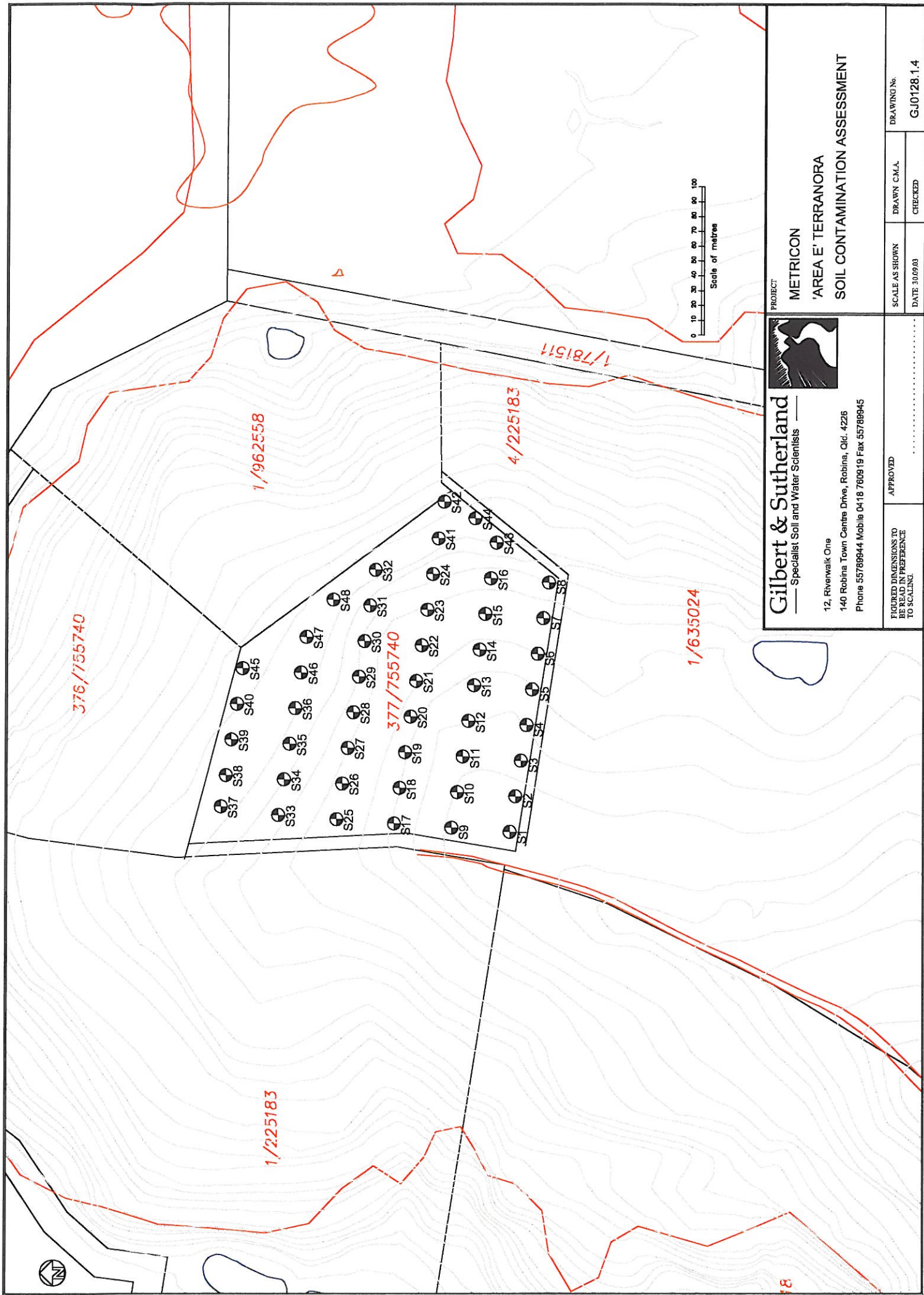




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PROJECT

METRICON
'AREA E' TERRANORA
SOIL CONTAMINATION ASSESSMENT

FIGURED DIMENSIONS TO
BE READ IN PREFERENCE
TO SCALING.

