Composite sample no.	Arsenic	Lead	Aldrin+ Dieldrin	Chlordane	DDT+ DDD+ DDE
C6 (S21,S22,S23,S24)	<1	5	<0.1	<0.1	<0.3
C7 (S25,S26,S27,S28)	<1	8	<0.1	<0.1	<0.3
C8 (S29,S30,S31,S32)	<1	6	<0.1	<0.1	<0.3
C9 (S33,S34,S35,S36)	<1	6	<0.1	<0.1	<0.3
C10 (S37,S38,S39,S40)	<1	7	<0.1	<0.1	<0.3
C11 (S41,S42,S43,S44)	<1	5	<0.1	<0.1	<0.3
C12 (S45,S46,S47,S48)	<1	4	<0.34	<0.1	<0.3
C13 (S49,S50,S51,S52)	<1	6	<0.1	<0.1	<0.3
C14 (S53,S54,S55,S56)	<1	5	<0.1	<0.1	<0.3
C15 (S57,S58,S59,S60)	<1	5	<0.14	<0.1	<0.3
C16 (S61,S62,S63,S64)	<1	7	<0.1	<0.1	<0.3
C17 (S65,S66,S67,S68)	<1	6	<0.1	<0.1	<0.3
C18 (S69,S70,S71,S72)	<1	5	<0.21	<0.1	<0.3
Mean	<1	6	<0.13	<0.1	<0.30

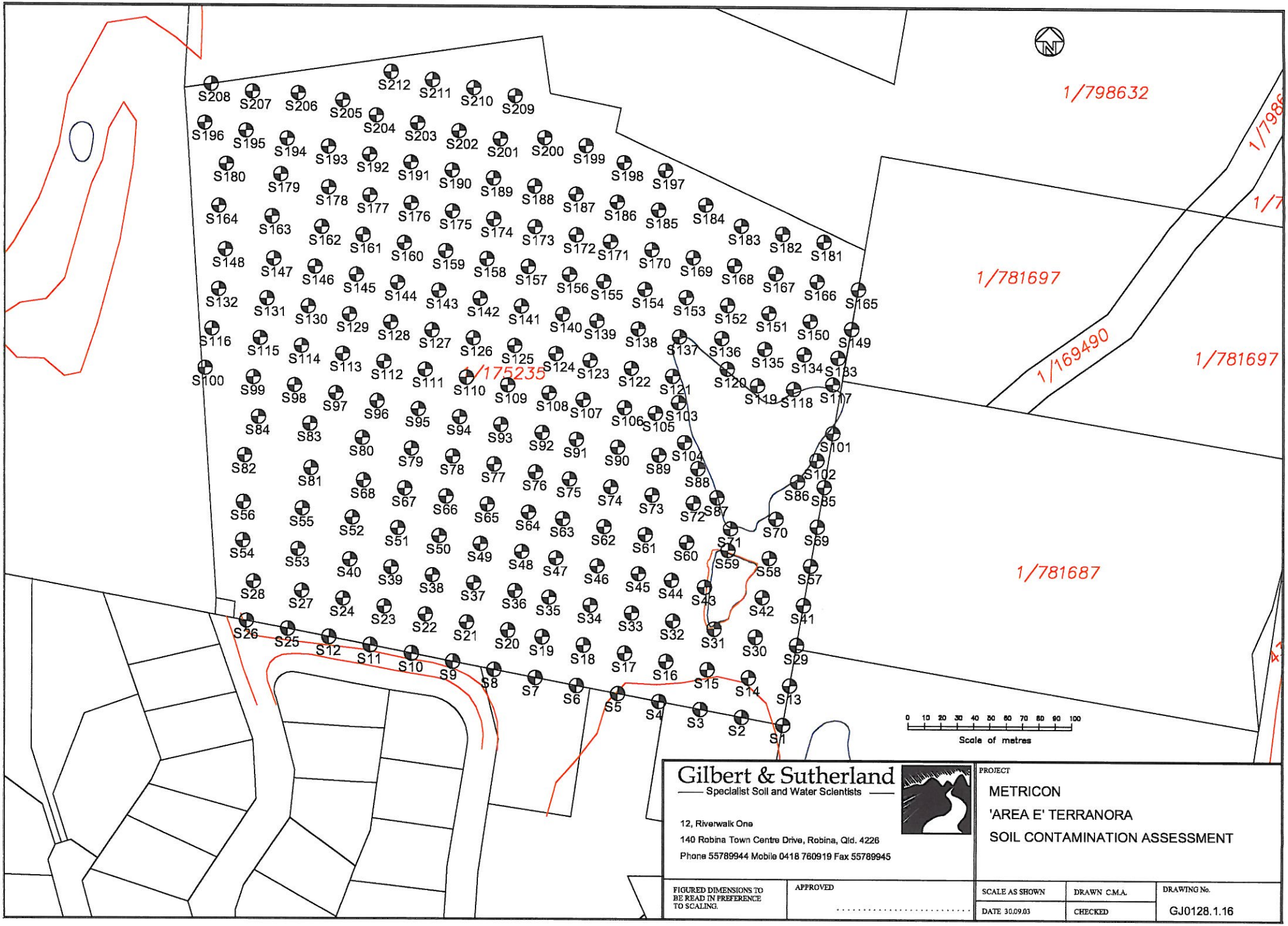
The concentrations of arsenic, lead, and organochlorine compounds were below the adjusted HIL's within all eighteen (18) of the composite samples analysed.

