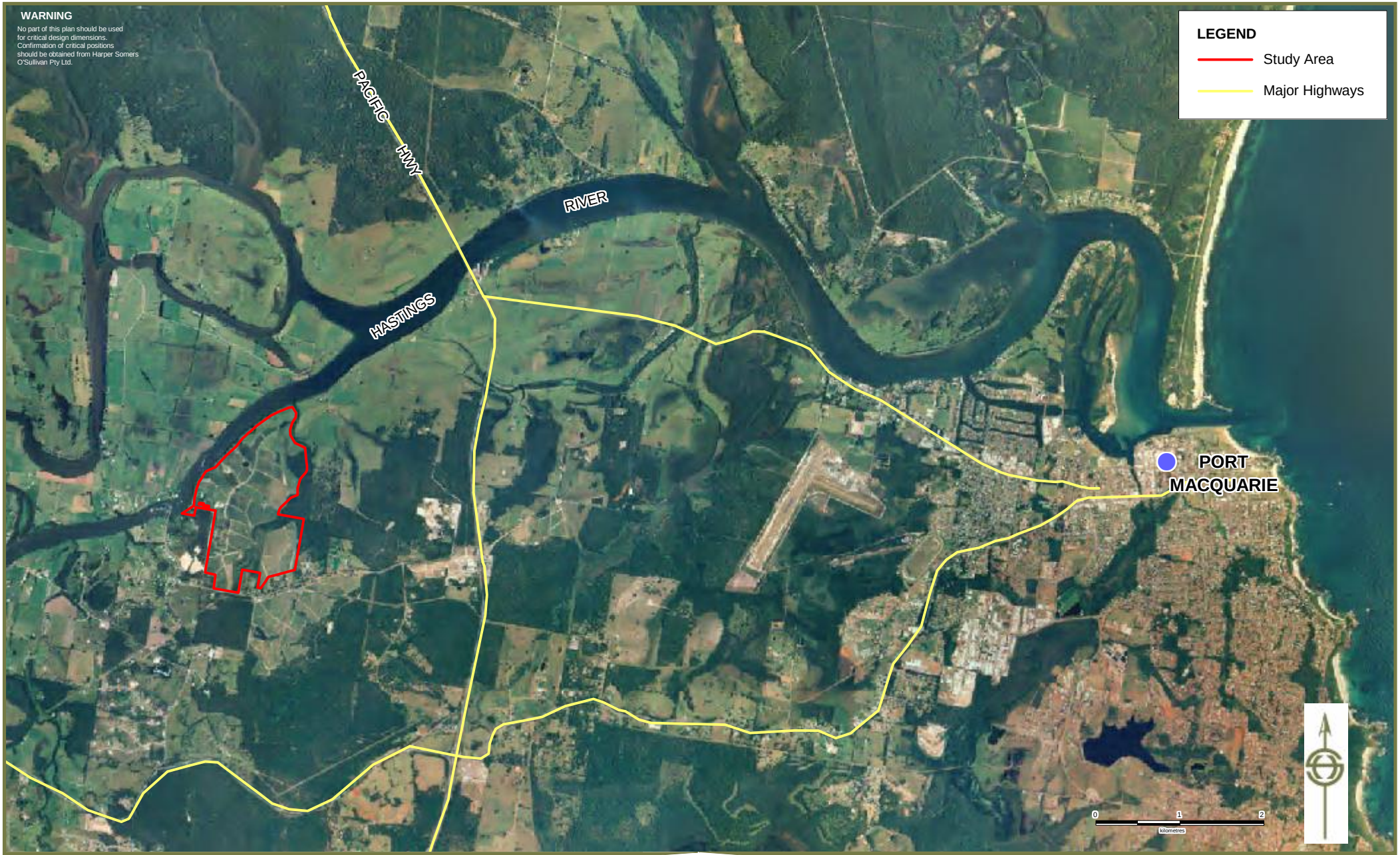
As mentioned above, the Aboriginal community consultation was conducted in accordance with the DECC Interim Community Consultation Guidelines (ICCG). An advertisement was placed in both the local newspapers, Port Express (6 August 2008) and Port News (1 August 2008), and the relevant authorities were contacted. Documents relating to consultation are included in Appendix G.

1.6 Acknowledgements

The study team acknowledges the assistance in preparing this report of various organisations and individuals, including but not limited to;

- Birpai Local Aboriginal Land Council
- Bunyah Local Aboriginal Land Council
- Andrew Lister – Hopkins Consultants Pty Ltd
- Rebecca Ward – National Trust of Australia (NSW)
- Julie Blyth – National Trust of Australia (NSW)
- Le Clos Development Board – Local Land Holders

Figure 1-1: Port Macquarie – Hastings LGA



TITLE:

Figure 1-1 Locality
Sancrox Road
SANCROX

CLIENT:

Hopkins Consultants

PLANNING SURVEYING ECOLOGY

HARPER SOMERS O'SULLIVAN

SCALE: 1: 60 000 at A4 Size **DRAWN:** L.Steel **APPROVED:** L.Nelson

DATUM: MGA Zone 56 (GDA 94) **DATE:** 16/10/2008

LAYOUT REF: J:\JOBS\25K\25290 Sancrox\Drafting\Figures \25290 Figure 1-1 A-A4.WOR

CONTOUR INTERVAL: N/A

JOB REF: 25290

241 DENISON STREET BROADMEADOW PO BOX 428 HAMILTON NSW 2303
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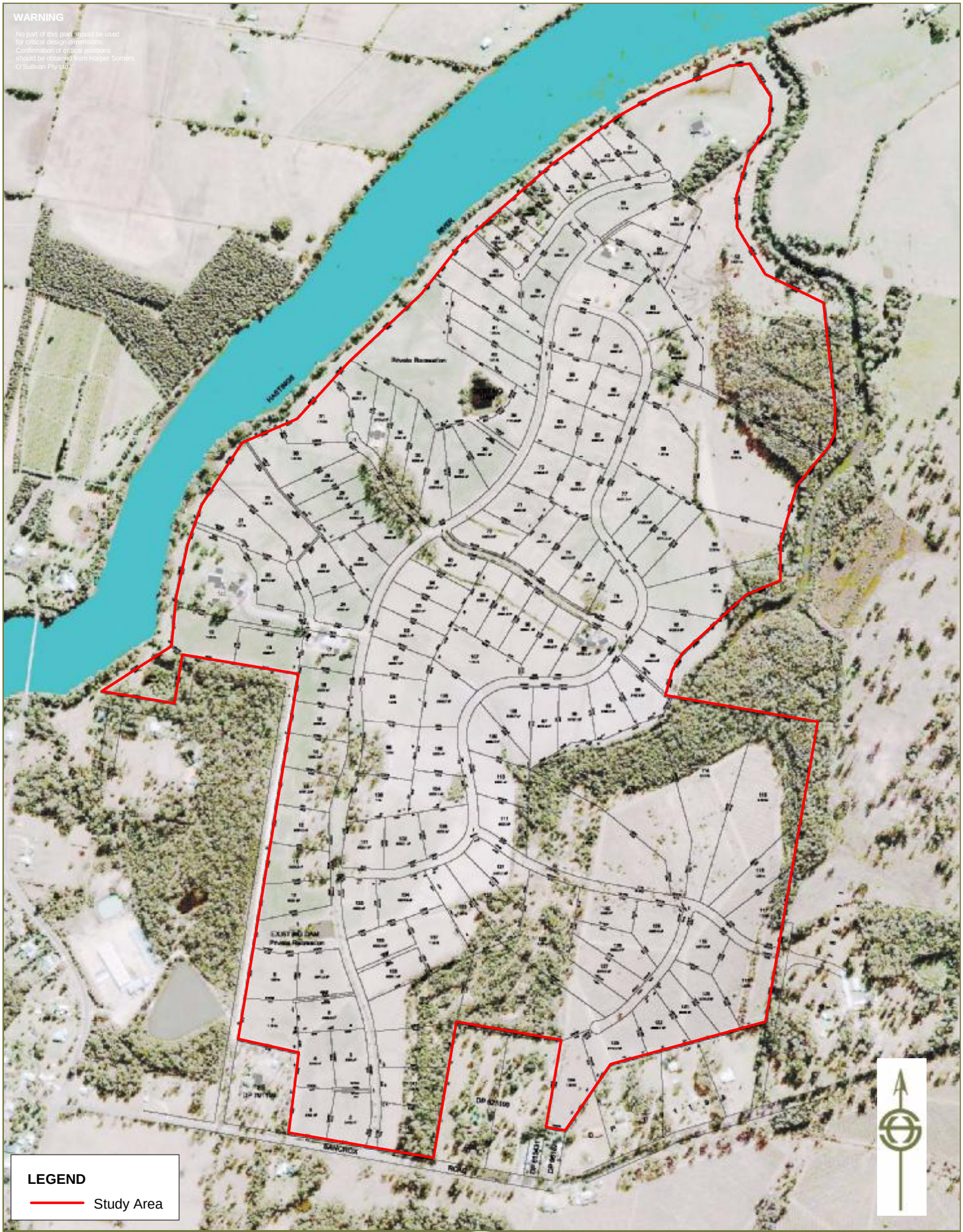
Figure 1-2: Le Clos Verdun Study Area



TITLE:
Figure 1-2 Site Map
Sancrox Road
SANCROX

CLIENT:
Hopkins Consultants

SCALE: 1: 10 000 at A4 Size
DRAWN: L.Steel
APPROVED:
DATUM: MGA Zone 56 (GDA 94)
DATE: 16/10/2008
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CONTOUR INTERVAL: N/A
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2 ENVIRONMENTAL CONTEXT

The environmental context section of this report describes data relevant to the specific subject area and broader areas. The environmental factors included are topography, hydrology, climatic conditions, fauna and flora resources and the geology in and around the subject area. The data from all of these elements are assessed to predict what the environment was like in the past, and thus how people interacted with the specific subject area.