APPROVED

SCALE AS SHOWN

DRAWN C.M.A.

DRAWING No.

CHECKED

DATE 30/09/03

GJ0128.1.4



6.5 Results for Lot 1 DP 962558 (Greben)

A summary of the analytical results for Lot 1 DP 962558 are shown in Table 6.5.1 below. The sample locations are shown on Drawing Number GJ0128.1.5.

Table 6.5.1. Summary of analytical results for Lot 1 DP 962558 (mg/kg).

Composite sample no.	Arsenic	Cadmium	Copper	Lead	Zinc	Mercury	Aldrin+ Dieldrin	Chlordane	DDT + DDD + DDE
C1 (S1,S2,S3,S4)	6	<1	30	11	108	0.2	<0.1	<0.1	<0.3
C2 (S5,S6,S7,S8)	4	<1	31	6	67	0.1	<0.1	<0.1	<0.3
C3 (S9,S10,S11,S12)	5	<1	31	10	65	0.1	<0.1	<0.1	<0.3
C4 (S13,S14,S15,S16)	3	<1	48	7	57	<0.1	<0.1	<0.1	<0.3
C5 (S17,S18,S19,S20)	5	<1	31	9	62	<0.1	<0.1	<0.1	<0.3
C6 (S21,S22,S23,S24)	4	<1	44	8	83	0.1	<0.1	<0.1	<0.3
C7 (S25,S26,S27,S28)	29	<1	18	6	72	0.1	<0.1	<0.1	<0.3
C8 (S29,S30,S31,S32)	34	<1	19	8	110	0.1	<0.1	<0.1	<0.3
C9 (S33,S34,S35,S36)	30	<1	20	8	109	0.1	<0.1	<0.1	<0.3
C10 (S37,S38,S39,S40)	2	<1	64	7	66	0.1	<0.1	<0.1	<0.3
C11 (S41,S42,S43,S44)	7	<1	14	13	45	0.1	<0.1	<0.1	<0.3
Mean	12	<1	32	8	77	<0.1	<0.1	<0.1	<0.3

