











Environmental Monitoring Report

Reporting Period 02/05/2011-29/05/2011 Supplemental

Former Bayer Crop Science Site Hauxton Cambridgeshire

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1.0 Introduction

1.1. General

This report has been prepared and submitted in accordance Environmental Permitting Regulations 2007 with reference to the approved Deployment of Vertase FLI's Environmental Permit Ref: ERP/QP3293FY for the remediation works at the former Bayer CropScience site Hauxton, and in accordance with Condition 4 of the planning permission dated 5th February 2010.

The time period that this report represents is from the 2nd of May 2011, until the 29th of May 2011.

1.2. The site

The site is the former Bayer Crop Science site, Cambridge Road, Hauxton, Cambridge. The site was used for the storage and production of agrichemicals from the 1940's through to ceasing production in 2004. The site was used primarily for the synthesis, formulation, packaging and storage of agrichemicals (both herbicides and pesticides). It is this former historical use that has led to the contamination legacy of soil and groundwater at the site.

There is also a Waste Water Treatment Plant (WWTP) and other agricultural land which is part of the former land holding of Bayer Crop Science and is part of that controlled by Harrow Estates. The WWTP will be utilised to assist in the treatment of recovered groundwater and will be improved to undertake this task and then maintained for the duration of the remediation. This area of the site will not be subject to remediation as part of this phase of works but will be remediated as a separate phase of work under a separate contract and separate Remediation Method Statement in the future.

1.3. Remediation Brief and Philosophy

The philosophy for this remediation project is set out in detail in the agreed Remediation Method Statement. The remediation of the site has been developed from knowledge of the site gained from historical site investigations, Atkins Preliminary Conceptual Model Report August 2006 (interpretative report defining the current and correct understanding of the geological and



environmental conditions) and subsequent sampling and analysis defining the extent of contamination following further investigation. This information has allowed the conceptual site model and pollutant linkages to be developed to form the remediation methodology. Whilst the remediation work itself is complex and varied, the philosophy is simple and defines the proposed remedial action required. This philosophy has been designed with the brief in mind. This brief can be defined as "a remediation to address all pollutant linkages and ensure that following remediation and re-development no unacceptable risks will remain associated with the treated area of the site by applying the best available techniques not entailing excessive costs (BATNEEC)".

The philosophy behind the remediation is to remove all uncertainty relating to soils and groundwater within the site area by the excavation, characterisation and treatment. All pathways between the identified sources and receptors will be removed and the contaminant mass within soils reduced as far as the practical limits of cost effective technology permit. The Remediation Method Statement sets out how this philosophy or strategy will be achieved practically on site and validated with confirmative post remediation risk assessment.

These remediation works are also required to satisfy the regulators that adequate remediation works have been completed to satisfy their requirements under Part IIa of the Environmental Protection Act 1990.



2.0 Monthly Progress

Week 60. Week Commencing 2nd May 2011

Restoration of remediated soils in the north of the site to grid squares K6, J6, K7, J7, I7, K8, J8, and I8. No excavation undertaken. Turning of treatment beds continues to promote the bioremediation processes and reduce the moisture content of the material. The force ventilation vapour extraction treatment beds were uncovered and turned to ensure the materials are homogenous and the treatment is affecting all materials within the bed. Relocating of existing treatment beds and stockpiles was undertaken to create space for validation and backfilling.

Week 61. Week Commencing 9th May 2011

Restoration of remediated soils in the north of the site to grid squares K6, J6, K7, J7, I7, K8, J8, and I8. Excavating contaminated materials from grid squares M7, M8 and M9 with materials being sent directly to windrows for bioremediation. Turning of treatment beds was undertaken to promote biological degradation and dry the material in preparation for reinstatement. The haul road in the centre of the site was relocated to create a second area for validation and restoration.

Week 62. Week Commencing 16th May 2011

Restoration of remediated soils in the north of the site to grid squares K6, J6, K7, J7, I7, K8, J8, and I8. No excavation undertaken. Turning of treatment beds was undertaken to promote biological degradation and dry the material in preparation for reinstatement. Relocating of existing treatment beds and stockpiles from the centre of the site was undertaken to create space for validation and backfilling.