If archaeologists know if the environment was inhabitable and the nature and density of resources available to past populations, then predictions of how the area was used (site type likely to be located), how many people the area could support (the density of the sites) and the chronological period the area was occupied (if the area was consistently used or rarely used). The environmental data will be combined with previous archaeological work conducted in the area (Section 4) to develop a predictive model for human occupation in the subject area (Section 5). The predictive model will then be tested in the field survey.

2.1 Geology and Soils

The broad geology of the Manning Macleay sub-region of the NSW north coast consists of extremely complex faulted terrain where the New England Fold belt over-thrusts the Sydney Basin. The main rocks present are Silurian and Devonian slates, quartzites and acid volcanics, Carboniferous mudstones and lithic sandstones, and less deformed Permian shales and sandstones (Morgan 2001). The geology of the study area is deeply weathered regolith on Permian mudstones of the Kempsey beds and Beechwood Beds (Atkinson 1999:42).

The soil landscape of the study area is predominantly of the Kundabung landscape, the character of which is exhibited by shallow to deep (<100mm - >300mm), poorly drained, hard-setting soloths and grey-brown, yellow and red podsolic soils, with gleyed podsolic soils and humic gleys in drainage depressions (Atkinson, 1999:42). Some limitations of this soil type are seasonal waterlogging, water erosion and foundation hazards, low wet-bearing strength, high erodibility, sodic, acidic and potential for high aluminium toxicity (ibid). It has also been noted that vineyard planting at Sancrox has resulted in the soil being ameliorated by lime slotting (Ibid:43).

In general the soils can be described as skeletal and poor on the crests and slopes while the river flood plain, drainage and creek lines are marked by alluvial soil. Areas of slope that are devoid of vegetation are readily eroded.

2.2 Climate

The climate of the Port Macquarie region is considered temperate, with a maritime influence. The average daily temperature in January ranges from 25.7° Celsius to a minimum of 18.7° Celsius. Temperature in the Port for July ranges from 7.2° - 17.9° Celsius. Port Macquarie has an average rainfall of 1534 mm annually (Australian Bureau of Meteorology).

2.3 Topography and Hydrology

Port Macquarie has a diverse topography with landforms such as sand dunes, wetlands, floodplains and mountain regions common across the area.

The site is located 15 km west of Port Macquarie, 7 km east of Wauchope, and lies adjacent to the Hastings River. Its topography consists of undulating rises with broad crests and extensive footslopes and drainage plains (Atkinson, 1999:42), which drain into the Hastings River. Slopes are mostly <5%, with elevations 5-30m, with relief 10-30m.

As mentioned above, the dominant soil type in the study area is the Kundabung residual landscape. Hydrology in these soil types are subject to poorly defined surface drainage, owing to the sodic nature of the soils. Surface drainage is also often interrupted with incipient channel development (ibid).

The study area is marked by a number of drainage lines, mainly modified, that feed Haydons Creek to the east and the Hastings River to the north. The study area has within its boundaries both twenty tear and one hundred year flood plains. Figure 2-1

2.4 Flora and Fauna

As mentioned above, the study area was once heavily forested, but has since been predominantly cleared. Remnant lowland forest still occurs on the site, and adjoins a narrow strip of Riparian remnant forest on Crown land near Haydon Creek. Some regrowth dry sclerophyll exists on site, as well as a large central area of swamp/sclerophyll forest (mainly regrowth and/or disturbed) (NCFE, 2004:3). This swamp/sclerophyll forest was identified as an identifiable, significant habitat node (ibid:4).

Floral species identified in the study area include *Eucalyptus microcorys* (tallowwood), *E. tereticornis* (Forest Red Gum), *E. propinqua* (Grey Gum), *E. robusta* (swamp mahogany), *E. carnea* (white mahogany), *E. globoidea* (white stringybark), *E. pilularis* (blackbutt), *C gummifera* (red bloodwood), *Syncarpia gl*omulifera (turpentine), *Melaleuca quinqenervia* (broadleafed paperbark) and swamp oak (ibid).

Faunal species noted in the study area include a number of bird species, such as cockatoos, rosellas, honeyeaters, butcherbird, pidgeons, kites, magpies and crows, as well as reptiles and amphibians such as the eastern water dragon and the southern laughing tree frog, and mammals such as the red-necked wallaby and eastern grey kangaroo (ibid:25-26). The area has also been designated as a potential koala habitat.

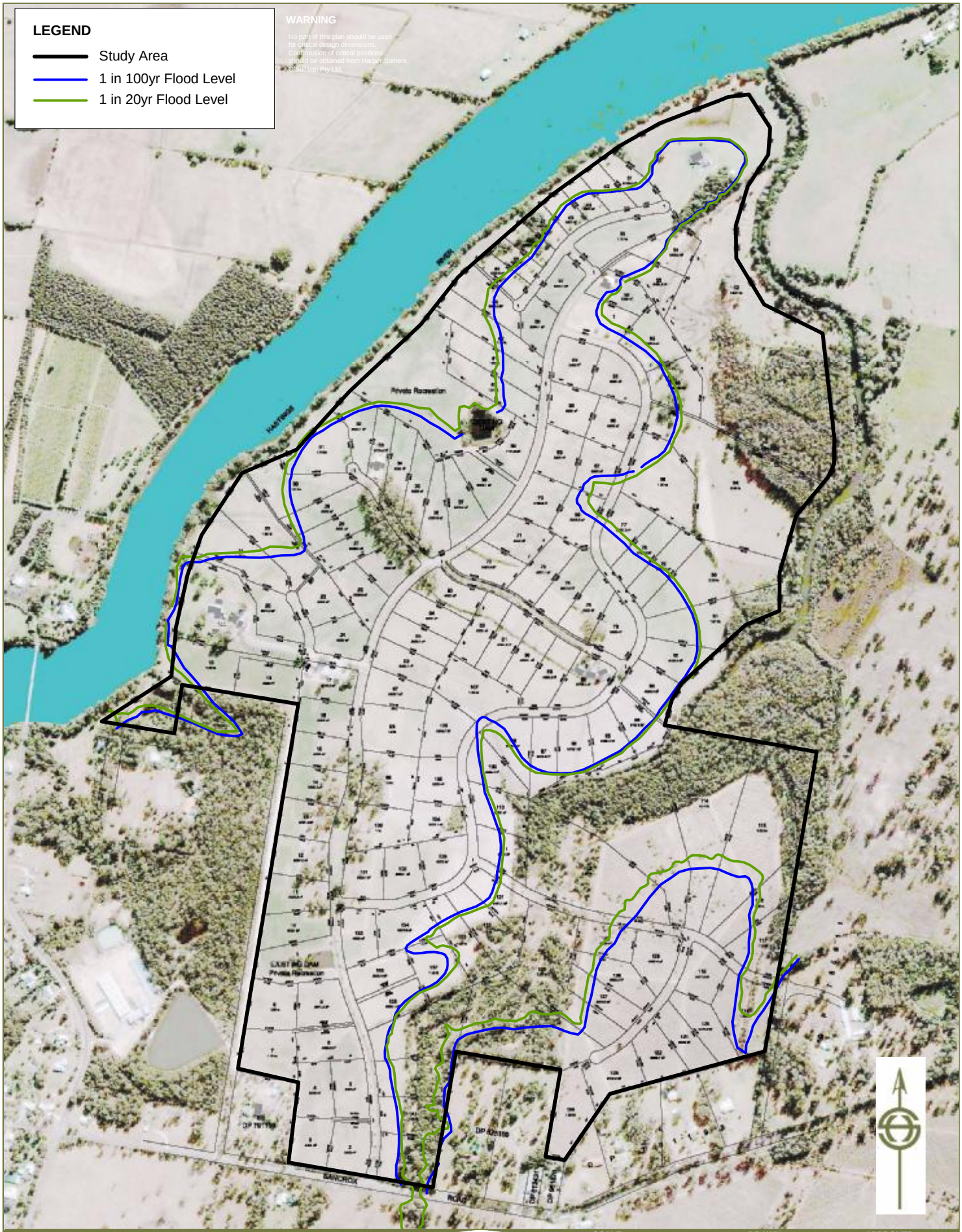
2.5 Existing Condition of the Study Area

The study area appears as a series of low hills bordered to the north and east by the alluvial flood plains of the Hastings River and Haydons Creek. A number of reasonably modern houses occur surrounded by small acreages. In terms of vegetation the majority of the area has been cleared of all trees and under storey vegetation with paddock grasses well established and dense. A number of small copses of eucalypts occur though none are of sufficient age to be candidates for modified trees. Kangaroos were seen across the study area.

While the area has been logged since the earliest settlement in the area it appears the clearance that is seen now was a result of the establishment of viticulture around the mid to late twentieth century. The remnant of the mounding used in grape cultivation is still visible across the landscape though most of the vines have been removed. Only one sector, in the south east of the study area, has remnant vines though all appear to be dead.

The drainage line of Haydons Creek is marked by remnant native vegetation in particular swamp oaks and melaleuca. The bank of the Hastings River has a narrow band of a variety of trees and shrubs including eucalypts, swamp oaks and introduced species. Apart from the Haydons Creek margin the only area of native vegetation containing both upper and middle storey species was in the north eastern sector of the study area. This appears as a small patch of lowland rainforest located on the east facing slope of a prominent spur of land with views over both the river and creek.

Figure 2-1: Le Clos Verdun Flood Levels



TITLE:
Figure 2-1 Flood Map
Sancrox Road
SANCROX

CLIENT:
Hopkins Consultants

SCALE: 1: 10 000 at A4 Size
DRAWN: L.Steel
APPROVED:
DATUM: MGA Zone 56 (GDA 94)
DATE: 16/10/2008
LAYOUT REF: J:\JOBS\25K\25290 Sancrox\Drafting
CONTOUR INTERVAL: N/A
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3 OVERVIEW OF THE PAST

Information regarding Aboriginal culture, particularly with respect to the pre-contact phase, comes predominantly from European sources. It should therefore be noted that many opinions and observations expressed regarding Aboriginal culture may be coloured by prevailing contemporary beliefs and attitudes of the various authors.