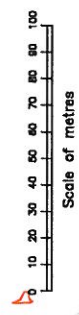
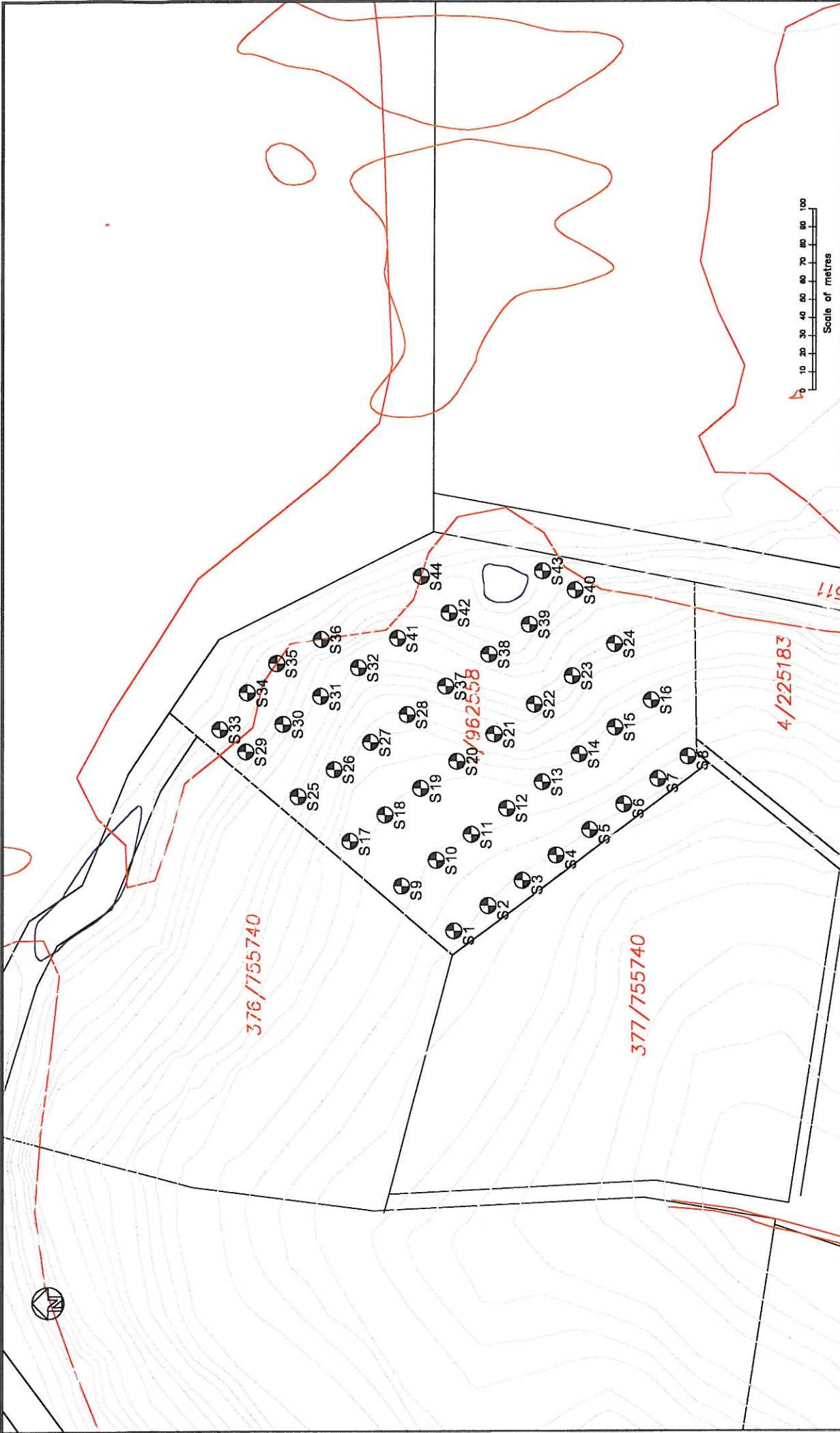
Three (3) of the eleven (11) composite samples (C7, C8, & C9) analysed exceeded the adjusted HIL of 25mg/kg for arsenic. The arsenic concentration of these samples was 29, 34, & 30 mg/kg respectively. The concentrations of lead, cadmium, copper, zinc, mercury and organochlorine compounds were below the adjusted HIL's within all eleven (11) of the composite samples analysed.

The eight (8) samples used to form composite samples C7 & C8 were subsequently analysed for arsenic concentration. The analytical results for these samples are shown in Table 6.5.2 below. No analyses were undertaken on samples S33 to S36 representing composite sample C9, due to these samples being misplaced by the laboratory.

Table 6.5.2. Arsenic results (mg/kg).

Sample no.	Arsenic	
	ALS Brisbane	ALS Newcastle
S25	27	23
S26	48	46
S27	56	60
S28	10	12
S29	37	39
S30	49	49
S31	19	18
S32	39	38
Mean	35.63	35.63

The concentration of arsenic was below the HIL of 100 mg/kg for all eight (8) samples submitted to ALS Brisbane. To provide a check on the analytical proficiency of the Brisbane laboratory, eight split samples representative of the samples analysed by ALS Brisbane, were forwarded to ALS Newcastle for analysis of arsenic. Similarly, the concentration of arsenic was below the HIL of 100 mg/kg for all eight of the split samples analysed by ALS Newcastle.



