

TSA Dreamscapes



Preliminary Site Investigation:  
Lots 6 and 7 DP 1203674,  
484 and 488 Bringelly Road, Austral, NSW

ENVIRONMENTAL



WATER



WASTEWATER



GEOTECHNICAL



CIVIL



PROJECT  
MANAGEMENT



P1705935JR02V01  
July 2017

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Document and Distribution Status								
Author(s)			Reviewer(s)		Project Manager		Signature	
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Revision No.	Status	Release Date	Document Location					
			File Copy	TSA Dreamscapes	-	-	-	-
1	Draft	23.06.2017	1E, 1P, 1H	1P	-	-	-	-
1	Final	6.07.2017	1E, 1P, 1H	1P	-	-	-	-
					-	-	-	-

Distribution Types: F = Fax, H = hard copy, P = PDF document, E = Other electronic format. Digits indicate number of document copies.

**All enquiries regarding this project are to be directed to the Project Manager.**

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# **1 Overview**

## **1.1 Introduction**

This report, prepared by Martens and Associates (MA), documents a preliminary site contamination investigation (PSI) to support a development application (DA) to Liverpool City Council (LCC) for a development at 484 and 488 Bringelly Road, Austral, NSW ('the site'), being Lots 6 and 7 DP 1203674. The proposed development consists of four residential flat buildings, each with a single level basement car park.

## **1.2 Objectives**

Investigation objectives include:

- Identification of historic and current potentially contaminating site activities.
- Evaluation of areas of environmental concern (AEC) and associated contaminants of potential concern (COPC) within investigation area.
- Assess identified AECs and associated COPCs.
- Provide comment on suitability of investigation area for future development use, and where required, provide recommendations for additional investigations and/or remediation.

## **1.3 Project Scope**

Scope of works includes:

- Walkover inspection to review current land use, potential contaminating activities and neighbouring land uses.
- Site history review using historical aerial photographs and Council records.
- Review NSW EPA notices under the Contaminated Land Management Act (1997).
- Preparation of a report in general accordance with the relevant sections of NSW OEH (2011) and ASC NEPM (1999, amended 2013) and DEC (2006).

## 1.4 Abbreviations

ACM – Asbestos containing material

AEC – Area of environmental concern

ASC NEPM – Assessment of Site Contamination - National Environmental Protection Measure (1999 amended 2013)

BA – Building application

BTEX – Benzene, toluene, ethyl benzene, xylene

COPC – Contaminants of potential concern

DA – Development application

DEC – NSW Department of Environment and Conservation

DECC – Department of Environment and Climate Change

DP – Deposited plan

DSI – Detailed site investigation

EPA – NSW Environmental Protection Authority

HM – Heavy metals

LCC – Liverpool City Council

LGA – Local Government Area

MA – Martens & Associates Pty Ltd

mAHD – Metres, Australian Height Datum

mbgl – Metres below ground level

OCP – Organochloride pesticides

OEH – NSW Office of Environment and Heritage

OPP – Organophosphate pesticides

PACM – Potential asbestos containing material

PAH – Polycyclic aromatic hydrocarbons

PSI – Preliminary site investigation

SAC – Site acceptance criteria

TRH – Total recoverable hydrocarbons

## 2 Site Description

### 2.1 Site Location and Existing Land Use

Site information is summarised in Table 1, and site location and general surrounds shown in Attachment A.