3.1 The Pre-Contact Phase

The original inhabitants of the Hastings River area are the Birpai (Biripi / Birrapee / Birrbay) people, in particular, the Ngamba clan (Tindale). The term "birpai" appears to relate to both the language and the people (National Heritage Studies Pty Ltd, undated), although it would appear that the Birpai language was a dialect of the Kattang (Gadhang) language (Murrrbay Aboriginal Language and Culture Co-Operative, undated). Although tribal boundaries remain uncertain, it is thought that the traditional land of the Birpai was bounded by the Manning River to the South, the Macleay River to the north and the Apsley River to the west (Hastings Council 2003:3).

In general, information regarding pre-contact Aboriginal lifestyle and culture are extrapolated from early European explorers to the area and archaeological evidence. However, some cultural information is still passed orally through the generations. For example, Marion Hampton, the co-ordinator of Birpai LALC states that it was known that Birpai men married Murrawon women (from Macleay River area), and Birpai women married Murrawon men (Hastings Writers 2003:11). This was designed to prevent inbreeding amongst clans (ibid).

Dreaming stories were intended to teach the young of the clan the laws and their responsibilities within the clan structure (ibid). For example, there is a Birpai story relating to a couple who married against tribal law and attempted to escape by swimming the Dhoongang (the Hastings River) at Settlement Point. The tribe chased them, throwing spears, one of which hit the man in the water. The woman tried to keep him afloat, but they both drowned. The "Cleverfella" of the tribe took pity on them and transformed them into porpoises (ibid).

Penalties for transgression of Dreamtime laws usually meant punishment by death, whereas transgression of a cultural law resulted in either spearing or banishment (ibid). If a person was banished, he or she had to move away from the clan, and their names would cease to be mentioned by anyone in the clan (ibid). The banished person became "no-one" (ibid).

The Birpai clan visited the Hastings River area in the winter to take advantage of the fish and moderate climate, and had a saying "when the bloodwood blooms the mullet run" (Hastings Writers 2003:19). In summer, the Birpai moved to the cooler hinterland, and shaded valleys (ibid).

3.2 The Post-Contact Phase

A plaque on the Port Macquarie Town Green states that at the time of settlement, the Birpai nation comprised 6,000 people (ibid:56). However, an estimation of Aboriginals in Port Macquarie in 1848 was 370 (ibid).

The first European known to have seen the area was Captain James Cook, when on 12 May, 1770 he sailed along the eastern seaboard, and noted three mountains close together (Hastings Writers 2003:9). He named these mountains "The Brothers". Coincidentally, this is the same name the Birpai people gave to the same mountains. Cook noted in his journal that the country "rose in gradual slopes carrying a great show of fertility" (ibid).

In 1791, William Bryant, a convict on the First Fleet, escaped from Sydney in a fishing boat with six others, including his wife Mary. They sailed north along the coastline, stopping infrequently for fear of hostile natives. It is believed, however, that one of their stops was in Port Macquarie, which could be the first contact in the area between Europeans and Aboriginals in the Port Macquarie area (Rogers 1986:13).

John Oxley, Surveyor-General of the colony from 1812 to 1828, headed an expedition to the Lachlan, Macquarie, Castlereagh, Peel and Hastings Rivers in 1817-1818. He named Port Macquarie at the mouth of the Hastings River after Governor Lachlan Macquarie (Oxley 1818).

Oxley noted meeting a group of ten Aboriginal people in October 1818. Although the explorers attempted to communicate and offer gifts of fish hooks and pelts to the group, the Aboriginal people kept their distance, retreating when the Europeans attempted to move closer (ibid). When Oxley mounted his horse, the Aboriginal people ran off. Oxley noted, however, that the Aboriginals were "handsome" and showed "evident signs of good living".

Oxley also relates his party disturbing a group of Aboriginal men on the banks of the Hastings River building a canoe. The startled Aboriginal men leapt into their canoes and escaped, leaving their weapons and tools behind. Oxley noted that one of the canoes they escaped in was big enough to hold at least nine men. Oxley and his men took the unfinished canoe and attempted to finish it in order to use it (ibid). He noted that his men were able to fashion a canoe similar to the ones they had seen used by the Aboriginal men, but felt sure that the Aboriginal men would laugh at their efforts (ibid).

In 1821, Governor Macquarie visited the area and decided on Port Macquarie as a suitable site for a penal colony. During this visit, Macquarie notes in his journal that whilst Oxley's experience with the local Aboriginal people appeared to be mainly peaceful, he had detected a change in this relationship. After a cedar getter had been speared and killed whilst cutting rosewood and cedar, Macquarie put this hostility down to "treacherous, cruel conduct" (Blomfield 1992:55). Likewise, Captain Francis Allman, the first commandant of the penal colony in Port Macquarie, noted the acts of hostility by the Aboriginals towards the cedar getters required a doubling of the guards in the bush (ibid).

The penal colony was constructed using convict labour by 1824. Convicts constructed Government House and other public buildings, as well as establishing farms to make the settlement self-sufficient. In 1821 it was recorded that 200 convicts were employed clearing land for wheat at St Rocks (Griffin & Howell 1996:11). This was to become the government farm of Sancrox, also known variously as St Croix, St Rocks and San Roch (Rogers 1986:45, 79).

In addition to wheat growing and cedar getting, one of the earliest industries in the area was sugar cane production, and was the first commercial sugar cane endeavour in the country. The first crop was planted near the site of Government House in Port

Macquarie (Rogers 1986:58). The success of the first crops encouraged expansion of the crops in the area, and in 1825 a sugar plantation at Rollands Plains was established, growing 66 acres in its first year. The following year a mill was established for both sugar and grain near the Maria River (ibid: 59). However, following an enquiry regarding the running of the Port Macquarie settlement in 1828, very few sugar cane crops were continued.

Relations at the time between the settlers at Port Macquarie and the local Aboriginal population appear to have been fair. In January, 1828 a Government Notice proclaims that medals be given to seven Aboriginals after assisting and rescuing an overturned pilot boat and her seven crew in inclement weather. After it was judged too dangerous for other boats to assist the overturned pilot boat, seven Aboriginal men swam out to the boat, righted it, returned four of the crew to the boat and brought the remaining three crew members to shore (Hastings Writers 2003:31).

Although there are no historical sources verifying massacres in the Hastings area, (apart from one at Cogo where three European cedar getters were killed by Aboriginal people), oral tradition speaks of Birpai being driven into the water at Blackmans Point by Europeans on horseback. Some were shot, some drowned, and some escaped (ibid: 56). In late 1831 to early1832 the local Aboriginal people were devastated by an epidemic of small pox. With no resilience to the disease the impact was severe and the Aborigines around the Port Macquarie settlement were moved across to the northern side of the Hastings River. By December 1831 those Aborigines surviving left the area for Mud Creek, where unfortunately the contagion was spread to previously unaffected people. By 1832 the Aborigines of Tacking Point, Wallaby Hill, Ballangarra and Crottys Plains were infected. There is no record of the number of people who died however it must have had a devastating impact on the people and the population (Griffin & Howell 1996: 388).

As mentioned above, land around the Hastings River was opened to private ownership in 1830. A number of people bought land and established farms in the areas around the Hastings River. One such settler, Major Archibald Clunes Innes, established a farm near present day Lake Innes, growing crops for the convicts in the settlement (Hastings Writers 2003:28). The ruins of Innes House are now gazetted heritage items.

Another early settler was Captain Robert Andrew Wauch, who settled on 1,000 acres on the southern banks of the Hastings River, near present day Wauchope. Wauch's surname was Wauchope, but he changed his name to Wauch after a family dispute. The town of Wauchope, established in 1835, is named after this person. The house he built, Wauchope House, is no longer in the landscape, after being left to fall to ruins in the 1920s (Gorter 1985:26).

As related St Rocks by 1824 was the location of one of two original government farms in the area, by 1826 the spelling of the name was recorded as Sancrox (Rogers 1982: 45).

The first crops of wheat both at Sancrox and Settlement Farm were affected by blight and rust, however 400 bushels were nonetheless gained from the Sancrox farm (Rogers 1986: 79). Forty acres of corn was grown here in 1826 (ibid: 59), however in 1830 the Surveyor General recommended that the government farm at St Rocks (Sancrox), among others, be opened for public selection (ibid: 83).

As part of this development Governor Darling requested that land be set aside for a village, to be called Hay, near the Saint Roche government agricultural station. The village was to be on the banks of the Hastings River near the crossing to Rawdon Island. The name Hay was changed later to Haytown to avoid confusion with the Riverina town of Hay (Cooper 2001:52). It would appear the village did not succeed with little future reference to it.

In 1889 the timber mill that had been at nearby Wauchope was relocated to Sancrox with logs brought to the mill by bullock dray and paddle wheel boats. One of these paddle wheel boats was built at Sancrox as were a number of punts (Wauchope District Historical Society 1990: 24). The Sancrox mill was the source of the wooden paving blocks found in early Sydney streets (ibid: 24). In 1906 the mill burnt down, the timber workers and their houses were relocated to another area and subsequently the village fell into decline (ibid: 32).

For this report it was not possible to ascertain the origin of the name Sancrox with various spellings being used until the official gazetting of Sancrox in January 1892 (Cooper 2001:51).

The Sancrox area seems to have been a series of small landholdings in the nineteenth century with the remaining area of Crown Land purchased by Henry Verdun Robson in the 1900's. In 1989 Clos Farming Estates purchased the study area (Environmental Resource Management 2004:3).

4 REVIEW OF DOCUMENTARY AND PHYSICAL EVIDENCE

In order to form a comprehensive overview of the existing archaeological evidence in the study area, a review of previous archaeological investigations, both European and Aboriginal, is necessary. This involves the review of State Government heritage databases, analysis of previous archaeological reports and other literature.

