

W07/4995-Ar1 MRW

22 February 2019

Allen Price & Scarratts Pty Ltd
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Construction Sciences Pty Ltd
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Attention: Matt Philpott

By Email: mattphilpott@allenprice.com.au

Dear Sir,

**Re: Stage 1 Contamination Assessment
Moss Vale Road (North), Bomaderry**

EXECUTIVE SUMMARY

Based on aerial photographs, title records and council records, the site appears to have only been used as agricultural land. Based on the site history and it's existing use as agricultural/residential land it is not expected that widespread or severe contamination would be present in the soil. Furthermore, since no contamination sources are perceived to exist, contamination of groundwater or contamination moving off-site is unlikely.

Consequently, in general terms, intrusive Stage 2 Contamination investigations are not considered necessary.

However, due to the size of the site, it was not possible to undertake a detailed walkover assessment of the site and investigate each property and associated outbuildings such as sheds etc. These types of structures are the most likely points of isolated contamination, if they were previously used for the storage of farming machinery, machine fuels, pesticides etc.

Areas of former 'orchard' may possibly have been subjected to pesticides and herbicides, consequently there is a low risk of contamination in those areas, subject to actual use of agricultural chemicals.

Geotechnical investigations are recommended to more accurately characterise the ground conditions for construction and building purposes. At this stage, opportunistic contamination sampling could be undertaken, if so required, to confirm the findings of this Stage 1 investigation and the low contamination risk at the site.

In summary:

- Phase 2 contamination investigation is not considered necessary based on the available information.
- Geotechnical investigation will be required prior to development of the site.

1.0 Introduction

Allen Price & Scarratts Pty. Ltd. (APS) on behalf of MVRN Owners Group commissioned Network Geotechnics Pty Ltd (NG), now Construction Sciences Pty Ltd (CS), to carry out a Stage 1 Contamination Assessment in accordance with the Contamination Land Management Act for the Moss Vale Road (North) urban release area.

This report is a minor revision of the original NG report (reference W07/4995-A dated 8 May 2018).

2.0 Scope of Work

The objective of the investigation was to carry out a Stage 1 Contamination Assessment in order to assess the risk of site contamination and the suitability of the site for proposed subdivision.

The scope of work undertaken to achieve the objectives included:

- Review of regional topography, landscape and geology;
- Review of historical aerial photographs, title records and other publicly available information;
- A report presenting findings in accordance with SEPP 55 Contaminated Land for Stage 1 contamination investigations.

3.0 Site Identification

The site is located to the north and east of Moss Vale Road, Bomaderry. The site is a large (266 Ha) irregular shaped area of land generally bounded by:

- Moss Vale Road to the south and west; and
- Rural properties to the north and east.

The site boundary and location is as shown on Figure 1 below. A Master plan layout (reference APS Drawing 25830-29) is attached.

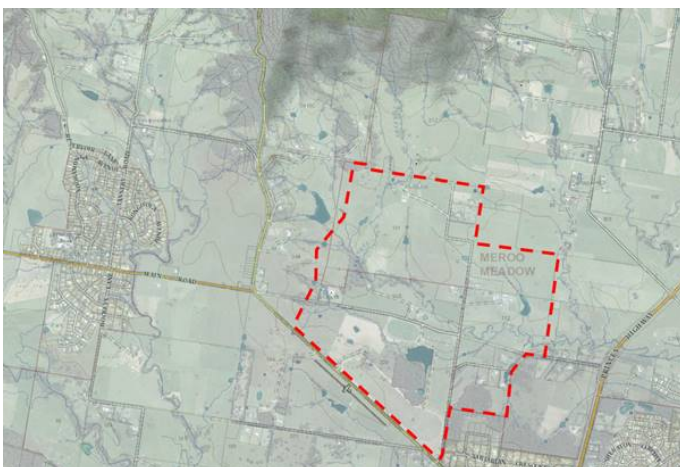


Figure 1: Site Location

The site is comprised of 17 current lots located in Shoalhaven City Council area in the Parish of Bunberra and County of Camden.

4.0 Site History

4.1 Title Records

A standard approach to Stage 1 investigations is to obtain title records, since a record of ownership and potentially site use can be inferred from the records. A summary of title records for the 17 lots comprising the site is given in Tables 1 to 17 as follows.

Table 1 220 Moss Vale Road, Cambewarra – Lot 4 DP268209

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
20/7/1899	102/3060 103/3060	1885-186	George Smith (Farmer)
13/9/1915	102/3060 103/3060	1885-186	Harry Joseph Bell (Farmer)
15/2/1971	102/3060 103/3060	1885-186	Harry Joseph Bell (Farmer) John Leonard Bell (Farmer) Frank Raymond Bell (Farmer)
7/3/1983	102/3060 103/3060	1885-186	John Leonard Bell
24/12/1993	102/3060 103/3060	1885-186	Frank Raymond Bell Harry Joseph Bell
17/10/1994	102/3060 103/3060	Tsfr U773254	Miltonbrook Projects Pty Ltd
14/11/1997	4/268209	Tsfr 3608201	Robert Henry Dickerson Jennifer Jill Dickerson
21/9/2016 - Present	4/268209	Tsfr AK768878	Jennifer Jill Dickerson