Week 63. Week Commencing 23rd May 2011

Excavation in grid square H14 and Lagoon B which is now surplus to requirement, materials were hauled to treatment area and grid squares validated. Relocating of existing treatment beds and stockpiles from the centre of the site was undertaken to create space for validation and backfilling. Restoration of remediated soils in the centre of the site in grid squares H14, H15,



I14, I15, J14 and J15. Turning of treatment beds was undertaken to assist in the biodegradation of the contaminants and reduce the moisture content of the material.



3.0 Environmental Monitoring Summary

The environmental monitoring locations detailed in the Environmental Permit deployment form for the site are highlighted in drawing D907_33C in Appendix A.

The detailed environmental monitoring data can be found in Appendix B, the following chapters summarise the finding from the monitoring undertaken by Vertase FLI Site Engineers.

3.1. Odour and VOC Emissions

Odour and VOC monitoring around the site boundary commenced on the 22nd March 2010 and has been undertaken twice daily at eight compass points around the site boundary, in the public access areas. Odour and VOC related observations in between the eight compass points around the site are also noted by the Vertase FLI representative undertaking the monitoring.

In addition to physical control via covers and management of activities odour controlling suppressants and masking agent are being used around the site boundary to mitigate the impact of odour migration off site. Three mobile telescopic misting fans were used on site and a full boundary misting system was also used to supplement the mobile units.

Site generated odours including those from the remediation processes and the odour suppression systems observed during the monitoring rounds beyond the site boundary are listed in the environmental monitoring data spreadsheet in Appendix B.

The Vertase FLI Environmental Engineers and Site Management team have been working closely to prevent odours and VOC's generated by the remediation processes migrating off site, along with trying to achieve a fine balance of using a specific odour control fragrance's at a variety of dilutions to reduce the impact of any odours detected off site.

The Environmental Engineers have logged the actions undertaken on site to reduce the impact of VOC/odours off site, these are noted in the environmental monitoring data in Appendix B. All mitigation measures have been in accordance with the actions stipulated in the deployment



form, including some additional actions to reduce the potential of odour nuisance e.g. repositioning of mobile odour control systems.

During the twice daily environmental monitoring a Photoionisation Detector (PID) has been used to record VOC's present beyond the site boundary. The PID will not function correctly in wet weather conditions, this has prevented real-time monitoring on a number of days and data is missing from the environmental monitoring spreadsheet for this reason. During the reported period VOC's were detected by the PID (Limit of detection of 0.1ppm) beyond the site boundary on the following occasions:

- 06/05/2011 10:15 at the west monitoring location, a maximum PID reading of 5ppm was recorded with the odour being described as an intense solvent smell. To reduce the concentrations of VOC present at this location, works on the odorous beds were halted and the materials were immediately covered, the VOC concentrations rapidly reduced to 0.0ppm.
- 13/05/2011 10:35 at the west monitoring location, a maximum PID reading of 0.1ppm was recorded with the odour being described as a weak solvent smell. The odour was intermittent and no action was required other than regular monitoring to ensure the voc levels in this area did not increase during the works.
- 16/05/2011 10:40 at the northwest monitoring location, a maximum PID reading of 0.2ppm was recorded with the odour being described as a barely traceable solvent smell. The odour was intermittent and no action was required other than regular monitoring to ensure the voc levels in this area did not increase.

Long term passive VOC monitoring is carried out at eight compass point locations around the site boundary, in the public accessible areas, further monitoring locations are located within the centre of the waste water treatment works, on Church Road, Hauxton and Queens Close, Harston.