4.1 Registered Historic Sites

A search of the State Heritage Register maintained by the Heritage Branch of the NSW Department of Planning for the Port Macquarie / Hastings Local Government Area showed 131 heritage items, ten of which are gazetted under the *Heritage Act 1977* (NSW), and the remaining 121 listed by other State and local government agencies. Of the ten items gazetted under the *Heritage Act*, seven items are in the township of Port Macquarie, approximately 11km to the east of the study area. The gazetted items consist of buildings, two cemeteries and a church. The remaining three items occur in Kendall and Laurieton (both Schools of Art buildings) and at Wauchope (railway building complex). The closest non Aboriginal items to the study area appear to be those at Wauchope, approximately 7 km to the west

Of the 121 items listed by other State and local government agencies, 54 are in the township of Port Macquarie, and include private and public buildings, a shipwreck, cemeteries / burials, wells / drains and churches. Sixteen listed items are in and around Wauchope.

4.2 Existing Built and Landscape Elements

Although there are no known heritage items existing within the study area, it should be noted that the area was once a Government farm known as “St Rocks”. It is therefore possible that subsurface artefactual material may be disturbed during any excavation or construction work within the study area. Examination of early parish maps for the Sancrox area do not list any built items within the study area, however other items, such as tangible remnants of early farming, may still be present in the landscape.

4.3 Historical Archaeology

There are few historical archaeological studies carried out within close proximity to the study area. However, as mentioned above, the Sancrox area has been utilised since the earliest times of European settlement in the Port Macquarie area.

Collins, J, 2003, Route Selection study for proposed Oxley Highway Upgrade Wrights Road to Pacific Highway west of Port Macquarie, NSW: Cultural Heritage Assessment.

This study was prepared for the Roads and Traffic Authority (RTA) – Environmental Technology in order to investigate route options for the realignment of the Oxley Highway between Wrights Road and the Pacific Highway.

Seventeen items of potential non indigenous heritage significance were identified, comprising 15 weatherboard houses ranging in age from one in 1870s, the remainder from the 1940s -1950s and one shed and one garage. All of these potential heritage items were situated along Oxley Highway.

Of these, Collins assessed that 12 of these sites had lost too many of their original features, and therefore were of no significance. Four others were assessed to be of low representative value, whilst one other was assessed to be of low-moderate representative value in a local context.

South East Archaeology, 2005, Preliminary Non Indigenous Heritage Impact Assessment, Oxley Highway upgrade.

This report was commissioned by GHD on behalf of the Roads & Traffic Authority as part of the environmental assessment of the impacts associated with the road realignment of the Pacific Highway between the Oxley Highway and Kempsey. The relevant portion of this study area is located approximately 4 km east of the current study area.

South East Archaeology identified eight heritage items in the entire study area between Port Macquarie and Kempsey. None of these heritage items were located in the relevant portion of the study area.

4.4 Aboriginal Heritage Information Management System (AHIMS)

A search with the Department of Environment & Climate Change (DECC) of the Aboriginal Heritage Information Management System (AHIMS) showed 56 sites with a 10 km radius of the study area, with 11 of those sites in close proximity of the study area.

Of the 56 sites within 10km of the study area, the greatest percentage of the sites are open camp sites (27), comprising 48% of all site types, followed by fifteen (15) isolated finds (27%). Two (2) scarred trees are also noted. Twelve (12) sites are artefact scatters (21%), which have not been designated as either an open site or isolated finds.

Of the 11 sites close to the study area, six sites are open camp sites, four are isolated finds, and one is a scarred tree.

Table 1: AHIMS Results for Vicinity

AHIMS #	Site type
30-3-0156	Isolated find
30-3-0157	Isolated find
30-3-0162	Scarred tree
30-3-0194	Open camp
30-3-0195	Open camp
30-3-0207	Open camp
30-3-0208	Isolated find
30-3-0209	Isolated find
30-3-0210	Open camp
30-3-0211	Open camp
30-3-0212	Open camp

Four (4) of the open camp sites (30-3-0207, 30-3-0210, 30-3-0211, 30-3-0212) are in the vicinity of the scarred tree (30-3-0162), as are two (2) isolated finds (30-3-0208, 30-3-0209). These sites are located to the east of the junction of the Pacific Highway and Sancrox Road approximately 2.5km southeast of the study area. The two sites closest to the study area are open camp sites (30-3-0194, 30-3-0195), and are situated approximately 1.5km east of the study area, on the western side of the Pacific Highway.

4.5 Aboriginal Archaeology in the Subject Area

Birpai Local Aboriginal Land Council, 2004,

In 2004 the Birpai Local Aboriginal Land Council (LALC) conducted a pedestrian survey of the study area in order to provide a cultural heritage assessment of the study area. Birpai LALC found no new Aboriginal sites, although limitations of the survey included inclement weather and poor visibility.

4.6 Aboriginal Archaeology in the Region of the Subject Area

There have been several archaeological investigations conducted in the region of the study area. A review of the available literature associated with these investigations shows that the area was used extensively by past Aboriginal communities.

Lindsay Moran (1986), an Aboriginal Sites Survey at Hastings Shire, Port Macquarie, NSW for the National Estate Grants Program 1985-1986

This archaeological survey was conducted by Lindsay Moran, Chief Sites Officer for the Birpai Local Aboriginal Land Council. Its purpose was to examine known sites in order to comment on the measures required to preserve the sites.

Primarily Moran surveyed 17 midden sites within the Hastings Shire. Two (2) sites were identified within the dune system of Lighthouse Beach that appeared to be *in situ* deposits of stone, bone, shell and charcoal. Moran noted the comments of NPWS botanist, Mike Dodkin, that the dune system is one of the only systems on the mid North Coast that still contains evidence of mainly undisturbed, *in situ* material (Moran, 1986:12).

Collins, J, 1993, SH 10 Oxley Highway West of Port Macquarie, Stage 2 Wrights Road to Pacific Highway: Archaeological Survey for Aboriginal Sites

This report was prepared for the Roads & Traffic Authority of NSW ahead of a proposed road realignment of the Oxley Highway between Wrights Road and the Pacific Highway, approximately 5 km South East of the subject area.

Three sites were located, comprising two isolated artefact sites and one open camp site. Collins recommended the artefacts of the isolated finds sites be collected and a s.90 Consent to Destroy be sought from DEC. With respect to the open camp site, Collins recommended that Birpai Local Aboriginal Land Council be present for monitoring purposes during the removal of vegetation and topsoil phase of construction.

J Appleton, 1996, The Archaeological Investigation of the site of proposed quarry operations at Sancrox Road, Wauchope, NSW

This report was commissioned by Anthony Thorne & Associates pursuant to information received from the local Aboriginal community that a ceremonial site once existed at the site of a proposed quarry at Sancrox Road, Wauchope, situated approximately 5km South West of the current study area. Appleton found that there was no evidence to support the existence of a ceremonial site, however, he theorised that any such evidence may have been removed earlier in the process during the removal of overburden at the site. Appleton also identified a single artefact, but believed that it was in a secondary context.

Collins, J, 2003, Route Selection study for proposed Oxley Highway Upgrade Wrigts Road to Pacific Highway west of Port Macquarie, NSW: Cultural Heritage Assessment

This report was prepared for the RTA – Environmental Technology in order to investigate route options for the realignment of Oxley Highway between Wrights Road and Pacific Highway.

Eight (8) sites were located during this survey, comprising two scarred trees (AHIMS # 30-3-0162, 30-3-0169), three isolated finds (AHIMS # 30-3-0163, 30-3-0167, 30-3-0168), and three open camps (AHIMS # 30-3-0164, 30-3-0165, 30-3-0166).

One (1) scarred tree site (30-3-0162) was a dead eucalypt, possibly mahogany with an ovoid scar 85 cm long, 35 cm wide and 15cm deep. The other (30-3-0169) was a living red mahogany with a scar 48 cm long and 10 cm wide.

With regards to the isolated finds, one (30-3-0163) comprised a quartz bipolar core with three negative scars, one (30-3-0167) comprised a siltstone retouched flake, and the other (30-3-0168) a quartzite flake.

Of the three camp sites, site 30-3-0164 comprised an artefact scatter of 26 chert, quartz, quartzite, greywacke and siltstone flakes, site 30-3-0165 comprised two quartz cores, and site 30-3-0166 comprised two quartz flakes and 1 quartz tool.

Collins noted that Birpai Local Aboriginal Land Council were opposed to any disturbance of these sites.

Kuskie, P J of Southeast Archaeology, 2006, Pacific Highway Upgrade: Oxley Highway to Kempsey – Supplementary Indigenous Heritage Impact Assessment Report – Areas of Cultural Sensitivity

This report was commissioned by GHD on behalf of the Roads & Traffic Authority as part of the environmental assessment of the impacts associated with the road realignment of the Pacific Highway between the Oxley Highway and Kempsey. This particular report is a supplementary report detailing areas of particular cultural sensitivity within their study area.

Kuskie includes a number of unregistered sites of cultural significance, mainly obtained through interviews with Lindsay Moran of Birpai LALC, Tracy and Ruth Campbell, Mary Button, David Hoskins and Isaac Campbell of Dunghutti Elders Corporation.

Three (3) main sites of cultural sensitivity were identified. The first, as mentioned by Appleton (1996) was a ceremonial site north west of the junction of Sancrox Road and the Pacific Highway (now the site of a hard rock quarry). The second is the land surrounding the Hastings River, as it was the site of frequent battles between the Birpai and the Dunghutti. The third was an area near Maria Creek. This last was identified by Ruth Campbell, whose father had warned her to stay away from the area.

Other information provided by the Aboriginal representatives include:

- Native resources included the wild apple (giving rise to the name Kundabung), and Cobra grubs (giving rise to the name Copperabung, later corrupted to Cooperabung) (Lindsay Moran);
- Birpai people lived in the mountains in summer and the coast in winter (Lindsay Moran);
- Known Aboriginal camps in historic times are on the south side of the Hastings River, especially in the area between the Pacific Highway and Haydons Creek (to the immediate east of the subject area) (Lindsay Moran);

With respect to the three unregistered culturally sensitive sites, Kuskie recommends further investigation of these sites, and to avoid development impacts.

