

## Appendix 16

### Preliminary Contaminated Site Investigation





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# **Preliminary Contaminated Site Investigation**

## **"Riveroaks Estate", Pacific Highway, North Ballina**

(Proposed 236 Lot Residential Subdivision  
at Lots 1,2, 3 & 5 DP1074242 and part Lot 269 DP755684 on behalf  
of RAYSHIELD Pty. Ltd.)

**24 January 2008**

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Environmental Scientist, LandPartners Limited



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The report relies on information supplied by the client and on findings obtained using accepted survey and assessment methodology. Specific survey methodology is described in the relevant section of the report.

While due care was taken during field survey and report preparation, LandPartners accepts no responsibility for any omissions that may have occurred due to the nature of the survey methodology.

Conclusions to the report are professional opinions and LandPartners cannot guarantee acceptance or consent of the relevant determining/consent authorities.

This report was written by Nick Davison (Environmental Scientist) and peer reviewed by Bruce Hammond (Project Manager, LandPartners Limited). The assistance and inputs of Donald Cook (current/former landholder) are acknowledged.

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# 1. Introduction

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LandPartners Limited ("LandPartners") has been commissioned by Rayshield Pty. Ltd to undertake a Preliminary Contaminated Site Investigation of Lots 1, 2, 3 and 5 DP1074242 and part Lot 269 DP755684 Pacific Highway, North Ballina, in order to satisfy Section 6.1 of the Director-General's Requirements (DGR) regarding the proposed 236 Lot "*Riveroaks Estate*" residential subdivision, Pacific Highway, North Ballina (Fig. 1). For the purposes of this report, the aforementioned Lots are identified as the subject site (Fig. 2).

## 1.1 Objectives

The Environment Protection Authority (EPA) (1997) describes the objectives of a Preliminary Contaminated Site Investigation (PCSI) as follows:

- To identify all past and present potentially contaminating activities;
- To identify potential contaminants of concern;
- To assess and discuss the conditions within the subject land;
- To provide a preliminary assessment of the potential for site contamination on Lots 1, 3 and 5 DP1074242; and
- To assess the need for further detailed investigations.

This investigation has been conducted to assess the site's suitability for the proposed development with regard to potential land contamination issues arising from past and present land uses both within the subject site and the surrounding area.

## 1.2 Scope of Work

The scope of the work included:

- A review of available information held by relevant state and local authorities, as well as present and past landholders;
- A review of the available aerial photographic record;
- Groundwater bore/monitoring well search of Department of Natural Resources (DNR) licensed groundwater bores within 1.5 kilometres of the subject land;
- A detailed site inspection;

- A review of available published information regarding site conditions, e.g. geology sheets, soil maps and notes etc.; and
- Incorporation of these findings into a report.

Guidance considered during the preparation of this report included:

- EPA (1997) Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites;
- EPA (1998) Contaminated Sites: Guidelines for the NSW Site Auditor Scheme;
- ANZECC/NHMRC (1992): Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites; and
- NEPM (1999a) Schedule B (7b): *Guideline on Exposure Scenarios and Exposure Settings*. National Environmental Protection Council Service Corporation, Adelaide, SA.

### **1.3 Subject Land**

The subject site (Fig. 2) is located on the southern side of the Pacific Highway, approximately 1.8 km north-west of the Ballina Central Business District (CBD) on the Far North Coast of NSW. The site is formally known as Lots 1, 3 and 5 in DP1074242 and part Lot 269 DP755684 (approximately 24.26 ha) and comprises typically flat and level lands cleared primarily for agricultural purposes (cultivation and grazing) as shown in Plates 1 & 2. The site is currently zoned 2(a) - Residential in the Ballina Local Environmental Plan (BSC, 1987).



**Plate 1.** Site conditions upon Lot 1 with NW aspect



**Plate 2** Site conditions upon Lot 1 with SE aspect



The subject site fronts the Pacific Highway (~ 830 m) and adjoins neighbouring Lots 1 and 5 DP578477 to the west (~ 240 m) with Lot 2 DP1074242 bordering the subject site to the south (~ 670 m) and to the east (~ 385 m).

The proposed development entails the subdivision of Lots 1, 3 and 5 DP 1074242 to form 235 residential lots, with provisions for the establishment of a childcare centre, playing fields and retained open spaces. The proposed development will include:

- Filling of Lots 1, 3 and 5 with regard to the minimum specified 1 in 100 year flood height, however this may vary depending upon the ultimate land use (dwelling, road, park etc.);
- Construction of internal roads and a temporary access road originating from the Pacific Highway;
- Installation of critical infrastructure including mains water, mains sewer, power, telecommunications etc; and
- Construction and alteration of stormwater collection, diversion and detention infrastructure with Lots 1, 2, 3 and 5.

Earthworks will be required to divert and redirect stormwater flows entering the site through a series of engineered flow paths within the existing drainage easements of Lot 2 DP1074242, as well as a constructed floodway to direct flows during times of excessive inundation. The adaptation and enhancement of the existing altered flow paths (Plates 3 and 4) is proposed, incorporating enlargement of the western and central drains within the existing easements and the implementation of detention basins and Floodway paths.



**Plate 3.** Existing drainage line running parallel Lot 2 DP1074242 western boundary



**Plate 4.** Existing drainage path entering Lot 1 DP1074242 south-western corner



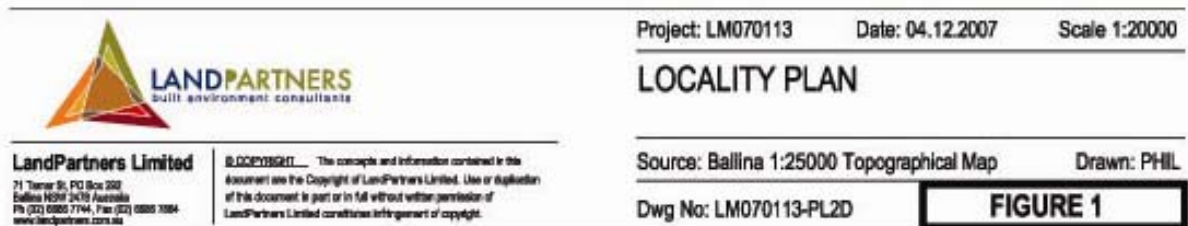
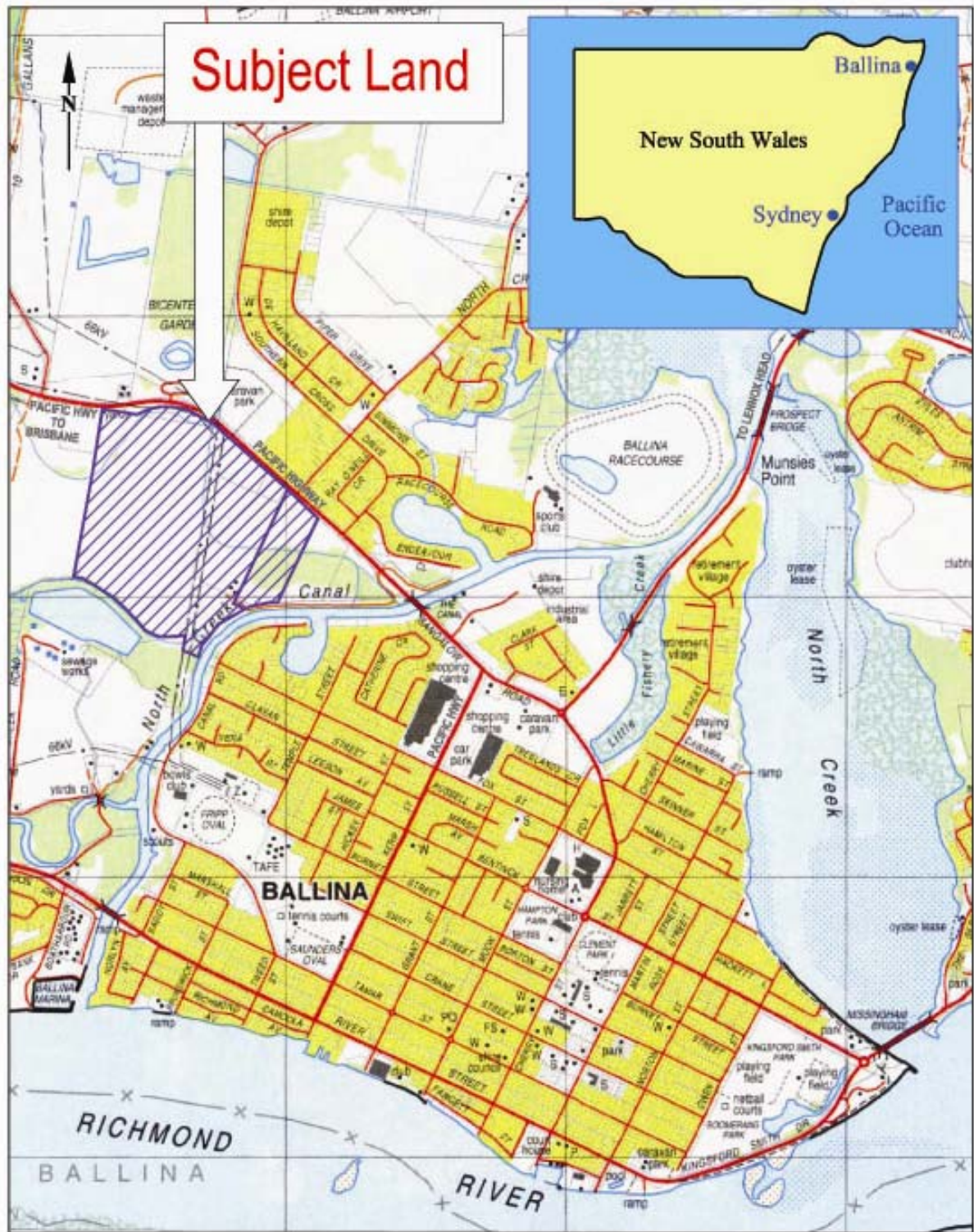
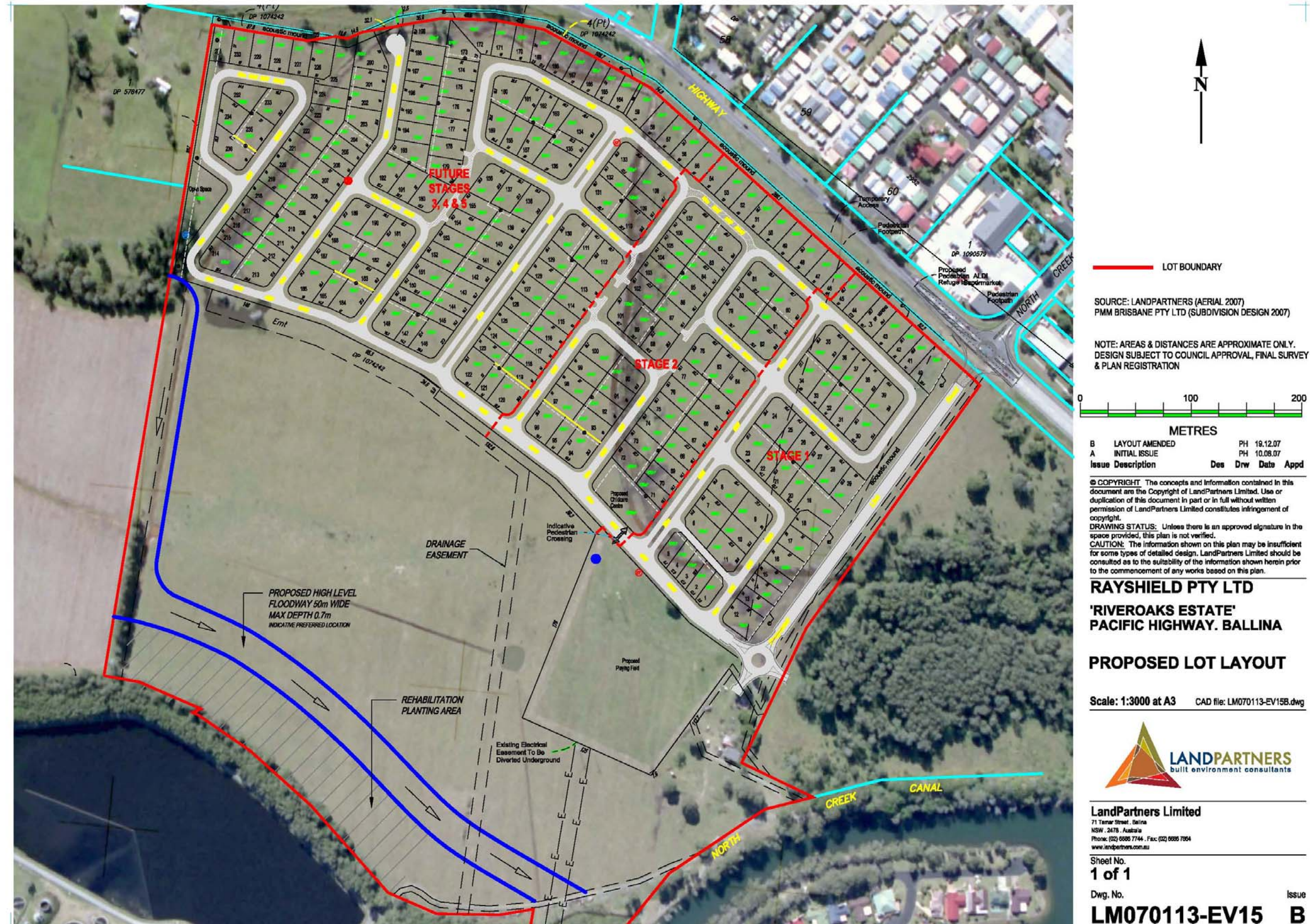


