



DETAILED SITE HISTORY FOR "AREA E" TERRANORA PREPARED FOR GILBERT & SUTHERLAND MAY 2003

1.0 INTRODUCTION

This report has been undertaken to provide a detailed site history of various land holdings within the locality referred to as "Area E" Terranora, as part of a comprehensive preliminary site contamination report being prepared by Gilbert & Sutherland, Specialist Soil and Water Scientists.

2.0 SITE DETAILS

The site comprises thirteen land holdings owned by various land owners in the Terranora locality. Details of the holdings are as follows:

1. Lot 1 DP 785420, Terranora Road, Terranora (referred to as Property 1);
2. Lot 2 DP 785420, Terranora Road, Terranora (referred to as Property 2);
3. Lot 376 DP 755740, Mahers Lane, Terranora (referred to as Property 3);
4. Lot 375 DP 755740, Mahers Lane, Terranora (referred to as Property 4)
5. Lot 1 DP 962558, Mahers Lane, Terranora (referred to as Property 5);
6. Lot 1 DP 225183, Mahers Lane, Terranora (referred to as Property 6);
7. Lot 4 DP 582842, Terranora Road, Terranora (referred to as Property 7);
8. Lot 227 DP 755740, Fraser Drive, Terranora (referred to as Property 8)
9. Lot 1 DP 215959, Terranora Road, Terranora (referred to as Property 9).
10. Lot 2 DP 215959, Terranora Road, Terranora (referred to as Property 10);
11. Lot 12 DP 534942, Terranora Road, Terranora (referred to as Property 11);
12. Lot 1 DP 723050, Terranora Road, Terranora (referred to as Property 12).
13. Lot 1 DP 984118, Terranora Road, Terranora (referred to as Property 13).

Figure 1 indicates the boundaries and location of the various properties.

[illegible]



3.0 SITE HISTORY

The following maps, aerial photography and reports were examined in compiling a site history for the land:

- Topographic Map – Tweed Heads, No. 213A Zone 8, prepared by the Australian Section of the Imperial General Staff – 1935 (location Tweed Shire Library).
- Topographic Map – Tweed Heads, 9641-IV-S prepared by Central Mapping Authority of NSW – 1974 (location Tweed Shire Library).
- Topographic Map – Tweed Heads, 9641-IV-S prepared by Central Mapping Authority of NSW – 1985 (location Jim Glazebrook & Associates Pty Ltd).
- Aerial photography prepared for Master Planning Services Australia Pty Ltd – 1993 (location Jim Glazebrook & Associates Pty Ltd).
- Aerial photography prepared for McLauchlan Surveying – 1999 (location Jim Glazebrook & Associates Pty Ltd).
- Assessment of Soil Chemical Residues and Agricultural Report, prepared by Wilkie Fleming & Associates Pty Ltd, Agricultural & Property Management Consultants, 1994, (location Jim Glazebrook & Associates Pty Ltd).

FINDINGS

Based on the information examined the following is a summary of the use of the land.

1935

- Properties 1 to 7 – scattered timber, non perennial watercourses existing on most holdings.
- Property 8 – medium timber cover, swamp or marsh, watercourse on northern boundary.
- Property 9 – bananas (extent unknown) scattered timber.
- Properties 10, 12 & 13 – scattered timber and non perennial watercourses.
- Property 11 – scattered timber, bananas (extent unknown), possible stockyards.



1974

- Property 1 – cleared land, 3 buildings, dam.
- Property 2 – cleared land, building located on eastern boundary.
- Property 3 – cleared land, scrub on northern boundary, dam.
- Property 4 – cleared land, 2 buildings located in south west corner and 1 building located in north east corner, electricity transmission line running through center of property.
- Property 5 – scrub.
- Property 6 – cleared land, building located at road frontage, scrub located in center of land, scrub and marsh or swamp located on western portion of land together with a large dam.
- Property 7 – cleared land, scattered timber and dam located in north west corner, dam located on northern boundary, building located in center of land.
- Property 8 – scrub, swamp or marsh.
- Property 9 – cleared land, scattered timber, building located at end of access to land, indefinite stream or watercourse running from north west corner to center of the land.
- Property 10 – cleared land.
- Property 11 – cleared land, scattered timber along northern boundary, dams located on northern and western boundaries of land, indefinite stream or watercourse running from dam on northern boundary through center of land. 4 buildings (including large T shaped structure existing on land).
- Property 12 – cleared land.
- Property 13 – scattered timber, indefinite stream or watercourse located on southern boundary.

1985

- Property 1 – cleared land, number of buildings, 2 waterbodies.
- Property 2 – cleared land, building.