The results for the long term passive VOC monitoring carried out between 14/04/2011 and 12/05/2011 are reported in appendix C. Due to a dispatch error by the media supplier Unicarb tubes were used to collect the monthly data rather than the preferred Tenax tube, this resulted in



a poor recovery of data at the laboratory for the voc's that have been continually present around the site. The data produced still indicates that Tetrachloroethene is the most dominant VOC present around the site, yet is well below the levels considered to be within acceptable limits for published criteria. Due to the type of activities on site and the infrequency of any odorous activities it is highly likely that voc's generated at the site were all well below acceptable limits during the monitoring period.

The 28 day passive VOC monitoring results have been forwarded to the Health Protection Agency for review. The HPA have under taken independent risk assessment upon the data provided and have provided a positive non technical summary which is available on South Cambridgeshire District Councils website.

3.2. Dust Fibre and Particulate Emission

Both real time dust measurement and long term dust deposition monitoring has been undertaken around the site boundary at six compass point locations, north, east, south, west with two monitoring positions in the northeast (drawing D907_30C, Appendix A).

Real time airborne dust monitoring is undertaken as a minimum twice daily by an Environmental Engineer using a 'Dustmate' dust particle monitor around the site boundary as part of the environmental monitoring schedule, results are recorded in the environmental monitoring spreadsheet (Appendix B). The 'Dustmate' dust particle monitor will not function correctly in wet weather conditions, therefore on a number of days and data is missing from the environmental monitoring spreadsheet for this reason. Dust migration is however less likely in wet weather conditions.

Dust particle measurements at each monitoring location have varied, with the higher dust readings being generally at the locations adjacent to the heavily trafficked Cambridge Road (A10). The average Total Suspended Particulates (TSP) reading around the site is 183.65µg/m³, the average PM10 dust reading around the site is 94.56µg/m³. Where a potential for dust has been observed, on site dust suppression methods have been deployed immediately to reduce the generation of site dust and all haul routes are continually wetted to prevent dust release.



Directional dust deposition gauges at the six monitoring locations are analysed every fortnight for Effective Area Coverage (EAC) (percentage of dust deposition relating to the potential to cause nuisance), results generated by an external laboratory are presented in Appendix D.

Baseline dust monitoring undertaken between 19/02/2010 to 19/03/2010 (4 locations monitored) recorded a maximum dust deposition rate of 0.54%EAC at the western monitoring location.

Dust monitoring undertaken from the 03/05/2011 to 17/05/2011 (6 locations monitored) recorded a maximum dust deposition rate was 0.64%EAC at the west monitoring location. All other locations had a maximum dust deposition rate of 0.57%EAC, or less.

Dust monitoring undertaken from the 17/05/2011 to 01/06/2011 (3 locations monitored only due to damage to monitoring equipment caused by high winds during the monitoring period) recorded a maximum dust deposition rate was 1.53%EAC at the east monitoring location. All other locations had a maximum dust deposition rate of 1.07%EAC, or less.

Dust deposition values of less than 2.5% are regarded as having a very low nuisance potential. Only when percentages rise from 2.5% – 5% EAC is dust considered to have a low nuisance causing potential. During the reported period dust, fibre and particle emissions have been low, and have not caused visual dusting off site.

3.3. Control of Mud and Debris

A pressure washer has been on site constantly to allow any maintenance or plant delivery vehicles leaving contaminated parts of the site to be washed down thoroughly first, as not to take potentially contaminated mud and debris through the clean zone and off site. The movement of vehicles between the contaminated and clean parts of the site is strictly controlled by the site management team.

3.4. Noise

Noise monitoring around the site boundary commenced on the 22nd March 2010 and has been undertaken twice daily as a minimum, recording findings at eight compass points around the site boundary in the public access areas (drawing D907 30C, Appendix A).



Site operations are restricted to 8am to 6pm and site noise levels are consistently at an average acceptable low background level of 64dB. Exceedance's of the 80dB threshold (stipulated in the Environmental Permit deployment document) have been recorded during the monitoring period, however traffic along the A10 has been identified as the source of the slightly elevated noise levels. Data is recorded in the environmental monitoring data spreadsheet, Appendix B.

