

Appendix 7

Cultural Heritage Assessment Lot 1, 3 and 5 DP 1074242



Cultural Heritage Assessment at Lots 1, 3 and 5 DP 1074242 Riveroaks Pacific Highway Via Ballina NSW Prepared for

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EXECUTIVE SUMMARY

The following report presents the outcomes of a Cultural Heritage Assessment over Lots 1, 3 and 5 DP 1074242 Pacific Highway (River Oaks) Ballina northern coastal NSW. This report is to provide supporting documentation to a Development Application to be lodged in accordance with *Part 3A of the Environment and Planning and Assessment Act* 1979.

An Archaeological Assessment was conducted over the subject land with the assistance of the Jali Local Aboriginal Land Council (LALC) in 1997 (Piper 1997). No archaeological sites were found. There were no recommendations from the report for the management of specific sites or where there are areas considered potentially archaeologically significant.

The Aboriginal Community Consultation process 2007 was carried out via a newspaper advertisement, mailout and site inspection. There were no responses to the advertisement after a two week period. A mailout to individuals and organizations was undertaken in the event that persons may not have had an opportunity to see the advertisement. There were no responses to the material.

A desktop review, including a review of previous archaeological reports over the Ballina and South Ballina areas and a review of the DECC, AHIMS register found there were no additional reports or sites registered, with information that would alter the findings of the 1997 archaeological assessment. As it was found that surface disturbance through vegetation clearing had recently taken place over a wide area a further field inspection of the subject lands was considered justified as the amount of surface area possible to inspect was significantly greater than had been the case when the 1997 assessment was carried out. The field inspection was carried out by Everick Heritage Consultants and Mr. Marcus Ferguson, Heritage Officer of the Jali LALC on 29-06-07. The results of these investigations are as follows:

Cultural Heritage Assessment

The consultation process with the Aboriginal community did not result in the identification of any sites or areas to which any cultural heritage significance is attached or cultural heritage values that would be destructively impacted by the proposed development.

Archaeological Assessment

There were no Aboriginal archaeological sites found or areas considered to be potentially archaeologically significant. No items of European heritage were identified within the subject lands.

The following recommendations are based upon the results of:

The Aboriginal community consultation process undertaken under the DECC Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation. Copies of the draft report were emailed to the Jali LALC for the attention of the Co-ordinator Mr. Gavin Brown and Sites Officer Mr. Marcus Ferguson on July 10th 2007. On July 20th Mr. Brown informed Everick that a written response would be forthcoming the following week. Mr. Brown left the position in late August 2007 there was no response from the Land Council to the report. Repeated representations were made by Everick and the Proponent Mr. Ken Jones by telephone between July and October 2007 to the Land Council, requesting consideration of the report. Representations were made by Mr. Daryl Creighton Aboriginal Community Liaison Officer, Ballina Shire Council on behalf of Everick Heritage Consultants to the Executive of the Land Council, on a number of occasions in an attempt to expedite consideration of a 'backlog' of reports including the 'Riveroaks' report. A meeting with Executive Members of the Land Council was arranged by Mr. Creighton on 12th September 2007 in an attempt to have the report considered and a written response provided, However to date no response to the content and recommendations of the report has been received. No sites or other cultural heritage was recorded during the field inspections for this development. There was no response to letters and newspaper advertisement as required under the DECC *Draft Community Consultation Guidelines*. No Aboriginal community concern with regard to cultural heritage in the area to be impacted by this development, have been expressed.

- The desktop review including an overview of previous archaeological reports and a search of the DECC AHIMS sites register; and
- The outcome of archaeological assessments over the River Oaks property in 1999 and 2007.
- An additional field inspection was conducted in June 2007 as tree clearing had caused significant changes to surface conditions to those of 1999.

As no sites or areas of significance have been identified in the subject lands there are no recommendations as to the management of specific sites.

The following recommendations are cautionary.

Recommendation 1

The consultants recommend that if in the process of works within the area of the proposed development, at any time it is believed materials of an Aboriginal origin are found, works at the location must stop immediately. The NSW Department of Environment and Climate Change (DECC) Regional Office - Coffs Harbour and Jali LALC must be advised and advice sought as to the most appropriate course of action to follow. Jali LALC may also wish to inform Traditional Owner respondents and seek their views as to how cultural heritage values might be impacted and to how best to mitigate potential impacts. Works must not proceed in the specific location without written consent of the DECC and Jali LALC.

Recommendation 2

Prior to any vegetation clearing and initial earthworks contractors be advised of the statutory requirements of the *National Parks & Wildlife Services Act* (1974 as amended) that in regard to Aboriginal sites or relics: it is an offence to knowingly disturb, deface, damage or destroy, or to permit the disturbance, defacement, damage or destruction of a relic without first obtaining written consent to do so from the Director General of the DECC.

1. INTRODUCTION

1.1 Cultural Heritage Background

The following report presents the outcomes of a Cultural Heritage Assessment over Lots 1, 3 and 5 DP 1074242 Pacific Highway Ballina in northern coastal NSW. The 24.26 ha site is located on the northern outskirts of Ballina (Figure1). This report is to provide supporting documentation to the preparation of a Development Application (under *Part 3A of the EP&A Act*) (PMM 2007: 3).