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1/635024



Inferential testing was conducted to compare the results obtained by ALS Brisbane with those of ALS Newcastle across the distribution of results. A paired samples t-test confirmed that there was no significant difference ($P=1.0$) between the distribution of results between the two laboratories, which demonstrates a satisfactory proficiency of the Brisbane laboratory.

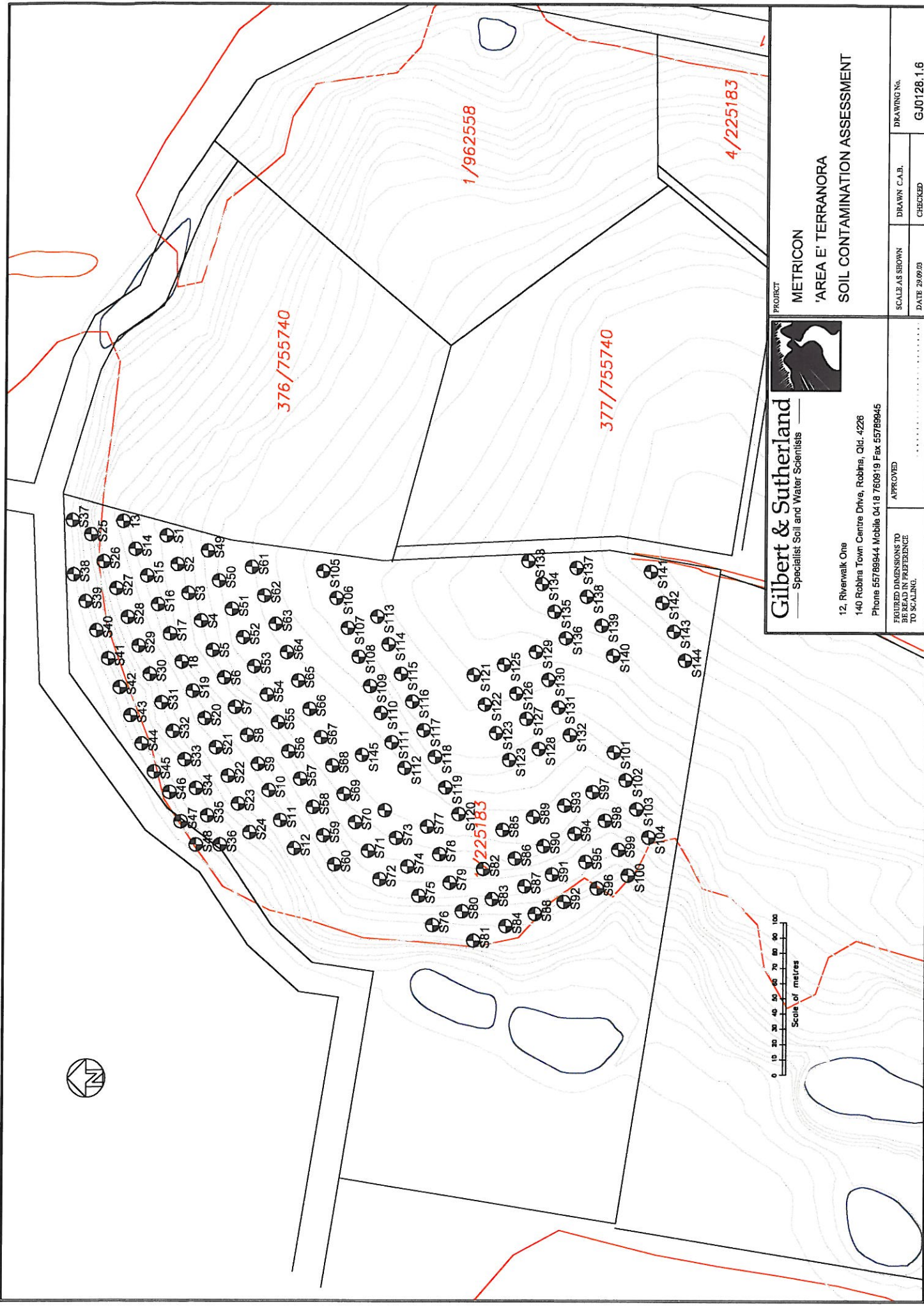
6.6 Results for Lot 1 DP 225183 (Greben)

A summary of the analytical results for Lot 1 DP 225183 are shown in Table 6.6.1 below. The sample locations are shown on Drawing Number GJ0128.1.6.