3.5. Litter

All litter occurrences are removed from within the site, and off site around the boundary fence, and disposed of appropriately. Litter is generally low off site, and is well managed on site, by all site personnel. All recordings of the presence of litter are noted in the Environmental Monitoring Data spreadsheet in Appendix B.



4.0 Surface and Ground Water Condition

4.1. Surface Water Monitoring

As part of the environmental monitoring programme, the Riddy Brook located to the east of the site (Drawing D907_33C, Appendix A) is inspected daily as a minimum at two locations up and down stream for general observations, on any discolouration, sedimentation etc. The observations are recorded on the Environmental Monitoring Data (Appendix B). Throughout the monitoring period there have been no visual signs that the remediation works on site are having any impact on the Riddy Brook.

The water level within the Riddy Brook is monitored and recorded on a daily basis at a minimum of two locations, footbridge adjacent to Mill House (Riddy 1) and the most southerly footbridge over the Riddy Brook, adjacent to the eastern corner of the site (Riddy 4). Two further locations are also monitored, Riddy 2 at the footbridge over the Riddy Brook approximately 150m southeast of Mill House and the former fire exit bridge (Riddy 3), 210m southeast of Mill House. All the water level data is recorded in the main groundwater level data sheet in Appendix E.

On the 17th of May 2011 there was a significant drop in the water level within the Riddy brook of around 30 – 40mm by the 19th of May the water level had returned to its usual level for the monitoring period, this event was not related to any site works and may have been a result of water abstraction from the Riddy Brook upstream of the site.

4.2. Surface Water Sampling and Analysis

Upstream and downstream water samples from both the River Cam (Granta) and the Riddy Brook are taken on a monthly basis. The results for samples taken on 31st May 2011 are presented in Appendix F.

The surface water analysis of the 31st May 2011 shows trace levels of Mecoprop (7.6 ug/l), MCPA (7.4ug/l), Tetrachloroethylene (4 µg/l) and Ethofumesate (0.4 ug/l) detected in all surface water samples analysed, the Riddy Brook upstream and downstream and the River Cam upstream and downstream, with the higher concentrations generally being present in the upstream samples of both water courses. Dichloroprop (1.5 ug/l) was detected in both upstream



and downstream samples of the Riddy Brook, Schradan (3.4 ug/l) was detected in the down stream sample of the River Cam and Cis1,2-Dichloroethylene (1 µg/l) was detected in the down stream sample of the Riddy Brook.

These trace levels identified in the May 2011 sampling round have been recorded in the baseline data collected prior to the commencement of the remediation project and are not related to a specific site incident.

4.3. Groundwater Level Monitoring

Groundwater levels are recorded within at least 11 borehole locations onsite on a daily basis, to ensure the groundwater beneath the site remains in a static condition during the remediation works and does not pose a risk to surface and groundwater bodies beyond the site boundary.

During the initial excavation works on site very little groundwater has been encountered, the majority of excavations located in the northern parts of the site have exceeded a depth of 4m below current ground level and have penetrated the Gault Clay in parts.

The main source of water encountered during excavations has been discontinuous contaminated perched water present in the Made Ground. This water has been captured and treated in the Waste Water Treatment Works associated with the site.

From approximately 2-3m below ground level discontinuous thin sand and gravel bands have also produced some limited quantities of water, which have tended to dry up within 24 hours.

The groundwater levels measured at locations around the site are shown in drawing D907_31G, in appendix A. The groundwater levels are presented in Appendix E.

Groundwater contour plots are drawn up on a weekly basis to interpret the potential movement of the water beneath the site. Contour plots D907_171, D907_172, D907_173, and D907_174 (Appendix G) illustrate the weekly groundwater levels for the reported period.



The four contour plots constructed (Appendix G) illustrate that there have been little changes to groundwater levels within the boreholes on site, due to the discontinuous nature of the geology on site and the depth of open excavation, the contour plots do not accurately depict groundwater level across the site.

There has been no recharge of groundwater in the central and northern part of the site where the main excavations have taken place, the base of excavations on site are approximately at 10.00mAOD and remain free of groundwater. There has not been any change to the pumping regime in this part of the site during the monitoring period.

