BERNIE DE WITT CONSULTING

PROPOSED REZONING

PART LOT 358 DP755242, PART LOT 359 DP244002, MORISSET PARK

STABILITY ASSESSMENT AND

PRELIMINARY CONTAMINATION ASSESSMENT

N08340/01-AB

4 June 2003

Coffey

N08340/01-AB DDM:DDM
4 June 2003

Bernie de Witt Consulting Pty Ltd
14 Kullaroo Road
CHARLESTOWN NSW 2290

Attention: Bernie

Dear Sir

RE: PROPOSED REZONING

PART LOT 358 DP755242, PART LOT 359 DP244002, MORISSET PARK

STABILITY ASSESSMENT AND PRELIMINARY CONTAMINATION ASSESSMENT

Please find enclosed our report describing geotechnical studies undertaken at the above mentioned site. The report addresses slope stability at the site with regard to future urban development, and also discusses potential contamination.

The report concludes that urban development on the site is feasible with regard to the above issues, and recommends some further contamination testing in an isolated burnt area of the site, and some geotechnical constraints on the development with regard to geotechnical issues.

If you have any questions regarding this matter please do not hesitate to contact the undersigned.

For and on behalf of

COFFEY GEOSCIENCES PTY LTD

STEVE MORTON

Distribution:

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DRAWINGS

N08340/01-1	Site Locality Plan
N08340/01-2	Site Plan

1. INTRODUCTION

As requested, Coffey Geosciences Pty Ltd (Coffey) have carried out a slope stability and contamination assessment at Part Lot 358 DP 755242 and Part Lot 359 DP244002, corner of Morisset Park Road and Chifley Road, Morisset Park. The work was commissioned by Cedric Wright of Postfox Pty Ltd in a letter dated 31 January 2003, and also by Bernie de Witt of Bernie de Witt Consulting Pty Ltd in a fax dated 20 May 2003.

The location of the site is shown on Drawing No N08340/01-1

It is understood that a rezoning for the site is to lodged with Lake Macquarie City Council when the Local Environmental Plan (LEP) 2001 is gazetted.

The purpose of the work described herein was to address the following issues with regard to urban redevelopment of the site:

- Slope stability;
- Potential contamination.

The client supplied a site plan outlining the site.

2. SCOPE OF WORK AND METHODOLOGY

This assessment was based on an assessment of the site surface conditions, soils and site geology, with the following work carried out:

- A review of geological maps and topographical maps covering the site;
- A review of aerial photographs;
- Review of information held within Coffey archives;
- Site surface observation and mapping principally addressing areas of concern identified by the above review;
- Terrain classification and assessment of stability of areas with like geotechnical properties;
- Drilling, logging and sampling of soils at three locations on the site using hand auger techniques. Locations were selected on the basis of underlying site geology, andareas of possible contamination. A surface soil sample was obtained from the area of some fill and burning of waste (S1). Field work was carried out on 3 June 2003;
- Near surface soils samples from the borehole location and S1 were collected for subsequent chemical analysis

Engineering logs of the boreholes are presented in Appendix B together with explanation sheets defining the terms and symbols used in their preparation. Borehole and sample locations and shown on Drawing No N08340/01-2.

3. SITE CONDITIONS

3.1 Site History

A brief site history has been prepared from a review of land titles documentsand a review of maps held within Coffey archives.

The land titles search indicates the chain of ownership of Part Lot 358 DP755242 to be as follows:

- 1973 – Owned by Ernest William Harold Hill;
- 1973 – transferred to John Molyneux;
- 1976 – transferred to Arthur Erling Mould & Gillian Mary Mould;
- 1989 – transferred to Relatively Pty Ltd;
- 1993 – transferred to Norman Phillip Green;
- 1999 – transferred to Ian Douglas Cairns and Jan Margaret Cairns.

The land titles search indicates the chain of ownership of Part Lot 359 DP244002 to be as follows:

- 1944 – owned by James Edward Owen;
- 1970 – transferred to John Molyneux;
- 1977 – transferred to Paul William Nielsen & Patrick Anthony Rennie;
- 1979 – transferred to Fonsomby Investments Pty Limited;
- 1985 – transferred to David Maxwell Fatches & Rose Eva Fatches;
- 1989 – transferred to Relativity Pty Ltd;
- 1991 – transferred toPeter Kenneth Fry & Patricia Suzanne Fry;
- 1993 – transferred to Postfox Pty Limited.

Copies of land titles documents are presented in Appendix A.

3.2 Surface Conditions

As shown on Drawing N08340/01-1, the site is located on the corner of Morisset Park Road and Chifley Road, Morisset Park. It is bounded by residential land to the north, with some residential land bounding the site to the east, along with Chifley Road. The site is bound to the south by Morisset Park Road, and Environmental Conservation land Bounds the site to the west.

Topographically the site is situated in a region of gently undulating topography, with the majority of the land sloping gently towards Lake Macquarie.

The site is located on the northern side of a west to east trending ridgeline, with surface slope ranging from 2° to 5°, as shown on drawing N08340/01-1. The only break of slope observed on the site was an ephemeral drainage gully that intersects the south eastern corner of Lot 359, and discharges to the northeast.

Surface soils over the site are typically Silty and Clayey SANDS, (refer to section 3.3 for further soil descriptions). Drainage over both sites is predominantly by overland flow, with some infiltration and subsurface flow expected through the upper sandy layers of soils. The field work was done after a period a rainfall at the site, and water was observed on the ground surface in several locations.

The land has been cleared of vegetation for grazing over the south western portion of lot 359, with short grass cover the only vegetation over this area. The northern and eastern parts of this lot have vegetation consisting mainly of tall mature eucalypt trees, typically 10 to 15m tall, with some small grass and ferns also occurring in these areas. Also in this area, large areas covered with woodchips were observed in depths varying from 100mm to 200mm. Approximately half of lot 358 has been cleared for grazing, with ground cover in this area consisting of short grasses. The north western portion of lot 358 contains dense vegetation, with mature eucalypt trees up to 15m in height, and dense undergrowth consisting of grasses ferns and small shrubs.

An area of filling was found on the site associated with an area where the burning of timber, and garbage had taken place, located around S1 on the drawing N08340/01-1.

No large excavations were observed on the site, however several small cuts were observed on both sites, with the approximate location of these shown on drawing N08340/01.

The site is expected to be generally trafficable via a 2WD vehicle, with the exception of the dense vegetated area on Lot 358. However after rainfall trafficability may be reduced in areas were there is no grass cover, and the surface soils are exposed, which tend to restrict traction of a 2WD vehicle.

3.3 Subsurface Conditions

Reference to the 1:100,000 Newcastle Coalfields Surface Geology Map, the site is underlain by the Narrabeen Group (Clifton Subgroup and Terrigal Formation), which typically comprises sandstone, siltstone, conglomerate and claystone.

The types of soils encountered are summarised in Table 1.

TABLE 1: SUMMARY OF SOILS TYPES

UNIT	SOIL TYPE	DESCRIPTION
1	Fill	Woodchips were encountered only at BH2
2	Topsoil	Gravelly Silty SAND, or Silty Gravelly SAND, fine to medium grained, grey – dark grey – brown, fine grained Gravel, containing some roots
3	Slopewash	Silty Gravelly SAND, fine to medium grained, grey, fine grained gravel, some roots
4	Colluvium	Gravelly Clayey SAND, fine to coarse grained sand, pale grey – pale brown, mottled orange, medium plasticity Clay, fine grained Gravel, and containing some Silt
5	Residual	Gravelly Sandy CLAY, high plasticity, orange, fine to medium grained sand, fine grained Gravel, some red mottling a greater depths.

Table 2 contains a summary of the distribution of the above units in the test pits.

TABLE 2. SUMMARY OF THE SOIL UNITS ENCOUNTERED AT EACH TEST PIT LOCATION.

TEST PIT	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5
	DEPTHS IN METRES				
BH1	-	0.0-0.1	0.1-0.3	0.3-0.5	0.5-1.0
BH2	0.0-0.15	-	0.15-0.35	0.35-0.65	0.65-1.0
BH3	-	0.0-0.15	0.15-0.35	-	0.35-0.7

No groundwater inflows were encountered during the current investigation.

4. SLOPE STABILITY ASSESSMENT

4.1 Basis of Assessment

The risk of slope instability has been assessed from the observed site conditions in accordance with the classification system formulated by the Australian Geomechanics Society and published in '*Australian Geomechanics News, Number 10, 1985*' (see attached Table 1 – Classification of Risk of Slope Instability, for explanation of risk categories and implications for development).

This report provides an assessment of the risk of slope instability on the property and immediate surrounding area. The report also recommends some geotechnical constraints for the site development in light of the assessed risk of slope instability.

On the basis of the site conditions discussed in Sections 3.2 and 3.3, the site is assessed as having a low risk of slope instability in accordance with the classification system in Table 1.

4.2 Recommended Geotechnical Constraints For Development

The following constraints are aimed at providing broad guidelines to assist in development planning. Development should be carried out in accordance with good hillside practice (as set out in Table 2 and Figure 1 attached) and the specific geotechnical constraints defined below.

Area for Development

Urban Development of the site is considered feasible from a slope stability viewpoint.

Good hillside construction practice is recommended in all areas of the site.

Type of Structure

There are no particular geotechnical constraints on the types of structures considered suitable for the site provided they are constructed on footings designed in accordance with AS2870 "Residential Slabs and Footings".

Development should be designed to accommodate the natural slope profiles.

Foundation Type

Strip/pad footings, raft slabs and pier and beam systems would be suitable from a slope stability point of view.

Excavations

All excavations should be retained or battered at 1V:2H or flatter and protected against erosion. Steeper cuts should be supported by properly designed retaining walls. Excavations in competent conglomerate or sandstone (below the level of backhoe refusal) may be battered at 1V:1H.

Filling

The total depth of fill on individual lots should preferably not exceed 1.5m. This does not include areas of engineered site regrade or road embankment fill.

Fill batters on all geotechnical units should be graded to an angle of 1V:2H or flatter and protected against erosion, or else supported by engineered retaining walls.

Retaining Walls

Retaining walls should be designed for surcharge loading from slope or structures above the wall and adequate surface and subsurface drainage must be provided behind all retaining walls.

Retaining walls in excess of 1.5m should be designed by an engineer.

Site Clearance

To limit erosion, the development strategy should include the following principles:

- Plan for soil and water management concurrently with engineering design and in advance of earthworks;
- Minimise the area and duration of soil exposure by staged development and controlled clearing;
- Stockpile stripped topsoil for reuse and protect from erosion;
- Control stormwater run-off by diverting clean run-off from denuded areas, minimising slope gradient, length and run-off velocities and trapping soil and water pollutants. This can be carried out by installation of sediment basins/barriers, perimeter banks, siltation fences and nutrient traps (wet basins);
- Quick rehabilitation of disturbed areas.

Road Construction and Earthworks

It is assumed that road fill and site regrade areas proposed during the construction works will be composed of engineered fill obtained from excavation in cut areas. Residual soils (Unit 5) - is considered suitable for reuse as engineered fill. Clayey soils of medium to high plasticity will contribute a large proportion of engineered fill won from the site and care should be taken to ensure clay fill is placed and maintained at moisture contents close to optimum compaction levels (±2%). Where fill is to be placed on slopes of more than 7° a level surface should be benched into the slope profile.

5. CONTAMINATION

5.1 Evidence of Contamination

Form the site history obtained there was no indication of any activities taking place on this site that would be likely to result in contamination of the site.

Currently there are several possible sources of contamination on the sites as follows

- An area of filling on Lot 359, as shown on drawing N08340/01-1, where burning of timber and other materials has taken place;
- The old garage on Lot 359, a small container of oil was found in this shed, along with some other unlabeled containers;
- A minor dumping area around the garage on Lot 358, In this area old empty 44gallon drums have been dumped, with the labels on these on the drums indicating that they once contained "bakers product".

There was no evidence of contamination observed at the site, such as odours, oily sheens, vegetation dieback or distress observed during the walkover assessment.

5.2 ENVIRONMENTAL LABORATORY TESTING

5.2.1 Sample Selection and Analysis Suite

The samples, when collected in the field were stored in eskies on ice and then returned to Coffey's Newcastle Laboratory and placed in refrigerated storage. Samples were selected for analysis on the basis of location within the site and soil profile. Selected samples were sent under Chain of Custody conditions to Australian Laboratory Services, a specialist NATA registered chemical laboratory.

Selected samples were tested for the following suite of common contaminants:

- Total Petroleum Hydrocarbons (TPH) – from spillage or leakage of fuels, oils and greases;
- Polycyclic Aromatic Hydrocarbons (PAH) – from oils, greases, ash, slag, tar or bitumen related products;
- Heavy Metals – Copper, lead, zinc, cadmium, chromium, arsenic, mercury and nickel;
- Organochlorine and Organo phosphorus pesticides – from pesticideand termite spraying on site;
- BTEX – benzene, toluene, Ethyl benzene, xylene – from petroleum and oil spills;
- PCB – Polychlorinated Byphenal – typically from oils.

The results of the above testing are shown in the Attached Table 3, and the original results are presented in Appendix C.

5.2.2 Quality Control

Samples were transported to Australian Laboratory Services on ice under Chain of Custody conditions.

Field duplicate samples were taken for quality control purposes; one duplicate sample was collected. No wash blank samples were collected as sampling was undertaken by scooping the soil directly into the jars without use of additional tools. It should also be noted that samples were collected from the sides of test pits using disposable rubber gloves to reduce the chance of cross contamination. Comparison between the results of analyses on primary and duplicate soil samples are presented in Table 4

As shown in Table 4, the results of analyses of primary and duplicate samples generally show good correlation on all analytes tested (TPH, PAH, OCP, OPP, BTEX, PCB, Heavy Metals).

In addition to field quality control, the laboratory conducted internal quality control using laboratory duplicates, surrogates and method blanks. The results are shown with laboratory report sheets in Appendix C. Analytical methods used for the laboratory testing are also indicated on the laboratory report sheets. The results of laboratory quality control testing are considered to be within acceptable limits.

On the basis of the field and laboratory quality control results discussed above, the field and laboratory methods are considered appropriate, and the data obtained is considered to reasonably represent the concentrations at the sampling points at the time of sampling.

5.3 Guideline and Acceptance Criteria

For evaluation of soil contamination, reference was made to the criteria presented in NEPM (1999) Reference 1. These guidelines present ecological investigation levels for a broad range of contaminants in soil. Reference has also been made to health based soil investigation levels presented in NSW EPA "Guidelines for the Site Auditor Scheme" Reference 2, which offers several sets of guideline values based upon intended site usage.

5.4 Results and Recommendations

The results are summarised and compared to guideline criteria in Table 3. The following points are noted with regard to Table 3:

- All TPH concentrations were below the practical quantifiable limit of the analytes for all samples;
- All PAH concentrations were below the quantitative detectable limit of the analytes for all samples;
- All OCP and OPP were below the quantifiable detectable limit of the analytes, and therefore well below the guidelines;
- Concentrations of Arsenic were below the guidelines for all locations, with the exception of S1,

which showed a concentration above the EPA guideline for residential sites;

- Elevated concentrations of Arsenic, Chromium, Copper, and Zinc were above the NEPM Ecological Soil Investigation guidelines at sample location S1, with an elevated level of Zinc also being reported at BH3.
- All other heavy metals tested had concentrations below criteria;

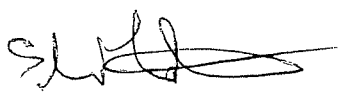
The results indicate that some contamination in the soils has occurred in the area of the fill, and burnt area, as shown on drawing N08340/01-2. It is considered that further testing in this area may be required to identify the extent of the contamination and to determine the preferred method of management of the contamination encountered.

6. CONCLUSIONS

The proposed residential development of Part Lot 358 DP 755242 and Part Lot 359 DP244002, corner of Morisset Park Road and Chifley Road, Morisset Park, as shown on Drawing No N08340/01-1 is considered feasible from a slope stability assessment. Further testing in the burnt area is recommended to approximate the extent of the contamination.

For and on behalf of

COFFEY GEOSCIENCES PTY LTD



STEVE MORTON

REFERENCES:

1. National Environmental Protection (Assessment of Site Contamination) Measure. *Guideline on Investigation Levels for Soil and Groundwater.* December 1999.
2. NSW Environmental Protection Authority, Guidelines for the NSW Site Auditor Scheme. June 1998.

TABLE 3 - RESULTS OF CHEMICAL ANALYSES (concentrations in mg/kg)

Client: BERNIE DE WITT CONSULTING PTY LTD

Project: CORNER OF MORISSET ROAD AND CHIFFLEY ROAD, MORISSET PARK

Location: REFER TO DRAWING N08340/01

	SAMPLE LOCATION	DEPTH (m)	PID (ppm)	TOTAL PETROLEUM HYDROCARBONS					PAH		PCB	Pesticides (Total)		BTEX				HEAVY METALS							
				C6-C9	C10-C14	C15-C28	C28-C36	TOTAL	Total	b-a-p		OCP	OPP	Benzene	Toluene	Ethyl Ben.	Xylene	As	Cd	Cr*	Cu	Pb	Ni	Zn	Hg
Primary Samples	BH1	0.0-0.1		<2	<50	<100	<100	<250	<8	<0.5	<0.1	<1.35	<1.45	<0.2	<0.2	<0.2	<0.2	<1	<1	3	3	14	<1	28	<0.1
	BH2	0.0-0.1		<2	<50	<100	<100	<250	<8	<0.5	<0.1	<1.35	<1.45	<0.2	<0.2	<0.2	<0.2	3	<1	4	3	19	<1	26	<0.1
	BH3	0.0-0.1		<2	<50	<100	<100	<250	<8	<0.5	<0.1	<1.35	<1.45	<0.2	<0.2	<0.2	<0.2	3	<1	42	2	286	<1	362	<0.1
	S1	0.0-0.1		<2	<50	<100	<100	<250	<8	<0.5	<0.1	<1.35	<1.45	<0.2	<0.2	<0.2	<0.2	296	<1	79	165	32	2	254	<0.1
Duplicates	BH10	0.0-0.1		<2	<50	<100	<100	0	<8	<0.5	<0.1	<1.35	<1.45	<0.2	<0.2	<0.2	<0.2	<1	<1	2	3	11	<1	29	<0.01
QC	Wash Blank																								
	Trip Blank																								
Sample size:				4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Mean:				1.00	25	50	50	125	4	0.3	0	1	1	0.1	0.1	0.1	0.1	76	0.5	32	43	88	1	166	0.1
Maximum:	Calculations are based on Primary Samples only			1	25	50	50	125	4	0.3	0	1	1	0.1	0.1	0.1	0.1	296	0.5	79	165	286	2	362	0.1
Minimum:				1	25	50	50	125	4	0.3	0	1	1	0.1	0.1	0.1	0.1	1	0.5	3	2	14	1	26	0.1
Standard Deviation:				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	127.2	0.0	31.4	70.3	114.6	0.6	145.6	0.0
Student's t:				2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
95% UCL of Mean				1.0	25.0	50.0	50.0	125.0	4.0	0.3	0.1	0.7	0.7	0.1	0.1	0.1	0.1	225.3	0.5	68.9	126.0	222.6	1.6	338.8	0.1
CRITERIA																									
Environmental:														1	1.4	3.1	14	20	3	400*	100	600	60	200	1
Human Health(1):				65				1000	20	1	8500			1	130	50	25	100	20	100**	1000	300	600	7000	15
Human Health(2):									40	2								200	40	200**	2000	600	600	14000	30
Human Health (3):									80	4								400	80	400**	4000	1200	2400	28000	60
Human Health (4):									100	5								500	100	500**	5000	1500	3000	35000	75

NOTES:

<PQL Results Below Practical Quantifiable Limit

ITALIC Results Below PQL but half the detection limit has been adopted for statistical calculations

SHADED Value exceeds Environmental soil investigation guidelines from ANZECC 1992, Table 2

BOLD Value exceeds guidelines for Human Health (1) criteria

* Total Chromium (digested by laboratory)

**Chromium VI (6+ oxidation state)

CRITERIA:

Environmental Ecological Investigation Levels (EILs)

Human Health(1) criteria for residential sites (NSW EPA 1994 & 1998)

Human Health (2) criteria - health based soil investigation levels for Parklands, recreational open space and playing fields (NSW EPA, 1998)

Human Health (3) criteria - health based soil investigation levels for residential sites with minimal access to soil (NSW EPA, 1998)

Human Health (4) criteria - health based soil investigation levels for commercial or industrial sites (NSW EPA, 1998)

TABLE 4 - RESULTS OF DATA REVIEW (RELATIVE PECENT DIFFERENCE CALCULATION)

Client: BERNIE DE WITT CONSULTING PTY LTD

Project: CORNER OF MORISSET ROAD AND CHIFFLEY ROAD, MORISSET PARK

Location: REFER TO DRAWING N08340/01

SAMPLE LOCATION		TOTAL PETROLEUM HYDROCARBONS					PAH		PCB	Pesticides (Total)		BTEX				HEAVY METALS							
		C6-C9	C10-C14	C15-C28	C28-C36	TOTAL	Total	b-a-p		OCP	OPP	Benzene	Toluene	Ethyl Ben.	Xylene	As	Cd	Cr*	Cu	Pb	Ni	Zn	Hg
BH1	0.0-0.1	*<2*	*<50*	*<100*	*<100*	*<250*	*<8*	*<0.5*	*<0.1*	*<1.35*	*<1.45*	*<0.2*	*<0.2*	*<0.2*	*<0.2*	*<1*	*<1*	3	3	14	*<1*	28	*<0.1*
BH10	0.0-0.1	<2	<50	<100	<100	0	<8	<0.5	<0.1	<1.35	<1.45	<0.2	<0.2	<0.2	<0.2	<1	<1	2	3	11	<1	29	<0.01
RPD*		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	24.00	0.00	3.51	0.00

* Duplictae samples should have a RPD of less then 50 percent for most analytes where RPD = [difference between samples/average of samples] x 100

Table 1

CLASSIFICATION OF RISK OF SLOPE INSTABILITY

ASSESSMENT OF RISK

Natural hill slopes are formed by processes which reflect the site geology, environment and climate. These processes include downslope movement of the near surface soil and rocks, in geological time all slopes are unstable. The area of influence of these downslope movements may range from local to regional and are rarely related to property boundaries. The natural processes may be affected by human intervention in the form of construction and related activities.