Table 6.6.1. Summary of analytical results for Lot 1 DP 225183 (mg/kg).

Composite sample no.	Arsenic	Lead	Aldrin+ Dieldrin	Chlordane	DDT + DDD + DDE
C1 (S1,S2,S3,S4)	8	7	<0.1	<0.1	<0.3
C2 (S5,S6,S7,S8)	7	7	<0.1	<0.1	<0.3
C3 (S9,S10,S11,S12)	12	6	<0.1	<0.1	<0.3
C4 (S13,S14,S15,S16)	11	8	<0.1	<0.1	<0.3
C5 (S17,S18,S19,S20)	9	7	<0.1	<0.1	<0.3
C6 (S21,S22,S23,S24)	9	7	<0.1	<0.1	<0.3
C7 (S25,S26,S27,S28)	18	7	<0.1	<0.1	<0.3
C8 (S29,S30,S31,S32)	21	8	<0.1	<0.1	<0.3
C9 (S33,S34,S35,S36)	11	7	<0.1	<0.1	<0.3
C10 (S37,S38,S39,S40)	18	8	<0.1	<0.1	<0.3
C11 (S41,S42,S43,S44)	25	8	<0.1	<0.1	<0.3
C12 (S45,S46,S47,S48)	12	7	<0.1	<0.1	<0.3
C13 (S49,S50,S51,S52)	8	7	<0.1	<0.1	<0.3
C14 (S53,S54,S55,S56)	7	7	<0.1	<0.1	<0.3
C15 (S57,S58,S59,S60)	10	6	<0.1	<0.1	<0.3
C16 (S61,S62,S63,S64)	8	7	<0.1	<0.1	<0.3
C17 (S65,S66,S67,S68)	6	5	<0.1	<0.1	<0.3
C18 (S69,S70,S71,S72)	8	9	<0.1	<0.1	<0.3
C19 (S73,S74,S75,S76)	10	9	<0.1	<0.1	<0.3
C20 (S77,S78,S79,S80)	11	6	<0.1	<0.1	<0.3
C21 (S81,S82,S83,S84)	8	7	<0.1	<0.1	<0.3
C22 (S85,S86,S87,S88)	4	4	<0.1	<0.1	<0.3
C23 (S89,S90,S91,S92)	7	7	<0.1	<0.1	<0.3
C24 (S93,S94,S95,S96)	5	7	<0.1	<0.1	<0.3
C25 (S97,S98,S99,S100)	8	7	<0.1	<0.1	<0.3
C26 (S101,S102,S103,S104)	11	27	<0.1	<0.1	<0.3
C27 (S105,S106,S107,S108)	6	8	<0.1	<0.1	<0.3
C28 (S109,S110,S111,S112)	10	8	<0.1	<0.1	<0.3
C29 (S113,S114,S115,S116)	7	6	<0.1	<0.1	<0.3
C30 (S117,S118,S119,S120)	7	9	<0.1	<0.1	<0.3
C31 (S121,S122,S123,S124)	6	7	<0.1	<0.1	<0.3
C32 (S125,S126,S127,S128)	6	7	<0.1	<0.1	<0.3
C33 (S129,S130,S131,S132)	13	7	<0.1	<0.1	<0.3
C34 (S133,S134,S135,S136)	7	7	<0.1	<0.1	<0.3
C35 (S137,S138,S139,S140)	17	9	<0.1	<0.1	<0.3
C36 (S141,S142,S143,S144)	7	6	<0.1	<0.1	<0.3
Mean	10	8	<0.1	<0.1	<0.3

One (1) of the thirty-six (36) composite samples (C11) analysed exhibited an arsenic concentration of 25mg/kg, being equivalent to the adjusted HIL for arsenic. The concentrations of lead and organochlorine compounds were below the adjusted HIL's within all thirty-six (36) of the composite samples analysed.



