



NELLIGEN BRIDGE REPLACEMENT

Non-Aboriginal Heritage Assessment

FINAL

August 2016



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on behalf of
Roads and Maritime Services

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Executive Summary



Roads and Maritime Services is proposing to build a new bridge over the Clyde River at Nelligen. This report has been prepared as part of the environmental assessment required as part of the Nelligen Bridge replacement proposal.

Methodology

This report examines the non-Aboriginal (historical) heritage issues associated with the proposal, with the aim of assessing and evaluating any heritage impacts. The report identifies the known statutorily listed heritage items in addition to potential heritage sites/items identified during historical research and site inspections. The report assesses the significance of the potential sites/items, includes a heritage impact statement for these sites/items and recommends mitigation and management measures for the sites/items assessed as being significant.

Listed heritage items

Several sites/items with statutory heritage listing were identified within the study area. These predominantly comprise locally listed items located within the town of Nelligen.

Potential heritage items

An assessment of the study area for potential non-listed heritage sites/items was undertaken during both research and site inspection. The only non-listed item that was identified is the Nelligen Bridge itself. This item has been assessed as part of this report.

Summary of statement of heritage impacts

Implementing the preferred option of demolishing the current bridge and building a new bridge to the north of the existing bridge will increase the distance between the new bridge and the listed heritage sites/items in Nelligen. The concept bridge drawings indicate that a functional new bridge is planned to replace the current bridge. The proposed design of the bridge does not differ markedly in mass and scale from the existing bridge and as such the Project is assessed as overall having no negative visual impacts on the heritage values of the sites within the study area.

There are two key elements of the Project that have the potential to impact negatively on the heritage sites within the study area. These fall into the categories of 1) vibration impacts and 2) modification to the rear curtilage of two sites.

The new access road into the town at Wharf Street sits within the existing Wharf Road reserve adjacent to the former Post Office. Road improvement work in this area will not impact on the heritage values of the Former Post Office. However the construction of this new access road, the demolition of the old bridge and associated

site remediation, as well as the rock cutting and pile driving associated with the construction of the new bridge are all activities that raise the potential for indirect vibration impacts on the heritage buildings and structures in the vicinity of these construction and demolition activities. The Noise and Vibration Assessment prepared for Roads and Maritime by GHD evaluates the vibratory impacts of this project. It provides detailed recommendations including that Roads and Maritime manage the potential risk of damage caused by construction vibration by monitoring the impact of vibration on heritage structures within 35 metres of the proposed construction and demolition activities. The Former Schoolhouse (1200); the Former Police Station (1201); Former Post Office (1199); the Mechanics Institute (1198) and the Bushrangers Tree (1300) are all located within this range and are potentially subject to indirect vibration impacts. These heritage structures will need to be managed through the commission of condition reports and vibration monitoring for the duration of construction and demolition activities in accordance with the detailed recommendations of the GHD report.

Five sites are subjected to minor modifications to the rear curtilage. These are the Former Schoolhouse (1200); the Former Police Station (1201); the Former Courthouse (2102); the Soldiers Memorial (1197) and the Ferry Masters Residence (1315). Minimal impact works will be contained within a maximum five metre buffer zone at the rear of these sites. At each of these sites the heritage item is located towards the front of the block and although the back half of the curtilage fall within the study area, the heritage structure itself is removed from the proposed works and is located outside the study area boundary. It is assessed that there will be minimal or no visual intrusion as a result of these works once site remediation has been implemented. It is assessed that the works will have no lasting negative impact on the heritage values of these sites.

Recommendations

Based on the background research, a site inspection and review of relevant statutory obligations the following recommendations are made:

- All property adjustments shall be completed in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*. These negotiations should include consultation regarding appropriate reinstatement of vegetation or landscaping
- Roads and Maritime has engaged GHD to prepare a Noise and Vibration Assessment to evaluate the vibratory impacts of the project. It is recommended that Roads and Maritime implement the recommendations of this report to manage the potential risk of damage caused by construction vibration. This includes monitoring the impact of vibration on heritage structures within 35 metres of the proposed construction and demolition activities, in particular on the Former Schoolhouse (1200); the Former Police Station (1201); the Former Post Office (1199); the Mechanics Institute (1198) and the Bushrangers Tree (1300)
- Prior to proposed works, Roads and Maritime shall engage a suitable consultant to prepare condition reports for heritage items affected by vibratory activities, as identified by the Noise and Vibration Management Plan
- During the proposed works Roads and Maritime shall undertake vibration monitoring of identified heritage items potentially susceptible to indirect impact from proposed works. A qualified vibration consultant must undertake the monitoring. If damage risk to the heritage item is identified, vibratory activities are to be immediately halted and alternative work methods should be implemented so that vibration impacts are reduced to acceptable levels
- Remediation of the demolished bridge approaches should be effectively integrated within the landscape and Nelligen Village Development Control Plan (DCP). This should complement and add amenity to the adjacent open land, particularly at the western end where it will impact the Wharf Street Foreshore Park. Continued consultation with Eurobodalla Shire Council and local residents should be undertaken
- Physical impacts on the non-listed Nelligen Bridge cannot be avoided. There is currently interpretation of all previous river crossings on the site. It is recommended that interpretation be developed, in consultation with community and Eurobodalla Shire Council, to document the 1964 bridge and its former location
- No heritage related permits or approvals will be required for the proposal

- Site workers shall be briefed about the heritage status of all known items in the vicinity of works, including as part of any inductions undertaken prior to working on site. As part of this briefing, they should also be made aware of Section 139/146 provisions of the Heritage Act, archaeological 'relics' and the statutory obligations applying to their discovery
- In the unlikely event that unexpected archaeological remains or potential heritage items not identified as part of this report (including potential burials or human skeletal remains) are discovered during the project all works in the immediate area should cease and the Roads and Maritime Services' *Standard Management Procedure for Unexpected Heritage Items* should be followed.

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1.0 Introduction

Roads and Maritime Services (Roads and Maritime) is proposing to build a new bridge over the Clyde River at Nelligen. This report has been prepared as part of environmental assessment required as part of the Nelligen Bridge replacement proposal.

These works are located on a section of the Kings Highway at Nelligen (refer to **Figure 1.1**) hereafter the study area.

Umwelt (Australia) Pty Ltd (Umwelt) has been commissioned by Roads and Maritime to undertake a heritage assessment of the Nelligen Bridge Replacement Project. This report examines the non-Aboriginal (historical) heritage aspects of the project with the aim of assessing and evaluating the potential heritage impact associated with the proposal.

As part of the preparation of the history section of this report thanks are due to the staff of the Old Court House Museum Clyde River and Batemans Bay Historical Society, as well as Amie Nicolas, Heritage and Conservation Engineer, Roads and Maritime, South West division.

1.1 Project description

Roads and Maritime is investigating options for the replacement or refurbishment of the Kings Highway Nelligen Bridge, Nelligen (the proposal). Routine inspections have for some time been monitoring the condition of the supporting concrete pillars under the bridge, and while the bridge has been assessed as still being able to safely carry normal traffic loads, the supporting bridge piers 1 – 4 have deteriorated to the point where Roads and Maritime have had to consider either to repair or to replace the bridge. Investigations have concluded that despite the additional costs associated with building a new bridge, the benefits from improved road safety, greater improvements in the lifespan of the bridge, and reduced heavy vehicle operating costs, outweighed the costs and it is proposed that a new bridge be built on the north (upstream) side of the existing bridge and that once the new bridge is open, the existing bridge would be demolished.

The proposal includes:

- An improved curve on the eastern side of the bridge
- 3.5 metre wide lanes
- 2.5 metre wide shoulders
- New bridge built to the north with 100 year bridge design life
- Safety barriers between the road and footpath on the bridge
- The existing bridge would be removed after the new bridge is built ¹

¹ <http://www.rms.nsw.gov.au/projects/south-coast/kings-highway/nelligen-bridge/index.html>, accessed online 21.3.2016.



Image Source: Google Earth, DigitalGlobe (2015)
 Data Source: NSW Roads and Maritime (2015)

0 100 250 500m
 1:10 000

Legend

- Study Area
- Proposed Design
- Proposed Culvert
- Proposed Drain
- Possible Burial Marker Trees

FIGURE 1.1
 Locality Plan

1.2 Background

This Non-Aboriginal heritage assessment has been prepared as part of the environmental assessment of the study area for the Nelligen Bridge Replacement proposal as recommended by the Nelligen Bridge Preliminary Environmental Investigation 2014.

Non-Aboriginal (European / historical) heritage is commonly used to describe heritage that is not Aboriginal and can include buildings, structures, archaeological sites/relics, works (roads, bridges etc), precincts/conservation areas, rural landscapes, culturally modified or significant natural items and movable items.

As such, this report comprises a non-Aboriginal heritage assessment that identifies sites or items with potential heritage constraints which require further assessment. The report identifies the known statutorily listed heritage items contained within, and in the vicinity of, the study area. In addition it identifies any new potential heritage sites/items located during historical research and initial site inspections. The report assesses the significance of the potential sites/items, includes a heritage impact statement for these sites/items and recommends mitigation and management measures for any sites/items assessed as being significant.

This assessment has been prepared in accordance with guidelines set out in the NSW Heritage Manual 1996 (Heritage Office and Department of Urban Affairs & Planning), including *Archaeological Assessments*, *Assessing Heritage Significance*, *Statements of Heritage Impact* and with consideration of the principles contained in The Burra Charter (Australia ICOMOS. 2013) and the *Historical Archaeology Code of Practice* (2006).

This report does not include any assessment or consideration of any Aboriginal archaeological values or Aboriginal cultural heritage values associated with the study area. Aboriginal cultural heritage will be assessed in *Nelligen Bridge Replacement, Aboriginal Cultural Heritage Assessment (in Prep)*.

2.0 Legislative requirements

2.1 Statutory overview

The *Heritage Act 1977* (NSW) (the Heritage Act) and the *Environmental Planning and Assessment Act 1979* (EP&A Act) are the primary statutory controls protecting non-Aboriginal heritage and archaeology within NSW.

2.1.1 The Heritage Act 1977 (NSW)

The Heritage Act affords automatic statutory protection to items of heritage significance which form part of the heritage record of NSW (except where these provisions are suspended by other prevailing legislation). The Heritage Act defines a heritage item as a place, building, work, 'relic', moveable object or precinct.

The Heritage Act defines a 'relic' as any deposit, object or material evidence relating:

- to the settlement of the area that comprises New South Wales, not being Aboriginal settlement
- is of State or local heritage significance.

2.1.2 Environmental Planning and Assessment Act 1979

The EP&A Act enables responsibility for heritage (both Aboriginal and Non-Aboriginal) to be shared by state and local government agencies. The Act provides local government with the power to protect items and places of heritage significance in the local area through local environmental plans (LEPs) and development control plans.

The EP&A Act requires consideration be given to environmental impact – including heritage – as part of the land use planning process, and the provisions of the EP&A Act allow for the implementation of LEPs which provide the statutory framework for heritage conservation within a particular local government area (LGA).

The study area is within the Eurobodalla Shire LGA and planning controls include:

- Eurobodalla LEP 2012
- Nelligen Village DCP 2012.

2.1.3 The Burra Charter

The *Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 2013* (The Burra Charter) (Australia ICOMOS. October 2013) was written to explain the basic principles and procedures to be followed in looking after important places. As such it comprises a set of best practice principles and procedures for heritage conservation. The Burra Charter defines cultural significance as meaning 'aesthetic, historic, scientific or social value for past, present or future generations' (Article 1.2). Cultural significance is defined as being present in the 'fabric, setting, use, associations, meanings, records, related places and related objects'. The fabric of a place refers to its physical material and can include built elements, sub surface remains and natural material (Australia ICOMOS 2013).

Although the Burra Charter is not cited within heritage legislation and has no legal force, it guides the policies and guidelines of the Heritage Council of NSW and Heritage Division, Office of Environment and Heritage (OEH).

2.2 Heritage listings

In order to identify if any historical heritage items are located within or in the immediate vicinity of the study area, desktop searches were conducted of the NSW State Heritage Register (SHR) and State Heritage Inventory, the Australian Heritage Database (including Commonwealth and National Heritage lists and the Register of the National Estate (RNE)), and local planning instruments (Eurobodalla LEP 2012). Items listed within and in the immediate vicinity of the study area are detailed in **Figure 2.1** and **Table 2.1**.

2.3 Discussion

No state-listed heritage items were identified within the study area. Two items were located on the Register of the National Estate (RNE) where their inclusion denotes identified national significance, however all references to the RNE were removed from the EPBC Act on 19 February 2012 and the RNE is now maintained on a non-statutory basis as a publicly available archive and educational resource. This identified national significance is acknowledged here but not further in the report, as it has no statutory implications. Thirteen locally-listed heritage items were identified in Nelligen in the Eurobodalla LEP 2012, of which only nine are within the study area as listed within **Table 2.1**.