- Property 3 – cleared land, building, dam, medium timber located in north east corner of the land.
- Property 4 – cleared land, building located in south east corner.
- Property 5 – cleared land, 4 buildings, medium timber located in north east corner.
- Property 6 – cleared land, medium timber throughout property, 2 buildings located on eastern boundary (road frontage), 2 dams, land subject to inundation located along western and north western boundaries.
- Property 7 – cleared, scattered timber and watercourse located on northern boundary, building located in south west corner.
- Property 8 – cleared land, medium forest located along northern boundary, north eastern corner and central portion of land, watercourse located along boundary perimeter, land subject to inundation along western boundary.
- Property 9 – cleared land, scattered to medium timber located on northern end and north western boundaries.
- Property 10 – cleared land, 2 buildings.
- Property 11 – cleared land, medium timber located in center of land as well as in the north western and north eastern areas of the land, dams located in the north west corner and on the western boundary of the land. Building and dam located on road frontage of land.
- Property 12 – cleared land.
- Property 13 – cleared land, scattered to medium timber on northern boundary.

1993

- Property 1 – scattered timber, mainly cleared land, large building, smaller ancillary structures.
- Property 2 – cleared land, scattered timber, building located on eastern boundary.
- Property 3 – small crops, building located in center of land.
- Property 4 – small crops, building located in south west corner.



- Property 5 – small crops, building located on western boundary.
- Property 6 – small crops predominant, bananas located along northern boundary of land, number of buildings located on eastern portion of land, medium timber located along western and northern boundary of land.
- Property 7 – cleared land, scattered to medium timber throughout property.
- Property 8 – cleared land, scattered to medium timber coverage in north western portion of land.
- Property 9 – majority of property under bananas, building located in western portion of site.
- Property 10 – cleared land.
- Property 11 – predominantly small crops, scattered to medium timber located in central and north west of site.
- Property 12 – predominantly small crops with scattered timber on northern boundary.
- Property 13 – small crops with medium timber on northern boundary.

1994

- Property 1 & 2 – no known crop usage.
- Properties 3 – 5 – small crops – existing crops (ie. 1994) zucchinis, sweet potatoes, - past crop usage – tomatoes, peas and beans.
- Property 6 – bananas and small crops – existing crops (ie. 1994) bananas (located in northern sector of land), zucchinis, sweet potatoes, - past crop usage – beans.
- Property 7 – grazing.
- Property 8 – no records of crop usage.
- Properties 9 – 13 – existing crops (ie. 1994) bananas and small crops, bananas predominantly located on eastern portion of site (ie. Lot 1 DP 215959) – past crop usage – tomatoes, zucchinis, peas, beans and sweet potatoes.



1999

- Property 1 – predominantly cleared, scattered timber, dwelling and associated outbuildings.
- Property 2 – predominantly cleared, scattered timber, shed.
- Property 3 – small crops, scattered timber, building, dam on northern boundary.
- Property 4 – small crops, dwelling associated outbuildings.
- Property 5 – small crops, shed on western boundary, scattered timber on north east boundary, dam on eastern boundary.
- Property 6 – dwelling, associated outbuildings and scattered timber along eastern boundary, northern and central area of land under crops, medium to dense timber and 2 dams and watercourse located in western sector of land.
- Property 7 – scattered to medium timber, with possible crops on western boundary, 3 dams in northern sector of site, central areas of site predominantly cleared, building located on eastern boundary.
- Property 8 – cleared land, scattered to medium timber in western sector.
- Property 9 – predominantly crops, scattered timber, shed.
- Property 10 – dwelling, possible small crops predominant.
- Property 11 – dwelling in south east corner, predominantly crops, scattered timber in northern sector of land, dam in north west corner.
- Property 12 – small crops, scattered timber on northern boundary.
- Property 13 – small crops, cleared land and medium timber located in northern sector of site.

CONCLUSION

Due to the predominant use of the subject land for crop usage it is recommended that appropriate sampling occur on the land to determine if any possible contamination is evident. This is particularly recommended for those areas of the land that have been used for banana plantation purposes. These areas are indicated on the attached plan (see Figure 2).

FIGURE 2



ALPHA 2



POSSIBLE BANANA PLANTATION USE



**Soil Contamination
Assessment for
'Area E' Properties
Terranora**

**Volume 2 -
Laboratory Results**

Prepared for
Metricon Queensland Pty Ltd

October, 2003

Originating office:

Suite 12, Riverwalk One
Robina Town Centre Drive, Robina Q4230
PO Box 4115, Robina Q4226
Telephone 07 5578 9944
Facsimile 07 5578 9945
gsrobina@bigpond.com

Also at Kawana and Ballina

**ALS Environmental**

TO: GILBERT & SUTHERLAND PTY LTD

P O BOX 4115
ROBINA QLD 4230

ATTENTION: MR C BUTLER

SUBJECT: Analytical results.