Figure 1. Site Location







**Figure 3.** Proposed Subdivision Layout



## **1.4 Limitations**

The findings of this report are based on the objectives and scope of work outlined in Sections 1.1 and 1.2. LandPartners performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental assessment profession. No warranties or guarantees expressed or implied, are given. Subject to the scope of the work, LandPartners assessment is limited strictly to identifying typical environmental conditions associated with the subject land, and does not include evaluation of any other issues. This report does not comment on any regulatory issues arising from the findings, for which a legal opinion should be sought. This report relates only to the objectives and scope of work stated, and does not relate to any other works undertaken for the client.

The report and conclusions are based on the information obtained at the time of the assessment. Changes to the subsurface conditions may occur subsequent to the investigation described herein, through natural processes or through the intentional or accidental addition of contaminants, and these conditions may change with space and time.

The site history and associated uses, areas of use, and potential contaminants were determined based on the activities described in the scope of work. Additional site information held by the client, regulatory authorities or in the public domain, which was not provided to LandPartners or was not sourced by LandPartners under the scope of work, may identify additional uses, areas of use and/or potential contaminants. The information sources referenced have been used to determine the site history and desktop information regarding local subsurface conditions. Whilst LandPartners has used reasonable care to avoid reliance on data and information that is inaccurate and unsuitable, LandPartners is not able to verify the accuracy or completeness of all information and data made available.

Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history, and which may not be expected at the site. The absence of any identified hazardous or toxic materials on the subject land should not be interpreted as a warranty or guarantee that such materials do not exist on the site. If additional certainty is required, additional site history or desktop studies, or environmental sampling and analysis should be commissioned.

The results of this assessment are based upon site inspections and fieldwork conducted by LandPartners personnel and information provided by the client. All conclusions regarding the property area are the professional opinions of the LandPartners personnel involved with the project, subject to the qualifications made above. While normal assessments of data reliability have been made, LandPartners assume no responsibility or liability for errors in any data obtained from regulatory agencies, information from sources outside of LandPartners, or developments resulting from situations outside the scope of this project.

## 2. Site Identification and Land Uses

### 2.1 Site Identification

The site location is shown in Fig. 1 with site identification and land use details provided in Table 1 below. Plates 5 and 6 (below) (in conjunction with the previous plates 1 – 4) show the current conditions of the subject site.

**Table 1.** Site Details

| Site Details          |            | Comments                                                       |
|-----------------------|------------|----------------------------------------------------------------|
| Site Address          |            | Pacific Highway, North Ballina, NSW                            |
| Property Description  |            | Lots 1, 3 and 5 DP1074242                                      |
| Local Government Area |            | Ballina                                                        |
| Current Zoning        |            | 2(a) Residential                                               |
| Elevation             |            | 0 – 2 m AHD                                                    |
| Land Use - Existing   |            | Light grazing with minimal areas of marginal native vegetation |
| Land Use - Proposed   |            | 235 Lot Residential Subdivision                                |
| Site Area             | 1//1074242 | Approx. 24.26 ha                                               |
|                       | 3//1074242 | Approx. 0.06 ha                                                |
|                       | 5//1074242 | Approx. 0.05 ha                                                |



**Plate 5.** Conditions within excavated drain exiting south-western corner of subject site



**Plate 6** Conditions within excavated drain entering subject site's south-western corner and proceeding north-east

## 2.2 Environmental Setting

### 2.2.1 Local Meteorology

A summary of climatic data obtained from the closest Bureau of Meteorology weather stations: Ballina Airport Automated Weather Station (AWS) and the Alstonville Tropical Fruit Research Station are presented in Table 2.

**Table 2.** Climatic Summary

| Month     | Temperature     |                 | Rainfall        |                  | Average Monthly Evaporation (mm) |
|-----------|-----------------|-----------------|-----------------|------------------|----------------------------------|
|           | Average Maximum | Average Minimum | Average Monthly | Decile 5 Monthly |                                  |
| January   | 28.1            | 19.5            | 146.7           | 146.6            | 180                              |
| February  | 28.0            | 19.3            | 192.2           | 156.8            | 140                              |
| March     | 26.8            | 18.0            | 217.0           | 200.4            | 133                              |
| April     | 24.9            | 15.0            | 152.3           | 149.0            | 105                              |
| May       | 22.3            | 12.2            | 183.6           | 128.8            | 84                               |
| June      | 20.2            | 9.6             | 186.8           | 149.9            | 75                               |
| July      | 19.9            | 8.6             | 123.2           | 95.8             | 84                               |
| August    | 21.0            | 8.7             | 92.5            | 66.5             | 109                              |
| September | 23.4            | 11.3            | 58.6            | 40.1             | 138                              |
| October   | 24.8            | 13.9            | 94.9            | 84.1             | 158                              |
| November  | 25.9            | 16.1            | 113.0           | 84.2             | 165                              |
| December  | 27.4            | 17.9            | 132.8           | 102.8            | 189                              |

**Notes:** Rainfall and Temperature data obtained from 1972 to 2007 from Ballina Airport AWS Latitude: 28.84 °S; Longitude: 153.56 °E; Elevation: 1 m. Evaporation data obtained from Alstonville Tropical Fruit Research Station Latitude: - 28.8521 S; Longitude: 153.4556 E; Elevation: 140.0 m. Monthly evaporation (mm/month) calculated from daily datasets (mm/day).

### 2.2.2 Topography and Hydrology

The lands of the subject site are predominantly flat with a gradual landfall away from the Pacific Highway to the south, toward adjoining Lot 2 DP1074242. Elevation ranges from 0.35 – 1.5 m AHD across the site, highest in the northern portions fronting the Pacific Highway and lowest in the low lying depressions draining the site from east to west.

Two (2) drainage channels traverse the site accepting stormwater and overland flows from the Pacific Highway at two (2) culvert crossings and directing these waters through the site in a southerly direction. A single major low lying depression dominates the drainage of the site with waters entering the site through the south-western corner and continuing north-west to the northern portion of the site adjoining the Pacific Highway before turning south east – east and exiting the site's eastern boundary.

### 2.2.3 Geology and Soils

The geological composition of the site is dominated by Quaternary estuarine alluvium overlain by and/or mixed with Quaternary (Pleistocene) sands generally of aeolian origin (Morand, 1994). The level plains of the subject site are described by Thom (1984) as sediment basins inland of the inner barrier dune system. Such basins are derived from a number of depositional processes, such as:

- Deposition by suspension from rivers and creeks;
- Washover sand deposition as extensive sheets which have been transported by storm surges across the shore zone and frontal dune ridges;
- Aeolian reworking of exposed sand surfaces to produce back- dune flats; and
- Channel-fill deposition of flood-tidal delta origin.

As depicted by Morand (1994) the subject site is wholly identified as the Aeolian soil landscape *Tyagarah* (**ty**). The **ty** landscape is described as possessing the following characteristics:

**Landscape** – sediment basins of mixed estuarine and aeolian origin forming level to gently undulating plains. Relief is < 3 m, elevation is < 5 m and slopes < 1 m. Extensively cleared open- and closed-forest.

**Soils** – deep (> 150 cm), moderately well-drained minimal Prairie Soils (Gn3.91, Gn2.81, Dd4.51) near Basaltic areas. Deep (> 150 cm), well-drained Podzols (Uc2.33, Uc2) and Acid Peats (O) near barrier systems.

**Limitations** – Very strongly acid, permeable often waterlogged soils of low fertility and low water holding capacity with localised salinity. Very localised Acid Sulfate Soils and Potential Acid Sulfate Soils generally occurring along old estuarine areas.

### 2.2.4 Hydrogeology

The subject site has been recognised as a drained Coastal Sand Bed Groundwater System, supporting wetlands, terrestrial vegetation and hypogean ecosystems. The wetlands are often referred to as groundwater windows as they indicate the groundwater levels in the surrounding sand beds and ridges (DLWC, 2002). Maintenance of the existing salt water /fresh water interface is essential in order to prevent salt water intrusion following dewatering or excessive extraction of groundwater.

A search of the NSW Department of Natural Resources groundwater bore data identified twelve (12) licensed groundwater bores within a 1.5 km radius of the site. Table 3 below gives a summary of the groundwater bore data with the available attribute data obtained for each bore provided in Appendix 1.



The majority of bores (with the exception of GW039163) were of shallow construction, extracting groundwaters from shallow, predominantly unconfined aquifers. These shallow water table heights were confirmed during borehole excavations.

Available groundwater quality data was limited with analyses of samples obtained from GW039163 recording the salinity of waters as 1001 – 3000 ppm (seawater 35000 ppm). No other data was specified.