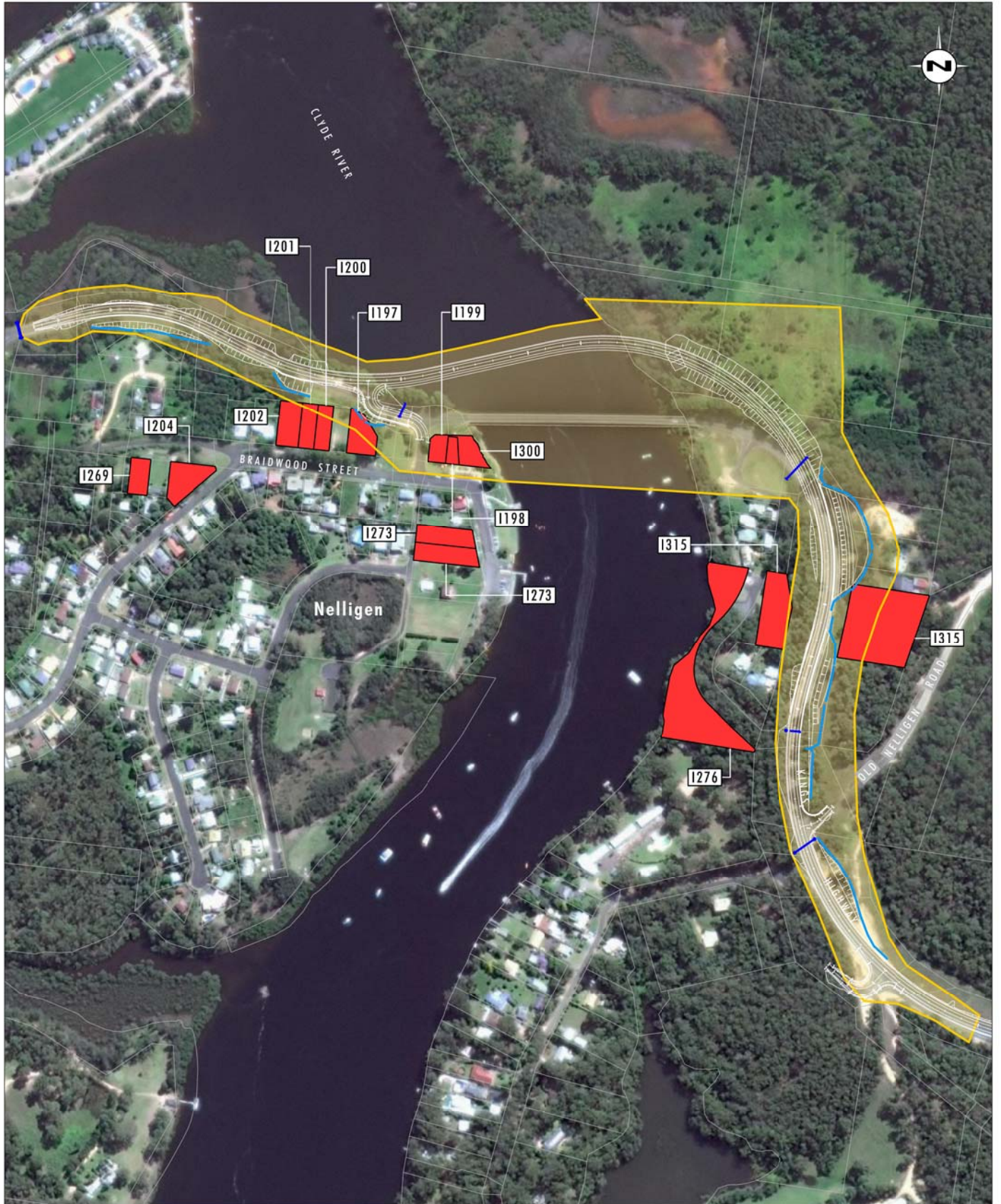


Image Source: Google Earth, DigitalGlobe (2015)
 Data Source: LPI NSW (2016)

0 100 200 300m
 1:6 000

Legend

- Study Area
- Heritage Listings
- Proposed Design
- Proposed Culvert
- Proposed Drain

FIGURE 2.1
 Listed Heritage Items

Table 2.1 Listed items within the study area

Item	Listing number	Heritage significance	Location	Source
Soldiers Memorial	1197 19195	Local and national (RNE)	Braidwood Street, Lot 4, Section 4, DP 758762	Item listed under 'Nelligen', Schedule 5, Eurobodalla LEP 2012 RNE (indicative place)
Mechanics Institute	1198	Local	3 Braidwood Street, Lot 5, Section 5, DP 758762	Item listed under 'Nelligen', Schedule 5, Eurobodalla LEP 2012
Former Post Office	1199	Local	7 Braidwood Street, Lot 1, DP 519317	Item listed under 'Nelligen', Schedule 5, Eurobodalla LEP 2012
Former Schoolhouse	1200	Local	11 Braidwood Street, Lot 6, Section 4, DP 758762	Item listed under 'Nelligen', Schedule 5, Eurobodalla LEP 2012
Former Police Station	1201	Local	13 Braidwood Street, Lot 5, Section 4, DP 758762	Item listed under 'Nelligen', Schedule 5, Eurobodalla LEP 2012
Court House	1202	Local	15 Braidwood Street, Lot 2, Section 4, DP 758762	Item listed under 'Nelligen', Schedule 5, Eurobodalla LEP 2012
Bushrangers Tree	1300	Local	Braidwood St, 7011, DP 1055178	Item listed under 'Nelligen', Schedule 5, Eurobodalla LEP 2012
Clyde River	19406	National	Clyde River, Kings Hwy, Batemans Bay, NSW, Australia (Clyde River water and the immediate environs it flows through from its source in the Morton National Park to the mouth east of Batemans Bay at the Tollgate Islands.)	RNE (indicative place)
Ferry Masters Residence	1315	Local	Thule Road, Lot 64, DP 755933	Item listed under 'Nelligen', Schedule 5, Eurobodalla LEP 2012

3.0 Historical background

As part of NSW heritage assessment procedures it is essential to have a full understanding of a site or item based on its historical and physical context. This section of the report comprises a historical context for the study area and its broader locality to provide an understanding of the significance of any heritage sites within the study area. This section was prepared with consideration of *RTA Thematic History; A component of the RTA Heritage and Conservation Register 2006*.

3.1 European contact

The study area is located within the tribal country of the Yuin (Djuin) people. The Yuin people are the traditional owners of the land and water of the far south coast from Twofold Bay to the Shoalhaven River at Nowra and inland to the Great Dividing Range at Goulburn. They have lived on this land since The Dreaming and evolved a rich culture and economy². The Clyde River, particularly the shellfish beds, provided an important and abundant food source and the adjacent forests were a source of roots and tubers, food animals and materials. Archaeological evidence of campsites and middens indicates that Aboriginal use of the area was concentrated along the foreshores of the river where there are freshwater soaks and flat areas suitable for camping³. There are seven recorded Aboriginal heritage sites within one kilometre of Nelligen village⁴.

The Yuin population across the territory pre-1788 was estimated at about 11 000 comprising two main tribes; Walbanja, north of Narooma, and Dyiringanj from Narooma, south to Bega and west to the top of the range. From the 1820s onwards the settlement of the region by Europeans had an increasingly severe impact on the lives of Aboriginal people. Diseases, in particular yellow fever, syphilis and influenza took many lives and the settlement of the riverine areas resulted in a series of incidents including a possible massacre of Aboriginal people at Coila Lake⁵. These circumstances drove the Yuin people off their land and into Aboriginal Reservations and employment with whaling, timber getting and on farms⁶. For further information regarding the Aboriginal use of the region refer to *Nelligen Bridge Replacement, Aboriginal Cultural Heritage Assessment (in Prep)*.

While population dramatically reduced over the first generation of contact with Europeans⁷, the traditional owners of the land at Nelligen are represented in the historical record through the remarkable works of 'Mickey', an artist who first appears in the historic record in 1875. Described as "An old crippled blackfellow of Nelligen, Clyde River NSW"⁸, he was a Dhurga speaking man of the Yuin people, who was born in about 1820 and he lived and worked all his life on Clyde Coast.

Mickey created many artworks that provide a unique insight into the life of the Clyde Coast Aboriginal community and their interaction with settlers at a time of increasing dispossession when, following European settlement of the area, some Aboriginal people found jobs in local industries (refer to **Plate 3.1**).

² http://livingknowledge.anu.edu.au/learningsites/kooricoast/05_map.htm, accessed online 29.2.2016

³ <http://www.environment.nsw.gov.au/resources/planmanagement/final/20120101ClydeRiverfinal.pdf>, accessed online 29.2.2016.

⁴ URS Australia Pty. LTD., Nelligen Bridge Preliminary Environmental Investigation, Report for Roads and Maritime Services, September 2014, p. 36.

⁵ Donaldson, S. *Eurobodalla Aboriginal Cultural Heritage Study Stage two*, 2006, p. 75.

⁶ <http://www.turooshead.org/Pages/AboriginalHistory.htm>, accessed online 21.3.2016.

⁷ Goulding, M. and Waters, K. *Eurobodalla Aboriginal Cultural heritage Study*, March 2005 accessed online 21.3.2016.

⁸ Andrew Sayers, 'Mickey of Ulladulla (1820–1891)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/mickey-of-ulladulla-13098/text23697>, published first in hardcopy 2005, accessed online 29 February 2016.

His art works document an active traditional life, depicting corroborees and ceremonial dress, as well as reflecting the daily life of Aboriginal labourers from the 1840s, as Aboriginal labour was increasingly used in sawmills, on farms and on the wharves and in commercial fishing. These images document the role of women cooking, digging potatoes and husking maize, and of men in harvesting, tree-felling and hunting. In his later years he lived in Ulladulla at the Aboriginal Reserve. Mary Ann Gambell, the wife of the Ulladulla lighthouse keeper, provided art materials and preserved his works. After his death in 1891 the Board for the Protection of Aborigines sent five of Mickey's drawings to the 1893 World's Columbian Exposition, Chicago, where they were awarded a bronze medal and were described as 'unique and valuable as a specimen of primitive art'. His work is now held in galleries and museums across Australia⁹.

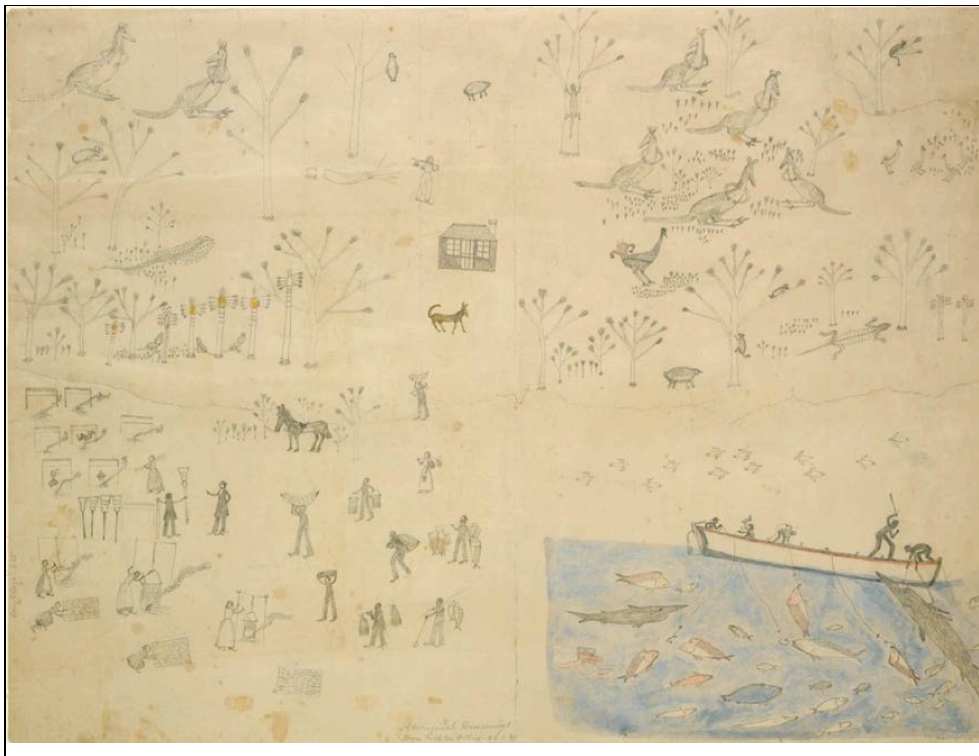


Plate 3.1

Scenes of Aboriginal life by Mickey of Ulladulla c1880

Mitchell Library, SLNSW Call no: XV/68

⁹ *Ibid.*

3.2 Exploration and early settlement

The Voyage of the *Endeavour*, Commanded by Captain James Cook was the first to leave written records of this area. When Cook sailed past the area of Batemans Bay, which he named, at noon on 22 April 1770, he recorded that they saw: “an open bay in which were three or four small islands... This bay seemed to afford but little shelter from the sea winds and yet it is the only place where there appears a probability of finding anchorage upon the whole coast”.¹⁰ Cook noted that he “saw smoke in many places near the beach” but did not make contact with the Aboriginal inhabitants. Joseph Banks, also on the voyage, recorded that “In the morn we stood in with the land near enough to discern 5 people who appear through our glasses to be enormously black.... We have not observed those large fires we so frequently saw in the islands and New Zealand made by the Natives in order to clear the ground for cultivation: we thence concluded not much in favour of our future friends”¹¹. Cook also noted “between Mount Dromedary and the Pigeon House, we saw high mountains, which... are covered with wood... The trees which almost every where clothe this country, appear to be large and lofty”¹².

Cook did not discover the Clyde River, which remained unexplored until 1821, when it was named and navigated by Lieutenant Robert Johnson, on board the cutter *Snapper*. Johnson, Australian born but educated in Britain, appears to have seen a parallel with the Scottish river Clyde. In 1822 Alexander Berry, who was already involved in cutting and shipping timber from the Illawarra district, took part in a second expedition to the area. Berry describes the expedition:

...we proceeded direct to Bateman Bay, which we entered in the evening, and came to an anchor late at night under Snapper Island. Next day I proceeded up the river Clyde, in company with Lieutenant Johnston, its discoverer. The general appearance of the river agrees very well with his description. He was, however, surprised to find it quite salty, in situations where he had found, on his former visit, about a month before, excellent fresh water. (It was then very rainy weather.) At a short distance below what he calls the fast rapid, the river was fresh, and most likely will continue so about that place at all seasons. At this place, however, the navigation ceases, and we could only proceed a few miles farther in the boat at high water. Thus far the direction of the river is northerly, with an inclination to west: the fresh-water run, however, comes chiefly from the southward. Throughout, the river winds in a beautiful manner among the hills, which slope gradually to the water's edge. These hills are moderately wooded. The white gum is the most prevalent. Generally the soil is rather barren, and is covered with low ferns, prickly shrubs, and a kind of dwarf palm, called *burrawang* by the natives (*Zamia spiralis*). As we advance up the river, the alternate projecting points, on either side, consist of rich alluvial soil, but are of small extent.¹³

Berry recognised the challenges of settling in this area, but expressed optimism: “this country is so peculiar, and has so many apparent disadvantages in the midst of many seeming advantages, it becomes our duty to improve the latter, and to obviate the former. It is therefore perhaps happy that its colonization has been deferred until the present time, when the sum of human knowledge, both moral and physical, is so extended, that these attempts may be made upon just and rational principles”.

¹⁰ Cook, ‘21 to 23 April 1770’, *Voyages in the Southern Hemisphere*, Vols II – III, p 488. <http://southseas.nla.gov.au/journals/hv23/488.html> accessed online 30.2.2016.