An Archaeological Assessment was conducted over the subject land with the assistance of the Jali Local Aboriginal Land Council (LALC) in 1997 (Piper 1997). No archaeological sites were found. No recommendations for the management of specific sites or potential areas of archaeological significance were made. Matters of European Heritage are addressed in this report. No European heritage sites were found.

As the 'River Oaks' development has been designated a Significant Development since the archaeological assessment of 1997, Cultural Heritage matters pertaining to the proposed development will be required to conform with the Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation July 2005.

1.2 The Proposed Plan of Subdivision

The Development Application seeks approval for the development of a 234 lot residential subdivision and sporting facilities (Figure 2).



Figure 1: Location of Subject Lands



Figure 2: Proposed Plan of Subdivision

2. ABORIGINAL COMMUNITY CONSULTATION

2.1 Newspaper Advertisement.

In accordance with the Department of Environment and Climate Change guidelines, an advertisement was placed in the Northern Star newspaper on 21, 22 and 23 June 2007 in the Public Notices section (Appendix B). The advertisement, headed Aboriginal Cultural Heritage, invited Aboriginal persons with an interest in the future planning of the Riveroaks development to contact Everick Heritage Consultants. The advertisement identified the location of the development and detailed the type of development that would be undertaken on the land.

In the advertisement, potential applicants were advised that they had 14 days to respond. Provision was made for the inclusion of applicants after that time if necessary. However, there were no responses.

2.2 Mailout.

In the event that Aboriginal Community organisations and individuals had not had the opportunity to see the advertisement a letter from Everick Heritage Consultants inviting Aboriginal participation was sent to the prominent Aboriginal organizations in the region. Invitations to participate in the process of developing a Cultural Heritage Assessment Plan for the proposed residential subdivision, together with explanatory materials, a copy of the advertisement and Jali LALC recommendations of 1999 report were sent to the following:

Bundjalung Elders Aboriginal Corporation Bunjum Aboriginal Co-operative Jali LALC Ms. S Anderson Mr. D Anderson

3. ENVIRONMENT

The subject lands are floodplain composed of a mixture of sediments of estuarine and aeolian origin. Topography is undulating, maximum elevation c. 3m, slope 1%.(Morand 1994:160) A poorly defined channel between Emigrant Creek and North Creek Canal winds through the property. There is no tree growth on the property; pasture grasses for cattle grazing are the only vegetation cover beyond the stream line (Figures 3-5).



Figure 3: View north over proposed development



Figure 4: View of drain and exposure due to tree clearing



Figure 5: View northeast showing drain and recent clearing

4. CULTURAL BACKGROUND

4.1 Settlement and movement

The Aboriginal people of the lower Richmond region were part of a larger linguistic group, the Bundjalung, which inhabited the area between the Clarence and Logan Rivers extending west to Tenterfield. Dialect groups composed of interlinked family groups occupied distinct areas within the wider Bundjalung association. Land belonged to individual clans whose territorial boundaries had been established in mythology (Creamer 1974). The study area is located within the territory of the Arakwal people, with the Bundjalung to the west and the coastal Minjanbal to the north of Byron Bay (Tindale 1974; Crowley 1978). Contact between local clans and more distant groups took place for the purposes of exchange, inter-marriage, armed conflict and during times of seasonally abundant food supply. Population numbers on the coastal plain were high, possibly reflecting the wide variety and high productivity of coastal ecologies. Ainsworth (1922) is the most detailed of early sources for this area, writing specifically of the Aboriginal people of east and west Ballina. Ainsworth (1922:43) recorded '... In 1847 there were between 400 and 500 in the native tribes belonging to East and West Ballina ...' Bray records that Ballina people often mixed with the Coodjingbura a coastal clan group extending from the Tweed to the Brunswick Rivers (Bray 1901:9).

Models to describe possible patterns of settlement and movement in the region vary. One suggests that groups ranged between the sea coast and foothills of the coastal ranges on a seasonal basis (McBryde1974). Early sources support this view to some extent as there are records describing the movement of inland groups of the Clarence River to the coast during winter (McFarlane1934; Dawson1935:25). A second model suggests that movement of coastal people was not frequent, and that semi-sedentary groups moved north and south within the coastal plain rather than to the upper rivers (Coleman1982). The model is based on reports of numbers of small villages composed of dome-shaped weatherproof huts between the mid-NSW coast and Moreton Bay. Flinders described a small group of huts in the vicinity of Yamba in 1799, and Perry described two villages on the banks of the lower Clarence in 1839 (McBryde 1974:9). Similar sightings were reported by Rous on the Richmond (McBryde 1974),

Oxley on the Tweed (Piper1976) and in Moreton Bay (Hall1982). The 'solid' construction methods described for these huts seem to suggest occupation for periods of months at a base camp rather than a constant wide-ranging pattern of low-level land use. Godwin (1999) argues that neither of the above 'models' is supported by the archaeological record and that local conditions dictated exploitation strategies on the north coast of N.S.W.