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The four (4) samples used to form composite sample C11 were subsequently analysed for arsenic concentration. The analytical results for these samples are shown in Table 6.6.2 below.

Table 6.6.2. Arsenic results (mg/kg).

Sample no.	Arsenic	
	ALS Brisbane	ALS Newcastle
S41	16	16
S42	20	18
S43	20	15
S44	3	3
Mean	15	13

The concentration of arsenic was below the HIL of 100 mg/kg for all four (4) samples submitted to ALS Brisbane. To provide a check on the analytical proficiency of the Brisbane laboratory, four split samples representative of the samples analysed by ALS Brisbane, were forwarded to ALS Newcastle for analysis of arsenic. Similarly, the concentration of arsenic was below the HIL of 100 mg/kg for all four of the split samples analysed by ALS Newcastle.

Due to the low sample number (n=4) and hence a low statistical power, no inferential testing was conducted. However, the arsenic results obtained by both ALS Brisbane and ALS Newcastle appear to be similar, indicating a satisfactory proficiency of the Brisbane laboratory.

Additionally, one (1) sample was recovered from within the vicinity of a shed used possibly for the storage and mixing of agricultural chemicals. The results are shown in Table 6.6.2 below.

Table 6.6.2. Summary of analytical results for a sample recovered from within the vicinity of a shed located on Lot 1 DP 225183 (mg/kg).

Sample no.	Arsenic	Lead	Aldrin+ Dieldrin	Chlordane	DDT + DDD + DDE
S145 (Shed)	7	8	<0.1	<0.1	<0.3

The concentrations of arsenic, lead and organochlorine compounds were below the HIL's (100, 300, 10, 50 & 200 mg/kg respectively) within the recovered sample S145.

6.7 Results for Lot 4 DP 582842 (James)

6.7.1 (Site A)

A summary of the analytical results for Lot 4 (Site A) DP 582842 are shown in Table 6.7.1 on the following page. The sample locations are shown on Drawing Number GJ0128.1.7.





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METRICON
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SOIL CONTAMINATION ASSESSMENT

SCALE AS SHOWN	DRAWN C.A.B.	DRAWING No.
DATE 29/09/08	CHECKED	GJ0128.1.7

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REQUIRED DIMENSIONS TO BE PROVIDED TO SCALING





Table 6.7.1. Summary of analytical results for Lot 4 (Site A) DP 582842 (mg/kg).

