

3

ARCHAEOLOGICAL BACKGROUND

This section examines issues of Aboriginal heritage pertaining to the Project Area, and comprises the following:

- a review of relevant archaeological documentation on Aboriginal activity relevant to the Project Area;
- a database search for registered Aboriginal sites, and
- a site prediction model based on the research undertaken for the environmental and archaeological context of this study.

3.1

ETHNOHISTORY

The Ara:kwai people were the Aboriginal people who resided locally in the area now called Ballina. The Ara:kwai territorial boundaries extended from the northern bank of the Richmond River, west to Lismore, and north to Byron Bay. The different local groupings within Ara:kwai territory is still a matter of contention, however the area of water catchment relating to the Richmond River is generally referred to as Bundjalung speaking country.

The Bundjalung speaking area is diverse and contains many different dialects. Collins (1992: 18) asserts that the Bundjalung linguistic area was divided into around twenty separate dialectic territories with three main dialects spoken in the Byron Shire region.

According to Ainsworth, who resided on the Richmond River in 1847, the name Ballina was a corruption of the Aboriginal word Bullenah. Although contentious, Ainsworth asserted that the meaning of the word was connected with fish or oysters (Reed 1973:21).

Ainsworth (1922 in Collins 2003: 9) states that the rich marine resource base that stemmed from the Richmond River's estuarine and mangrove habitats spurred an increase in population in East and West Ballina, especially after 4000 years Before Present (BP). This was due to the relative stability of sea levels from 6000 BP onward. Richmond River tributaries also held significant marine resources.

Aboriginal people from Ballina assembled unitedly at Chickyaba on North Creek during the oyster season. To this day, oysters line the banks of North Creek and North Creek Canal. There was also intermixing of various groups as it is recorded that people from Lismore visited Ballina in Summer (Collins 2003: 9).

An early colonial resident of Tintenbar witnessed a Bora ceremony on the nearby flats of Emigrant Creek. This ceremony was attended by up to 300 Aboriginal people (Collins 2003: 9).

3.2

PREVIOUS ABORIGINAL HERITAGE INVESTIGATIONS

In order to evaluate the potential of the Project Area to contain Aboriginal sites consideration should be made of regional and local site patterning. This section provides a review of past research and examination of locally identified sites to form the basis of a site prediction model for the area.

It is not fully understood how the north coast of New South Wales was used by Aboriginal peoples and there are currently two models suggested, through archaeological evidence, for occupation of the north coast in remote time. The first

model suggests that inland groups of the Clarence River region moved to the coast in winter periods. While a second model states the coastal peoples were semi sedentary and that there was limited movement into the Upper Rivers region (Robins 2008a).

Archaeological evidence in the region shows that there was use of all the landscape elements by Aboriginal peoples. Table 3.1 lists several relevant archaeological studies conducted around the study area.

Table 3.1 *Archaeological Studies of the Local Region*

Author	Year	Findings
Starling	1974	Heritage assessment of Tallow Creek and Suffolk Park Burials. Burials in the area associated with middens and artefact scatters.
Collins, J. P.	1992	The study area covers the entire Byron Shire, incorporating Mullumbimby, Ewingsdale, Byron Bay, Skinners Shoot and Broken Head of the current Project Area. A comprehensive regional study of Aboriginal heritage in the Byron Shire. A regional study that created a predictive model for Aboriginal sites based on landforms in the Byron Shire.
Appleton	1992	Assessment of Byron Bay sand quarry, no Aboriginal sites located.
Collins, J.P.	1993	Aboriginal archaeological assessment of Lismore where levee system was proposed along the Wilson River and its tributary Leycester Creek. No sites recorded along the river bank, one artefact located 70 metres north of the levee corridor. Floodplain landscape where all the artefacts may be located subsurface but there are no surface indications. Monitoring of excavation works recommended.
Mills and Wilkinson	1994	The study area follows a proposed transmission line route from Lismore to Mullumbimby, through Dunoon. This transmission line follows a different route to the current Project Area. An archaeological desktop and selected site survey of the Lismore to Mullumbimby Transmission Line. Due to low ground surface visibility, further archaeological investigation was recommended, four Potential Archaeological Deposits (PADs) were identified, including test excavations on high ground on alluvial floodplains. A site prediction model created for the region suggested campsites within 500m of water courses.
Rich, E.	1994	Archaeological investigation of Angle Beach Estate - 40,000 shell and shell fragments recovered. 900 stone artefacts recovered including unmodified flakes, backed blades, cores, hammer stones, uni and bi-facially flaked pebble tools. The raw materials included chalcedony, chert and volcanic river pebbles. The findings of the excavation showed that the occupation was frequent in the area and that there were two main phases: c.100BP and c.530BP. From the stone tool technology there is indicated 2000yrs of occupation.
Byrne, D.	1996	The study area includes the Lismore substation, however then the line deviates toward Dunoon, instead of toward Alstonville. Survey for Aboriginal archaeological sites along a proposed 132kV transmission line from Lismore to Dunoon. Five new sites were recorded including, one scarred tree, two artefact scatters and two isolated artefacts. A program of monitoring construction was recommended.
Piper, A.	1997	The study area is located ten metres east of the current Project Area. An archaeological assessment of Cumbalum via Ballina. No sites recorded during survey.
Collins, J.P.	1998	Survey for proposed Pacific Highway realignment in Ballina. Emigrant Creek was surveyed and no sites were located along its banks. One Aboriginal artefact was located in a ploughed field. Three areas of PAD were identified, two areas of foot slope and a spur saddle.
Collins J.P. 2000 and Piper A.		Excavation of site 04-5-0094 was undertaken and it was determined that there was low level scatter across the sand rises in the area and that there was continuous occupation by Aboriginal peoples between Lennox Head and Byron Bay.