Early sources indicate that coastal clans remained within a defined territory in small family groups, which gathered en masse at times of abundant food resources. Ainsworth recorded that the Ballina people '... usually camped in divisions at different places excepting during the oyster season, when they assembled unitedly at Chickiaba on North Creek, where the large oyster banks on the foreshores to this day mark the old feeding grounds ...' (Ainsworth 1922:45). While Ainsworth is not specific as to the oyster season, he does refer to an annual migration to the beaches in the month of September for salmon fishing (ibid: 44).

Movement across established tribal boundaries is documented by Petrie (1975) and Bundock (1898). Bundock described the Richmond Aborigines attending bunya nut feasts in the Bunya Mountains of south-east Queensland. These gatherings occurred every fourth year, attracting groups to their own traditionally defined camping areas and serving to promote trade and strengthen kinship networks across a vast area of western Queensland, south-east Queensland, and north-east N.S.W.

4.2 Economy

According to Ainsworth (1922:43-44) the coastal people between Ballina and Byron Bay relied on '... fish and oysters and the varied products of the chase ...' He refers to the spearing of salmon on the beaches and the netting of estuarine fish by means of '... a "tow-row"-a finely meshed net attached to a stick of bamboo bent in the shape of a bow ...'. He is not specific about which estuarine fish were caught by this method, although an excavation of a North Creek shell midden did indicate the exploitation of flathead and bream (Bailey 1975:55). Ainsworth places an emphasis on the consumption of oyster to the exclusion of other estuarine, coastal rock platform and open shore molluscs, all of which are recorded in local shell middens (Bailey 1975; Campbell 1982; Hughes 1991). Modern research supports Ainsworth's assessment as to the prominence of oyster at least for certain periods, in the diet of the Ballina group to the extent that this species comprises the greatest volume of estuarine shellfish represented in Aboriginal middens (Hughes 1991).

Terrestrial animal foods mentioned by Ainsworth (1922:43) include pademelons, wallabies, bandicoots, and 'iguanas'. He reports that flying foxes provided a source of food and were easily brought down with the boomerang and pademelon stick. Bundock also records the hunting of flying fox '... by going into the camps where they sleep during the day, when it is raining heavily, as they will not fly... ' (Bundock:1898). At Byron Bay flying fox were so prolific and reliable that the natives though often shifting camp, seldom went far away on account of this source of food supply (Anon. n.d., b:1 in Sullivan1978:107).

Ethnohistorical records are largely directed towards descriptions of hunting techniques which employed large groups of people and obvious types of technology requiring demonstrable physical skills-the use of spears, clubs, boomerangs, the 'tow-row' (net) etc. As a result, the role of plant foods in the local economy is often understated or overlooked entirely. Certainly, vegetable foods are given no particular prominence in Ainsworth's recollections at Ballina. He refers to yams obtainable in the scrubs, and to bread made from nuts which grew on the coastal headland (Ainsworth 1922:43). McFarlane (1934) placed greater emphasis on the role of vegetable foods '... the woods supply much variety in the shape of fruit or berries but every description of vegetable contributed to the digestive requirements of the collector of food necessities.'.

Commentary on material equipment from the North Coast is provided by McBryde (1978). Her sources refer to shields (McFarlane 1934; Dawson 1935), single point fire-hardened spears, three types of boomerang (Dawson 1935), clubs-nulla nulla and pademelon sticks, bark and palm leaf bags, wooden water vessels, possum rugs, cane and shell necklaces and stone knives (Bundock 1898).

5. ARCHAEOLOGICAL BACKGROUND

5.1 Prehistory

There is evidence of occupation during the Pleistocene for coastal northern N.S.W. and southern Queensland. For example, at Wallen Wallen Creek on North Stradbroke Island, a cultural sequence dating between 22000-1000 years before the present (BP) has been investigated. Analysis of faunal material from the site indicates an economy initially based upon the hunting of terrestrial animals, changed to one based upon a reliance on marine fish and shellfish. The change was directly linked to changing local ecologies caused by rising sea levels (Neil and Stock 1986).

Coastal sites in northern N.S.W. date to within the Holocene period. The earliest of these is a shell midden at the base of Sexton Hill on the lower Tweed River where an occupation phase was dated between 4,700 BP and 4,200 BP (Appleton 1993:34). Faunal material showed a predominance of oyster, cockle and whelk by volume, in addition to remains of pademelon, kangaroo, bream, whiting, flathead and schnapper. The stone component exhibited few diagnostic traits; only four artefacts appearing to be a deliberately manufactured shape (Appleton 1993:17-18). An earlier excavation of a shell midden 2.5 km further upstream yielded a basal date of 605 ± 90 BP. A column sample revealed compacted fish bone remains at the lower levels, with a greater content of shellfish in the upper levels. Bone points were also recovered. It was concluded that the diet, initially based upon fish and possibly terrestrial fauna, changed to one more reliant upon shellfish, which probably reflected the gradual siltation of the Tweed River to a mudflat ecology (Barz 1980), in that location at least.

At Ballina a shell midden on Chickiba Creek was found to have accumulated between 1,750 BP and c.100 BP (Bailey 1975:52). Shell samples from the Angels Beach area are dated between 800 BP and 530 BP, with one sample at 900-1,000 BP (Rich 1994:195). Stone

artefacts were assessed on technological grounds to date to within the past 2,000 years (Rich 1994:161). Bailey's basal date of 1,750 BP suggests that the modern resource-rich environment may not have been productive enough at an earlier time to support any more than small groups. In contrast, the Tweed River estuarine site was in use some 3,000 years earlier than this (Appleton 1993).

