

# ARDILL PAYNE & PARTNERS

Civil & Structural Engineers – Project Managers – Town Planners – Surveyors



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## PRELIMINARY CONTAMINATED SITE INVESTIGATION

Submission to Ballina Shire Council

BALLINA HEIGHTS ESTATE  
Lot 302 DP 1147087 & Lot 316 DP 1148856,  
Pacific Highway, Cumbalum

for:  
Vixsun Pty Ltd & Catholic Church

September 2010

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1 EXECUTIVE SUMMARY

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Ardill Payne and Partners (APP) has carried out Preliminary Contaminated Site Investigation for the site filling works and residential subdivisions of Lot 302 DP1147087, Lot 316 DP 1148856, Lot 1 DP 1077982 and Lot 2 DP 788088, Pacific Highway, Cumbalum.

The findings of the desktop site history review indicate that the site was historically used for cattle grazing, pig rearing, cane cultivation, cropping of vegetables, and rural residential. No pesticide or herbicide chemicals were used on the agricultural crops.

The site is not listed as a contaminated site or potentially contaminating activity on the NSW DECCW Contaminated Sites Register or Protection of the Environment Operations (POEO) Register. Three Areas of Environmental Concern were identified for the site, including the former agricultural areas, cattle tick dip site and proposed cut and fill areas.

Topography buffers and the distances from the proposed urban residential development eliminated the dip site from further investigation.

The possibility of the proposed development areas being affected by cane cultivation was considered unlikely due to pesticide application techniques preventing upslope contamination, and presence of fill material on flat areas.

Roads and civil infrastructure will be constructed over the former potato growing area, with a small area of overlap from five residential lots. Given the short period of vegetable cultivation and lack of agricultural chemicals use on crops, no sampling of this area is proposed.

Cut and fill areas will be managed to ensure clean fill is brought onto site, which adheres to appropriate waste reuse guidelines and land use criteria.

Based on the above findings and proposed management strategies, a preliminary sampling and analysis program or further assessment is deemed unnecessary. The site is considered suitable for the proposed development.

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**2 Introduction**

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This report has been prepared for the Catholic Church (St Francis Xavier's Parish) and Vixsun Pty Ltd for the purpose of assessing soil contamination with respect to the following proposed developments: 1. filling activities and future residential subdivision on western precinct of the Ballina Heights Estate; 2. future residential subdivision in the eastern and southern precincts, including filling activities.

**2.1 Site Identification**

The land parcels forming the proposed development investigated in this assessment is detailed in Table 1 below. For the purpose of this investigation, we have broken up the site into three distinct areas known as the western precinct, eastern precinct and the southern precinct as shown on Figure 2 (Attachment 1).

**Table 1: Subject Land within Development**

| Subject lot        | Precinct            |
|--------------------|---------------------|
| Lot 316 DP 1148856 | Western and Eastern |
| Lot 302 DP 1147087 | Western and Eastern |
| Lot 284 DP 1141745 | Eastern             |
| Lot 2 DP 788088    | Southern            |
| Lot 1 DP 1077982   | Western             |

The land forms part of the Ballina Heights Estate and adjoins developed and developing stages of the estate (including residential and open space areas). The north-eastern extremities of the site extend into the south-eastern boundary of the Cumbalum Urban Release Area Precinct A.

The subdivision scattered throughout the eastern has been broken up into individual cells numbered 1-5. These are marked on Figure 2 and more detail is provided in the Table 2 overleaf.

Table 2: Subdivision Sites in Eastern Precinct

| Cell No. | Subject lot                             | Number of proposed lots | Road frontage                     |
|----------|---|-------------------------|-----------------------------------|
| 1        | Lot 316 DP 1148856                      | 22                      | Scotia Avenue                     |
| 2        | Lot 316 DP 1148856 & Lot 302 DP 1147087 | 21                      | Perkins Close/Lindsay Avenue      |
| 3        | Lot 302 DP 1147087                      | 23                      | Ahern Circuit/Deadmans Creek Road |
| 4        | Lot 316 DP 1148856                      | 1                       | Cumbalum Way/Unara Parkway        |
| 5        | Lot 302 DP 1147087                      | 6                       | Deadmans Creek Road               |

## 2.2 Proposed Development

The proposed development involves:

- Construction of future residential subdivisions on the western, eastern and southern precincts as indicated on Figure 2 (Attachment 1); and
- Filling of undulating sections of land that are cleared grassland, devoid of significant native vegetation on the western precinct as shown on Figure 8 (Attachment 1). This specifically includes the following:
  - Retirement village – approximate fill volume of 15,000m<sup>3</sup>;
  - Village centre – approximate fill volume of 45,000m<sup>3</sup>; and
  - Central gully – approximate fill volume of 65,000m<sup>3</sup>.
- Filling and stripping works for future residential subdivisions across the site.

The fill will be spread and leveled via mechanical means, and sown with grass seed to minimise the potential for dust and erosion. Appropriate erosion and sediment control measures will be installed and maintained around fill areas to ensure no adverse impacts result on downstream receiving environments. These measures are shown on plans provided in Appendix 2 of the D.A. and SOE (APP, 2010).

The filling of the land will be similar to previous filling operations undertaken on the Ballina Heights Estate (BHE) development. It is expected that the filling will be undertaken on a periodic basis, which will be contingent upon the availability of fill material. The fill material is

8.4 **LEP Amendment Request - Mitchell Close, Cumbalum**

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to comprise clean, non-acid sulphate soil material sourced from the Ballina By-pass construction project (BBA) or other approved sources.



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**3 OBJECTIVE**

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The purpose of this investigation is to enable Council to consent to the development under the NSW State Environment Planning Policy No. 55 – Remediation of Land once it has considered: (a) whether the land is contaminated, and (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out.

This report has been prepared in response to Ballina Shire Council's (BSC) correspondence dated 29<sup>th</sup> July 2010, ref# DA 2010/715, which requires the following to be addressed:

- Identify previous land use of the site;
- To identify any Areas of Environmental of Concern (AEC) or Potential Contaminants of Concern (PCoC) associated with past/present land uses;
- To assess the source of fill onsite and the contamination status of the fill;
- Analyse the risks in relation to the proposed works; and
- The management and/or disposal of waste soil associated with the proposed works.

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**4 SCOPE OF WORK**

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This investigation involved the undertaking of a Desktop Site History Review and preparation of the Preliminary Site Contamination Investigation Report including the following:

- Interviews with persons with knowledge of the site and surrounding land use history;
- Review of available maps, aerial photographs and previous reports pertaining to the site;
- Review of the site history and identify Areas of Environmental Concern (AEC) and Potential Contaminants of Concern (PCoC);
- Undertake limited preliminary sampling of soils and testing for potential contaminants of concern, if required;
- Compile the findings of the site history review and make a preliminary assessment as to the potential for previous land uses to have resulted in contamination of the site; and
- Make recommendations for further investigations if required.

This investigation was carried out in accordance with the following relevant guidelines:

- SEPP 55 "*Remediation of Land*" (NSW Dept. Planning, 1998);
- NSW EPA's "*Guidelines for Consultants Reporting on Contaminated Sites*" (NSW EPA, 1997);
- NSW EPA's "*Sampling Design Guidelines*" (NSW EPA, 1995); and
- Ballina Shire Council's "*Management of Contaminated Land,*" (BSC, 2008).

A glossary of commonly used abbreviations has been provided at the end of this report.

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**5 SITE HISTORY**

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A desktop site history assessment was undertaken to determine the chronological history of site uses and possible sources and locations of contamination. Various sources include aerial photographs, records held by the NSW Department of Environment, Climate Change & Water and Department of Primary Industries, and Council records. The findings are presented below.

**5.1 Previous Reporting**

Table 1.2 of the Development Application (David Ardill and Associates, Sep 2000) for the entire site indicated the land was used for pasture with some rural residential occupation.

Section 6.3 and 6.6.5 of the rezoning submission for Lot 2 DP 788088 indicates the following in relation to Lot 2 DP 788088:

- There has been no dip sites or intensive land use practices historically undertaken on site;
- No mining leases exist on site and no mining exploration has occurred on site; and
- Given the use of the site for low intensity grazing purposes, no pesticide or herbicide chemicals have been used on the subject area.

**5.2 Review of Aerial Photographs**

A limited review was undertaken of available aerial photographs which is present in Table 2 overleaf. Aerial images are provided as Figures 3-7 in Attachment 1.