**Table 3.** Summary of Groundwater Bore data

| Bore Number | License Number | Location                | Portion/Lot/DP | Use             | Total Depth (m) | Standing Water Level (m) | Water Bearing Zones (m) | Inferred Gradient and Approximate distance from Site Boundary |
|-------------|----------------|-------------------------|----------------|-----------------|-----------------|--------------------------|-------------------------|---------------------------------------------------------------|
| GW039163    | N/A            | 28°50'42"<br>153°33'01" | 387            | G/Water Explore | 21.90           | 1.70                     | 9.1 – 13.7              | Upgradient; 450 m north                                       |
| GW062566    | 30BL134281     | 28°51'07"<br>153°33'11" | 5//237778      | Domestic        | 7.5             | N/A                      | N/A                     | On site; north – eastern corner                               |
| GW304610    | 30BL18270      | 28°51'06"<br>153°33'12" | 2//537420      | Monitoring Bore | N/A             | N/A                      | N/A                     | On site; north – eastern corner                               |
| GW304609    | 30BL182700     | 28°51'08"<br>153°33'11" | 2//537420      | Monitoring Bore | 5.0             | 2.50                     | 3.0 – 5.0               | On site; north – eastern corner                               |
| GW305637    | 30BL181366     | 28°51'26"<br>153°33'07" | 37//259593     | Domestic        | 10.00           | N/A                      | N/A                     | Downgradient; 370 m south                                     |
| GW303361    | 30BL180128     | 28°51'29"<br>153°33'24" | 379//263137    | Domestic        | 9.0             | 2.10                     | 7.0 – 7.6               | Downgradient; 620 m south-east                                |
| GW305959    | 30BL184259     | 28°51'32"<br>153°33'36" | 1//632357      | Monitoring Bore | 4.0             | N/A                      | N/A                     | Upgradient; 950 m east-south-east                             |
| GW601295    | 30BL133015     | 28°51'33"<br>153°33'11" | 16//259953     | Domestic        | 9.5             | N/A                      | 2.0 – 9.5               | Downgradient; 620 m south-south-east                          |
| GW301922    | 30BL178644     | 28°51'33"<br>153°33'12" | 14//259953     | Domestic        | 28.0            | N/A                      | N/A                     | Downgradient; 615 m south-south-east                          |
| GW303698    | 30BL181217     | 28°51'33"<br>153°33'04" | 6//260872      | Domestic        | 10.0            | N/A                      | N/A                     | Downgradient; 500 m south                                     |
| GW073423    | 30BL176663     | 28°51'35"<br>153°33'00" | 20//814552     | Domestic        | 8.2             | N/A                      | N/A                     | Downgradient; 580 m south                                     |
| GW038565    | 30BL101031     | 28°51'09"<br>153°32'34" | 390            | Stock           | 8.20            | 3.60                     | 6.0 – 8.1               | Downgradient; 430 m south-west                                |

## **2.3 Land Uses of the Subject site**

The site has been recently cleared of all vegetation (refer Plate 7), with the exception of aquatic vegetation within constructed drainlines, and a single mature Tuckeroo. Established pasture at the site is currently utilised for grazing purposes. The dominant vegetation is best described as disturbed grazing land dominated by exotic grass (Buffalo, Paspalum) with common agricultural weed species (Scotch Thistle, Fireweed, Balloon Cotton Bush).



**Plate 7.** Cleared vegetation at the subject site

## **2.4 Surrounding Environment and Land Use**

The subject site is bounded on all sides as follows:

- To the north by the Pacific Highway Road and developed land that is zoned 4 Industrial (includes (Aldi Supermarket; Supercheap Auto etc) and the Ballina Gardens Caravan Park);
- To the south by similar cleared grazing lands (Lot 2 DP1074242) zoned 1(d) Rural (Urban Investigation);
- To the east by land zoned 1(d) Rural (Urban Investigation), 2(a) Residential (Living Area) and 7(a) Environmental Protection (Wetlands); and
- To the west by cultivated and cleared land that is zoned 1(d) Rural (Urban Investigation).

A search by the NSW Department of Primary Industries (DPI) Cattle Dip site locator website did not identify any licensed cattle tick dip sites upon the subject site. The nearest identified dip sites were NORTH CREEK and BALLINA. Table 4

below provides a summary of the available information (DPI, 2007) on both identified dip sites. A full list of details for each identified site (as provided by DPI) is available in Appendix 2. As per the guidelines recommended by the Cattle Tick Dip Site Management Advisory Committee (DIPMAC) (1995), both the located cattle tick dip sites are well outside the specified 200 m zone of influence and as such do not require further investigation as part of this assessment.

**Table 4.** Located Cattle Tick Dip Sites within the Local Area (1.5 km)

| Dipname     | Road             | Location MGA<br>GDA 94     | Status | Chemical Data            |            |
|-------------|------------------|----------------------------|--------|--------------------------|------------|
|             |                  |                            |        | Chemical                 | First Used |
| North Creek | North Creek Road | 554,710.00<br>6,808,940.00 | Lapsed | Arsenic                  | 5/54       |
|             |                  |                            |        | DDT Benzene Hexachloride | 9/60       |
|             |                  |                            |        | DDT                      | 4/61       |
|             |                  |                            |        | Dioxathion               | 10/62      |
|             |                  |                            |        | Dioxathion Ethion        | 12/72      |
|             |                  |                            |        | Ethion Chlordimeform     | 11/73      |
|             |                  |                            |        | Ethion                   | 12/76      |
| Ballina     | Canal Road       | 553,490.00<br>6,806,990.00 | Lapsed | Arsenic                  | 7/39       |
|             |                  |                            |        | DDT                      | 5/57       |
|             |                  |                            |        | Dioxathion               | 10/62      |
|             |                  |                            |        | Dioxathion Chlordimeform | 11/73      |

A search of the data available on the North Coast Comprehensive Coastal Assessment (NCCA) (DPI 2004) shows no mineral extraction or identified mineral resources both within the bounds of the subject site or within 1.5 km. The nearest identified mineral extraction activity identified is the sand extraction operations associated with the identified construction sand resource at the Ballina Airport Pit (currently not operational).

The Ballina Sewage Treatment Works (STW) site is approximately 200 m south of the southernmost portion (proposed playing fields) of Lot 1 DP 1074242. The STW is separated from the subject site by Lot 2 DP1074242 and currently discharges treated effluent into the North Creek Canal at an EPA licensed discharge point (Instrument No. - 588).

An Auto Wreckers yard (Ballina Auto Wreckers) formerly occupied Lot 2 DP537420, immediately adjacent the sites north-eastern corner. This site has now been developed into commercial premises (ALDI Supermarket; Super Cheap Auto etc).



### 3. Site History

---

#### 3.1 Historical Title Search

A search of the Historical Title record (Ezisearch, 2007) for Lot 1 DP1074242 identified the following:

|               |                  |                  |
|---------------|------------------|------------------|
| First Titles: | VOL 893 FOL 211  | VOL 3137 FOL 104 |
|               | VOL 3137 FOL 105 | VOL 6843 FOL 42  |
|               | VOL 15373 FOL 96 | VOL 15378 FOL 90 |
|               | 1/241779         | 2/1033657        |
| Prior Titles: | 1/241779         | 6/243060         |
|               | 1 - 2/527161     | 271/755684       |
|               | 422/755684       | 2/1033657        |

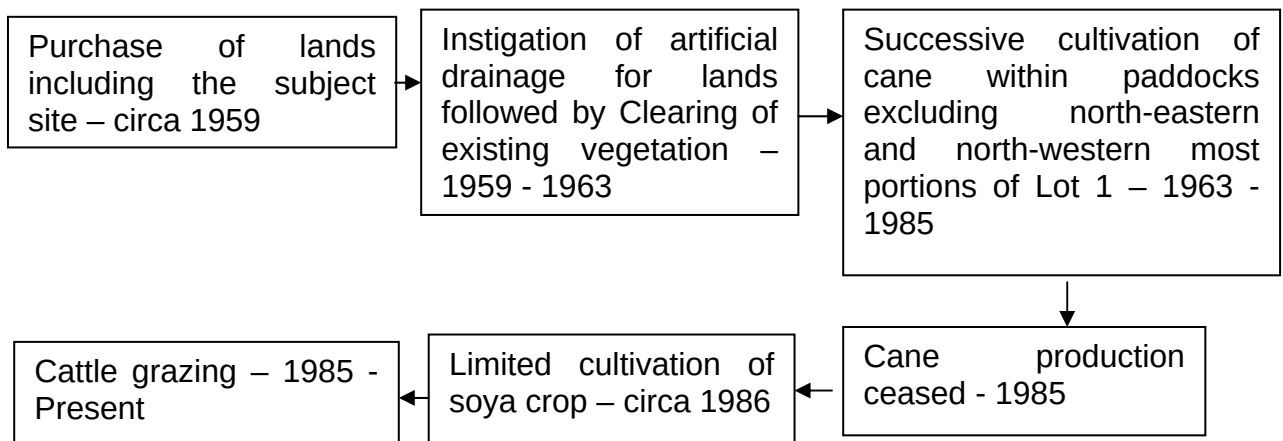
#### 3.2 EPA Register Searches

A search of the current list (EPA, 2007a) of licensed activities as per Schedule 1 of the Protection of the Environment Operations Act 1997 did not identify any licensed polluting activities occurring on the subject site. The closest identified licensed pollution point is Instrument No. 588 – Ballina Sewage Treatment Works.

A search of the Contaminated Land Record (EPA, 2007b) identified two (2) Notices (Remediation Orders) for the Ballina Shire Local Government Area (LGA); Dip 5282 Spoons and Dip 5157 Ridges. Both Site and Notice Details are provided in Appendix 3. No notices regarding the subject site were found.

#### 3.3 Interviews

An interview of previous landholder and resident/manager of Lot 2 DP1074242, Mr. Donald Thomas Cook on 20<sup>th</sup> June 2007 provided the following anecdotal site history:



Prior to the clearing activities undertaken by Mr. Cook, the lands of the subject site were described as partially inundated and well covered with established vegetation. Following drainage and clearance works, sugar cane cropping was established and subsequently cultivated on a two year rotation until ~ 1985. A limited attempt at the cultivation of Soya was made following the cessation of cane cultivation however following one cropping effort this activity was abandoned. Previously cultivated paddocks were left to grow out and were subsequently utilised for grazing purposes until present day.

### **3.4 Available Historic Aerial Photographic Record for the Subject site**

Three (3) historical aerial photographs were obtained from Department of Lands (DoL). These images (provided in Appendix 4) span a 21 year period between 1973 and 1994.

#### **3.4.1 1973 (B&W): Run XX Frames XXXX - XXXX (Scale unknown - DoL)**

The majority of the subject site has been cleared and substantially drained prior to the capture of this image. The main access to the site appears to be via the south-eastern corner, off of a dirt access track originating from the Pacific Highway (adjacent the North Creek Canal Bridge) and running parallel the Canal to the residence of Mr. Donald Cook.

Cultivation of Sugar Cane is obvious in all paddocks with the notable exceptions of the north-east corner opposite North Creek Road. Remaining vegetation is visible along the drainage lines with a small stand noted within the vacant area devoid of cane.

A single structure is evident slightly west of the North Creek Road/Pacific Highway intersection. Another access route is assumed as originating from the Pacific Highway to service this structure. The residence of Mr. Donald Cook is also visible, adjacent the south-eastern corner of the subject site.

The quality of the image does not enable the accurate identification of adjoining land uses however small sections of developed areas are evident upon the arterial roads such as North Creek Road. The use of the subject site for the cultivation of sugar cane is consistent with that of the surrounding lands.

### **3.4.2 1980 (B&W): NSW 2572 (M1079) SH10 - Grafton to Tweed Heads; Run UE17 Scale 1:10,000**

No further clearing is obviously evident with regrowth restricted to the remaining major drainage line running west to east. Access to the site still appears to be via the original points (i.e. access track entering south-east corner and via access to established house diagonally opposite North Creek Road).

Cane cultivation is still evident as the primary land use however it is difficult to discern from this image the status of the cane at this time. Several bare earth patches are obvious although the cause and nature of these disturbances are unclear.

No additional structures are evident on site with the existing structure noted in the north-east corner. Significant development of the land to the sites immediate north has occurred with a number of industrial facilities (sheds/wreckers) visible. A large open pit is seen to the north-east of the site, most likely a fill pad or worked sand pit prior to construction of industrial/commercial structures.

Again, the predominant land use of the subject site and surrounding lands is for agricultural purposes however the beginnings of the Ballina Airport Industrial Area is evident.

### **3.4.3 1994 (Colour): Run X Frame XX (Scale Unknown - DoL)**

Regrowth of vegetation has continued along the main drainage line and lands to the east of the subject site. Access to the site appears unchanged.

Cane cultivation is no longer evident with paddock remnants still discernible but no cropping visible.