**Table 1:** Site background information.

Item	Description / Detail
Site address, lot/DP, and approximate area <sup>1</sup>	484 Bringelly Road, Austral, NSW (Lot 7 DP 1203674) – approximately 8,700 m <sup>2</sup> 488 Bringelly Road, Austral, NSW (Lot 6 DP 1203674) – approximately 8,695 m <sup>2</sup>
Local Government Area (LGA)	Liverpool City Council (LCC)
Current land use	Both lots are currently zoned R3 – Medium density residential
Proposed land use	Residential flat building development, consisting of four buildings, each with a single level basement car park.
Site description	Currently used for rural purposes, with a dwelling, sheds and market gardens located on each lot. A dam is located in the central portion of Lot 6. Existing vegetation consists of grass and scattered trees.
Surrounding land uses	The site is bordered by Bringelly Road to the south, and rural and rural residential properties to the west, north and south. Greenhouses are located on properties to the west and east, and market gardens are located to the west, north and east. Construction works are currently underway on local road infrastructure.
Topography	Located on slightly undulating terrain. Site elevation ranges from approximately 76 mAHD near the eastern site boundary to 81 mAHD near the western site boundary.
Expected geology	<i>The Penrith 1:100,000 Geological Series Sheet 9030</i> , 1st edition (1991), describes the underlying geology of the site as Bringelly shale comprising shale, carbonaceous claystone, claystone, laminite, fine to medium grained lithic sandstone and rare coal and tuff. The NSW Environment and Heritage eSPADE website identifies the site as having soils from the Blacktown and South Creek soil landscapes. These are both described generally as very deep layered sediments over bedrock or relict soils, shallow to moderately deep (<1 m) hardsetting mottled texture contrast soils, red and brown podzolic soils on crests grading to yellow podzolic soils on lower slopes and in drainage lines, and terraces with areas of structured grey clays.
Environmental receptors	Site drainage is via overland flow east towards an unmapped tributary of Kemps Creek. A pond is located in the northern portion of Lot 6, and a dam on the adjacent property to the west.
Sensitive receptors	Future site residents, visitors and workers. Site workers during future construction works. Surrounding residential/rural site occupants and workers.

#### Notes

<sup>1</sup> NSW Planning Portal



## **2.2 Hydrogeology**

Review of NSW Department of Primary Industries Water's database indicated no groundwater bores are located within 500 m of the site (Figure 2, Attachment A).

Groundwater was not observed during drilling of the boreholes up to investigation termination depths of 5.0 mbgl, however groundwater conditions may vary seasonally or due to weather conditions (MA, 2017). Further investigations would be required to fully characterise site groundwater conditions.

## 3 Site Background Assessment

### 3.1 Historical Site Records Review

Development application and building plan records kept by LCC (Table 2 and Attachment D) indicate that past applications for dwelling construction and additions were approved, and applications for construction of dog kennels were approved for Lot 6 (1971 and 1988).

**Table 2:** Site history information.

Lot ID	Year	Record No.	Description
484 Bringelly Road (Lot 7 DP 1203674)	1979	Consent to Develop 10/79: Building Permit 2097/78	Screen enclosure
	1979	Consent to Develop 52/79: Building Permit 72/79	Double garage
	1979	Consent to Develop 644/79: Building Permit 980/79	Carport addition
488 Bringelly Road (Lot 6 DP 1203674)	1965	Building Permit 1088/65	Weatherboard dwelling addition
	1971	Consent to Develop 751/71: Building Permit 684/71/67	Erection of a brick veneer dwelling
	1971	Consent to Develop 1126/71: Building Permit 1256/71	Dog kennels
	1976	Consent to Develop 192/76: Building Permit 324/76	Additions to dwelling
	1988	Notice of Determination 356/88 Building Permit 815/88	Erection of a dog kennel building for 12 dogs

### 3.2 NSW EPA Records

No notices for the site or nearby surrounding areas were identified under the Contaminated Land Management Act (1997) or the Environmentally Hazardous Chemicals Act (1985), and no sites within Austral were identified on the list of NSW contaminated sites notified to the EPA.

### 3.3 Historical Aerial Photograph Review

Historical aerial photographs taken of the site during 1947, 1961, 1970, 1994, 2007 and 2017 were reviewed to investigate historic site land uses (Table 3). Copies of aerial photographs are provided in Attachment B.

Photos indicate that the site has generally been used for rural purposes since at least 1947.