Author	Year	Findings
Davies, S.	2000	The study area is located adjacent to the transmission easement in Newrybar. An archaeological assessment of a proposed sand mining site at Lennox Head. Three Aboriginal archaeological sites were recorded in the study area. All three sites were isolated stone artefacts made from chert.
Collins, J.P.	2001	The study area is located in Broken Head approximately one kilometre east of the current study area. An Aboriginal archaeological assessment of a proposed subdivision at Broken Head, Byron Shire. No new Aboriginal archaeological sites were recorded. A program of monitoring ground disturbance was recommended for the development.
Piper, A. and Collins, J.	2001	Located approximately 5 kms east of the current study area. An archaeological investigation of Lot 400 and Lot 426 Manly Street, Ballina. Sub-surface testing revealed three stone artefacts and a shell midden at a distance of 500 metres from North Creek, Ballina. The shell midden site was determined to have low scientific value. Recommendations included monitoring for potential burials and S90 consent for midden site Manly St 2.
Collins, J.	2003	The study area is approximately 1.5 kms south of the proposed transmission line upgrade. An archaeological survey for the replacement of bridges over Maguires and Emigrant Creeks, Teven Road, Ballina. No new sites were recorded. Archaeological sensitivity was low to negligible due to land fill on the banks of Emigrant Creek, and poorly drained banks of Maguires Creek.
Robins, R.	2007	Aboriginal archaeological assessment of South Ballina sand quarry. No new sites recorded and previously recorded sites not found within area, considered that the early recording of the sites may put them outside the study area.
Robins, R.	2008a	Aboriginal archaeological assessment of Lennox Head, for the Pacific Pines Estate development. This is an updated report from the 1993 Piper report on the same property. No new sites identified recommendation that monitoring be undertaken by the LALC.
Robins, R.	2008b	Aboriginal archaeological assessment of the Byron Bay Sewerage Treatment Plant. No sites recorded in the study area, but community concern expressed that burial present as they are known to occur widely over the Suffolk Park and Tallow Beach.

3.3

AHIMS REGISTER SEARCH

The Register of Aboriginal sites kept by the Department of Environment and Climate Change (DECC) (National Parks and Wildlife Service) is the main source of information regarding Aboriginal sites in New South Wales. The Aboriginal Heritage Information Management System (AHIMS) Register of the DECC was searched for sites within the Project Area (refer to *Annex D* for Aboriginal archaeological site types).