The single structure located within the subject site is still visible and no other additional structures are evident. The increase in development within lands to the north is ongoing with numerous new industrial structures constructed. The Ballina STW have been constructed during the intervening period (1980 – 1994) with excavated materials from the settling ponds deposited upon lands within the south-western portion of Lot 2 DP1074242 (pers. Comments; D. Cook – 20<sup>th</sup> June 2007)

Although development of the lands north of the Pacific Highway has increased, forming the Ballina Airport Industrial Estate, the subject site and lands further west are still primarily utilised for agricultural purposes. The switch from cane cultivation to grazing is evident upon the subject site however surrounding rural properties seem to be still under crop.

### **3.5 Site Inspection**

A site inspection was conducted (18<sup>th</sup> June 2007) to visually assess and identify any potential indicators of contamination that were present on site. The site was traversed on foot, and inspected for the following:

- Areas of discoloured soil, polluted water, significant odours, and affected plant growth;
- Soil loss or depositing, and an evaluation of future erosion potential;
- The presence of stockpiled material, imported soil or fill material;
- Location of all visible features including foundations, tanks, pits, wells and bores;
- Chemical storage and transfer areas, including the presence of waste or chemical containers;
- The direction of surface water runoff from the site;
- Adjacent landuse; and
- Any differences between existing conditions and the information obtained during the site history review.

#### **3.5.1 Observations**

No chemical drums or containers were identified within the bounds of the site. There was no evidence of any chemical storage/packing sheds, small cropping, banana cultivation, livestock dips and/or spray-races within the bounds of the subject site.

No chemical odours (i.e. hydrocarbon, herbicide and pesticide odours) were detected during ground-truthing efforts.

No areas of bare earth or stressed vegetation were observed. Removal of the regrowth vegetation along the drainage line was underway with litter stored on site in windrows for future disposal.

Several head of cattle (< 25) were observed within the site. Fill materials were not observed however drain cleaning activities may have deposited some drain spoil upon the banks of the drain line during maintenance works (pers. Comments; D. Cook 20<sup>th</sup> June 2007).



## 4. Areas of Environmental Concern and Potential Contaminants of Concern

With the agricultural activities conducted on the subject lands, the potential for any Contaminants of Concern (CoC) to be present in concentrations exceeding those specified by 'Table 5 – A; Soil Investigation Levels' (as shown in Table 5) in NEPM (1999b) is minimal. These agricultural operations are considered to have provided a minor risk of site contamination and as such the need for a broad-scale soil investigation is unwarranted.

**Table 5.** Adapted from NEPM Schedule B (1) Soil Investigation Levels (mg/kg)

| Substances          | Health Investigation Levels (HILs) |      |      |      | Background Ranges |
|---------------------|------------------------------------|------|------|------|-------------------|
|                     | A                                  | D    | E    | F    |                   |
| Arsenic (total)     | 100                                | 400  | 200  | 500  | 1 - 50            |
| Chromium (VI)       | 100                                | 400  | 200  | 500  | ND                |
| Copper              | 1000                               | 4000 | 2000 | 5000 | 2 - 100           |
| Lead                | 300                                | 1200 | 600  | 1500 | 2 -200            |
| Mercury (inorganic) | 15                                 | 60   | 30   | 75   | 0.03              |
| Aldrin + Dieldrin   | 10                                 | 40   | 20   | 50   | N/A               |
| Chlordane           | 50                                 | 200  | 100  | 250  | N/A               |
| DDT + DDD + DDE     | 200                                | 800  | 400  | 1000 | N/A               |
| Heptachlor          | 10                                 | 40   | 20   | 50   | N/A               |

ND – Not Determined    N/A – Not Applicable

No industrial activities were identified on site and no storage of dangerous chemicals was recorded during the site inspection or history review. The greatest potential for contamination of the site is assessed as the migration of soil bound CoC via surface run-off and aquatic flows and the transport of dissolved (or volatile) contaminants through the soil atmosphere.

## 5. Recommendations

With no broad-scale or point source contaminating activity identified as having occurred on the subject site, the likelihood of CoC to be present in concentrations exceeding those recommended in NEPM (1999b) is considered to be minimal. A broad-scale soil sampling and analysis effort is not warranted given the results of the site history review.

As the greatest potential for contamination considered to possibly occur on site is likely to be a result of off site sources, again the likelihood of CoC to be present in concentrations exceeding NEPM (1999b) Health Investigation Levels is minimal.

## 6. Conclusion

---

In order to satisfy Section 6.2 of the Director-General's Requirements (DGR) regarding the proposed 236 Lot "*Riveroaks Estate*" residential subdivision, a Preliminary Contaminated Site Investigation (Phase 1) was undertaken in order to identify the potential for contamination of the subject lands due to historical and present land use.

A review of the available site history was carried out, in conjunction with a site inspection and an interpretation of an aerial photographic historical record. These actions were conducted in an effort to identify any land uses that may have contributed to the potential contamination of the subject lands and possibly present a Significant Risk of Harm (SROH) as a result of the activities proposed as part of the residential subdivision development.

No industrial or commercial activities were identified on site however considerable development of the lands immediately north of the subject site (Ballina Airport Industrial Estate) has occurred. Searches of notices or records held by the EPA relevant to the subject site were identified during this investigation. Two (2) former cattle tick dip sites and the Ballina Airport Pit industrial mineral extraction area were identified within the regional area however no such activity was identified upon or within approximately 1 km of the subject site.

The historical land uses identified upon the subject site were assessed to have been agricultural, predominantly cultivation and grazing activities. As a result of the site history review, no significant contaminating activity can be associated with these land uses. Therefore, neither broad-scale or targeted soil assessments including laboratory analysis are considered appropriate as contamination of the site is considered unlikely.

With the diminished potential for CoC to be present on site as a result of the activities conducted during past and present land uses, the presence of such materials in concentrations exceeding the recommended HIL is assessed as minimal.

## References

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## Appendices

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|                                                                          |           |
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## Appendix 1 Groundwater Attribute Data (NRATLAS, 2007)

# Groundwater Works Summary

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## Work Requested -- GW305637

### Works Details [\(top\)](#)

|                        |                                       |
|------------------------|---------------------------------------|
| GROUNDWATER NUMBER     | GW305637                              |
| LIC-NUM                | 30BL181366                            |
| AUTHORISED-PURPOSES    | DOMESTIC                              |
| INTENDED-PURPOSES      | DOMESTIC                              |
| WORK-TYPE              | Spear                                 |
| WORK-STATUS            | New Bore                              |
| CONSTRUCTION-METHOD    |                                       |
| OWNER-TYPE             | Private                               |
| COMMENCE-DATE          |                                       |
| COMPLETION-DATE        | 2003-03-01                            |
| FINAL-DEPTH (metres)   | 10.00                                 |
| DRILLED-DEPTH (metres) |                                       |
| CONTRACTOR-NAME        |                                       |
| DRILLER-NAME           |                                       |
| PROPERTY               | YEADON'S                              |
| GWMA                   | - LOWER MURRUMBIDGEE (D/S NARRANDERA) |
| GW-ZONE                | - MURRUMBIDGEE IRRIGATION AREA (MIA)  |
| STANDING-WATER-LEVEL   |                                       |
| SALINITY               |                                       |
| YIELD                  |                                       |

### Site Details [\(top\)](#)

|                  |                  |
|------------------|------------------|
| REGION           | 30 - NORTH COAST |
| RIVER-BASIN      |                  |
| AREA-DISTRICT    |                  |
| CMA-MAP          |                  |
| GRID-ZONE        |                  |
| SCALE            |                  |
| ELEVATION        |                  |
| ELEVATION-SOURCE |                  |
| NORTHING         | 6807684.92       |
| EASTING          | 553827.02        |
| LATITUDE         | 28 51' 26"       |
| LONGITUDE        | 153 33' 7"       |
| GS-MAP           |                  |

AMG-ZONE 56  
COORD-SOURCE Map Interpretation  
REMARK

#### Form-A [\(top\)](#)

COUNTY ROUS  
PARISH BALLINA  
PORTION-LOT-DP 37//259593

#### Licensed [\(top\)](#)

COUNTY ROUS  
PARISH BALLINA  
PORTION-LOT-DP 37 259593

#### Water Bearing Zones [\(top\)](#)

no details

#### Drillers Log [\(top\)](#)

no details

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# Groundwater Works Summary

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[Works Details](#) [Site Details](#) [Form A](#) [Licensed](#) [Construction](#) [Water Bearing Zones](#) [Drillers Log](#)

## Work Requested -- GW038565

### Works Details [\(top\)](#)

|                        |                                       |
|------------------------|---------------------------------------|
| GROUNDWATER NUMBER     | GW038565                              |
| LIC-NUM                | 30BL101031                            |
| AUTHORISED-PURPOSES    | STOCK                                 |
| INTENDED-PURPOSES      | STOCK                                 |
| WORK-TYPE              | Spear                                 |
| WORK-STATUS            | (Unknown)                             |
| CONSTRUCTION-METHOD    | Driven                                |
| OWNER-TYPE             | Private                               |
| COMMENCE-DATE          |                                       |
| COMPLETION-DATE        |                                       |
| FINAL-DEPTH (metres)   | 8.20                                  |
| DRILLED-DEPTH (metres) | 8.20                                  |
| CONTRACTOR-NAME        |                                       |
| DRILLER-NAME           |                                       |
| PROPERTY               | N/A                                   |
| GWMA                   | - LOWER MURRUMBIDGEE (D/S NARRANDERA) |
| GW-ZONE                | - MURRUMBIDGEE IRRIGATION AREA (MIA)  |
| STANDING-WATER-LEVEL   |                                       |
| SALINITY               |                                       |
| YIELD                  |                                       |

### Site Details [\(top\)](#)

|                  |                      |
|------------------|----------------------|
| REGION           | 30 - NORTH COAST     |
| RIVER-BASIN      | 203 - RICHMOND RIVER |
| AREA-DISTRICT    |                      |
| CMA-MAP          | 9640-3N              |
| GRID-ZONE        | 56/2                 |
| SCALE            | 1:25,000             |
| ELEVATION        |                      |
| ELEVATION-SOURCE | (Unknown)            |
| NORTHING         | 6808234.00           |
| EASTING          | 552953.00            |
| LATITUDE         | 28 51' 9"            |
| LONGITUDE        | 153 32' 34"          |
| GS-MAP           | 0005C4               |

AMG-ZONE 56  
 COORD-SOURCE GD.,ACC.MAP  
 REMARK

### Form-A [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP 390

### Licensed [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP 390

### Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;  
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

| HOLE-<br>NO | PIPE-<br>NO | COMPONENT-<br>CODE | COMPONENT-<br>TYPE | DEPTH-<br>FROM<br>(metres) | DEPTH-<br>TO<br>(metres) | OD<br>(mm) | ID<br>(mm) | INTERVAL | DETAIL                 |
|-------------|-------------|--------------------|--------------------|----------------------------|--------------------------|------------|------------|----------|------------------------|
| 1           | 1           | Casing             | (Unknown)          | -0.30                      | 8.20                     | 63         |            |          | Seated<br>on<br>Bottom |

### Water Bearing Zones [\(top\)](#)

| FROM-<br>DEPTH<br>(metres) | TO-<br>DEPTH<br>(metres) | THICKNESS<br>(metres) | ROCK-CAT-<br>DESC | S-<br>W-L | D-<br>D-<br>L | YIELD | TEST-<br>HOLE-<br>DEPTH<br>(metres) | DURATION | SALINITY  |
|----------------------------|--------------------------|-----------------------|-------------------|-----------|---------------|-------|-------------------------------------|----------|-----------|
| 6.00                       | 8.10                     | 2.10                  | Unconsolidated    | 3.60      |               | 0.32  |                                     |          | (Unknown) |