A landslip (or landslide) is a downslope movement of a soil or rock mass as a result of shear failure at the boundaries of the moving mass. Soil creep, which is extremely slow and occurs without a well defined surface, is not included as a landslip.

It is not technically feasible to assess the stability of a particular site in absolute terms such as stable or unstable. However, the degree of risk of slope movement can be assessed by the recognition of surface features supplemented by limited information on the regional and local subsurface profile and with the benefit of experience gained in similar geological environments. The degree of risk is categorised below:

RISK OF INSTABILITY	EXPLANATION	IMPLICATIONS FOR DEVELOPMENT
VERY HIGH	Evidence of active or past landslips or rockface failure, extensive or rockface failure, extensive instability may occur.	Unsuitable for development unless major geotechnical work can satisfactorily improve the stability. Extensive geotechnical investigation necessary. Risk after development may be higher than usually accepted.
HIGH	Evidence of active soil creep or minor slips or rockface instability, significant instability may occur during and after extreme climatic conditions.	Development restrictions and/or geotechnical works required. Geotechnical investigation necessary. Risk after development may be higher than usually accepted.
MEDIUM	Evidence of possible soil creep or a steep soil covered slope, significant instability can be expected if the development does not have due regard for the site conditions.	Development restrictions may be required. Engineering practices suitable to hillside construction necessary. Geotechnical investigation may be needed. Risk after development generally no higher than usually accepted.
LOW	No evidence of instability observed, instability not expected.	Good engineering practices suitable for hillside construction required. Risk after development normally acceptable.
VERY LOW	Typically shallow soil cover with flat to gently sloping topography.	Good engineering practices should be followed.

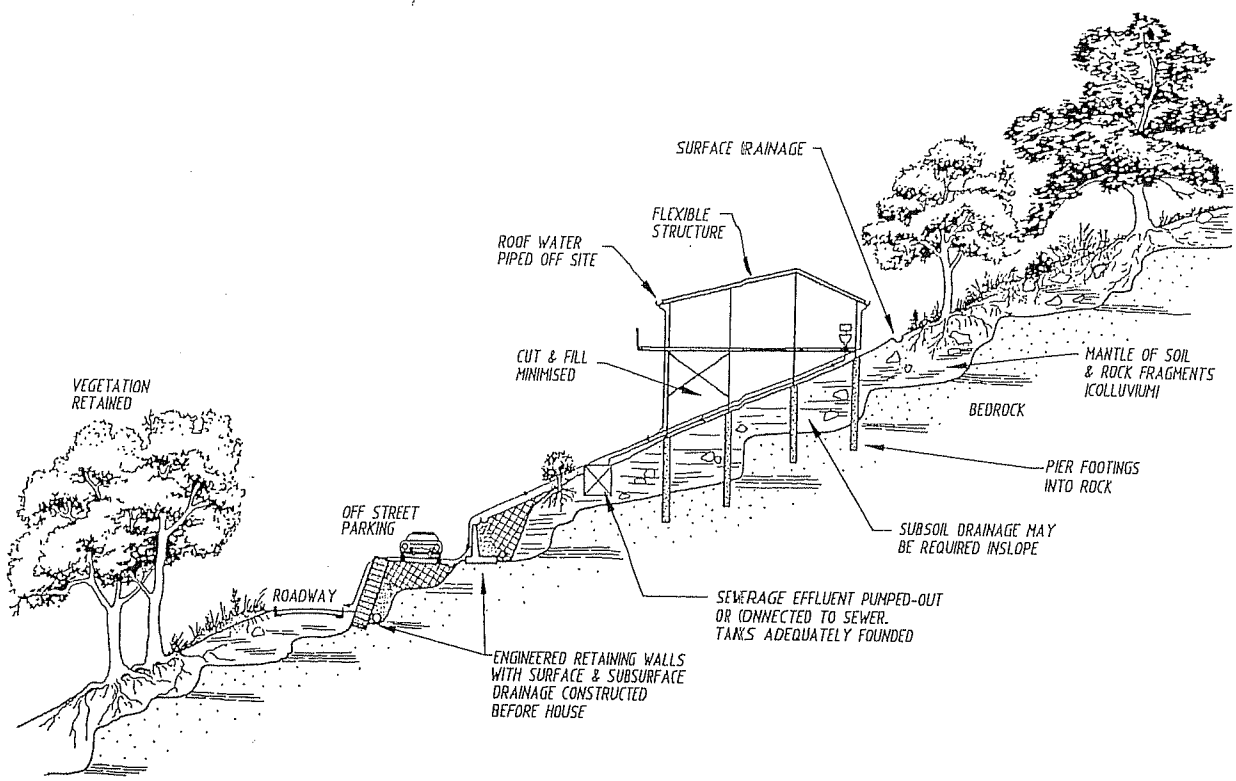
Ref 1: GEOTECHNICAL RISKS ASSOCIATED WITH HILLSIDE DEVELOPMENT Australian Geomechanics News, Number 10, December, 1985.

TABLE 2 SOME GUIDELINES FOR HILLSIDE CONSTRUCTION

	GOOD ENGINEERING PRACTICE	POOR ENGINEERING PRACTICE
ADVICE		
GEOTECHNICAL ASSESSMENT	Obtain advice from a qualified, experienced geotechnical consultant at early stage of planning and before site works.	Prepare detailed plan and start site works before geotechnical advice.
PLANNING		
SITE PLANNING	Having obtained geotechnical advice, plan the development with the Risk of Instability and Implications for Development in mind.	Plan development without regard for the Risk of Instability.
DESIGN AND CONSTRUCTION		
HOUSE DESIGN	Use flexible structures which incorporate properly designed brickwork, timber or steel frames, timber or panel cladding. Consider use of split levels. Use decks for recreational areas where appropriate.	Floor plans which require extensive cutting and filling. Movement intolerant structures.
SITE CLEARING	Retain natural vegetation wherever practicable.	Indiscriminately clear the site.
ACCESS & DRIVEWAYS	Satisfy requirements below for cuts, fills, retaining walls and drainage. Council specifications for grades may need to be modified. Driveways and parking areas may need to be fully supported on piers.	Excavate and fill for site access before geotechnical advice.
EARTHWORKS	Retain natural contours wherever possible.	
CUTS	Minimise depth. Support with engineered retaining walls or batter to appropriate slope. Provide drainage measures and erosion control.	Large scale cuts and benching. Unsupported cuts. Ignore drainage requirements.
FILLS	Minimise height. Strip vegetation and topsoil and key into natural slopes prior to filling. Use and compact clean fill materials. Batter to appropriate slope or support with engineered retaining wall. Provide surface drainage and appropriate subsurface drainage.	Loose or poorly compacted fill. Block natural drainage lines. Fill over existing vegetation and topsoil. Include stumps, trees, vegetation, topsoil, boulders, building rubble etc in fill.
ROCK OUTCROPS & BOULDERS	Remove or stabilise boulders which may become unstable. Support rock faces where necessary.	Disturb or undercut detached blocks or boulders.
RETAINING WALLS	Engineer design to resist applied soil and water forces. Found on rock where practicable. Provide subsurface drainage within wall backfill and surface drainage on slope above. Construct wall as soon as possible after cut/fill operation.	Construct a structurally inadequate wall such as sandstone flagging, brick or unreinforced blockwork. Lack of subsurface drains and weepholes.
FOUNDATIONS	Support on or within rock where practicable. Use rows of piers or strip foundations oriented up and down slope. Design for lateral creep pressures. Backfill foundation excavations to exclude ingress of surface water.	Found on topsoil, loose fill, detached boulders or undercut cliffs.
SWIMMING POOLS	Engineer designed. Support on piers to rock where practicable. Provide with under-drainage and gravity drain outlet where practicable. Design for high soil pressures which may develop on uphill side whilst there may be little or no lateral support on downhill side.	
DRAINAGE		
SURFACE	Provide at tops of cut and fill slopes. Discharge to street drainage or natural water courses. Provide generous falls to prevent blockage by siltation and incorporate silt traps. Line to minimise infiltration and make flexible where possible. Special structures to disipate energy at changes of slope and/or direction.	Discharge at top of fills and cuts. Allow water to pond on bench areas.
SUBSURFACE	Provide filter around subsurface drain. Provide drain behind retaining walls. Use flexible pipelines with access for maintenance. Prevent inflow of surface water.	
SEPTIC & SULLAGE	Usually requires pump-out or mains sewer systems; absorption trenches may be possible in some low risk areas. Storage tanks should be water-tight and adequately founded.	Discharge sullage directly onto and into slopes.
EROSION CONTROL & LANDSCAPING	Control erosion as this may lead to instability. Revegetate cleared area.	Failure to observe earthworks and drainage recommendations when landscaping.
DRAWINGS AND SITE VISITS DURING CONSTRUCTION		
DRAWINGS	Building Application drawings should be viewed by geotechnical consultant.	
SITE VISITS	Site Visits by consultant may be appropriate during construction.	
INSPECTION AND MAINTENANCE BY OWNER		
OWNER'S RESPONSIBILITY	Clean drainage systems; repair broken joints in drains and leaks in supply pipes. Where structural distress is evident seek advice. If seepage observed, determine cause or seek advice on consequences.	

This table is an extract from GEOTECHNICAL RISKS ASSOCIATED WITH HILLSIDE DEVELOPMENT as presented in Australian Geomechanics News, Number 10, 1985 which discusses the matter more fully.

EXAMPLES OF GOOD HILLSIDE PRACTICE



EXAMPLES OF POOR HILLSIDE PRACTICE

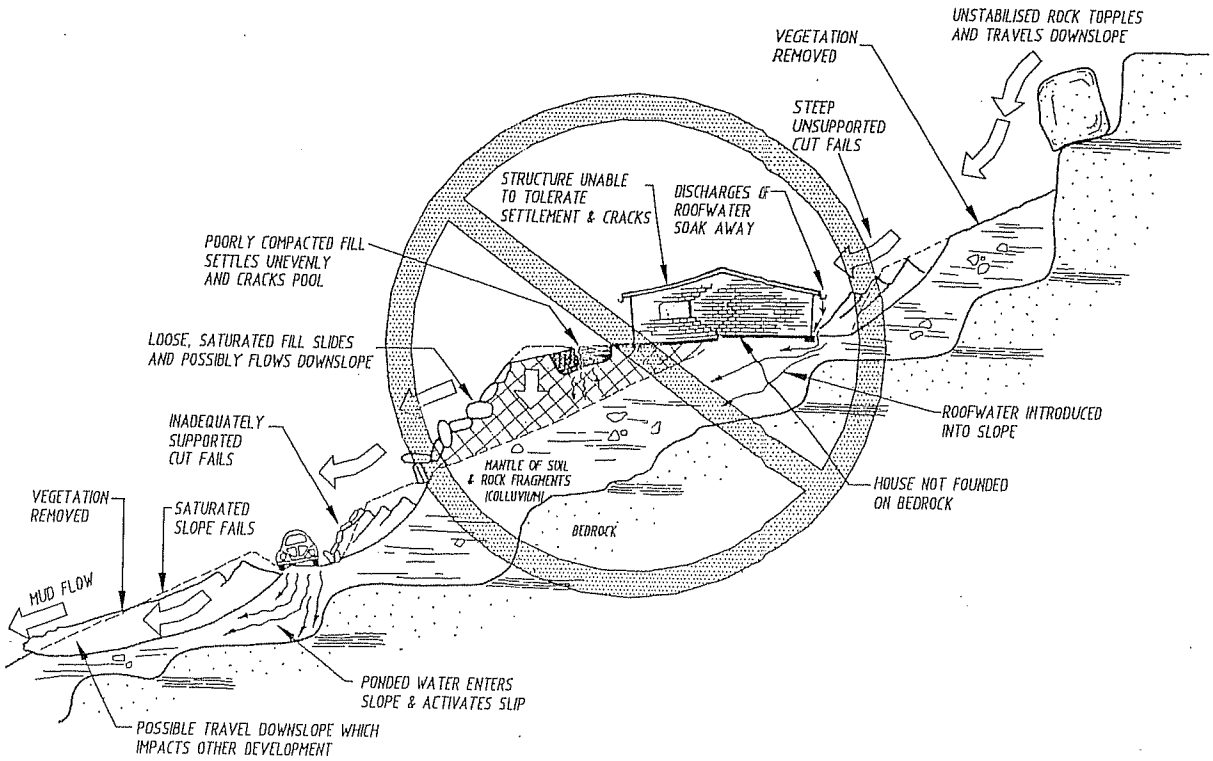


FIGURE 2: ILLUSTRATIONS OF GOOD AND POOR HILLSIDE PRACTICE

This figure is an extract form LANDSLIDE RISK MANAGEMENT CONCEPTS AND GUIDELINES as presented in *Australian Geomechanics*, Vol 35, No 1, 2000 which discusses the matter more fully.

Information

Important information about your **Coffey** Report

As a client of Coffey you should know that site subsurface conditions cause more construction problems than any other factor. These notes have been prepared by Coffey to help you interpret and understand the limitations of your report.

Your report is based on project specific criteria

Your report has been developed on the basis of your unique project specific requirements as understood by Coffey and applies only to the site investigated. Project criteria typically include the general nature of the project; its size and configuration; the location of any structures on the site; other site improvements; the presence of underground utilities; and the additional risk imposed by scope-of-service limitations imposed by the client. Your report should not be used if there are any changes to the project without first asking Coffey to assess how factors that changed subsequent to the date of the report affect the report's recommendations. Coffey cannot accept responsibility for problems that may occur due to changed factors if they are not consulted.

Subsurface conditions can change

Subsurface conditions are created by natural processes and the activity of man. For example, water levels can vary with time, fill may be placed on a site and pollutants may migrate with time. Because a report is based on conditions which existed at the time of the subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. Consult Coffey to be advised how time may have impacted on the project.

Interpretation of factual data

Site assessment identifies actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from literature and external data source review, sampling and subsequent laboratory testing are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, owners should retain the services of Coffey through the development stage, to identify variances, conduct additional tests if required, and recommend solutions to problems encountered on site.

Your report will only give preliminary recommendations

Your report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore your report recommendations can only be regarded as preliminary. Only Coffey, who prepared the report, is fully familiar with the background information needed to assess whether or not the report's recommendations are valid and whether or not changes should be considered as the project develops. If another party undertakes the implementation of the recommendations of this report there is a risk that the report will be misinterpreted and Coffey cannot be held responsible for such misinterpretation.

Your report is prepared for specific purposes and persons

To avoid misuse of the information contained in your report it is recommended that you confer with Coffey before passing your report on to another party who may not be familiar with the background and the purpose of the report. Your report should not be applied to any project other than that originally specified at the time the report was issued.

Coffey Geosciences Pty Ltd ABN 057 056 335 516

N08371/01-AB
11 December 2002

Coffey

APPENDIX A

RESULTS OF SITE HISTORY INVESTIGATION

SEARCH REPORT

OFFICE OF LAND AND PROPERTY INFORMATION OF NSW
TORRENS TITLE BRANCH

LAND : Morisset Road, Morisset Park
Being: Lot 358 in DP755242 &
Lot 9 in DP244002

Certificate of Title	Land Description	Registered Proprietor	Acquisition Date
Folio Identifier 358/755242	Lot 358 in DP755242	Ian Douglas Cairns & Jan Margaret Cairns	3-3-1999 vide Transfer 5646178
As above	As above	Norman Philip Green	24-8-1993 vide Transfer I589477
As above	As above	Relativity Pty Limited	8-3-1989 vide Transfer Y225498
Volume:11963 Folio:68	Portion 358	Arthur Erling Mould & Gillian Mary Mould	26-5-1976 vide Transfer P734260
As above	As above	John Molyneux	31-1-1973 vide Transfer N404142
As above	As above	Ernest William Harold Hill	21-5-1973 vide Transfer N201441
Folio Identifier 9/244002	Lot 9 in DP244002	Postfox Pty Limited	21-9-1993 vide Transfer I661811
As above	As above	Peter Kenneth Fry & Patricia Suzanne Fry	2-12-1991 vide Transfer Z910968
As above	As above	Relativity Pty Limited	11-1-1989 vide Transfer Y88407
Volume:12025 Folio:100	Lot 9 in DP244002	David Maxwell Fatches & Rose Eva Fatches	3-4-1985 vide Transfer V645491
As above	As above	Fonsomby Investments Pty Limited	22-10-1979 vide Transfers R482482 & R482483
As above	As above	Paul William Nielsen & Patrick Anthony Rennie	10-8-1977 vide Transfer Q235730

Volume:4097 Folio:47	Portion 359	John Molyneux	13-5-1970 vide Transfer L911900
As above	As above	James Edward Owen	2-9-1944 vide Transfer D323500

Land and Property Information

TITLE SEARCH

Computer Folio Certificate issued under Section 96D of the Real Property Act 1900

No. B20

Search certified to:
26/5/2003 12:02 PM

COMPUTER FOLIO REFERENCE	
358/755242	
EDITION No. & DATE OF CURRENT CERTIFICATE OF TITLE	
6	3/3/1999

LAND

LOT 358 IN DEPOSITED PLAN 755242
LOCAL GOVERNMENT AREA: LAKE MACQUARIE
PARISH OF MORISSET COUNTY OF NORTHUMBERLAND
(FORMERLY KNOWN AS PORTION 358)
TITLE DIAGRAM: CROWN PLAN 7913.2111

FIRST SCHEDULE

IAN DOUGLAS CAIRNS
JAN MARGARET CAIRNS
AS JOINT TENANTS (T 5646178)

SECOND SCHEDULE (2 NOTIFICATIONS)

---

1. LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
2. EXCEPTING LAND BELOW A DEPTH FROM THE SURFACE OF 15.24 METRES

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

Land and Property Information
No. B20

HISTORICAL TITLE SEARCH

Certificate issued under Section 96G
of the Real Property Act 1900

Search certified to: 26/5/2003 11:59AM

Computer Folio Reference: 358/755242

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 11963 FOL 68

Recorded	Number	Type of Instrument	C.T. Issue
3/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
12/1/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
6/2/1989	Y167944	APPLICATION FOR REMOVAL OF RESTRICTIONS	EDITION 1
8/3/1989	Y225498	TRANSFER	EDITION 2
5/11/1992	E879407	MORTGAGE	EDITION 3
24/8/1993	I589476	DISCHARGE OF MORTGAGE	
24/8/1993	I589477	TRANSFER	
24/8/1993	I589478	MORTGAGE	EDITION 4
8/3/1995	O71559	DISCHARGE OF MORTGAGE	EDITION 5
3/3/1999	5646178	TRANSFER	EDITION 6

*** END OF SEARCH ***

REGISTRAR GENERAL · NEW SOUTH WALES ·

00200 WS:idw01 OPR:01

B20 /Req:K478918 /DL I589477

RP13

TRANSFER

Real Property Act, 1900

I 589477 E

Office of

060893 2621 04 2006APR18/03

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title. If appropriate, specify the share transferred.

Folio Identifier 358/755242

(B) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
80E	Tuttman Hoyle REFERENCE (max. 15 characters): DLC

(C) **TRANSFEROR** RELATIVITY PTY. LIMITED A.C.N. 002 218 993

(D) acknowledges receipt of the consideration of $136,000.00

and as regards the land specified above transfers to the transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. ..... 2. ..... 3. .....

(F) **TRANSFEREE**

(G) T

NORMAN PHILIP GREEN of 80 Grand Parade, Bonnells Bay

~~as joint tenants/tenants in common~~

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. DATE OF EXECUTION 18th August 1998

Signed in my presence by the transferor who is personally known to me.