4.4. Groundwater Sampling and Analysis

Groundwater samples from 11 monitoring locations on site are taken on a monthly basis. The results for samples taken on 31st May 2011 are presented in Appendix F.

The contaminant concentrations present in the samples taken on the 31st of May 2011, are similar to the baseline data collected during the summer of 2008, however there is a considerable reduction in concentration of the main contaminants in the groundwater samples adjacent to the areas that have undergone remediation.



5.0 Waste Water Treatment Plant

The Waste Water Treatment Plant (WWTP) is part of the former land holding of Bayer Cropscience and is part of that controlled by Harrow Estates. The WWTP was an integral part of the former Bayer Crop Science site, located to the west of the A10, specifically designed to treat and discharge liquid waste products derived from the production of agrochemicals (both herbicides and pesticides) and sewage from the facility.

The WWTP has been previously operated (until the 15th of March 2010) by Alpheus Environmental Ltd. to maintain the required discharge volume generated by the groundwater pumping systems on the main Bayer Cropscience site along the bentonite cut off wall and the high bay warehouse.

Vertase FLI have established a maintenance programme and control procedures to ensure the WWTP is operated within the constraints of the discharge consent. Essential system checks and improvements have been made to the plant to ensure it can treat the volume and concentrations of influent generated by the continued groundwater control and the contaminated water recovered during the remediation activities on the main site.

The composition of the water discharged to the River Cam (Granta) must not exceed the permitted levels in paragraphs 1.7.1, 1.8.1 and 1.8.2 of the discharge consent PR1NF/1744D01 Issued and regulated by the Environment Agency.

The treated effluent is sampled at the specified location as stipulated in the discharge consent. Vertase FLI also sample the influent to the WWTP, along with a sample taken after the primary carbon treatment, this is to assess the performance of main treatment process of the WWTP and highlight potential expiry of the primary carbon vessels.

The fortnightly samples are analytically tested for the water quality parameters and the chemical compounds specified in paragraph 1.7.1 of the discharge consent PR1NF/1744 D 01. The data is tabulated and presented in Appendix H along with the raw data from the laboratory reports.



Throughout the reporting period the WWTP has been successful in treating the compounds listed within paragraph 1.7.1 (consent PR1NF/1744D01) to acceptable levels for discharge to the River Cam (Granta) under the regulated discharge consent.

The Environment Agency carry out independent discharge monitoring at the WWTP on a monthly basis, during the reportable period Vertase FLI and Harrow Estates Plc have not been notified of any unacceptable effluent discharging to the River Cam (Granta) from the operating plant.



6.0 Contaminants Not Previously Identified

To fulfil the requirements of condition 4 and condition 9, Planning Condition Document ref:S/2307/06/f Issued 10/02/2010, Vertase FLI are continually undertaking soil characterisation sampling prior to remediation processes to identify the types and concentrations of

contaminants present in the specific grid squares across the entire site.

The soil characterisation samples undergo a series of laboratory analyses consisting of targeted

analysis, screening against known contaminants and a full GCMS scan to identify any

contaminants not previously identified.

All characterisation samples analysed and found to contain previously unidentified contaminants

are reported in accordance with condition 9 of the Planning Condition Document ref:S/2307/06/f

Issued 10/02/2010.

From the commencement of site works (15/03/2010) to 29/05/2011, eighty nine characterisation

samples have been taken by Vertase FLI in partnership with Atkins to assess the contamination

type and concentrations prior to remediation of the materials. Thirty eight characterisation

samples analysed contained a total of twenty five compounds / potential contaminants that had

not been previously identified.

A summary table of the soil characterisation testing is presented in Appendix I, the previously

unidentified compounds are listed here, with comments regarding the origin and likely usage on

site.

The remediation project consultants Atkins continuously review the soil characterisation analysis

and report previously unidentified contaminates in accordance with condition 9, Planning

Condition Document ref:S/2307/06/f Issued 10/02/2010.