### Drillers Log [\(top\)](#)

| FROM | TO   | THICKNESS | DESC            | GEO-MATERIAL | COMMENT |
|------|------|-----------|-----------------|--------------|---------|
| 0.00 | 3.04 | 3.04      | Soil            |              |         |
| 3.04 | 8.22 | 5.18      | Clay Sandy Sand | Water Supply |         |

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# Groundwater Works Summary

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## Work Requested -- GW039163

### Works Details [\(top\)](#)

**GROUNDWATER NUMBER** GW039163  
**LIC-NUM**  
**AUTHORISED-PURPOSES**  
**INTENDED-PURPOSES** G/WATER XPLORE  
**WORK-TYPE** Bore  
**WORK-STATUS** Test Hole  
**CONSTRUCTION-METHOD** Rotary Mud  
**OWNER-TYPE** D.W.R. (NSW Dept Infrastructure, Planning & Nat Resources)  
**COMMENCE-DATE**  
**COMPLETION-DATE** 1976-09-01  
**FINAL-DEPTH (metres)** 21.90  
**DRILLED-DEPTH (metres)** 21.60  
**CONTRACTOR-NAME**  
**DRILLER-NAME**  
**PROPERTY**  
**GWMA**  
**GW-ZONE**  
**STANDING-WATER-LEVEL**  
**SALINITY**  
**YIELD**

### Site Details [\(top\)](#)

**REGION** 30 - NORTH COAST  
**RIVER-BASIN** 203 - RICHMOND RIVER  
**AREA-DISTRICT**  
**CMA-MAP** 9640-3N  
**GRID-ZONE** 56/2  
**SCALE** 1:25,000  
**ELEVATION**  
**ELEVATION-SOURCE** (Unknown)  
**NORTHING** 6809065.00  
**EASTING** 553685.00  
**LATITUDE** 28 50' 42"  
**LONGITUDE** 153 33' 1"  
**GS-MAP** 0005C4

AMG-ZONE 56  
 COORD-SOURCE GD.,ACC.MAP  
 REMARK

### Form-A [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP 387

### Licensed [\(top\)](#)

no details

### Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;  
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

| HOLE-<br>NO | PIPE-<br>NO | COMPONENT-<br>CODE | COMPONENT-<br>TYPE | DEPTH-<br>FROM<br>(metres) | DEPTH-<br>TO<br>(metres) | OD<br>(mm) | ID<br>(mm) | INTERVAL | DETAIL                                    |
|-------------|-------------|--------------------|--------------------|----------------------------|--------------------------|------------|------------|----------|-------------------------------------------|
| 1           | 1           | Casing             | P.V.C.             | -0.90                      | 21.00                    | 102        |            |          | (Unknown)                                 |
| 1           | 1           | Opening            | Slots              | 9.10                       | 12.10                    | 102        |            | 1        | Slotted On<br>Site; SL:<br>0mm; A:<br>0mm |

### Water Bearing Zones [\(top\)](#)

| FROM-<br>DEPTH<br>(metres) | TO-<br>DEPTH<br>(metres) | THICKNESS<br>(metres) | ROCK-CAT-<br>DESC | S-<br>W-L | D-<br>D-<br>L | YIELD | TEST-<br>HOLE-<br>DEPTH<br>(metres) | DURATION | SALINITY         |
|----------------------------|--------------------------|-----------------------|-------------------|-----------|---------------|-------|-------------------------------------|----------|------------------|
| 9.10                       | 13.70                    | 4.60                  | Unconsolidated    | 1.70      | 0.52          |       |                                     |          | 1001-3000<br>ppm |

### Drillers Log [\(top\)](#)

| FROM  | TO    | THICKNESS | DESC                 | GEO-MATERIAL | COMMENT |
|-------|-------|-----------|----------------------|--------------|---------|
| 0.00  | 0.30  | 0.30      | Topsoil              |              |         |
| 0.30  | 1.52  | 1.22      | Sand Orange          |              |         |
| 1.52  | 4.57  | 3.05      | Mud Estuarine        |              |         |
| 1.52  | 4.57  | 3.05      | Shell                |              |         |
| 4.57  | 6.10  | 1.53      | Sand Clay            |              |         |
| 4.57  | 6.10  | 1.53      | Shell                |              |         |
| 6.10  | 9.14  | 3.04      | Sand Indurated Shell |              |         |
| 9.14  | 13.72 | 4.58      | Sand Water Supply    |              |         |
| 13.72 | 21.34 | 7.62      | Clay Grey            |              |         |
| 21.34 | 21.64 | 0.30      | Basalt               |              |         |

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## Work Requested -- GW061295

### Works Details [\(top\)](#)

|                               |                                       |
|-------------------------------|---------------------------------------|
| <b>GROUNDWATER NUMBER</b>     | GW061295                              |
| <b>LIC-NUM</b>                | 30BL133015                            |
| <b>AUTHORISED-PURPOSES</b>    | DOMESTIC                              |
| <b>INTENDED-PURPOSES</b>      | DOMESTIC                              |
| <b>WORK-TYPE</b>              | Spear                                 |
| <b>WORK-STATUS</b>            | Supply Obtained                       |
| <b>CONSTRUCTION-METHOD</b>    | (Unknown)                             |
| <b>OWNER-TYPE</b>             | Private                               |
| <b>COMMENCE-DATE</b>          |                                       |
| <b>COMPLETION-DATE</b>        | 1983-03-01                            |
| <b>FINAL-DEPTH (metres)</b>   | 9.50                                  |
| <b>DRILLED-DEPTH (metres)</b> | 0.00                                  |
| <b>CONTRACTOR-NAME</b>        |                                       |
| <b>DRILLER-NAME</b>           |                                       |
| <b>PROPERTY</b>               | N/A                                   |
| <b>GWMA</b>                   | - LOWER MURRUMBIDGEE (D/S NARRANDERA) |
| <b>GW-ZONE</b>                | - MURRUMBIDGEE IRRIGATION AREA (MIA)  |
| <b>STANDING-WATER-LEVEL</b>   |                                       |
| <b>SALINITY</b>               |                                       |
| <b>YIELD</b>                  |                                       |

### Site Details [\(top\)](#)

|                         |                      |
|-------------------------|----------------------|
| <b>REGION</b>           | 30 - NORTH COAST     |
| <b>RIVER-BASIN</b>      | 203 - RICHMOND RIVER |
| <b>AREA-DISTRICT</b>    |                      |
| <b>CMA-MAP</b>          | 9640-3N              |
| <b>GRID-ZONE</b>        | 56/2                 |
| <b>SCALE</b>            | 1:25,000             |
| <b>ELEVATION</b>        |                      |
| <b>ELEVATION-SOURCE</b> | (Unknown)            |
| <b>NORTHING</b>         | 6807475.00           |
| <b>EASTING</b>          | 553930.00            |
| <b>LATITUDE</b>         | 28 51' 33"           |
| <b>LONGITUDE</b>        | 153 33' 11"          |
| <b>GS-MAP</b>           | 0005C4               |

AMG-ZONE 56  
 COORD-SOURCE GD.,ACC.MAP  
 REMARK

### Form-A [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP L16 DP259593 (99999)

### Licensed [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP 16 259593

### Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;  
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

| HOLE-<br>NO | PIPE-<br>NO | COMPONENT-<br>CODE | COMPONENT-<br>TYPE | DEPTH-<br>FROM<br>(metres) | DEPTH-<br>TO<br>(metres) | OD<br>(mm) | ID<br>(mm) | INTERVAL | DETAIL                                         |
|-------------|-------------|--------------------|--------------------|----------------------------|--------------------------|------------|------------|----------|------------------------------------------------|
| 1           | 1           | Casing             | (Unknown)          | 0.00                       | 0.00                     | 75         |            |          | Driven into<br>Hole                            |
| 1           | 1           | Opening            | Slots              |                            | 0.00                     | 0          |            | 1        | Mechanically<br>Slotted; SL:<br>0mm; A:<br>0mm |

### Water Bearing Zones [\(top\)](#)

| FROM-<br>DEPTH<br>(metres) | TO-<br>DEPTH<br>(metres) | THICKNESS<br>(metres) | ROCK-<br>CAT-DESC | S-<br>W-<br>L | D-<br>D-<br>L | YIELD | TEST-<br>HOLE-<br>DEPTH<br>(metres) | DURATION | SALINITY  |
|----------------------------|--------------------------|-----------------------|-------------------|---------------|---------------|-------|-------------------------------------|----------|-----------|
| 2.00                       | 9.50                     | 7.50                  | (Unknown)         |               |               |       |                                     |          | (Unknown) |

### Drillers Log [\(top\)](#)

no details

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# Groundwater Works Summary

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## Work Requested -- GW062566

### Works Details [\(top\)](#)

|                        |                                       |
|------------------------|---------------------------------------|
| GROUNDWATER NUMBER     | GW062566                              |
| LIC-NUM                | 30BL134281                            |
| AUTHORISED-PURPOSES    | DOMESTIC                              |
| INTENDED-PURPOSES      | GENERAL USE                           |
| WORK-TYPE              | Spear                                 |
| WORK-STATUS            | Supply Obtained                       |
| CONSTRUCTION-METHOD    | Hand Dug                              |
| OWNER-TYPE             | Private                               |
| COMMENCE-DATE          |                                       |
| COMPLETION-DATE        |                                       |
| FINAL-DEPTH (metres)   | 7.50                                  |
| DRILLED-DEPTH (metres) | 7.50                                  |
| CONTRACTOR-NAME        |                                       |
| DRILLER-NAME           |                                       |
| PROPERTY               | N/A                                   |
| GWMA                   | - LOWER MURRUMBIDGEE (D/S NARRANDERA) |
| GW-ZONE                | - MURRUMBIDGEE IRRIGATION AREA (MIA)  |
| STANDING-WATER-LEVEL   |                                       |
| SALINITY               |                                       |
| YIELD                  |                                       |

### Site Details [\(top\)](#)

|                  |                      |
|------------------|----------------------|
| REGION           | 30 - NORTH COAST     |
| RIVER-BASIN      | 203 - RICHMOND RIVER |
| AREA-DISTRICT    |                      |
| CMA-MAP          | 9640-3N              |
| GRID-ZONE        | 56/2                 |
| SCALE            | 1:25,000             |
| ELEVATION        |                      |
| ELEVATION-SOURCE | (Unknown)            |
| NORTHING         | 6808275.00           |
| EASTING          | 553945.00            |
| LATITUDE         | 28 51' 7"            |
| LONGITUDE        | 153 33' 11"          |
| GS-MAP           | 0005C4               |



AMG-ZONE 56  
COORD-SOURCE GD.,ACC.MAP  
REMARK

### Form-A [\(top\)](#)

COUNTY ROUS  
PARISH BALLINA  
PORTION-LOT-DP L5 DP237778 (388)

### Licensed [\(top\)](#)

COUNTY ROUS  
PARISH BALLINA  
PORTION-LOT-DP 5 237778

### Water Bearing Zones [\(top\)](#)

no details

### Drillers Log [\(top\)](#)

| FROM | TO   | THICKNESS | DESC | GEO-MATERIAL | COMMENT |
|------|------|-----------|------|--------------|---------|
| 0.00 | 7.50 | 7.50      |      | Sand         |         |

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## Work Requested -- GW073423