¹¹ Brunton, P. *The Endeavour Journal of Joseph Banks: The Australian Journey*, Angus and Robertson, 1998, p. 19.

¹² *Ibid.*

¹³ Berry, A. ‘On the Geology of Part of the Coast of New South Wales’, in Barron Field (ed) *Geographical Memoirs on New South Wales*. Chapter 8, p. 231, 1827. <http://gutenberg.net.au/ebooks13/1304421h.html> accessed online 30.2.2016.

In 1827 Major Thomas Mitchell sent surveyors Thomas Florance and Robert Hoddle to explore and map the south coast and hinterland. On 2 December 1829 Hoddle laid out 640 acres of “good forest land at Nellican Creek” for absentee landowner Francis Moylan¹⁴. The good timber, “rich alluvial soil” and reliable boat access attracted pioneer settlers, and timber getting commenced in the area by the 1830s¹⁵ although the agricultural development of the small fertile flats was slow¹⁶.

While agriculture was slow to develop in the steep mountainous country of the coastal hinterland, it was thriving on the Southern Tablelands and Braidwood was already well established as a prosperous pastoral and agricultural centre. The need for a good road was identified as early as 1835, when landowners and citizens of Braidwood petitioned the Colonial Secretary for “a road from Braidwood to Batemans Bay whereby the Braidwood District settlers might ship their wool and receive supplies”¹⁷.

No official action was taken, and road building continued to develop in a piecemeal fashion. In 1843 *Baker’s Australian Atlas* records only a packhorse trail from Braidwood descending the Sugarloaf, now Clyde Mountain, which passed well south of Nelligen, and terminated at ‘Moruuyar’ (refer to **Plate 3.2**). It connected to a packhorse trail passing through ‘Nellikeng’ Creek and continuing along the western side of the Clyde River before crossing much further up river, well above Currowan. River crossings throughout the district continued to pose considerable challenges, and aroused dissatisfaction as drownings occurred and mail was damaged or lost¹⁸.

Following discovery of gold in the Araluen Valley in 1851, it was recognised that the Clyde gave ocean-going vessels their closest possible landing to the diggings, and in March 1852 a further petition was drawn up, signed by twenty six citizens of Braidwood and sent to the Surveyor General, Sir Thomas Mitchell, seeking a route to be surveyed from Braidwood the Clyde River. It read:

We, the undersigned landholders, and inhabitants of the District of Braidwood, have the honour to request that instruction may be given to the District Surveyor, S. Larmer, Esq., to examine and report upon the practicability of constructing a road from this place to the navigable part of the Clyde River. From such local information as we are already in possession of, we have every reason to believe that the formation of a road from Braidwood to the point above mentioned might be accomplished without encountering any great or insurmountable difficulty. The peculiar capabilities of this district as a grain growing country, and the greatly increased importance which it is now acquiring from the almost daily discovery of new auriferous deposits, render the construction of a road to the coast an object not only of local but of general importance, and we, therefore, beg to invite your attention to the request herein contained.¹⁹

¹⁴ Gibbney, H.J. *Eurobodalla: History of the Moruya District*, Eurobodalla Shire Council, 2007, p. 21.

¹⁵ Turner, J.W. *Thematic History of Eurobodalla Shire: Heritage Study History*, Report for the Eurobodalla Shire Council, 1996, p. 27.

¹⁶ Gibbney *Op.cit.*

¹⁷ Giovanelli, P. *Nelligen Main Street Study*, Report for the Eurobodalla Shire Council, June 2011, p. 7.

¹⁸ DMR *Historical Roads of New South Wales: Princes Highway*, DMR, Vol XVI, No.3, 1951.p. 82.

¹⁹ Moore, D. *Dray Trail to Prosperity*, file held by the Clyde River & Batemans Bay Historical Society.

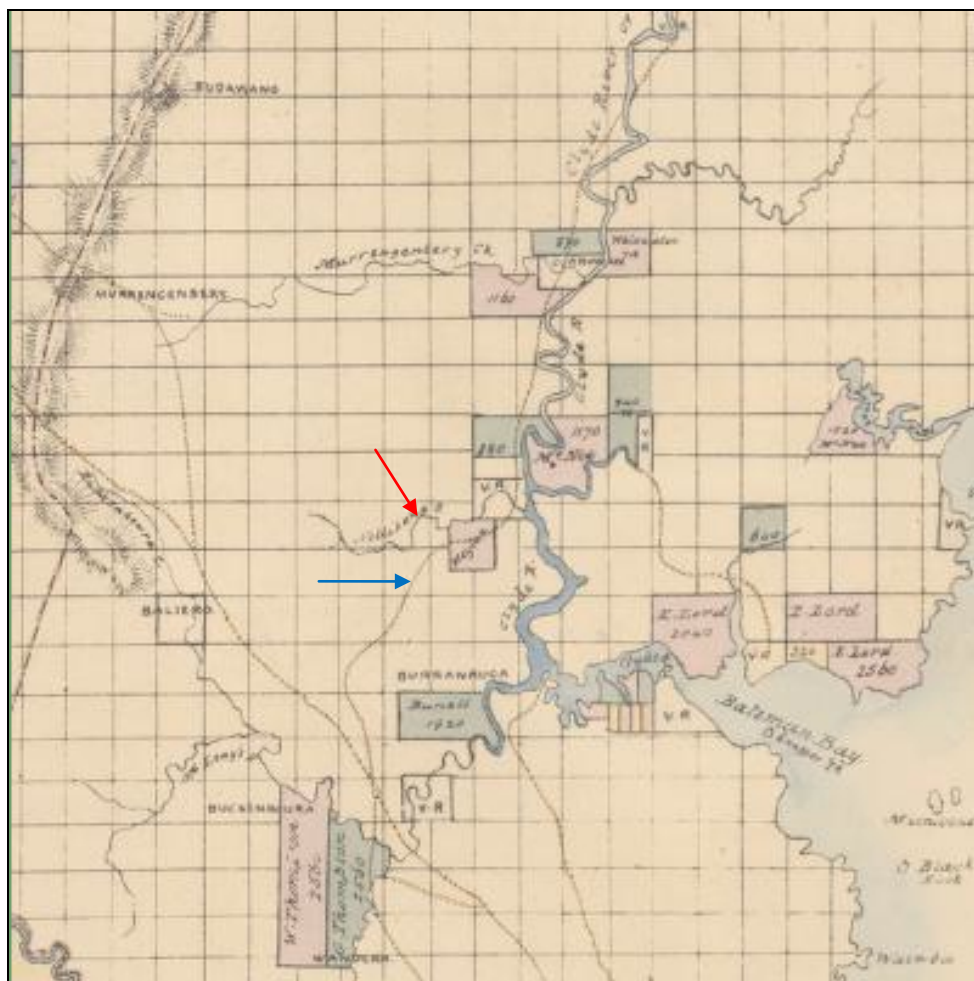


Plate 3.2

'Nellikeng' creek and packhorse trail

Nelligen Creek indicated with red arrow and the trail with blue arrow.

Source: Bakers Atlas 1843 National Library of Australia, Map raa8

3.2.1 Nelligen

In 1827 Surveyor Robert Hoddle had dismissed the feasibility of a wagon trail between Braidwood and the Clyde River, but the new gold strikes gave weight to the petition and this time they were successful. By the end of June 1852, the Surveyor General had accepted a tender from Mr John T. Mann for surveying and constructing the proposed road²⁰ at an estimated cost of £5,000. A work camp was established at the junction of *Nellikeng* Creek and the Clyde River and in 1853 James McCauley piloted the first steam ship, the *PS Nora Creina*, up the Clyde River to Nelligen carrying men and equipment to build the road. On 10 September 1853 the Colonial Secretary advised the Acting Deputy Surveyor General that the Governor General had approved that the cost of the road would come from Territorial Revenue. Works were overseen by Superintendent W.H.L. Green, who set out clearing the route surveyed by John Mann from Nelligen towards Braidwood. The project was fraught with difficulties, not the least were delays caused by the difficulty of hiring men, despite offering the highest rate of wages and good rations. The proximity of the project to the goldfields was the acknowledged cause, but Mann nearly lost his contract because of these delays²¹.

²⁰ *Ibid.*

²¹ *Ibid.*

Crossing the range at Sugarloaf Mountain was another major challenge and progress on the road was slow. There were very real fears that the allocated funds would be exhausted before the range had been crossed. A report from Thomas Mitchell on 6 April 1855 indicated that the terrain was formidable: “The chief difficulty in this line is the Sugar Loaf Mountain, to cross which with a road, as the line has been marked exactly, should not be attempted; and it can only be with very judicious side cutting that the Sugar loaf line can be made passable as a road.” Under direction of a new superintendent, Mr Weber, the side cut across the southeast face of the Sugar Loaf began to take shape²² and the road progressed.

The establishment of the town of Nelligen, complete with an approved plan, was formally announced by the Colonial Secretary’s Office in December 1854²³. By 1856 the Clyde Mountain Road was opened and in use. This lived up to expectations and greatly facilitated the movement of goods to and from Sydney and Braidwood, Araluen, Majors Creek, Bungendore and Queanbeyan. By 1858 there were regular express coach and haulage services as well as steamers from the Illawarra Steampacket Company, which visited the town twice a week²⁴. The road consolidated Nelligen’s role as the main port town on the Clyde Coast and the town's prosperity as a port and teamsters town was supported by a small, pastoral and dairy industry, gold discoveries and the rich resource of fine hardwood trees.

A report published in the *Illawarra Mercury* of 3 January 1859, describes Nelligen as “one of the finest districts in the colony, at present, for laborers with large families to come to settle in. It is a new township and district, just opened up, situated on the banks of a beautiful serpentine and navigable river. The fertile soil on its banks is fit for growing any description of produce for the use of man and beast; there is an abundance of timber, and numerous fresh water creeks, for all purposes. The Clyde produces timber admirably adapted for ship-building-; for instance, see the building yard of Messrs Wilson and Brush (at Nelligen) in Fishermen's Bay; on the stocks there you will see a model of a monster cargo punt, the first ever built on the Clyde of Australia, which reflects great credit on the builders”²⁵. In his optimism the author draws a parallel with the history of Melbourne: “there is nothing required to make Nelligen and its fine back goldfields and country... one of the finest, the wealthiest, and most important districts in New South Wales.... Melbourne, 22 years ago, was what Nelligen is now”²⁶.

In 1860 the Sydney Morning Herald correspondent was less complementary about the state of the Clyde Mountain Road, which “like all other roads in the colony, is in a most deplorable condition” and it could take “three to four days to arrive in Braidwood, the distance being only thirty one miles”. Despite that, he acknowledged that the road was very well used, with “upwards of 500 horses and nearly as many bullocks kept continually on the road between Nelligen and Braidwood and neighboring goldfields”. The correspondent proposed the building of a tramway to solve this problem, which he believes could be constructed at the cost of four thousand pounds a mile, and was confident that a private company could build this infrastructure and still make a profit “considering the immense traffic” the road carried²⁷. This grand project was never implemented, and an extension of the railway line from Goulburn to Cooma, which opened in 1869, brought the railways into direct competition with the wagon trail and steamship link²⁸.

²² *Ibid.*

²³ Giovanni, *op.cit.*, p. 7.

²⁴ Turner, *op.cit.*, p. 27.

²⁵ *Illawarra Mercury* 3 January 1859, p. 4.

²⁶ *Ibid.*

²⁷ *Sydney Morning Herald* 5 October 1860, p. 8.

²⁸ Turner, *op.cit.*, p. 27.

Given the poor condition of the road surface, this competition saw a decline in the use of the road. One such example was the change of route for the gold escort between Braidwood and Sydney which in October 1869 was altered so that instead of going to Nelligen and then being forwarded by sea, it went to Goulburn and then via railway²⁹. This decline continued, with a ‘Correspondent’ in 1875 stating that “Nelligen seems to have been a very busy place, but has fallen back very much. Stores, which appear to have done a great trade, are now shut and I am told that there were four public houses all busy a few years ago. There is now only one, namely the Steam Packet Hotel... The buildings in the township are all of weatherboard. The school of arts is a very small building, bark roof, and is used for church purposes, balls, concerts or any public performance or amusement.”³⁰ By the turn of the century the pace of life in Nelligen was considerably slower (refer to **Plate 3.3**). During the early 1900s the Illawarra and South Coast Steam Navigation Company recognised that their continued operation would rely on supplying the townships of the region and on the South Coast's timber industry³¹.