6.16 Results for Lot 1 DP 175235 (Abernathy)

A summary of the analytical results for Lot 1 DP 175235 are shown in Table 6.16.1 below. The sample locations are shown on Drawing Number GJ0128.1.16.

Table 6.16.1. Summary of analytical results for Lot 1 DP 175235 (mg/kg).

Composite sample no.	Arsenic	Cadmium	Copper	Lead	Zinc	Mercury	Aldrin+ Dieldrin	Chlordane	DDT+ DDD+ DDE
C1 (S1,S2,S3,S4)	2	<1	227	17	93	0.1	<0.1	<0.1	<0.3
C2 (S5,S6,S7,S8)	<1	<1	112	14	90	0.1	<0.1	<0.1	<0.3
C3 (S9,S10,S11,S12)	4	<1	82	12	85	<0.1	<0.1	<0.1	<0.3
C4 (S13,S14,S15,S16)	3	<1	36	7	82	0.1	<0.1	<0.1	<0.3
C5 (S17,S18,S19,S20)	3	<1	66	8	77	0.1	<0.1	<0.1	<0.3
C6 (S21,S22,S23,S24)	1	<1	105	16	117	0.2	<0.1	<0.1	<0.3
C7 (S25,S26,S27,S28)	5	<1	125	12	106	0.1	<0.1	<0.1	<0.3
C8 (S29,S30,S31,S32)	2	<1	47	8	89	0.1	<0.1	<0.1	<0.3
C9 (S33,S34,S35,S36)	7	<1	110	30	84	0.1	<0.1	<0.1	<0.3
C10 (S37,S38,S39,S40)	2	<1	122	17	118	0.1	<0.1	<0.1	<0.3
C11 (S41,S42,S43,S44)	3	<1	30	7	85	<0.1	<0.1	<0.1	<0.3
C12 (S45,S46,S47,S48)	3	<1	88	8	76	0.1	<0.1	<0.1	<0.3
C13 (S49,S50,S51,S52)	3	<1	63	10	77	0.1	<0.1	<0.1	<0.3
C14 (S53,S54,S55,S56)	2	<1	82	10	73	0.1	<0.1	<0.1	<0.3
C15 (S57,S58,S59,S60)	8	<1	18	8	75	<0.1	<0.1	<0.1	<0.3
C16 (S61,S62,S63,S64)	3	<1	55	14	274	0.1	<0.1	<0.1	<0.3
C17 (S65,S66,S67,S68)	4	<1	61	11	157	0.1	<0.1	<0.1	<0.3
C18 (S69,S70,S71,S72)	2	<1	56	16	101	0.1	<0.1	<0.1	<0.3
C19 (S73,S74,S75,S76)	2	<1	49	7	63	<0.1	<0.1	<0.1	<0.3
C20 (S77,S78,S79,S80)	6	<1	38	7	66	0.1	<0.1	<0.1	<0.3
C21 (S81,S82,S83,S84)	2	<1	66	7	57	<0.1	<0.1	<0.1	<0.3
C22 (S85,S86,S87,S88)	2	<1	25	9	58	<0.1	<0.1	<0.1	<0.3
C23 (S89,S90,S91,S92)	5	<1	32	6	75	<0.1	<0.1	<0.1	<0.3
C24 (S93,S94,S95,S96)	4	<1	92	7	71	<0.1	<0.1	<0.1	<0.3
C25 (S97,S98,S99,S100)	3	<1	54	11	59	<0.1	<0.1	<0.1	<0.3
C26 (S101,S102,S103,S104)	2	<1	18	8	57	<0.1	<0.1	<0.1	<0.3
C27 (S105,S106,S107,S108)	6	<1	17	8	61	0.1	<0.1	<0.1	<0.3
C28 (S109,S110,S112,S113)	2	<1	76	8	65	<0.1	<0.1	<0.1	<0.3
C29 (S115,S116,S117,S118)	2	<1	81	8	57	<0.1	<0.1	<0.1	<0.3