### Works Details [\(top\)](#)

|                        |                                       |
|------------------------|---------------------------------------|
| GROUNDWATER NUMBER     | GW073423                              |
| LIC-NUM                | 30BL176663                            |
| AUTHORISED-PURPOSES    | DOMESTIC                              |
| INTENDED-PURPOSES      | DOMESTIC                              |
| WORK-TYPE              | Spear                                 |
| WORK-STATUS            | (Unknown)                             |
| CONSTRUCTION-METHOD    | Auger                                 |
| OWNER-TYPE             | Private                               |
| COMMENCE-DATE          |                                       |
| COMPLETION-DATE        | 1995-01-31                            |
| FINAL-DEPTH (metres)   | 8.20                                  |
| DRILLED-DEPTH (metres) | 0.00                                  |
| CONTRACTOR-NAME        |                                       |
| DRILLER-NAME           |                                       |
| PROPERTY               | WHITE'S                               |
| GWMA                   | - LOWER MURRUMBIDGEE (D/S NARRANDERA) |
| GW-ZONE                | - MURRUMBIDGEE IRRIGATION AREA (MIA)  |
| STANDING-WATER-LEVEL   |                                       |
| SALINITY               |                                       |
| YIELD                  |                                       |

### Site Details [\(top\)](#)

|                  |                      |
|------------------|----------------------|
| REGION           | 30 - NORTH COAST     |
| RIVER-BASIN      | 203 - RICHMOND RIVER |
| AREA-DISTRICT    |                      |
| CMA-MAP          | 9640-3N              |
| GRID-ZONE        | 56/2                 |
| SCALE            | 1:25,000             |
| ELEVATION        |                      |
| ELEVATION-SOURCE |                      |
| NORTHING         | 6807427.90           |
| EASTING          | 553648.50            |
| LATITUDE         | 28 51' 35"           |
| LONGITUDE        | 153 33' 0"           |
| GS-MAP           |                      |

AMG-ZONE 56  
COORD-SOURCE GD.,ACC.GIS  
REMARK

### Form-A [\(top\)](#)

COUNTY ROUS  
PARISH BALLINA  
PORTION-LOT-DP LOT 20 DP814552

### Licensed [\(top\)](#)

COUNTY ROUS  
PARISH BALLINA  
PORTION-LOT-DP 20 814552

### Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;  
ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

| HOLE-<br>NO | PIPE-<br>NO | COMPONENT-<br>CODE | COMPONENT-<br>TYPE | DEPTH-<br>FROM<br>(metres) | DEPTH-<br>TO<br>(metres) | OD<br>(mm) | ID<br>(mm) | INTERVAL | DETAIL      |
|-------------|-------------|--------------------|--------------------|----------------------------|--------------------------|------------|------------|----------|-------------|
| 1           |             | Hole               | Hole               | 0.00                       | 8.20                     |            |            |          | Hand<br>Dug |
| 1           | 1           | Casing             | Lining             | 0.00                       | 7.00                     |            |            |          |             |

### Water Bearing Zones [\(top\)](#)

no details

### Drillers Log [\(top\)](#)

no details

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## Work Requested -- GW301922

### Works Details [\(top\)](#)

|                        |                                       |
|------------------------|---------------------------------------|
| GROUNDWATER NUMBER     | GW301922                              |
| LIC-NUM                | 30BL178644                            |
| AUTHORISED-PURPOSES    | DOMESTIC                              |
| INTENDED-PURPOSES      | DOMESTIC                              |
| WORK-TYPE              | Bore                                  |
| WORK-STATUS            | (Unknown)                             |
| CONSTRUCTION-METHOD    |                                       |
| OWNER-TYPE             |                                       |
| COMMENCE-DATE          |                                       |
| COMPLETION-DATE        |                                       |
| FINAL-DEPTH (metres)   | 28.00                                 |
| DRILLED-DEPTH (metres) |                                       |
| CONTRACTOR-NAME        |                                       |
| DRILLER-NAME           |                                       |
| PROPERTY               | " NELSON'S "                          |
| GWMA                   | - LOWER MURRUMBIDGEE (D/S NARRANDERA) |
| GW-ZONE                | - MURRUMBIDGEE IRRIGATION AREA (MIA)  |
| STANDING-WATER-LEVEL   |                                       |
| SALINITY               |                                       |
| YIELD                  |                                       |

### Site Details [\(top\)](#)

|                  |                  |
|------------------|------------------|
| REGION           | 30 - NORTH COAST |
| RIVER-BASIN      |                  |
| AREA-DISTRICT    |                  |
| CMA-MAP          |                  |
| GRID-ZONE        |                  |
| SCALE            |                  |
| ELEVATION        |                  |
| ELEVATION-SOURCE |                  |
| NORTHING         | 6807486.00       |
| EASTING          | 553961.00        |
| LATITUDE         | 28 51' 33"       |
| LONGITUDE        | 153 33' 12"      |
| GS-MAP           |                  |

AMG-ZONE 56  
COORD-SOURCE  
REMARK

### Form-A [\(top\)](#)

no details

### Licensed [\(top\)](#)

COUNTY ROUS  
PARISH BALLINA  
PORTION-LOT-DP 14 259593

### Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;  
ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

| HOLE-<br>NO | PIPE-<br>NO | COMPONENT-<br>CODE | COMPONENT-<br>TYPE | DEPTH-<br>FROM<br>(metres) | DEPTH-<br>TO<br>(metres) | OD<br>(mm) | ID<br>(mm) | INTERVAL | DETAIL |
|-------------|-------------|--------------------|--------------------|----------------------------|--------------------------|------------|------------|----------|--------|
| 1           | 1           | Casing             | P.V.C.             | 0.00                       | 28.00                    | 100        |            |          |        |

### Water Bearing Zones [\(top\)](#)

no details

### Drillers Log [\(top\)](#)

no details

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## Work Requested -- GW303361

### Works Details [\(top\)](#)

|                        |                                       |
|------------------------|---------------------------------------|
| GROUNDWATER NUMBER     | GW303361                              |
| LIC-NUM                | 30BL180128                            |
| AUTHORISED-PURPOSES    | DOMESTIC                              |
| INTENDED-PURPOSES      | DOMESTIC                              |
| WORK-TYPE              | Bore                                  |
| WORK-STATUS            |                                       |
| CONSTRUCTION-METHOD    |                                       |
| OWNER-TYPE             |                                       |
| COMMENCE-DATE          |                                       |
| COMPLETION-DATE        | 2002-07-04                            |
| FINAL-DEPTH (metres)   | 9.00                                  |
| DRILLED-DEPTH (metres) | 9.00                                  |
| CONTRACTOR-NAME        |                                       |
| DRILLER-NAME           |                                       |
| PROPERTY               | CUCILOVIC'S                           |
| GWMA                   | - LOWER MURRUMBIDGEE (D/S NARRANDERA) |
| GW-ZONE                | - MURRUMBIDGEE IRRIGATION AREA (MIA)  |
| STANDING-WATER-LEVEL   |                                       |
| SALINITY               |                                       |
| YIELD                  |                                       |

### Site Details [\(top\)](#)

|                  |                  |
|------------------|------------------|
| REGION           | 30 - NORTH COAST |
| RIVER-BASIN      |                  |
| AREA-DISTRICT    |                  |
| CMA-MAP          |                  |
| GRID-ZONE        |                  |
| SCALE            |                  |
| ELEVATION        |                  |
| ELEVATION-SOURCE |                  |
| NORTHING         | 6807606.00       |
| EASTING          | 554289.00        |
| LATITUDE         | 28 51' 29"       |
| LONGITUDE        | 153 33' 24"      |
| GS-MAP           |                  |

AMG-ZONE 56  
 COORD-SOURCE Map Interpretation  
 REMARK

### Form-A [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP LT 379 DP 263137

### Licensed [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP 379 263137

### Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;  
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

| HOLE-<br>NO | PIPE-<br>NO | COMPONENT-<br>CODE | COMPONENT-<br>TYPE | DEPTH-<br>FROM<br>(metres) | DEPTH-<br>TO<br>(metres) | OD<br>(mm) | ID<br>(mm) | INTERVAL | DETAIL                            |
|-------------|-------------|--------------------|--------------------|----------------------------|--------------------------|------------|------------|----------|-----------------------------------|
| 1           |             | Hole               | Hole               | 0.00                       | 9.00                     | 115        |            |          | Rotary                            |
| 1           | 1           | Casing             | PVC Class 12       | -0.03                      | 3.50                     | 115        | 103        |          | (Unknown);<br>Driven into<br>Hole |
| 1           | 1           | Opening            | Slots              | 7.00                       | 7.60                     | 50         |            |          | PVC Class<br>12                   |

### Water Bearing Zones [\(top\)](#)

| FROM-<br>DEPTH<br>(metres) | TO-<br>DEPTH<br>(metres) | THICKNESS<br>(metres) | ROCK-<br>CAT-<br>DESC | S-<br>W-L | D-<br>D-L | YIELD | TEST-<br>HOLE-<br>DEPTH<br>(metres) | DURATION | SALINITY |
|----------------------------|--------------------------|-----------------------|-----------------------|-----------|-----------|-------|-------------------------------------|----------|----------|
| 7.00                       | 7.60                     | 0.60                  |                       | 2.10      | 2.10      | 0.60  | 7.60                                | 1.00     |          |

### Drillers Log [\(top\)](#)

| FROM | TO   | THICKNESS | DESC                    | GEO-MATERIAL | COMMENT |
|------|------|-----------|-------------------------|--------------|---------|
| 0.00 | 2.00 | 2.00      | Light Fill              |              |         |
| 2.00 | 8.50 | 6.50      | Part Black Puggy        |              |         |
| 8.50 | 9.00 | 0.50      | Free Flowing Sand Light |              |         |

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## Work Requested -- GW303698

### Works Details [\(top\)](#)

|                        |                                       |
|------------------------|---------------------------------------|
| GROUNDWATER NUMBER     | GW303698                              |
| LIC-NUM                | 30BL181217                            |
| AUTHORISED-PURPOSES    | DOMESTIC                              |
| INTENDED-PURPOSES      | DOMESTIC                              |
| WORK-TYPE              | Bore                                  |
| WORK-STATUS            |                                       |
| CONSTRUCTION-METHOD    |                                       |
| OWNER-TYPE             |                                       |
| COMMENCE-DATE          |                                       |
| COMPLETION-DATE        | 2002-12-23                            |
| FINAL-DEPTH (metres)   | 10.00                                 |
| DRILLED-DEPTH (metres) |                                       |
| CONTRACTOR-NAME        |                                       |
| DRILLER-NAME           |                                       |
| PROPERTY               | LEGGE'S                               |
| GWMA                   | - LOWER MURRUMBIDGEE (D/S NARRANDERA) |
| GW-ZONE                | - MURRUMBIDGEE IRRIGATION AREA (MIA)  |
| STANDING-WATER-LEVEL   | 3.00                                  |
| SALINITY               |                                       |
| YIELD                  |                                       |

### Site Details [\(top\)](#)

|                  |                  |
|------------------|------------------|
| REGION           | 30 - NORTH COAST |
| RIVER-BASIN      |                  |
| AREA-DISTRICT    |                  |
| CMA-MAP          |                  |
| GRID-ZONE        |                  |
| SCALE            |                  |
| ELEVATION        |                  |
| ELEVATION-SOURCE |                  |
| NORTHING         | 6807483.00       |
| EASTING          | 553739.00        |
| LATITUDE         | 28 51' 33"       |
| LONGITUDE        | 153 33' 4"       |
| GS-MAP           |                  |

**AMG-ZONE** 56  
**COORD-SOURCE** Map Interpretation  
**REMARK**

### Form-A [\(top\)](#)

**COUNTY** ROUS  
**PARISH** BALLINA  
**PORTION-LOT-DP** LT 6 DP 260872

### Licensed [\(top\)](#)

**COUNTY** ROUS  
**PARISH** BALLINA  
**PORTION-LOT-DP** 6 260872

### Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;  
ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

| HOLE-<br>NO | PIPE-<br>NO | COMPONENT-<br>CODE | COMPONENT-<br>TYPE | DEPTH-<br>FROM<br>(metres) | DEPTH-<br>TO<br>(metres) | OD<br>(mm) | ID<br>(mm) | INTERVAL | DETAIL    |
|-------------|-------------|--------------------|--------------------|----------------------------|--------------------------|------------|------------|----------|-----------|
| 1           |             | Hole               | Hole               | 0.00                       | 10.00                    | 100        |            |          | (Unknown) |
| 1           | 1           | Casing             | P.V.C.             | 0.00                       | 7.00                     | 100        |            |          |           |