Table 2 344 Moss Vale Road, Cambewarra – Lot 54 DP1024592

Date	Lot /DP Number	Volume/Folio	Remarks
30/3/1853	Por 79, 80 and 81		Crown Grant to Robert Owen
20/4/1904		BK779-N:256	William Urquhart (Farmer)
29/4/1927		Probate	To Mary Urquhart (Wife) Duncan Roy Urquhart (Farmer) Alexander Urquhart
25/1/1949		BK2080-N:30	William Oliver Urquhart
12/9/1960		BK2546-N:824	William James Urquhart (Farmer) Judith Ann Urquhart (Wife) Duncan Roy Urquhart (Farmer)
5/9/1988	1/741742	Tsfr X859966	Judith Ann Abernethy Joanne Kay Urquhart Scott William Urquhart Cameron Searl Urquhart Gavin James Urquhart To Walmere Pastoral Pty Ltd
3/3/1989	4/775554	Tsfr Y251430	Silvano Bordignon Marcia Bordignon
29/9/1995	4/775554	Tsf 0614617	John William Lees Susan Ann Lees

			Ronal George Marler Patricia Mary Marler
26/7/2002	54/1024592	Tsf 8849493	John Ernest Fisher Carolyn Ann Fisher
20/4/2007	54/1024592	Tsf AD117421	Rhonda Ann Flynn Tracy Ann Flynn
31/3/2009 - Present	54/1024592	Tsf AE609199	Kel Warren Priestley Kareena Dawn Priestley

Table 3 91A Bells Lane, Meroo Meadow – Lot 3 DP708356

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837	Por 10		Crown Grant to Alexander Berry
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
13/8/1898	96/3060	1259-2	Jesse Watts (Farmer)
5/12/1916	96/3060	1259-2	William Urquhart (Farmer)
8/1/1920	96/3060	3011-248	John James Boxsell (Farmer)
12/3/1920	96/3060	3011-248	William Henry Anderson (Farmer)
28/6/1934	96/3060	3011-248	Alfred John Anderson (Farmer)
22/9/1954	96/3060	3011-248	Hedley George Johnson (Real Estate Agent)
5/3/1958	96/3060	3011-248	Samuel Risk Lumsden (Farmer)
8/7/1958	96/3060	7551-134	Henry James Wheatley (Farmer)
8/7/1958	96/3060	7551-133	Robert Arnold Wheatley (Horse Trainer)
11/9/1968	96/3060	7551-133	Ann Eileen Wheatley (married woman)
31/7/1975	1/630811	12874-97	Antony Alan Lake (Builder) Rosemary Lake (his wife)
12/5/1986 - Present	3/708356	Tsfr W339943	Garry Robert Brown Maree Anne Brown

Table 4 91B Bells Lane, Meroo Meadow – Lot 4 DP708356

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837	Por 10		Crown Grant to Alexander Berry
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
13/8/1898	96/3060	1259-2	Jesse Watts (Farmer)
5/12/1916	96/3060	1259-2	William Urquhart (Farmer)
8/1/1920	96/3060	3011-248	John James Boxsell (Farmer)
12/3/1920	96/3060	3011-248	William Henry Anderson (Farmer)
28/6/1934	96/3060	3011-248	Alfred John Anderson (Farmer)
22/9/1954	96/3060	3011-248	Hedley George Johnson (Real Estate Agent)
5/3/1958	96/3060	3011-248	Samuel Risk Lumsden (Farmer)
8/7/1958	96/3060	7551-134	Henry James Wheatley (Farmer)

8/7/1958	96/3060	7551-133	Robert Arnold Wheatley (Horse Trainer)
11/9/1968	96/3060	7551-133	Ann Eileen Wheatley (married woman)
31/7/1975 - Present	4/708356	12874-97	Antony Alan Lake (Builder) Rosemary Lake (his wife)

Table 5 66A Bells Lane, Meroo Meadow – Lot 2 DP630811

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837	Por 10		Crown Grant to Alexander Berry
Before 29/11/1892			John Hay (Esquire) The Honourable James Norton (Esquire)
13/8/1898	96/3060	1259-2	Jesse Watts (Farmer)
5/12/1916	96/3060	1259-2	William Urquhart (Farmer)
8/1/1920	96/3060	3011-248	John James Boxsell (Farmer)
12/3/1920	96/3060	3011-248	William Henry Anderson (Farmer)
28/6/1934	96/3060	3011-248	Alfred John Anderson (Farmer)
22/9/1954	96/3060	3011-248	Hedley George Johnson (Real Estate Agent)
5/3/1958	96/3060	3011-248	Samuel Risk Lumsden (Farmer)
8/7/1958	96/3060	7551-134	Henry James Wheatley (Farmer)
8/7/1958	96/3060	7551-133	Robert Arnold Wheatley (Horse Trainer)
11/9/1968	96/3060	7551-133	Ann Eileen Wheatley (married woman)
31/7/1975	96/3060	12874-97	Antony Alan Lake (Builder) Rosemary Lake (his wife)
11/10/1984	2/630811	15004-136	James William Brown Diane Margaret Brown
17/2/1994	2/630811	Tsfr U061369	Theresa Barbara Hope Wooderson
2/2/2010	2/630811	Tsfr AF286126	Lee Charles Wooderson
30/3/2016 - Present	2/630811	Tsfr AK340437	Andrena Margaret Wooderson

Table 6 66A Bells Lane, Meroo Meadow – Lot 3 DP847399

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
20/7/1899	100/3060	1288-108	Alexander McPherson (Farmer)
13/9/1915	100/3060	1288-108	Harry Joseph Bell (Farmer)
15/2/1971	100/3060	1288-108	Harry Joseph Bell (Farmer) John Leonard Bell (Farmer) Frank Raymond Bell (Farmer)
7/3/1983	100/3060	1288-108	John Leonard Bell
24/12/1993	100/3060	Tsfr I827750	Frank Raymond Bell Harry Joseph Bell
17/10/1994	100/3060	Tsfr U773254	Miltonbrook Projects Pty Ltd
8/5/1995	3/847399	Tsfr 0268404	Stuart Alexander Boad