Brett Rosenthal
Signature of Witness

Brett Rosenthal
Name of Witness (BLOCK LETTERS)

80 Ferris St Annandale 2038
Address of Witness

COMMON SEAL RELATIVITY PTY LIMITED A.C.N. 002 218 993

DIRECTOR

Signature of Transferor SECRETARY

Signed in my presence by the transferee who is personally known to me.

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Signature of ~~Transferee~~ R.KAUFMANN
Solicitor for Transferee

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

00199 WS:idw01 OPR:01

B20 /Req:K478919 /DL Y225498

RP 13
1985

STAMP DUTY

REGISTRAR GENERAL'S DEPARTMENT NEW SOUTH WALES

TRANSFER

REAL PROPERTY ACT, 1900

T

CT 1 of 1
$ 0.12

DESCRIPTION OF LAND
Note (a)

Torrens Title Reference

Volume 11963
Folio 68
Now being 358/755242

If Part Only Delete Whole and Give Details

WHOLE

Location

at Morisset Park

TRANSFEROR
Note (b)

ARTHUR ERLING MOULD and GILLIAN MARY MOULD

ESTATE
Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $139,500.00
and transfers an estate in fee simple
in the land above described to the TRANSFEREE

TRANSFEREE
Note (d)

RELATIVITY PTY LIMITED of A-62 Telegraph Road, Pymble

OFFICE USE ONLY

S

TENANCY
Note (e)

~~as joint tenants/tenants in common~~

PRIOR ENCUMBRANCES
Note (f)

subject to the following PRIOR ENCUMBRANCES 1. NIL

2

3

DATE 17 February, 1989

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900

EXECUTION
Note (g)

Signed in my presence by the transferor who is personally known to me

Signature of Witness

643

R.C. LETHERBARROW
Name of Witness (BLOCK LETTERS)

89 DORA ST MORISSET
Address and occupation of Witness

SOLICITOR

J M Mould
A E Mould
Signature of Transferor

Note (g)

Signed in my presence by the transferee who is personally known to me

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

K J HENNESSY Signature of Transferee's Solicitor

TO BE COMPLETED BY LODGING PARTY
Notes (h) and (i)

LODGED BY
~~PHILLIPS FOX~~
SOLICITORS
17th LEVEL,
20 BOND STREET,
SYDNEY. 2000
TEL: 239-8907 REF: SCH/REG
Delivery Box Number DX 607 602T

LOCATION OF DOCUMENTS

CT | OTHER

Herewith

In L.T.O. with

Produced by

OFFICE USE ONLY

Checked | Passed | REGISTERED - -19

8 MAR 1989

Signed | Extra Fee

Secondary Directions

Delivery Directions CT 602T

NSW $=*******1.00 STAMP DUTY 18/01/89 1387 Y ML

NEW SOUTH WALES
three dollars
STAMP DUTY
SYDNEY, N.S.W.

No. 1972/2148

New South Wales

Vol. 11963 Fol. 68
Registered 13-11-1972
CANCELLED
Registrar General.

GRANT UPON PURCHASE OF LAND HELD AS A SUBURBAN HOLDING

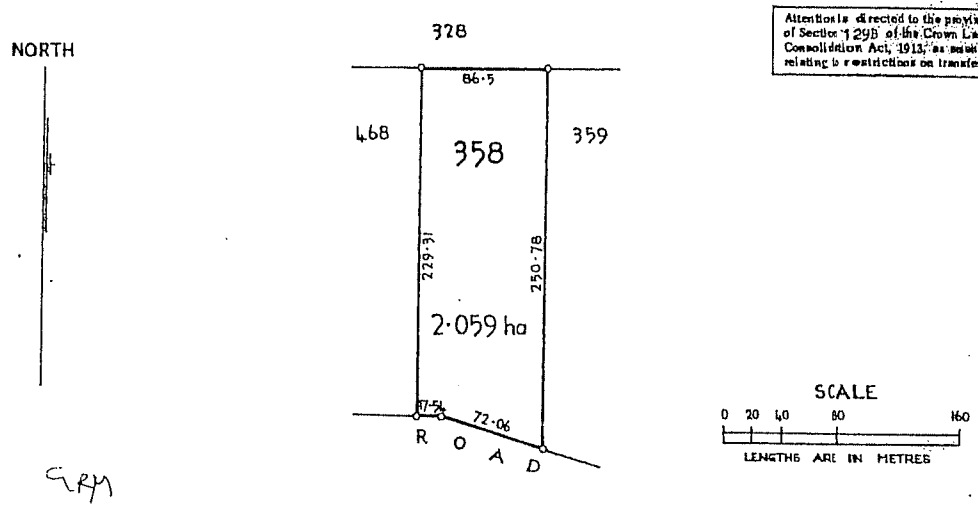
SEE AUTO FOLIO

S.H.P. 1960/18
GOSFORD

ELIZABETH the SECOND, by the Grace of God of the United Kingdom, Australia and Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith,—

To All to whom these Presents shall come, Greeting:—

Whereas the holder of Suburban Holding No. 1960/18 in the Land District of Gosford comprising the land hereinafter described and intended to be hereby granted limited to the surface thereof and to a depth of 15.24 metres below such surface applied to purchase the land held under the said Suburban Holding and after a report by the Local Land Board of the said District Our Minister for Lands approved of the granting of the said application AND WHEREAS the sum of seven hundred and fifty dollars being the purchase money payable for the said land has been duly paid and all things required by law to be done to entitle GRAND UNITED ODDFELLOWS (N.S.W.) CO-OPERATIVE BUILDING SOCIETY ~~No. 9~~ LIMITED (hereinafter called the GRANTEE) to a grant of the fee simple of the said land subject to the Reservations Exceptions and Conditions hereinafter contained have been done and performed NOW THESE PRESENTS WITNESS That in consideration of the premises WE DO HEREBY GRANT unto the GRANTEE Subject to the Reservations Exceptions and Conditions hereinafter contained ALL THAT parcel of land containing by admeasurement two point zero five nine hectares be the same more or less situated in the County of Northumberland Parish of Morisset Portion 358 as shown in plan catalogued No. N.7913-2111 in the Department of Lands



Attention is directed to the provisions of Section 129B of the Crown Lands Consolidation Act, 1913, as amended relating to restrictions on transfer.

As per Plan hereon SAVING AND EXCEPTING unto Us Our Heirs and Successors all that part of the said land which lies at a depth greater than 15.24 metres below the surface thereof TO HOLD unto the GRANTEE in fee simple PROVIDED NEVERTHELESS AND WE DO HEREBY RESERVE AND EXCEPT unto Us Our Heirs and Successors all minerals which the Land hereby granted contains with full power and authority for Us Our Heirs and Successors and such person or persons as shall from time to time be authorised by Us or Them to enter upon the Land hereby granted and to search for mine dig and remove the said minerals AND ALSO all such parts and so much of the Land hereby granted as may hereafter be required for public ways in over and through the same to be set out by Our Governor for the time being of Our said State or some person by him authorised in that respect with full power for Us Our Heirs and Successors and for Our Governor as aforesaid by such person or persons as shall be by Us Them or him authorised in that behalf to make and conduct all such public ways And the right of full and free ingress egress and regress into out of and upon the Land hereby granted for the several purposes aforesaid or any of them Provided Further AND IT IS EXPRESSLY DECLARED that mining operations may have been and may be carried on upon and in the land below the land hereby granted and the lands adjoining the land hereby granted and the land below the same and metals and minerals may have been and may be removed therefrom and that these presents are made upon and subject to the condition that neither the GRANTEE nor its sequels in title shall be entitled to make or prosecute any claim for damages or take any proceedings either by way of injunction or otherwise against Us Our Heirs and Successors or the Government of Our said State or any lessee or lessees under any Mining Act or Acts of Our said State or his or their executors administrators or assigns for or in respect of any damage or loss occasioned by the letting down subsidence or lateral movement of the land hereby granted or otherwise howsoever by reason of the following acts and matters that is to say by reason of Us Our Heirs or Successors or the Government of Our said State or any person on Our Their or its behalf or any lessee or lessees as aforesaid or his or their executors administrators or assigns having worked or now or hereafter working any mines or having carried on or now or hereafter carrying on mining operations or having searched for worked won or removed or now or hereafter searching for working winning or removing any metals or minerals under in or from the land below the land hereby granted or on in under or from any other lands situated laterally to the land hereby granted and the land below the same and whether on or below the surface of such other lands Provided Lastly AND WE DO HEREBY EXPRESSLY RESERVE unto Us Our Heirs and Successors the liberty and authority by reason of the acts and matters aforesaid or in the course thereof for Us Our Heirs and Successors and the Government of Our said State and any person on Our Their or its behalf and any lessee or lessees as aforesaid and his or their executors administrators and assigns to from time to time let down without payment of any compensation whatsoever any part of the land hereby granted and/or of the surface thereof IN TESTIMONY WHEREOF We have caused this Our Grant to be Sealed with the Seal of Our said State

Witness Our Governor of Our State of New South Wales and its Dependencies in the Commonwealth of Australia, at Sydney in Our said State, this first day of November in the twenty first year of Our Reign and in the year of Our Lord one Thousand nine hundred and seventy two

A. A. Cutler

Governor

FOR ENDORSEMENTS SEE PAGE 2

V. C. N. BLIGHT, GOVERNMENT PRINTER

Vol. 11963 Fol. 68

SCHEDULE OF REGISTERED PROPRIETORS

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
~~Ernest William Harold Hill of Morrisett Park, Retired~~	~~Transfer~~	~~N281441~~	~~21.5.1973~~	~~3.7.1973~~	
~~John Hargreaves of Wyoming Coal Miner~~	~~Transfer~~	~~N406142~~	~~31.7.1973~~	~~28-8-1973~~	
Arthur Erling Mould of Gladesville, Mechanic and Gillian Mary Mould his wife as joint tenants.	Transfer	P734260	———	26-5-1976	

CANCELLED

SEE AUTO FOLIO

SCHEDULE OF ENCUMBRANCES ETC.

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		
~~Caveat~~	~~M989561~~	~~14.11.1972~~	~~by the Registrar General~~					
			~~Land Commission Act 1970~~	13-11-1972		Withdrawn	N281441	
~~Mortgage~~	~~N406143~~	~~31-7-1973~~	~~To A.G.C. (Advances) Limited~~	~~28-8-1973~~		Cancelled	P734260	
~~Mortgage~~	~~P734261~~		~~to A.G.C. (Advances) Limited.~~	~~26-5-1976~~		Discharged	Q879211	

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

(Page 2 of 2 pages)

RGX

N404142 28/8/73

P734260 26/5/76 - 1 m JR

Q879211 D/F

00304 WS:idw07 OPR:07

B20 /Req:K478891 /CT 11963-068

Land and Property Information

TITLE SEARCH

Computer Folio Certificate issued under Section 96D of the Real Property Act 1900

No. B20

Search certified to:
26/5/2003 12:07 PM

COMPUTER FOLIO REFERENCE	
9/244002	
EDITION No. & DATE OF CURRENT CERTIFICATE OF TITLE	
4	21/9/1993

LAND

LOT 9 IN DEPOSITED PLAN 244002
AT MORISSET PARK
LOCAL GOVERNMENT AREA: LAKE MACQUARIE
PARISH OF MORISSET COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM: DP244002

FIRST SCHEDULE

POSTFOX PTY LIMITED (T I661811)

SECOND SCHEDULE (3 NOTIFICATIONS)

---

1. LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
2. Z910968 EASEMENT APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN SO BURDENED IN PLAN WITH Z910969
3. Z910968 RIGHT OF CARRIAGEWAY APPURTENENT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN SO BURDENED IN PLAN WITH Z910969

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

Land and Property Information

HISTORICAL TITLE SEARCH

Certificate issued under Section 96G of the Real Property Act 1900

No. B20

Search certified to: 26/5/2003 12:51PM

Computer Folio Reference: 9/244002

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 12025 FOL 100

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
31/12/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
27/1/1988		AMENDMENT: LOCAL GOVT AREA	
31/10/1988	X949718	MORTGAGE	EDITION 1
11/1/1989	Y88405	DISCHARGE OF MORTGAGE	
11/1/1989	Y88406	DISCHARGE OF MORTGAGE	
11/1/1989	Y88407	TRANSFER	EDITION 2
2/12/1991	Z910968	TRANSFER	
5/11/1992	E879407	MORTGAGE	EDITION 3
21/9/1993	I661810	DISCHARGE OF MORTGAGE	
21/9/1993	I661811	TRANSFER	EDITION 4

*** END OF SEARCH ***

RP 13A 1978

STAMP DUTY $48.50 paid in our CC a/c 19.11.91

18 NOV 1991

OFFICE OF STATE REVENUE (N.S.W. TREASURY)

OFFICE OF STATE REV (N.S.W. TREASURY) 1990/91

Z 910968 X

TRANSFER (INCLUDING EASEMENT/COVENANTS)

REAL PROPERTY ACT, 1900

(See Instructions for Completion on back of form)

U T Y $ of R1/2

DESCRIPTION OF LAND Note (a)

LAND being transferred		
Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Folio Identifier 2/244002	WHOLE	at Morisset Park

TENEMENTS PANEL Note (b) This panel also to be completed for covenants by transferor

Servient Tenement (Land burdened by easement)		Dominant Tenement (Land benefited by easement)	
Torrens Title Reference	Torrens Title Reference	Torrens Title Reference	Torrens Title Reference
IDENTIFIER 2/244002		IDENTIFIER 3/244002	

TRANSFEROR Note (c)

RELATIVITY PTY. LIMITED

OFFICE USE ONLY: N

Note (d) (the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 100,000-00 and transfers an estate in fee simple in the land being transferred above described to the TRANSFEREE

TRANSFEREE Note (c)

PETER KENNETH FRY and PATRICIA SUZANNE FRY

OFFICE USE ONLY: OVER

TENANCY Note (e)

as joint tenants/~~XXXXXXXXXXXXXXXX~~

PRIOR ENCUMBRANCES Note (f)

subject to the following PRIOR ENCUMBRANCES 1. nil 2. ..... 3. .....

Note (g) AND the TRANSFEROR:—

(I) ~~GRANTS~~ RESERVES an easement as set out in SCHEDULE ONE hereto The site of which is shown on the plan annexed hereto and marked with the letter "A"

(II) COVENANTS with the TRANSFEREE as set out in SCHEDULE TWO hereto

Note (g) AND the TRANSFEREE COVENANTS with the TRANSFEROR as set out in SCHEDULE THREE hereto

DATE OF TRANSFER 3.9.1991

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION Note (h)

Signed in my presence by the Transferor who is personally known to me.

THE COMMON SEAL OF ~~XXXXXXXXXXXXXXXX~~ WAS AFFIXED HERETO BY AUTHORITY OF THE DIRECTORS

Name of Witness (BLOCK LETTERS)

IN THE PRESENCE OF:

Address and occupation of Witness

RELATIVITY PTY LIMITED A.C.N. 002 218 093 SEAL

DIRECTOR

Jill Edee Brigham Director

Signature of Transferor

Note (h) Signed in my presence by the Transferee who is personally known to me.

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

BRUCE JOHN DAWSON

Solicitor for the ~~XXXXXX~~ Transferee

TO BE COMPLETED BY LODGING PARTY Notes (i) and (j)

LODGED BY 35D

MORRIS, HAYES & EDGAR LAW STATIONERS 99 ELIZABETH ST., SYDNEY DX 420 23[illegible]

Delivery Box Number 1AQ 2876 Reid

LOCATION OF DOCUMENTS: CT / OTHER — Herewith. In R.G.O. with ..... Produced by .....

OFFICE USE ONLY

Extra Fee	Checked by	REGISTERED ~ -19
	Reg'd out	Registrar General

RP 13A
1970

SCHEDULE ONE HEREINBEFORE REFERRED TO

The Transferor hereby grants/reserves

Notes (k) and (l)

Full and free right by the transferor indicated herein and any person authorised by him to place and maintain and repair any pipes and conduits and power poles and cables or whatever may be deemed necessary by the relevant authorities to provide services or water and electricity and telephone and drainage of water from the lots benefited by this easement. The right shall include the right to enter upon the land and the use of any tools or implements or machinery which would normally be necessary for the purposes stated herein PROVIDED that any disturbances of the natural surface shall be restored as nearly as practicable to its original condition and all work to be completed within a reasonable period of time. The above rights shall be limited to the area designated on the plan annexed hereto. In addition the transferor is to have the right of carriageway over the same area of land. The terms of the right of carriageway are as defined within section 88a and 181a of the Conveyancing Act, 1919.

Pursuant to Section 88 of the Conveyance Act, 1919.

(a) The land to which the benefit of the easement is appurenant is Lot 9 DP244002

(b) The land which is the subject of the burden of the easement is Lot 2 DP244002

(c) The persons having the right to release the said easement are the proprietors for the time being of the land having the benefit of the easement

SCHEDULE TWO HEREINBEFORE REFERRED TO

The Transferor hereby covenants with

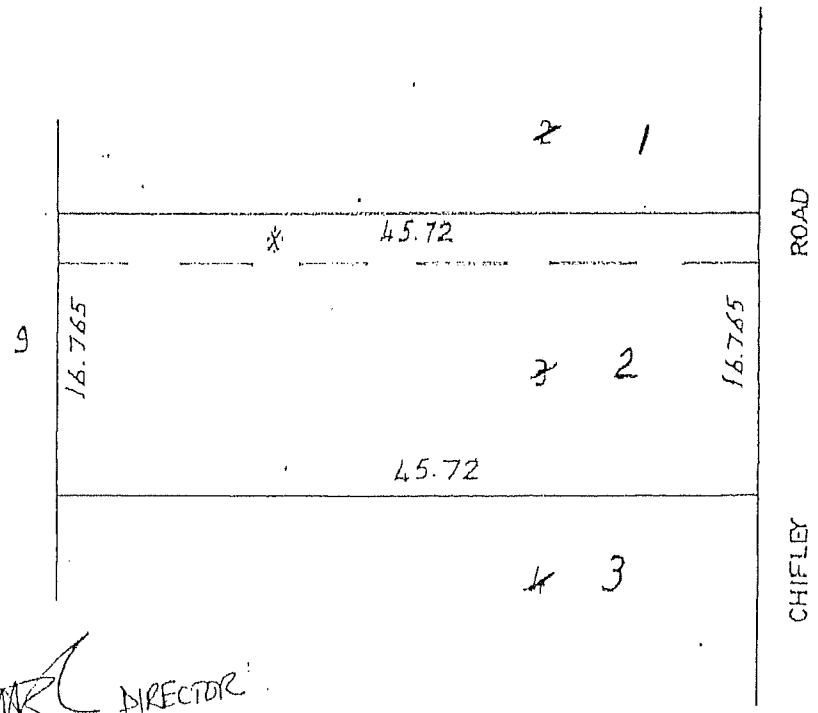
Notes (m) and (l)
Also complete tenements panel on front of form

OF EASEMENT TO DRAIN WATER AND EASEMENT FOR SERVICES
3 WIDE OVER LOT 3 D.P 244002
PARISH OF MORISSET COUNTY OF NORTHUMBERLAND
REDUCTION RATIO 1:400

B

This is the annexure marked "A" mentioned and referred to in the Transfer including easement.
DATED THIS 3rd day of September, 1991

.....
BRUCE JOHN DAWSON



DIRECTOR

Julie Ede C Bingham, Director.

* SITE OF ERSEMENT 3 WIDE

LODGE WITH DEALING

10/10/91.

SCHEDULE THREE HEREINBEFORE REFERRED TO

Notes (n) and (l) · The Transferee hereby covenants with

(For continuation of SCHEDULE(S) see annexure(s) hereto)

RP 13A
1979

INSTRUCTIONS FOR COMPLETION

This form is only to be used for the transfer of land together with the granting or reservation of easements and/or the creation of restrictive covenants. For other transfers use forms RP 13, RP 13B, RP 13C, as appropriate.

This dealing should be marked by the Commissioner of Stamp Duties before lodgment at the Registrar General's Office.

Typewriting and handwriting should be clear, legible and in permanent black non-copying ink.

Alterations are not to be made by erasure; the words rejected are to be ruled through and initialled by the parties to the dealing.

If the space provided is insufficient, additional sheets of the same size and quality of paper and having the same margins as this form should be used. Each additional sheet must be identified as an annexure and signed by the parties and the attesting witnesses.

Registered mortgagees, chargees and lessees of the servient tenement should consent to any grant or reservation of easement; otherwise the mortgage, charge or lease should be noted in the memorandum of prior encumbrances.

The signatures of the parties and the attesting witnesses should appear below the last provision in the last completed schedule.

Rule up all blanks.

The following instructions relate to the side notes on the form.

(a) Description of land.

(i) TORRENS TITLE REFERENCE.—Insert the current Folio Identifier or Volume and Folio of the Certificate of Title/Crown Grant for the land being transferred, e.g., 135/SP12345 or Vol. 8514 Fol. 126.