### Water Bearing Zones [\(top\)](#)

no details

### Drillers Log [\(top\)](#)

no details

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## Work Requested -- GW304609

### Works Details [\(top\)](#)

|                        |                                       |
|------------------------|---------------------------------------|
| GROUNDWATER NUMBER     | GW304609                              |
| LIC-NUM                | 30BL182700                            |
| AUTHORISED-PURPOSES    | MONITORING BORE                       |
| INTENDED-PURPOSES      | MONITORING BORE                       |
| WORK-TYPE              | Bore                                  |
| WORK-STATUS            |                                       |
| CONSTRUCTION-METHOD    | Auger - Hollow Flight                 |
| OWNER-TYPE             | Private                               |
| COMMENCE-DATE          |                                       |
| COMPLETION-DATE        | 2004-03-03                            |
| FINAL-DEPTH (metres)   | 5.00                                  |
| DRILLED-DEPTH (metres) | 5.00                                  |
| CONTRACTOR-NAME        |                                       |
| DRILLER-NAME           |                                       |
| PROPERTY               | JESTERMOND PTY LTD                    |
| GWMA                   | - LOWER MURRUMBIDGEE (D/S NARRANDERA) |
| GW-ZONE                | - MURRUMBIDGEE IRRIGATION AREA (MIA)  |
| STANDING-WATER-LEVEL   | 2.50                                  |
| SALINITY               |                                       |
| YIELD                  |                                       |

### Site Details [\(top\)](#)

|                  |                      |
|------------------|----------------------|
| REGION           | 30 - NORTH COAST     |
| RIVER-BASIN      | 203 - RICHMOND RIVER |
| AREA-DISTRICT    |                      |
| CMA-MAP          |                      |
| GRID-ZONE        |                      |
| SCALE            |                      |
| ELEVATION        |                      |
| ELEVATION-SOURCE | (Unknown)            |
| NORTHING         | 6808240.00           |
| EASTING          | 553933.00            |
| LATITUDE         | 28 51' 8"            |
| LONGITUDE        | 153 33' 11"          |
| GS-MAP           |                      |

AMG-ZONE 56  
 COORD-SOURCE GPS - Global Positioning System  
 REMARK

### Form-A [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP LT2 DP537420

### Licensed [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP 2 537420

### Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;  
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

| HOLE-<br>NO | PIPE-<br>NO | COMPONENT-<br>CODE | COMPONENT-<br>TYPE | DEPTH-<br>FROM<br>(metres) | DEPTH-<br>TO<br>(metres) | OD<br>(mm) | ID<br>(mm) | INTERVAL | DETAIL                                          |
|-------------|-------------|--------------------|--------------------|----------------------------|--------------------------|------------|------------|----------|-------------------------------------------------|
| 1           |             | Hole               | Hole               | 0.00                       | 5.00                     | 175        |            |          | Auger -<br>Hollow<br>Flight                     |
| 1           | 1           | Opening            | Slots              | 2.00                       | 5.00                     | 50         |            |          | PVC Class<br>18; Casing<br>- Machine<br>Slotted |
| 1           |             | Annulus            | (Unknown)          | 1.50                       | 5.00                     |            |            |          | Graded;<br>GS: 1.5-<br>3mm                      |

### Water Bearing Zones [\(top\)](#)

| FROM-<br>DEPTH<br>(metres) | TO-DEPTH<br>(metres) | THICKNESS<br>(metres) | ROCK-<br>CAT-<br>DESC | S-<br>W-L | D-<br>D-<br>L | YIELD | TEST-HOLE-<br>DEPTH<br>(metres) | DURATION | SALINITY |
|----------------------------|----------------------|-----------------------|-----------------------|-----------|---------------|-------|---------------------------------|----------|----------|
| 3.00                       | 5.00                 | 2.00                  |                       | 2.50      |               |       |                                 |          |          |

### Drillers Log [\(top\)](#)

| FROM | TO   | THICKNESS | DESC                   | GEO-MATERIAL | COMMENT |
|------|------|-----------|------------------------|--------------|---------|
| 0.00 | 5.00 | 5.00      | SAND COARSE, LOOSE WET |              |         |

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## Work Requested -- GW304610

### Works Details [\(top\)](#)

GROUNDWATER NUMBER GW304610  
LIC-NUM 30BL182700  
AUTHORISED-PURPOSES MONITORING BORE  
INTENDED-PURPOSES  
WORK-TYPE Bore  
WORK-STATUS  
CONSTRUCTION-METHOD  
OWNER-TYPE  
COMMENCE-DATE  
COMPLETION-DATE 2004-04-07  
FINAL-DEPTH (metres)  
DRILLED-DEPTH (metres)  
CONTRACTOR-NAME  
DRILLER-NAME  
PROPERTY JESTERMOND PTY LTD  
GWMA - LOWER MURRUMBIDGEE (D/S NARRANDERA)  
GW-ZONE - MURRUMBIDGEE IRRIGATION AREA (MIA)  
STANDING-WATER-LEVEL  
SALINITY  
YIELD

### Site Details [\(top\)](#)

REGION 30 - NORTH COAST  
RIVER-BASIN  
AREA-DISTRICT  
CMA-MAP  
GRID-ZONE  
SCALE  
ELEVATION  
ELEVATION-SOURCE  
NORTHING 6808328.00  
EASTING 553948.00  
LATITUDE 28 51' 6"  
LONGITUDE 153 33' 12"  
GS-MAP

AMG-ZONE 56  
COORD-SOURCE GPS - Global Positioning System  
REMARK

### Form-A [\(top\)](#)

COUNTY ROUS  
PARISH BALLINA  
PORTION-LOT-DP LT 2 DP 537420

### Licensed [\(top\)](#)

COUNTY ROUS  
PARISH BALLINA  
PORTION-LOT-DP 2 537420

### Water Bearing Zones [\(top\)](#)

no details

### Drillers Log [\(top\)](#)

no details

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## Work Requested -- GW305959

### Works Details [\(top\)](#)

|                        |                                       |
|------------------------|---------------------------------------|
| GROUNDWATER NUMBER     | GW305959                              |
| LIC-NUM                | 30BL184259                            |
| AUTHORISED-PURPOSES    | MONITORING BORE                       |
| INTENDED-PURPOSES      | MONITORING BORE                       |
| WORK-TYPE              | Well                                  |
| WORK-STATUS            | New Bore                              |
| CONSTRUCTION-METHOD    |                                       |
| OWNER-TYPE             | Private                               |
| COMMENCE-DATE          |                                       |
| COMPLETION-DATE        | 2006-11-03                            |
| FINAL-DEPTH (metres)   | 4.00                                  |
| DRILLED-DEPTH (metres) | 4.00                                  |
| CONTRACTOR-NAME        |                                       |
| DRILLER-NAME           |                                       |
| PROPERTY               | AMPOL PIED PIPER SERVICE STATI        |
| GWMA                   | - LOWER MURRUMBIDGEE (D/S NARRANDERA) |
| GW-ZONE                | - MURRUMBIDGEE IRRIGATION AREA (MIA)  |
| STANDING-WATER-LEVEL   | 1.00                                  |
| SALINITY               |                                       |
| YIELD                  |                                       |

### Site Details [\(top\)](#)

|                  |                  |
|------------------|------------------|
| REGION           | 30 - NORTH COAST |
| RIVER-BASIN      |                  |
| AREA-DISTRICT    |                  |
| CMA-MAP          |                  |
| GRID-ZONE        |                  |
| SCALE            |                  |
| ELEVATION        |                  |
| ELEVATION-SOURCE |                  |
| NORTHING         | 6807506.70       |
| EASTING          | 554605.82        |
| LATITUDE         | 28 51' 32"       |
| LONGITUDE        | 153 33' 36"      |
| GS-MAP           |                  |



AMG-ZONE 56  
 COORD-SOURCE  
 REMARK

### Form-A [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP 1//632357

### Licensed [\(top\)](#)

COUNTY ROUS  
 PARISH BALLINA  
 PORTION-LOT-DP 1 632357

### Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;  
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

| HOLE-<br>NO | PIPE-<br>NO | COMPONENT-<br>CODE | COMPONENT-<br>TYPE | DEPTH-<br>FROM<br>(metres) | DEPTH-<br>TO<br>(metres) | OD<br>(mm) | ID<br>(mm) | INTERVAL | DETAIL |
|-------------|-------------|--------------------|--------------------|----------------------------|--------------------------|------------|------------|----------|--------|
| 1           |             | Hole               | Hole               | 0.00                       | 4.00                     | 60         |            |          |        |
| 1           | 1           | Backfill           | Cement grout       | 0.00                       | 1.00                     |            |            |          |        |

### Water Bearing Zones [\(top\)](#)

no details

### Drillers Log [\(top\)](#)

| FROM | TO   | THICKNESS | DESC                      | GEO-MATERIAL | COMMENT |
|------|------|-----------|---------------------------|--------------|---------|
| 0.00 | 0.10 | 0.10      | concrete                  |              |         |
| 0.10 | 0.50 | 0.40      | gravelly clay dk brw / or |              |         |
| 0.50 | 1.90 | 1.40      | sand light yellow grey    |              |         |
| 1.90 | 4.00 | 2.10      | sand grey water at 1.8m   |              |         |

---

Warning To Clients: This raw data has been supplied to the Department of Infrastructure, Planning and Natural Resources (DIPNR) by drillers, licensees and other sources. The DIPNR does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

## Appendix 2 Identified Dip Site Details (DPI, 2007)



[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>         | BALLINA    | <i>Note: Map references are for 25,000 series coordinates are in AGD66 AMG zone 56.</i> |            |
| <b>Road</b>            | CANAL ROAD | <b>Mapsheets</b>                                                                        | 9640-III-N |
| <b>Town / Locality</b> | BALLINA    | <b>Easting</b>                                                                          | 55349      |
| <b>Shire Council</b>   | BALLINA    | <b>Northings</b>                                                                        | 80699      |
| <b>Parish</b>          | BALLINA    | <b>County</b>                                                                           | ROUS       |

### Dip site status

|                   |            |                                    |        |
|-------------------|------------|------------------------------------|--------|
| <b>Dip Status</b> | DEMOLISHED | <b>Licence / Lease Status</b>      | LAPSED |
| <b>Land type</b>  | GOVT       | <b>Licence / Lease Expiry Date</b> |        |

[Explanation of status terms](#)

### Chemical Details

| Chemicals used in dip bath | Date first used |
|----------------------------|-----------------|
| ARSENIC                    | 7/39            |
| DDT                        | 5/57            |
| DIOXATHION                 | 10/62           |
| DIOXATHION CHLORDIMEFORM   | 11/73           |

### Current Details

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

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



[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>         | NORTH CREEK      | <i>Note: Map references are for 25,000 series coordinates are in AGD66 AMG zone 56.</i> |            |
| <b>Road</b>            | NORTH CREEK ROAD | <b>Mapsheets</b>                                                                        | 9640-III-N |
| <b>Town / Locality</b> | BALLINA          | <b>Easting</b>                                                                          | 55471      |
| <b>Shire Council</b>   | BALLINA          | <b>Northing</b>                                                                         | 80894      |
| <b>Parish</b>          | BALLINA          | <b>County</b>                                                                           | ROUS       |

### Dip site status

|                   |            |                                    |            |
|-------------------|------------|------------------------------------|------------|
| <b>Dip Status</b> | DEMOLISHED | <b>Licence / Lease Status</b>      | LAPSED     |
| <b>Land type</b>  | LEASE      | <b>Licence / Lease Expiry Date</b> | 31/12/1986 |