			Anne Boag
24/1/1997	3/847399	Tsfr 273537	Donald Kent Nelson
18/10/2003	3/847399	Tsfr AA79228	Frances Alden Nelson
27/11/2009	3/847399	Tsfr AF187679	Jeffry Stephen Turner
8/8/2013	3/847399	Tsfr AH978331	Jack Watson Turner Gloria Dawn Turner
24/4/2017 - Present	3/847399	Tsfr AM323429	Rachel Monique Batchelor

Table 7 66B Bells Lane, Meroo Meadow – Lot 21 DP854369

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
20/7/1899	100/3060	1288-108	Alexander McPherson (Farmer)
13/9/1915	100/3060	1288-108	Harry Joseph Bell (Farmer)
15/2/1971	100/3060	1288-108	Harry Joseph Bell (Farmer) John Leonard Bell (Farmer) Frank Raymond Bell (Farmer)
7/3/1983	100/3060	1288-108	John Leonard Bell
24/12/1993	100/3060	Tsfr I827750	Frank Raymond Bell Harry Joseph Bell
17/10/1994	100/3060	Tsfr U773254	Miltonbrook Projects Pty Ltd
18/12/1996 - Present	21/854369	Tsfr 0741953	Philip Noel Warnock Deborah Joan Warnock

Table 8 66C Bells Lane, Meroo Meadow – Lot 22 DP854369

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
20/7/1899	100/3060	1288-108	Alexander McPherson (Farmer)
13/9/1915	100/3060	1288-108	Harry Joseph Bell (Farmer)
15/2/1971	100/3060	1288-108	Harry Joseph Bell (Farmer)
			John Leonard Bell (Farmer) Frank Raymond Bell (Farmer)
7/3/1983	100/3060	1288-108	John Leonard Bell
24/12/1993	100/3060	Tsfr I827750	Frank Raymond Bell Harry Joseph Bell
17/10/1994	100/3060	Tsfr U773254	Miltonbrook Projects Pty Ltd
1/12/1995 - Present	22/854369	Tsfr 0741953	David John Anderson Kerrie Lynne Anderson

Table 9 - Part A 66D Bells Lane, Meroo Meadow – Lot 1 DP882059

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
20/7/1899	100/3060	1288-108	Alexander McPherson (Farmer)
13/9/1915	100/3060	1288-108	Harry Joseph Bell (Farmer)

15/2/1971	100/3060	1288-108	Harry Joseph Bell (Farmer) John Leonard Bell (Farmer) Frank Raymond Bell (Farmer)
7/3/1983	100/3060	1288-108	John Leonard Bell
24/12/1993	100/3060	Tsfr I827750	Frank Raymond Bell Harry Joseph Bell
17/10/1994	100/3060	Tsfr U773254	Miltonbrook Projects Pty Ltd
27/4/1995		Tsfr 0207875	John David Gunn Pamela Gunn
2/12/1996	1/847399	Tsfr 2730635	Ronald Joseph Hockey
23/9/2009 - Present	1/882059	Tsfr AF65986	Susannah Victoria Jarman

Table 9 - Part B 66D Bells Lane, Meroo Meadow – Lot 1 DP882059

Date	Lot /DP Number	Volume/Folio	Remarks
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
29/5/1908	99/3060	1885-24 1885-25	Thomas Gibson Watts (Farmer) William Henry Watts (Farmer)
31/7/1916	99/3060	2691-62	William Henry Watts (Farmer)
14/4/1938	99/3060	2691-62	William Henry Arthur Watts (Farmer) Charles Arthur Baron (Farmer)
3/2/1939	99/3060	2691-62	Angus Henderson (Farmer)
1/10/1995	99/3060	2691-62	Roderick Lacey Walker (Milk Carrier)
12/12/1958	2/230850	10422-118	Heather Margaret Watt
19/4/1971	2/230850	10422-118	Heather Margaret Wilford
12/1/1999	1/882059	Tsfr 6333238	Ronald Joseph Hockey
23/9/2009 - Present	1/882059	Tsfr AF65986	Susannah Victoria Jarman

Table 10 91D Bells Lane, Meroo Meadow – Lot 2 DP1191186

Date	Lot /DP Number	Volume/Folio	Remarks
30/3/1853	Por 81		Crown Grant to Robert Owen
20/4/1904		BK779-N:256	William Urquhart (Farmer)
19/12/1930	1/152436	1617-837	Mary Urquhart ((Widow)) Alexander Urquhart (Real Estate Agent) Duncan Roy Urquhart (Farmer) To William Henry Anderson (Farmer)
21/11/1943	1/152436	1936-567	Alfred John Anderson (Farmer)
11/7/1945	1/152436	1967-282	William James Tyrrell (Farmer) Linda May Tyrrell (Wife)
16/12/1946	1/152436	2007-128	Owen Leslie Green (Farmer) Olive Irene Green (Wife)
7/2/1948	1/152436	2065-109	Lloyd George Anderson (Farmer)
6/3/1954	1/152436	2283-814	Gerald Nathaniel Hockin (Farmer and Naval Airman)
26/4/1956	1/152436	2379-433	Wardell Bloomfield Wilson (Farmer)

			Margaret James Wilson (Wife)
28/7/1958	1/152436	2457-3	Samuel Risk Lumsden (Farmer)
5/5/1961	1/152436	2576-320	Archibald Charles Harvey (Contractor)
10/1/1978	1/152436	3323-952	Donald Arthur Barter (Bread Vendor) Julie Anne Barter (Wife)
16/12/1988	1/152436	Tsf Y077235	John Roy Lockeridge Linda Anne Lockeridge
30/1/2002	1/152436	Tsf 8354171	Rodney Ryding Tracey Leed Ryding
25/8/2010	1/152436	Tsf 817239	Imogen Mary Parker
20/12/2013	Behind 1/152436	Tsf A1375202	Jennifer Ann Urquhart Joanne Kay Urquhart Scott William Urquhart Gavin James Urquhart To Imogen Mary Parker