Table 3: Historical Aerial Photo Review

| Historical Aerial Photo Review                  |  | Western Precinct  | Eastern Precinct   | Southern Precinct              |
|---|--|---|--|--------------------------------|
| 6/10/58<br>Refer to Figure 3<br>(Attachment 1)  | Sugar cane drains across low lying areas to the south-west suggest cane cultivation has occurred on these areas. However, the scale of the photo makes it difficult to determine if there is an existing crop at that time of the photo. A few scattered dwellings are evident on the elevated portions of the western section, and the land appears to be used for rural residential with grazing land. Refer to Figure 3 (Attachment 1).   | Grazing land with remnant bushland with no structures evident.  | Grazing land with remnant bushland with two residential sized structures evident.  | No change evident to land use. |
| 21/05/67<br>Refer to Figure 4<br>(Attachment 1) | Two long thin rectangular shaped structures, which are possibly farming sheds, are located near the proposed Cumbalum Way. On runs in an east-west direction, the other in a north-south direction. Land use to the north-west remains rural residential in combination with cattle grazing.<br>Wind break trees and diagonal lines of vegetation suggest possible agricultural activity in the central gully area and eastward.<br>Another structure is evident to the south-west of the site. The vegetation pattern in this area does not indicate an existing sugar cane crop being grown. Refer to Figure 4 (Attachment 1). | Bushland in the area of The Ridgeway and Cummings Crescent has reestablished.<br>Possible agricultural areas in the northern portion now appear to be used for grazing. | Wind break trees and diagonal lines of vegetation suggest there may be some agricultural activity in the area of the central gully and eastward. However, the lack of trees suggests it is not an orchard of sorts, but perhaps a grass based crop like wheat or barley. | No change evident to land use. |
| 3/04/79<br>Refer to Figure 5<br>(Attachment 1)  | Sugar cane is being grown on south-western portions. The north-south orientated shed identified in the previous image is no longer visible.<br>Possible agricultural areas in the mid section appear to be used for grazing. Refer to Figure 5 (Attachment 1).   | No change evident to land use. Summerland Crescent to the south-east of the site is under construction.   | No change evident to land use.   | No change evident to land use. |

|  |   |  |                                |
|--|---|--|--------------------------------|
| 1/08/87<br>Refer to Figure 6<br>(Attachment 1)   | No major change to the land use is evident on this image. Refer to Figure 6 (Attachment 1).   |  |                                |
| 24/07/94<br>Refer to Figure 7<br>(Attachment 1)  | Sugar cane is no longer present on the south-western section of the site. Refer to Figure 7 (Attachment 1).   | Bush land on The Ridgeway and Cummings Crescent has been removed.                            | No change evident to land use. |
| Current imagery available from Dept. Lands (date unknown)<br>Refer to Figure 2<br>(Attachment 1) | The sheds identified in the 1967 image have disappeared. Clearing works for the construction of Cumbalum way is visible between the eastern and western portions. Refer to Figure 2 (Attachment 1). | The eastern portion of the development has been developed, with dwellings and roads present. | No change evident to land use. |

**5.3 Local Resident Interviews**

Interviews were conducted with local residents who formerly owned the properties under investigation or that lived in the area. Specific focus was targeted on the area on the western and eastern precinct identified in the 1967 aerial photo (as shown on Figure 4, Attachment 1), which looked like it underwent agricultural cropping of some sort. The information provided by these residents is outlined below:

**Adjacent Land Owner**

Mr John Coop, a former property owner of part of the land forming the Cumbalum Urban Expansion Area A to the north of BHE was contacted by phone on 18<sup>th</sup> August. Mr Coop advised that the sugar cane was grown on the flats of the western precinct in the 1970's.

Mr Tony Koellner of Koellner Steel was contacted on 23<sup>rd</sup> August, and he advised that the area identified in the 1967 aerial (as mentioned above) was formerly owned by the Poulous family and to contact Jim Poulous for more specific information related to the potentially cropped areas. To his knowledge, the land was used as a dairy farm with pigs, and sweet potato and corn were grown.

**Former Site Owner**

Mr Jim Poulous was contacted on the 26<sup>th</sup> August and indicated that his family owned the land across the western precinct, extending partially into the eastern precinct, from the 1950's to late 1970's. During this time, the land was use predominantly for pasture, pigs and pasture improvement, with cane grown on the flats. The Catholic Church purchased the land from his family.

The north south orientated shed on the 1967 image was a pig sty, and the smaller shed running east-west was a dairy bale (Refer to Figure 4, Attachment 1). Potatoes were grown for a period of two years to the east of the east-west shed. No pesticide or herbicides were used on this area.

The area bearing resemblance to cropped areas was used for pasture improvement, which he defined as: the clearing of camphor laurel trees to make more space for pasture. The row of trees was kept to stabilise the soil, and grass was planted in between the row of trees.

**5.4 NSW Department of Primary Industries Cattle Tick Dip Search**

A search of the NSW Department of Primary Industries Cattle Dip Site Locator was conducted in 12<sup>th</sup> August 2010 which indicated that 3

cattle tick dip sites were located within Cumbalum. Information related to the dip sites is summarised in Table 2, and the complete information sheets are provided in Attachment 2.

Table 4: Cattle Tick Dip Sites within the Cumbalum Area

| Dip Name   | Road                         | Approximate Distance (m) and Direction from Site | Status                                 | Chemicals                       |       |
|------------|------------------------------|--|--|---------------------------------|-------|
| Laurel     | Pacific Highway              | 0.2 Km to the West                               | Lease Active, Decommissioned & Capped  | Arsenic                         | 7/54  |
|            |                              |  |  | DDT                             | 1/61  |
|            |                              |  |  | Dioxathion                      | 10/62 |
|            |                              |  |  | Dioxathion Ethion               | 5/73  |
|            |                              |  |  | Dioxathion Ethion Chlordimeform | 11/73 |
|            |                              |  |  | Ethion Chlordimeform            | 5/74  |
|            |                              |  |  | Promacyl                        | 10/85 |
|            |                              |  |  | Amitraz                         | 11/86 |
| Cumbalum   | Inghams Road                 | 1.16 Km to the West                              | Lease Lapsed & Decommissioned & Capped | Arsenic                         | 3/43  |
|            |                              |  |  | Arsenic                         | 7/48  |
|            |                              |  |  | DDT                             | 12/60 |
|            |                              |  |  | Dioxathion                      | 10/62 |
|            |                              |  |  | Dioxathion Chlordimeform        | 11/73 |
|            |                              |  |  | Dioxathion Ethion Chlordimeform | 9/74  |
| Sandy Flat | Sandy Flat Road              | 1.5 km to North-east                             | Lease Lapsed & Decommissioned & Capped | Cypermethrin Chlorfenvinphos    | 2/86  |
|            |                              |  |  | Arsenic                         | 8/52  |
|            |                              |  |  | DDT                             | 12/60 |
|            |                              |  |  | Dioxathion                      | 10/62 |
|            |                              |  |  | Dioxathion Ethion               | 10/72 |
|            |                              |  |  | Ethion Chlordimeform            | 10/73 |
|            | Cypermethrin Chlorfenvinphos | 5/84   |  |                                 |       |
|            | Flumethrin                   | 9/90   |  |                                 |       |

**NOTE:** Decommissioned – means all the standing structures (shed, fencing and roof) of the dip bath have been dismantled, and the bath itself, is emptied of all chemical fluid and is capped with concrete lids. The bath may have been demolished prior to decommissioning in which case it is usually smashed and buried. Clean soil may be spread around the bath to run flush with the bath edge and then grassed. The draining pen concrete floor is usually left intact so as not to disturb the surrounding soil.  
Lapsed – which means the dip is still standing, capable of dipping operations either immediately or with some minor refurbishment.

From our investigations on the adjacent Cumbalum Urban Release Area (CURA) Precinct A site directly to the north of BHE, APP discovered the location of a fourth site in Cumbalum, which was a manual spray dip, not a dip bath. The DPI advised us that spray dips

were typically privately built and maintained, and introduced after the cessation of persistent chemicals such as Arsenic or DDT. The DPI also indicated that the facility, referred to as 'Quinlan's spray', was operated on land now owned by the Roads and Traffic Authority (RTA), which is opposite Lot 1 DP 1077982.

Information obtained from one of the CURA-A landowners indicated that the Quinlan spray site was located on the flat area proposed for the future north bound land of the Pacific highway. It was an above ground structure where cattle were directed down a corrugated iron tunnel and sprayed with a fine mist of pesticides, similar to a car wash facility. It is believed that the dip operated between the 1970's to mid 1980's (APP, 2009).