5 PREDICTIVE MODEL OF THE SUBJECT AREA

Identification of the potential for an archaeological site to occur is helped by the construction of a predictive model.

5.1 Framework

Predictive modelling involves reviewing existing literature and consulting site databases to determine basic patterns of site distribution and correlating this distribution with the associated environment. The use of land systems and environmental factors in predictive modelling is based upon the assumption that these factors provided constraints that influenced land use patterns. Land use patterns may differ because of differing environmental constraints, resulting in the physical manifestation of different spatial distributions and forms of sites in the archaeological record. Predictive models can be used as a basis for the planning and management of Aboriginal and non Aboriginal heritage and for formulating survey strategies to target areas of maximum archaeological potential.

5.2 Identification of Potential Built and Landscape Heritage Items

There are no known built heritage items within the subject area. The current landscape of the subject area, however, has been heavily influenced by past post contact land use, in particular that of agriculture and viticulture.

5.3 Aboriginal Predictive Model for the Subject Area

The environmental data discussed in Section 2 and the previous archaeological research discussed in Section 4 has been used to formulate the following predictive model of sites and their context located in the subject area. Some archaeological investigations have been carried out in the Port Macquarie area generally, however, the majority of these have been conducted in response to development applications and are few in number. Therefore, it is important to note that the majority of Aboriginal sites are skewed towards those sorts of sites that typically may occur in landscapes suitable for development. Hence, the current archaeological model for the site types in the subject area is very broad.

5.4 Site Types and Location

There are many factors that affect the location of sites and the potential for preservation of material evidence. Generally, people utilise places to obtain resources and are therefore likely to utilise areas where resources are abundant. Resources considered essential include a permanent water supply, food, stone raw material and shelter from environmental elements. Sites often occur along access tracks, particularly within close proximity to watercourses. The archaeological record is a reflection of a multitude of use patterns and with increased modern accessibility to these areas, both pre and post contact sites are frequently highly disturbed. The purpose for which a site is used and frequency of visitation is also determined by the ease of accessibility. Accessibility is dependent upon environmental constraints of natural and cultural barriers including geological formations, predators, seasonal conditions and tribal boundaries. Natural constraints also affect the ability for site visibility and detection, and can influence the type and number of sites recorded in an area. A full glossary of sites is contained in Appendix C.

Due to the perishable nature of many items of Aboriginal material culture, such as those made from timber, and the high acidity of many Australian soils, remaining material evidence is often not representative of the range of activities occurring at a site and more likely represents a bias in preservation factors. Durable items usually comprise shell and stone items, and less often bone and charcoal remains, although contexts have likely been altered since deposition.

Based on information from AHIMS and previous archaeological investigations in the vicinity of the study area, it is predicted that the most likely site type to be encountered in the study area are open camp sites, followed by isolated finds. The most frequent landscape in which sites are to be found is forested areas, close to permanent water sources. There are no known sites within the subject area.

As noted above, the disturbed nature of the study area lessens the probability of identifying *in situ* sites. Nonetheless, the nature of the disturbance (deforestation, past farming practices) does not preclude such sites being identified.

5.5 Historic Predictive Model for the Subject Area

The results of database searches (NSW Heritage Office) and the Hastings Council provided a concept of the types of sites and activities that could have been carried out in the subject area. The early European history of Port Macquarie shows that as it was first established a penal colony, farming was essential for survival. Following 1830, the land was opened for private selection with various forms of agriculture dominating the economy of the area. The cultural remains of these activities are therefore the most likely to occur in the subject area.

However, subsequent land use may have obliterated any historical artefacts and/or features. Since 1830 the land has been used mainly for agricultural purposes, including grazing and crops, which may have impacted on the survival of any subsurface archaeological remains. In the 1980s the land was used for viticultural purposes and hobby farms. The potential for any historical archaeology remaining in the archaeological record is therefore considered low.

6 FIELD SURVEY

The survey was conducted on Wednesday 8th October 2008 in fine weather with clear skies and excellent visibility. The survey was conducted by Lindsay Moran, Chief Site Officer for Birpai LALC and Laraine Nelson, Senior Archaeologist, RPS HSO. Guy Jones, Bunyah LALC had been advised of the survey time and date prior but on the day was not able attend. Full details regarding the consultation process can be found at Appendix C.

6.1 Methodology

The Le Clos Verdun study area comprises a section of the river bank and flood plain of the Hastings River, a section of the creek bank and floodplain of Haydons Creek and a series of low hills that form a wedge section bounded by the Hastings River and Haydons Creek. All landform units were inspected. Within those units greater weight was given to the creek bank, drainage lines, tracks and scalds due to superior visibility.

6.2 Strategy

A pedestrian survey was carried out by two team members. The subject area was divided into eight separate transect areas with each systematically surveyed for archaeological evidence.

A preliminary assessment revealed a landscape that had been cleared, ploughed, planted with vines (now mostly removed) and currently grazed by cattle. The majority of the area was covered in dense pasture grasses that provided nil ground visibility. The strategy devised focussed on all areas with a representative selection of landform types; that is crest, slopes, alluvial plains and drainage lines. In addition, areas that had appeared to have had fewer disturbances, as evidenced by mature trees and second storey vegetation, were examined.

The survey commenced at an exposure along a drainage line that ran parallel to Sancrox Road toward the southern boundary of the study area. Commencing at Le Clos Verdun Road the team worked east to west along this exposure and then did a return to the Road. This return transect was approximately 320 metres.

The second transect followed the same drainage line as transect one but in an easterly direction from Le Clos Verdun Road and crossed Haydons Creek into the eastern boundary of the study area. This return transect was approximately two kilometres.

The third transect focussed on a series of exposures, including a redundant dirt road, around a group of mature eucalypts on one of the more elevated sections of the study area. This return transect was approximately seven hundred metres.

The fourth transect inspected another series of exposures again linked to eucalypts on a high point of the study area. The return transect was approximately five hundred metres.

The fifth transect examined an area of the Haydons Creek alluvial plain. Exposures were visible: generally cattle tracks and scalds. The return transect was approximately seven hundred metres.

The sixth transect investigated an area of remnant forest on the south facing slope of a high ridge above the junction of the Hastings River and Haydons Creek. This transect was approximately two hundred metres.

The seventh transect commenced at the top of the ridge described in transect six proceeding down the northern slope and along the alluvial plain of Hastings River and Haydons Creek. This transect was approximately six hundred metres.

A vehicular survey strategy ensured the location of all exposures on the eastern side of Riverbend Road was identified. At the northern limit of Riverbend Road the area to the west was also examined. This area, on the flood plain of the Hastings River was covered by dense pasture grass with no exposures apparent.

A concept design plan supplied by Hopkins Consultants Pty Ltd was used during the pedestrian survey to gauge the extent of the works of the proposed rural residential subdivision. A GPS was taken by the survey team, to provide accurate location of artefacts or sites if required.

6.3 Survey

Details of the survey transects for the Sancrox study area can be found in Table 6-1.

The Le Clos Verdun Road, a tarred private access road runs through the centre of the study area. It provided a baseline for transects which were commenced on either side and extended where possible to the limits of the study area.

The first transect followed a track bordered by a drainage line that led in a westerly direction away from the tarred Le Clos Verdun Road approximately two hundred metres from its intersection with Sancrox Road. The landform is a low slope rising to the west. The drainage line fed into a dam as it flowed in an easterly direction toward Haydons Creek. The banks of the dam were heavily vegetated with no exposures visible. The track exposure was seen as having poor soils with a considerable amount of a fragmented laminated stone. This track was followed to its intersection with Riverbend Road on the western border of the study area (Plate 1).

The second transect commenced at the same point on the Le Clos Verdun Road as transect one and headed in an easterly direction. This had the same soil profile as transect 1 with poor soils and a quantity of fragmented laminated stone. Continuing for a distance of approximately four hundred and fifty metres, Haydons Creek, which at this point consists of a shallow drainage line was crossed. The Creek margin is marked by alluvial soils, stands of swamp oak and a dense understorey. East of the Creek the land rises slightly, here it is cleared and the study area is ringed by tall stands of eucalypts on the east and northern boundaries with residential properties to the south. The land has remnant grape vines with some supporting trellises. The area displayed a dense ground cover of grasses. Visibility was limited to two tracks one parallel to Haydons Creek and the other running East – West through the centre of the property. Again the soil was noted as being poor and stony. The return to Le Clos Verdun Road followed a separate parallel route (Plates 2 & 3).

Transect three was commenced on the crest of a hill to the West of the road. The area was marked by a copse of eucalypts, cleared of understorey vegetation that had exposures around the bases. None of the trees were of an age to be candidates for Aboriginal modification. A section of embankment and eroding track that may have

been the original dirt Le Clos Verdun Road was also inspected. Bedrock was visible in some areas of the track with ironstone gravels seen (Plate 4).

Transect four continued along either side of the driveway to the Le Clos Verdun residence. The presence of eucalypts again provided some areas of exposure with leaf and twig litter hampering visibility. The landscape of this area is seen as a ridgeline spur that intrudes into the flood plain of the Hastings River to the north-west (Plate 5).

Transect five was situated East from the road toward Haydons Creek and the creek margin. The area had cattle grazing with a cattle yard and large quantities of stacked treated pine logs from the redundant vineyard. An area of alluvial soil, it had little stone visible along the cattle tracks. Dense swamp oak and sedges marked the drainage line. A levee bank has been constructed to limit inundation (Plate 6). Lindsay Moran during the course of the survey remarked that this area was the location of timber extraction up until the 1970's or 80's. No evidence of this activity remains.

Transect six was plotted through a dense stand of remnant vegetation. The area is on the South-Eastern slope of spur which juts out into the flood plain marking the junction of Haydons Creek with the Hastings River. The leaf litter was dense and the area impenetrable apart from a poorly defined track, the ground visibility was nil. Of interest was the location of a number of broken cobbles. None of these cobbles, which rested on the surface of the leaf litter, had any evidence of being modified or worked, nor did the stone display crypto-crystalline characteristics which are necessary for knapping stone artefacts. However, apart from one other found in transect seven they did not appear anywhere else across the study area (Plate 7 & 8).