(ii) PART/WHOLE.—If part only of the land in the folio of the Register is being transferred, delete the word "WHOLE" and insert the lot and plan number, portion, &c. See also sections 327 and 327AA of the Local Government Act, 1919.

(iii) LOCATION.—Insert the locality shown on the Certificate of Title/Crown Grant, e.g., at Chullora. If the locality is not shown, insert the Parish and County, e.g., Ph. Lismore Co. Rous.

(b) Tenement panel.—Insert the current Folio Identifier or Volume and Folio of the Certificate of Title/Crown Grant for both the servient and dominant tenements of the easements, e.g., 135/SP12345 or Vol. 8514 Fol. 126, &c. This panel is also to be completed for covenants by the transferor.

(c) Show the full name, address and occupation or description.

(d) If the estate being transferred is a lesser estate than an estate in fee simple, delete "fee simple" and insert appropriate estate.

(e) Delete if only one transferee. If more than one transferee, delete either "joint tenants" or "tenants in common", and, if the transferees hold as tenants in common, state the shares in which they hold.

(f) In the memorandum of prior encumbrances, state only the registered number of any mortgage, charge or lease (except where the consent of the mortgagee, chargee or lessee is furnished) and of any writ recorded in the Register.

(g) Delete whichever words are inappropriate.

(h) Execution.

GENERALLY (i) Should there be insufficient space for execution of this dealing, use an annexure sheet.
(ii) The certificate of correctness under the Real Property Act, 1900 must be signed by all parties to the transfer, each party to execute the dealing in the presence of an adult witness, not being a party to the dealing, to whom he is personally known. The solicitor for the transferee may sign the certificate on behalf of the transferee, the solicitor's name (not that of his firm), to be typewritten or printed adjacent to his signature.
Any person falsely or negligently certifying is liable to the penalties provided by section 117 of the Real Property Act, 1900.

ATTORNEY (iii) If the transfer is executed by an attorney for the transferor/transferee pursuant to a registered power of attorney, the form of attestation must set out the full name of the attorney, and the form of execution must indicate the source of his authority, e.g., "AB by his attorney (or trustee or delegate, as the case may be) XY pursuant to power of attorney registered Book No. , and I declare that I have no notice of the revocation of the said power of attorney".

AUTHORITY (iv) If the transfer is executed pursuant to an authority (other than specified in (iii)) the form of execution must indicate the statutory, judicial or other authority pursuant to which the transfer has been executed.

CORPORATION (v) If the transfer is executed by a corporation under seal, the form of execution should include a statement that the seal has been properly affixed, e.g., in accordance with the Articles of Association of the corporation. Each person attesting the affixing of the seal must state his position (e.g., director, secretary) in the corporation.

(i) Insert the name, postal address, Document Exchange reference, telephone number and delivery box number of the lodging party.

(j) The lodging party is to complete the LOCATION OF DOCUMENTS panel. Place a tick in the appropriate box to indicate the whereabouts of the Certificate of Title. List, in an abbreviated form, other documents lodged, e.g., stat. dec. for statutory declaration, pbte for probate, L/A for letters of administration, &c.

(k) State the nature of the easement (see, e.g., section 181A of the Conveyancing Act, 1919) and accurately describe the site of the easement. The grant or reservation of easement (other than an easement in gross) must comply with section 88 of the Conveyancing Act, 1919. If not applicable, rule through this space.

(l) Annexures should be of the same size and quality of paper and have the same margins as the transfer form. Each such annexure must be identified as an annexure and signed by the parties and the attesting witnesses. Any plan annexed should comply with regulation 37 of the Real Property Act regulations, 1970.

(m) This space is provided for any restrictive covenant by the transferor (which must comply with section 88 of the Conveyancing Act, 1919). If not applicable, rule through this space.

(n) This space is provided for any restrictive covenant by the transferee (which must comply with section 88 of the Conveyancing Act, 1919). If not applicable, rule through this space.

OFFICE USE ONLY

DIRECTION: PROP
No. OF NAMES:

FIRST SCHEDULE DIRECTIONS

(A) FOLIO IDENTIFIER	(B) No.	(C) SHARE	(C) I	(E) NAME AND DESCRIPTION
2/244002		ST2		Peter Kenneth Fry Patricia Suzanne Fry

SECOND SCHEDULE & OTHER DIRECTIONS

(F) FOLIO IDENTIFIER (OR REQD. DEALING # FOLIO IDENTIFIER)	(G) DIRECTION	(H) NCTFN TYPE	(J) DEALING NUMBER	(K) DETAILS
2/244002	ON	EA		Easement addecting the part and the land above described shown as easement to drain water and for services 3 wide in plan with Z910969
2/244002	ON	EB		Right of carriageway affecting the part and the land above described shown as easement to drain water & for services 3 wide in plan with Z910969
9/244002	ON	EA		Easement appurtenant to the land above described affecting the land shown so burdened in plan with Z910969
9/244002	ON	EB		Right of carriageway appurtenant to the land above described affecting the land shown so burdened in plan with Z910969

NP 466 D. WEST, GOVERNMENT PRINTER

00202 WS:idw01 OPR:01

B20 /Req:K478921 /DL Y088407

REAL PROPERTY ACT, 1900 STAMP DUTY

$=********1.00 STAMP DUTY 12/12/

2885 CD HH

(1) $1

TRANSFER

REAL PROPERTY ACT, 1900 T

3 3 of 3 K R3/3

$ 42

DESCRIPTION OF LAND Note (a)

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Vol 12025 Fol 100 Now Only 9/244002	WHOLE	Morisset Park

TRANSFEROR Note (b)

DAVID MAXWELL FATCHES and ROSE EVA FATCHES

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 260,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

RELATIVITY PTY LIMITED of A-62 Telegraph Road, Pymble

OFFICE USE ONLY S

TENANCY Note (e)

PRIOR ENCUMBRANCES Note (f)

subject to the following PRIOR ENCUMBRANCES 1. Nil

2.

3.

DATE 16-12-1988

EXECUTION Note (g)

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

Signed in my presence by the transferor who is personally known to me

Signature of Witness

A.N. POWTER
SOLICITOR & COMMISSIONER FOR AFFIDAVITS
14 BOLTON ST. NEWCASTLE

Signature of Transferor

Note (g)

Signed in my presence by the transferee who is personally known to me

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

K J HENNESSY Signature of Transferee'S SOLICITOR

TO BE COMPLETED BY LODGING PARTY Notes (h) and (l)

LODGED BY

SOLICITORS
12TH LEVEL,
[illegible]
SYDNEY, 2000
TEL: 239-5907 REF: SCH/[illegible]
DX 107 6027

Delivery Box Number

Checked	Passed
EC14	
Signed	Extra Fee

REGISTERED - -19

11 JAN 1989

CT	OTHER	LOCATION OF DOCUMENTS
		Herewith.
		In L.T.O. with
		Produced by

Secondary Directions			
Delivery Directions			6027

OFFICE USE ONLY

CERTIFICATE OF TITLE

NEW SOUTH WALES

PROPERTY ACT, 1900

(Page 1) Vol. 12025 Fol. 100

Prior Title (Crown Grant)
Vol.4097 Fol.47

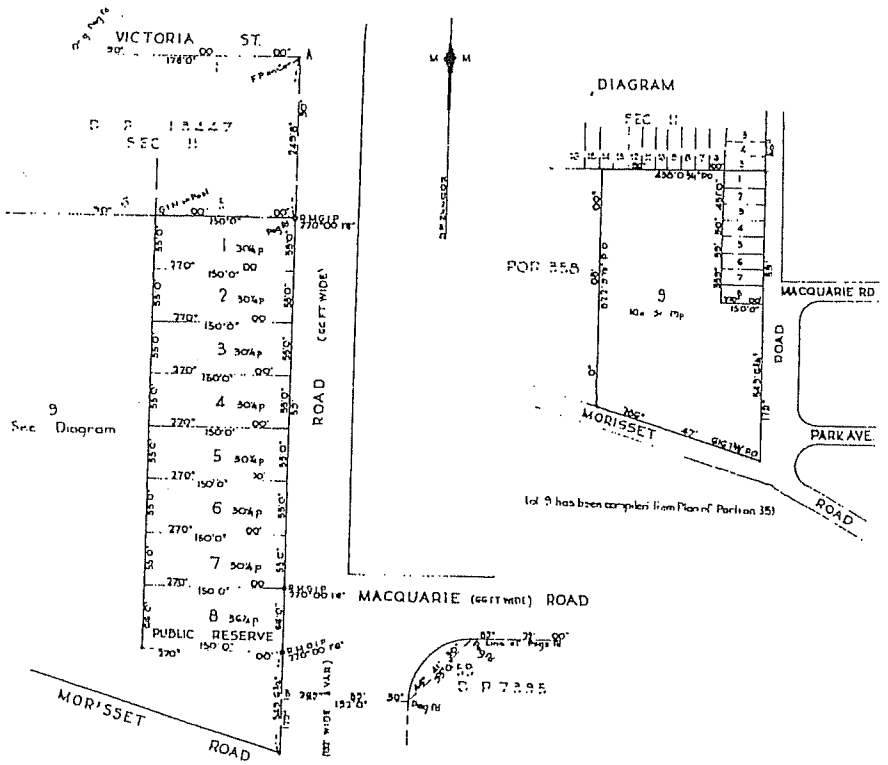
Vol. 12025 Fol. 100

Edition issued 30-1-1973

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

CANCELLED
Registrar General.
SEE AUTO FOLIO

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 9 in Deposited Plan 244002 at Morisset Park in the Shire of Lake Macquarie Parish of Morisset and County of Northumberland. EXCEPTING THEREOUT the minerals reserved by the Crown Grant.

FIRST SCHEDULE

~~JOHN MOLYNEUX of Lightning Ridge, Opal Miner.~~

SECOND SCHEDULE

GRM

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

Registrar General

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED.

Vol. 12025 Fol. 100

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
~~Paul William Nielsen of Morriset Park, Builder as to two undivided one third shares and Patrick Anthony Rennie of Gosford, Real Estate Agent as to the remaining undivided one third share as Tenants in Common~~					
~~Ponsomby Investments Pty. Limited~~	Transfer	Q235730		10-8-1977	
	Transfers	R482482 R482483		22-10-1979	
David Maxwell Fatches and Rose Eva Fatches as joint tenants by Transfer V645491 Registered 3-4-1985					

SECOND SCHEDULE (continued)

NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
~~Mortgage~~	~~W448510~~	~~30.8.1973~~	~~to The National Bank of Australasia Limited~~	~~21-9-1973~~		Cancelled	Q235730	
~~Mortgage~~	Q235731		~~to Mutual Acceptance Limited~~	~~10-8-1977~~		Discharged	R482481	
~~Mortgage~~	R925633		~~to Hoseline Jean McPhan of Green Point, Married Woman, Leonard Harold Swadling of Bateau Bay, Retired and Elsie Alice Murphy of Erina, Widow, tenancy in common~~	~~17-7-1980~~		Discharged	S641995	
S641996 Mortgage to Leonard Harold Swadling, Elsie Alice Murphy and Ilebate Pty. Limited as tenants in common Registered 19-8-1981						Discharged	S989341	
~~V645492 Mortgage to Anna Johanna Nielsen Registered 3-4-1985~~						Discharged	W951911.	
W951912 Mortgage to Commonwealth Savings Bank of Australia. Registered 1.7.1987.								

(Page 2 of 2 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

N448510M
Q235730T 10M
-731M
R482481M
-82Tc
-63Tc
R925633M
S641995M
-6M
S989341DM
V645491T
-92M
W951911M
-2M

Perpetuity
Issued

No. 1927/4113

35291—1 M 1518

State of New South Wales

[LAND GRANT]

CANCELLED

REGISTER BOOK
VOL. 4097 FOL. 47

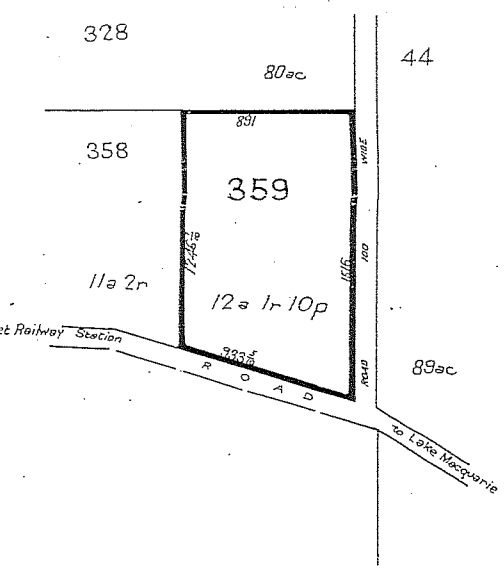
NEW SOUTH WALES ONE POUND STAMP DUTY SYDNEY, N.S.W.

N.S.W. DEPARTMENT 6 JA28 W OF STAMP DUTIES

GRANT UPON PURCHASE OF LAND HELD AS A SUBURBAN HOLDING.

GEORGE V, by the Grace of God, of Great Britain, Ireland, and the British Dominions beyond the Seas, King, Defender of the Faith, Emperor of India :—
TO ALL to whom these Presents shall come, Greeting :—

Whereas John Carson Hosking of Morrisset in Our State of New South Wales Hospital attendant being the holder of the lands hereinafter mentioned and more particularly described comprised in Suburban Holding No. 1921/14 Land District of Gosford confirmed on the twelfth day of July 1921 has applied to purchase the same and after a report by the Local Land Board of the said District Our Minister for Lands has approved of the granting of the said application as hereinafter mentioned And whereas it has been certified by the Local Land Board aforesaid that all conditions other than payment of purchase money have been duly complied with and the sum of thirty six pounds eighteen shillings and nine pence sterling being the purchase money and all other moneys due and payable for and in respect of the said land have been duly paid into the office of the Treasurer of Our said State And all things required by law to be done to entitle the said John Carson Hosking to a grant of the fee-simple of the said land subject to all the reservations and exceptions hereinafter contained have been done and performed Now Know Ye That for and in consideration of the said moneys for and on Our behalf well and truly paid into the Treasury of Our said State before these presents are issued and of all and singular the premises We have Granted and for Us Our Heirs and Successors Do hereby Grant unto the said John Carson Hosking his Heirs and Assigns subject to the Reservations and Exceptions hereinafter contained All that Piece or Parcel of Land in Our said State containing by Admeasurement twelve acres one rood ten perches be the same more or less situated in the County of Northumberland and Parish of Morrisset Lake Macquarie Shire



Scale 8 Chains to an Inch

Portion 359

Commencing on the North Eastern side of the road from Morrisset Railway Station to Lake Macquarie at the South Eastern corner of portion three hundred and fifty eight of eleven acres two roods and bounded thence on the South West by that road bearing South seventy three degrees twenty one minutes East nine chains thirty three links and five tenths of a link on the East by a road one chain wide dividing this land from portion forty four of eighty nine acres bearing North eight minutes West fifteen chains sixteen links to a South Eastern corner of portion three hundred and twenty eight of eighty acres on the North by part of the Southern boundary of portion three hundred and twenty eight bearing South eighty nine degrees fifty two minutes West eight chains ninety one links and on the West by the Eastern boundary of portion three hundred and fifty eight aforesaid bearing South twelve chains forty six links and seven tenths of a link to the point of commencement.

As shown on plan in the margin hereof being the block comprising portion No. 359 aforesaid notified as available for selection in the *Government Gazette* of the fourteenth day of January one thousand nine hundred and twenty one With all the Rights and Appurtenances whatsoever thereto belonging To Hold unto the said John Carson Hosking his Heirs and Assigns for ever Provided Nevertheless And We do Hereby Reserve and Except unto Us Our Heirs and Successors all Minerals which the said Land contains with full power and authority for Us Our Heirs and Successors and such person or persons as shall from time to time be authorised by Us or them to enter upon the said Land and to search for mine dig and remove the said Minerals And also all such parts and so much of the said Land as may hereafter be required for public ways viaducts canals railways tramways dams sewers or drains in over and through the same to be set out by Our Governor or some person by him authorised in that respect And also all sand clay stone gravel and indigenous timber and all other Materials the natural produce of the said Land which may be required at any time hereafter for the construction and repair of any public ways bridges or canals or for naval purposes or railways and tramways or any fences embankments viaducts dams sewers or drains necessary for the same together with the right of taking and removing all such materials by such person or persons as may be authorised in that behalf by Our Governor aforesaid Provided Lastly and We do Hereby Reserve for Us Our Heirs and Successors and for Our Governor as aforesaid by such person or persons as shall be by Us them or him authorised in that behalf full power to make and conduct through in under upon or over the said Land or any portion thereof all public ways viaducts railways tramways canals and all common or public drains and sewers which may be deemed expedient And the right of full and free ingress egress and regress into out of and upon the said Land for the several purposes aforesaid or any of them In Testimony Whereof We have caused this Our Grant to be Sealed with the Seal of Our said State

Witness Our Trusty and Well-beloved Sir Dudley Rawson Stratford de Chair, Admiral in Our Royal Navy, Knight Commander of Our Most Honourable Order of the Bath, Member of Our Royal Victorian Order, Governor of Our State of New South Wales and its Dependencies in the Commonwealth of Australia, at Sydney, in Our said State, this 20th day of December in the eighteenth year of Our Reign, and in the year of Our Lord one thousand nine hundred and twenty-seven.

D. R. S. de Chair
Governor.

RECORDED and ENROLLED in the Registrar General's Office, at Sydney, in New South Wales, this 6th day of January 1928.

H K Clayton
acting Registrar General.

Attention is hereby directed to the provisions of Sec 129B of the Crown Lands Consolidation Act, 1913, relating to transfer.

No. B 987089 Conveyance dated 23rd January 1928 from the said John Carson Hosking to Marion Draper of Sydney Widow

Produced and entered 27th June 1930 at 22 mts ft 11 o'clock in the fore noon.

H K Clayton
REGISTRAR GENERAL

No. D323499 DISCHARGE of within mortgage No. B987089 dated 21st June 1944
Produced and entered 24th October 1944 at 11 mts ft 11 o'clock in the fore noon.

R W Willis
REGISTRAR GENERAL.

No. D323500 TRANSFER dated 2nd September 1944 from the said John Carson Hosking to James Edward Owen of Morisset, Hospital Attendant of the land within described
Produced and entered 24th October 1944 at 16 mts ft 11 o'clock in the fore noon.

R W Willis
REGISTRAR GENERAL.

No. D323501 MORTGAGE dated 2nd September 1944 from the said James Edward Owen to Newcastle Co-operative Building and Investment Society Limited
Produced and entered 24th October 1944 at 16 mts ft 11 o'clock in the fore noon.

R W Willis
REGISTRAR GENERAL.

No. D641824 DISCHARGE of within mortgage No. D323501 dated 15th October 1946
Produced and entered 20th March 1947 at 26 mts ft 10 o'clock in the fore noon.

L. Wells
REGISTRAR GENERAL.

No. D988050 MORTGAGE dated 8th March 1949 from the said James Edward Owen to Commonwealth Bank of Australia
Produced and entered 30th March 1949 at 28 mts ft 10 o'clock in the fore noon.

L. Wells
REGISTRAR GENERAL.

MORTGAGE No. D988050 has been discharged.
See 911899 Entered 28th July 1970

Jawatson
REGISTRAR GENERAL

John Mahoney now of Lightning Ridge Opal Miner is now the registered proprietor of the land within described.

See TRANSFER No. 911900 dated 13th May 1970
Entered 28th July 1970

Jawatson
REGISTRAR GENERAL

This deed is cancelled as to the whole
New Certificates of Title have issued on 30-11-1973
For lots in Deposited Plan No. 244002 as follows:-
Lots 1 to 9 Vol. 12025 Fol 92 to 100 respectively.

Jawatson
REGISTRAR GENERAL

911899 Dlm
900
DP 244002
Lot 1 to 9 DP 244002

Coffey

APPENDIX B

RESULTS OF FIELD INVESTIGATION

Soil Description

Explanation Sheet (1 of 2)

DEFINITION:

In engineering terms soil includes every type of uncemented or partially cemented inorganic or organic material found in the ground. In practice, if the material can be remoulded or disintegrated by hand in its field condition or in water it is described as a soil.

Other materials are described using rock description terms.

CLASSIFICATION SYMBOL & SOIL NAME

Soils are described in accordance with the Unified Soil Classification (UCS) as shown in the table on Sheet 2.

PARTICLE SIZE DESCRIPTIVE TERMS

NAME	SUBDIVISION	SIZE
Boulders		>200 mm
Cobbles		63 mm to 200 mm
Gravel	coarse	20 mm to 63 mm
	medium	6 mm to 20 mm
	fine	2.36 mm to 6 mm
Sand	coarse	600 µm to 2.36 mm
	medium	200 µm to 600µm
	fine	75 µm to 200 µm

MOISTURE CONDITION

Dry Looks and feels dry. Cohesive and cemented soils are hard, friable or powdery. Uncemented granular soils run freely through hands.