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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. GJ0128.1.16
		DATE 30.09.03	CHECKED	

Composite sample no.	Arsenic	Cadmium	Copper	Lead	Zinc	Mercury	Aldrin+ Dieldrin	Chlordane	DDT+ DDD+ DDE
C30 (S119,S120,S121,S122)	2	<1	19	6	60	<0.1	<0.1	<0.1	<0.3
C31 (S123,S124,S125,S126)	5	<1	27	7	71	0.1	<0.1	<0.1	<0.3
C32 (S127,S128,S129,S130)	1	<1	39	7	54	<0.1	<0.1	<0.1	<0.3
C33 (S131,S132,S133,S134)	2	<1	94	8	56	<0.1	<0.1	<0.1	<0.3
C34 (S135,S136,S137,S138)	1	<1	13	7	57	<0.1	<0.1	<0.1	<0.3
C35 (S139,S140,S141,S142)	8	<1	14	7	37	0.3	<0.1	<0.1	<0.3
C36 (S143,S144,S145,S146)	1	<1	35	8	57	<0.1	<0.1	<0.1	<0.3
C37 (S147,S148,S149,S150)	3	<1	86	8	64	<0.1	<0.1	<0.1	<0.3
C38 (S151,S152,S153,S154)	2	<1	23	7	62	<0.1	<0.1	<0.1	<0.3
C39 (S155,S156,S157,S158)	2	<1	14	7	42	<0.1	<0.1	<0.1	<0.3
C40 (S159,S160,S161,S162)	2	<1	47	7	53	<0.1	<0.1	<0.1	<0.3
C41 (S163,S164,S165,S166)	3	<1	99	9	63	<0.1	<0.1	<0.1	<0.3
C42 (S167,S168,S169,S170)	3	<1	26	10	69	0.1	<0.1	<0.1	<0.3
C43 (S171,S172,S173,S174)	1	<1	19	7	60	0.1	<0.1	<0.1	<0.3
C44 (S175,S176,S177,S178)	3	<1	25	8	54	<0.1	<0.1	<0.1	<0.3
C45 (S179,S180,S181,S182)	2	<1	92	8	52	<0.1	<0.1	<0.1	<0.3
C46 (S183,S184,S185,S186)	3	<1	47	12	54	0.1	<0.1	<0.1	<0.3
C47 (S187,S188,S189,S190)	3	<1	25	8	55	0.1	<0.1	<0.1	<0.3
C48 (S191,S192,S193,S194)	3	<1	28	8	68	<0.1	<0.1	<0.1	<0.3
C49 (S195,S196,S197,S198)	3	<1	93	8	52	<0.1	<0.1	<0.1	<0.3
C50 (S199,S200,S201,S202)	3	<1	22	8	63	0.1	<0.1	<0.1	<0.3
C51 (S203,S204,S205,S206)	2	<1	31	8	56	0.1	<0.1	<0.1	<0.3
C52 (S207,S208,S209,S210)	3	<1	84	8	47	0.2	<0.1	<0.1	<0.3
C53 (S211,S212,S213,S214)	2	<1	49	8	40	0.1	<0.1	<0.1	<0.3
Mean	>10	<1	58	9	73	<0.1	<0.1	<0.1	<0.3