BATCH: EB56836-0

DATE: 24/07/03

AUSTRALIAN LABORATORY SERVICES P/L

ABN: 84 009 936 029

BRISBANE

Tel: 61-7-3243 7222
Fax: 61-7-3243 7218

SYDNEY

Tel: 61-2-8784 8555
Fax: 61-2-8784 8500

MELBOURNE

Tel: 61-3-9538 4444
Fax: 61-3-9538 4400

NEWCASTLE

Tel: 61-2-4968 9433
Fax: 61-2-4968 0349

AUCKLAND

Tel: 64-9-379 9437
Fax: 64-9-379 1449



GILBERT & SUTHERLAND PTY LTD

Attention: MR C BUTLER

YourOrder: GJ0128

SampleType:SOIL

Project:

Page-no: 1

ENV BRISBANE

Batch-no: 56836

Sub-batch:0

No-samples:38

Received: 17/07/03

Checked:

Method	Analysis description	Units	LOR	12/53-C13	1/22-C1	1/22-C2
				16/07/03	15/07/03	15/07/03
EA-055	Moisture Content (dried @ 103' %		0.1	23.4	23.2	23.1
EG-005T	Arsenic - Total	mg/kg	1	8	8	7
EG-005T	Lead - Total	mg/kg	1	8	7	7

Results apply to sample(s) as submitted. Samples thoroughly homogenised prior to testing. Samples as received digested by USEPA method 200.2 (modified) prior to the determination of metals. Results reported on a dry weight basis.

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BRISBANE

Tel: 61-7-3243 7222

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SYDNEY

Tel: 61-2-8784 8555

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AUCKLAND

Tel: 64-9-379 9437

Fax: 64-9-379 1449



GILBERT & SUTHERLAND PTY LTD

Attention: MR C BUTLER
 YourOrder: CJ0128
 SampleType: SOIL
 Project:

Page-no: 2
 ENV BRISBANE
 Batch-no: 56836
 Sub-batch: 0
 No-samples: 38
 Received: 17/07/03
 Checked:

Method	Analysis description	Units	LOR	1/22-C3	1/22-C4	1/22-C5
				15/07/03	15/07/03	15/07/03
EA-055	Moisture Content (dried @ 103' %		0.1	20.4	20.8	18.4
EG-005T	Arsenic - Total	mg/kg	1	12	11	9
EG-005T	Lead - Total	mg/kg	1	6	8	7

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BRISBANE

Tel: 61-7-3243 7222

Fax: 61-7-3243 7218

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Tel: 61-2-8784 8555

Fax: 61-2-8784 8500

MELBOURNE

Tel: 61-3-9538 4444

Fax: 61-3-9538 4400

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AUCKLAND

Tel: 64-9-379 9437

Fax: 64-9-379 1449



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Attention: MR C BUTLER
YourOrder: GJ0128
SampleType:SOIL
Project:

Page-no: 3
ENV BRISBANE
Batch-no: 56836
Sub-batch:0
No-samples:38
Received: 17/07/03
Checked:

Method	Analysis description	Units	LOR	1/22-C6	1/22-C7	1/22-C8
				15/07/03	15/07/03	15/07/03
EA-055	Moisture Content (dried @ 103' %		0.1	22.6	27.5	25.7
EG-005T	Arsenic - Total	mg/kg	1	9	18	21
EG-005T	Lead - Total	mg/kg	1	7	7	8

AUSTRALIAN LABORATORY SERVICES P/L

ABN: 84 009 936 029

BRISBANE

Tel: 61-7-3243 7222
Fax: 61-7-3243 7218

SYDNEY

Tel: 61-2-8784 8555
Fax: 61-2-8784 8500

MELBOURNE

Tel: 61-3-9538 4444
Fax: 61-3-9538 4400

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Fax: 61-2-4968 0349

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Fax: 64-9-379 1449



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Attention: MR C BUTLER
 YourOrder: GJ0128
 SampleType: SOIL
 Project:

Page-no: 4
 ENV BRISBANE
 Batch-no: 56836
 Sub-batch: 0
 No-samples: 38
 Received: 17/07/03
 Checked:

Method	Analysis description	Units	LOR	1/22-C9	1/22-C10	1/22-C11
				15/07/03	15/07/03	15/07/03
EA-055	Moisture Content (dried @ 103' %		0.1	23.1	25.8	24.2
EG-005T	Arsenic - Total	mg/kg	1	11	18	25
EG-005T	Lead - Total	mg/kg	1	7	8	8

AUSTRALIAN LABORATORY SERVICES P/L

ABN: 84 009 936 029

BRISBANE	SYDNEY	MELBOURNE	NEWCASTLE	AUCKLAND
Tel: 61-7-3243 7222	Tel: 61-2-8784 8555	Tel: 61-3-9538 4444	Tel: 61-2-4968 9433	Tel: 64-9-379 9437
Fax: 61-7-3243 7218	Fax: 61-2-8784 8500	Fax: 61-3-9538 4400	Fax: 61-2-4968 0349	Fax: 64-9-379 1449



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Attention: MR C BUTLER
 YourOrder: GJ0128
 SampleType:SOIL
 Project:

Page-no: 5
 ENV BRISBANE
 Batch-no: 56836
 Sub-batch:0
 No-samples:38
 Received: 17/07/03
 Checked:

Method	Analysis description	Units	LOR	1/22-C12	1/22-C13	1/22-C14
				15/07/03	16/07/03	16/07/03
EA-055	Moisture Content (dried @ 103' %		0.1	19.1	29.3	26.5
EG-005T	Arsenic - Total	mg/kg	1	12	8	7
EG-005T	Lead - Total	mg/kg	1	7	7	7

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