Table 11 – Part A 191 Bells Lane, Meroo Meadow – Lot 1 DP1191186

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837	Pt Por 10 Pt Por 81		Crown Grant to Alexander Berry Crown Grant to Robert Owen
		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
22/3/1898	90/3060	1244-240	William Urquhart (Farmer)
20/10/1927	90/3060	1244-240	Mary Urquhart (Widow) Alexander Urquhart (Estate Agent) Duncan Roy Urquhart (Grazier)
20/4/1950	90/3060	1244-240	Mary Urquhart Duncan Roy Urquhart
20/4/1950	90/3060	1244-240	William Oliver Urquhart (Fire Brigade Officer) Mary Urquhart Duncan Roy Urquhart
19/7/1955	90/3060	1244-240	William Oliver Urquhart Duncan Roy Urquhart
24/10/1955	90/3060	1244-240	Duncan Roy Urquhart
12/9/1960	90 & 95/3060	8148-145 8148-146 8148-144	William James Urquhart Judith Ann Urquhart (Wife) Duncan Roy Urquhart
29/3/1978	90 & 95/3060	8148-144	Mark Fairles Morton (Solicitor) Thomas Gould Tait (Accountant)
8/7/1986	90 & 95/3060	8148-144	Joanne Kay Urquhart Scott William Urquhart Cameron Searl Urquhart Gavin James Urquhart
30/4/1968	90 & 95/3060	8148-145	Judith Ann Urquhart
19/2/1988	90 & 95/3060	8148-145	Judith Ann Abernethy
19/2/1988	90 & 95/3060	8148-146	Judith Ann Abernethy

4/3/2014	1/11991186	Tsfr AT529669	Jennifer Ann Urquhart Joanne Kay Urquhart Scott William Urquhart Gavin James Urquhart To WJ and HL Crittle Pty Ltd
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Table 11 – Part B 191 Bells Lane, Meroo Meadow – Lot 1 DP1191186

Date	Lot /DP Number	Volume/Folio	Remarks
13/8/1898	95/3060	1257-250	Thomas Smith (Farmer)
22/6/1904		1257-250	William Smith (Farmer)
30/5/1908		1257-250	Charles Smith (Farmer)
19/6/1912		5340-78	Herbert Lloyd Oliver (Solicitor)
14/7/1942		5340-78	Duncan Roy Urquhart (Farmer)
12/9/1960	90 & 95/3060	8148-145 8148-146 8148-146	William James Urquhart (Farmer) Judith Ann Urquhart (Wife) Duncan Roy Urquhart
5/11/1992		Transfer E895939	Judith Ann Abernethy To Joanne Kay Urquhart Scott William Urquhart Cameron Searl Urquhart Gavin James Urquhart

Table 12 194 Bells Lane, Meroo Meadow – Lot 2 DP582036

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
22/2/1897		1214-180	James Horgan (Farmer)
9/9/1912		1214-180	Mary Horgon (Spinster)
9/12/1936		1214-180	Margaret McGill (wife of John Thomas - Farmer)
3/12/1946		1214-180	Ivan Norman Isaac Frost (Farmer)
21/1/1970	2/582036	13024-203	Culgoa Pty Ltd
3/5/1976 - Present	2/582036	13024-203	Carl Francis Beddoe (Civil Engineer) Jill Ellen Beddoe (his wife)

Table 13 202 Bells Lane, Meroo Meadow – Lot 5 DP618693

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
22/2/1897		1214-180	James Horgan (Farmer)
9/9/1912		1244-180	Mary Horgon (Spinster)
9/12/1936		1244-180	Margaret McGill (wife of John Thomas - Farmer)
3/12/1946		1244-180	Ivan Norman Isaac Frost (Farmer)

21/1/1970	1&4/582036	13024-204/ 13024-202	Culgoa Pty Ltd
9/7/1976	1/582036	13024-202	Marian Broz (Carpenter) Katarina Broz (his wife)
15/1/1982	5/618693	14550-230	Marian Broz Katarina Broz
	5/618693		Marian Broz
4/4/2017 - Present	5/618693	Tsfr AM288435	John Andrew Timbs

Table 14 132 Bells Lane, Meroo Meadow – Lot 6 DP618693

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
22/2/1897		1214-180	James Horgan (Farmer)
9/9/1912		1244-180	Mary Horgon (Spinster)
9/12/1936		1244-180	Margaret McGill (wife of John Thomas - Farmer)
3/12/1946		1244-180	Ivan Norman Isaac Frost (Farmer)
5/2/1971		13024-204	Culgoa Pty Ltd
21/10/1981			Victor Frederick Pratt Ailsa Pratt
15/3/1991	6/618693	Tsfr Z491738	Ailsa Pratt
5/4/1991	6/618693	Tsfr Z673633	Richard Barnes Ladmore Mark Edward Ladmore Shirley Ann Ladmore
30/8/1991	6/618693	Tsfr Z92999	Anthony Martin Booth Helen Catherine Booth
30/8/1995	6/618693	Tsfr 2559252	John Charles Hill James Warren Dunlop Lilian Anne Dunlop
18/1/2018 - Present	6/618693	Tsfr AN49231	James Warren Dunlop