In our Preliminary Contaminated Site Investigation for CURA-A, neither we, nor the DPI could accurately identify the specific location of the Quinlan's spray facility since it has been dismantled. However, we considered some of the small shed like structures directly west of Lot 1 DP 1077982, observed in the 1967 aerial image, as potentially being the location (Figure 4, Attachment 1).

The Cattle Tick Dip Site Management Committee (DIPMAC) recommend further investigation if developments are within 200m of a dip site. The proposed village centre and retirement village (in western precinct) appear to be within 200m of any dip site, albeit upslope of it. Given the steep terrain that exists between the dip site and proposed development, it is extremely unlikely that contamination would have resulted on the western precinct for the following reasons:

- Cattle treated at this dip site would have been directed back onto the owners land using a less steep route suitable for them to cross. Thus it is unlikely that any chemicals dripped onto the subject site;
- Cattle were dipped not sprayed therefore it is unlikely that windblown contamination was deposited on the subject site.

Based on the above, it is not proposed to investigate the northern portion of the western precinct further.

#### **5.5 NSW EPA Contaminated Lands Record Search**

A search of the NSW EPA Contaminated Land Record (CLR) was conducted in 17<sup>th</sup> August 2010 to search for notices issued by the NSW EPA on sites that were contaminated and required further investigation or remediation. The search showed two notices were issued within the Ballina Shire Council area in Lennox Head and Macleans Ridges.



The dip site at Fig Tree Drive Lennox Head was over 4 km to the north-east of the north of the site. Both of the above listed sites on the DECC contaminated sites register are considered too far to cause impact to the subject site and have been eliminated from further investigation. A copy of the NSW EPA notice is included in Attachment 2.

#### 5.6 Protection of the Environment Operations (POEO) Act Licenses

The DECC maintains a register of Environmental Protection Licenses (EPL), Environment Protection Notice (EPN) and/or Noise Control Notices (NCN) and Convictions in Prosecutions under the POEO Act, which are discussed below:

- An EPL is issued to operators conducting commercial/industrial activities that have the potential to cause environmental impact. The license specifies terms by which the operator must adhere in order to conduct their operation in an environmentally safe manner and prevent pollution; and
- An NCN or EPN is issued if the commercial/industrial activity is in breach of its EPL, and prosecution is pursued when the operator has not rectified the activity for which an EPN/NCN is issued.

A search of the current list (EPA, 2008) of licensed activities as per Schedule 1 of the Protection of the Environment Operations Act 1997 was conducted on 17<sup>th</sup> August 2010, which revealed 24 licenses or notices (issued or surrendered) and 17 notices issued within the Shire of Ballina. The closest identified licensed operations to the site were:

- License 2261, Licensee – Boral Resources (Country) Pty Ltd, at North Teven Road Teven. Located 2 km to the west of site;
- License 12710, Licensee – Gradex Civil Contractors Pty Ltd, at Newrybar Swamp Road. Located 2 km to the north-east of site; and
- License 12910, Licensee – Leighton Contractors Pty Ltd, Pacific Highway Alignment Ballina. The licensed activity is for crushing, grinding or separating land based extraction activity, which is not considered to impact on the subject site. This activity is located all the way along the subject site.

All of the above operations are considered too far from the subject site to have caused contamination to the subject site and have been eliminated from further investigation. A copy of the NSW EPA license search list is included in Attachment 2.

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**6 AREAS OF ENVIRONMENTAL CONCERN**

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The available site history and aerial photography suggests that the subject site has been used for agricultural (cattle, pigs, potatoes, sweet potato, corn and sugar cane on the flats in the south-west) land uses. Section 3.3.2 of the Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land (DUAP & EPA, 1998) states that “further information is required when a subject site is in the vicinity of or associated with an activity listed in Table 1 but it is unknown whether contamination exists”. Activities identified in Table 1 include agricultural activities and a cattle dip, which are discussed in further detail in the following sections.

Three Areas of Environmental Concern (AEC) were identified in this investigation, which are considered a possible source of Potential Contaminants of Concern (PCoC). The AEC are shown on Figures 8 & 9 (Attachment 1) and include the following:

- The Laurel dip site is within 200 m radius of the lands within BHE. Refer to Figure 8 (Attachment 1);
- Agricultural areas including the sugar cane crops in the low lying areas of western precinct (south) and crops (sweet potato, potato and corn) on elevated portions of Lot 302 DP 1147087. Refer to Figure 8 (Attachment 1); and
- Proposed cut and fill areas for the western precinct and future residential subdivisions. Refer to Figure 8 (Attachment 1).

The only identified land use of the southern precinct was cattle grazing, which poses nil risk of residual contamination. Therefore, no further assessment of this area will be made as part of this investigation.

**6.1 Cattle Dip Site**

The Cattle Tick Dip Site Management Committee (DIPMAC) recommend further investigation if developments are within 200m of a dip site. The Retirement Village, Village Centre and some residential lots on the western precinct appear to be just outside, if not on the boundary of the 200m radius of influence of the Laurel dip site. Proposed future residential subdivisions in the eastern and southern precincts are considered too far from the dip site to warrant further investigation, therefore only the western precinct will be assessed further. Refer to Figure 8 (Attachment 1).

The DIPMAC guidelines indicate that the extent of contamination surrounding a dip site is approximately 20m uphill or on the flat and 50 m downhill of the dip bath. The migration of contamination from a dip site can occur via the following means which are discussed further:

- Erosion or runoff are the most likely means;
- Spray drift; and
- Stormwater runoff or windblown dust.

It is unlikely that there would be any spray drift from the Laurel dip site as it was a bath structure. There may have been windblown dust from the site, although it is likely to have been capped and sealed by the DPI to prevent further erosion. If required, the area could be fenced off to prevent access to potentially contaminated soil.

It is impossible for any contamination from the dip bath site to have impacted the proposed development area, given the terrain separating them. Additionally, the proposed development sites are more than 100m upslope of the dip bath, across the Pacific Highway and outside the 20m extent of contamination as suggested by the DIPMAC guidelines.

The land in the village centre and retirement village will not be used for sensitive purposes where vegetables are grown or edible livestock such as chickens are raised. Therefore, there is no exposure via these pathways. The closest residential lot is right on the boundary of the 200m radius of influence, if not just outside of it. Based on this information, it is not proposed to conduct any further investigation of the land within 200m of the dip site.

## 6.2 Agricultural Areas - Cane

Though sugar cane was cultivated on the low lying areas outside the proposed development area (Figure 8, Attachment 1), we have investigated the potential for this activity to have resulted in contamination of the adjoining western and eastern precinct.

The Poulous family grew cane on the flat areas on the western precinct (south-west), which is confirmed in the 1979 and 1987 aerial photos. Cane was not apparent on the 1994 aerial image. Earlier photos suggest cane had been grown prior to this, but no crops were evident at the time of the photographs reviewed in Section 5.2.

APP have previously conducted research into the practices of cane cultivation and pesticide application with industry experts and farmers. The information obtained indicates the following:

- Cane cuttings were dipped in small quantities of pesticides before replanting, once every 4-6 years. Modern pesticide treatments are

completely mechanical and involve dipping the cane cuttings in a chamber of pesticide and it drops into the soil;

- Established crops were sprayed or dosed with diluted pesticide mixtures or powders and wire worm infested crops were treated with fertilisers mixed with aldrin;
- Chemical sprays for weed, pest and disease control (Fiji disease, red rot and chlorotic streak) became common practice in the 1980's. Prior to this, hot water was used to treat diseases of cane;
- Pesticides used on cane include aldrin, dieldrin (1940s-1970's), Lindane (BHC) and hexochlorobenzene (HCB), Shirtan (methoxy ethyl mercuric chloride – a mercurial fungicide), methyl mercury, methyloxy or Aratan, Shirtan, Sodium Chlorate, Gramoxone; and
- Mechanical weed control was used prior to the introduction of dieldrin, then the industry moved onto Paraquat herbicides used in conjunction with Atrazine. More recently Roundup and 2-4-D were used for spot weed control.