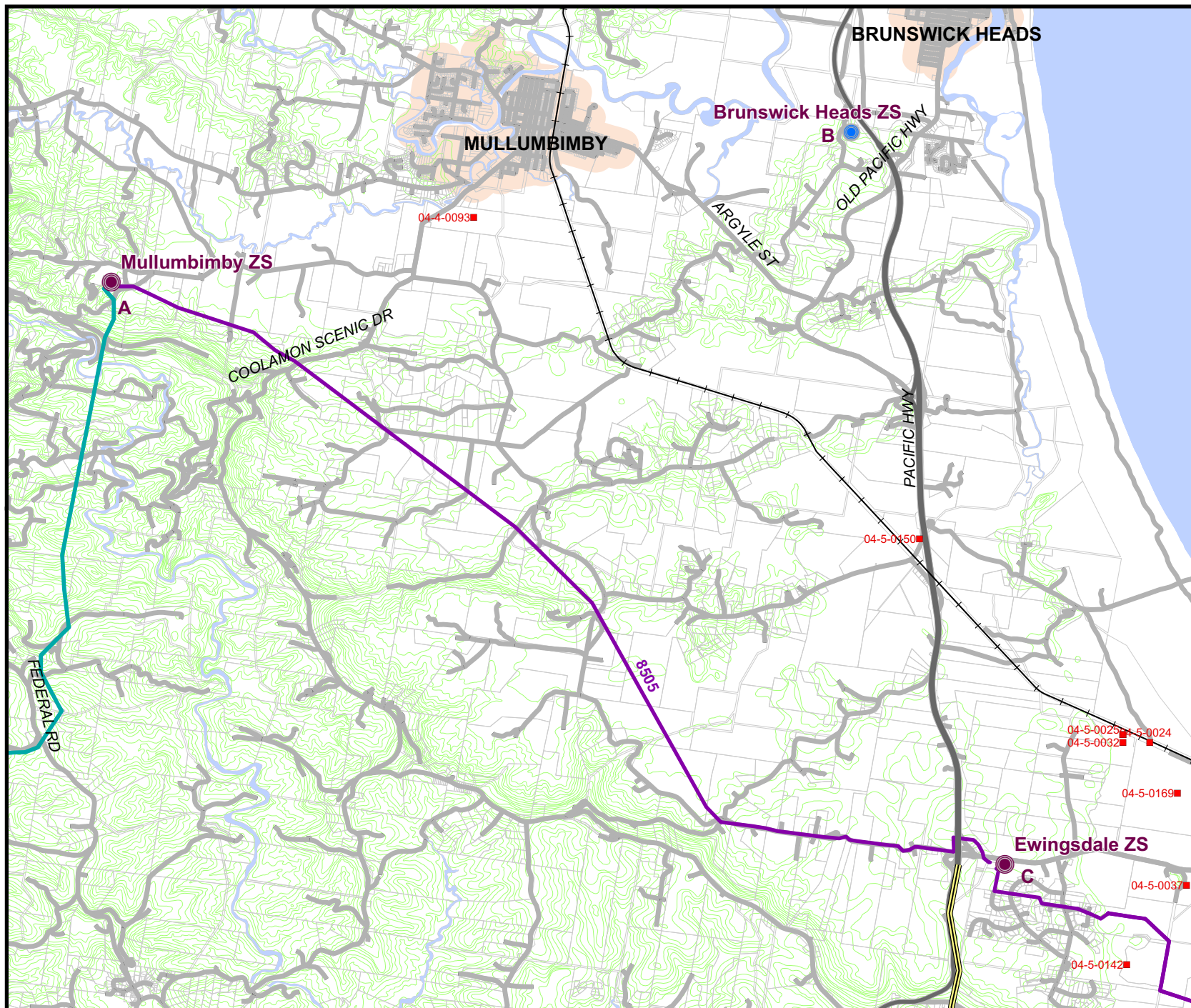
A total of 171 Aboriginal archaeological sites have previously been recorded within a five kilometre radius of the Project Area. No previously recorded Aboriginal archaeological sites have been located within the Project Area. Most of the previously recorded sites within a 5 kilometre radius are located along the coast and coastal lowlands near Byron Bay, Suffolk Park, Lennox Head, Skennars Head, Broken Head and Ballina. The inland areas and volcanic plateaus that make up parts of the region termed the 'Big Scrub' have relatively few sites recorded in comparative terms. The AHIMS sites within a 5 kilometre radius of the Project Area are illustrated on *Figures 3.1 to 3.6*.

The low number of archaeological sites in the 'Big Scrub' may be due to prior disturbance to the region. Intense vegetation clearance, the channelling of swamps and watercourses and the extensive use of the area by European peoples since the early 1840s for pastoral and agricultural activities has seen the landscape dramatically transformed. This has in no doubt diminished the likelihood of finding Aboriginal

archaeological sites within the 'Big Scrub' area.

Within recent decades, the coastal regions surrounding the Project Area have seen intense development which has generated many archaeological surveys. Development has not been as intensive in the 'Big Scrub' and therefore has reduced the amount of archaeological surveys generated. Site distribution patterns will be affected by the amount of archaeological investigation an area receives and therefore may also explain the lack of previously recorded sites in the 'Big Scrub' region.

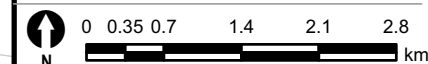
Overall the most common site type is artefact scatters or isolated artefacts and middens. Other site types found throughout the Project Area include burials, ceremonial sites, dreaming sites, Potential Archaeological Deposits (PADs), hearths, scarred trees and habitation sites.



- Legend**
- Existing Substation
 - Proposed Substation
 - AHIMS Record
 - Pacific Highway Upgrade
 - Highway
 - Casino-Murwillumbah Railway
 - Existing 66kV
 - Roadway
 - Contours
 - Cadastral Boundaries
 - Water Course
 - Built-up Area