Table 15 Bells Lane, Meroo Meadow – Lot 7 DP618693

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
22/2/1897		1214-180	James Horgan (Farmer)
9/9/1912		1244-180	Mary Horgon (Spinster)
9/12/1936		1244-180	Margaret McGill (wife of John Thomas - Farmer)
3/12/1946		1244-180	Ivan Norman Isaac Frost (Farmer)
5/2/1971	7/618693	1244-210	Culgoa Pty Ltd
2/6/2005	7/618693	Tsfr AB661541	Alan Frederick Watts Calcraft Mary-Anne Louise Calcraft
14/7/2008	7/618693	Tsfr AE107747	J. Calcraft Pty Ltd (1/2 share) Tarajjel Pty Ltd

29/6/2012	7/618693	Tsfr AH254767	Mary-Anne Louise Calcraft (1/2 share) Tarajjel Pty Ltd
7/12/2016 - Present	7/618693	Tsfr AM155563	Tarajjel Pty Ltd

Table 16 50 Abernethys Lane, Meroo Meadow – Lot 1 DP1134376

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
Before 29/11/1892		1186-183	John Hay (Esquire) The Honourable James Norton (Esquire)
24/3/1898	98/3060	1244-210	James Waddington Jr. (Farmer)
13/1/1914	98/3060	1244-210	John Fletcher (Farmer)
12/11/1920	98/3060	1244-210	William Richard Lymbery (Farmer) John Maddington Beazley (Farmer)
14/12/1920	98/3060	1244-210	Henry Arthurware (Farmer)
1/3/1924	98/3060	1244-210	Henry Shepherd (Farmer)
13/1/1946	Pt 98/3060	5549-198	James Reginald Shepherd (Farmer)
20/5/1953	Pt 98/3060	6271-110	Oliver Thomas Lamond (Dairy Farmer)
23/7/1962	Pt 98/3060	6271-110	Victor John Lamond (Farmer) Bryant Macintosh Lamond (Manager)
23/7/1962	Pt 98/3060	6271-110	Kevin James Blissett (Dairy Farmer)
30/3/1965	Pt 98/3060	6271-110	Raymond Joseph Abood (Transport Manager) Doreen Hope Abood (his wife)
14/2/1967	4/233241	10590-120	Edward George Tyrrell (Farmer)
6/5/1976	6/582148	13003-152	William George Lamond (Local Government Employee) Kathleen Dorothy Lamond (his wife)
27/9/2006	6/582148	Tsfr AC630782	Alexander Deura (owners of part) Karen Mary Thompson
9/11/2009	Pt 97/3060	Tsfr AF131170	Garry Lynton Mackrell (owners of part) Judith Mary Mackrell
9/11/2009	1/1134376	AC630782 AF131170	Alexander Deura Karen Mary Thompson Harry

Table 17 112 Bells Lane, Meroo Meadow – Lot 2 DP1134376

Date	Lot /DP Number	Volume/Folio	Remarks
20/5/1837			Crown Grant to Alexander Berry
Before 29/11/1892			John Hay (Esquire) The Honourable James Norton (Esquire)
23/8/1898	97/3060	1259-1	Harry Bell (Farmer)

2/12/1912	97/3060	1259-1	Harry Joseph Bell (Farmer)
15/2/1971	97/3060	1259-1	Harry Joseph Bell (Farmer) John Leonard Bell (Farmer) Frank Raymond Bell (Farmer)
7/3/1983	97/3060	1259-1	John Leonard Bell (Farmer)
24/12/1993	97/3060	Tsfr I827750	Frank Raymond Bell (Farmer) Harry Joseph Bell (Farmer)
5/10/1994	97/3060	Tsfr U710056	Denison SOHO Pty Ltd
5/10/1994	97/3060	Tsfr U710056	Ashley John Stephenson Julie-Anne Stephenson
13/3/2003	97/3060	Tsfr 9477315	Michell Doreen Hitchcock
30/6/2005 - Present	97/3060	AB592022	Garry Lynton Mackrell Judith Mary Mackrell

4.2 Aerial Photographs

Aerial photographs for the site were purchased from NSW Department of Lands. Copies of the photographs are attached. A summary of findings are presented in Table 18.

Table 18 Summary of aerial photograph review

Year	Scale/Colour	Site Description
1961 (earliest available)	Black & White	The site is rural land and relatively undeveloped. Moss Vale Road is present in it's current configuration. A number of farmhouses/dwellings are present across the site. Abernethy's Creek and tributaries can be seen to be crossing the site in a north west to south east direction. Parts of the site can be seen to have been divided into fields and some areas of woodland.
1970	Black & White	Minimal change from 1961 apart from the construction of the odd farmhouse/dwelling.
1979	Black & White	Minimal change
1984	Black & White	Minimal change. Possible development of orchard in the southern corner of the site.
2006	Colour	Some of the creeks have been dammed to form water reservoirs. An orchard appears to have developed in the north eastern corner of the site. Two tracks, possibly for horse training/races, have been constructed in the southern part of the site, which suggests some possible earthworks.
Google Earth 2018	Colour	Relatively no change since 2006.

4.3 Council Records

A request for information on the subject site was made to Shoalhaven City Council. Council provided replied by email (attached) which indicates no record of contamination or contaminative uses at the site.

4.4 Land Use

Based on aerial photographs, title records and council records, the site appears to have only been used as agricultural land.

4.5 Adjacent Land

Historical photographs indicate that the adjacent land to the north, south, west and east has also historically been used for agricultural and residential purposes. The land to the south east corner of the site having become extensively developed as residential land. The risk of contamination migration is assessed to be very low.

5.0 Site Condition and Surrounding Environment

The site generally slopes down towards the south east. The site is currently occupied by a number of farmhouses/residential properties and generally covered with grass fields and trees.

The south eastern part of the site is occupied by Turpentine Park, a horse stud facility.

6.0 Geology & Hydrogeology

6.1 Geology

Reference to the Shoalhaven 1:100,000 Geological Sheet indicates the site is underlain by Alluvial floodplain and terrace deposits, associated with the creeks, overlying Permian sedimentary rocks.