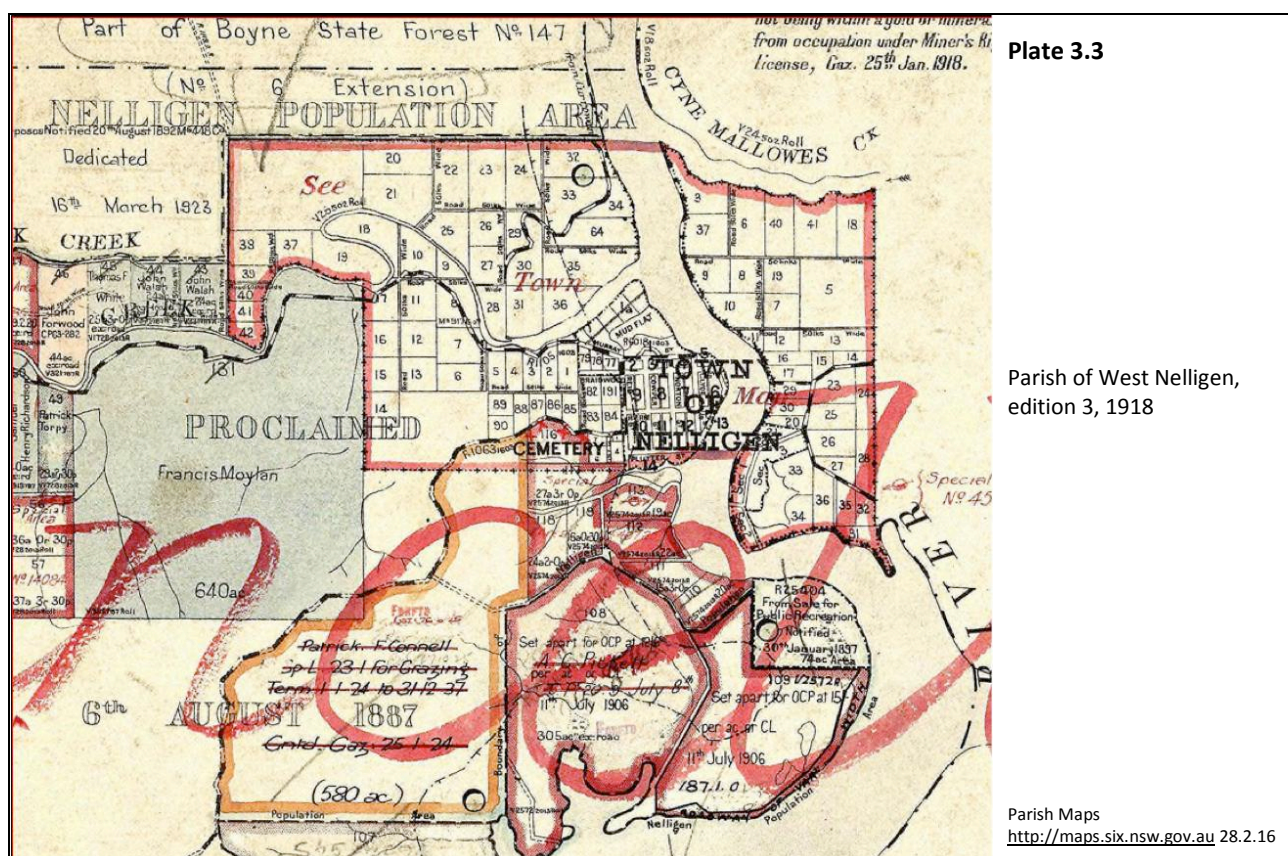


Plate 3.3

Parish of West Nelligen, edition 3, 1918

Parish Maps <http://maps.six.nsw.gov.au> 28.2.16

Eurobodalla’s major river systems, the Clyde at both Batemans Bay and Nelligen and the Moruya River, presented physical barriers which kept the area relatively undeveloped. Residents and visitors crossing the Clyde were first rowed across, then hand winched, steamed or petrol driven across in ferries and punts long before the first bridge was built in Batemans Bay in 1956. Such crossings were dangerous and conditional on the wind and weather, so from 1857 until 1871, the main road south from Nowra went via Milton, Currowan, Nelligen, Runnyford, Moruya and Bodalla³², running some distance inland and travelling along the western bank of the Clyde River to avoid the need for a deep water crossing.

²⁹ Sydney Mail 17 October 1869, p. 2.

³⁰ Empire, 30 May 1875, p. 4.

³¹ Moore, D. op.cit.

³² Historical Roads of New South Wales: Princes Highway, op.cit., 82.

The first reference to a punt at Nelligen was in December 1857, when the Illawarra Mercury records that: "In a few days the inhabitants of this place will have the satisfaction of witnessing the launching, into the deep waters of our noble river, of a large cargo punt. This punt has been built on the banks of the river, by Messrs Dawson and Kemp for Messrs Wilson and Bush. The style of the work, and the rapidity with which it has been performed, reflects the highest credit to the builders. The punt will greatly facilitate the discharging of the steamer, as, whilst Mr Richardson's goods may be discharging on to his wharf on one side, Messrs Wilson and Bush will be taking theirs into the punt on the other. The punt will also be used for conveying cargo up and down the river to and from the steamer"³³.

Private arrangements such as this clearly continued to provide both passenger and goods transport across the Clyde at Nelligen, however with the establishment of a regular Government passenger ferry service across the river downstream at Bateman's Bay in 1871³⁴, the route via Nelligen diminished in its importance until a Mr Templeman commenced a regular passenger ferry service across the Clyde at Nelligen in 1878, which allowed a much shorter route to Bateman's Bay than via Runnyford³⁵.

Any number of disasters are recorded at Nelligen with the punt, many causing inconvenience and delay or even bringing cross river traffic to a halt – one such example in 1884 saw the ferry "sunk to the bottom of the river, where it remained for at least three weeks without being successfully raised to the surface"³⁶. Far more serious were cases where loss of life was involved. In 1872 a local man was killed while loading timber onto the Nelligen punt, while in 1928 a tragedy occurred at nearby Batemans Bay ferry that focused the attention of the nation of the dangers of such river crossings, when the Reverend Benson of Bodalla mistakenly drove his car straight into the Clyde River due to the lack of safety barriers at the ferry. His wife and four young children were drowned³⁷. Newspaper coverage on the drownings was extensive, and public opinion was stern - a barrier gate was quickly installed at the Batemans Bay punt site. This incident caused outrage in the local community who called for bridges to be built and expressed their concern that similar accidents could happen at other local crossings. Mentioning the recent tragedy at Bateman's Bay, local identity Mr. A. M. Campbell, in a letter to the Editor of the Sydney Morning Herald, stressed the serious danger facing people who crossed the Clyde River at Nelligen: "Over 40 years ago, the Nelligen punt was locally built, and the obsolete, dilapidated, unseaworthy derelict is still carrying increasingly large cargoes of human life over a wide stretch of the Clyde. It has been botched, patched, extemporised with plugs, pitch, sawdust, and even cement to such an extent that it is now leaking like a lobster pot"³⁸. The Braidwood Review of October 1928, reported: "residents of Braidwood, Nelligen and Batemans Bay are deeply incensed... The Nelligen Punt was in such a precarious state that the punt man needed to continually stop and bale it out, causing further delays to travelers, a trip on a good day already taking 20 minutes". Authorities concurred and commenced replacing punt systems with bridges, the first being the Wagonga River bridge at Narooma, which was finished in 1932³⁹, the first major bridge constructed by the Department of Main Roads on the Princes Highway⁴⁰.

Depression and war intervened, however and the pace of bridge building slowed. Tragedies continued and include the 1949 death of Braidwood grazier, James MacKey, who fell off the Nelligen punt when it was in mid river and drowned⁴¹. During the 1950s replacement of ferries by bridges again became a priority for

³³ *Illawarra Mercury* 27 December 1857 p. 4.

³⁴ DMR, *Main Roads Journal* Vol. XXII, No. 2, December, 1956.

³⁵ Clyde River and Batemans Bay Historical Society *Past Times*, issue 9, 2013, p. 2.

³⁶ *Australian Town and Country Journal*, 22 November 1884, p. 17.

³⁷ *Sydney Morning Herald*, 13 October 1928, p.17.

³⁸ Thompson, M. 'Tragedy on The Clyde', *Past Times*, Issue 14 Aug 2014, Clyde River and Batemans Bay Historical Society, p. 5.

³⁹ Kass, T. *RTA Thematic History* 2006, p. 53.

⁴⁰ *Ibid.*

⁴¹ *Braidwood Review* 3.5. 1949 p.2

the NSW Department of Main Roads (DMR). In 1948 the state government operated thirty ferries across major rivers⁴² and it was not until 1956 that the Batemans Bay Bridge replaced the ferry⁴³. By 1958 that number was down to eighteen ferries controlled by DMR. Nelligen punt remained one of them and the pressure of the tourist industry, including transporting caravans across rivers was considerable⁴⁴ (refer to **Plate 3.4**).

Then to the relief of travelers on the Kings Highway, construction of the bridge to replace the cable ferries at Nelligen was commenced by E.S. Clemenson and Co. in 1960. It is recorded that “the Steampacket Hotel once again reverberated as voices were raised in friendship, contention or song after healthy pay packets had been opened”⁴⁵.



Plate 3.4

Approximately 1940 dated photograph of Nelligen punt looking west

State Library of NSW Call No. a3269038r

Until the 1950s, there were key engineers involved in bridge design on the NSW road bridge network. However, by the late 1960s bridge design had become more standardised and was outsourced from DMR⁴⁶. The Nelligen bridge design was prepared for DMR by the Sydney firm of Consulting Engineers, MacDonald, Wagner and Priddle. It is possible that structural engineer Raymond Arthur Priddle, a partner at the firm who had two years experience working with DMR in the Yass/Canberra area in his early career, influenced the design of the Nelligen Bridge⁴⁷. The bridge was made of reinforced and pre-stressed concrete, had seven spans and was 827 feet in length. The deck was 24 feet wide between the kerbs, single lane in each direction and there was a five-foot wide pedestrian access on the southern (downstream) side. Each of the prestressed beams were cast on false work immediately above their true position. They were then stressed and lowered on to their bearings by means of jacks⁴⁸. The level of the deck was three feet above the highest recorded flood level. The total cost of the project was three hundred and forty thousand pounds, including the construction of the approaches, which required major earthworks⁴⁹. Construction of the new

⁴² DMR, *Main Roads Journal*, December 1948, p. 43.

⁴³ DMR, *Main Roads Journal*, December, 1956.

⁴⁴ Kass, *Op.cit.*

⁴⁵ Moore, D. *Op.cit.*

⁴⁶ Burns Roe Worley, *Concrete Beam Bridges*, Report for RTA, 2005, p.90 and Amie Nichols, Perc. Com., 3.3.16.

⁴⁷ Henry J. Cowan, 'Priddle, Raymond Arthur (1913–1971)', *Australian Dictionary of Biography*, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/priddle-raymond-arthur-11459/text20429>, published first in hardcopy 2002, accessed online 19 March 2016.

⁴⁸ L H Evans, *A History of Concrete Road Bridges in New South Wales*, RTA, Sydney 1987, p. 31.

⁴⁹ *Main Roads Journal*, March 1965, p. 72.

bridge also required major changes to Nelligen’s road layout, with through-traffic from the Kings Highway no longer passing along Wharf Road, as well as the demolition of two buildings adjacent to the post office to enable an ‘at grade’ road between the highway and Braidwood Street⁵⁰. Despite this impact, the construction of the bridge appears to have been very welcome after 140 years of reliance on punts and ferries to negotiate the vagaries of nature and the formidable Clyde River. The regular ferry service over the Clyde River at Nelligen, which had begun in 1878 finally ceased operating on Saturday 12 December 1964 when the newly constructed road bridge on the Canberra to Batemans Bay road (Trunk Road No.51) was officially opened to traffic by the Hon P.D. Hill, MLA Deputy Premier and Minister for Local Government and Minister for Highways⁵¹.

The Nelligen Bridge was state of the art at the time of its design, with similar segmental, prestressed concrete bridges such as the Silverwater Bridge (1962) in Sydney and the Commonwealth Avenue Bridge (1963) in Canberra being world class examples of long span bridges utilising pre-stressed, pre-cast structural components that combined high strength with long spans⁵². The first bridge with a pre-stressed concrete superstructure built by DMR was at Bobbin Head in Ku-ring-gai Chase and was opened on 1 September 1956⁵³. The combined factors of standardisation and mass production, better quality control and greater speed of erection all gave pre-cast bridges a significant economic advantage over traditional cast-in-place construction methods. Advances in pre-stressing concrete also allowed for more elegant profiles and shapes as well as longer spans.⁵⁴

In 1964, “Nelligenites celebrated the opening of their bridge as an epic occasion, but with no more E.S. Clemenson pay packets, gatherings in the Steampacket were all too often farewell send-offs”⁵⁵.

The opening of the bridge saw the acceleration of another period of decline for the town as its population shrunk to below 200. The Steampacket Hotel relocated to the west side of the highway in 1967, the school was closed in 1970 and the post office closed in 1982⁵⁶. However, Nelligen is again growing as tourism, retirees and workers who commute to Batemans Bay are attracted by a charm the town has never lost. A general store has opened, the old post office now operates as a bed and breakfast and a new café and takeaway is located on the corner of Braidwood and Wharf Roads on the site of the first Steampacket Hotel (and has just reopened, after having burnt to the ground in 2010).

The existing bridge is now fifty-one years old, and when it was built it was estimated that it would carry 475 vehicles a day, raising to 1000 in the summer holiday months⁵⁷. In 2008 the average daily traffic volume was 3667 vehicles and traffic numbers continue to rise⁵⁸. Routine inspections have for some time been monitoring the condition of the supporting concrete pillars under the bridge, and while the bridge has been assessed as still being able to safely carry normal traffic loads, the supporting bridge piers 1 – 4 have deteriorated to the point where Roads and Maritime have had to consider either to repair or to replace the bridge. Investigations have concluded that despite the additional costs associated with building a new bridge, the benefits from improved road safety, greater improvements in the lifespan of the bridge, and reduced heavy vehicle operating costs, outweighed the costs. It is proposed that a new bridge be built on

⁵⁰ Giovanelli, P. *op.cit.* p. 7.

⁵¹ *Ibid.*

⁵² Lacey, G. et.al, ‘State of the Art for long span Prestressed Concrete Bridges of Segmental Construction’, *PIC Journal* September 1971, p. 54.

⁵³ Kass, *op.cit.*, p. 52.

⁵⁴ Lacey, *op.cit.*, p. 74.

⁵⁵ Moore, D. *op.cit.*

⁵⁶ Giovanelli, P. *op.cit.* p. 9.

⁵⁷ *Main Roads Journal*, March 1965, p. 72.

⁵⁸ Roads and Maritime *Nelligen Bridge Preferred Route* Report 2015, p. 2.

the north (upstream) side of the existing bridge and that once the new bridge is open the 1964 bridge be demolished.

3.3 Historical themes

A historical theme is a research tool, which can be used at the national, state or local level to aid in the identification, assessment, interpretation and management of heritage places (AHC 2001:1). Nine national historical themes have been identified by the Australian Heritage Commission (AHC now Australian Heritage Council). The Heritage Division, OEH has identified thirty-five historical themes for understanding the heritage of NSW. The development of the study area is broadly reflective of the history of the local region, and can be assessed in the context of the broader historic themes defined by the Heritage Division, OEH and AHC. In accordance with the Heritage Division and AHC framework of historic themes, the themes in **Table 3.1** are relevant to the study area and locality.