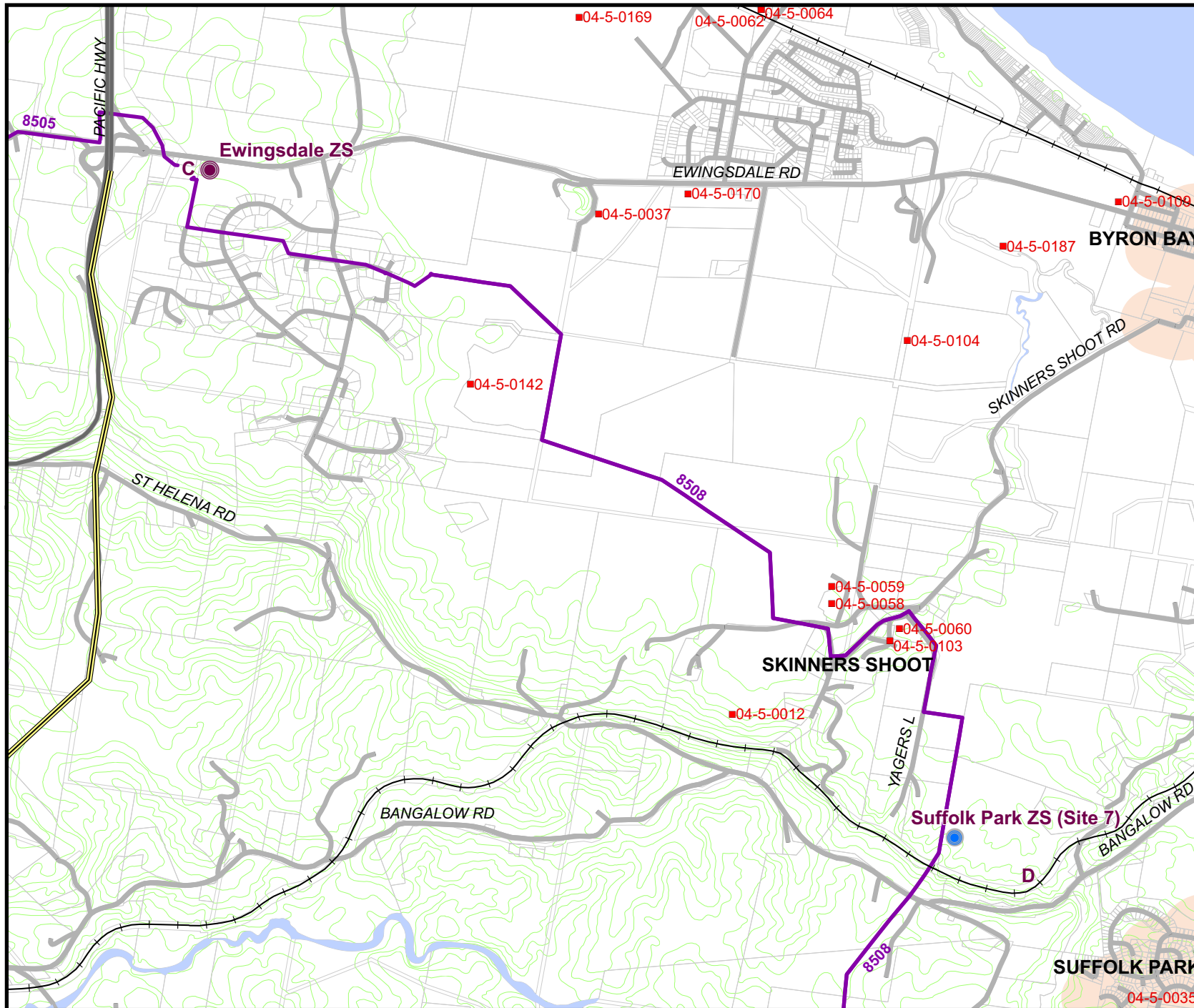
Figure 3.1
Mullumbimby to Ewingsdale
NSW DEC AHIMS Records

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Project:	Lismore to Mullumbimby Upgrade		
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Date:	10/09/2008	Drawing size:	A4
Drawn by:	TH	Reviewed by:	MC
Source:	LPI 2007		
Scale:	Refer Scale Bar		



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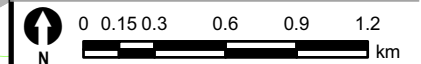