Based on the above information, it is not intended to conduct further investigation of sugar cane areas for the following reasons:

- It is considered unlikely that the development sites would be contaminated from wind blown deposition of cane pesticides due to the practice of dipping cane cuttings before planting;
- It is anticipated that there would be localised pesticide accumulation at the cane planting sites rather than widespread contamination from spraying;
- The infrequent application of pesticide chemicals every 4-6 years over an approximately 15 year period (during the 1970's and 1980's), means the soil would have received approximately 3-4 doses of pesticides, in small quantities;
- The area historically used for cane cultivation has been buried beneath 1.5m to 3.0m of fill material, thus reducing any exposure to future site users. This area will be used for recreational purposes with no potential for growing vegetables or raising edible livestock. Additionally, part of this land has been acquired by the Ballina Bypass Alliance and used for road construction. With these in mind, there is no likelihood of future site users coming into contact with potential residual contamination from cane cultivation.

### **6.3 Agricultural Areas – Potato, Sweet Potato & Corn**

It is acknowledged that there is some discrepancy between the information provided regarding the potentially cropped area noted in the 1967 aerial photo. Local resident Tony Koellner advised APP that potato, corn and sweet potato were grown on the Poulous land. While Jim Poulous, son of the former owner (Mr George Poulous) indicated

that only potatoes were cultivated for a period of two years, and that no pesticide or herbicide chemicals were applied to the crops.

The proposed lot layout for the western precinct was overlaid on the 1967 aerial to determine the approximate future land use (Refer to Figure 8 Attachment 1). It is noted that this is an approximate overlay only, as the scale on the aerial and the proposed layout did not completely match. So the former potato cultivation area is approximately within the location for Cumbalum way and offshoot roads, and 5 lots partially overlap it.

Anecdotal information from Mr Poulous suggests that no pesticide were used on the Poulous land, though we acknowledge that there is the potential for it to have been used but not disclosed. If any pesticides were used on the potatoes, they would have been applied to the leaves or the tubers at planting stage. Given the short period during which they were grown, we do not expect significant contamination to have resulted from this land use. Based on the information obtained in the site history review, we do not propose to conduct a preliminary sampling investigation of this area.

#### **6.4 Cut and Fill Areas**

This section refers to the cut and fill activities proposed for the western precinct as per Figure 8 (Attachment 1), and future subdivision areas in the eastern and southern precincts, where topsoil will be removed and replaced with compacted fill.

It is noted from drawing No's SK187 and SK188 which were provided for DA No. 2010/715 that depths of fill required to central gully area ranges from 0.09 to 3.93m. A total of 65,000m<sup>3</sup> is proposed to be used in this area, and will be sourced from the Ballina By-pass construction project (BBA) or other approved sources.

At this stage, APP cannot confirm the specific source of the fill material will be, nor can we ensure that it is natural excavated material, or potentially contaminated fill material. Previous deliveries of engineering fill material used on the sporting fields and on Cumbalum Way sourced from either the Alstonville Bypass or Ballina Bypass Alliance, were tested for contaminants of concern associated with historical land use (cattle grazing) and certified as suitable for the land use.

Where future material is not certified by the supplier, we propose a similar screening process in Section 7.0 to ensure that only clean fill

material is brought on site for use, and that there is no risk of harm from this sourced material.

We understand that there have been some excavations on the western precinct for installation of a Rous Water main, rock wall and fibre optic cable in accordance with APP drawing No. T1-23 dated 12<sup>th</sup> July 2002, and approved by Council in DA consent 2001/128. Excess spoil sourced from the Altsonville Bypass was used for fill on the playing fields south-west of the western precinct area. The land acquired for the bypass was used for cattle grazing, thus was unlikely to be contaminated. Laboratory analysis of this material was shown to be free of pesticides and heavy metals typically associated with agricultural land. We have not provided the results of these tests as part of this investigation as they do not constitute proposed future development areas.

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**7 MANAGEMENT OF WASTE SOIL AND FILL MATERIAL**

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This section addressed Council's request for information related to the following:

- The source of fill;
- The contamination status of the fill;
- The risks in relation to the proposed works; and
- The management and/or disposal of waste soil i.e. top soil.

As we have stated in Section 6.1, soil material for the proposed filling activities for the western precinct and other areas proposed for future subdivisions, have not been brought onto the site as yet. Therefore the procedures outlined in this section relate to future operations yet to be undertaken.

**7.1 Legislative Responsibility**

Once waste material is moved offsite and applied to land for beneficial reuse of materials, it is regulated under clause 39 of Schedule 1 of the Protection of the Environment Operations (POEO) Act 1997. The NSW Department of Environment Climate Change and Water (DECCW) is responsible for regulating this Act to ensure that waste material is used appropriately and does not result in deleterious effects on the receiving environment, and that waste is disposed appropriately.

**7.2 Land Application of Fill Material**

Fill material to be used on site will either be certified by the supplier as being clean fill, or undergo assessment in accordance with the DECCW's *Guidelines on Resource Recovery Exemptions (Land Application) (April 2008)*. This procedure will assess whether the fill is suitable for its intended use as a recovered material. A summary of the actions to be followed are provided below:

- Assess the historical land use of the site from where the fill material will be sourced, to determine potential contaminants of concern (if any);
- Collect a minimum of 20 samples from the stockpiled fill material and analyse for those chemicals listed in Table 1 in Appendix I of above guidelines, in addition to any other contaminants associated with historical land use; and
- Apply to DECCW for a general exemption under the POEO Act to reuse the waste for land application and follow the procedures outline on page 5 of the above guidelines.

risks associated with proposed works will relate to any contaminants identified, the proposed land use of areas to be filled, and the placement of these materials. To determine if the material is suitable for the intended land use, the chemical concentrations of fill contaminants (if present) will be compared with NEPM Health Investigation Levels for residential land use (retirement village in western precinct and proposed residential subdivisions across the site) and commercial (village centre in western precinct) land use. If any contaminant levels exceed these criteria, then it will not be used for these purposes, thus eliminating any risk of harm to future site users and site workers.

If there are elevated levels of contaminants within the fill that are below relevant land use criteria, the following provisions will be made:

- Ensure civil contractors use appropriate protective equipment, avoid handling the material and make amenities available for them to wash their hands if they come into contact with any fill;
- Bury the material at sufficient depth below clean fill to reduce contact with future site users and root growing vegetables. Ensure material will not be disturbed in future for the installation of swimming pools etc, by landscaping or caveats;
- Use the material on the less sensitive land i.e. commercial land use or beneath hard stand surfaces with little chance of exposure to future site users;
- Employ appropriate sediment and erosion control on site to prevent runoff and downstream contamination; and
- Material is not to be used on site if it has the potential to leach into groundwater.

It is the responsibility of the civil contractor engaged for earthworks to ensure their workers operate in a safe working environment, and that they follow the above procedures.

### 7.3 Waste Disposal

Given the expense in purchasing fill material, all material stripped (e.g. topsoil) or excavated during earthworks will be mixed back in and compacted, or used elsewhere on site. Therefore it is not envisaged that any waste material will leave site. However, if in the event that any material is removed from site, it must be classified and disposed of in accordance with DECCW's *Waste Classification Guidelines Part 1: Classifying Waste* (1998).



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8 **CONCLUSIONS AND RECOMMENDATIONS**

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Ardill Payne and Partners (APP) has carried out Preliminary Contaminated Site Investigation for the site filling works and residential subdivisions of Lot 302 DP1147087, Lot 316 DP 1148856, Lot 1 DP 1077982 and Lot 2 DP 788088, Pacific Highway, Cumbalum. This report focuses on those areas within the Ballina Heights Estate that are proposed for future earthworks (filling) and residential subdivision, and not those areas already developed for residential or recreational purposes.

The findings of the desktop site history review indicate that the site was historically used for dairy cattle grazing, pigs rearing, sugar cane cultivation, cropping of potatoes, sweet potatoes and corn, pastoral improvement areas, and rural residential. Anecdotal information provided from former site owners indicated that no pesticide or herbicide chemicals were used on the agricultural crops.

The site is not listed on the NSW EPA Contaminated Sites Register or the NSW EPA Protection of the Environment Operations (POEO) Register as being subjected to contamination or any potentially contaminating activity.

Three Areas of Environmental Concern were identified for the site, including the former agricultural areas, cattle tick dip site and proposed cut and fill areas. Topography buffers and the distances from the proposed urban residential development eliminated the dip site from further investigation.

The practice of dipping cane plantings in small quantities of pesticides at the planting site, and the infrequent application of these chemicals would reduce the chance of windblown or upslope contamination onto the adjacent western or eastern precincts. Additionally the former cane areas are buried under a layer of fill material ranging between 1.5-3.0m.

The majority of area formerly used to cultivate potato crops will be used for road construction and civil infrastructure, though there is a small overlap from five lots. Given the short period in which these vegetables were grown, and the anecdotal information from the former site owner, indicating that no agricultural chemicals were used on these crops, no sampling of this area is proposed.