Table 3.1 Historical themes relevant to the study area and locality

National	National sub themes	NSW themes	Local themes	Examples
Peopling Australia	Living as Australia’s earliest inhabitants Adapting to diverse environments	Aboriginal contact Exploration Convicts Migration	Activities and processes associated with the exploration and settlement and the impact of such movements.	First contact with shipwreck survivors, Traditional land uses, firestick farming, conflict over resources Sightings by Cook, official exploration parties, surveys As part of exploring expeditions as crews of ships and assigned to free settlers clearing timber, and agriculture First settlers, gold rush, free selectors post WWII

National	National sub themes	NSW themes	Local themes	Examples
Developing local, regional and national economies	<p>Surveying the continent</p> <p>Utilising the natural resources</p> <p>Developing primary production</p> <p>Moving goods and people</p> <p>Altering the environment</p> <p>Developing an Australian engineering and construction industry</p>	<p>Agriculture</p> <p>Pastoralism</p> <p>Commerce</p> <p>Environment and cultural landscape</p> <p>Mining</p> <p>Transport</p>	<p>Activities relating to the cultivation and rearing of plant and animal species, land grants and free selection</p> <p>Activities relating to buying and selling and exchanging goods and services.</p> <p>Activities associated with the interactions between humans, societies and the shaping of their physical surroundings.</p> <p>Activities associated with the identification, extraction, processing and distribution of mineral ores.</p> <p>Activities associated with moving goods and people from one place to another.</p>	<p>Rural landscapes, land clearing subsistence farming, potatoes farmsteads, cattle leases, dairying,</p> <p>Banks, shops, shipping, carting and inns.</p> <p>National parks and nature reserves.</p> <p>Alluvial gold mining 1850s , reef mining 1880s, stone quarry for local use and export (Sydney Harbour Bridge)</p> <p>Roads, ferries punts, and bridge. Slow to develop. Absence of railway. Importance of road transport – hors. Bullock, motor vehicles.</p>
Building settlements, town and cities	<p>Making settlements to serve rural Australia</p> <p>Supplying urban services</p>	Town, suburbs and villages.	Activities associated with creating, planning and managing urban functions, landscapes and lifestyles.	Nelligen town plan c1853, streetscape, village reserves and concentration of urban functions
Working	Working in harsh conditions			Construction of Clyde Mountain Road
Developing Australians cultural life	Leisure	Activities associated with recreation and relaxation	Beach culture	Caravan Parks, tourist brochures

4.0 Site inspection

The inspection of the study area was undertaken on 9 and 10 March 2016 by Umwelt heritage specialist Verena Mauldon. A vehicle inspection of the entire study area was undertaken with pedestrian inspection of listed sites (discussed in detail in **Section 5.2**) and the one identified non-listed potential site within the study area; the Nelligen Bridge (refer to **Plate 4.1** and discussion in **Section 5.3**).

The 137 kilometre Kings Highway starts at the Australian Capital Territory (ACT) border and joins the Princes Highway at Batemans Bay. It is the key east-west route connecting Eurobodalla shire with major inter and intra state routes. It is strategically important to the area as an east/west freight route; supporting regional tourism and as a link facilitating regional service provision for residents. The Kings Highway Nelligen Bridge is located towards the eastern end of the Kings Highway and crosses the Clyde River at Nelligen.

Construction of the bridge required major changes to Nelligen’s road layout and the approaches required major earthworks. The bridge is made of reinforced and pre-stressed concrete. It is made up of pre-stressed, pre-cast structural components. It has seven spans and is a total of 827 feet in length. The deck is 24 feet wide between the kerbs. It carries a single lane of traffic in each direction and has a five-foot wide pedestrian access on the southern (downstream) side.

The Nelligen Bridge was built in 1964 and is fifty-two years old. When it was built it was estimated that it would carry 475 vehicles a day, rising to 1000 in the summer holiday months⁵⁹. In 2008 the average annual daily traffic volume was 3667 vehicles and traffic numbers continue to rise⁶⁰. The traffic counts undertaken in February 2016 for the environmental assessment, showed traffic volumes had increased to an average daily traffic of 4501 vehicles per day⁶¹. Under this increased traffic load routine monitoring of the condition of bridge has identified “significant deterioration in most of the reinforced concrete bridge piles” with particular deterioration to piers one to four⁶². In 2014 the bridge was assessed as having an expected remaining operational life of between five and ten years⁶³. Roads and Maritime have had to consider either to repair or to replace the bridge.

Table 4.1 Potential heritage item with no statutory listing within the study area

Item name	Location	Impact of project
The Nelligen Bridge	Kings Highway, Nelligen	Demolition

⁵⁹ *Main Roads Journal*, March 1965, p. 72.

⁶⁰ Roads and Maritime, *Nelligen Bridge Preferred Route Report*, 2015, p. 2.

⁶¹ T Webster, *Personal Communication*, 20 June 2016.

⁶² Roads and Maritime, *Nelligen Bridge Preferred Route Report*, 2015, p. 3.

⁶³ Roads and Maritime, *Preliminary Environmental Assessment*, 2014, p. 1.



Plate 4.1

Potential heritage item in the study area: Nelligen Bridge. VM 9.3.16

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5.0 Heritage significance assessment

An assessment of significance is undertaken to explain why a particular place is important and to enable appropriate site management to be determined.

The Burra Charter defines cultural significance as meaning ‘aesthetic, historic, scientific or social value for past, present or future generations’ (Article 1.2). The Burra Charter was written to explain the basic principles and procedures to be followed in looking after important places. Cultural significance is defined as being present in the ‘fabric, setting, use, associations, meanings, records, related places and related objects’. The fabric of a place refers to its physical material and can include built elements, sub surface remains and natural material (Australia ICOMOS 2013).

5.1 Basis of assessment

The *NSW Heritage Manual* (1996), published by the then NSW Heritage Office and Department of Urban Affairs and Planning, sets out a detailed process for conducting assessments of heritage significance. The manual provides a set of specific criteria for assessing the significance of an item, including guidelines for inclusion and exclusion.

The seven criteria defined by the Heritage Division, OEH, and used by the NSW Heritage Council as an assessment format within NSW are outlined below:

Criterion (a) An item is important in the course, or pattern, of NSW’s cultural or natural history

Criterion (b) An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW’s cultural or natural history

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

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

Criterion (e) An item has potential to yield information that will contribute to an understanding of NSW’s cultural or natural history

Criterion (f) An item possesses uncommon, rare or endangered aspects of NSW’s cultural or natural history

Criterion (g) An item is important in demonstrating the principal characteristics of a class of NSW’s cultural or natural places or cultural or natural environments.

The following significance assessment is based upon the above seven criteria.

As a component of the holistic concept of significance, archaeological significance has been described as a measure by which a site may contribute knowledge, not available from other sources, to current research themes in historical archaeology and related disciplines (Bickford and Sullivan, 1984 19-26). Archaeology is concerned with material evidence and the archaeological record may provide information not available from other sources. An archaeological study focuses on the identification and interpretation of material evidence to explain how and where people lived, what they did and the events that influenced their lives.

Considerations material to the study of the archaeology include:

- Whether a site, or the fabric contained within a site, contributes knowledge or has the potential to do so. If it does, the availability of comparative sites and the extent of the historical record should be considered in assessing the strategies appropriate for the management of the site
- The degree and level at which material evidence contributes knowledge in terms of ‘current research themes in historical archaeology and related disciplines’.

Following Bickford and Sullivan’s work on archaeological significance (1984, 19-26) the following questions can be used as a guide to assessing the significance of an archaeological site:

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


The Heritage Council of NSW recognises four levels of significance for heritage in NSW: Local, State, National and World. An item has local heritage significance when it is important to the local area. An item has state heritage significance when it is important in NSW. Most heritage in NSW is of local significance.


5.2 Statements of significance for statutorily listed items within study area


Statutorily listed items within the study area are identified in **Sections 2.2** and **2.3** and **Figure 2.1**. These items have been subject to previous assessments to determine heritage significance. Listed items within the study area and their previously assessed significance are discussed in **Table 5.1**.



Nelligen Village was historically a busy trade and commercial centre, linking the coast to the Southern Tablelands. European explorers and settlers reached the Batemans Bay area in the early nineteenth century, and progressive land grants were provided for the development of timber and fishing industries. Gold mining also took place in forested areas surrounding Nelligen village in the late 1800s. The historic legacy of Nelligen means the village contains a number of surviving historic buildings that define its character, eight of which are within the proposal study area.


Table 5.1 Summary of significance and history of listed heritage sites within study area from NSW State Heritage Inventory.


Item name, location and image from site visit	Statement of Heritage significance	History
<p>Mechanics' Institute (1198) 3 Braidwood Street, Lot 5, Section 5, DP 758762</p> 	<p>Local: The Hall has high-level local historic significance for its role in assisting in the development of early twentieth century Nelligen (along with its neighbouring Post Office). Aesthetically the building is unremarkable except for the very delicately designed barge boards and the unique solution to ventilating the under floor area at the rear of the building, where some weatherboarding has either been deleted or removed. For these reasons the building has local aesthetic significance. Socially and scientifically the building has local significance, socially for its central role in the lives of Nelligen residents for almost a century and scientifically because of its potential to reveal information which could contribute to an understanding of the social activity of the residents of a small South Coast town at the beginning of the twentieth century and of how that activity has changed over the succeeding ninety years.</p>	<p>The Mechanics' Institute (now Nelligen Hall) was built on land adjacent to the Post Office in 1903. The building has a raised stage at one end and a kitchen at the end furthest from the street. The remainder of the space is an open hall. The front section has been used in the past as a library and reading room, lighting being provided by coal oil mantle lamps mounted on the walls. The building sits on gum piers set directly into the ground. The frame is of hardwood with tallow wood flooring; the flooring timbers were milled on the North Coast of NSW and shipped to Sydney before being transported to Nelligen by Steampacket. The outer walls are of 4 inch pitsawn boards and the roof is galvanised iron sheeting. The Hall (as it is now called) has been used in the past for fund raising for charities, travelling movies, bush dances etc. The Buffalo's Lodge and Manchester Unity used the Hall as a meeting place. From June 1961 until December of that year, the Hall was used as an annexe to the Public School. Nowadays the Hall is used for a regular "Free Exchange" library, for craft days, and as a meeting place for the Hall Committee and Nelligen Progress Association as well as general community and social activities. A Committee of local residents and three Trustees manage the Hall.</p>


Item name, location and image from site visit	Statement of Heritage significance	History
<p>Former Post Office (1199) 7 Braidwood Street, Lot 1, DP 519317</p> 	<p>Local: The former Post Office building has high-level local historic significance for its part in bringing formalised postal services to Nelligen and in assisting in the development of the town around the turn of the century. Aesthetically the building is representative of type at a regional level. Socially the building remains important to generations of local residents for its part in providing social focus to the town over a period of almost a century. Scientifically the building and grounds have potential to provide evidence of the form of the provision of postal services in rural South Coast towns at the turn of the century and of the changes in the scale and type of those functions throughout the twentieth century.</p>	<p>The Post Office (officially called Nelligen Point) was originally opened in a local store in 1858. During 1890 a site of 1 rood and 10 perches (about 0.17 hectares) was reserved for an official Post Office by the NSW Lands Department but the new building was not completed until 26 May 1900. In 1907 because of declining revenue, the Post Office was reduced to non-official status. In 1957 1360 pounds was spent on the building but in March 1962 the question of disposing of the building was raised. In the same year a portion of the site was sold to the Department of Main Roads for a new highway and the toilet and clotheslines were re-positioned. A new entrance gate from Braidwood Street was provided. The Post Office operated as a lease of private premises from late in 1971 until it ceased operations in March 1982. The Eldridges, owners of the building since 1980, set up a gallery in the old Post Office room. In 1983 the owners received the Minister's approval to retain the "Nelligen Post Office" sign.</p>

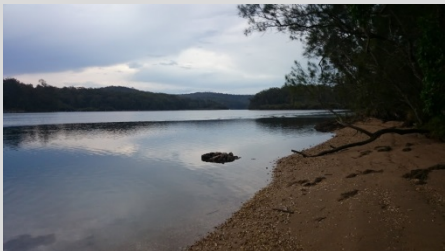
Item name, location and image from site visit	Statement of Heritage significance	History
<p>Former Schoolhouse (1200) 11 Braidwood Street, Lot 6, Section 4, DP 758762</p> 	<p>Local: Historically the school building has local significance for its role in the expansion of public school education in the Nelligen area in the early twentieth century. Socially the building has played a significant role in the education of generations of local Nelligen area residents. Scientifically the building and site are significant for their potential to reveal information about the form and scale of education in a small South Coast town in the early twentieth century and potentially also about the occupancy of the site prior to the turn of the century. As such they have local scientific significance. The teacher's residence has a high degree of integrity, especially when viewed from the street, and this is apparent when the building is compared with the historic 1923 plans. Some side fencing is also part of the historic significant fabric.</p>	<p>The existing residence occupies the site of the original school and residence erected in 1869. The current dwelling dates from 1923 at which time the area of the School grounds was a small half-acre. In 1939 the School was granted temporary permission to use the adjacent Police Station paddock as a play area. School attendances dropped until 1960 when an influx of people brought about the appointment of an Assistant Teacher in 1961. The increased enrolment necessitated the temporary renting of a hall, but in December 1961 it was decided to transfer the closed Stony Creek School building to the Nelligen site. The new building (extended to 24 x 18' feet) and a new storeroom were opened in June 1962. Nelligen School was closed permanently in 1970 when Batemans Bay took over the Primary School functions and Moruya the High School function. At the time, the School consisted of a teacher's residence with one large and one small schoolroom. The teacher's residence is now private residence.</p>