Beach foreshore sites investigated to date have been associated with more recent phases of occupation. Foredune sites typically take the form of narrow bands of pipi shell, or surface scatters of pipi and a few stone artefacts. Pipi horizons at South Ballina and Broadwater have dated to 260 years BP and 200 years BP respectively (McBryde 1982:77). A more substantial pipi midden (AHIMS: #4-6-61) investigated on the beach foreshore at Byron Bay had been used between approximately 1,000 and 400 years BP. The 80 cm deep midden deposit was overwhelmingly dominated by pipi shell, with minor inclusions of periwinkle, limpet, sand snail, oyster and cartrut. Bream was the most abundant vertebrate species. Although in lower quantities relative to bream, a broad range of fauna was represented in the midden, including other types of fish, tortoise, macropods, bandicoot, possums, rodents, birds and reptiles. The midden's stone assemblage was characterised by primary flaking debitage which reflected the poor knapping quality of the raw materials used. All of these materials are believed to have been collected from intertidal pebble beds adjacent to the site (Collins 1994).

The most extensive archaeological investigation of sites on Pleistocene sand substrate has been that conducted by Rich (1994) at what is now known as Angels Beach Estate, Ballina. This study resulted in the recovery of 40,000 shells and shell fragments, bone fragments, a piece of ochre and 9,000 stone artefacts. Rich's investigation at Angels Beach Estate produced results, which are largely in accord with those from other studies in the Lennox Head-Ballina area, revealing an assemblage of unmodified flakes, backed blades, cores, hammerstone, uni- and bifacially faked pebble tools, manufactured chiefly on chalcedony, chert and acid volcanic beach/river pebbles. Bone and shell fragments indicated exploitation of estuarine shellfish and terrestrial animals in addition to fish. Rich concluded that evidence for the spatial distribution of intra-site activities, specifically meat butchering and tool manufacturing, suggested that the sites were not the product of itinerant or random occupation, but of repeated occupation by groups larger than a single family unit (Rich 1994:204). Radiocarbon determinations for shell samples revealed an occupation phase dating between c. 100 BP and 530 BP. On technological grounds, stone working events were dated to within the last 2,000 years (Rich 1994:9).



Figure 6: DECC AHIMS sites in the vicinity of the Subject Lands

6. DESKTOP REVIEW

6.1 PREVIOUS ARCHAEOLOGICAL ASSESSMENTS

6.1.1 West Ballina floodplain

A recent assessment over floodplain adjoining an area of mangrove immediately south of the subject lands identified an artefact scatter/open campsite. The materials on the site (Fishery Creek 1) were pebble cores, bevilled pounders and flakes. The type and range of artefacts were considered to be indicative of a permanent campsite and the site to be significant in view of its having potential for further research (Robins and Piper 2005).

The assemblage was dominated by large artefacts often referred to as pebble tools (58%). Technologically, they are unifacial cores. All were made on pebbles (probably from nearby beaches), and all retained a high proportion of pebble cortex. Four of them had bevelled edges that showed evidence of use wear in the form of a silica gloss, along one margin.

While the relief of the floodplain in this locality probably bears little resemblance to the original relief due to the impacts of drainage, land clearing, leveling and cultivation making detection unlikely or impossible, the 2005 assessment shows that archaeological evidence does exist in floodplain contexts although it will require unique conditions to detect it e.g. very high surface visibility.

Shovel test pitting across the subject lands was conducted by Navin and McConchie (1991) during an assessment of the impact of a sewage line in the power line easement which passes south-north through the property. No cultural materials were found where the sewage line passes through the River Oaks' property. Studies by Collins (1996) of alternative routes for

the Ballina Bypass across an extensive area of flood plain west of the study area found no evidence of Aboriginal sites.

6.1.2 East Ballina estuary and dunefields

Archaeological attention in the lower Richmond has focused on the Richmond River estuary and the coastal dunes and plains between Lennox Head and South Ballina. With the exception of Bailey (1972) the majority of studies have been in response to impact assessments. These studies include those of Stockton (1974), Godwin (1986), Bonhomme (1988), Cane and Nicholson (1989), Navin and McConchie (1991), Collins (1992, 1993, 1996), Hughes (1991) and Rich (1994). At least 29 sites in the Richmond estuary extending northwards across dune fields have been recorded as a result of these studies. The sites recorded included 16 midden sites consisting of estuarine and beach species and stone artefacts. Thirteen open camp sites comprising low density shell scatters and stone artefacts were recorded. The greatest concentration of sites is the middens on the North Creek/Chickiba estuary and open sites scattered across the adjacent dune fields of what is now known as the Angels Beach estate. The estuarine sites are extensive high volume shell middens, predominantly composed of oyster.

The current picture of site locations in the Ballina area is that the majority of known sites are located on elevated sand masses of Holocene or Pleistocene origins. Godwin, having recorded 26 sites in the near vicinity of the North/Chickiba Creek estuary, predicted that evidence for use of the estuarine land unit would be restricted to levees and raised sand areas. Studies by Piper (1997) of areas of flood plain at Teven also found no evidence of sites on the lower Richmond River flood plain. The wetlands, Godwin observed, were not likely to contain large sites and discard would probably be restricted to the odd stone tool. The dune system, and any raised areas close to food gathering areas are likely to be extremely archaeologically sensitive with the likelihood that sites found here would represent a wide range of activities (Godwin 1986).