A procedure is outlined in the report to ensure that only clean fill is brought onto site that is free of contamination, and which adheres to appropriate waste reuse guidelines and residential or commercial land use criteria.

## 8.4 LEP Amendment Request - Mitchell Close, Cumbalum

Ardill Payne & Partners 

Based on the above findings and proposed management strategies, a preliminary sampling and analysis program or further assessment is deemed unnecessary. The site is considered suitable for the proposed development.

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9 **General Notes**

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**General**

Geotechnical and environmental reports present the results of investigations carried out for a specific project and usually for a specific phase of the project (e.g. preliminary design). The report is based specific criteria, such as the nature of the project, underground utilities or scope of service limitations imposed by the Client. The report may not be relevant for other phases of the project (e.g. construction), after some time or where project details and clients change.

**Soil and Rock Description**

Soil and rock descriptions are based on AS1726-1993 using visual and tactile assessment except at discrete locations where field and/or laboratory tests have been carried out. Refer to the terms and symbols sheet for definitions.

**Groundwater**

The water levels indicated are taken at the time of measurement and depending on material permeability may not reflect the actual groundwater level at those specified locations. Also groundwater levels can vary with time due to seasonal or tidal fluctuation, construction activities and other external factors.

**Interpretation of Results**

The discussion and recommendations in the accompanying report are based on extrapolation/interpolation from data obtained at discrete locations and other external sources and guidelines. The actual interface between the materials may be far more gradual or abrupt than indicated. Also actual conditions in areas not sampled may differ from those predicted.

The report is based on significant background details that only the authors can be aware off, and therefore implementation of the recommendations by others may lead to misinterpretation and complications. Therefore this company should be consulted to explain the reports implications to other involved parties.

Reporting relies on interpretation of often limited factual information based on judgment and opinion which has a level of uncertainty and ambiguity attached to it, and is far less exact than other design disciplines. This should be considered by users of the report when assessing the implications of the recommendations.

**Change in Conditions**

Subsurface conditions can change with time and can vary between test locations. Construction operations at or adjacent to the site and natural events such as floods, earthquakes or groundwater fluctuations can also affect subsurface conditions.

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10 **Scope of Engagement**

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This report has been prepared by Ardill Payne & Partners (APP) at the request of Catholic Church (St Francis Xavier's Parish) and Vixsun Pty Ltd for the purpose of: 1. filling activities on various sections of land within the Ballina Heights Estate; and 2. residential subdivision.

This report has been prepared from the information provided to us and from other information obtained as a result of enquiries made by us. APP accepts no responsibility for any loss or damage suffered howsoever arising to any person or corporation who may use or rely on this document for a purpose other than that described above.

No part of this report may be reproduced, stored or transmitted in any form without the prior consent of APP.

APP declares that it does not have, nor expects to have, a beneficial interest in the subject project.

To avoid this advice being used inappropriately it is recommended that you consult with APP before conveying the information to another who may not fully understand the objectives of the report. This report is meant only for the subject site/project and should not be applied to any other.

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11 References

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Ardill Payne & Partners. December 2009. *Preliminary Contaminated Site Investigation – Rezoning of Lands Identified within Cumbalum Urban Release Area*. Report prepared for Vixsun Pty Ltd, J Sheather, Intrapac, K Barlow.

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NSW EPA. September 1995. *Sampling Design Guidelines.* Sydney South, NSW.

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12 Attachments

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- Attachment 1      Figures
- Attachment 2      Site History Information

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ATTACHMENT 1

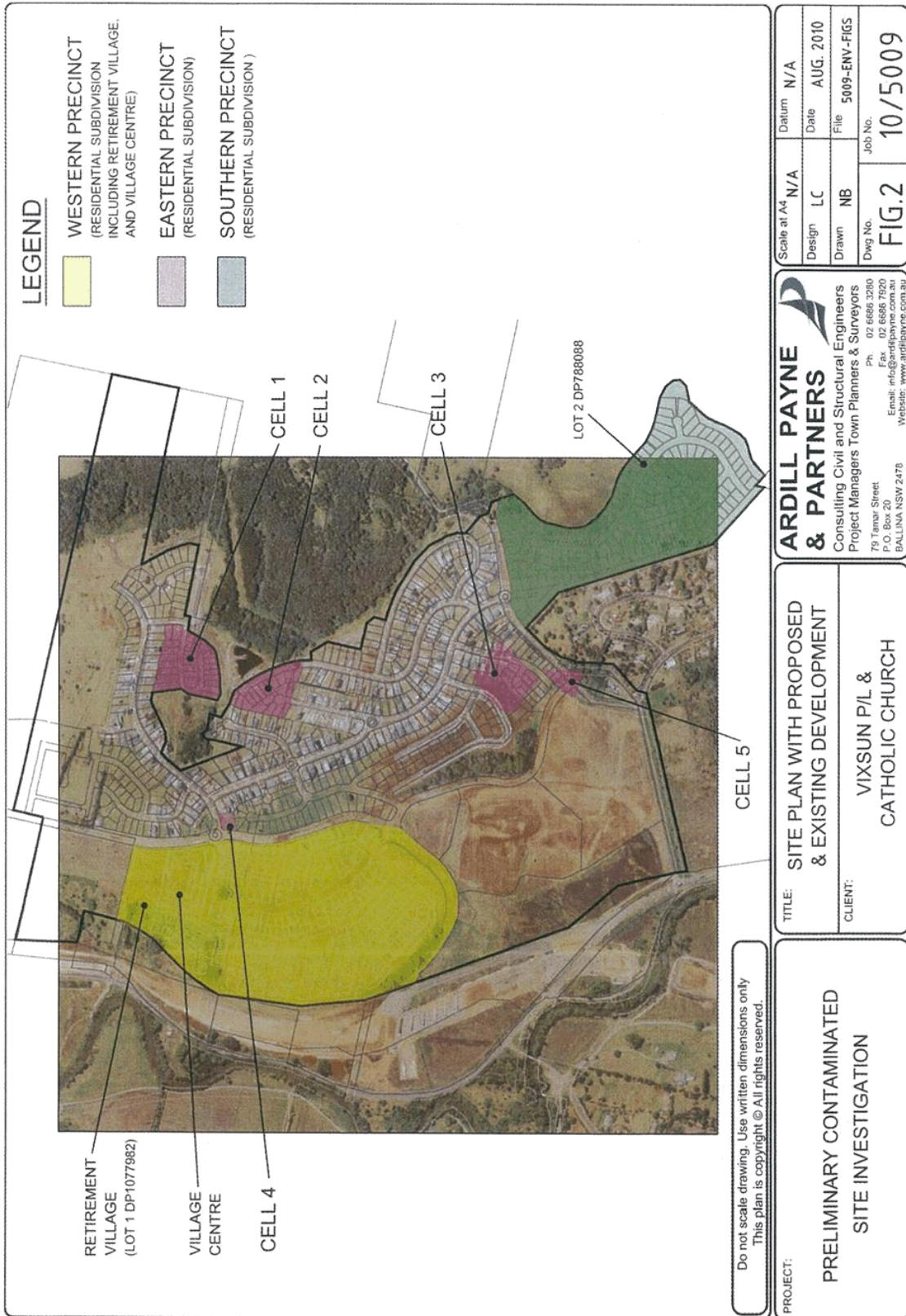
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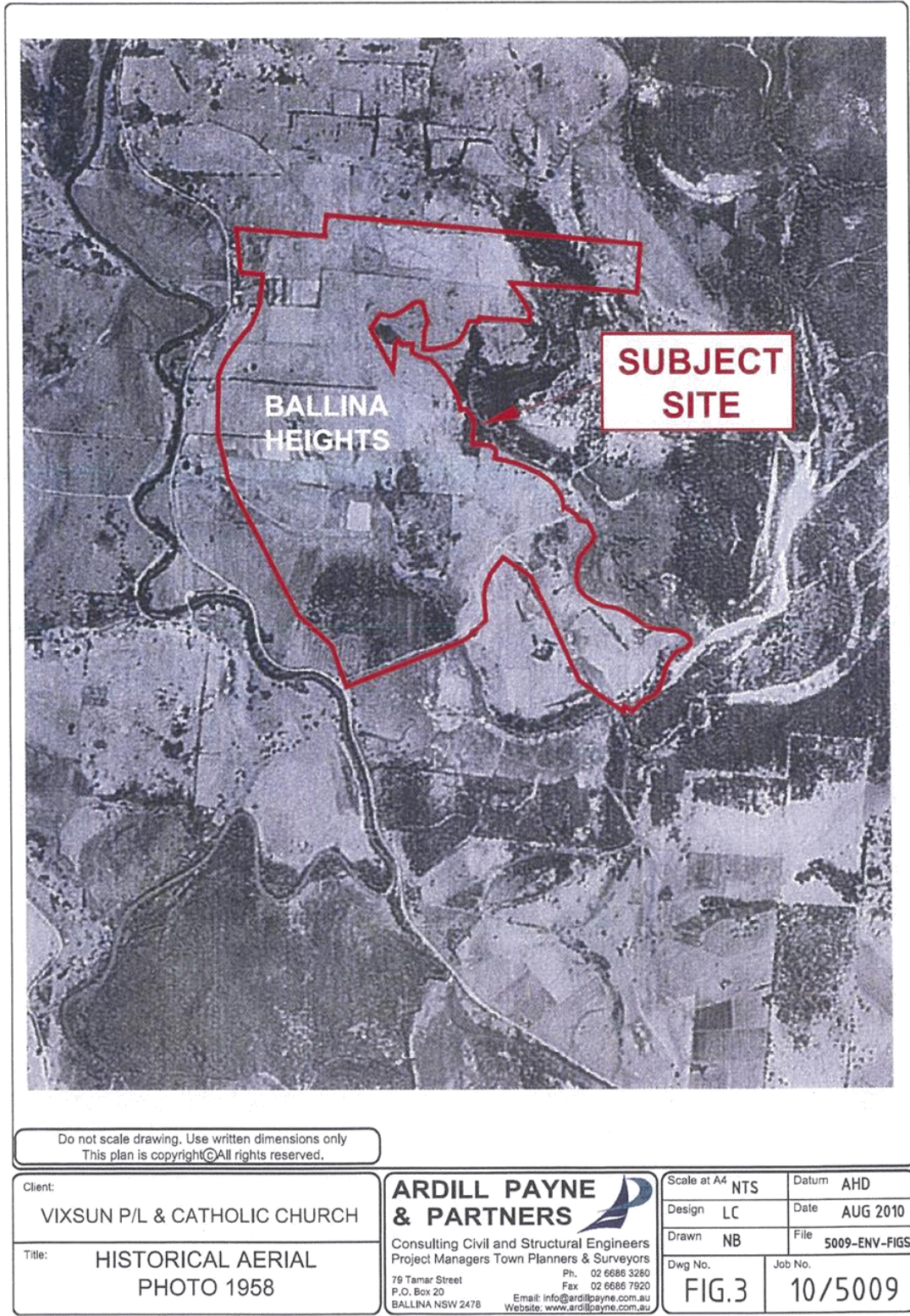
**Attachment 1**  
Figures