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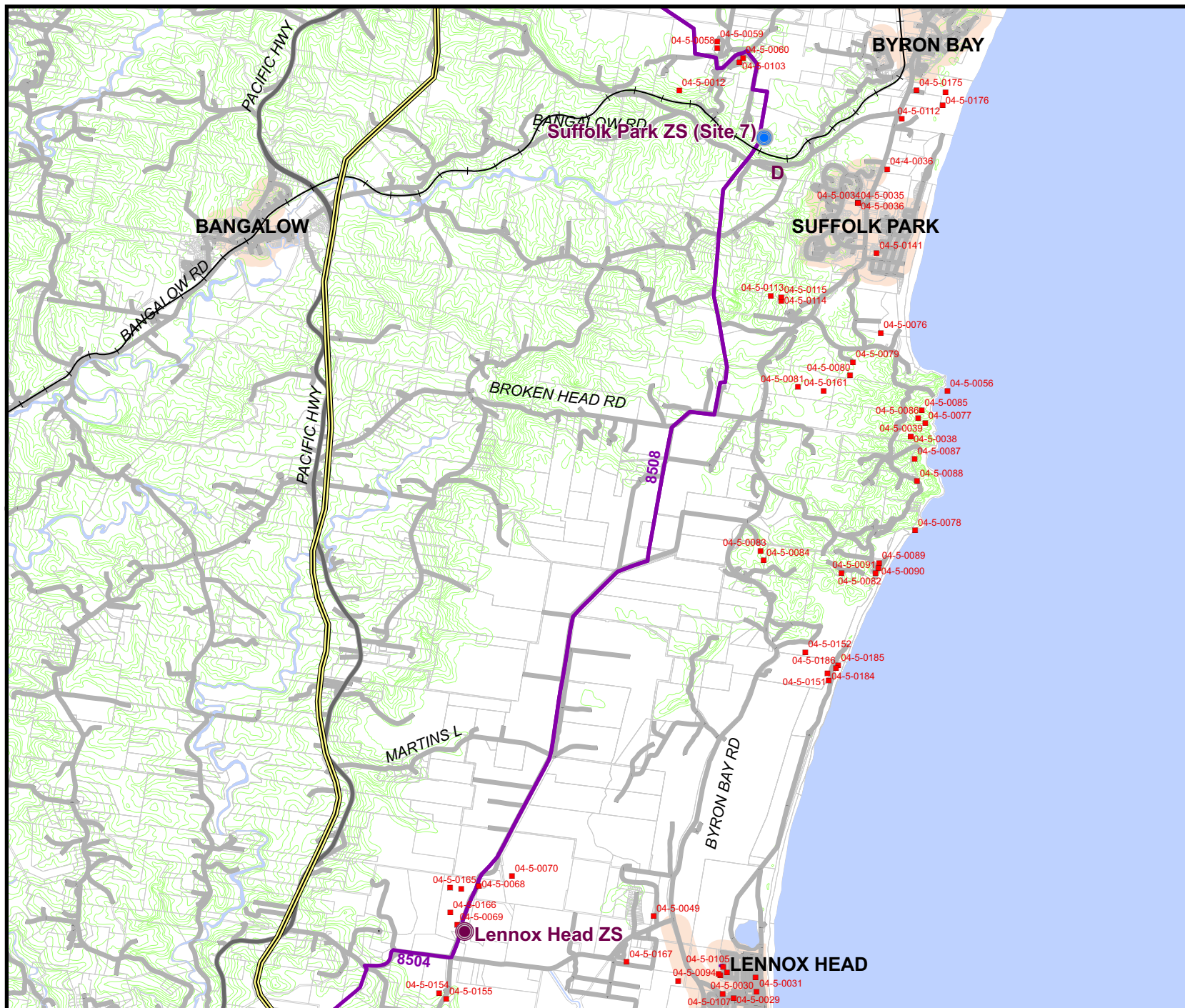
Figure 3.2
Ewingsdale to Suffolk Park
NSW DEC AHIMS Records

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Project:	Lismore to Mullumbimby Upgrade		
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Date:	10/09/2008	Drawing size:	A4
Drawn by:	TH	Reviewed by:	MC
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Scale:	Refer Scale Bar		



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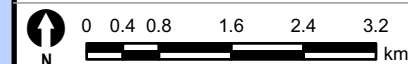
Legend

- Substation
- Proposed substation
- AHIMS Record
- Pacific Highway Upgrade
- Highway
- Roadway
- Casino-Murwillumbah Railway
- Existing 66kV
- Contours
- Cadastral boundaries
- Water Course
- Built-up Area