The most extensive study of sites on Pleistocene sand dune substrate is that conducted by Rich (1994) at what is known as the Angels Beach Estate. The most extensive and comprehensive of its kind, the study recovered 40,000 shell and fragments, bone fragments, a piece of ochre and 9000 stone artefacts. The sites had originally been recorded by Godwin (1986) and others (Smith 1989) who concluded that the main focus of Aboriginal activity were the raised sand masses or lower slopes adjacent to the estuary and wetlands of North and Chickiba Creeks. They also suggested that sites in sand dunes at greater distances from immediate foreshores represented less intense activities (Godwin 1986:64-65). Studies by Kuskie (1991) Collins (1993) and Piper (1994 and 1997) in dunes south and south east of the Angels Beach Estate did not record any sites. However, all of these studies were hampered by poor surface visibility conditions. The Kuskie survey excavated 55 test pits/anger holes in three transacts across a hind dune west of the Ballina - Lennox Head coast road. Only one quartz blade was recovered. The lack of materials led Kuskie to agree with Cane and Nicholsons (1989) conclusion at Newrybar Swamp that sparse intermittent shell and stone artefact deposits represented sporadic short term random occupation of the sand dunes (Kuskie 1991: 11).

The Rich (1994) study at the Angels Beach Estate produced an artefact catalogue and raw material base consistent with that of other sites in the Lennox Head - Ballina area. Unretouched flakes, backed blades, and cores, were manufactured on chalcedonies cherts and jaspers. Hammerstones, and flaked and bifacially flaked pebble tools were manufactured chiefly on acid volcanic beach/river pebbles. Bone and shell fragments indicated a primary exploitation of estuarine shellfish and terrestrial animals in addition to fish. Rich concluded that evidence of spatial distribution of functions within the site e.g. meat butchering and tool fabrication, indicated the site was not representative of an itinerant nor random occupation, rather a base camp the focus of wider ranging activities (Rich 1994: 9).

Studies by Navin (1991) and Navin and McConchie (1991) recorded sites in wetland contexts in association with the Ballina/Lennox Head sewage augmentation scheme. An open camp site (Site No: 04-5-0094), containing at least one known burial previously recorded by M. Dallas (1991), was assessed as having significant research potential. The site contains retouched and unretouched flakes and cores on quartzite and chalcedony. Large numbers of modified and unmodified pebbles are present with nodules of ochre. The Jali Aboriginal Land Council, who represent the views of the wider Aboriginal community regard this site as having a high significance.

6.1.3 South Ballina dunefields and floodplain

The earliest archaeological recording in the South Ballina area appears to be in 1965 according to an Archaeological Heritage Information Management System (AHIMS) site card that records a midden/burial site on a South Ballina beach (Beswicks Beach) '... in danger of rutile mining...' (AHIMS site card #04-05-0008). The Starling (1970-1974) report identified graves, surface camps, middens and ceremonial grounds between the Richmond River and Broadwater. However the precise location of these sites is uncertain other than they are generally described as being on sand ridges and sand dunes between the Richmond River and the shoreline. The main concentration of sites at South Ballina is in the Keith Hall area. They are important for the high incidence of burials in addition to their shell and stone artefact content. The sites range in area and in density of their cultural materials from between a few square metres to several thousand square metres. Current grid references indicated in the AHIMS, if derived from the Starling report and not verified by field inspection, are highly likely to be incorrect due to their having been extrapolated from 1:1mile imperial map sheets and 1:250,000 map sheets, exacerbated by imprecise descriptions.

A report by Koettig (1988) assessed an area to the south and east of Mobbs Bay on the Richmond River at South Ballina. The report notes five midden sites. At three locations burials were also found in the area described by Starling. However the report makes the observation that Starling's information was '... not detailed enough to distinguish which site is which within this cluster...' (Koettig 1988:3). Vegetation cover was so dense that access was not feasible, and no new sites were recorded (ibid: 4).

An assessment by Piper and Robins (2006b:31) over 234 ha of flood plain and sand ridges in the central Keith Hall area found all of the surviving Aboriginal cultural materials were located on the crests of vegetated sand ridges. Fifteen sites were recorded. These included four artefact scatters, two middens (*in situ* shell deposits) and artefact scatters, four shell and artefact scatters, one shell scatter, one midden and three single artefacts (Piper and Robins (2006b:31). Shell species were representative of both an estuarine and open beach environment. Stone artefacts reflected the exploitation of a number of different stone sources possibly foreign to the South Ballina area. Artefact types included flakes, retouched flakes, flaked pieces, backed blades, cores , hearthstones, ochre nodules and pebbles (ibid: 32-34).

A report compiled in 1979 that records a burial, a midden with *in situ* shell deposit and a '... stone tool factory' (AHIMS site card 4-05-8. 1979). The site is located on the eastern face of a high dune approximately 150 m west of the HWM on Beswicks Beach approximate 4 km south of the Richmond River.