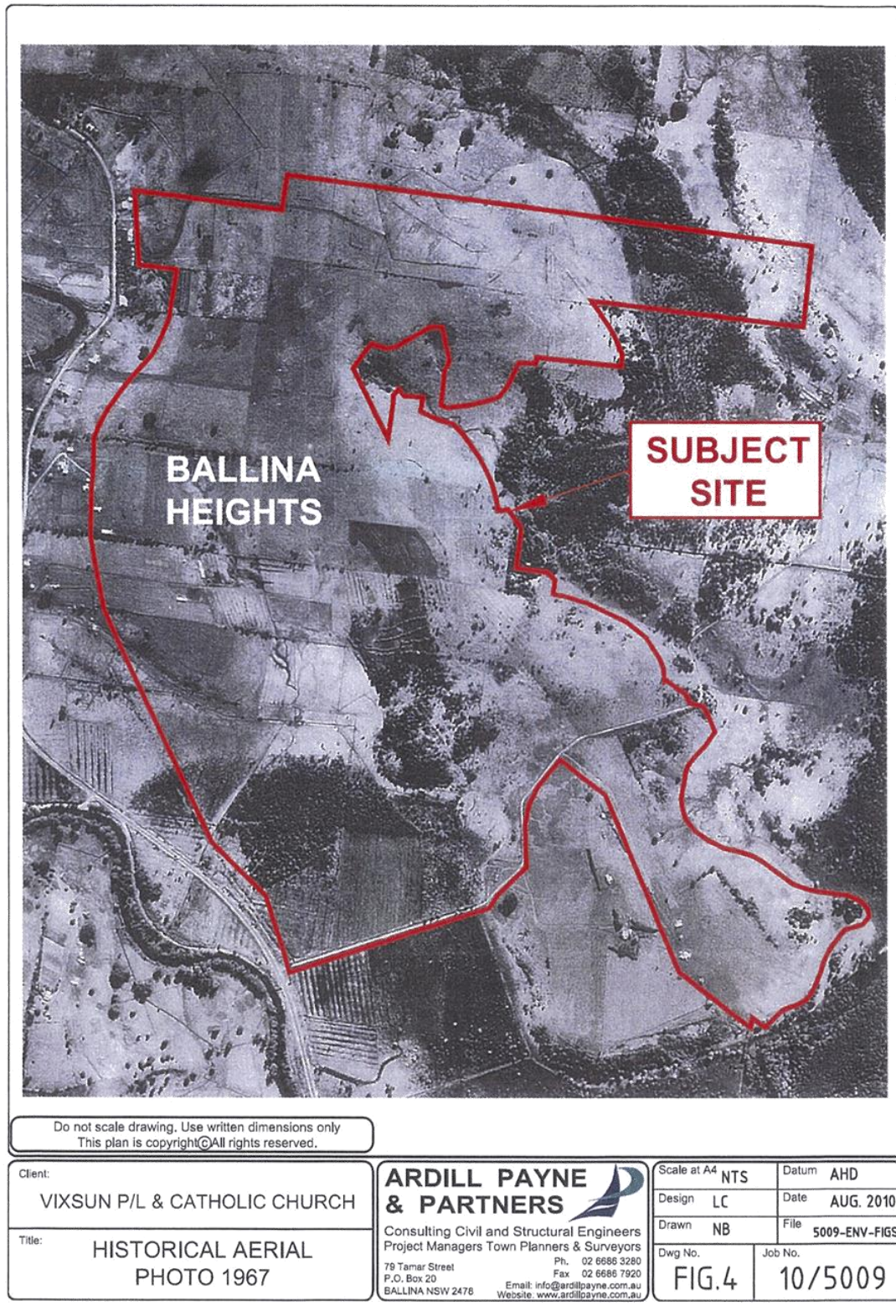


10:1 16444-000-009-0008 81kva height5 Drawings5 Environmental Comments004-ENV-FIGS.dwg FIG 1, 7/8/2010 10:04:42 AM