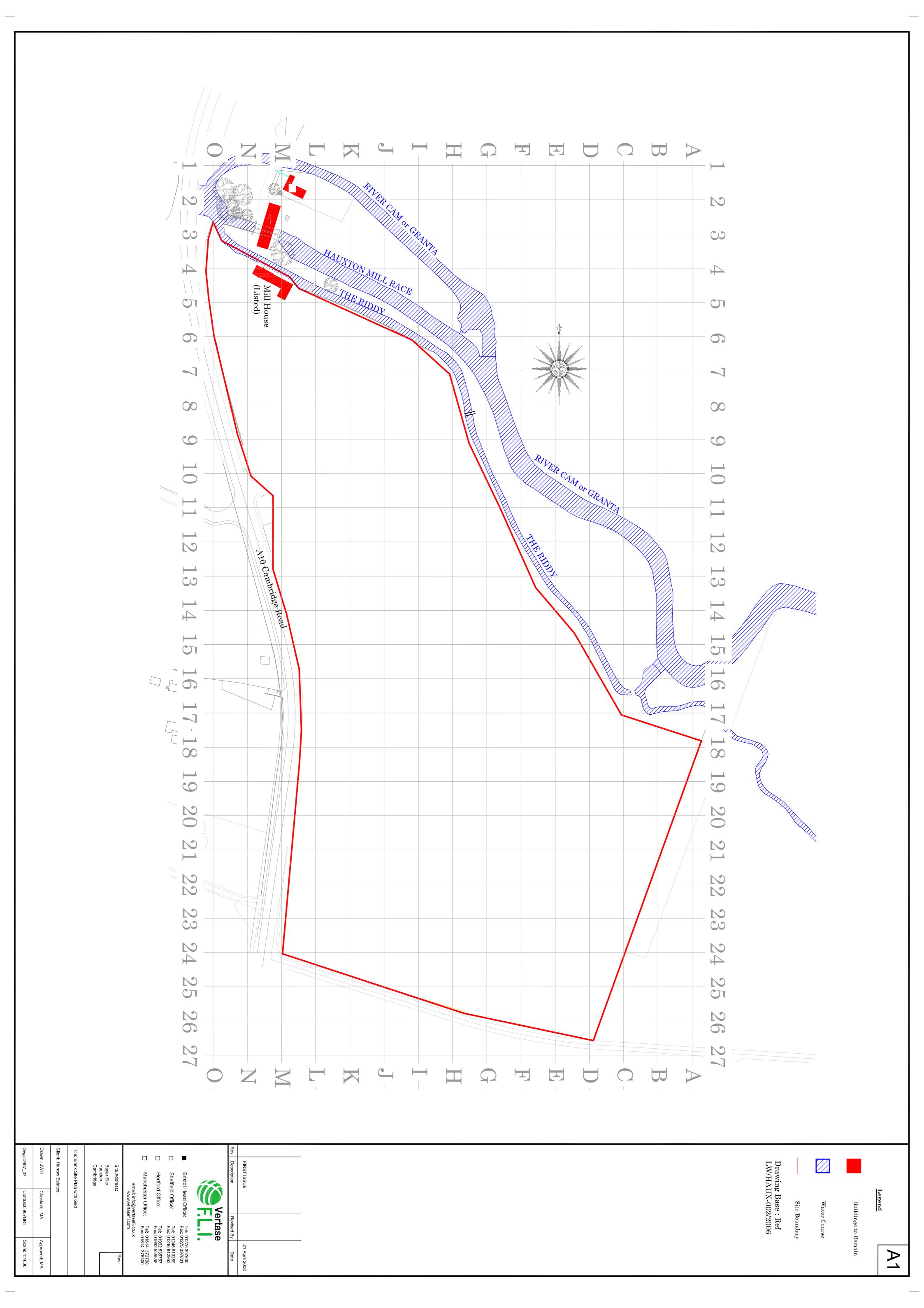
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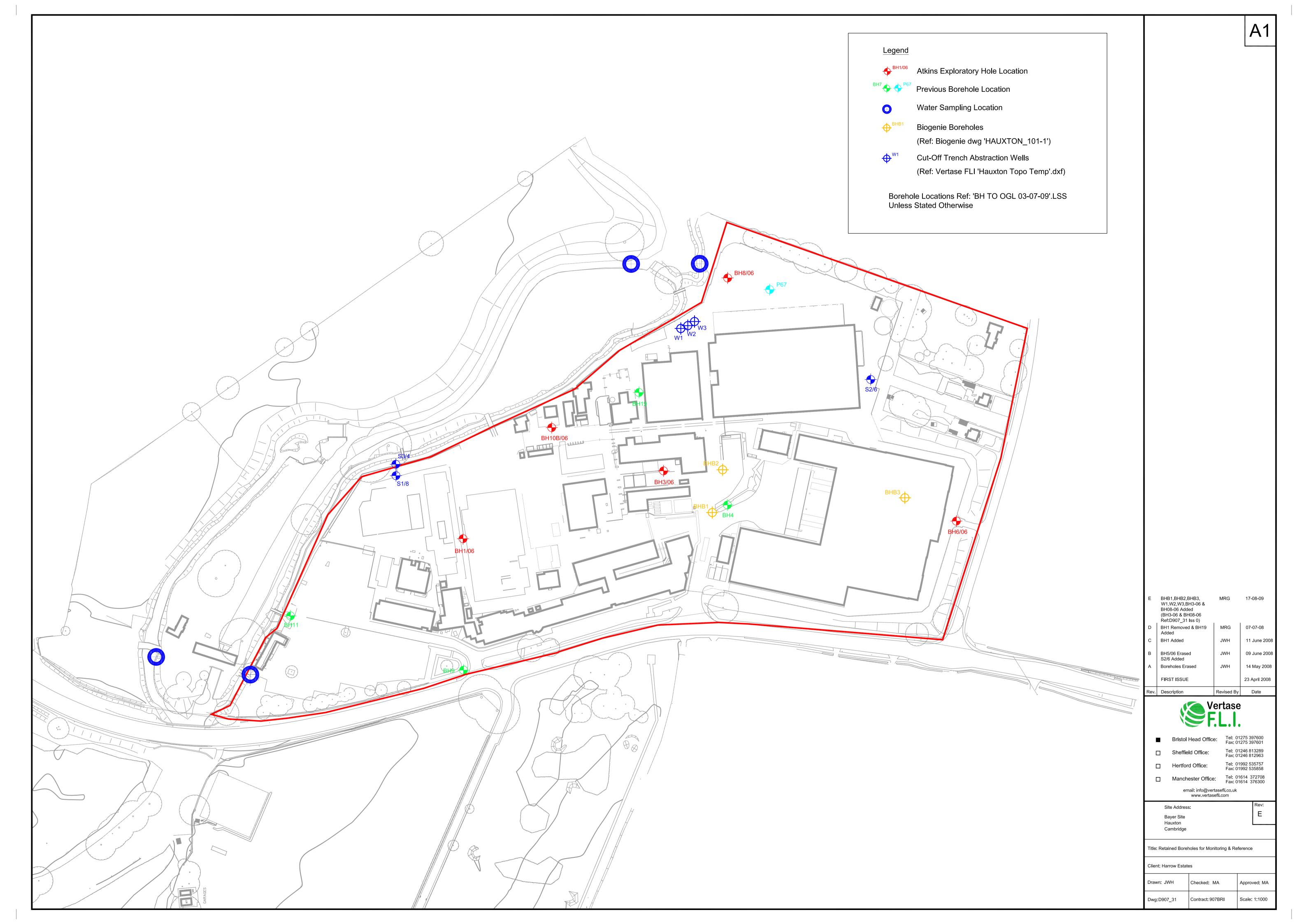