An additional report (Lourandos 1979:1-3) into site 04-05-0008, following an inspection in 1979 described '... a large "blow out" 250-300 m long and 150 m wide, containing archaeological material, two human burials, and an area of stratified deposit...' A third burial was reported but not found. The stratified area measured c. 100 x 50 m in a dark soil horizon to a depth of c. 20-30 cm. Shell species were predominately pipi with a lesser component of oyster and other rock platform species. The cultural assemblage comprised flakes of chert and quartz. The eroded area comprised similar materials and it is assumed to be the eroded remnant of a stratified cultural horizon. The artefact assemblage consisted of large flaked water worn pebble tools, chert, agate and quartz cores and flakes. The cultural deposit due to its limited depth and the burials were assessed to be of a fairly recent origin (Lourandos 1979:1-3).

This site was reviewed in 2006 in relation to a proposal to develop a building envelope on the western edge of the site. In addition to the archaeological materials previously described by Lourandos and others an artefact scatter was found in a water course a short distance to the north west of site 04-05-0008. The material consisted of pebble cores, pebbles and a chert flaked piece (Piper and Robins 2006a:41).

6.1.4 Cumbalum-Newreybar dune field

Sites adjacent to former wetlands were located in the course of a study by Bonhomme (1988). This study extended 4.5km north of Ross Lane, with Newrybar Swamp to the east and coastal foothills to the west. The midden site (Site No: 04-5-0070) was described by Bonhomme (1988) as a very extensive site, spread over 100 m x 100 m. The site contained sub-surface midden material in a layer 10cm thick. One hundred and fifty artefacts were exposed on the surface. They consisted of broken grindstones, hammerstones, cores, and retouched flakes. The shell material was predominately pipi. Artefact raw materials were volcanic river pebbles, cherts and chalcedonies (Bonhomme 1988:29-30). Two open campsites recorded by Bonhomme (1988:25-28) were located south of the midden on the same dune and comprised low density stone artefact scatters. A sample of the artefactual material included cores, flakes and flaked pieces manufactured on cherts, chalcedonies, quartz crystals and a white stone of unknown lithology (Bonhomme 1988:25-28).

These sites were subsequently investigated by Cane and Nicholson (1989) in relation to an application for Consent to destroy the sites, prior to mineral sands extraction. One open site (04-5-0068) and the midden site (04-5-0070) were augured to determine their subsurface content, which was described as containing a low density of materials. In all, 138 artefacts were collected from the three sites and the artefact content expanded to include backed blades and ochre. Cane and Nicholson (1989) concluded that the material was of a low density and appeared less significant than may have first appeared. They suggested that the sites were representative of a larger distribution of artefacts that extended throughout the dune complex

in the Newrybar and Lennox Head area. The sites were assessed as representing 'dinner-time' camps associated with the activities of small groups ranging from North Creek. Alternatively, they suggest that the sites represent discarded materials at transit camps between non specific locations (Cane and Nicholson 1989:30-33). The sites were subject to Consent and Destroy orders on 28 December 1989. Sites where 'Consent to Destroy' has been determined are still retained on the Register of the Aboriginal Heritage Information Management System.

6.2 DECC AHIMS Register of Recorded Sites

A search of the register of recorded sites found that there were no recorded sites within the subject lands. However as the 'Riveroaks' property is west of the major known concentration of sites on the North Creek/Chickiba Creek systems, east of the Fishery Creek and south east of the Emigrant Creek systems, the possibility of sites being found in the subject lands required a field assessment. The ecological context of recorded sites north of the Richmond River and west to Alstonville has been previously assessed by J. Collins (1996). She assessed fifty-three sites in the region for their environmental associations. The majority of sites (91%) were found to be located on sand dunes of Holocene or Pleistocene age. The remaining 9% of sites are based on sand/silt deposits edging the estuary (Collins 1996:16). There have been no recorded sites on the lower Richmond River flood plain.

The sites register indicates 63 registered sites between South Ballina/Patchs Beach north to Lennox Head and west to the coastal uplands of Cumbalum, Tintenbar and Knockrow. Of these 25 (39%) are shell middens, 26 (41%) are open campsites, and 3 (4%) are burials. Sites with multiple classifications include 6 (9.5%) open campsites/midden, 1 (1.5%) open campsite burial, 1 (1.5%) open campsite/midden/burial and 1 (1.5%) midden ceremonial (bora ground) site. The list of sites for the lower Richmond is, however, not complete. For example two burial sites (Site Nos: 4.5.0144 and 4.5.0145) in the vicinity of Patches Beach do not appear. Their inclusion would mean burials were 7% of the total of known sites in the region.

Shell middens dominate site types on the waterways of North Creek and Chickiba Creek. Here, middens dominated by oyster refuse form large mounds. Adjacent dune fields carry a greater proportion of artefact scatters/open sites. Here, content is less dominated by shell and more by other materials, predominately stone. Coastline middens adjacent to beaches tend to be thin with linear profiles and dominated by pipi shell and/or cartrut shell where beach rock platforms are accessible. Sites contained in hind dunes of East Ballina/Angels Beach between the estuary and open beach may contain a combination of shell species from both estuarine and ocean beach sources.