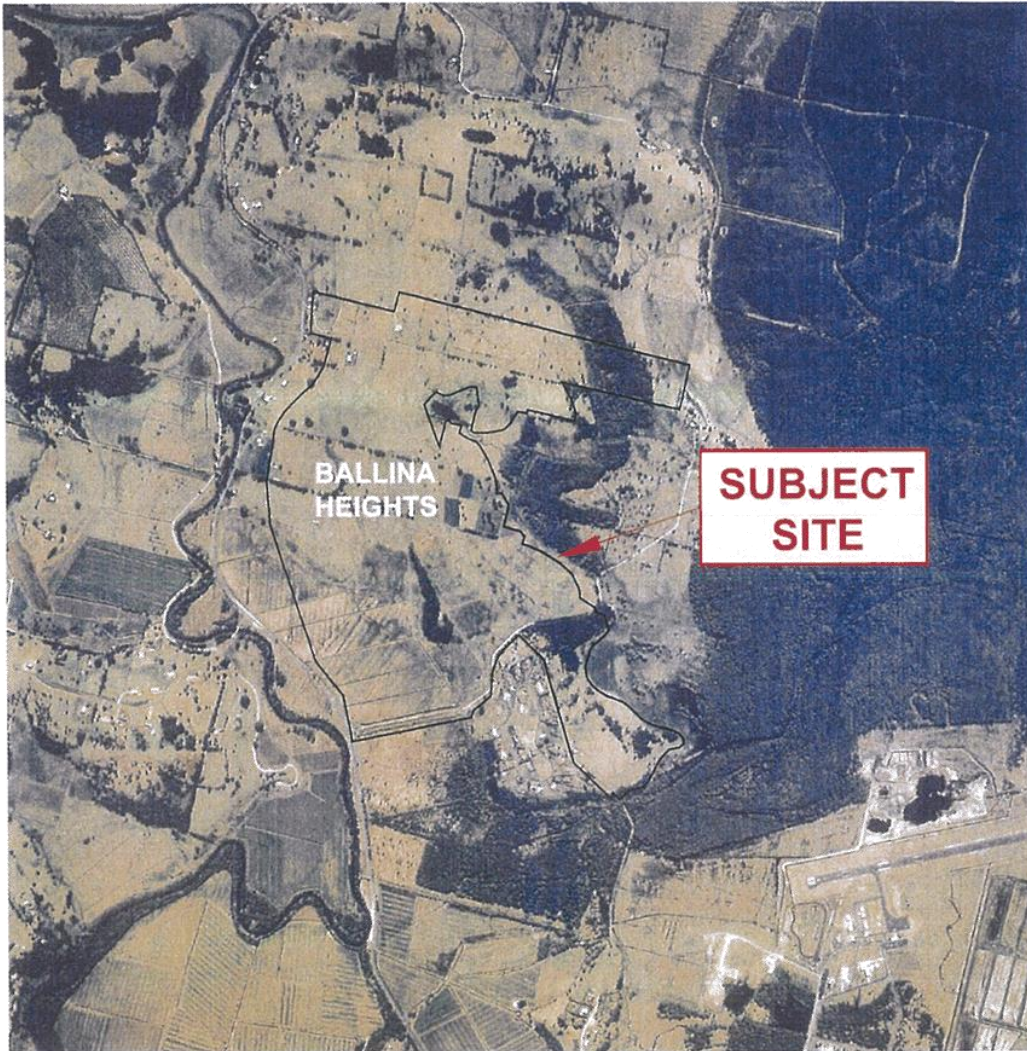
© 2010 Ardill Payne & Partners. All rights reserved. This drawing is the property of Ardill Payne & Partners. It is to be used only for the project and site for which it was prepared. It is not to be used for any other purpose without the written consent of Ardill Payne & Partners. File: 5009-ENV-FIGS.dwg, PLO, 11/09/2010 10:09:16 AM



S:\01\_Misc\000-5009\009\_Ballina Heights\001\_Drawing\01\_Environment\02\_of\_Construction\000-ENV-FIGS.dwg, FIG.4, 1/19/2010 10:00:36 AM







Do not scale drawing. Use written dimensions only  
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|  |   |                      |                        |
|--|---|----------------------|------------------------|
| Client:<br><b>VIXSUN P/L &amp; CATHOLIC CHURCH</b> | <b>ARDILL PAYNE &amp; PARTNERS</b><br>Consulting Civil and Structural Engineers<br>Project Managers Town Planners & Surveyors<br>79 Tamar Street Ph. 02 6686 3280<br>P.O. Box 20 Fax 02 6686 7920<br>BALLINA NSW 2478 Email: info@ardillpayne.com.au<br>Website: www.ardillpayne.com.au | Scale at A4 NTS      | Datum AHD              |
| Title:<br><b>HISTORICAL AERIAL PHOTO 1994</b>      |   | Design LC            | Date AUG. 2010         |
|  |   | Drawn NB             | File 5009-ENV-FIGS     |
|  |   | Dwg No. <b>FIG.7</b> | Job No. <b>10/5009</b> |

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ATTACHMENT 2

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**Attachment 2**  
Site History Information



NSW DEPARTMENT OF PRIMARY INDUSTRIES | AGRICULTURE

Home » Animals » Health, disease and pests » Cattle health and disease » Cattle tick » Cattle dipsite locator »

**Cattle dip site locator**

**Dip site location**

|                      |                       |   |            |
|----------------------|-----------------------|---|------------|
| <b>Dipname</b>       | CUMBALUM              | <i>Note: Map references are for 25,000 series topographic and coordinates are in AGD66 AMG zone 56.</i> |            |
| <b>Road</b>          | INGHAMS ROAD          | <b>Mapsheet</b>   | 9640-III-S |
| <b>Town/Locality</b> | CUMBALUM, VIA BALLINA | <b>Easting</b>  | 55035      |
| <b>Shire Council</b> | BALLINA               | <b>Northing</b>   | 81062      |
| <b>Parish</b>        | TEVEN                 | <b>County</b>   | ROUS       |

**Dip site status**

**IMPORTANT NOTE:** Cattle dip site information provided by NSW DPI is based on our own hard copy files representing currently known data. NSW DPI is not a public consent authority for the development of land containing cattle dip sites. It is possible that the physical conditions of a cattle dip site - including soil, structures, access and usage - may have been changed due to extreme natural events or landowner and developer actions that NSW DPI cannot be aware of. For more specific and accurate status information a physical inspection should be made and enquiries should always be directed to the appropriate Shire Council.

|                   |              |                                  |            |
|-------------------|--------------|----------------------------------|------------|
| <b>Dip Status</b> | DECOMMISSION | <b>Licence/Lease Status</b>      | LAPSED     |
| <b>Land type</b>  | LEASE        | <b>Licence/Lease Expiry Date</b> | 31/03/2002 |

Explanation of status terms

**Chemical Details**

**IMPORTANT NOTE:** Chemical history has been retrieved from a copied laboratory log. In some cases it may be confirmed by entries in the hard copy lease folder but generally the chemical record is based on this single lab document. It is possible that there are inaccuracies as well as errors made.

| Chemicals used in dip bath      | Date first used |
|---------------------------------|-----------------|
| ARSENIC                         | 3/43            |
| ARSENIC                         | 7/48            |
| DDT                             | 12/60           |
| DIOXATHION                      | 10/62           |
| DIOXATHION CHLORDIMEFORM        | 11/73           |
| DIOXATHION ETHION CHLORDIMEFORM | 9/74            |
| CYPERMETHRIN CHLORFENVINPHOS    | 2/86            |

**Current Details**

|                                 |        |
|---------------------------------|--------|
| <b>Current Chemical</b>         | NONE   |
| <b>Dip bath status/contents</b> | CAPPED |

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The information contained in this web page is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of Industry & Investment NSW or the user's independent adviser.

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NSW DEPARTMENT OF PRIMARY INDUSTRIES | AGRICULTURE

Home » Animals » Health, disease and pests » Cattle health and disease » Cattle tick » Cattle dipsite locator »

**Cattle dip site locator**

**Dip site location**

|                      |                      |  |            |
|----------------------|----------------------|--|------------|
| <b>Dipname</b>       | LAUREL               | <i>Note: Map references are for 25,000 series topographic and co-ordinates are in AGD66 AMG zone 56.</i> |            |
| <b>Road</b>          | PACIFIC HIGHWAY      | <b>Mapsheets</b>   | 9640-III-N |
| <b>Town/Locality</b> | CUMBALUM VIA BALLINA | <b>Easting</b>   | 55127      |
| <b>Shire Council</b> | BALLINA              | <b>Northing</b>  | 81165      |
| <b>Parish</b>        | BALLINA              | <b>County</b>  | ROUS       |

**Dip site status**

**IMPORTANT NOTE:** Cattle dip site information provided by NSW DPI is based on our own hard copy files representing currently known data. NSW DPI is not a public consent authority for the development of land containing cattle dip sites. It is possible that the physical conditions of a cattle dip site - including soil, structures, access and usage - may have been changed due to extreme natural events or landowner and developer actions that NSW DPI cannot be aware of. For more specific and accurate status information a physical inspection should be made and enquiries should always be directed to the appropriate Shire Council.

|                   |              |                                  |        |
|-------------------|--------------|----------------------------------|--------|
| <b>Dip Status</b> | DECOMMISSION | <b>Licence/Lease Status</b>      | ACTIVE |
| <b>Land type</b>  | GOVT         | <b>Licence/Lease Expiry Date</b> |        |

Explanation of status terms

**Chemical Details**

**IMPORTANT NOTE:** Chemical history has been retrieved from a copied laboratory log. In some cases it may be confirmed by entries in the hard copy lease folder but generally the chemical record is based on this single lab document. It is possible that there are inaccuracies as well as errors made.

| Chemicals used in dip bath      | Date first used |
|---------------------------------|-----------------|
| ARSENIC                         | 7/54            |
| DDT                             | 1/61            |
| DIOXATHION                      | 10/62           |
| DIOXATHION ETHION               | 5/73            |
| DIOXATHION ETHION CHLORDIMEFORM | 11/73           |
| ETHION CHLORDIMEFORM            | 5/74            |
| PROMACYL                        | 10/85           |
| AMITRAZ                         | 11/86           |

**Current Details**

|                                 |        |
|---------------------------------|--------|
| <b>Current Chemical</b>         | NONE   |
| <b>Dip bath status/contents</b> | CAPPED |

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The information contained in this web page is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of Industry& Investment NSW or the user's independent adviser.