Moist Soil feels cool and darkened in colour. Cohesive soils can be moulded. Granular soils tend to cohere.

Wet As for moist but with free water forming on hands when handled.

CONSISTENCY OF COHESIVE SOILS

TERM	UNDRAINED STRENGTH s_u (kPa)	FIELD GUIDE
Very Soft	<12	A finger can be pushed well into the soil with little effort.
Soft	12 – 25	A finger can be pushed into the soil to about 25mm depth.
Firm	25 – 50	The soil can be indented about 5mm with the thumb, but not penetrated.
Stiff	50 – 100	The surface of the soil can be indented with the thumb, but not penetrated.
Very Stiff	100 – 200	The surface of the soil can be marked, but not indented with thumb pressure.
Hard	>200	The surface of the soil can be marked only with the thumbnail.
Friable	–	Crumbles or powders when scraped by thumbnail.

DENSITY OF GRANULAR SOILS

TERM	DENSITY INDEX (%)
Very loose	Less than 15
Loose	15 – 35
Medium Dense	35 – 65
Dense	65 — 85
Very Dense	Greater than 85

MINOR COMPONENTS

TERM	ASSESSMENT GUIDE	PROPORTION OF MINOR COMPONENT IN:
Trace of	Presence just detectable by feel or eye, but soil properties little or no different to general properties of primary component.	Coarse grained soils: < 5% Fine grained soils: <15%
With some	Presence easily detected by feel or eye, soil properties little different to general properties of primary component.	Coarse grained soils: 5 – 12% Fine grained soils: 15 – 30%

SOIL STRUCTURE

ZONING		CEMENTING	
Layers	Continuous across exposure or sample.	Weakly cemented	Easily broken up by hand in air or water.
Lenses	Discontinuous layers of lenticular shape.	Moderately cemented	Effort is required to break up the soil by hand in air or water.
Pockets	Irregular inclusions of different material.		

GEOLOGICAL ORIGIN

WEATHERED IN PLACE SOILS

Extremely weathered material	Structure and fabric of parent rock visible.
Residual soil	Structure and fabric of parent rock not visible.

TRANSPORTED SOILS

Aeolian soil	Deposited by wind.
Alluvial soil	Deposited by streams and rivers.
Colluvial soil	Deposited on slopes (transported downslope by gravity).
Fill	Man made deposit. Fill may be significantly more variable between tested locations than naturally occurring soils.
Lacustrine soil	Deposited by lakes.
Marine soil	Deposited in ocean basins, bays, beaches and estuaries.

Rock Description

Explanation Sheet (1 of 2)

The descriptive terms used by Coffey are given below. They are broadly consistent with Australian Standard AS1726-1993.

DEFINITIONS: Rock substance, defect and mass are defined as follows:

Rock Substance	In engineering terms rock substance is any naturally occurring aggregate of minerals and organic material which cannot be disintegrated or remoulded by hand in air or water. Other material is described using soil descriptive terms. Effectively homogonous material, may be isotropic or anisotropic.
Defect	Discontinuity or break in the continuity of a substance or substances.
Mass	Any body of material which is not effectively homogeneous. It can consist of two or more substances without defects, or one or more substances with one or more defects.

SUBSTANCE DESCRIPTIVE TERMS:

ROCK NAME	Simple rock names are used rather than precise geological classification.
PARTICLE SIZE	Grain size terms for sandstone are:
Coarse grained	Mainly 0.6mm to 2mm
Medium grained	Mainly 0.2mm to 0.6mm
Fine grained	Mainly 0.06mm (just visible) to 0.2mm
FABRIC	Terms for layering or penetrative fabric (eg. bedding, cleavage etc.) are:
Massive	No layering or penetrative fabric.
Indistinct	Layering or fabric just visible. Little effect on properties.
Distinct	Layering or fabric is easily visible. Rock breaks more easily parallel to layering or fabric.

CLASSIFICATION OF WEATHERING PRODUCTS

Term	Abbreviation	Definition
Residual Soil	RS	Soil derived from the weathering of rock; the mass structure and substance fabric are no longer evident; there is a large change in volume but the soil has not been significantly transported.
Extremely Weathered Material	XW	Material is weathered to such an extent that it has soil properties, ie, it either disintegrates or can be remoulded in water. Original rock fabric still visible.
Highly Weathered Rock	HW	Rock strength is changed by weathering. The whole of the rock substance is discoloured, usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable. Some minerals are decomposed to clay minerals. Porosity may be increased by leaching or may be decreased due to the deposition of minerals in pores.
Moderately Weathered Rock	MW	The whole of the rock substance is discoloured, usually by iron staining or bleaching, to the extent that the colour of the fresh rock is no longer recognisable.
Slightly Weathered Rock	SW	Rock substance affected by weathering to the extent that partial staining or partial discolouration of the rock substance (usually by limonite) has taken place. The colour and texture of the fresh rock is recognisable; strength properties are essentially those of the fresh rock substance.
Fresh Rock	FR	Rock substance unaffected by weathering.

Notes on Weathering:

1. *AS1726 suggests the term "Distinctly Weathered" (DW) to cover the range of substance weathering conditions between XW and SW. For projects where it is not practical to delineate between HW and MW or it is judged that there is no advantage in making such a distinction, DW may be used with the definition given in AS1726.*
2. *Where physical and chemical changes were caused by hot gasses and liquids associated with igneous rocks, the term "altered" may be substituted for "weathering" to give the abbreviations XA, HA, MA, SA and DA.*

ROCK SUBSTANCE STRENGTH TERMS

Term	Abbrev-iation	Point Load Index, I_{S50} (MPa)	Field Guide
Very Low	VL	Less than 0.1	Material crumbles under firm blows with sharp end of pick; can be peeled with a knife; pieces up to 30mm thick can be broken by finger pressure.
Low	L	0.1 to 0.3	Easily scored with a knife; indentations 1mm to 3mm show with firm blows of a pick point; has a dull sound under hammer. Pieces of core 150mm long by 50mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
Medium	M	0.3 to 1.0	Readily scored with a knife; a piece of core 150mm long by 50mm diameter can be broken by hand with difficulty.
High	H	1 to 3	A piece of core 150mm long by 50mm can not be broken by hand but can be broken by a pick with a single firm blow; rock rings under hammer.
Very High	VH	3 to 10	Hand specimen breaks after more than one blow of a pick; rock rings under hammer.
Extremely High	EH	More than 10	Specimen requires many blows with geological pick to break; rock rings under hammer.

Notes on Rock Substance Strength:

1. *In anisotropic rocks the field guide to strength applies to the strength perpendicular to the anisotropy. High strength anisotropic rocks may break readily parallel to the planar anisotropy.*
2. *The term "extremely low" is not used as a rock substance strength term. While the term is used in AS1726-1993, the field guide therein makes it clear that materials in that strength range are soils in engineering terms.*
3. *The unconfined compressive strength for isotropic rocks (and anisotropic rocks which fail across the planar anisotropy) is typically 10 to 25 times the point load index (I_{s50}). The ratio may vary for different rock types. Lower strength rocks often have lower ratios than higher strength rocks.*

Coffey Geosciences Pty Ltd ACN 056 335 516

Borehole No. **BH1**

Sheet 1 of 1

Office Job No.: **N08340/01**

Engineering Log - Borehole

Client: *BERNIE DE WITT CONSULTING PTY LTD*

Date started: *3.6.2003*

Principal: *POSTFOX PTY LTD*

Date completed: *3.6.2003*

Project: *STABILITY / CONTAMINATION ASSESSMENT*

Logged by: *DDM*

Borehole Location: *REFER TO DRAWING No N08340/01-1*

Checked by: SRM

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface: Not Measured

hole diameter: 100 mm | Northing | bearing: | datum:

drilling information							material substance						
method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA		N	None Observed	E		0.0		SP	TOPSOIL: SAND, fine to medium grained, grey, some silt.	M			TOPSOIL
				E				SP	Gravelly SAND, fine to medium grained, grey, gravel fine grained, some silt, some roots.				SLOPEWASH
				D				SC	Gravelly Clayey SAND, fine to coarse grained, pale grey-pale brown mottled orange, clay medium plasticity, gravel fine grained, some silt.				COLLUVIUM
						0.5		CH	Gravelly Sandy CLAY, high plasticty, orange, sand fine to medium grained, gravel fine grained. Colour becoming orange mottled red.	M<Wp	VSt	x	RESIDUAL
						1.0			Borehole BH1 terminated at 1m				
						1.5							
						2.0							
						2.5							
						3.0							
						3.5							
						4.0							

BOREHOLE N09340-01.GPJ COFFEY.GDT 04.06.0

Form GEO 5.3 Issue 3 Rev.2

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

Coffey Geosciences Pty Ltd ACN 056 335 516

Borehole No. BH2

Sheet 1 of 1

Engineering Log - Borehole

Office Job No.: N08340/01

Client: BERNIE DE WITT CONSULTING PTY LTD

Date started: 3.6.2003

Principal: POSTFOX PTY LTD

Date completed: 3.6.2003

Project: STABILITY / CONTAMINATION ASSESSMENT

Logged by: DDM

Borehole Location: REFER TO DRAWING No N08340/01-1

Checked by: SRM

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface: Not Measured

hole diameter: 100 mm | Northing | bearing: | datum:

drilling information							material substance						
method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
BH		N	None Observed	E					FILL: WOODCHIPS.	M			FILL
				E				SP	Silty Gravelly SAND, fine to medium grained, grey, gravel fine grained, some roots.				SLOPEWASH
				E		0.5		SC	Gravelly Clayey SAND, fine to coarse grained, pale grey-pale brown mottled orange, clay medium plasticity, gravel fine grained, some silt.	W			COLLUVIUM
								CH	Gravelly Sandy CLAY, high plasticity, orange, sand fine to medium grained, gravel fine grained.	M>Wp	VSt	×	RESIDUAL
						1.0			Colour becoming orange mottled red.				
									Borehole BH2 terminated at 0.7m				
						1.5							
						2.0							
						2.5							
						3.0							
						3.5							
						4.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

BOREHOLE N08340-01.GPJ COFFEY.GDT 04.06

Form GEO 5.3 Issue 3 Rev.2

Coffey Geosciences Pty Ltd ACN 056 335 516

Borehole No. *BH3*

Sheet 1 of 1

Office Job No.: *N08340/01*

Engineering Log - Borehole

Client: *BERNIE DE WITT CONSULTING PTY LTD*

Date started: *3.6.2003*

Principal: *POSTFOX PTY LTD*

Date completed: *3.6.2003*

Project: *STABILITY / CONTAMINATION ASSESSMENT*

Logged by: *DDM*

Borehole Location: *REFER TO DRAWING No N08340/01-1*

Checked by: SPM

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface: Not Measured

hole diameter: 100 mm | Northing | bearing: | datum:

drilling information | material substance

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA		N	None Observed	E				SM	TOPSOIL: Gravelly Silty SAND, fine to medium grained, dark grey-brown, gravel fine grained, some roots.	M			TOPSOIL
								SP	Silty Gravelly SAND, fine to medium grained, grey, gravel fine to medium grained, some roots.				SLOPEWASH
				E		0.5		CH	Sandy CLAY, high plasticity, pale grey-orange, sand fine to medium grained. Colour becoming orange-brown mottled pale grey.	M>Wp		x	RESIDUAL
						1.0			Borehole BH3 terminated at 0.7m				
						1.5							
						2.0							
						2.5							
						3.0							
						3.5							
						4.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit
*bit shown by suffix e.g.	ADT

support

M mud N nil

C casing

penetration 1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

basedon unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

BOREHOLE N08340-01.GPJ COFFEY.GDT 04.06.

Form GEO 5.3 Issue 3 Rev.2

N08371/01-AB
11 December 2002

Coffey

APPENDIX C

LABORATORY TEST RESULTS

SRANE10477

ALS Environmental

SAMPLE RECEIPT ADVICE

COMPANY: COFFEY GEOSCIENCES PTY LTD
ATTENTION: MR SAM MACKENZIE
DATE: Jun. 05, 2003
FROM: Wonnie Condos, ENV NEWCASTLE

ALS has received samples pertaining to your reference: N 51757

For future reference the batch number on this order is: NE10477

All samples and paper work were received in good order.
Samples have been received within recommended holding times.
Samples chilled when received.
Samples received in appropriately pretreated and preserved containers.
Samples requiring volatile organic compound analysis received in airtight containers (ZHE).
Please direct any turnaround/technical queries to Cindy Suen.
Any queries relating to sample condition/numbering/breakages should be directed to Wonnie Condos.
ANALYTICAL WORK FOR THIS BATCH WILL BE CONDUCTED AT ALS SYDNEY
All aqueous samples are stored for two weeks and solid samples for three months from the date of completion of the batch, unless specific arrangements are made otherwise.

Purchase Order Number: N 51757
Chain of Custody Reference Number: 22629
Project Name: N08340/1

You can expect results to be reported as detailed below:

All Environmental Results Jun. 13, 2003

A L S - SERVICING YOUR NEEDS BETTER

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

ALS Environmental

CERTIFICATE OF ANALYSIS

CONTACT:	MR SAM MACKENZIE	**BATCH:**	NE10477
CLIENT:	COFFEY GEOSCIENCES PTY LTD	**SUB BATCH:**	0
ADDRESS:	13 MANGROVE ROAD SANDGATE NSW 2304	**LABORATORY:**	NEWCASTLE
		DATE RECEIVED:	03/06/2003
		DATE COMPLETED:	16/06/2003
		SAMPLE TYPE:	SOIL
ORDER No.:	N 51757	**No. of SAMPLES:**	5
PROJECT:	N08340/1		

COMMENTS

Samples as received digested by USEPA method 200.2 (modified) prior to the determination of metals. Results reported on a dry weight basis.

All analysis and Laboratory QC conducted in accordance with Schedule B(3) NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soil (December 1999).

NOTES

This is the Final Report and supersedes any preliminary reports with this batch number.
All pages of this report have been checked and approved for release.

ISSUING LABORATORY: NEWCASTLE

Address
5 Rosegum Close
WARABROOK NSW 2304

Phone: 61-2-4968 9433
Fax: 61-2-4968 0349
Email: kathy.mcdermott@alsenviro.com

Signatory

Batch: NE10477
Sub Batch: 0
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

CERTIFICATE OF ANALYSIS

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		1	2	3	4	5					
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	BH1_ 0.0-0.1	BH2_ 0.15-0.20	BH3_ 0.0-0.1	S1_ 0.0-0.1	BH10_ 0.0-0.1					
EA-055	Moisture Content (dried @ 103'C)	%	0.1	17.5	14.4	14.9	24.1	17.3					
EG-005T	Arsenic - Total	mg/kg	1	<1	3	3	296	<1					
EG-005T	Cadmium - Total	mg/kg	1	<1	<1	<1	<1	<1					
EG-005T	Chromium - Total	mg/kg	1	3	4	42	79	2					
EG-005T	Copper - Total	mg/kg	1	3	3	2	165	3					
EG-005T	Nickel - Total	mg/kg	1	<1	<1	<1	2	<1					
EG-005T	Lead - Total	mg/kg	1	14	19	286	32	11					
EG-005T	Zinc - Total	mg/kg	1	28	26	362	254	29					
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1					

Batch: NE10477
Sub Batch: 0
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

QUALITY CONTROL REPORT

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		200	201	202							
		Date Sampled		03/06/2003	03/06/2003	03/06/2003							
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	METHOD BLANK	LCS	MS							
				CHECKS AND SPIKES									
EA-055	Moisture Content (dried @ 103'C)	%	0.1	----	----	----							
EG-005T	Arsenic - Total	mg/kg	1	<1	93.0%	92.0%							
EG-005T	Cadmium - Total	mg/kg	1	<1	97.0%	93.0%							
EG-005T	Chromium - Total	mg/kg	1	<1	93.0%	91.0%							
EG-005T	Copper - Total	mg/kg	1	<1	91.0%	87.0%							
EG-005T	Nickel - Total	mg/kg	1	<1	92.0%	87.0%							
EG-005T	Lead - Total	mg/kg	1	<1	94.0%	81.0%							
EG-005T	Zinc - Total	mg/kg	1	<1	95.0%	93.0%							
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	108%	108%							

ALS Environmental

CERTIFICATE OF ANALYSIS

CONTACT:	MR SAM MACKENZIE	**BATCH:**	NE10477
CLIENT:	COFFEY GEOSCIENCES PTY LTD	**SUB BATCH:**	1
ADDRESS:	13 MANGROVE ROAD SANDGATE NSW 2304	**LABORATORY:**	NEWCASTLE
		DATE RECEIVED:	03/06/2003
		DATE COMPLETED:	16/06/2003
		SAMPLE TYPE:	SOIL
ORDER No.:	N 51757	**No. of SAMPLES:**	5
PROJECT:	N08340/1		

COMMENTS

Samples analysed on an as received basis. Results reported on a dry weight basis. All analysis and Laboratory QC conducted in accordance with Schedule B(3) NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soil (December 1999). Analysis conducted by ALS Sydney, NATA Site No. 10911.

NOTES

This is the Final Report and supersedes any preliminary reports with this batch number.
All pages of this report have been checked and approved for release.

ISSUING LABORATORY: NEWCASTLE

Address
5 Rosegum Close
WARABROOK NSW 2304

Phone: 61-2-4968 9433
Fax: 61-2-4968 0349
Email: kathy.mcdermott@alsenviro.com

Signatory

Batch: NE10477
Sub Batch: 1
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

CERTIFICATE OF ANALYSIS

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		1	2	3	4	5					
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	BH1_ 0.0-0.1	BH2_ 0.15-0.20	BH3_ 0.0-0.1	S1_ 0.0-0.1	BH10_ 0.0-0.1					
EA-055	Moisture Content (dried @ 103'C)	%	0.1	17.5	14.4	14.9	24.1	17.3					
EP-066-SS	Total Polychlorinated biphenyls	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1					
EP-066S-SS	**POLYCHLORINATED BIPHENYL SURROGATE**												
EP-066S-SS	Decachlorobiphenyl	%	1	74	80	83	72	69					

Batch: NE10477
Sub Batch: 1
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

QUALITY CONTR L REPORT

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		100	101	102	103	104					
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	METHOD BLANK	NPCBS619 SCS	NPCBS619 DCS	NPCBS619 MS	NPCBS619 MSD					
				CHECKS AND SPIKES									
EA-055	Moisture Content (dried @ 103'C)	%	0.1	----	----	----	----	----					
EP-066-SS	Total Polychlorinated biphenyls	mg/kg	0.1	<0.1	91.0%	97.0%	85.0%	81.0%					
EP-066S-SS	POLYCHLORINATED BIPHENYL SURROGATE												
EP-066S-SS	Decachlorobiphenyl	%	1	87	89	95	94	95					

ALS Environmental

CERTIFICATE OF ANALYSIS

CONTACT:	MR SAM MACKENZIE	BATCH:	NE10477
CLIENT:	COFFEY GEOSCIENCES PTY LTD	SUBBATCH:	2
ADDRESS:		LABORATORY:	NEWCASTLE
	13 MANGROVE ROAD	DATE RECEIVED:	03/06/2003
	SANDGATE NSW 2304	DATE COMPLETED:	16/06/2003
		SAMPLE TYPE:	SOIL
ORDER No.:	N 51757	No. of SAMPLES:	5
PROJECT:	N08340/1		

COMMENTS

Samples analysed on an as received basis. Results reported on a dry weight basis. All analysis and Laboratory QC conducted in accordance with Schedule B(3) NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soil (December 1999). Analysis conducted by ALS Sydney, NATA Site No. 10911.

NOTES

This is the Final Report and supersedes any preliminary reports with this batch number.
All pages of this report have been checked and approved for release.