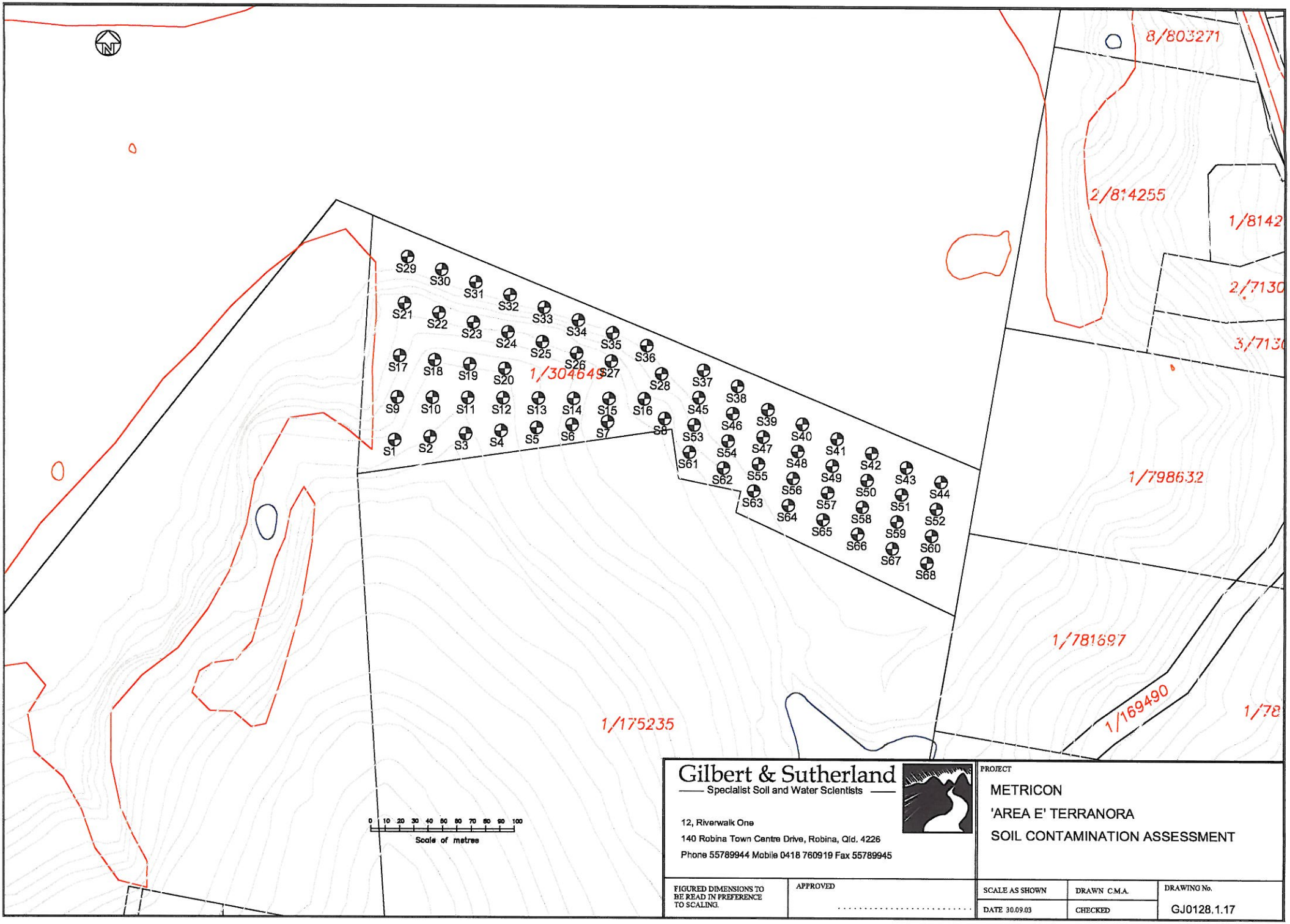
The concentrations of arsenic, cadmium, copper, lead, zinc, mercury and organochlorine compounds were below the adjusted HIL's within all fifty-three (53) of the composite samples analysed.

6.17 Results for Lot 1 DP 304649 (Abernathy)

A summary of the analytical results for Lot 1 DP 304649 are shown in Table 6.17.1 below. The sample locations are shown on Drawing Number GJ0128.1.17.

Table 6.17.1. Summary of analytical results for Lot 1 DP 304649 (mg/kg).