Transect seven commenced from the top of the spur and led down toward the junction of the Hastings River and Haydons Creek. The team then turned to follow the creek margin of Haydons Creek which had been cleared; cattle were grazing at the time of the survey. A dirt bike track has been constructed with quantities of earth moved to form jumps and a track. Lindsay Moran commented that when he did a previous survey of the area in February 2006 this sector was inundated and in his opinion, it floods on a regular basis. The close proximity to the junction with the tidally affected Hastings River would support this view (Plates 9 & 10).

To conclude the survey the western boundary of the study area near Riverbend Road was inspected by vehicle. The area to the east of the road was checked to ensure that all available exposures had been identified. A small section of the study is on the north western end of the road. Part of the flood plain of the Hastings River it was covered in dense pasture grasses with no exposures apparent.

The survey was completed after driving to the Rawdon Island Bridge and looking back across the Hastings River toward the study area (Plate 11).

Table 2: Survey Transects

Landform Unit	Survey Unit	Total area of landform unit sq. m.	Exposure %	Area of exposure sq. m.	Visibility %	Area available for detection	% landform area available for detection
Slope	1 (2 pers.)	1,280	10	128	20	26	2
Lower slope & creek margin	2 (2 pers.)	2,000	10	200	20	40	2
crest	3 (2 pers.)	700	10	70	40	28	4
crest	4 (2 pers.)	500	5	25	5	1.25	.25
creek margin	5 (2 pers.)	700	5	35	80	28	4
crest	6 (2 pers.)	200	-	-	-	-	-
creek margin	7 (2 pers.)	600	10	60	80	48	8

6.4 Results

No items of Aboriginal cultural heritage significance were located.

No items of European cultural heritage significance were located.

6.5 Archaeological Significance

The term 'archaeological significance ' (also referred to as scientific significance) is a value allocated to Aboriginal heritage sites by archaeologists to help determine appropriate management strategies and mitigation recommendations for their ongoing care and management.

The archaeological significance given to a site, or area in the absence of identified sites, is based on several criteria. The criteria includes an assessment of the site, PAD or general subject area for its;

- rarity in a local and regional context
- representativeness in a local and regional context
- Integrity in a local and regional context
- Connectedness in a local and regional context
- Complexity in a local and regional context
- Ability to contribute to the archaeological understanding of the cultural sequence in a local and regional context

When each of these criteria have been assessed, a score is determined which is used to provide an overall summary of the archaeological significance. As no sites (including PADs) were located on the survey, the archaeological significance of the subject area is discussed and assessed instead.

6.5.1 Rarity

This criterion examines the site type against those occurring in the local and regional context. If the site type being assessed is considered to be rare at either regional or local levels, this raises its importance in the archaeological record. In Australia, the most common site type is an artefact scatter. For the local area, the most common site type is a rock shelter. Based on the nature and disturbance of the subject area has been identified has having low significance for rarity.

6.5.2 Representativeness

This criterion relates to determining if the site can be characterised as representative of the site (types, integrity etc) present in the local and regional context. The purpose of this is to conduct further investigations on a sample of sites within a given area, in order to add to the archaeological understanding of the area, but to leave a representative sample *in situ* for future generations. Based on the nature and disturbance of the subject area there is a low significance for representativeness.

6.5.3 Integrity

This criterion refers to how undisturbed and intact a site (PAD) is. The analysis of a site with integrity can provide information relating to chronology, social systems, tool technology, site formation, site of the clan / tribe occupying the area, how often the area was used and many more levels of analysis. If a site has been subject to moderate to large degrees of disturbance, it has a low probability of retaining integrity, and thus the information able to be obtained from the site is reduced dramatically. Based on the nature and disturbance of the subject area, the subject area has been identified has having low significance for integrity.

6.5.4 Connectedness

The connectedness criterion relates to the relationship between a site and others in the local and regional environment. If a site is determined to have connectedness with other sites, the depth of knowledge that can be obtained from the connected sites increases and can be used to develop an understanding of more Traditional practices that cannot be identified by looking at one site in isolation. The connectedness could relate to age, the landform in which they are contained, the contents of the sites etc. This criterion is often used to ascertain without subsurface investigations. Based on the nature and disturbance of the subject area it is considered as having low significance for connectedness.

6.5.5 Complexity

The complexity criterion relates the contents of the site. This may relate to a high number of artefacts per square metre or features which can add to the layer of information that can be obtained from a site (e.g. hearths, knapping floors, ochres etc). Based on the nature and disturbance of the subject area it has been identified has having low significance for complexity.

6.5.6 Contribute to Knowledge

The ability of a site to contribute to knowledge is largely dependant on the site having moderate to high significance assessments for the other criteria, especially the connectedness, complexity, rarity and integrity. The reason for this is the ability to contribute to knowledge requires 'new' knowledge to be drawn from the site and add to the local and / or regional context. Based on the low assessment from each of the previous criteria and the level of disturbances, the subject area has been determined to have a low significance level for ability to contribute to knowledge.

The overall archaeological significance of the subject area is therefore assessed to be low.

6.6 Cultural Significance

The cultural significance is a criterion that only Aboriginal people can determine. A detailed assessment of cultural significance of the subject area has not been carried out as part of this study. As there were no sites located in the area, the community are asked to read this draft report and provide comment on the subject area as a whole (Appendix F).

6.7 Historical Significance

No non-Indigenous cultural heritage sites were located during this survey.

7 DISCUSSION

7.1 Aboriginal Cultural Heritage

The study area presents as two major landform types in terms of Aboriginal use: the creek margins or flood plains and the slopes and crests of the low hills. Both of these landform types have been significantly impacted upon since European settlement.

The creek margins of Haydons Creek and the flood plain of the Hastings River have been subjected to repeated and significant flooding with a significant part of the Le Clos Verdun area considered a twenty year flood plain. The regular and persistent logging of this area and the upper reaches of the Hastings River would have resulted in continual erosion and aggrading of this landscape up to the present day.

The slopes and crests of the study area has been the subject of intensive agricultural practices with its use as a vineyard and more recently for cattle grazing. The area would have been clear felled and intensively ploughed prior to the establishment of the vineyard. The impact of the ploughing together with the mounding of the vineyard rows has left a lasting impression on the landscape.

Consequently, it would be highly unlikely that any *in-situ* Aboriginal cultural heritage material would remain across the study area. One area that may hold potential is a small area in transect six. The density of vegetation indicates that the area may not have been ploughed, although the area would have most likely been logged. The area also presents as one highly desirable as a location for camping, situated as it is on the crest of a hill and offering an excellent vantage point over both the Hastings River and Haydons Creek. It is noted that this area while inside the study area is outside the development footprint. This report supports its exclusion from development.

It is considered that while the Birpai people would have frequented this area for hunting and foraging, changes to the landscape over the past century would have rendered this record no longer evident.

7.2 European Cultural Heritage

In terms of European heritage no evidence was seen of use of the landscape in excess of fifty years ago. The location of Sancrox, the early government farm for Port Macquarie was given consideration. The NSW Department of Lands SIX website places the centre of Sancrox at the intersection of Rawdon Island Road and Sancrox Road, approximately 500 metres west of the intersection of Sancrox and Le Clos Verdun Road.

The location of the original government farm is not known and there is no written account of structures on that farm. They would have been most likely simple timber dwellings of a temporary nature constructed close to the crops on the fertile flood plain. With no record of them, it is possible they disappeared during one of the numerous inundations.

More recently the Sancrox Timber Mill that burnt down in 1906 led to the moving of both mill workers and their houses from the area. The boat building yards would have been located on the banks of the Hastings, yet with no modern reference point, and subsequent and frequent inundation events, no record remains.

There is no indication that either the farm or the late nineteenth century mill or boat building yards were in the vicinity of Le Clos Verdun, it is most likely they were further west towards Rawdon Island Road.

To ensure that this assumption was correct all buildings were observed. They were found to be recent, most likely constructed since the 1970's or 1980's. Farm structures such as fences were noted as it was considered possible that early post and rail fences may still exist. This was not the case the majority of fences were electric. Some wooden post / wire fences were observed in transect five, however, they were of modern construction. It was noted that although modern they had been affected by white ant infestation, as had a number of trees across the study area. This would indicate it highly unlikely that untreated wooden objects would survive for any length of time.

The river bank was seen as having a fringe of trees with cultivation occurring up to the steep river banks with no evidence of any structures.

Because of the complete lack of evidence for both Aboriginal and European heritage items there is no need to develop Cultural Heritage Management Plans for either, as is sometimes required for a Part 3A Application under the *Environmental Planning and Assessment Act* (1979).

8 RECOMMENDATIONS

The management recommendations that stem from this archaeological assessment are based on the legislation designed to address the impact of development on sites of cultural significance.

The subject area is deemed to have low archaeological significance in terms of both Aboriginal and European cultural heritage.

8.1 Recommendation 1

During the course of construction work, if suspected Aboriginal cultural heritage material is encountered, work should cease immediately. The NSW Department of Environment and Climate Change (DECC) and Birpai LALC and Bunyah LALC should be notified. Works should only recommence when an appropriate and approved management strategy has been agreed to by all of the relevant stakeholders.

8.2 Recommendation 2

In the event that skeletal remains are uncovered whilst construction operations are underway, work is to stop immediately and the NSW Coroner's Office and NSW Police contacted, if deemed to be of Aboriginal origin, Birpai LALC and Bunyah LALC and the DECC are to be contacted.

With regard European cultural heritage works may progress with regard the following:

8.3 Recommendation 3

If, during the course of clearing work, significant European cultural heritage material (for archaeological items it is those exceeding 50 years in age) is uncovered work should cease immediately. The NSW Heritage Office should be notified and works only recommence when an appropriate and approved management strategy instigated.