ISSUING LABORATORY: NEWCASTLE

Address
5 Rosegum Close
WARABROOK NSW 2304

Phone: 61-2-4968 9433
Fax: 61-2-4968 0349
Email: kathy.mcdermott@alsenviro.com

Signatory

Batch: NE10477
Sub Batch: 2
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

CERTIFICATE O. ANALYSIS

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		1	2	3	4	5					
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	BH1_ 0.0-0.1	BH2_ 0.15-0.20	BH3_ 0.0-0.1	S1_ 0.0-0.1	BH10_ 0.0-0.1					
EA-055	Moisture Content (dried @ 103'C)	%	0.1	17.5	14.4	14.9	24.1	17.3					
EP-068A-SS	**ORGANOCHLORINE PESTICIDES**												
EP-068A-SS	alpha-BHC	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	HCB	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	beta-BHC & gamma-BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1					
EP-068A-SS	delta-BHC	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Heptachlor	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Aldrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Heptachlor epoxide	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Chlordane - trans	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Endosulfan 1	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Chlordane - cis	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Dieldrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	DDE	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Endrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Endosulfan 2	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	DDD	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Endrin aldehyde	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Endosulfan sulfate	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	DDT	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					
EP-068A-SS	Endrin ketone	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068A-SS	Methoxychlor	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					
EP-068B-SS	**ORGANOPHOSPHORUS PESTICIDES**												
EP-068B-SS	Dichlorvos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Demeton-S-methyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Monocroptophos	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					
EP-068B-SS	Dimethoate	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Diazinon	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Chlorpyrifos-methyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Parathion-methyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					
EP-068B-SS	Malathion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Fenthion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Chlorpyrifos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Parathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					

Batch: NE10477
Sub Batch: 2
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

CERTIFICATE OF ANALYSIS

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		1	2	3	4	5					
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	BH1_ 0.0-0.1	BH2_ 0.15-0.20	BH3_ 0.0-0.1	S1_ 0.0-0.1	BH10_ 0.0-0.1					
EP-068B-SS	Pirimphos-ethyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Chlorfenvinphos E	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Chlorfenvinphos Z	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Bromophos-ethyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Fenamiphos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Prothiofos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Ethion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Carbophenothion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068B-SS	Azinphos-methyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-068S-SS	**ORGANOCHLORINE PESTICIDE SURROGATE**												
EP-068S-SS	Dibromo-DDE	%	1	91	116	117	116	104					
EP-068T-SS	**ORGANOPHOSPHORUS PESTICIDE SURROGATE**												
EP-068T-SS	DEF	%	1	101	119	118	119	104					

Batch: NE10477
Sub Batch: 2
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

QUALITY CONTROL REPORT

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		100	101	102	103	104					
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	METHOD BLANK	NOCOPS1312 SCS	NOCOPS1312 DCS	NOCOPS1312 MS	NOCOPS1312 MSD					
				CHECKS AND SPIKES									
EA-055	Moisture Content (dried @ 103'C)	%	0.1	----	----	----	----	----					
EP-068A-SS	**ORGANOCHLORINE PESTICIDES**												
EP-068A-SS	alpha-BHC	mg/kg	0.05	<0.05	92.3%	85.4%	----	----					
EP-068A-SS	HCB	mg/kg	0.05	<0.05	87.5%	75.3%	----	----					
EP-068A-SS	beta-BHC & gamma-BHC	mg/kg	0.1	<0.1	91.8%	86.5%	93.8%	84.5%					
EP-068A-SS	delta-BHC	mg/kg	0.05	<0.05	91.6%	87.0%	----	----					
EP-068A-SS	Heptachlor	mg/kg	0.05	<0.05	87.1%	83.1%	91.5%	96.2%					
EP-068A-SS	Aldrin	mg/kg	0.05	<0.05	92.7%	90.0%	81.7%	90.2%					
EP-068A-SS	Heptachlor epoxide	mg/kg	0.05	<0.05	93.5%	89.8%	----	----					
EP-068A-SS	Chlordane - trans	mg/kg	0.05	<0.05	83.0%	80.3%	----	----					
EP-068A-SS	Endosulfan 1	mg/kg	0.05	<0.05	94.2%	88.2%	----	----					
EP-068A-SS	Chlordane - cis	mg/kg	0.05	<0.05	82.8%	81.1%	----	----					
EP-068A-SS	Dieldrin	mg/kg	0.05	<0.05	93.4%	91.2%	91.4%	88.3%					
EP-068A-SS	DDE	mg/kg	0.05	<0.05	92.8%	88.9%	----	----					
EP-068A-SS	Endrin	mg/kg	0.05	<0.05	91.5%	91.9%	105%	103%					
EP-068A-SS	Endosulfan 2	mg/kg	0.05	<0.05	95.5%	92.4%	----	----					
EP-068A-SS	DDD	mg/kg	0.05	<0.05	94.9%	91.2%	----	----					
EP-068A-SS	Endrin aldehyde	mg/kg	0.05	<0.05	87.5%	89.1%	----	----					
EP-068A-SS	Endosulfan sulfate	mg/kg	0.05	<0.05	93.8%	90.3%	----	----					
EP-068A-SS	DDT	mg/kg	0.2	<0.2	87.8%	82.5%	71.2%	70.2%					
EP-068A-SS	Endrin ketone	mg/kg	0.05	<0.05	95.4%	91.1%	----	----					
EP-068A-SS	Methoxychlor	mg/kg	0.2	<0.2	87.0%	82.6%	----	----					
EP-068B-SS	**ORGANOPHOSPHORUS PESTICIDES**												
EP-068B-SS	Dichlorvos	mg/kg	0.05	<0.05	93.7%	85.0%	----	----					
EP-068B-SS	Demeton-S-methyl	mg/kg	0.05	<0.05	80.5%	94.3%	----	----					
EP-068B-SS	Monocroptophos	mg/kg	0.2	<0.2	25.4%	36.4%	----	----					
EP-068B-SS	Dimethoate	mg/kg	0.05	<0.05	82.5%	80.3%	----	----					
EP-068B-SS	Diazinon	mg/kg	0.05	<0.05	90.4%	85.4%	86.6%	96.2%					
EP-068B-SS	Chlorpyrifos-methyl	mg/kg	0.05	<0.05	82.8%	87.4%	75.4%	86.0%					
EP-068B-SS	Parathion-methyl	mg/kg	0.2	<0.2	88.5%	92.4%	----	----					
EP-068B-SS	Malathion	mg/kg	0.05	<0.05	99.3%	94.9%	----	----					
EP-068B-SS	Fenthion	mg/kg	0.05	<0.05	91.7%	88.3%	----	----					

Batch: NE10477
Sub Batch: 2
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

QUALITY CONTROL REPORT

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		100	101	102	103	104					
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	METHOD BLANK	NOCOPS1312 SCS	NOCOPS1312 DCS	NOCOPS1312 MS	NOCOPS1312 MSD					
				CHECKS AND SPIKES									
EP-068B-SS	Chlorpyrifos	mg/kg	0.05	<0.05	92.0%	87.4%	----	----					
EP-068B-SS	Parathion	mg/kg	0.2	<0.2	83.0%	82.9%	----	----					
EP-068B-SS	Pirimphos-ethyl	mg/kg	0.05	<0.05	90.9%	87.5%	85.5%	86.3%					
EP-068B-SS	Chlorfenvinphos E	mg/kg	0.05	<0.05	----	----	----	----					
EP-068B-SS	Chlorfenvinphos Z	mg/kg	0.05	<0.05	92.0%	89.4%	----	----					
EP-068B-SS	Bromophos-ethyl	mg/kg	0.05	<0.05	86.8%	89.9%	90.8%	89.5%					
EP-068B-SS	Fenamiphos	mg/kg	0.05	<0.05	81.1%	81.0%	----	----					
EP-068B-SS	Prothiofos	mg/kg	0.05	<0.05	84.2%	80.9%	81.0%	85.5%					
EP-068B-SS	Ethion	mg/kg	0.05	<0.05	92.7%	88.0%	----	----					
EP-068B-SS	Carbophenothion	mg/kg	0.05	<0.05	86.2%	83.7%	----	----					
EP-068B-SS	Azinphos-methyl	mg/kg	0.05	<0.05	86.9%	95.5%	----	----					
EP-068S-SS	ORGANOCHLORINE PESTICIDE SURROGATE												
EP-068S-SS	Dibromo-DDE	%	1	88	96	93	78	81					
EP-068T-SS	ORGANOPHOSPHORUS PESTICIDE SURROGATE												
EP-068T-SS	DEF	%	1	80	97	92	83	84					

ALS Environmental

CERTIFICATE OF ANALYSIS

CONTACT:	MR SAM MACKENZIE	**BATCH:**	NE10477
CLIENT:	COFFEY GEOSCIENCES PTY LTD	**SUB BATCH:**	3
ADDRESS:	13 MANGROVE ROAD SANDGATE NSW 2304	**LABORATORY:**	NEWCASTLE
		DATE RECEIVED:	03/06/2003
		DATE COMPLETED:	16/06/2003
		SAMPLE TYPE:	SOIL
ORDER No.:	N 51757	**No. of SAMPLES:**	5
PROJECT:	N08340/1		

COMMENTS

Samples analysed on an as received basis. Results reported on a dry weight basis. All analysis and Laboratory QC conducted in accordance with Schedule B(3) NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soil (December 1999).

NOTES

This is the Final Report and supersedes any preliminary reports with this batch number.
All pages of this report have been checked and approved for release.

ISSUING LABORATORY: NEWCASTLE

Address
5 Rosegum Close
WARABROOK NSW 2304

Phone: 61-2-4968 9433
Fax: 61-2-4968 0349
Email: kathy.mcdermott@alsenviro.com

Signatory

NATA Accredited Laboratory Number 825

Batch: NE10477
Sub Batch: 3
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

CERTIFICATE OF ANALYSIS

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		1	2	3	4	5					
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	BH1_ 0.0-0.1	BH2_ 0.15-0.20	BH3_ 0.0-0.1	S1_ 0.0-0.1	BH10_ 0.0-0.1					
EA-055	Moisture Content (dried @ 103'C)	%	0.1	17.5	14.4	14.9	24.1	17.3					
EP-071-SS	**TOTAL PETROLEUM HYDROCARBONS**												
EP-071-SS	C6 - C9 Fraction	mg/kg	2	<2	<2	<2	<2	<2					
EP-071-SS	C10 - C14 Fraction	mg/kg	50	<50	<50	<50	<50	<50					
EP-071-SS	C15 - C28 Fraction	mg/kg	100	<100	<100	<100	<100	<100					
EP-071-SS	C29 - C36 Fraction	mg/kg	100	<100	<100	<100	<100	<100					
EP-080-SS	**BTEX**												
EP-080-SS	Benzene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					
EP-080-SS	Toluene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					
EP-080-SS	Chlorobenzene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					
EP-080-SS	Ethylbenzene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					
EP-080-SS	meta- & para-Xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					
EP-080-SS	ortho-Xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2					
EP-071S-SS	**TPH (SV) Surrogates**												
EP-071S-SS	4-Methylnonane	%	1	83	95	85	109	82					
EP-071S-SS	n-Pentatriacontane	%	1	85	89	93	90	87					
EP-080S-SS	**VOLATILE TPH/BTEX COMPOUND SURROGATES**												
EP-080S-SS	1.2-Dichloroethane-D4	%	1	94	92	93	84	84					
EP-080S-SS	Toluene-D8	%	1	89	85	85	83	85					
EP-080S-SS	4-Bromofluorobenzene	%	1	89	86	83	80	85					

Batch: NE10477
Sub Batch: 3
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

QUALITY CONTROL REPORT

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		200	201	202	203	204					
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	METHOD BLANK	NTPHT4058 SCS	NTPHT4058 DCS	NTPHT4058 MS	NTPHT4058 MSD					
				CHECKS AND SPIKES									
EA-055	Moisture Content (dried @ 103'C)	%	0.1	----	----	----	----	----					
EP-071-SS	**TOTAL PETROLEUM HYDROCARBONS**												
EP-071-SS	C6 - C9 Fraction	mg/kg	2	<2	96.8%	96.8%	79.2%	97.9%					
EP-071-SS	C10 - C14 Fraction	mg/kg	50	<50	103%	111%	96.2%	81.9%					
EP-071-SS	C15 - C28 Fraction	mg/kg	100	<100	91.9%	96.8%	110%	97.6%					
EP-071-SS	C29 - C36 Fraction	mg/kg	100	<100	88.4%	93.7%	120%	105%					
EP-080-SS	**BTEX**												
EP-080-SS	Benzene	mg/kg	0.2	<0.2	102%	98.3%	95.7%	98.6%					
EP-080-SS	Toluene	mg/kg	0.2	<0.2	100%	101%	80.6%	96.1%					
EP-080-SS	Chlorobenzene	mg/kg	0.2	<0.2	100%	98.3%	89.4%	104%					
EP-080-SS	Ethylbenzene	mg/kg	0.2	<0.2	100%	105%	93.4%	113%					
EP-080-SS	meta- & para-Xylene	mg/kg	0.2	<0.2	100%	98.6%	92.4%	111%					
EP-080-SS	ortho-Xylene	mg/kg	0.2	<0.2	100%	102%	90.5%	107%					
EP-071S-SS	**TPH (SV) Surrogates**												
EP-071S-SS	4-Methylnonane	%	1	98	102	112	100	84					
EP-071S-SS	n-Pentatriacontane	%	1	76	87	92	103	83					
EP-080S-SS	**VOLATILE TPH/BTEX COMPOUND SURROGATES**												
EP-080S-SS	1.2-Dichloroethane-D4	%	1	82	104	87	87	92					
EP-080S-SS	Toluene-D8	%	1	111	100	102	91	97					
EP-080S-SS	4-Bromofluorobenzene	%	1	96	100	93	87	105					

ALS Environmental

CERTIFICATE OF ANALYSIS

CONTACT:	MR SAM MACKENZIE	BATCH:	NE10477
CLIENT:	COFFEY GEOSCIENCES PTY LTD	SUB BATCH:	4
ADDRESS:		LABORATORY:	NEWCASTLE
	13 MANGROVE ROAD SANDGATE NSW 2304	DATE RECEIVED:	03/06/2003
		DATE COMPLETED:	16/06/2003
		SAMPLE TYPE:	SOIL
ORDER No.:	N 51757	No. of SAMPLES:	5
PROJECT:	N08340/1		

COMMENTS

Samples analysed on an as received basis. Results reported on a dry weight basis. All analysis and Laboratory QC conducted in accordance with Schedule B(3) NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soil (December 1999). Analysis conducted by ALS Sydney, NATA Site No. 10911.

NOTES

This is the Final Report and supersedes any preliminary reports with this batch number.
All pages of this report have been checked and approved for release.

ISSUING LABORATORY: NEWCASTLE

Address
5 Rosegum Close
WARABROOK NSW 2304

Phone: 61-2-4968 9433
Fax: 61-2-4968 0349
Email: kathy.mcdermott@alsenviro.com

Signatory

Batch: NE10477
Sub Batch: 4
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

CERTIFICATE OF ANALYSIS

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		1	2	3	4	5					
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	BH1_ 0.0-0.1	BH2_ 0.15-0.20	BH3_ 0.0-0.1	S1_ 0.0-0.1	BH10_ 0.0-0.1					
EA-055	Moisture Content (dried @ 103'C)	%	0.1	17.5	14.4	14.9	24.1	17.3					
EP-076A-SS	**POLYNUCLEAR AROMATIC HYDROCARBONS**												
EP-076A-SS	Naphthalene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Acenaphthylene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Acenaphthene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Fluorene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Phenanthrene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Anthracene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Fluoranthene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Pyrene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Chrysene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Benzo(b)fluoranthene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Benzo(a)pyrene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Indeno(1.2.3.cd)pyrene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Dibenz(a.h)anthracene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076A-SS	Benzo(g.h.i)perylene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
EP-076S-SS	**SURROGATE COMPOUNDS**												
EP-076S-SS	2-Fluorobiphenyl	%	1	90	95	94	84	101					
EP-076S-SS	Anthracene-d10	%	1	105	109	111	95	118					
EP-076S-SS	p-Terphenyl-d14	%	1	109	110	111	98	116					

Batch: NE10477
Sub Batch: 4
Date of Issue: 16/06/2003
Client: COFFEY GEOSCIENCES PTY LTD
Client Reference: N08340/1

QUALITY CONTROL REPORT

				SAMPLE IDENTIFICATION										
		Laboratory I.D.		100	101	102	103	104						
		Date Sampled		03/06/2003	03/06/2003	03/06/2003	03/06/2003	03/06/2003						
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	METHOD BLANK	NEP076S968 SCS	NEP076S968 DCS	NEP076S968 MS	NEP076S968 MSD						
				CHECKS AND SPIKES										
EA-055	Moisture Content (dried @ 103'C)	%	0.1	----	----	----	----	----						
EP-076A-SS	**POLYNUCLEAR AROMATIC HYDROCARBONS**													
EP-076A-SS	Naphthalene	mg/kg	0.5	<0.5	107%	104%	----	----						
EP-076A-SS	Acenaphthylene	mg/kg	0.5	<0.5	110%	106%	----	----						
EP-076A-SS	Acenaphthene	mg/kg	0.5	<0.5	113%	104%	98.2%	92.9%						
EP-076A-SS	Fluorene	mg/kg	0.5	<0.5	111%	106%	----	----						
EP-076A-SS	Phenanthrene	mg/kg	0.5	<0.5	106%	103%	----	----						
EP-076A-SS	Anthracene	mg/kg	0.5	<0.5	108%	102%	----	----						
EP-076A-SS	Fluoranthene	mg/kg	0.5	<0.5	110%	103%	----	----						
EP-076A-SS	Pyrene	mg/kg	0.5	<0.5	111%	104%	101%	92.5%						
EP-076A-SS	Benz(a)anthracene	mg/kg	0.5	<0.5	107%	101%	----	----						
EP-076A-SS	Chrysene	mg/kg	0.5	<0.5	109%	105%	----	----						
EP-076A-SS	Benzo(b)fluoranthene	mg/kg	0.5	<0.5	104%	99.6%	----	----						
EP-076A-SS	Benzo(k)fluoranthene	mg/kg	0.5	<0.5	106%	100%	----	----						
EP-076A-SS	Benzo(a)pyrene	mg/kg	0.5	<0.5	103%	102%	----	----						
EP-076A-SS	Indeno(1.2.3.cd)pyrene	mg/kg	0.5	<0.5	104%	98.1%	----	----						
EP-076A-SS	Dibenz(a.h)anthracene	mg/kg	0.5	<0.5	103%	97.5%	----	----						
EP-076A-SS	Benzo(g.h.i)perylene	mg/kg	0.5	<0.5	105%	98.5%	----	----						
EP-076S-SS	**SURROGATE COMPOUNDS**													
EP-076S-SS	2-Fluorobiphenyl	%	1	112	101	110	89	84						
EP-076S-SS	Anthracene-d10	%	1	115	113	107	94	89						
EP-076S-SS	p-Terphenyl-d14	%	1	101	106	97	99	92						

ALS Environmental

ORGANICS QUALITY CONTROL REPORT

BATCH NO: NE10477

DATE BATCH RECEIVED: 04/06/2003

CLIENT: Coffey Geosciences Pty Ltd

DATE BATCH COMPLETED: 13/06/2003

PROJECT: n08340/1

Method Code	Test	Matrix	Method Reference		QC Lot Number	Date Samples Extracted	Date Samples Analysed
			Extraction	Analysis			
EP-066	PCB	Soil	Tumbler	USEPA 8270B	NPCBS619	11/06/03	12/06/03
EP-068	Pesticides	Soil	Tumbler	USEPA 8270B	NOCOPS1312	11/06/03	12/06/03
EP-071	TPH(SV)	Soil	Tumbler	USEPA 8015A	NTPHT4058	11/06/03	12/06/03
EP-071/80	TPH(V)/BTEX	Soil	USEPA 5030A	USEPA 8260A	NVOCS4058	11/06/03	11/06/03
EP-076	PAH (USEPA	Soil	Tumbler	USEPA 8270C	NEP076S-968	11/06/03	12/06/03

Where applicable, internal standards are added to sample extracts prior to instrumental analysis. Absolute peak areas and retention times fall within the criteria specified in the individual methods. Continuing Calibration (CC) standards are run at the frequency of 1 in every 20 samples.

Abbreviations: SV = semivolatile, V = volatile

*: In-house methods

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE

ALS EP-066 : PCB

QC LOT No. : NPCBS619 ANALYST :S.Green
MATRIX: Soil

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Conc	DCS Conc	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
EP-066 : PCB									
Total PCBs	<LOR	0.50	0.46	0.49	94	6	67	117	20
EP-066 : PCB SURROGATE									
Decachlorobiphenyl	87%	0.50	88.8	94.6	92	6	69	117	20

COMMENTS:
1) The control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
2) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL -- MATRIX SPIKE / DUPLICATE

ALS EP-066 : PCB ANALYSIS

QC LOT No. : NPCBS619 ANALYST : S.Green
MATRIX : Soil SPIKED SAMPLE : ES39981-3

COMPOUND	Sample Results	Spike Level	QCSPIKE RESULTS				Control Limits
			MS Conc	MSD Conc	Av. Rec.	RPD	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	RPD
EP-066 : PCB							
Total PCBs	<LOR	0.50	0.43	0.40	83	5	20
EP-066 : PCB SURROGATE							
Decachlorobiphenyl	0	0.50	94	95	94	0	20

COMMENTS :

1) The control limits are based on ALS laboratory statistical data (Method QWI-ORG/07)
2) * : RPD falls outside the recommended control limit.