Item name, location and image from site visit	Statement of Heritage significance	History
<p>Former Police Station (1201)</p> <p>13 Braidwood Street, Lot 5, Section 4, DP 758762</p> 	<p>Local: Historically the Police Station has high-level local significance, dating from the second phase of development of Nelligen and its police presence. Socially the building is strongly identified with the town's early hub and as such has local significance to generations of Nelligen residents. Scientifically it has local significance for its potential to reveal information about the scale and form of policing in a small South Coast town in the early twentieth century.</p>	<p>The first Watch House was built on the site in 1860. The Court House adjacent was built in 1893 and the current Police Station building was erected in 1920/21 to replace the old Watch House demolished in that year. George McRae was the responsible Government Architect. The Police Station was closed for a time in 1939 and then closed permanently in May 1940 at which time its functions were relocated to Batemans Bay. It is currently a private residence.</p>
<p>Former Court House (1202)</p> <p>15 Braidwood Street, Lot 2, Section 4, DP 758762</p> 	<p>Local: Historically the building is identified with the second phase of development of Nelligen in the late nineteenth century. As such it has local historic significance. Aesthetically the building demonstrates a strongly unified composition and attention to detail consistent with its role as an important public building. It has local aesthetic significance. Socially the building is strongly identified with the public life of Nelligen over the past century and has local social significance. Scientifically it is significant locally for its potential to reveal information which could contribute to a better understanding of the scale and functions of small South Coast Court Houses in the late nineteenth and early twentieth centuries.</p>	<p>On 31 July 1860 Nelligen's first Watchhouse was completed. In 1893 the current "Court House" building was built to the designs of Government Architect Walter Vernon, by local builder John McDonald. The Watchhouse was removed in 1920 when a new Police Station was built adjacent to the Court House. The Court House ceased to function circa 1940.</p> <p>The first Church of England, St Nicholas', was built in 1875 on the allotment to the west of St Josephs. It was a wooden building that was first mentioned in the Diocesan list in 1878 (Wyatt). Later reports had noted that new hangings, kneelers, carpets etc were provided in 1934. The Church of England cemetery was in the church grounds. The church was destroyed by bushfires in 1939 and the Courthouse was bought by the Church of England in 1954/55 and adapted to become the next St Nicholas Anglican Church. Services were still being conducted and the building actively used for community purposes in 2011.</p>

Item name, location and image from site visit	Statement of Heritage significance	History
<p>Bushrangers tree (1300) Braidwood St, 7011, DP 1055178</p> 	<p>Local: High heritage value for its presumed historic associations. The tree has very high interpretation potential.</p>	<p>It is maintained that the Clark brothers were chained to this tree while awaiting transportation to Darlinghurst, Sydney for trial for multiple murders. They were convicted of murdering troopers and subsequently executed on 25 June 1867. The tree died about 1990 and had to be pruned for safety reasons.</p>

Item name, location and image from site visit	Statement of Heritage significance	History
<p>Ferry Masters residence (1315) Thule Road, Lot 64, DP 755933</p> 	<p>Local: Significantly associated with this very important ferry crossing from the time of its construction until cessation of ferry services in 1965. The location of the dwelling close to the Thule Street loading ramp is also of significance. The significant part of the site is the house and the front portion of the allotment between the King's Highway and the former ferry ramp.</p>	<p>A ferry service across the Clyde at Nelligen was commenced by a Mr Templeman in 1878, allowing a much shorter route to Bateman's Bay than via Runnyford. The cottage was built in 1926 in response to the increasing volume of traffic and by one account was relocated from further up the Clyde River and reconstructed by "Snow" Wallace. This may have been associated with a commitment from the State Government to general upgrading of transport on the south coast and would correspond with an increase in the population of Queanbeyan and Canberra, and greater use of the south coast for recreation. The first to occupy it were the Daniels family. In 1954 some 7,500 vehicles were ferried across the Clyde at Nelligen. By 1963 about 30,000 vehicles crossed the Clyde, however the limited ferry size led to extensive queues during holiday times, in spite of there being two ferries operating by that time.</p>

Item name, location and image from site visit	Statement of Heritage significance	History
<p>Soldiers Memorial (1197) (REN: 19195) Braidwood Street, Lot 4, Section 4, DP 758762</p> 	<p>Local: Historically the Memorial has local significance for identifying the involvement of the town in the major twentieth century wars. Aesthetically it is representative of type at a regional level. Socially it has high-level significance as a symbol to generations of local residents of the locals who were lost to Nelligen as a result of their involvement in major conflict. The memorial has local significance for its potential to reveal information about the social profile of the town at specific points in time and about the impact of the wars on the structure and functioning of the town. The significant part of the site is the front portion of the allotment where the memorial is located.</p> <p>NB: The REN listing allocates this site a national significance status; however the REN is a non-statutory list and has no legal implications.</p>	<p>The monument is about 5 metres high and is an excellent example of one of the most commonly used forms at both State and National levels. It used to consist of a marble figure of a soldier standing on a pedestal of Bowral trachyte supported by a sandstone base of sawn slabs. The soldier is currently missing (March 2016). These slabs are post World War 2 and have been inserted to allow the inclusion of inscriptions commemorating that and subsequent events. The statue of a soldier with head bowed, slouch hat and reversed rifle in both hands, is in the official military stance of remembrance. Facing south, the dedication inscription records its erection by the people of Nelligen and District in honour of the men who enlisted in the Australian Imperial Force for the Great War 1914-19; the dead are recorded alphabetically, with ranks and medals. First War names are incised and gilded on the polished surfaces of the pedestal, later additions having been added to the base on bronze plaques. Instead of a step, the lower part of the square base displays a sloping rendered surface on which a small plaque, with inscription, reinforces the earlier dedication. The location adjacent to the main traffic route is appropriate to its function as a district memorial and consistent with prevailing practice. A minor street diverges from Braidwood Street above the memorial. This leads to the first schoolhouse, the former police warehouse and the former courthouse. A flagpole identifies the memorial's location, which looks out over the river below.</p>

Item name, location and image from site visit	Statement of Heritage significance	History
<p data-bbox="208 316 611 379">Clyde River, Kings Highway, NSW, Australia (REN 19406)</p> 	<p data-bbox="723 316 1249 772">National: (non-statutory listing.) The Clyde River and the immediate environs are significant in the evolution of Australia’s flora and faunas. As a complete eco system relatively untouched by human habitation and as a clean waterway, the Clyde River and its tributaries are integral to the maintenance of a variety of ecosystems and hydrological processes in this part of the south east of NSW. The Clyde is 110kms long from the source in the Morton National Park to the mouth east of Batemans Bay at the Tollgate Islands.</p>	<p data-bbox="1292 316 2047 1315">The Clyde River is located within the tribal country of the Yuin (Djuin) people. The Yuin people are the traditional owners of the land and water of the far south coast from Twofold Bay to the Shoalhaven River at Nowra and inland to the Great Dividing Range at Goulburn. They have lived on this land since The Dreaming and evolved a rich culture and economy. The Clyde River, particularly the shellfish beds, provided an important and abundant food source and the adjacent forests were a source of roots and tubers, food animals and materials. Archaeological evidence of campsites and middens indicates that Aboriginal use of the area was concentrated along the foreshores of the river where there are freshwater soaks and flat areas suitable for camping. There are seven recorded Aboriginal heritage sites within one kilometre of Nelligen village. Cook did not discover the Clyde River, which remained unexplored until 1821, when it was named and navigated by Lieutenant Robert Johnson, on board the cutter Snapper. Johnson, Australian born but educated in Britain, appears to have seen a parallel with the Scottish river Clyde. In 1822 Alexander Berry, who was already involved in cutting and shipping timber from the Illawarra district, took part in a second expedition to the area. Berry describes the expedition: “...we proceeded direct to Bateman Bay, which we entered in the evening, and came to an anchor late at night under Snapper Island. Next day I proceeded up the river Clyde, in company with Lieutenant Johnston, its discoverer”. Since that time the Clyde has been in constant use as a transport route for economic and recreational purposes.</p>

Discussion of potential heritage impacts of listed heritage sites within study area

Visual impact

Views and setting of Nelligen Village have already been substantially impacted by the construction of the existing non-listed bridge and its demolition will alter the landscape setting in ways that will alter an established relationship by increasing the distance between the items and the bridge. By removing the non-heritage listed existing bridge, a modern accretion, it can be argued that the immediate setting of the west Nelligen heritage sites is being enhanced as the place is being returned to a known earlier state (Burra Charter Article 1.7). The concept bridge drawings indicate that a functional bridge is planned to replace the current bridge (refer to **Appendix 2** for the Concept Sketch). The proposed design of the bridge does not differ markedly in mass and scale from the existing bridge and as such the project will have no negative impact on the heritage values of the sites in the study area.

Archaeological impact

Demolition and road resurfacing will take place within the road reserve, an area that has already been subject to significant disturbance and major earthworks. Modification to the rear of on the Former Schoolhouse (1200); the Former Police Station (1201); the Soldiers Memorial (1197) and the Ferry Masters Residence (1315) involves rock cutting. It is assessed that the Project will be impacting on areas of low archaeological potential, with a low potential for discovering any relics that are likely to have state or local heritage significance.

Vibration impact

The construction of the improved access road from the Kings Highway into Wharf Road and the demolition of the old bridge and the subsequent site remediation raise the potential for vibration impacts to heritage buildings and structures including: general intensity construction activities, rock cutting and piling⁶⁴. The new access road into the town at Wharf Street sits largely within the existing Wharf Road reserve adjacent to the former Post Office. Road improvement work in this area will not directly impact on the heritage values of the Former Post Office. However the construction of this new access road, the demolition of the old bridge and associated site remediation, as well as the rock cutting and pile driving associated with the construction of the new bridge are all activities that raise the potential for indirect vibration impacts on the heritage buildings and structures in the vicinity of these construction and demolition activities.

Vibrations from general construction activities, such as heavy vehicles and excavation as well as piling have the theoretical potential to inflict indirect impacts on damage/disturb a heritage items. Annex A of the British Standard BS7385:Part2:1993 for the Evaluation and Measurement for Vibration in Buildings states that:

...the age and existing condition of a building are factors to consider in assessing the tolerance to vibration. If a building is in a very unstable state, then it will tend to be more vulnerable to the possibility of damage arising from vibration or any other ground-borne disturbance (British Standard BS7385:7).

The British Standard BS7385 further discusses that 'a building of historical value should not (unless it is structurally unsound) be assumed to be more sensitive' (British Standard BS7385:5). The German standard DIN 4150: Part 3 Effects of Vibration on Structures includes a building type 'Particularly Sensitive' which is assigned vibration limits of 3 mm/s (at less than 10Hz), 3 to 8 mm/s (at 10-50Hz) and 8 to 10 mm/s (at 50-100Hz). Swiss Standard SN640 312:1978 also includes a 'Particularly Sensitive' structural type which is assigned vibration limits of 3 mm/s (at 10 to 30Hz) and 3 to 5 mm/s (at 30 to 60 Hz).

⁶⁴ Roads and Maritime, *Proposed Construction Methodology of Current Nelligen Bridge Concept*, 2016, p.1.

Australian Standard AS 2187.2-2006 Explosives—Storage and use Part 2: Use of explosives no longer references ‘sensitive or heritage structure’. The previous AS 2187.2-1993 indicated a conservative vibration level of 5 mm/s should be assigned to ‘sensitive or heritage structures’. In the absence of a current Australian Standard which refers to structural vibration in buildings or heritage structures specifically, or any building specific assessment of the relevant sites/items considered in this report, a conservative peak particle velocity limit of 5 mm/s is considered to be appropriate when assessing the heritage items discussed in this report.

The Noise and Vibration Assessment prepared for Roads and Maritime by GHD evaluates the vibratory impacts of this project. It recommends that Roads and Maritime manage the potential risk of damage caused by construction vibration by monitoring the impact of vibration on heritage structures within 35 metres of the proposed construction and demolition activities. The Soldiers Memorial (1197) is located 37m from the works so according to the GHD specifications it should not be adversely impacted unless vibration monitoring at adjacent sites indicates higher than expected vibration levels. The former Courthouse (1202) is 45 metres from the works and therefore does not require condition reports or monitoring unless vibration monitoring at adjacent sites indicates higher than expected vibration levels. The former Schoolhouse (1200); the former Police Station (1201); the former Post Office (1199), the Mechanics Institute (1198) and the Bushrangers Tree (1300) are all located within the range where they are potentially subject to indirect vibration impacts. These heritage structures will need to be managed through the commission of condition reports and vibration monitoring for the duration of construction and demolition activities in accordance with the detailed recommendations of the GHD report.

Impacts due to modifications to rear curtilage

Although the study area encroaches on the curtilage of all the above listed items, there will be no direct physical impacts to the items, as works will be contained within the existing road corridor except for at five sites, which are subjected to minor modifications to the rear curtilage.

These are the former Schoolhouse (1200); the former Police Station (1201); the former Courthouse (1202); the Soldiers Memorial (1197) and the Ferry Masters Residence (1315). Minimal works for drainage and maintenance access are required and although current designs may be subject to final construction detail revisions, these will be contained within a five metre buffer zone at the rear of these sites. At each of these sites the heritage item is located towards the front of the block and although the back half of the curtilage falls within the study area, the heritage structure itself is more than thirty five to fifty metres removed from the proposed works and is located outside the study area boundary. There is the potential for indirect impact due to high vibration activities such as rock cutting and pile driving which should be evaluated by the Noise and Vibration Impact Assessment as discussed above. The property adjustments should be completed in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*, and these negotiations should include consultation regarding appropriate reinstatement of vegetation and landscaping to ensure that there will be minimal or no visual intrusion as a result of these works. The works will have no negative impact on the heritage values of these sites.

Table 5.2 Summary of significance, potential impacts of the proposal and recommendations for listed heritage sites within study area

Significance	Physical impacts	Visual impacts	Recommendations
<p>Local items: Former Schoolhouse (1200); Former Police Station (1201; Former Courthouse (1202); Soldiers Memorial (1197) and the Ferry Masters Residence (1315)</p>	<p>Minimal impact works for drainage and maintenance access to property boundaries. Impacts will be contained within a five metre buffer zone. This will be located at the rear of soldiers memorial site, and will be at least 37m from the location of the memorial. Road construction will be 32m, but GHD report assessed as being unlikely to cause structural damage. Reassess if vibration monitoring at adjacent sites indicates vibrations exceeding expectations.</p> <p>The Kings Highway currently bisects the Ferry Masters Residents site. The heritage residence is located on the western side of the highway, and the proposed works are located over 70 metres away on the eastern side of the Kings Highway. No direct impact assessed.</p>	<p>Possible minor impact to rear setting of each item. The key views are to and from the Soldiers Memorial and the town and river. Works will not impact on views to or from the Soldiers Memorial or views to or from the Former Schoolhouse (1200); Former Police Station (1201; Former Courthouse (1202) or the Ferry Masters Residence</p>	<p>All property adjustments should be completed in accordance with the <i>Land Acquisition (Just Terms Compensation) Act 1991</i>. These negotiations should include consultation regarding appropriate reinstatement of vegetation and landscaping</p> <p>Fence works during construction to ensure heritage items are isolated from construction</p> <p>Assess vegetation for any significant plantings and avoid disruption if possible. Reinstatement appropriate vegetation</p>

Significance	Physical impacts	Visual impacts	Recommendations
<p>Local items: Former Schoolhouse (1200); Former Police Station (1201; Former Post Office (1199); the Mechanics Institute (1198); the Bushrangers Tree (1300)</p>	<p>Possible vibration impacts</p>	<p>The demolition of the non-listed existing bridge will alter the landscape setting between the new bridge and the heritage items by increasing the distance between the items and the bridge. This will remove a modern accretion from the immediate setting and return the place to a known former state (Burra Charter article 1.7)</p> <p>The proposed design of the bridge is further removed from the heritage sites and does not differ markedly in mass and scale from the existing bridge and as such the project will have no negative impact on the heritage values of the sites in the study area</p>	<p>Fence works during construction to ensure heritage items are isolated from construction</p> <p>Prior to proposed works, Roads and Maritime shall implement the recommendations of the GHS Noise and Vibration Assessment to manage the heritage items that may be affected by vibratory impacts.</p> <p>The Bushrangers Tree, although not mentioned in the GHD report, should also be considered individually as the tree is dead and it is not known if it is adequately supported by its' root system. Earthworks in the area associated with "demolishing abutment and reshaping area"⁶⁵ may cause the tree to fall. It is recommended that an experienced arborist be consulted to discuss supports/propping for the tree during high vibration activities</p>

⁶⁵ Ibid., p.4.