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APPENDIX A Legislative Requirements

The following overview of the legal framework is provided solely for information purposes for the client, and should not be construed as legal advice. RPS Harper Somers O'Sullivan will not be liable for any action taken by any person, body or group as a result of this general overview, and recommend that specific legal advice be obtained from a qualified legal practitioner prior to any action being taken as a result of the general overview below.

LEGISLATIVE CONTEXT – INDIGENOUS

COMMONWEALTH

Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (ATSIHP Act)

This purpose of this Act is to preserve and protect of all heritage place of particular significance to Aboriginal and Torres Strait Islander people. This Act applies to all sites and objects across Australia and in Australian waters (s4).

It would appear that the intention of this Act is to provide national baseline protection for Aboriginal places and objects where State legislation is absent. It is not to exclude or limit State laws (s7(1)). Should State legislation cover a matter already covered in the Commonwealth legislation, and a person contravenes that matter, that person may be prosecuted under either Act, but not both (s7(3)).

The Act provides for the preservation and protection of all Aboriginal objects and places from injury and/or desecration. A place is construed to be injured or desecrated if it is not treated consistent with the manner of Aboriginal tradition or is or likely to be adversely affected (s3).

STATE

It is incumbent on any land manager to adhere to legislative requirements that protect indigenous culture heritage in NSW. The relevant legislation is:

National Parks & Wildlife Act 1974 (NPW Act)

The NPW Act provides statutory protection for all Aboriginal relics (not being a handicraft made for sale, with penalties levied for breaches of the Act. Part 6 of this Act is the relevant part concerned Aboriginal objects and places, with the ss86 and s90 being the most pertinent:

Section 86: "A person, other than the Director-General or a person authorised by the Director-General in that behalf, who:

a) disturbs or excavates any land, or causes any land to be disturbed or excavated, for the purpose of discovering an Aboriginal object,

b) disturbs or moves on any land an Aboriginal object that is the property of the Crown, other than an Aboriginal object that is in the custody or under the control of the Australian Museum Trust,

c) takes possession of an Aboriginal object that is in a national park, historic site, state conservation area, regional park, nature reserve, karst conservation reserve or Aboriginal area,

d) removes an Aboriginal object from a national park, historic site, state conservation area, regional park, nature reserve, karst conservation reserve or Aboriginal area, or

e) erects or maintains, in a national park, historic site, state conservation area, regional park, nature reserve, karst conservation reserve or Aboriginal area, a building or structure for the safe custody, storage or exhibition of any Aboriginal object, except in accordance with the terms and conditions of an unrevoked permit issued to the person under section 87, being terms and conditions having force and effect at the time the act or thing to which the permit relates is done, is guilty of an offence against this Act.

Section 90: "*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 this Act*."

Permits are issued under s87 of the NPW Act to avoid disturbing or removing an Aboriginal object or site, whereas consents may be issued under s90 to permit the destruction or damage of a site.

Penalties under these two sections are currently 50 penalty units, or 6 months in gaol, or both for an individual, and 200 penalty units for a corporation.

Environmental Planning & Assessment Act 1979 (EPA Act)

This Act regulates a system of environmental planning and assessment for New South Wales. Land use planning requires that environmental impacts are considered, including the impact on cultural heritage and specifically Aboriginal heritage. Within the EP&A Acts Parts III, IV, and V relate to Aboriginal heritage.

Part III regulates the preparation of planning policies and plans. Part IV governs the manner in which consent authorities determine development applications and outlines those that require an environmental impact statement. Part V regulates government agencies that act as determining authorities for activities conducted by that agency or by authority from the agency. The National Parks & Wildlife Service is a Part V authority under the EP&A Act.

In brief, the NPW Act provides protection for Aboriginal objects or places, while the EP&A Act ensures that Aboriginal cultural heritage is properly assessed in land use planning and development.

Part 3A of the EPA relating to major projects, obviates the need to conform with other specific legislation. In particular, s75U of the EPA Act explicitly removes the need to apply for s87 or s90 permits under the NPW Act. This means that although Aboriginal cultural heritage is considered during the planning process, a permit is not required to disturb or destroy an Aboriginal object or place. However, the Director-General of Planning must nonetheless consult with other government agencies, including DECC and National Parks & Wildlife, prior to any decision being made.

LEGISLATIVE CONTEXT – NON INDIGENOUS

At the national level, the National Heritage List and the Commonwealth Heritage List (for those items under the control of the Commonwealth Government) records and protects those items that are accorded National Significance. The extensive Register of the National Estate lists those items considered of value for future generations.

STATE

Heritage Act 1977

The *Heritage Act 1977* (amended in 1999 and 2008) provides protection for listed items of heritage significance and can be defined as a place, building, work, relic, moveable object or precinct. The Act includes subsurface relics and protection is afforded items of state significance listed on the State Heritage Register. Items of Local Significance are afforded protection under the EPA Act. Of note is the following provision under s139 of the Heritage Act:

> *"A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit"*

Environmental Planning & Assessment Act 1979 (EPA Act)

This Act regulates a system of environmental planning and assessment for New South Wales. Land use planning requires that environmental impacts are considered, including the impact on cultural heritage and specifically Aboriginal heritage. Within the EP&A Acts Parts III, IV, and V relate to heritage.

Part III regulates the preparation of planning policies and plans. Part IV governs the manner in which consent authorities determine development applications and outlines those that require an environmental impact statement. Part V regulates government agencies that act as determining authorities for activities conducted by that agency or by authority from the agency.

Part 3A of the EPA relating to major projects, obviates the need to conform with other specific legislation. In particular, s75U of the EPA Act explicitly removes the need to apply for an approval under Part 4 of the *Heritage Act 1977*, or an excavation permit under s139 of the *Heritage Act*. With respect to non-indigenous heritage, this means that although heritage is considered during the planning process, a permit is not required to disturb or destroy a place or relic within the meaning of the *Heritage Act*. However, the Director-General of Planning must nonetheless consult with other government agencies prior to any decision being made

APPENDIX B AHIMS Registered Sites in a 10km radius of the Study Area

Table 3: AHIMS Registered Sites in a 10km radius of the Study Area

Site ID	Site Name	Site type
30-3-0156	RTA 1	Isolated find
30-3-0157	RTA 2	Isolated find
30-3-0158	RTA 3	Open camp site
30-3-0162	Brettar 7	Scarred tree
30-3-0163	Tarrakoe 1	Isolated find
30-3-0164	Tarrakoe 2	Open camp site
30-3-0165	Tarrakoe 3	Open camp site
30-3-0166	Tarrakoe 4	Open camp site
30-3-0167	Tarrakoe 5	Isolated find
30-3-0168	Tarrakoe 8	Isolated find
30-3-0169	Tarrakoe 7	Scarred tree
30-3-0177	Bittrow 1	Isolated find
30-3-0178	Bittrow 2	Isolated find
30-3-0179	Bittrow 3	Open camp site
30-3-0180	Bittrow 4	Isolated find
30-3-0181	Bittrow 5	Open camp site
30-3-0182	Bittrow 6	Open camp site
30-3-0183	Bulli 1	Isolated find
30-3-0188	Cooricki 1	Open camp site
30-3-0190	Cooricki 3	Open camp site
30-3-0191	Cooricki 3	Open camp site
30-3-0192	Cooricki 4	Open camp site
30-3-0193	Cooricki 5	Open camp site
30-3-0194	Bocal 1	Open camp site
30-3-0195	Bocal 2	Open camp site
30-3-0196	Carkon 1	Open camp site
30-3-0197	Carkon 2	Isolated find
30-3-0198	Carkon 3	Open camp site
30-3-0199	Carkon 4	Open camp site
30-3-0204	Wattoo 1	Isolated find
30-3-0205	Wattoo 2	Isolated find
30-3-0206	Wattoo 3	Open camp site
30-3-0207	Brettar 1	Open camp site
30-3-0208	Brettar 2	Isolated find
30-3-0209	Brettar 3	Isolated find
30-3-0210	Brettar 4	Open camp site
30-3-0211	Brettar 5	Open camp site
30-3-0212	Brettar 6	Open camp site
30-3-0217	Rawdon 1;Rawdon Is	Open camp site
30-3-0221	Rawdon 1	Open camp site
30-3-0224	Stoney Cree 1; SC1	Open camp site
30-3-0245	Sarahs 1	Isolated find
30-3-0324	D2	None
30-3-0325	D3	None
30-3-0327	Karikeree 1	None
30-3-0328	Karikeree 2	None
30-3-0334	Watoo 9	None
30-3-0335	Watoo 10	None
30-3-0353	CA62 #2 & #3	None
30-3-0354	C62 #4	None
30-3-0355	C64 #5	None
30-3-0375	C65 #1	None
30-3-0376	C65 #2	None
30-3-0380	Thrumster PAD 1	None
30-6-0120	RRID 3	Open camp site
30-6-0121	RRID 4	Open camp site

APPENDIX C Aboriginal Site Type Glossary

The following is a brief description of most Aboriginal site types.

ARTEFACT SCATTERS

Artefact scatters are defined by the presence of two or more stone artefacts in close association (i.e. within fifty metres of each other). An artefact scatter may consist of surface material exposed by erosion, or may contain subsurface deposits of varying depth. Associated features may include hearths or stone-lined fireplaces and heat treatment pits.

Artefact scatters may represent:

- Camp sites: involving short or long term habitation, manufacture and maintenance of stone or wooden tools, raw material management, tool storage and food preparation and consumption;
- Hunting or gathering activities;
- Activities spatially separated from camp sites (eg tool manufacture or maintenance), or
- Transient movement through the landscape.

The detection of artefact scatters depends upon conditions of surface visibility, including vegetation cover, ground disturbance and recent sediment deposition. Unfavourable conditions obscure artefact scatters and prevent their detection during surface surveys.

BORA GROUNDS

Bora grounds are ceremonial sites associated with initiations. They are usually comprised of two circular depressions in the earth, and may be edged with stone. Bora grounds generally occur on soft sediments in river valleys, though they may also be located on high, rocky ground in association with stone arrangements.