[Explanation of status terms](#)

### Chemical Details

| Chemicals used in dip bath | Date first used |
|----------------------------|-----------------|
| ARSENIC                    | 5/54            |
| DDT BENZENE HEXACHLORIDE   | 9/60            |
| DDT                        | 4/61            |
| DIOXATHION                 | 10/62           |
| DIOXATHION ETHION          | 12/72           |
| ETHION CHLORDIMEFORM       | 11/73           |
| ETHION                     | 12/76           |

### Current Details

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

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

## **Appendix 3 Additional Documentation**

- 1) Title Search
- 2) Historical Title Search
- 3) Contaminated Land Record Notices

Information Provided Through  
RUDOV & ASSOCIATES P/L  
Ph. 0292678865 Fax. 0292676617

# Title Search

**EziSearch**  
An Approved LPI NSW  
Information Broker

## LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/1074242

| SEARCH DATE | TIME    | EDITION NO | DATE       |
|-------------|---------|------------|------------|
| 22/6/2007   | 2:57 PM | 2          | 10/10/2005 |

LAND

LOT 1 IN DEPOSITED PLAN 1074242  
AT BALLINA  
LOCAL GOVERNMENT AREA BALLINA  
PARISH OF BALLINA COUNTY OF ROUS  
TITLE DIAGRAM DP1074242

FIRST SCHEDULE

RAYSHIELD PTY LIMITED

(T AB825252)

SECOND SCHEDULE (14 NOTIFICATIONS)

- 1 LAND EXCLUDES MINERALS - SEE SECTION 171 CROWN LANDS ACT 1989 AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 2 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM - SEE CROWN GRANT(S) AND MEMORANDUM S700000A
- 3 T175575 RIGHT OF CARRIAGEWAY APPURTENANT TO THE PART SHOWN SO BENEFITED IN THE TITLE DIAGRAM AFFECTING THE LAND SHOWN SO BURDENED IN DP604870
- 4 5046787 EASEMENT FOR SEWERAGE RISING MAIN 5 WIDE AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM  
EASEMENT NOW VESTED IN BALLINA SHIRE COUNCIL
- 5 DP1074242 POSITIVE COVENANT REFERRED TO AND NUMBERED (2) IN THE S.88B INSTRUMENT
- 6 DP1074242 EASEMENT FOR DEVELOPMENT ACCESS APPURTENANT TO THE LAND ABOVE DESCRIBED
- 7 DP1074242 POSITIVE COVENANT REFERRED TO AND NUMBERED (4) IN THE S.88B INSTRUMENT
- 8 DP1074242 EASEMENT FOR WATER SUPPLY OVER EXISTING LINE OF PIPES AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 9 DP1074242 RIGHT OF CARRIAGEWAY 5 METRE(S) WIDE (A) AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 10 DP1074242 RIGHT OF CARRIAGEWAY 5 METRE(S) WIDE (D) AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 11 DP1074242 EASEMENT FOR DRAINAGE OF WATER 10 AND 19.915 METRE(S) WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED
- 12 DP1074242 RESTRICTION(S) ON THE USE OF LAND
- 13 DP1074242 EASEMENT FOR DRAINAGE OF WATER 16 METRE(S) WIDE

END OF PAGE 1 - CONTINUED OVER

lm070113

PRINTED ON 22/6/2007

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH  
-----FOLIO: 1/1074242  
-----

PAGE 2

SECOND SCHEDULE (14 NOTIFICATIONS) (CONTINUED)  
-----

APPURTENANT TO THE LAND ABOVE DESCRIBED  
14 AB825253 MORTGAGE TO DONALD THOMAS COOK

NOTATIONS  
-----

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

Information Provided Through  
RUDOV & ASSOCIATES P/L  
Ph. 0292678865 Fax. 0292676617

# Historical Search

**EziSearch**  
An Approved LPI NSW  
Information Broker

## LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

22/6/2007 3:03PM

FOLIO: 1/1074242

First Title(s): VOL 893 FOL 211 VOL 3137 FOL 104  
VOL 3137 FOL 105 VOL 6843 FOL 42  
VOL 15373 FOL 96 VOL 15378 FOL 90  
1/241779 2/1033657  
Prior Title(s): 1/241779 6/243060  
1-2/527161 271/755684  
422/755684 2/1033657

| Recorded   | Number    | Type of Instrument                               | C.T. Issue                 |
|------------|-----------|--------------------------------------------------|----------------------------|
| 16/2/2005  | DP1074242 | DEPOSITED PLAN                                   | FOLIO CREATED<br>EDITION 1 |
| 16/3/2005  | AB353525  | CAVEAT                                           |                            |
| 16/5/2005  | AB475497  | REQUEST                                          |                            |
| 26/8/2005  | AB413459  | APPLICATION FOR PREPARATION<br>OF LAPSING NOTICE |                            |
| 26/8/2005  | AB710007  | WITHDRAWAL OF CAVEAT                             |                            |
| 10/10/2005 | AB825250  | WITHDRAWAL OF CAVEAT                             |                            |
| 10/10/2005 | AB825251  | TRANSFER                                         |                            |
| 10/10/2005 | AB825252  | TRANSFER                                         |                            |
| 10/10/2005 | AB825253  | MORTGAGE                                         | EDITION 2                  |

\*\*\* END OF SEARCH \*\*\*

LM070113

PRINTED ON 22/6/2007



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Site auditor scheme  
Guidelines under the CLM Act  
Record of EPA notices  
Engaging a consultant  
Information on gasworks sites  
Regulatory Impact Statement - Proposed Underground Petroleum Storage Systems Regulation  
Frequently asked questions  
More information about land

## Search results

Your search for: LGA: Ballina Shire Council

Matched 2 notices relating to 2 sites.

[SearchAgain](#)[RefineSearch](#)

| Suburb         | Address             | Site Name                       | Notices related to this site |
|----------------|---------------------|---------------------------------|------------------------------|
| Lennox Head    | Fig Tree Hill Drive | <a href="#">Dip 5282 Spoons</a> | 1 current                    |
| McLeans Ridges | McLeans Ridges Road | <a href="#">Dip 5157 Ridges</a> | 1 current                    |

Page 1 of 1



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[Frequently asked questions](#)  
[More information about land](#)

## Site and notice details

Your search for: LGA: Ballina Shire Council      2 notices on 2 sites were matched.

[Return to list of search results](#)

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[RefineSearch](#)

### Area No: 3001

The information below was correct at the time the notices were issued.

**Site:** Dip 5282 Spoors

**Address:** Fig Tree Hill Drive, Lennox Head, 2478

**LGA:** Ballina Shire Council

**Occupier:** Bareena (Lennox) Pty Ltd

**Owner:** Bareena (Lennox) Pty Ltd

### Notices relating to this site ( 1 current and 0 former)

(Map) where available, maps show the part of the site affected by the notice

\*notice matched search criteria

| Notice recipient         | Notice type & number                   | Status  | Date               |
|--------------------------|----------------------------------------|---------|--------------------|
| Bareena (Lennox) Pty Ltd | Remediation Order* <a href="#">259</a> | Current | Issued 10 May 1991 |



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[Frequently asked questions](#)  
[More information about land](#)

## Site and notice details

Your search for: LGA: Ballina Shire Council      2 notices on 2 sites were matched.

[Return to list of search results](#)

[SearchAgain](#)

[RefineSearch](#)

### Area No: 3140

The information below was correct at the time the notices were issued.

**Site:** Dip 5157 Ridges

**Address:** McLeans Ridges Road, McLeans Ridges, 2480

**LGA:** Ballina Shire Council

**Occupier:** Name Withheld

**Owner:** Name Withheld

|            |        |        |          |          |
|------------|--------|--------|----------|----------|
| Lot 1-3 DP | DP     | DP     | Lot 2 DP | Lot 5 DP |
| 712060     | 714198 | 755745 | 802950   | 842883   |

### Notices relating to this site ( 1 current and 0 former)

(Map) where available, maps show the part of the site affected by the notice

\*notice matched search criteria

| Notice recipient | Notice type & number                   | Status  | Date               |
|------------------|----------------------------------------|---------|--------------------|
| Name Withheld    | Remediation Order* <a href="#">438</a> | Current | Issued 21 Feb 1997 |



24 June 2007



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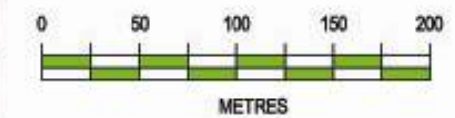
## **Appendix 4 Historical Aerial Photograph Record (1974 - 1994)**

- 1) 1973 (B&W): Run XX Frames XXXX - XXXX (Scale unknown - DoL)
- 2) 1980 (B&W): NSW 2572 (M1079) SH10 - Grafton to Tweed Heads; Run UE17 Scale 1:10,000
- 3) 1994 (Colour): Run X Frame XX (Scale Unknown - DoL)





SOURCE: SITE OUTLINE (LANDPARTNERS), ADJOINING  
CADASTRE (DEPT OF LANDS), AERIAL IMAGE  
(DEPT OF LANDS 1973)



A INITIAL ISSUE PH 13.06.07  
Issue Description Des Drw Date Appd

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**'RIVEROAKS' DEVELOPMENT  
PACIFIC HIGHWAY**

**HISTORICAL AERIAL PHOTOGRAPH  
(1973)**

Scale: AS SHOWN CAD file: LM070113-EV7A



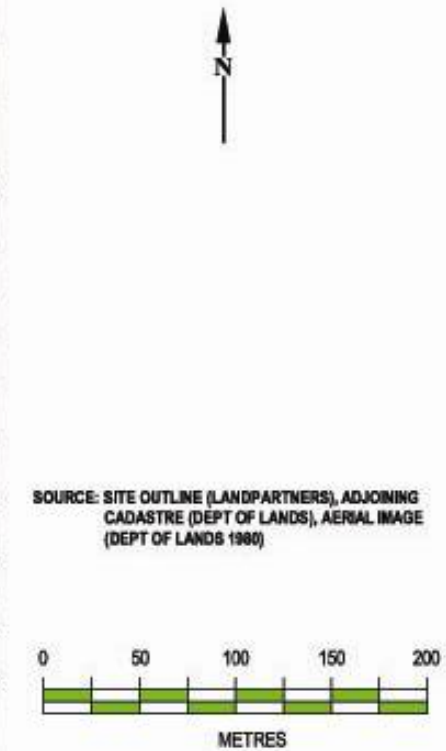
**LandPartners Limited**

11 Turner Street, Ballina  
NSW 2478, Australia  
Phone: (02) 6686 7744 Fax: (02) 6686 7764  
www.landpartners.com.au

Sheet No.  
**1 of 1**

Dwg. No. **LM070113-EV7** Issue **A**





SOURCE: SITE OUTLINE (LANDPARTNERS), ADJOINING  
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**HISTORICAL AERIAL PHOTOGRAPH**  
**(1980)**

Scale: AS SHOWN CAD file: LM070113-EV8A



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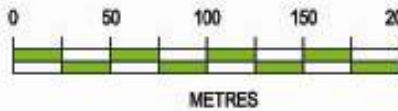
Sheet No.  
**1 of 1**

Dwg. No.  
**LM070113-EV8** Issue  
**A**





SOURCE: SITE OUTLINE (LANDPARTNERS), ADJOINING  
CADASTRE (DEPT OF LANDS), AERIAL IMAGE  
(DEPT OF LANDS 1994)



|                   |               |     |           |
|-------------------|---------------|-----|-----------|
| A                 | INITIAL ISSUE | PH  | 13.06.07  |
| Issue Description | Des           | Drw | Date Appd |

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