5.3 Significance assessment of the potential heritage items/sites within study area

5.3.1 Discussion of significance assessment Nelligen Bridge

The potential heritage item/site Nelligen Bridge does not meet any of the criteria for local heritage significance as set out by the Heritage Division, OEH (see **Table 5.3**).

While the bridge is a built element of significance in the wider Nelligen Village landscape, as an individual item it is not considered likely to provide any information not already known from the historical record. It is not thought to have any archaeological or technical research potential. Cultural significance is located not in the fabric and design of the bridge itself but in the history of the location as a crossing point for the Clyde River since the opening of the Clyde Mountain Road in 1856. The demolition the bridge may cause some discussion within the Nelligen community, as per criterion (d) of the significance assessment, however Roads and Maritime appear to have been managing this through effective community consultation.

Mitigation: The proposal will have a direct physical impact on item. In mitigation of this it is recommended that the cultural significance of the item should be explained by interpretation (Article 25 Burra Charter).

Table 5.3 Nelligen Bridge - significance assessment

Criterion	Nelligen Bridge site statement of significance
(a) an item is important in the course, or pattern, of NSW's cultural or natural history	This item is important to the course, or pattern, of NSW's cultural or natural history however that importance is located not in the fabric and design of the bridge itself but in the history of the location of Nelligen as a crossing point for the Clyde River since the opening of the Clyde Mountain Road in 1856.
(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	The bridge has no 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. This criterion is not relevant to the item.
(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW	The bridge does not demonstrate aesthetic characteristics and/or a high degree of creative or technical achievement. This criterion is not relevant to the item.
(d) an item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons	The bridge may have strong contemporary social links. There are potentially members of the community still residing in the local area to whom the bridge could have significance.
(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history	The bridge does not have the potential to yield information that will contribute to an understanding of NSW's cultural or natural history. This criterion is not relevant to the item.

Criterion	Nelligen Bridge site statement of significance
(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history	This bridge does not possess uncommon, rare or endangered aspects of NSW's cultural or natural history. This criterion is not relevant to the item.
(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	This bridge does not possess uncommon, rare or endangered aspects of NSW's cultural or natural history. This criterion is not relevant to the item.

6.0 Statement of Heritage Impact

The potential heritage impact of the proposal on the study area as a whole is assessed below using the guidelines provided in the NSW Heritage Manual document *Statements of Heritage Impact*.

What aspects of the development proposal respect or enhance the heritage significance of the study area?

The proposal will result in the realignment of the road approaches and the construction of a new bridge that will increase the distance of the bridge and traffic from the study area. While the design is not yet finalised, the proposal respects heritage values and minimises impacts by removing construction works, compounds, stockpiles etc some distance to the north of the Nelligen Village Heritage Precinct.

The proposal also requires the demolition of the existing non-listed bridge and if these demolition works proceed within the current road reserve, the proposal would not have a negative impact. The impact on the views and setting of the listed heritage items will in fact be a positive one as the proposal will increase the distance from the new bridge approaches as the current bridge passes only ten metres to the rear of three heritage-listed properties at its closest point.

What aspects of the proposal could have a detrimental impact on the heritage significance of the study area?

Views and setting of Nelligen Village have already been substantially impacted by the construction of the existing non-listed bridge and the demolition of this existing bridge will alter the landscape setting between the new bridge and the heritage items by increasing the distance between the items and the bridge. This will remove a modern accretion from the immediate setting and return the place to a known former state (Burra Charter article 1.7)

The concept bridge drawings indicate that a functional bridge is planned to replace the current bridge. The proposed design of the bridge does not differ markedly in mass and scale from the existing bridge and as such the project will have no negative impact on the heritage values of the sites in the study area.

There are two key elements of the Project that have the potential to impact negatively on the heritage sites within the study area. These fall into the categories of 1) vibration impacts and 2) modification to the rear curtilage of five sites. The improved access road into the town at Wharf Street sits largely within the existing Wharf Road reserve adjacent to the former Post Office. Road improvement work in this area will not impact on the heritage values of the former Post Office. The construction of this improved access road, the demolition of the old bridge and associated site remediation, as well as the rock cutting and pile driving associated with the construction of the new bridge are all activities that do raise the potential for indirect vibration impacts on the heritage buildings and structures in the vicinity of these construction and demolition activities.

The Noise and Vibration Assessment prepared for Roads and Maritime by GHD evaluates the vibratory impacts of this project. It recommends that Roads and Maritime manage the potential risk of damage caused by construction vibration by monitoring the impact of vibration on heritage structures within 35 metres of the proposed construction and demolition activities. The former Schoolhouse (1200); the former Police Station (1201); the former Post Office (1199), the Mechanics Institute (1198) and the Bushrangers Tree (1300) are all located within the range where they are potentially subject to indirect vibration impacts. These heritage structures will need to be managed through the commission of condition reports and vibration monitoring for the duration of construction and demolition activities in accordance with the detailed recommendations of the GHD report.

Five sites are subjected to minor modifications to the rear curtilage. These are the former Schoolhouse (1200); the former Police Station (1201); the former Courthouse (1202); the Soldiers Memorial (1197) and the Ferry Masters Residence (1315). Minimal impact works will be contained within a five-metre buffer zone at the rear of these sites. At each of these sites the heritage item is located towards the front of the block and although the back half of the curtilage falls within the study area, the heritage structure itself is removed from the proposed works and is located outside the study area boundary. It is assessed that there will be minimal or no visual intrusion as a result of these works once site remediation has been implemented. It is assessed that the works will have no lasting negative visual impact on the heritage values of these sites.

Modification to the rear of former Schoolhouse (1200); the former Police Station (1201); the former Courthouse (1202); the Soldiers Memorial (1197) and the Ferry Masters Residence (1315) involves rock cutting at the rear of the sites in areas of low archaeological potential which are adjacent to previous road works dating to the construction of the present bridge. Bridge demolition and road resurfacing works will take place within the road reserve, an area that has already been subject to significant disturbance and major earthworks. It is therefore assessed that the Project will be impacting on areas of low archaeological potential, with a low potential for discovering any relics that are likely to have state or local heritage significance.

Have more sympathetic options been considered and discounted?

Roads and Maritime have investigated four options for the future of the Nelligen Bridge. These were: Option 1 - Repair existing bridge; Option Two - Repair and strengthen existing bridge; Option 3 New Bridge - Northern Option; Option Four – New Bridge Southern Option. After broad consultation Roads and Maritime have selected the option that involves relocating the road alignment and the new bridge to the north of the existing bridge location. The ‘Do Nothing Option’ was rejected as bridge failure is a possibility and would result in significant regional and local access restrictions.⁶⁶ The ‘Repair’ and ‘Repair and Strengthen existing bridge’ options were considered problematic as they: fail to address key safety issues on the approach curves; would not effectively address the crash rate; would not allow for Higher Mass Limit (HML) vehicles (Option 1 only) would not allow for separation of pedestrians from traffic.

Options 1 and 2 would involve changes to the bulk and scale of the pile caps of the current non-heritage listed bridge, and the repair works would require new piles⁶⁷ so the potential for indirect vibration impacts on the Bushrangers Tree (1300), the Mechanics Institute (1198) and the Former Post Office (1199) would need to be considered if this option were implemented. The ‘New Bridge –Southern Option’ (Option 4) was assessed as having the greatest environmental and heritage impact. This option involved the acquisition of five properties in east Nelligen and would have had impacts on heritage items in west Nelligen⁶⁸. The ‘New Bridge – Northern Option’ (Option 3) has been selected as the preferred option as it both minimises the impacts on residents and the heritage precinct of Nelligen Village while providing the required modern safety features: improved approach geometry; increased load rating for HML compliance; providing road shoulders and separation for pedestrians and traffic. This is the option that is most sympathetic to heritage values if the indirect impacts of vibration and minor modifications to the rear curtilage of the five identified sites are managed effectively.

Overall it is assessed that this proposal would not negatively impact on the heritage significance of the Nelligen heritage sites and is the most sympathetic option available that meets both the heritage and the safety requirements.

⁶⁶ Roads and Maritime, *Preliminary Environmental Investigation*, 2014, p.35.

⁶⁷ Roads and Maritime, *Preferred Option Report*, 2015, p.5.

⁶⁸ *Ibid*, p.7.

7.0 Recommendations

Based on the background research, a site inspection and review of relevant statutory obligations the following recommendations are made:

- All property adjustments shall be completed in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*. These negotiations should include consultation regarding appropriate reinstatement of vegetation or landscaping
- Roads and Maritime has engaged GHD to prepare a Noise and Vibration Assessment to evaluate the vibratory impacts of the project. It is recommended that Roads and Maritime implement the recommendations of this report to manage the potential risk of damage caused by construction vibration. This includes monitoring the impact of vibration on heritage structures within 35 metres of the proposed construction and demolition activities, in particular on the Former Schoolhouse (1200); the Former Police Station (1201); the Former Post Office (1199); the Mechanics Institute (1198) and the Bushrangers Tree (1300)
- Prior to proposed works, Roads and Maritime shall engage a suitable consultant to prepare condition reports for heritage items affected by vibratory activities, as identified by the Noise and Vibration Management Plan
- During the proposed works Roads and Maritime shall undertake vibration monitoring of identified heritage items potentially susceptible to indirect impact from proposed works. A qualified vibration consultant must undertake the monitoring. If damage risk to the heritage item is identified, vibratory activities are to be immediately halted and alternative work methods should be implemented so that vibration impacts are reduced to acceptable levels
- Remediation of the demolished bridge approaches should be effectively integrated within the landscape and Nelligen Village Development Control Plan (DCP). This should complement and add amenity to the adjacent open land, particularly at the western end where it will impact the Wharf Street Foreshore Park. Continued consultation with Eurobodalla Shire Council and local residents should be undertaken
- Physical impacts on the non-listed Nelligen Bridge cannot be avoided. There is currently interpretation of all previous river crossings on the site. It is recommended that interpretation be developed, in consultation with community and Eurobodalla Shire Council, to document the 1964 bridge and its former location
- No heritage related permits or approvals will be required for the proposal
- Site workers shall be briefed about the heritage status of all known items in the vicinity of works, including as part of any inductions undertaken prior to working on site. As part of this briefing, they should also be made aware of Section 139/146 provisions of the Heritage Act, archaeological 'relics' and the statutory obligations applying to their discovery
- In the unlikely event that unexpected archaeological remains or potential heritage items not identified as part of this report (including potential burials or human skeletal remains) are discovered during the project all works in the immediate area should cease and the Roads and Maritime Services' *Standard Management Procedure for Unexpected Heritage Items* should be followed.

8.0 References

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APPENDIX 1

Historical heritage database search
results

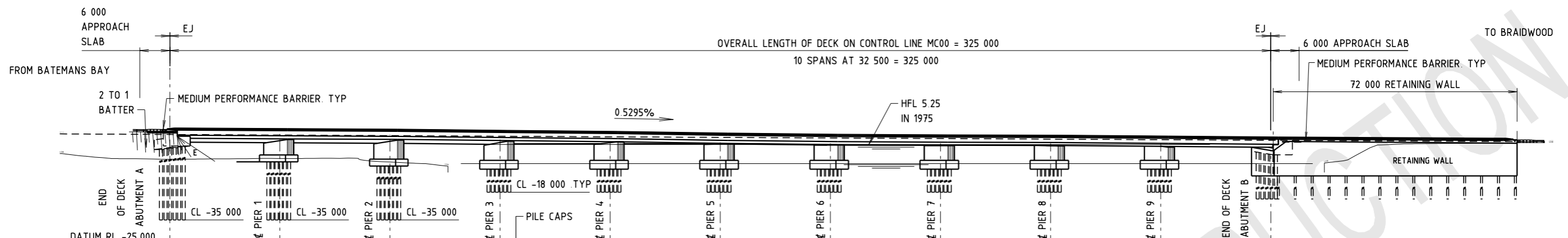
Historical heritage database search results