6.2 Acid Sulphate Soils

Office of Environment and Heritage NSW Acid Sulphate Soil (ASS) risk maps, do not indicate ASS to the west of the Princes Highway, Bomaderry. However, as indicated creeks do cross the site area and recent investigations by CS for other projects have confirmed the presence of acid sulphate soils.

6.3 Groundwater

A search of the NSW Office of Water groundwater bore database does not indicate any groundwater boreholes in the area.

7.0 Site Characterisation and Conclusion

Based on the site history and it's existing use as agricultural/residential land it is not expected that widespread or severe contamination would be present in the soil. Furthermore, since no contamination sources are perceived to exist, contamination of groundwater or contamination moving off-site is unlikely.

However, due to the size of the site, hence time and cost, it was not possible to undertake a detailed walkover assessment of the site and investigate each property and associated outbuildings such as sheds etc. These types of structures are the most likely points of isolated contamination, if they were previously used for the storage of farming machinery, machine fuels, pesticides etc.

Consequently it is recommended that a preliminary contamination assessment be undertaken for each property at DA stage, including a detailed walk over (site inspection) of the relevant property.

In general terms, the need for intrusive Stage 2 Contamination investigations would not be considered necessary, unless the detailed walkover of the individual properties identified features justifying Stage 2 works.

Areas of former 'orchard' may possibly have been subjected to pesticides and herbicides, consequently there is a low risk of contamination in those areas, subject to actual use of agricultural chemicals.

Earthworks, predominantly minor, appear to have been undertaken in localised areas at the site to form the reservoir dams and to form the level platforms for the horse tracks in the southern part of the site. Since earthworks usually involve some level of filling, it is possible that fill may have been imported to the site,

which since the origin is unknown may have some potential to be contaminated. However, this is considered unlikely, since any fill at the site was probably 'site won' material.

Asbestos containing materials may possibly have been used in the building construction of the numerous farmhouses & other structures around the site, and this should be assessed during walkover and/or demolition contractors prior to demolition.

With reference to the geology plan attached, areas of the site underlain by 'Permian sedimentary rocks' are likely to comprise a layer of residual clay soil grading into rock. These areas are likely to be good geotechnically and provide good bearing capacity for construction. The clays may be of variable plasticity and shrink swell potential and consequently lots would have to be developed with reference to AS2870 to determine appropriate lot classifications.

The parts of the site underlain by Alluvial deposits could be more problematical, geotechnically. Alluvial deposits, deposited by rivers, can be very variable in texture ie. boulders, cobbles ranging through gravels and sands into silts and clays. Also the interbedding, density, consistency and strength of these deposits can be complex and highly variable. Also note as per Section 6.2, these areas may also be acid sulphate in nature.

Consequently, at DA stage, geotechnical investigations are recommended to more accurately characterise the ground conditions. During geotechnical investigations, opportunistic contamination sampling could also be undertaken, if so required, to confirm the findings of this Stage 1 investigation and the low contamination risk at the site.

8.0 References

1. National Environment Protection Measures (NEPM) (2013)
2. Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)

We trust these comments are sufficient to meet your present requirements. Please do not hesitate to contact the undersigned should you have any queries.

For and on behalf of
Construction Sciences Pty Ltd



Martin Williams
Principal Geotechnical Engineer

Encl Information & Limitations (1 Sheet)
 APS Master Plan – 25830-29 (1 Sheet)
 Geology Plan (1 Sheet)
 Historical Aerial Photographs (6 Sheet)
 Shoalhaven City Council Correspondence (1 Sheet)

Information About This Report

LIMITATIONS

Scope of Services: The report has been prepared in accordance with the scope of services set out in CS's Proposal under CS's Terms of Engagement, or as otherwise agreed with the Client. The scope of services may have been limited and/or amended by a range of factors including time, budget, access and site constraints.

Specific Purpose: The report is provided for the specific development and purpose as described in the report. The report may not contain sufficient information for developments or purposes other than that described in the report.

Currency of Information: The information in this report is considered accurate at the date of issue with regard to the current conditions of the site.

Reliance on Information: In preparing the report CS has necessarily relied upon information provided by the Client and/or their Agents. Such data may include surveys, analyses, designs, maps and plans. CS has not verified the accuracy or completeness of the data except as stated in this report.

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Construction Specifications: Unless otherwise stated, the report, or sections of the report, should not be used as part of a specification for a project, without review and agreement by CS.

Report Should Not be Separated: The report must be read in conjunction with the attached Information Sheets and any other explanatory notes and should be kept in its entirety without separation of individual pages or sections.

Review by Others: CS cannot be held responsible for interpretations or conclusions from review by others of this report or test data, which are not otherwise supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

GENERAL NOTES

Geotechnical and Environmental Reporting: Geotechnical and environmental reporting relies on the interpretation of factual information based on judgment and opinion and is far less exact than other engineering or design disciplines. Geotechnical and environmental reports are for a specific purpose, development and site as described in the report and may not contain sufficient information for other purposes, developments or sites (including adjacent sites) other than that described in the report.

Subsurface Conditions: Subsurface conditions can change with time and can vary between test locations. For example, the actual interface between the materials may be far more gradual or abrupt than indicated and contaminant presence may be affected by spatial and temporal patterns. Therefore, actual conditions in areas not sampled may differ from those predicted since no subsurface investigation, no matter how comprehensive, can reveal all subsurface details and anomalies. Construction operations at or adjacent to the site and natural events such as floods, earthquakes or groundwater fluctuations can also affect subsurface conditions and thus the continuing adequacy of a geotechnical report. CS should be kept informed of any such events and should be retained to identify variances, conduct additional tests if required, and recommend solutions to problems encountered on site.