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**Cattle dip site locator**

**Dip site location**

|                      |                 |  |            |
|----------------------|-----------------|--|------------|
| <b>Dipname</b>       | SANDY FLAT      | <i>Note: Map references are for 25,000 series topographic and co-ordinates are in AGD66 AMG zone 56.</i> |            |
| <b>Road</b>          | SANDY FLAT ROAD | <b>Mapsheet</b>  | 9640-III-N |
| <b>Town/Locality</b> | VIA BALLINA     | <b>Easting</b>   | 55242      |
| <b>Shire Council</b> | BALLINA         | <b>Northing</b>  | 81314      |
| <b>Parish</b>        | BALLINA         | <b>County</b>  | ROUS       |

**Dip site status**

**IMPORTANT NOTE:** Cattle dip site information provided by NSW DPI is based on our own hard copy files representing currently known data. NSW DPI is not a public consent authority for the development of land containing cattle dip sites. It is possible that the physical conditions of a cattle dip site - including soil, structures, access and usage - may have been changed due to extreme natural events or landowner and developer actions that NSW DPI cannot be aware of. For more specific and accurate status information a physical inspection should be made and enquiries should always be directed to the appropriate Shire Council.

|                   |             |                                  |            |
|-------------------|-------------|----------------------------------|------------|
| <b>Dip Status</b> | DECOMM BATH | <b>Licence/Lease Status</b>      | LAPSED     |
| <b>Land type</b>  | LEASE       | <b>Licence/Lease Expiry Date</b> | 31/08/1995 |

Explanation of status terms

**Chemical Details**

**IMPORTANT NOTE:** Chemical history has been retrieved from a copied laboratory log. In some cases it may be confirmed by entries in the hard copy lease folder but generally the chemical record is based on this single lab document. It is possible that there are inaccuracies as well as errors made.

| Chemicals used in dip bath   | Date first used |
|------------------------------|-----------------|
| ARSENIC                      | 8/52            |
| DDT                          | 12/60           |
| DIOXATHION                   | 10/62           |
| DIOXATHION ETHION            | 10/72           |
| ETHION CHLORDIMEFORM         | 10/73           |
| CYPERMETHRIN CHLORFENVINPHOS | 5/84            |
| FLUMETHRIN                   | 9/90            |

**Current Details**

|                                 |        |
|---------------------------------|--------|
| <b>Current Chemical</b>         | NONE   |
| <b>Dip bath status/contents</b> | CAPPED |

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The information contained in this web page is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of Industry& Investment NSW or the user's independent adviser.



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A A

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**Summary of Licence No: 12910**

[View this licence](#) (PDF document 0 kb)

**Licence holder:** LEIGHTON CONTRACTORS PTY LIMITED

**Premises:** Ballina Bypass, Pacific Highway Upgrade  
Pacific Highway Alignment BALLINA 2460  
**LGA:** Ballina **Catchment:** Richmond

**Administrative fee:** \$35,175.00

**Status of licence:** Issued

**Licence type:** Premises

**Activity type:** Crushing, grinding or separating  
Land-based extractive activity  
Road construction

**Applications**

| Number                                  | Application type  | Current status | Date received |
|---|-------------------|----------------|---------------|
| 146115 <a href="#">View application</a> | Licence Variation | Approved       | 18 Mar 10     |
| 12910 <a href="#">View application</a>  | New Licence       | Approved       | 12 May 05     |

**Notices**

| Number                              | Issue date | Notice type            |
|-------------------------------------|------------|------------------------|
| 1112730 <a href="#">View notice</a> | 08 Apr 10  | S 58 Licence Variation |
| 1104494 <a href="#">View notice</a> | 07 Aug 09  | S 58 Licence Variation |
| 1100692 <a href="#">View notice</a> | 01 Jul 09  | S 58 Licence Variation |
| 1098023 <a href="#">View notice</a> | 20 Feb 09  | S 58 Licence Variation |
| 1091843 <a href="#">View notice</a> | 08 Sep 08  | S 58 Licence Variation |

**Annual Return Information** [information about non compliance](#)

| Start date | End date  | Date received | Non-compliance              | LBL Data           |
|------------|-----------|---------------|-----------------------------|--------------------|
| 16 Jun 09  | 15 Jun 10 | 05 Aug 10     |                             | Not subject to LBL |
| 16 Jun 08  | 15 Jun 09 | 05 Aug 09     | Yes <a href="#">Details</a> | Not subject to LBL |

23 August 2010



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**Summary of Licence No: 12710**

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**Licence holder:** GRADEX CIVIL CONTRACTORS PTY LTD

**Premises:** Gradex Civil Contractors Pty Ltd  
Newrybar Swamp Road LENNOX HEAD 2478  
**LGA:** Ballina **Catchment:** Richmond

**Administrative fee:** \$5,400.00

**Status of licence:** Issued

**Licence type:** Premises

**Activity type:** Land-based extractive activity

**Applications**

| Number                                 | Application type | Current status | Date received |
|--|------------------|----------------|---------------|
| 12710 <a href="#">View application</a> | New Licence      | Approved       | 10 May 07     |

**Notices**

| Number                              | Issue date | Notice type            |
|-------------------------------------|------------|------------------------|
| 1112246 <a href="#">View notice</a> | 23 Apr 10  | S 58 Licence Variation |

**Annual Return Information** [information about non compliance](#)

| Start date | End date  | Date received | Non-compliance              | LBL Data           |
|------------|-----------|---------------|-----------------------------|--------------------|
| 13 Jul 09  | 12 Jul 10 |               |                             | Not subject to LBL |
| 13 Jul 08  | 12 Jul 09 | 10 Sep 09     | No                          | Not subject to LBL |
| 13 Jul 07  | 12 Jul 08 | 11 Sep 08     | Yes <a href="#">Details</a> | Not subject to LBL |

23 August 2010



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Licence summary

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Summary of Licence No: 2261

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**Licence holder:** **BORAL RESOURCES (COUNTRY) PTY. LIMITED**  
**Trading as :** BORAL COUNTRY (CONCRETE AND QUARRIES)

**Premises:** BORAL COUNTRY - CONCRETE & QUARRIES  
 NORTH TEVEN ROAD TEVEN 2478  
**LGA:** Ballina **Catchment:** Richmond

**Administrative fee:** \$14,175.00

**Status of licence:** Issued

**Licence type:** Premises

**Activity type:** Crushing, grinding or separating  
 Land-based extractive activity

**Licence review:** Completed 22 Mar 10

**Notices**

| Number                              | Issue date | Notice type            |
|-------------------------------------|------------|------------------------|
| 1045873 <a href="#">View notice</a> | 09 May 05  | S 58 Licence Variation |
| 1014198 <a href="#">View notice</a> | 25 Mar 02  | S 58 Licence Variation |
| 009493 <a href="#">View notice</a>  | 13 Mar 00  | S 58 Licence Variation |
| 008841 <a href="#">View notice</a>  | 23 Nov 99  | S 58 Licence Variation |

**Annual Return Information** [information about non compliance](#)

| Start date | End date  | Date received | Non-compliance              | LBL Data           |
|------------|-----------|---------------|-----------------------------|--------------------|
| 25 Aug 08  | 24 Aug 09 | 16 Oct 09     | No                          | Not subject to LBL |
| 25 Aug 07  | 24 Aug 08 | 26 Sep 08     | No                          | Not subject to LBL |
| 25 Aug 06  | 24 Aug 07 | 02 Oct 07     | No                          | Not subject to LBL |
| 25 Aug 05  | 24 Aug 06 | 13 Oct 06     | No                          | Not subject to LBL |
| 25 Aug 04  | 24 Aug 05 | 27 Sep 05     | No                          | Not subject to LBL |
| 25 Aug 03  | 24 Aug 04 | 08 Oct 04     | No                          | Not subject to LBL |
| 25 Aug 02  | 24 Aug 03 | 07 Oct 03     | No                          | Not subject to LBL |
| 25 Aug 01  | 24 Aug 02 | 02 Oct 02     | No                          | Not subject to LBL |
| 25 Aug 00  | 24 Aug 01 | 03 Oct 01     | No                          | Not subject to LBL |
| 25 Aug 99  | 24 Aug 00 | 17 Oct 00     | Yes <a href="#">Details</a> | Not subject to LBL |

23 August 2010