Eurobodalla Shire Council

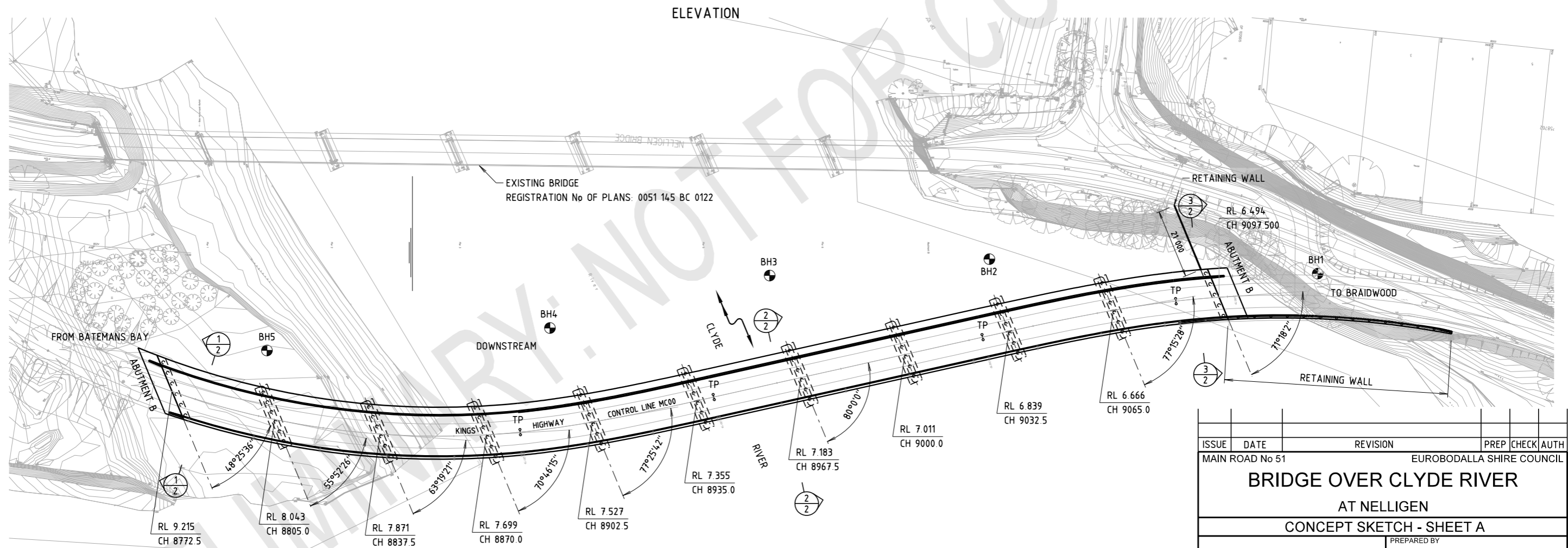
Nelligen	Bushranger's Tree	Braidwood Street	Lot 7011, DP 1055178	Local	I300
Nelligen	Soldiers Memorial	Braidwood Street	Lot 4, Section 4, DP 758762	Local	I197
Nelligen	Mechanics Institute	3 Braidwood Street	Lot 5, Section 5, DP 758762	Local	I198
Nelligen	Former Post Office	7 Braidwood Street	Lot 1, DP 519317	Local	I199
Nelligen	Former Schoolhouse	11 Braidwood Street	Lot 6, Section 4, DP 758762	Local	I200
Nelligen	Former Police Station	13 Braidwood Street	Lot 5, Section 4, DP 758762	Local	I201
Nelligen	Court House	15 Braidwood Street	Lot 2, Section 4, DP 758762	Local	I202
Nelligen	Nelligen Church of England Cemetery	28 Braidwood Street	Lot 11, DP 734504	Local	I269
Nelligen	Cemetery	Runnyford Road	Lots 2 and 7, DP 34654; Lot 84, DP 1140911	Local	I203
Nelligen	St Joseph's Roman Catholic Church	1 Runnyford Road	Lot 100, DP 736716	Local	I204
Nelligen	Ferry Master's Residence	Thule Road	Lot 64, DP 755933	Local	I315
Nelligen	Punt Loading Site	Thule Road	Reserve No 15646	Local	I276
Nelligen	Old Steam Packet Hotel	5-7 Wharf Street	Lots 12 and 13, Section 6, DP 758762	Local	I273



APPENDIX 2
Concept Sketches

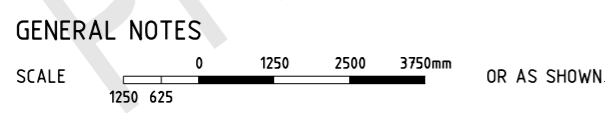
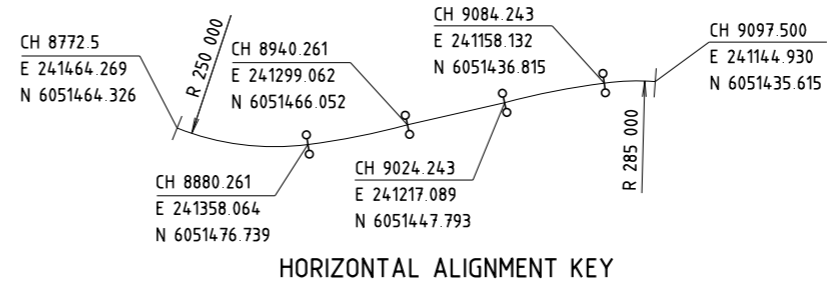


	CL -35 000	CL -35 000	CL -35 000	CL -18 000 .TYP	CL -18 000 .TYP	CL -18 000 .TYP	CL -18 000 .TYP	CL -18 000 .TYP	CL -18 000 .TYP	CL -18 000 .TYP	CL -18 000 .TYP	CL -18 000 .TYP	CL -18 000 .TYP
DATUM RL -25 000													
DESIGN SURFACE LEVEL ON CONTROL LINE MC00	9.215	8.043	7.871	7.699	7.527	7.355	7.183	7.011	6.839	6.666	6.494		
EXISTING SURFACE LEVEL ON CONTROL LINE MC00	0.896	1.739	0.081	-	-	-	-	-	-	-	-	-	-
CHAINAGE ON CONTROL LINE MC00	8772.500	8805.000	8837.500	8870.000	8902.500	8935.000	8967.500	9000.000	9032.500	9065.000	9097.500		



PLAN

BOREHOLE ID	EASTING	NORTHING
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BH2	241215.000	6051424.000
BH3	241282.000	6051429.000
BH4	241349.000	6051445.000
BH5	241435.275	6051451.838



ISSUE	DATE	REVISION	PREP	CHECK	AUTH

MAIN ROAD No 51 EUROBODALLA SHIRE COUNCIL

BRIDGE OVER CLYDE RIVER

AT NELLIGEN

CONCEPT SKETCH - SHEET A

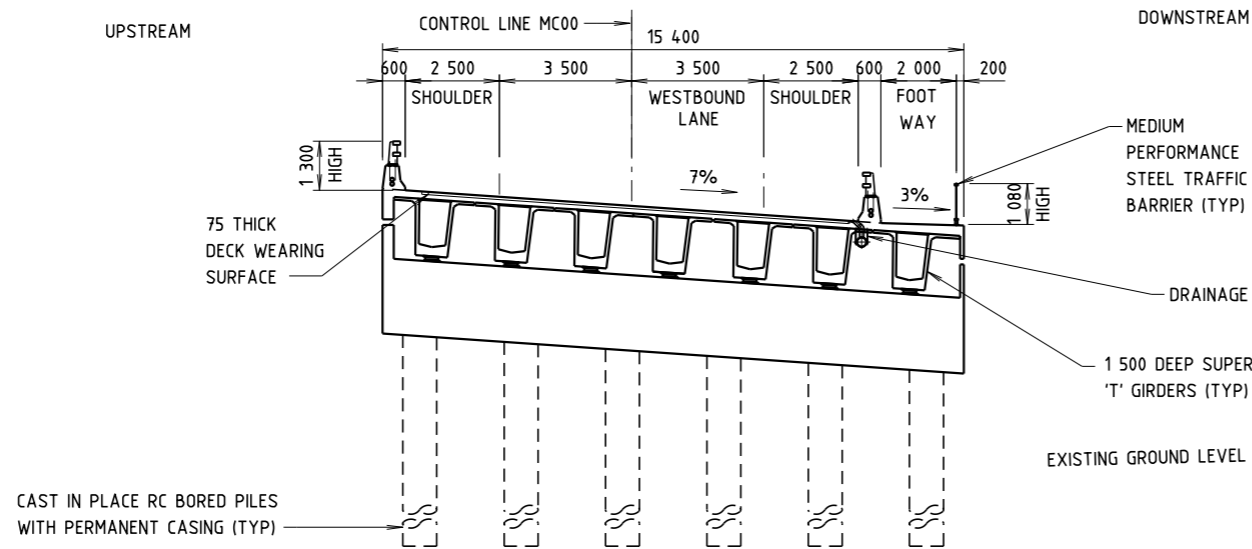
PREPARED BY
BRIDGE AND STRUCTURAL ENGINEERING BRANCH
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PHONE (02) 8837-0802 FACSIMILE (02) 8837-0055

CLIENT:
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90 CROWN STREET WOLLONGONG
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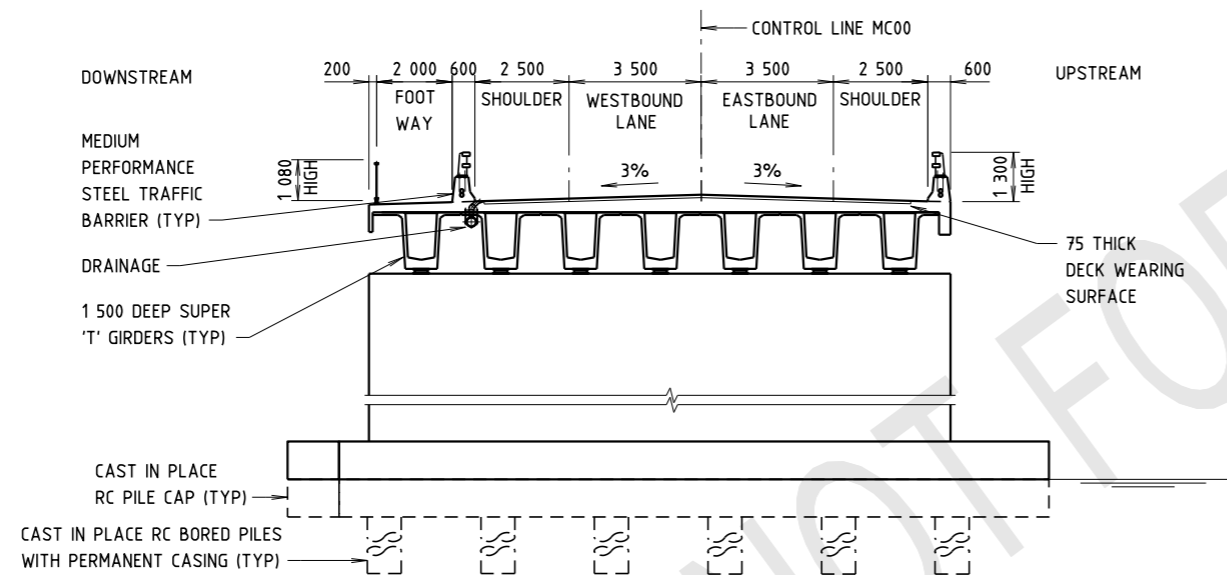
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		SHEET No 1 of 2 ISSUE
		1

SENIOR BRIDGE ENGINEER (NEW DESIGN) CAD No. KD977CSDA.dgn © COPYRIGHT ROADS AND MARITIME SERVICES 2012

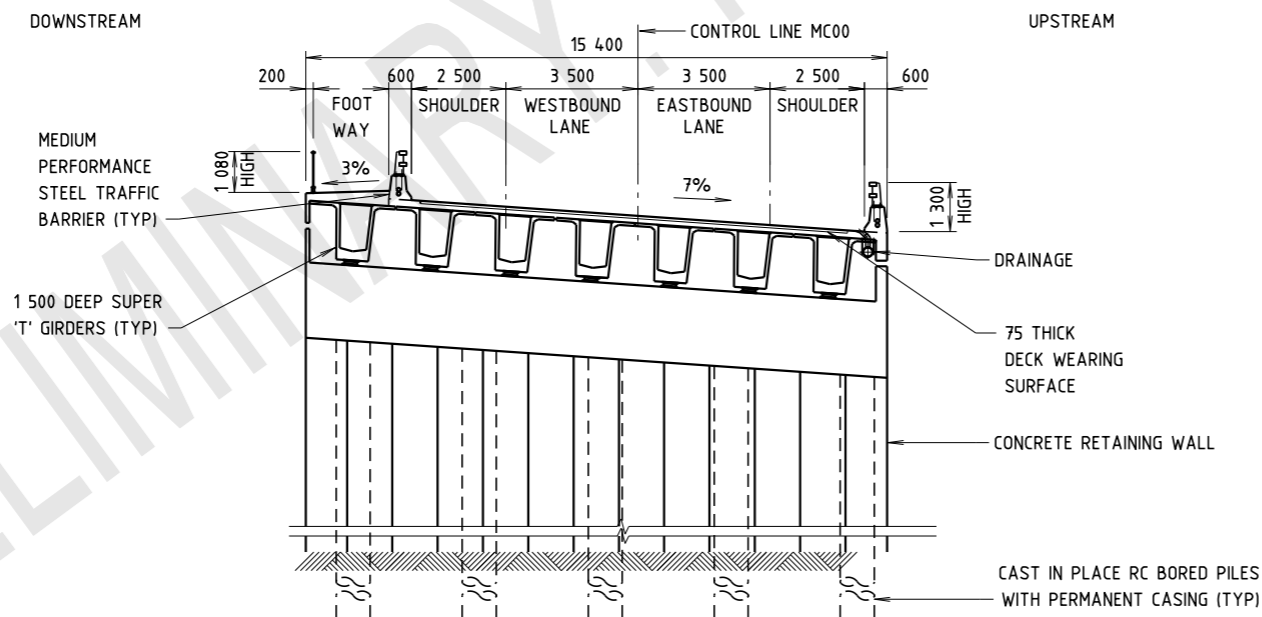
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SECTION 1
1



SECTION 2
1



SECTION 3
1

GENERAL NOTES

SCALE 1:0.5 OR AS SHOWN

FOR OTHER GENERAL NOTES RELATING TO THIS SHEET, SEE SHEET No 1.

ISSUE	DATE	REVISION	PREP	CHECK	AUTH
MAIN ROAD No 51			EUROBODALLA SHIRE COUNCIL		
BRIDGE OVER CLYDE RIVER					
AT NELLIGEN					
CONCEPT SKETCH - SHEET B					
Transport Roads & Maritime Services		PREPARED BY BRIDGE AND STRUCTURAL ENGINEERING BRANCH 110 GEORGE STREET PARRAMATTA NSW 2150 PHONE (02) 8837-0802 FACSIMILE (02) 8837-0055			
		CLIENT: SOUTHERN REGIONAL OFFICE - RSTM 90 CROWN STREET WOLLONGONG PHONE (02) 4221-2460 FACSIMILE (02) 4221-2777			
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