Figure 3.3

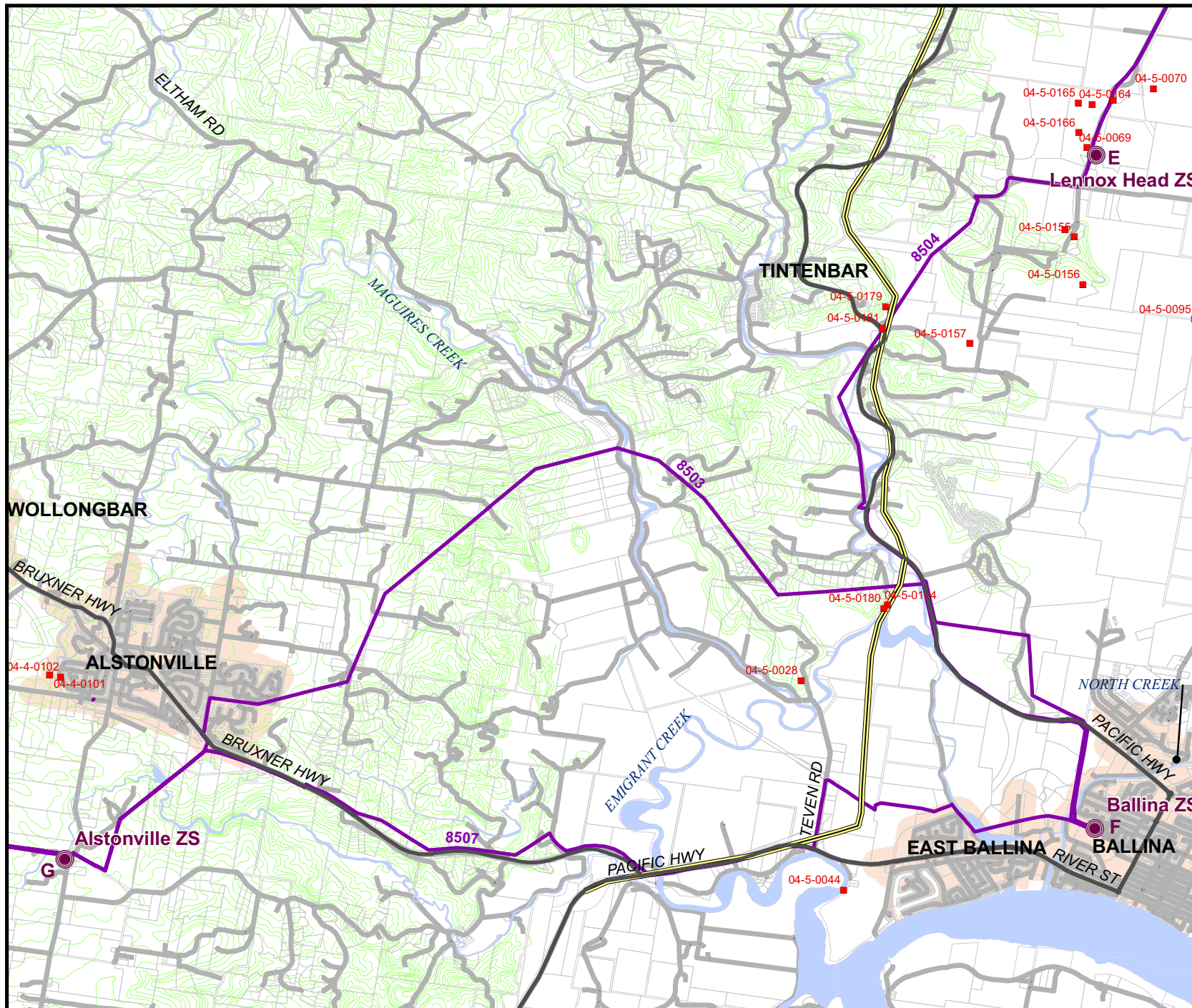
Suffolk Park to Lennox Head DECC AHIMS Records

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Project:	Lismore to Mullumbimby Upgrade		
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Date:	10/09/2008	Drawing size:	A4
Drawn by:	TH	Reviewed by:	MC
Source:	LPI 2007		
Scale:	Refer Scale Bar		



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Legend

- Existing Substation
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- Existing 66kV
- Water Course
- Roadway
- Cadastral Boundaries
- Contours
- Built-up Area