BATCH QUALITY CONTROL -- DUPLICATE

ALS EP-066 : PCB

QC LOT No. : NPCBS619
MATRIX : Soil

ANALYST :S.Green

COMPOUND	QC DUPLICATE RESULTS		
	ES39981 2	ES39981 2 Dup	RPD
	mg/kg	mg/kg	%
EP-066 : PCB			
Total PCBs	<LOR	<LOR	--
EP-066 : PCB SURROGATE			
Decachlorobiphenyl	95.79	96.04	0

BATCH QUALITY CONTROL -- DUPLICATE

ALS EP-066 : PCB

QC LOT No. : NPCBS619
MATRIX: Soil

ANALYST :S.Green

COMPOUND	QC DUPLICATE RESULTS		
	ES39981 3	ES39981 3 Dup	RPD
	mg/kg	mg/kg	%
EP-066 : PCB			
Total PCBs	<LOR	<LOR	--
EP-066 : PCB SURROGATE			
Decachlorobiphenyl	94.21	100.24	6.2

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE

ALS EP-068 : Pesticides

QC LOT No. : NOCOPS1312 ANALYST N. MAHABIR

MATRIX: Soils

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
EP068A : OC Pesticides									
a-BHC	<0.025	0.25	92.3	85.4	88.9	7.77	83.9	104	0 - 20
HCB	<0.025	0.25	87.5	75.3	81.4	15	73.6	107	0 - 20
b- & g-BHC	<0.05	0.5	91.8	86.5	89.2	5.95	89.1	103	0 - 20
d-BHC	<0.025	0.25	91.6	87	89.3	5.15	82.8	103	0 - 20
Heptachlor	<0.025	0.25	87.1	83.1	85.1	4.7	77.2	107	0 - 20
Aldrin	<0.025	0.25	92.7	90	91.4	2.96	82.4	106	0 - 20
Heptachlor epoxide	<0.025	0.25	93.5	89.8	91.7	4.04	82.2	106	0 - 20
Chlordane peak no 1	<0.025	0.25	83	80.3	81.7 *	3.31	82.2	107	0 - 20
Endosulfan 1	<0.025	0.25	94.2	88.2	91.2	6.58	83.2	107	0 - 20
Chlordane peak no. 2	<0.025	0.25	82.8	81.1	82	2.07	79.5	104	0 - 20
Dieldrin	<0.025	0.25	93.4	91.2	92.3	2.38	84.1	107	0 - 20
DDE	<0.025	0.25	92.8	88.9	90.9	4.29	82.2	106	0 - 20
Endrin	<0.025	0.25	91.5	91.9	91.7	0.44	77.2	108	0 - 20
Endosulfan 2	<0.025	0.25	95.5	92.4	94	3.3	81.8	105	0 - 20
DDD	<0.025	0.25	94.9	91.2	93.1	3.98	79	108	0 - 20
Endrin aldehyde	<0.025	0.25	87.5	89.1	88.3	1.81	81.7	106	1 - 20
Endosulfan sulfate	<0.025	0.25	93.8	90.3	92.1	3.8	79.9	107	0 - 20
DDT	<0.1	0.25	87.8	82.5	85.2	6.22	69.7	113	0 - 20
Endrin ketone	<0.025	0.25	95.4	91.1	93.3	4.61	80.5	107	0 - 20
Methoxychlor	<0.1	0.25	87	82.6	84.8	5.19	77.5	100	0 - 20
EP068B : OP Pesticides									
Dichlorvos	<0.025	0.25	93.7	85	89.4	9.74	79.2	103	0 - 20
Demeton-s-methyl	<0.025	0.25	80.5	94.3	87.4	15.8	68.9	109	0 - 20
Monocroptophos	<0.1	0.25	25.4	36.4	30.9	35.6 *	1.76	137	0 - 20
Dimethoate	<0.025	0.25	82.5	80.3	81.4	2.7	76.7	99.8	0 - 20
Diazinon	<0.025	0.25	90.4	85.4	87.9	5.69	81.7	105	0 - 20
Chlorpyrifos methyl	<0.025	0.25	82.8	87.4	85.1	5.41	80.5	104	0 - 20
Parathion methyl	<0.1	0.25	88.5	92.4	90.5	4.31	81.1	103	0 - 20
Malathion	<0.025	0.25	99.3	94.9	97.1	4.53	79.1	106	0 - 20
Fenthion	<0.025	0.25	91.7	88.3	90	3.78	82.3	103	0 - 20
Chlorpyrifos	<0.025	0.25	92	87.4	89.7	5.13	81.8	105	0 - 20
Parathion	<0.1	0.25	83	82.9	83	0.12	80.5	102	0 - 20
Pirimphos ethyl	<0.025	0.25	90.9	87.5	89.2	3.81	81.2	105	0 - 20
Chlorfenvinphos Z	<0.025	0.25	92	89.4	90.7	2.87	79.9	105	0 - 20
Bromophos ethyl	<0.025	0.25	86.8	89.9	88.4	3.51	82.2	105	0 - 20
Fenamiphos	<0.025	0.25	81.1	81	81.1	0.12	75.2	104	0 - 20
Prothiofos	<0.025	0.25	84.2	80.9	82.6	4	81.8	105	0 - 20
Ethion	<0.025	0.25	92.7	88	90.4	5.2	79.8	105	0 - 20
Carbofenthion	<0.025	0.25	86.2	83.7	85	2.94	58.1	118	0 - 20
Azinphos methyl	<0.025	0.25	86.9	95.5	91.2	9.43	63.8	110	0 - 20
EP068C : Triazines									

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE

ALS EP-068 : Pesticides

QC LOT No. : NOCOPS1312 ANALYST N. MAHABIR

MATRIX: Soils

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
Simazine	<0.025	0.25	94.3	98.5	96.4	4.36	78	104	0 - 20
Atrazine	<0.025	0.25	117	118	118 *	0.85	81.9	102	0 - 20
EP068D :Pyrethroids									
Cypermethrins(multipeaks)	<0.1	0.25	99.6	87.7	93.7	12.7	81.1	108	0 - 20
EP068S : OC Surrogate									
Dibromo-DDE	87.5%	0.5	96.4	92.8	94.6	3.81	72.3	120	0 - 20
EP068T : OP Surrogate									
DEF	80.4%	0.5	96.5	92.1	94.3	4.67	74.6	121	0 - 20

COMMENTS:

1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)

2) The control limits on RPD (relative percent deviation) are fixed.

3) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL – DUPLICATE

ALS EP-068 : Pesticides

QC LOT No. : NOCOPS1312
MATRIX : Soils
ANALYST: N. MAHABIR

COMPOUND	LOR	QC DUPLICATE RESULTS			
		NE10402 6	NE10402 6D	RPD	Cont. Limit
	mg/kg	mg/kg	mg/kg	%	
EP068A : OC Pesticides					
a-BHC	0.025	<0.025	<0.025	n/a	
HCB	0.025	<0.025	<0.025	n/a	
b- & g-BHC	0.05	<0.05	<0.05	n/a	
d-BHC	0.025	<0.025	<0.025	n/a	
Heptachlor	0.025	<0.025	<0.025	n/a	
Aldrin	0.025	<0.025	<0.025	n/a	
Heptachlor epoxide	0.025	<0.025	<0.025	n/a	
Chlordane peak no 1	0.025	<0.025	<0.025	n/a	
Endosulfan 1	0.025	<0.025	<0.025	n/a	
Chlordane peak no. 2	0.025	<0.025	<0.025	n/a	
Dieldrin	0.025	<0.025	<0.025	n/a	
DDE	0.025	<0.025	<0.025	n/a	
Endrin	0.025	<0.025	<0.025	n/a	
Endosulfan 2	0.025	<0.025	<0.025	n/a	
DDD	0.025	<0.025	<0.025	n/a	
Endrin aldehyde	0.025	<0.025	<0.025	n/a	
Endosulfan sulfate	0.025	<0.025	<0.025	n/a	
DDT	0.1	<0.1	<0.1	n/a	
Endrin ketone	0.025	<0.025	<0.025	n/a	
Methoxychlor	0.1	<0.1	<0.1	n/a	
EP068B : OP Pesticides					
Dichlorvos	0.025	<0.025	<0.025	n/a	
Demeton-s-methyl	0.025	<0.025	<0.025	n/a	
Monocroptophos	0.1	<0.1	<0.1	n/a	
Dimethoate	0.025	<0.025	<0.025	n/a	
Diazinon	0.025	<0.025	<0.025	n/a	
Chlorpyrifos methyl	0.025	<0.025	<0.025	n/a	
Parathion methyl	0.1	<0.1	<0.1	n/a	
Malathion	0.025	<0.025	<0.025	n/a	
Fenthion	0.025	<0.025	<0.025	n/a	
Chlorpyrifos	0.025	<0.025	<0.025	n/a	
Parathion	0.1	<0.1	<0.1	n/a	
Pirimphos ethyl	0.025	<0.025	<0.025	n/a	
Chlorfenvinphos E	0.025	<0.025	<0.025	n/a	
Chlorfenvinphos Z	0.025	<0.025	<0.025	n/a	
Bromophos ethyl	0.025	<0.025	<0.025	n/a	
Fenamiphos	0.025	<0.025	<0.025	n/a	
Prothiofos	0.025	<0.025	<0.025	n/a	
Ethion	0.025	<0.025	<0.025	n/a	
Carbofenthion	0.025	<0.025	<0.025	n/a	
Azinphos methyl	0.025	<0.025	<0.025	n/a	

BATCH QUALITY CONTROL – DUPLICATE

ALS EP-068 : Pesticides

QC LOT No. : NOCOPS1312
MATRIX : Soils
ANALYST: N. MAHABIR

COMPOUND	LOR	QC DUPLICATE RESULTS			
		NE10402 6	NE10402 6D	RPD	Cont. Limit
	mg/kg	mg/kg	mg/kg	%	
EP068C : Triazines					
Simazine	0.025	<0.025	<0.025	n/a	
Atrazine	0.025	<0.025	<0.025	n/a	
EP068D : Pyrethroids					
Cypermethrins(multipeaks)	0.1	<0.1	<0.1	n/a	
EP068S : OC Surrogate					
Dibromo-DDE	1%	96.7%	106%	9.18	0 - 20
EP068T : OP Surrogate					
DEF	1%	103%	105%	1.92	0 - 20

Note: The permitted range for RPD (relative percent deviation) is specified in ALS Method QWI-EN/38 and is dependent on the magnitude of results in comparison to the level of reporting:
Result < 10 times LOR, no limit.
Result between 10 and 20 times LOR, 0% - 50%.
Results > 20 times LOR, 0% - 20%.

BATCH QUALITY CONTROL -- DUPLICATE

ALS EP-068 : Pesticides

QC LOT No. : NOCOPS1312
MATRIX : Soils
ANALYST: N. MAHABIR

COMPOUND	LOR	QC DUPLICATE RESULTS			
		NE10402 7	NE10402 7D	RPD	Cont. Limit
	mg/kg	mg/kg	mg/kg	%	
EP068A : OC Pesticides					
a-BHC	0.025	<0.025	<0.025	n/a	
HCB	0.025	<0.025	<0.025	n/a	
b- & g-BHC	0.05	<0.05	<0.05	n/a	
d-BHC	0.025	<0.025	<0.025	n/a	
Heptachlor	0.025	<0.025	<0.025	n/a	
Aldrin	0.025	<0.025	<0.025	n/a	
Heptachlor epoxide	0.025	<0.025	<0.025	n/a	
Chlordane peak no 1	0.025	<0.025	<0.025	n/a	
Endosulfan 1	0.025	<0.025	<0.025	n/a	
Chlordane peak no. 2	0.025	<0.025	<0.025	n/a	
Dieldrin	0.025	<0.025	<0.025	n/a	
DDE	0.025	<0.025	<0.025	n/a	
Endrin	0.025	<0.025	<0.025	n/a	
Endosulfan 2	0.025	<0.025	<0.025	n/a	
DDD	0.025	<0.025	<0.025	n/a	
Endrin aldehyde	0.025	<0.025	<0.025	n/a	
Endosulfan sulfate	0.025	<0.025	<0.025	n/a	
DDT	0.1	<0.1	<0.1	n/a	
Endrin ketone	0.025	<0.025	<0.025	n/a	
Methoxychlor	0.1	<0.1	<0.1	n/a	
EP068B : OP Pesticides					
Dichlorvos	0.025	<0.025	<0.025	n/a	
Demeton-s-methyl	0.025	<0.025	<0.025	n/a	
Monocroptophos	0.1	<0.1	<0.1	n/a	
Dimethoate	0.025	<0.025	<0.025	n/a	
Diazinon	0.025	<0.025	<0.025	n/a	
Chlorpyrifos methyl	0.025	<0.025	<0.025	n/a	
Parathion methyl	0.1	<0.1	<0.1	n/a	
Malathion	0.025	<0.025	<0.025	n/a	
Fenthion	0.025	<0.025	<0.025	n/a	
Chlorpyrifos	0.025	<0.025	<0.025	n/a	
Parathion	0.1	<0.1	<0.1	n/a	
Pirimphos ethyl	0.025	<0.025	<0.025	n/a	
Chlorfenvinphos E	0.025	<0.025	<0.025	n/a	
Chlorfenvinphos Z	0.025	<0.025	<0.025	n/a	
Bromophos ethyl	0.025	<0.025	<0.025	n/a	
Fenamiphos	0.025	<0.025	<0.025	n/a	
Prothiofos	0.025	<0.025	<0.025	n/a	
Ethion	0.025	<0.025	<0.025	n/a	
Carbofenthion	0.025	<0.025	<0.025	n/a	
Azinphos methyl	0.025	<0.025	<0.025	n/a	

BATCH QUALITY CONTROL -- DUPLICATE

ALS EP-068 : Pesticides

QC LOT No. : NOCOPS1312
MATRIX : Soils
ANALYST: N. MAHABIR

COMPOUND	LOR	QC DUPLICATE RESULTS			
		NE10402 7	NE10402 7D	RPD	Cont. Limit
	mg/kg	mg/kg	mg/kg	%	
EP068C : Triazines					
Simazine	0.025	<0.025	<0.025	n/a	
Atrazine	0.025	<0.025	<0.025	n/a	
EP068D : Pyrethroids					
Cypermethrins(multipeaks)	0.1	<0.1	<0.1	n/a	
EP068S : OC Surrogate					
Dibromo-DDE	1%	105%	92.8%	12.3	0 - 20
EP068T : OP Surrogate					
DEF	1%	102%	98%	4	0 - 20

Note: The permitted range for RPD (relative percent deviation) is specified in ALS Method QWI-EN/38 and is dependent on the magnitude of results in comparison to the level of reporting:
Result < 10 times LOR, no limit.
Result between 10 and 20 times LOR, 0% - 50%.
Results > 20 times LOR, 0% - 20%.

BATCH QUALITY CONTROL -- MATRIX SPIKE/DUPLICATE

ALS EP-068 : Semivolatile Organic Compounds

QC LOT No. : NOCOPS1312 ANALYST : N. MAHABIR

MATRIX: Soils Sample ID: NE10402-7

COMPOUND	Sample Results	Spike Level	SPIKE QC RESULTS				Cont. Limit
			MS Rec.	MSD Rec.	Average Rec.	RPD	RPD
	mg/kg	mg/kg	%	%	%	%	%
EP068A : OC Pesticides							
b- & g-BHC	<0.05	0.25	93.8	84.5	89.2	10.4	0 - 20
Heptachlor	<0.025	0.25	91.5	96.2	93.9	5.01	0 - 20
Aldrin	<0.025	0.25	81.7	90.2	86	9.89	0 - 20
Dieldrin	<0.025	0.25	91.4	88.3	89.9	3.45	0 - 20
Endrin	<0.025	1	105	103	104	1.92	0 - 20
DDT	<0.1	1	71.2	70.2	70.7	1.41	0 - 20
EP068 : OP Pesticides							
Diazinon	<0.025	0.25	86.6	96.2	91.4	10.5	0 - 20
Chlorpyrifos methyl	<0.025	0.25	75.4	86	80.7	13.1	0 - 20
Pirimiphos ethyl	<0.025	0.25	85.5	86.3	85.9	0.931	0 - 20
Bromophos ethyl	<0.025	0.25	90.8	89.5	90.2	1.44	0 - 20
Prothiofos	<0.025	0.25	81	85.5	83.3	5.41	0 - 20
EP068S : OC Surrogate							
Dibromo-DDE	105%	0.5	78.4	80.7	79.6	2.89	0 - 20
EP068T : OP Surrogate							
DEF	102%	0.5	82.9	83.9	83.4	1.2	0 - 20

COMMENTS:

1) The RPD control limits are fixed.

2) *: RPD falls outside the recommended control limit.

QUALITY CONTROL REPORTS

ALS EP-071 : Total Petroleum Hydrocarbons (Semivolatile)

QC LOT No. : NTPHT4058

MATRIX: Soil

Analyst: Abida Khan

QC Schedule: 3

CONTROL SPIKES

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
TPH Bands									
TPH(C10 - C14)	<50	200	103	111	107	7.5	87	123	0 - 20
TPH(C15 - C28)	<100	200	92	97	94.5	5.3	88	119	0 - 20
TPH(C29 - C36)	<100	200	88	94	91	6.6	90	115	0 - 20
TPH Surrogates									
4-Methyl Nonane	97.9	20	102	112	107	9.3	86	120	0 - 20
n-Pentatriacontane	75.5	20	86.5	92.4	89.4	6.6	88	115	0 - 20

MATRIX SPIKES

Sample ID: ES40035-8

COMPOUND	Sample Results	Spike Level	SPIKE QC RESULTS				Control Limits		
			MS Rec.	MSD Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%	%	%	%	Low	High	%
TPH Bands									
TPH(C10 - C14)	<50	430	96	82	89	15.7	70	123	0 - 35
TPH(C15 - C28)	<100	3470	110	98	104	11.5	70	119	0 - 35
TPH(C29 - C36)	<100	2760	120	105	112	13.3	70	115	0 - 35
TPH Surrogates									
4-Methyl Nonane	96.3	20	99.9	83.7	91.8	17.6	70	120	0 - 35
n-Pentatriacontane	89.1	20	103	82.6	92.8	22	70	115	0 - 35

DUPLICATE 1

Sample ID: ES40035-8

COMPOUND	LOR	Original	Duplicate	RPD	
				RPD	Cont. Limit
	mg/kg	mg/kg	mg/kg	%	
TPH Bands					
TPH(C10 - C14)	50	<50	<50	n/a	No Limit
TPH(C15 - C28)	100	<100	<100	n/a	No Limit
TPH(C29 - C36)	100	<100	<100	n/a	No Limit
TPH Surrogates					
4-Methyl Nonane	1	96.3	84.3	13.3	0 - 20
n-Pentatriacontane	1	89.1	85.8	3.8	0 - 20

DUPLICATE 2

Sample ID: ES40035-12

COMPOUND	LOR	Original	Duplicate	RPD	
				RPD	Cont. Limit
	mg/kg	mg/kg	mg/kg	%	
TPH Bands					
TPH(C10 - C14)	50	<50	<50	n/a	No Limit
TPH(C15 - C28)	100	<100	<100	n/a	No Limit
TPH(C29 - C36)	100	<100	<100	n/a	No Limit
TPH Surrogates					
4-Methyl Nonane	1	87.1	85.9	1.4	0 - 20
n-Pentatriacontane	1	92.6	93.9	1.4	0 - 20

Notes:

1) The recovery control limits for control spikes are based on ALS laboratory statistical data. (Method QWI-ORG/07)
2) The control limits on RPD (relative percent deviation) for control spikes are fixed.
3) * : Recovery or RPD falls outside of the recommended control limits.
4) No control limits are applied to matrix spike recoveries due to the diversity of matrix types
5)The permitted range for RPD for duplicates specified in ALS Method QWI-EN/38 and is dependent on the magnitude of results in comparison to the level of reporting:

- LOR to10x LOR - no limit
- 10x LOR to20x LOR - 50%
- >20x LOR - 20%

...LITY CONTROL REPORTS

ALS EP-071/80 : Total Petroleum Hydrocarbons (Volatile)/BTEX

QC LOT No. : NVOCS4058

Analyst: Gaston Allende

MATRIX: Soil

QC Schedule: 3

CONTROL SPIKES

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS SCS Rec.	DCS Rec.	Average Rec.	RPD	Control Limits Rec. Low	Rec. High	RPD
	mg/kg	mg/kg	%		%	%			%
EP-071 TPH(V)									
TPH(C6 - C9)	<2	26	97	97	97	0	70	130	0 - 20
EP-080 BTEX									
Benzene	<0.2	1	102	98	100	4	70	130	0 - 20
Toluene	<0.2	1	100	101	100	1	70	130	0 - 20
Chlorobenzene	<0.2	1	100	98	99	2	70	130	0 - 20
Ethyl benzene	<0.2	1	100	105	102	4.9	70	130	0 - 20
m- & p-Xylene	<0.2	1	100	99	99.5	1	70	130	0 - 20
o-Xylene	<0.2	1	100	102	101	2	70	130	0 - 20
EP-080S Surrogates									
1,2 Dichloroethane-D4	82.1	5	104	87	95.5	17.8	70	130	0 - 20
Toluene-D8	111	5	100	102	101	2	70	130	0 - 20
4-Bromofluorobenzene	96.2	5	100	93.2	96.6	7	70	130	0 - 20