Open campsites are the most common site type further inland. Studies by Bonhomme (1988), Cane and Nicholson (1989) and Robins (2007) on the Pleistocene dunes at the base of the coastal uplands and west of the coastal wetlands suggest that extensive open camp sites comprising predominantly stone artefacts may be contained within these barrier sand masses.

6.3 ARCHAEOLOGICAL POTENTIAL

On the basis of the results of previous archaeological assessments the subject lands would appear to contain few of the attributes which would suggest it was a preferred campsite option. The subject lands are low and subject to frequent flooding. It is probable that the area was part of a vast expanse of catchments for food and resources to the occupants of campsites on more elevated positions. Artefact scatters, individual artefacts or even small shell scatters may exist as evidence of resource utilization.

Referring to the selection of campsites, Sullivan (1982) found that the essential determinant was the availability of fresh water. Seventy-seven percent of shell middens were found within 100 metres of a fresh water source. Given that prevailing winds blow from the south and south east, 89% of campsites lie between west and north-west of shelter. Seventy percent were located behind headlands (Sullivan 1982:143-146). The study area would no doubt have contained sources of fresh water although it was probably exposed and too low lying to afford the type of sheltered conditions to which Sullivan refers.

The present known distribution of Aboriginal sites on the lower Richmond River indicates that although rare, sites with *in situ* (and possibly) consolidated archaeological deposit can be found on the lower Richmond River flood plain. Although the Collins (1996) study found that 91% of sites were found on sand masses of Holocene or Pleistocene age and the remaining nine percent of sites are located on sand/silt substrate edging the estuary (Collins 1996: 16), a subsequent study (Robins and Piper 2005), located sites on adjoining land to the subject lands. The absence of recorded sites could be a result of the process of clearing, drainage and other land uses has been so destructive that virtually no trace remains of campsites in what were highly productive food gathering areas.

Undisturbed artefacts or sites would probably be covered by silt deposition as a result of the regular flood events on the lower Richmond. However, the destructive impacts of the clearing and subsequent agricultural and grazing practices make it unlikely that sites could be exposed and still be in their original condition. It is highly likely that organic cultural materials would decompose in the highly acidic soils. For the above reasons the archaeological potential of the study area can be expected to be low.

7. FIELD INSPECTION

A search of the register of recorded sites found that there were no recorded sites within the subject lands. However as the subject lands are within short distances of the major known concentration of sites on the North Creek/Chickiba Creek systems, east of sites on Fishery Creek and south of the Emigrant Creek systems, the possibility of sites being found in the subject lands required field assessment.

7.1 Methods

7.1.1 Aboriginal Cultural Heritage

The field inspection was conducted on foot. At the time of inspection, significant amounts of ground surface had been exposed due to tree clearing. These were the areas that of survey concentration. All exposed areas and exposed tree trunks were examined for artefacts. Photographs were taken as a record of general features and conditions, to indicate the degree of surface visibility and the content of any sites found. Notes are made of the degree of surface visibility, the area of visibility, ground cover, land uses and any other relevant features. An over-view of surface conditions and site detection conditions is given in Sections 7.2. An indication of areas searched and areas of surface visibility is given in Figure 9. The field inspection was a sampling assessment of exposed surfaces. Archaeological sites would be photographed, the characteristics of its contents recorded and the location fixed by GPS using WSG 84 datum.

7.1.2 Non-Indigenous Cultural Heritage

A search was made of the Ballina Shire Council Local Environment Plan (as Amended) Schedule 1 to ascertain whether any buildings, vegetation or any other features of cultural heritage value were within the subject lands. A search was made of the Commonwealth Governments Department of Environment and Water Resources, National and Commonwealth heritage listings. The land surface was also examined for evidence of objects, structures and feature that might be of importance.



Figure 7: Tree root exposed by land clearing



Figure 8: Example of varying degrees of surface exposure as a result of tree clearing

7.2 Constraints to Site Detection

The constraints to site detection are influenced by previous European land uses, the area of surface exposure, the degree of surface visibility, current land uses and natural and accelerated (man made) erosion, aggradations' and inundation by sediments (McDonald, Isbell, Speight 1990:92-96). Site detection conditions are generally described in terms of Areas A-C and their landforms

Floodplain Grassed throughout with the exception of areas subject to vegetation clearing. Surface exposure %: 25%. Surface visibility: 70%. Type: Mechanical clearing.

7.3 Survey Coverage

Table 1

LANDFORM	AREA	EXPOSURE	AREA OF	VIZIBILITY	AREA FOR	% OF LF
ELEMENT	(ha)	%	EXPOSURE	%	SITE	FOR SITE
			(ha)		DETECTION	DETECTION
					(ha)	
FLOODPLAIN	24	25	6.0	70	4.2	17.5

Approximate area for site detection: 4.2 ha (17.5%)



Figure 9: Areas of surface exposure inspected

7.4 RESULTS

7.4.1 Cultural Heritage Assessment

There were no sites identified or areas to which cultural heritage values were attached.

7.4.2 Archaeological Assessment

There were no archaeological sites found or areas considered to be potentially archaeologically significant. Estuarine shells, possibly derived from a midden, were found on the boundary line between the proposed residential subdivision and sports fields. However, these shells were associated with concrete and water worn pebbles, and some shells were mixed with the concrete. It is likely that these shells have been relatively recently imported for use in construction (Figure 10).