Figure 3.4

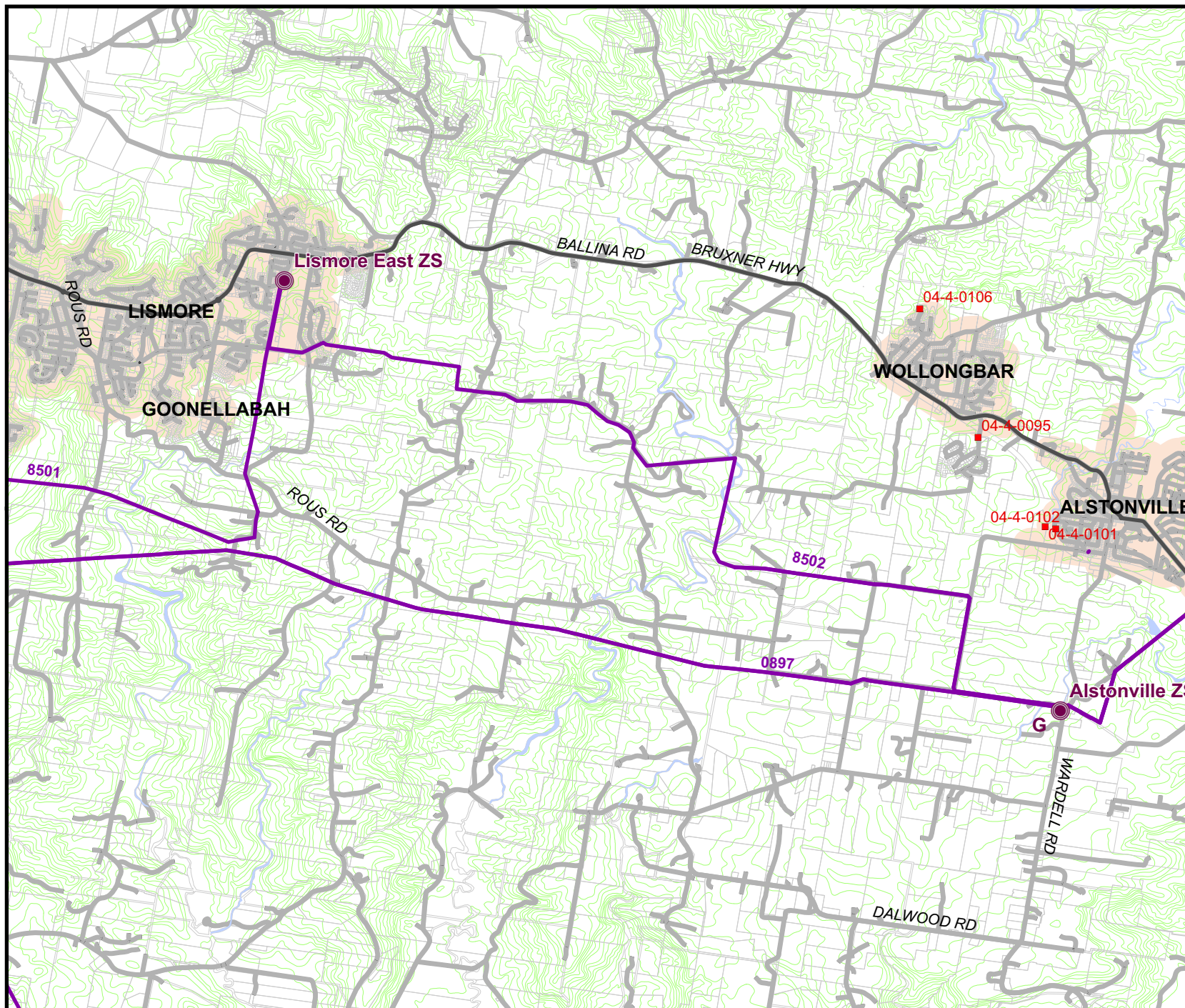
Lennox Head to Alstonville NSW DEC AHIMS Records

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Project:	Lismore to Mullumbimby Upgrade		
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Date:	10/09/2008	Drawing size:	A4
Drawn by:	TH	Reviewed by:	MC
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Scale:	Refer Scale Bar		



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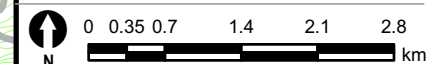




- Legend**
- Existing Substation
 - AHIMS Record
 - Highway
 - Roadway
 - Existing 66kV
 - Contours
 - Watercourse
 - Built-up Area

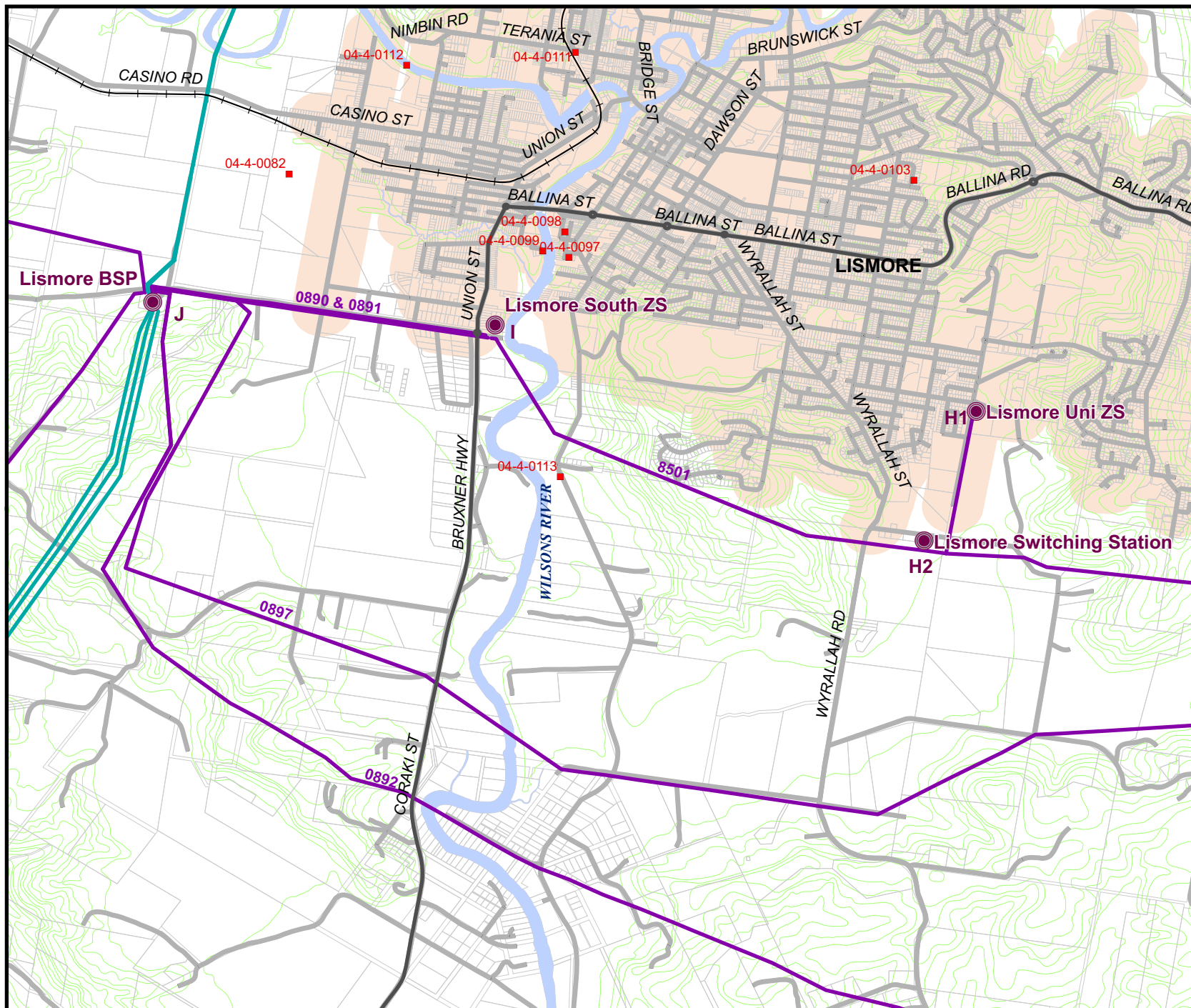
Figure 3.5
Alstonville to East Lismore
NSW DEC AHIMS Records