Composite sample no.	Arsenic	Cadmium	Copper	Lead	Zinc	Mercury	Aldrin+ Dieldrin	Chlordane	DDT+ DDD+ DDE
C1 (S1,S2,S3,S4)	3	<1	39	6	65	0.1	<0.1	<0.1	<0.3
C2 (S5,S6,S7,S8)	3	<1	36	6	53	0.1	<0.1	<0.1	<0.3
C3 (S9,S10,S11,S12)	4	<1	32	6	43	0.1	<0.1	<0.1	<0.3
C4 (S13,S14,S15,S16)	8	<1	23	7	30	<0.1	<0.1	<0.1	<0.3
C5 (S17,S18,S19,S20)	1	<1	32	4	42	<0.1	<0.1	<0.1	<0.3
C6 (S21,S22,S23,S24)	6	<1	30	6	34	<0.1	<0.1	<0.1	<0.3
C7 (S25,S26,S27,S28)	13	<1	19	7	28	<0.1	<0.1	<0.1	<0.3
C8 (S29,S30,S31,S32)	7	<1	18	5	23	<0.1	<0.1	<0.1	<0.3
C9 (S33,S34,S35,S36)	14	<1	18	7	34	<0.1	<0.1	<0.1	<0.3
C10 (S37,S38,S39,S40)	6	<1	26	8	44	0.1	<0.1	<0.1	<0.3
C11 (S41,S42,S43,S44)	5	<1	32	8	34	<0.1	<0.1	<0.1	<0.3
C12 (S45,S46,S47,S48)	4	<1	35	6	55	0.1	<0.1	<0.1	<0.3
C13 (S49,S50,S51,S52)	2	<1	27	4	41	<0.1	<0.1	<0.1	<0.3
C14 (S53,S54,S55,S56)	3	2	34	7	78	0.2	<0.1	<0.1	<0.3
C15 (S57,S58,S59,S60)	2	<1	30	6	80	0.1	<0.1	<0.1	<0.3
C16 (S61,S62,S63,S64)	5	<1	15	6	53	0.1	<0.1	<0.1	<0.3
C17 (S65,S66,S67,S68)	2	<1	34	7	83	0.2	<0.1	<0.1	<0.3
Mean	5	<1	28	6	48	<0.1	<0.1	<0.1	<0.3



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PROJECT

METRICON
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SOIL CONTAMINATION ASSESSMENT

FIGURED DIMENSIONS TO BE READ IN PREFERENCE TO SCALING.	APPROVED	SCALE AS SHOWN	DRAWN C.M.A.
		DATE 30.09.03	CHECKED

DRAWING No. GJ0128.1.17

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.

The recovery of soil samples, however extensive, can not completely eliminate the possibility that contaminants are present on a site[3]. However, based on the number of samples recovered and the results of the analyses conducted[4], we confirm that the sites investigated are free of soil contamination in circular hot spots larger than 25 meters in diameter[5].

[3] Standards Australia. AS 4482.1—1997. Guide to the Sampling and Investigation of Potentially contaminated Soil – Part 1: Non-volatile and Semi-volatile compounds.
[4] New South Wales Environmental Protection Agency. 1995. Contaminated Sites Sampling Design Guidelines. Sydney South, and New South Wales Environmental Protection Agency. 1997. Guidelines for Assessing Banana Plantation Sites. Chatswood.
[5] Assuming a circular hot spot at a 95% confidence level.

5. Conclusions and recommendations

The results of this Soil Contamination Assessment confirm that the concentration of agricultural substances within the surface soils of all investigated properties (refer Section 1.1), were below the relevant health investigation levels adopted by NSW EPA. This finding is based on the recovery of **1323** samples from the investigated properties and analysis of the **328** combined representative composite samples.

Twelve (12) composite samples initially analysed exhibited concentrations of arsenic equivalent to or greater than the adjusted HIL of 25mg/kg. These samples were recovered from the surface soils (maximum depth 150mm depth) from the following properties:

- Lot 2 DP 785420 (C2, C3, C12, C13 & C14),
- Lot 1 DP 962558 (C7, C8 & C9),
- Lot 1 DP 225183 (C11),
- Lot 12 DP 534942 (C28) and
- Lot 4 DP 582842 – Site B (C14 & C25)

Analysis of the forty-eight (48) samples that formed these twelve (12) composite samples for arsenic, later confirmed that all forty-eight of the samples were below the HIL of 100mg/kg for arsenic. All other agricultural substances were below the HIL's for all investigated properties.

Based on the required number of samples recovered within the areas of the subject properties used for agriculture, no potential hot spots exceeding an approximate diameter of 25m could be detected. This is based statistically on a 95% confidence level in accordance with the relevant guidelines.

As no contamination hot spots were encountered, no additional sampling or analysis appears to be required. In relation to soil contamination issues, the subject properties are therefore suitable for residential development.

Appendix A. Site history assessment report