BURIALS

Human remains were often placed in hollow trees, caves or sand deposits and may have been marked by carved or scarred trees. Burials have been identified eroding out of sand deposits or creek banks, or when disturbed by development. The probability of detecting burials during archaeological fieldwork is extremely low.

CULTURALLY MODIFIED TREES

Culturally modified trees include scarred and carved trees. Scarred trees are caused by the removal of bark for use in manufacturing canoes, containers, shields or shelters. Notches were also carved in trees to permit easier climbing. Scarred trees are only likely to be present on mature trees remaining from original vegetation. Carved trees, the easiest to identify, are caused by the removal of bark to create a working surface on which engraves are incised. Carved trees were used as markers for ceremonial and symbolic purposes, including burials. Although carved trees were relatively common in NSW in the early 20th century, vegetation removal has rendered this site type extremely rare. Modified trees, where bark was removed for often domestic use are less easily identified. Criteria for identifying modified trees include

the age of the tree; type of tree (the bark of many trees are not suitable, also introduced species would be highly unlikely subjects); axe marks (with the need to determine the type of axe – stone or steel – though Aborigines after settlement did use steel); shape of the scar (natural or humanly scarred); height of the scar above the ground (reasonable working height with consideration given to subsequent growth).

FISH TRAPS

Fish traps comprised arrangements of stone, branches and/or wickerwork placed in watercourses, estuaries and along coasts to trap or permit the easier capture of marine life.

GRINDING GROOVES

Grinding grooves are elongated narrow depressions in soft rocks (particularly sedimentary), generally associated with watercourses, that are created by the shaping and sharpening of ground-edge implements. To produce a sharp edge the axe blank (or re-worked axe) was honed on a natural stone surface near a source of water. The water was required for lubricating the grinding process. Axe grinding grooves can be identified by features such as narrow, short groove, with greatest depth near the groove centre. The grooves also display a patina developed through friction between stone surfaces. Generally a series of grooves are found as a result of the repetitive process.

ISOLATED FINDS

Isolated finds occur where only one artefact is visible in a survey area. These finds are not found in apparent association with other evidence for prehistoric activity or occupation. Isolated finds occur anywhere and may represent loss, deliberate discard or abandonment of an artefact, or may be the remains of a dispersed artefact scatter. Numerous isolated finds have been recorded in the study area. An isolated find may flag the occurrence of other less visible artefacts in the vicinity or may indicate disturbance or relocation after the original discard.

MIDDENS

Shell middens comprise deposits of shell remaining from consumption and are common in coastal regions and along watercourses. Middens vary in size, preservation and content, although they often contain artefacts made from stone, bone, or shell, charcoal and the remains of terrestrial or aquatic fauna that formed an additional component of the Aboriginal diet. Middens can provide significant information on land-use patterns, diet, chronology of occupation and environmental conditions.

MYTHOLOGICAL / TRADITIONAL SITES

Mythological and traditional sites of significance to Aboriginal people may occur in any location, although they are often associated with natural landscape features. They include sites associated with dreaming stories, massacre sites, traditional campsites and contact sites. Consultation with the local Aboriginal community is essential for identifying these sites.

ROCK SHELTERS WITH ART AND/OR OCCUPATION DEPOSIT

Rock shelters occur where geological formations suitable for habitation or use are present, such as rock overhangs, shelters or caves. Rock shelter sites generally contain artefacts, food remains and/or rock art and may include sites with areas of potential archaeological deposit, where evidence of rock art or human occupation is expected but not visible.

STONE ARRANGEMENTS

Stone arrangements include line, circles, mounds or other patterns of stone arranged by Aboriginal people. These may be associated with bora grounds, ceremonial sites, mythological or sacred sites. Stone arrangements are more likely to occur on hill tops and ridge crests that contain stone outcrops or surface stone where impact from recent land use practices has been minimal.

STONE QUARRIES

A stone quarry is a place at which stone resource exploitation has occurred. Quarry sites are only located where the exposed stone material is suitable for use either for ceremonial purposes (e.g. ochre) or for artefact manufacture.

APPENDIX D NSW Heritage Branch Significance Criteria

Heritage Council of New South Wales

Heritage Act 1977

CRITERIA FOR LISTING ON THE STATE HERITAGE REGISTER

The State Heritage Register is established under Part 3A of the Heritage Act (as amended in 1998) for listing of items of environmental heritage[1] which are of state heritage significance[2].

To be assessed for listing on the State Heritage Register an item will, in the opinion of the Heritage Council of NSW, meet one or more of the following criteria[3]:

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

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;

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

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

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

f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history;

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.

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.

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[1] ***environmental heritage*** means those places, buildings, works, relics, moveable objects, and precincts, of state or local heritage significance (section 4, *Heritage Act, 1977*).

[2] ***state heritage significance***, in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific cultural, social, archaeological, architectural, natural or aesthetic value of the item (section 4A(1), *Heritage Act, 1977*).

[3] Guidelines for the application of these criteria may be published by the NSW Heritage Office.

APPENDIX E Aboriginal Consultation

Consultation Log – Le Clos Verdun survey

Date/Time	Contact to Contact	Reason	Outcome (if relevant)	Arising
Friday 1st August	Port News	Call to Register Interest		
Wed 6th August	Port Express	Call to Register Interest		
Tues 5th August	Guy Jones from Bunyah LALC to RPS HSO	Respond to Ad	Need to check boundaries of project/ LALC on border	
Wed 6th August/4:00	RPS HSO (SP) called Birpai LALC.	Call to Register Interest	Got Lindsay Moran's (Site Officer) contact details	Call Lindsay
Wed 6th August/4:00	RPS HSO (SP) Lindsay Moran Birpai LALC	Inform of projects – assess if in their interest area. Got up to date contact details	Will post copies of project for review. Possible work in 2 weeks	
Wed 6th August/4:00	RPS HSO (SP) called Bunyah LALC.	Call to Register Interest	Phone rang out	Email today – call back tomorrow
Friday 3rd October	RPS HSO (LN) called Birpai LALC	Organise survey for Wed 8 October and Thurs 9 Oct.	Agreed on date.	
Friday 3rd October	RPS HSO (LN) called Bunyah LALC	Organise survey for Wed 8 October and Thurs 9 Oct.	Agreed on date.	
Tuesday 7th October	RPS HSO (LN) called Birpai LALC	Confirm time and date of survey. Lindsay Moran	Agreed.	
Tuesday 7th October	RPS HSO (LN) called Bunyah LALC	Confirm time and date of survey. Guy Jones	Agreed. Requested mobile no. from LALC but not available	
Wednesday 8th October	RPS HSO (LN) conducted survey with Birpai LALC			Survey completed with Birpai LALC but without Bunyah LALC. Follow up call to Bunyah LALC required.
Wednesday 8th October/ 4.30pm & 7.50pm	RPS HSO (LN) called Bunyah LALC	To advise survey had been completed.	Phone call unanswered.	
Thursday 9th October 8.30am	RPS HSO (LN) called Bunyah LALC	Advise of outcome of Le Clos Verdun.	Bunyah advised that their sites officer had attended Le Clos Verdun the previous day but was late and unable to locate survey team.	
Wednesday 29th October 2008	RPS HSO to Birpai LALC & Bunyah LALC	Forwarded draft Le Clos Verdun Cultural Heritage Report.		
Friday 28th November 2008 9.25am	RPS HSO(LN) called Bunyah LALC	Requested update on response to Draft Report.	Spoke to Steve Flaherty who said he would inform Guy Jones of call.	
Friday 28th November 2008 10.45am	RPS HSO (LN) called Bunyah LALC	Requested update on response to Draft Report.	Lindsay Moran gave verbal response. Details in Appendix F	
Monday 1st December 2008 9.00am	RPS HSO(LN) called Bunyah LALC	Requested update on response to Draft Report.	Guy Jones gave verbal response. Details in Appendix F	

Abbreviations:
SP - Sarah Paddington RPS-HSO
LN - Laraine Nelson RPS-HSO

APPENDIX F Aboriginal Community Response

Full details of the communication process can be found in Appendix X – Consultation Log.

Birpai LALC
A written response to the Le Clos Verdun draft report has not been received from Birpai LALC. Instead Lindsay Moran, CEO Birpai LALC and a member of the Le Clos Verdun survey team discussed the Draft Le Clos Verdun Report with Laraine Nelson on the telephone on Friday 28th November 2008.

Mr Moran agreed with the survey methodology, the findings and Recommendations of the draft report. Mr Moran had previously surveyed the Le Clos Verdun area and has considerable experience in archaeological surveys in the area.

Mr Moran agreed that the area had been considerably affected since European settlement through intensive agricultural practices and considered that the Recommendations of the report were appropriate.

Bunyah LALC
A written response to the Le Clos Verdun draft report has not been received from Birpai LALC. Instead Guy Jones, CEO Bunyah LALC discussed the Draft Le Clos Verdun Report with Laraine Nelson on the telephone on Monday 1st December 2008.

Mr Jones said he had read the report. He was satisfied with the survey methodology, the findings and Recommendations of the draft report. He had no further comments to add indicating all relevant issues were covered.

APPENDIX G Plates

Plate 1: Transect One – Dam Adjacent Drainage Line

Plate 2: Transect Two – Margins of Haydons Creek

Plate 3: Transect Two – Redundant Vineyard

Plate 4 – Transect Three – Unsealed Track

Plate 5: Transect Four – Copse of Eucalypts

Plate 6: Transect Five – Looking North-West Toward Scald Area

Plate 7: Transect Six – Lowland Rainforest

Plate 8: Transect Six – Cobble Observed in Lowland Rainforest

Plate 9: Transect Seven – Looking North Toward Hasting River

Plate 10: Transect Seven – Dirt Bike Track – Looking South-East Toward Haydons Creeks

Plate 11: Looking from the Rawdon Island Bridge Across the Hastings River Towards the Study Area