Composite sample no.	Arsenic	Cadmium	Copper	Lead	Zinc	Mercury	Aldrin + Dieldrin	Chlordane	DDT + DDD + DDE
C1 (S1,S2,S3,S4)	3	<1	14	6	72	0.1	<0.1	<0.1	<0.3
C2 (S5,S6,S7,S8)	3	<1	13	5	69	<0.1	<0.1	<0.1	<0.3
C3 (S9,S10,S11,S12)	2	<1	18	6	67	0.1	<0.1	<0.1	<0.3
C4 (S13,S14,S15,S16)	4	<1	14	5	53	<0.1	<0.1	<0.1	<0.3
C5 (S17,S18,S19,S20)	4	<1	14	7	65	0.1	<0.1	<0.1	<0.3
C6 (S21,S22,S23,S24)	6	<1	21	10	88	0.1	<0.1	<0.1	<0.3
C7 (S25,S26,S27,S28)	7	<1	27	11	174	0.2	<0.1	<0.1	<0.33
C8 (S29,S30,S31,S32)	4	<1	20	9	79	0.2	<0.1	<0.1	<0.3
C9 (S33,S34,S35,S36)	6	<1	16	6	76	0.2	<0.1	<0.1	<0.3
C10 (S37,S38,S39,S40)	8	<1	16	6	80	0.2	<0.1	<0.1	<0.3
C11 (S41,S42,S43,S44)	8	<1	16	6	72	0.2	<0.1	<0.1	<0.3
C12 (S45,S46,S47,S48)	6	<1	13	5	65	0.2	<0.1	<0.1	<0.3
C13 (S49,S50,S51,S52)	7	<1	14	6	69	0.2	<0.1	<0.1	<0.3
C14 (S53,S54,S55,S56)	5	<1	13	5	58	0.2	<0.1	<0.1	<0.3
C15 (S57,S58,S59,S60)	6	<1	15	6	75	0.2	<0.1	<0.1	<0.3
C16 (S61,S62,S63,S64)	5	<1	13	6	63	0.2	<0.1	<0.1	<0.3
C17 (S65,S66,S67,S68)	4	<1	12	7	69	0.2	<0.1	<0.1	<0.3
Mean	5	<1	16	7	76	<0.16	<0.1	<0.1	<0.30

The concentrations of arsenic, cadmium, copper, lead, zinc, mercury and organochlorine compounds were below the adjusted HIL's within all seventeen (17) of the composite samples analysed.

6.7.2 (Site B)

A summary of the analytical results for Lot 4 (Site B) DP 582842 are shown in Table 6.7.2.1 below. The sample locations are shown on Drawing Number GJ0128.1.7.A.

Table 6.7.2.1. Summary of analytical results for Lot 4 (Site B) DP 582842 (mg/kg).

Composite sample no.	Arsenic	Cadmium	Copper	Lead	Zinc	Mercury	Aldrin + Dieldrin	Chlordane	DDT + DDD + DDE
C1 (S1,S2,S3,S4)	4	<1	62	8	60	0.1	<0.1	<0.1	<0.3
C2 (S5,S6,S7,S8)	9	<1	61	7	64	0.1	<0.1	<0.1	<0.3
C3 (S9,S10,S11,S12)	8	<1	66	7	62	0.1	<0.1	<0.1	<0.3
C4 (S13,S14,S15,S16)	8	<1	64	6	62	0.1	<0.1	<0.1	<0.3
C5 (S17,S18,S19,S20)	7	<1	50	6	61	0.2	<0.1	<0.1	<0.3
C6 (S21,S22,S23,S24)	9	<1	64	6	59	0.1	<0.1	<0.1	<0.3
C7 (S25,S26,S27,S28)	7	<1	54	7	61	0.2	<0.1	<0.1	<0.3
C8 (S29,S30,S31,S32)	10	<1	69	7	62	0.1	<0.1	<0.1	<0.3
C9 (S33,S34,S35,S36)	7	<1	52	8	72	0.2	<0.1	<0.1	<0.3
C10 (S37,S38,S39,S40)	4	<1	62	8	62	0.1	<0.1	<0.1	<0.3
C11 (S41,S42,S43,S44)	3	<1	48	7	63	0.2	<0.1	<0.1	<0.3
C12 (S45,S46,S47,S48)	3	<1	56	7	53	0.1	<0.1	<0.1	<0.3
C13 (S49,S50,S51,S52)	4	<1	58	8	61	0.1	<0.1	<0.1	<0.3
C14 (S53,S54,S55,S56)	31	<1	50	7	59	0.2	<0.1	<0.1	<0.3
C15 (S57,S58,S59,S60)	31	<1	51	8	57	0.2	<0.1	<0.1	<0.3
C16 (S61,S62,S63,S64)	2	<1	65	8	52	0.1	<0.1	<0.1	<0.3
C17 (S65,S66,S67,S68)	3	<1	65	8	60	0.1	<0.1	<0.1	<0.3