Groundwater: Groundwater levels indicated on borehole and test pit logs are recorded at specific times. Depending on ground permeability, measured levels may or may not reflect actual levels if measured over a longer time period. Also, groundwater levels and seepage inflows may fluctuate with seasonal and environmental variations and construction activities.

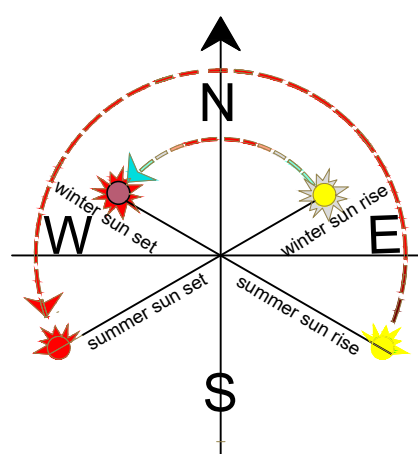
Interpretation of Data: Data obtained from nominated discrete locations, subsequent laboratory testing and empirical or external sources are interpreted by trained professionals in order to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions in accordance with any relevant industry standards, guidelines or procedures.

Soil and Rock Descriptions: Soil and rock descriptions are based on AS 1726 – 1993, using visual and tactile assessment except at discrete locations where field and / or laboratory tests have been carried out. Refer to the accompanying soil and rock terms sheet for further information.

Further Advice: NG would be pleased to further discuss how any of the above issues could affect a specific project. We would also be pleased to provide further advice or assistance including:

- Assessment of suitability of designs and construction techniques;
- Contract documentation and specification;
- Construction control testing (earthworks, pavement materials, concrete);
- Construction advice (foundation assessments, excavation support).

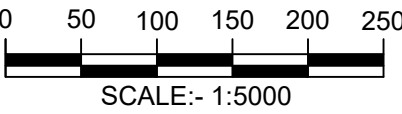
MOSS VALE ROAD NORTH URBAN RELEASE AREA INDICATIVE LAYOUT PLAN



- LARGE LOT >1000m²
- MEDIUM DENSITY/ INTEGRATED/ APARTMENTS <300m²
- SMALL LOT 300m² - 450m² FRONTING OPEN SPACE AREAS
- STANDARD LOT 450m² - 600m²
- OPEN SPACE
- MIXED-USE
- BUSINESS PARK
- RURAL USES



NOTE:
CADASTRAL INFORMATION AND CONTOURS HAVE BEEN OBTAINED FROM NSW LAND & PROPERTY INFORMATION (LPI) DIGITAL CADASTRAL DATA BASE (DCDB) AND IS SUBJECT TO SURVEY. IT SHOULD BE VIEWED AS APPROXIMATE ONLY.
ALL AREAS AND ZONING BOUNDARIES SHOWN ARE APPROXIMATE ONLY AND ARE BASED ON DCDB CADASTRE AND SHOALHAVEN COUNCIL LEP2014 MAPPING.



RATIO:
1:5000
(AT A1 ORIGINAL)

DATUM:
ORIGIN:
DATE OF PLAN: 04.02.2019

SURVEY	
DESIGN	
DRAWN	DGS
CHECK'D	

REV	DESCRIPTION

BY	DATE

aps **allen price & scarratts pty ltd**
land and development consultants
Nowra Branch: 75 Plunkett Street, Nowra NSW 2541
Kiama Branch: 5/125 Terralong Street, Kiama NSW 2533
phone: (02) 4421 6544 fax: (02) 4422 1821
consultants@allenprice.com.au www.allenprice.com.au

SKETCH PLAN SHOWING URA - INDICATIVE LAYOUT PLAN
IN THE VICINITY OF MOSS VALE ROAD, MAIN ROAD
TAYLORS LANE AND BELLS LANE, CAMBEWARRA
FOR MR NALL AND ORS

DRAWING STATUS	
PRELIMINARY NOT TO BE USED FOR CONSTRUCTION PURPOSES	
DRAWING NUMBER	SHEET 1 OF 1
25830-29	REVISION P0



Notes:

CLIENT:
SHOALHAVEN CITY
COUNCIL

5th Feb 2018

Legend

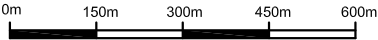
- 1961 - Dwelling
- State land

Job No: W07/4995

Drawing No: "1961"

Moss Vale Rd, Cambewarra

Scale @ A3 1:9000
Scale @ A4 1:13500



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Notes:

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Legend

-  1970 - dwelling
-  State land

Job No: W07/4995

Drawing No: 1970

Moss Vale Rd, Cambewarra

Scale @ A3 1:9000
Scale @ A4 1:13500



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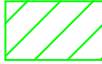


Notes:

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Legend

-  1979 - dwelling
-  State land

Job No: W07/4995

Moss Vale Rd, Cambewarra

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Drawing No: "1979"

Scale @ A3 1:9000
Scale @ A4 1:13500



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Notes:

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5th Feb 2018

Legend

■
1984 - dwelling

▨
State land

Job No: W07/4995

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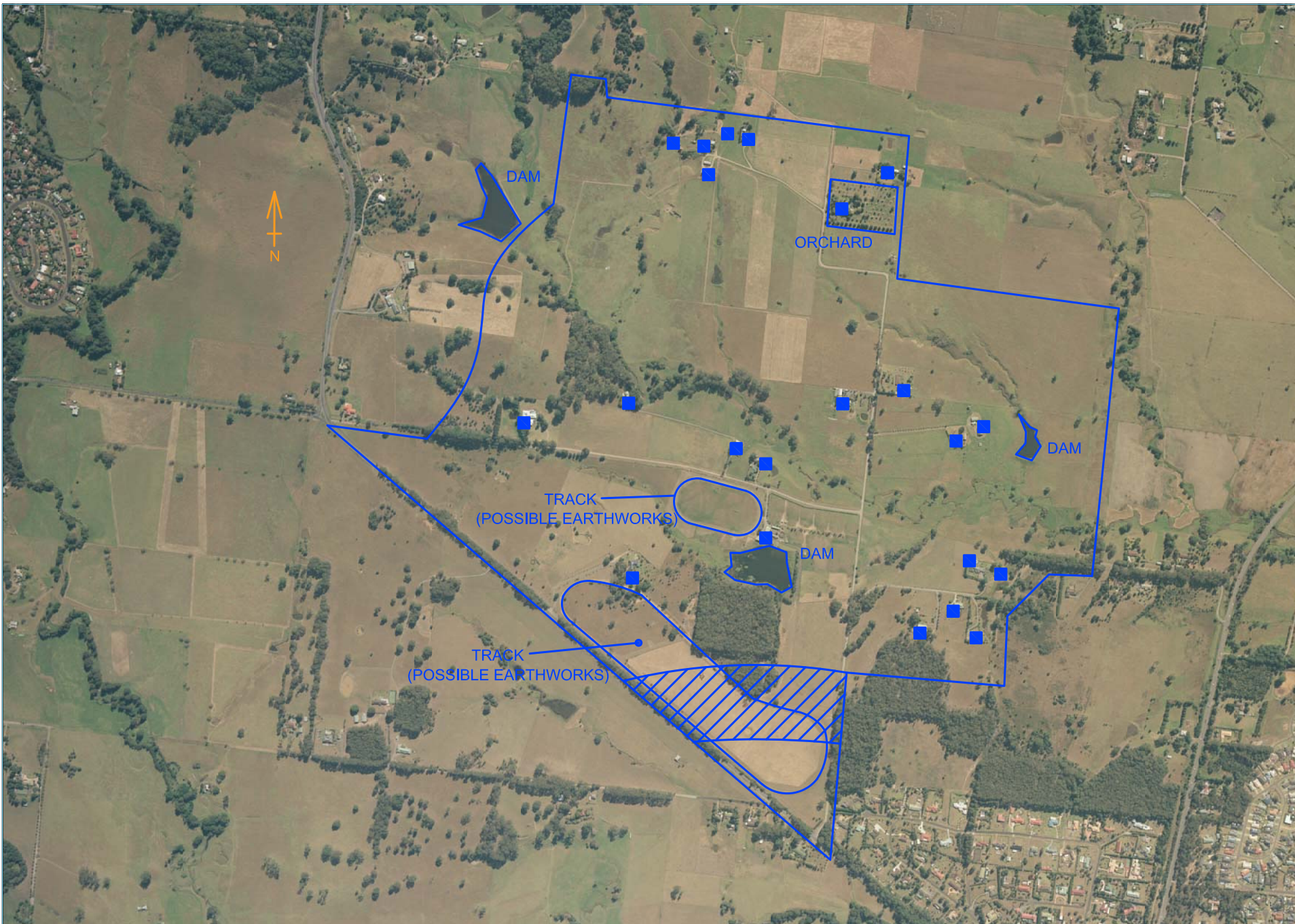
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**Network
Geotechnics**
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Drawing No: "1984"

Scale @ A3 1:9000
Scale @ A4 1:13500





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COUNCIL

5th Feb 2018

Legend

- 2006 - dwelling
- State land

Job No: W07/4995

Moss Vale Rd, Cambewarra

Drawing No: "2006"

Scale @ A3 1:9000
Scale @ A4 1:13500



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Notes:

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5th Feb 2018

Legend

■
2018 - dwelling



State land

Job No: W07/4995

Moss Vale Rd, Cambewarra

Drawing No: 2018

Scale @ A3 1:9000
Scale @ A4 1:13500



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Martin Williams

From: Diana Lord <Diana.Lord@shoalhaven.nsw.gov.au>
Sent: Wednesday, 14 February 2018 4:11 PM
To: Martin Williams
Subject: Moss Vale Road Urban Release Area - GIPA Records
Attachments: 20180202_131044.pdf; lot_list_north.pdf

Hello Martin

I refer to your below request for information relating to Moss Vale Road Urban Release Area. I have researched the Lot and DP's listed in your attachment and advise that none of these properties have a Potentially Contaminated Land file attached in Council records.

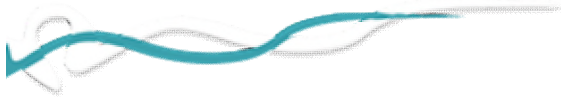
I trust this information is of assistance.

Kind regards

Diana

Diana Lord
Governance Officer
Shoalhaven City Council

02 4429 3530
Bridge Rd (PO Box 42) Nowra NSW 2541
diana.lord@shoalhaven.nsw.gov.au
www.shoalhaven.nsw.gov.au



From: Martin Williams [<mailto:mwilliams@netgeo.com.au>]
Sent: Friday, 2 February 2018 2:02 PM
To: Diana Lord <Diana.Lord@shoalhaven.nsw.gov.au>
Subject: HPECM: FW: Moss Vale Road Urban Release Area - GIPA Records

Hi Diana

Further to my email this morning, I have been instructed only the North area is now of interest, as highlighted on attached plan.

I also attach a listing of affected properties.

Regards

Martin Williams MSc MIEAust CPEng Principal Geotechnical Engineer. | **NETWORK GEOTECHNICS**
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w www.netgeo.com.au | **a** 1/140 Industrial Road, Oak Flats, NSW 2529

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