Figure 10: Introduced shell and pebbles

7.4.3 European Heritage Assessment

No items of European or Indigenous heritage were identified within the subject lands or recorded on the Ballina Shire Council Local Environmental Plan 1987 (as amended) Schedule 1.

8. RECOMMENDATIONS

The following recommendations are based upon the results of:

The Aboriginal community consultation process undertaken under the DECC • Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation. Copies of the draft report were emailed to the Jali LALC for the attention of the Co-ordinator Mr. Gavin Brown and Sites Officer Mr. Marcus Ferguson on July 10th 2007. On July 20th Mr. Brown informed Everick that a written response would be forthcoming the following week. Mr. Brown left the position in late August 2007 there was no response from the Land Council to the report. Repeated representations were made by Everick and the Proponent Mr. Ken Jones by telephone between July and October 2007 to the Land Council, requesting consideration of the report. Representations were made by Mr. Daryl Creighton Aboriginal Community Liaison Officer, Ballina Shire Council on behalf of Everick Heritage Consultants to the Executive of the Land Council, on a number of occasions in an attempt to expedite consideration of a 'backlog' of reports including the 'Riveroaks' report. A meeting with Executive Members of the Land Council was arranged by Mr. Creighton on September 12th 2007 in an attempt to have the report considered and a written response provided, However to date no response to the content and recommendations of the report has been received. No sites or other cultural heritage was recorded during the field inspections for this development. There was no response to letters and newspaper advertisement as required under the DECC Draft Community Consultation Guidelines. No Aboriginal community concern with regard to cultural heritage in the area to be impacted by this development, has been expressed .

- The desktop review including an overview of previous archaeological reports and a search of the DECC AHIMS sites register.
- The outcomes and recommendations of an archaeological assessment over the Riveroaks property in 1999 and
- An additional field inspection conducted in June 2007 as vegetation clearing had caused significant changes to surface conditions to those of 1999.

As no sites or areas of significance have been identified in the subject lands there are no recommendations as to the management of specific sites.

The following recommendations are cautionary.

Recommendation 1

The consultants recommend that if in the process of works within the area of the proposed development, that if in the process of works at any time it is believed materials of an Aboriginal origin are found, works at the location must stop immediately. The NSW DECC Regional Office - Coffs Harbour and Jali LALC must be advised and advice sought as to the most appropriate course of action to follow. Jali LALC may also wish to inform Traditional Owner respondents and seek their views as to how cultural heritage values might be impacted and to how best to mitigate potential impacts. Works must not proceed in the specific location without written consent of the DECC and Jali LALC.

Recommendation 2

Prior to any vegetation clearing and initial earthworks contractors be advised of the statutory requirements of the National Parks & Wildlife Services Act (1974 as amended) that in regard to

Aboriginal sites or relics: it is an offence to knowingly disturb, deface, damage or destroy, or to permit the disturbance, defacement, damage or destruction of a relic without first obtaining written consent to do so from the Director General of the DECC.

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APPENDIX A

Appendix A: Correspondence Jali LALC 1999

JALI Local Aboriginal Land Council

Cabbage Tree Island P.O. Box 24 WARDELL NSW 2477 Telephone: (02) 66 834 413 Fax: (02) 66 834 679

Jali LALC Cultural & Heritage Committee Meeting 29th January 1999.

Time: 9.30 am

Attendance: Lorna Kelly, Lewis Cook, Julie Webb, Ricky Ferguson, Artic Ferguson, Darrell Creighton.

 Archaeological Survey Cook - Natina Property. Cultural and Heritage Committee will accept recommendation and findings of the inspection carried out on the 14th January 1999 by Attie Ferguson and Adrian Piper, Archaeologist.

APPENDIX B

Appendix B: Advertisement Northern Star June 2007

ABORIGINAL CULTURAL HERITAGE

Aboriginal persons with an interest in the future planning of the remaining stages of the River Oaks Estate, Pacific Highway, Northern Ballina, please contact

> Everick Heritage Consultants (07)33682660 or email: everick@bigpond.net.au

APPENDIX C

Appendix C: Accompanying letter to Aboriginal organizations and individuals.



Ref: EV.71

3 July 2007

Dear Sir/Madam

Re: Cultural Heritage Assessment at Proposed Residential Subdivision 'Riveroaks' Ballina

Between 21 June and 23 June 2007, we placed an advertisement in the *Northern Star* relating to a Cultural Heritage Assessment that is required over the Riveroaks Property, Pacific Highway, Ballina. A copy of the advertisement is attached.

An archaeological assessment of this property was undertaken by Artie Ferguson and Adrian Piper in 1997. The recommendations of Jali LALC have been included and development information is attached. However, as a Development Application is proposed to be lodged in the near future, a broader consultation process with the Aboriginal community is required than was the case in 1999. Please see details of the Preliminary Environment Assessment Report that gives an overview of the development so far.

If you have Cultural Heritage interests in the proposed development we would like to invite you to an onsite meeting at your earliest convenience. Would you please contact the above number and details will be arranged.

Yours faithfully

Dr Richard Robins MAACAI Director

Innovative Heritage Solutions