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Project:	Lismore to Mullumbimby Upgrade
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Suffix No:	A0
Date:	10/09/2008
Drawing size:	A4
Drawn by:	TH
Reviewed by:	MC
Source:	LPI 2007
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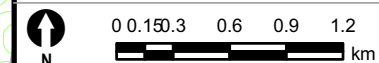




- Legend**
- Existing Substation
 - AHIMS Record
 - Highway
 - Casino-Murwillumbah Railway
 - Existing 132kV
 - Existing 66kV
 - Water Course
 - Roadway
 - Contours
 - Built-up Area
 - Cadastral boundaries

Figure 3.6
Lismore University to Lismore BSP
NSW DEC AHIMS Records

Client:	Country Energy		
Project:	Lismore to Mullumbimby Upgrade		
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Date:	10/09/2008	Drawing size:	A4
Drawn by:	TH	Reviewed by:	MC
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A listing of the site types in each locality is as follows:

A - Mullumbimby: One Aboriginal archaeological site has been previously recorded in the Mullumbimby area. This site was an artefact scatter found in a highly disturbed local park.

B – Brunswick Heads: One Aboriginal archaeological site has been recorded near Brunswick heads on coastal sand plains. This site is a burial.

C – Ewingsdale: Aboriginal archaeological sites previously found in the Ewingsdale area include swamp land middens. A burial and stone arrangement has also been found in the region.

D - Skinners Shoot: The swamp lands and sandy soils of the Skinners Shoot area have produced numerous Aboriginal archaeological sites including swamp middens, artefact scatters and burials. Areas of high ground near swamp lands have the potential to contain archaeological sites.

E – Tintenbar: Archaeological sites recorded in the Tintenbar vicinity include artefact scatters, bora rings, ceremonial grounds and burials. Many of these sites have been located on high ground of remnant dune systems. Sites have been recorded within 50 metres of the transmission line along Emigrant Creek and on the Newrybar flood plains.

F – Ballina: Aboriginal archaeological sites in and around Ballina are primarily located in coastal and estuarine areas. Sites types have included coastal and estuarine middens (primarily oyster shell), artefact scatters and burials. Sites have been found on Emigrant and North Creeks.

G - Alstonville: Aboriginal archaeological sites previously recorded in the vicinity of Alstonville have consisted of artefact scatters. Sites have been recorded along Maguires Creek.

J and I – Lismore: Aboriginal archaeological sites previously recorded in the Lismore area have included historic Aboriginal settlements associated with the Aborigines Protection Board, habitation structures, flora resource areas, artefact scatters and middens along the Wilson River, places of ceremonial importance, and places traditionally known as dangerous places.

3.4

PREDICTIVE MODEL

From the analysis of site types previously recorded in a five kilometre radius of the Project Area and previously undertaken archaeological studies, the following site prediction model has been developed to determine the potential for particular Aboriginal archaeology to be found in the Project Area.

- living places and campsites are located within 500 metres of major watercourses;
- areas of high ground have the potential to yield artefact scatters near flood plains and swamp land regions;
- spurs and ridgelines have the potential to yield artefact scatters from open campsites;
- middens have the potential to be found on river banks, particularly when close to estuarine environments;
- quarries have the potential to be found in areas where rock outcrops are present in the landscape; and
- burials may be located in sandy locations, particularly on sandy coastal plains. .