MATRIX SPIKES

Sample ID: ES40035-8

COMPOUND	Sample Results	Spike Level	SPIKE QC RESULTS MS Rec.	MSD Rec.	Average Rec.	RPD	Control Limits Rec. Low	Rec. High	RPD
	mg/kg	mg/kg	%	%	%	%			%
TPH Bands									
TPH(C6 - C9)	<2	25	79	98	88.5	21.5	70	130	0 - 35
EP-080 BTEX									
Benzene	<0.2	2.5	96	99	97.5	3.1	70	130	0 - 35
Toluene	<0.2	2.5	81	96	88.5	16.9	70	130	0 - 35
Chlorobenzene	<0.2	2.5	89	104	96.5	15.5	70	130	0 - 35
Ethyl benzene	<0.2	2.5	93	113	103	19.4	70	130	0 - 35
m- & p-Xylene	<0.2	2.5	92	111	102	18.7	70	130	0 - 35
o-Xylene	<0.2	2.5	90	107	98.5	17.2	70	130	0 - 35
EP-080S Surrogates									
1,2 Dichloroethane-D4	98.5	5	87.3	91.7	89.5	4.9	70	130	0 - 35
Toluene-D8	88.3	5	91.2	97.1	94.2	6.3	70	130	0 - 35
4-Bromofluorobenzene	95.6	5	87.1	105	96	18.6	70	130	0 - 35

DUPLICATE 1

Sample ID: ES40035-8

COMPOUND	LOR	Original	Duplicate	RPD	RPD Cont. Limit
	mg/kg	mg/kg	mg/kg	%	
EP-071 TPH(V)					
TPH(C6 - C9)	2	<2	<2	n/a	No Limit
EP-080 BTEX					
Benzene	0.2	<0.2	<0.2	n/a	No Limit
Toluene	0.2	<0.2	<0.2	n/a	No Limit
Chlorobenzene	0.2	<0.2	<0.2	n/a	No Limit
Ethyl benzene	0.2	<0.2	<0.2	n/a	No Limit
m- & p-Xylene	0.2	<0.2	<0.2	n/a	No Limit
o-Xylene	0.2	<0.2	<0.2	n/a	No Limit
EP-080S Surrogates					
1,2 Dichloroethane-D4	0.5	98.5	103	4.5	0 - 20
Toluene-D8	0.5	88.3	88.9	0.7	0 - 20
4-Bromofluorobenzene	0.5	95.6	97.4	1.9	0 - 20

DUPLICATE 2

Sample ID: ES40035-12

COMPOUND	LOR	Original	Duplicate	RPD	RPD Cont. Limit
	mg/kg	mg/kg	mg/kg	%	
TPH Bands					
TPH(C6 - C9)	2	<2	<2	n/a	No Limit
EP-080 BTEX					
Benzene	0.2	<0.2	<0.2	n/a	No Limit
Toluene	0.2	<0.2	<0.2	n/a	No Limit
Chlorobenzene	0.2	<0.2	<0.2	n/a	No Limit
Ethyl benzene	0.2	<0.2	<0.2	n/a	No Limit
m- & p-Xylene	0.2	<0.2	<0.2	n/a	No Limit
o-Xylene	0.2	<0.2	<0.2	n/a	No Limit
EP-080S Surrogates					
1,2 Dichloroethane-D4	0.5	98.6	105	6.3	0 - 20
Toluene-D8	0.5	94	94	0	0 - 20
4-Bromofluorobenzene	0.5	102	96.5	5.5	0 - 20

Notes:

1) The recovery control limits for control spikes are based on ALS laboratory statistical data. (Method QWI-ORG/07)
2) The control limits on RPD (relative percent deviation) for control spikes are fixed.
3) * : Recovery or RPD falls outside of the recommended control limits.
4) No control limits are applied to matrix spike recoveries due to the diversity of matrix types
5)The permitted range for RPD for duplicates specified in ALS Method QWI-EN/38 and is dependent on the magnitude of results in comparison to the level of reporting:

- LOR to10x LOR - no limit
- 10x LOR to20x LOR - 50%
- >20x LOR - 20%

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE

ALS EP-076 : Polynuclear Aromatic Hydrocarbons

QC LOT No. : NEP076S-968 ANALYST ALICE TAT

MATRIX: Soils

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
EP-076A$_{0}$: Polynuclear Aromatic Hydrocarbons									
Naphthalene	<0.25	4.0	107	104	106	2.84	80.9	109	0 - 20
Acenaphthylene	<0.25	4.0	110	106	108 *	3.7	81.8	105	0 - 20
Acenaphthene	<0.25	4.0	113	104	109	8.29	74.2	111	0 - 20
Fluorene	<0.25	4.0	111	106	109 *	4.61	80	108	0 - 20
Phenanthrene	<0.25	4.0	106	103	105	2.87	80.6	106	0 - 20
Anthracene	<0.25	4.0	108	102	105	5.71	79.3	107	0 - 20
Fluoranthene	<0.25	4.0	110	103	107	6.57	78.8	108	0 - 20
Pyrene	<0.25	4.0	111	104	108	6.51	75.5	111	0 - 20
Benzo(a)anthracene	<0.25	4.0	107	101	104	5.77	76.1	107	0 - 20
Chrysene	<0.25	4.0	109	105	107	3.74	79	107	0 - 20
Benzo(b)fluoranthene	<0.25	4.0	104	99.6	102	4.32	69.3	109	0 - 20
Benzo(k)fluoranthene	<0.25	4.0	106	100	103	5.83	78.1	105	0 - 20
Benzo(a)pyrene	<0.25	4.0	103	102	103	0.98	73.3	103	0 - 20
Indeno(1.2.4.cd)pyrene	<0.25	4.0	104	98.1	101	5.84	76.8	104	0 - 20
Dibenzo(a.h)anthracene	<0.25	4.0	102	97.5	99.8	4.51	76.7	104	0 - 20
Benzo(g.h.I)perylene	<0.25	4.0	105	98.5	102	6.39	74.8	103	0 - 20
EP-076S : PAH Surrogates									
2-Fluorobiphenyl	112%	4.0	101	110	106	8.53	78.1	115	0 - 20
Anthracene-d10	115%	4.0	113	107	110	5.45	83.1	110	0 - 20
4-Terphenyl-d14	101%	4.0	105	97.3	101	7.61	80.6	110	0 - 20

COMMENTS:

1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)

2) The control limits on RPD (relative percent deviation) are fixed.

3) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL -- DUPLICATE

ALS EP-076 : Polynuclear Aromatic Hydrocarbons

QC LOT No. : NEP076S-968
MATRIX : Soils
ANALYST: ALICE TAT

COMPOUND	LOR	QC DUPLICATE RESULTS		RPD	
		ES40038 4	ES40038 4D	RPD	Cont. Limit
	mg/kg	mg/kg	mg/kg	%	
EP-076A : Polynuclear Aromatic Hydrocarbons					
Naphthalene	0.25	<0.25	<0.25	n/a	
Acenaphthylene	0.25	<0.25	<0.25	n/a	
Acenaphthene	0.25	<0.25	<0.25	n/a	
Fluorene	0.25	<0.25	<0.25	n/a	
Phenanthrene	0.25	<0.25	<0.25	n/a	
Anthracene	0.25	<0.25	<0.25	n/a	
Fluoranthene	0.25	<0.25	<0.25	n/a	
Pyrene	0.25	<0.25	<0.25	n/a	
Benzo(a)anthracene	0.25	<0.25	<0.25	n/a	
Chrysene	0.25	<0.25	<0.25	n/a	
Benzo(b)fluoranthene	0.25	<0.25	<0.25	n/a	
Benzo(k)fluoranthene	0.25	<0.25	<0.25	n/a	
Benzo(a)pyrene	0.25	<0.25	<0.25	n/a	
Indeno(1.2.4.cd)pyrene	0.25	<0.25	<0.25	n/a	
Dibenzo(a.h)anthracene	0.25	<0.25	<0.25	n/a	
Benzo(g.h.i)perylene	0.25	<0.25	<0.25	n/a	
EP-076S : PAH Surrogates					
2-Fluorobiphenyl	1%	104%	102%	1.94	0 - 20
Anthracene-d10	1%	105%	102%	2.9	0 - 20
4-Terphenyl-d14	1%	91.6%	93.8%	2.37	0 - 20

Note: The permitted range for RPD (relative percent deviation) is specified in ALS Method QWI-EN/38 and is dependent on the magnitude of results in comparison to the level of reporting:
Result < 10 times LOR, no limit.
Result between 10 and 20 times LOR, 0% - 50%.
Results > 20 times LOR, 0% - 20%.

BATCH QUALITY CONTROL -- DUPLICATE

ALS EP-076 : Polynuclear Aromatic Hydrocarbons

QC LOT No. : NEP076S-968
MATRIX : Soils
ANALYST: ALICE TAT

COMPOUND	LOR	QC DUPLICATE RESULTS		RPD	
		ES40038 5	ES40038 5D	RPD	Cont. Limit
	mg/kg	mg/kg	mg/kg	%	
EP-076A : Polynuclear Aromatic Hydrocarbons					
Naphthalene	0.25	<0.25	<0.25	n/a	
Acenaphthylene	0.25	<0.25	<0.25	n/a	
Acenaphthene	0.25	<0.25	<0.25	n/a	
Fluorene	0.25	<0.25	<0.25	n/a	
Phenanthrene	0.25	<0.25	<0.25	n/a	
Anthracene	0.25	<0.25	<0.25	n/a	
Fluoranthene	0.25	<0.25	<0.25	n/a	
Pyrene	0.25	<0.25	<0.25	n/a	
Benzo(a)anthracene	0.25	<0.25	<0.25	n/a	
Chrysene	0.25	<0.25	<0.25	n/a	
Benzo(b)fluoranthene	0.25	<0.25	<0.25	n/a	
Benzo(k)fluoranthene	0.25	<0.25	<0.25	n/a	
Benzo(a)pyrene	0.25	<0.25	<0.25	n/a	
Indeno(1.2.4.cd)pyrene	0.25	<0.25	<0.25	n/a	
Dibenzo(a.h)anthracene	0.25	<0.25	<0.25	n/a	
Benzo(g.h.I)perylene	0.25	<0.25	<0.25	n/a	
EP-076S : PAH Surrogates					
2-Fluorobiphenyl	1%	107%	98.5%	8.27	0 - 20
Anthracene-d10	1%	101%	102%	0.985	0 - 20
4-Terphenyl-d14	1%	89.8%	90.2%	0.444	0 - 20

Note: The permitted range for RPD (relative percent deviation) is specified in ALS Method QWI-EN/38 and is dependent on the magnitude of results in comparison to the level of reporting:
Result < 10 times LOR, no limit.
Result between 10 and 20 times LOR, 0% - 50%.
Results > 20 times LOR, 0% - 20%.

BATCH QUALITY CONTROL -- MATRIX SPIKE/DUPLICATE

ALS EP-076 : Polynuclear Aromatic Hydrocarbons

QC LOT No. : NEP076S-968 ANALYST : ALICE TAT

MATRIX: Soils Sample ID: ES40038-5

COMPOUND	Sample Results	Spike Level	SPIKE QC RESULTS				Cont. Limit
			MS Rec.	MSD Rec.	Average Rec.	RPD	RPD
	mg/kg	mg/kg	%	%	%	%	%
EP-076A : Polynuclear Aromatic Hydrocarbons							
Acenaphthene	<0.25	10	98.2	92.9	95.6	5.55	0 - 35
Pyrene	<0.25	10	101	92.5	96.8	8.79	0 - 35
EP-076S : PAH Surrogates							
2-Fluorobiphenyl	107%	4	88.9	84	86.5	5.67	0 - 35
Anthracene-d10	101%	4	93.9	89.4	91.7	4.91	0 - 35
4-Terphenyl-d14	89.8%	4	98.5	91.5	95	7.37	0 - 35

COMMENTS:

1) The RPD control limits are fixed.

2) *: RPD falls outside the recommended control limit.

Coffey Geosciences Pty Ltd

A.C.N. 056 335 516

QA/QC DATA VALIDATION REPORT

Job No:...N08340/1.. Laboratory...ALS.....Batch No ...NE10477.....

I. SAMPLE HANDLING

	Yes	No (Comment below)
1. Were the sample **holding times** met?	X	
2. Were the samples in **proper custody** between the field and reaching the laboratory?	X	
3. Were the samples **properly and adequately** preserved? *This includes keeping the samples chilled, where applicable.*	X	
4. Were the samples received by the laboratory in good condition?	X	

COMMENTS:

Ok

Sample Handling was: X Satisfactory Unsatisfactory

Partially Satisfactory

II PRECISION/ACCURACY ASSESSMENT

	Yes	No (Comment below)
1. Was a NATA registered laboratory used?	X	
2. Did the laboratory perform the requested tests?	X	
3. Were the laboratory methods adopted NATA endorsed?	X	
4. Were the appropriate test procedures followed?	X	
5. Were the reporting limits satisfactory?	X	
6. Was the NATA Seal on the reports?	X	
7. Were the reports signed by an authorised person?	X	

COMMENTS:

Ok

Precision/Accuracy of the Laboratory Report	X Satisfactory	Unsatisfactory
	Partially Satisfactory	

III. FIELD QA/QC

1. Number of Samples analysed — Soil: 5; Water: 0

2. Number of Days of Sampling: — Soil: 1; Water: -

3. Number and Type of QA/QC Samples Collected:

	SOIL	WATER
Field Duplicates	1	-
Trip Blanks	0	-
Wash Blanks	0	-
Other (Field Blanks, Spiked Trip Blanks, etc.)	0	-

4. FIELD DUPLICATES

	Yes	No (Comment below)
A. Were an Adequate Number of field duplicates collected?	X	
B. Were RPDs within Control Limits?		
a. Organics (± 50%)	X	
b. Metals/Inorganics (± 50%)	X	
c. Nutrients (± 50%)	-	

COMMENTS:

Ok

Continued.....

III. FIELD QA/QC (Continued)

5. TRIP BLANKS

	Yes	No (Comment below)
A. Were an Adequate Number of trip blanks collected?	-	
B. Were the Trip Blanks free of contaminants? (If no, comment whether the contaminants present are also detected in the samples and whether they are common laboratory chemicals.)	-	

COMMENTS:

N/A

6. WASH BLANKS

	Yes	No (Comment below)
A. Were an adequate number of Wash Blanks collected?	-	
B. Were the Wash Blanks free of contaminants? (If no, comment whether the contaminants present are also detected in the samples and whether they are common laboratory chemicals.)	-	

COMMENTS:

N/A

Field QA/QC was:	X Satisfactory	Unsatisfactory
	Partially Satisfactory	

IV LABORATORY INTERNAL QUALITY CONTROL PROCEDURES

1. Type and Number of QA/QC Samples

	Metals	TPH	BTEX	PAH	OCP	OPP	PCB
Laboratory Blanks/Reagent Blanks	1	1	1	1	1	1	1
Matrix Spikes/Matrix Spike Duplicates	2	2	2	2	2	2	2
Standard/Certified Reference Material Analysis	-	2	2	2	2	2	2
Laboratory Duplicates	-	-	-	-	-	-	-
Surrogates	-	10	10	10	10	10	10
Totals	3	15	15	15	15	15	15

	Yes	No (Comment below)
2 Were the laboratory blanks/reagents blanks free of contamination?	X	
3. Were the spike recoveries within control limits?		
a. Organics (60% to 130%)	X	
b. Metals/Inorganic (60% to 130%)	X	
4. Were the RPDs of the laboratory duplicates within control limits?	X	
5. Were the surrogate recoveries within control limits?	X	

5. The laboratory internal QA/QC was: X Satisfactory Unsatisfactory

Partially Satisfactory

V. DATA USABILITY

1. Data Directly Usable X
2. Data Usable with the following corrections/modifications (see comment below)
3. Data Not Usable.

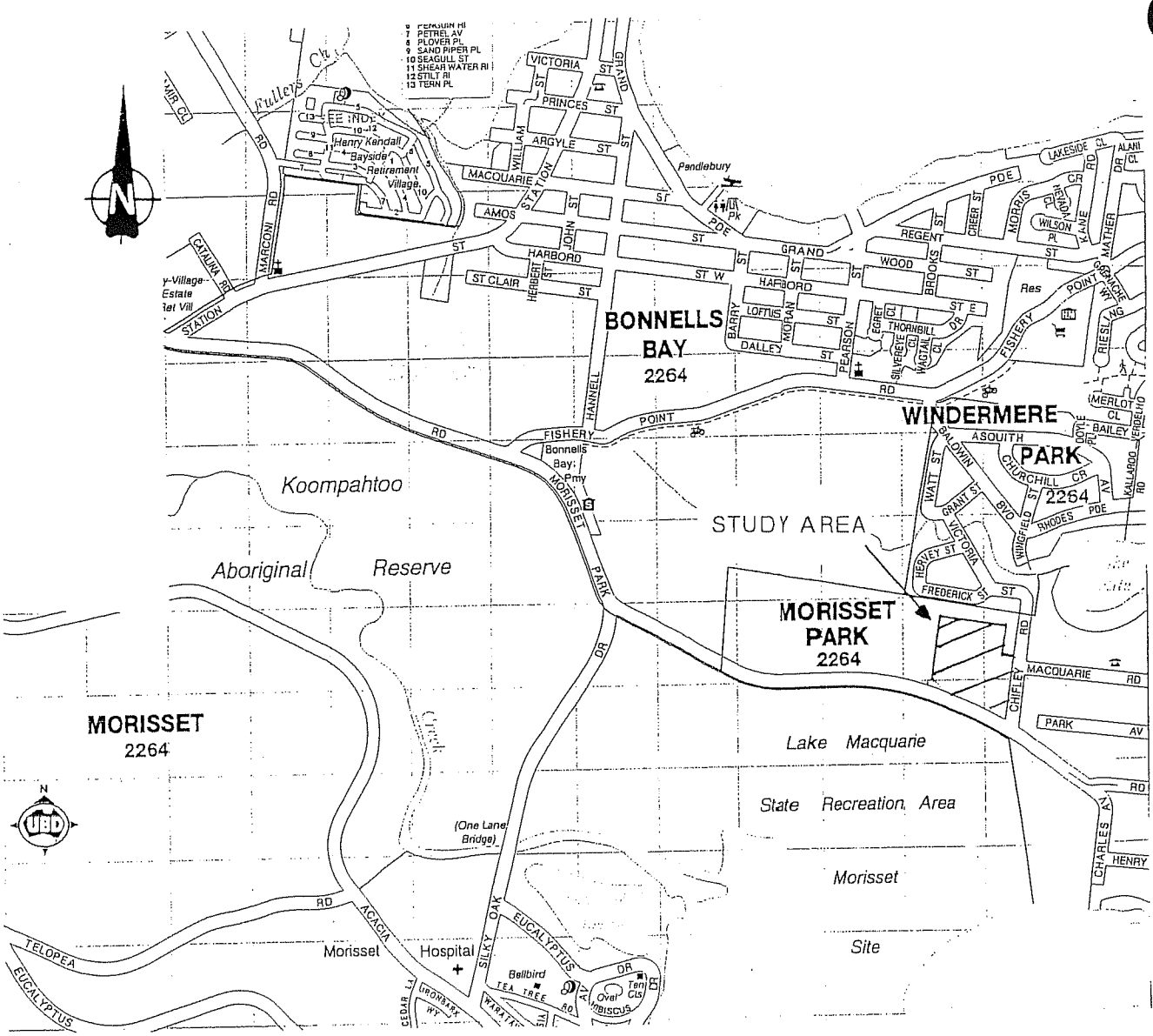
COMMENTS:

QA/QC Report Prepared by

QA/QC Report Reviewed by:

(Project Manager)

I. (Project Manager)



Coffey Geosciences Pty Ltd ACN056 335 516		Geotechnical I Resources I Environmental I Technical I Project Management	
Drawn	DDM	BERNIE DE WITT CONSULTING PROPOSED REZONING PART LOT 358 DP755242, PART LOT 359 DP244002, MORISSET PARK SITE LOCALITY PLAN	Drawing no: N08340/01-1
Approved			
Date	04/07/03		
Scale	1:20000 (A4)		Job no: N08340/01-AB

4° SURFACE SLOPE ANGLES

CUT 0.5m

BURNT OUT AREA, SOME FILL

BOREHOLE

SAMPLE LOCATION

Coffey Geosciences Pty Ltd ACN 056 335 516

Geotechnical | **Resources** | Environmental | **Technical** | Project Management

SCALE 1:4000 (A3)

10 0 10 20 30 40

Revision	Description	Drawn	Approved	Date

Drawn	DMW
Approved	SGM
Date	11/06/03
Scale	1: 4000

BERNIE DE WITT CONSULTING
PROPOSED REZONING
PART LOT 358 DP755242, PART LOT 359 DP244002, MORISSET PARK
SITE PLAN

Drawing No: N08340/01-2

Job no: N08340/01-AB