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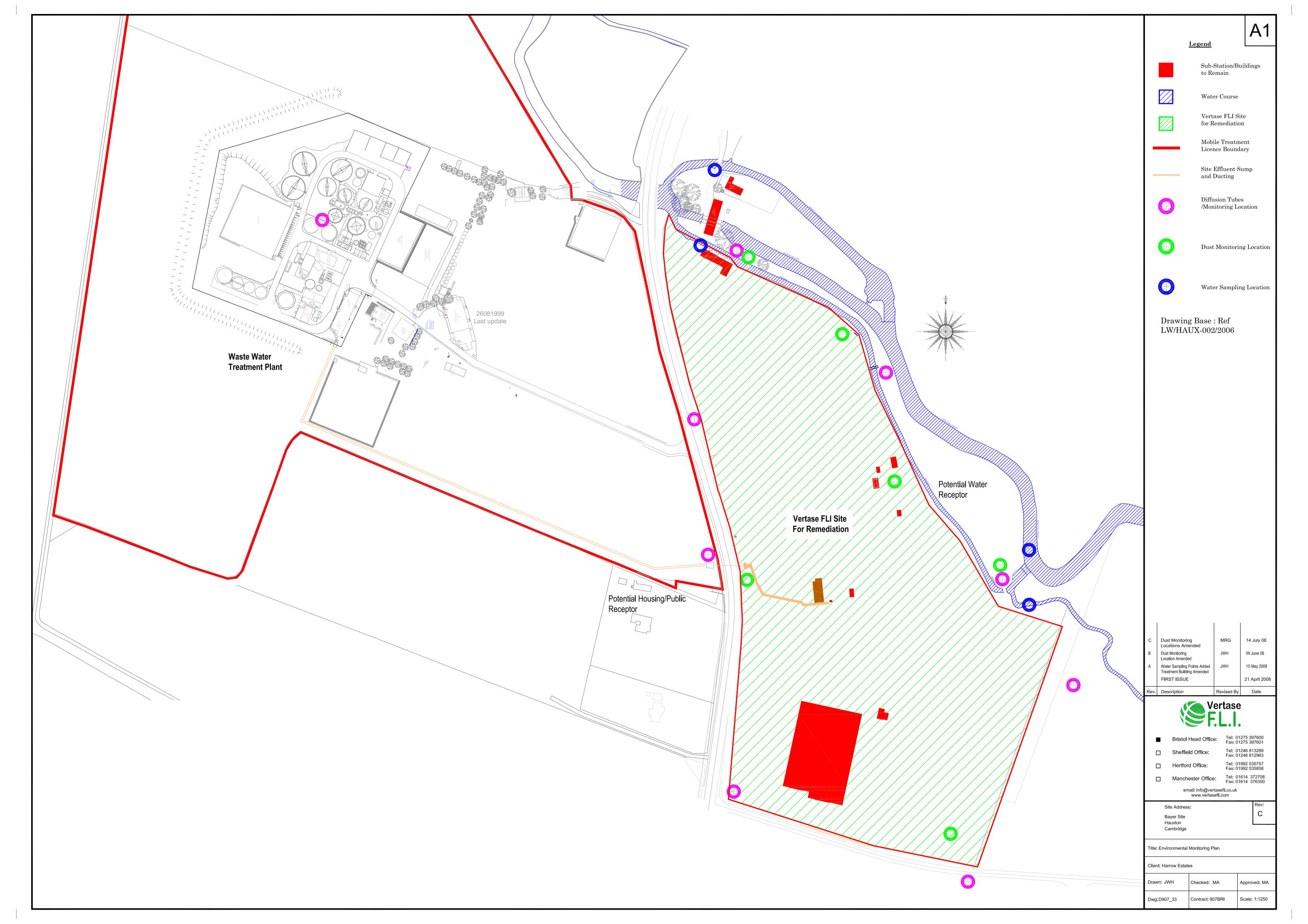


Appendix A

Drawings









Appendix B

Environmental Monitoring Data

Mathematical Content						ODOUR			DUST	VOISE LIT	TER	RIDDY	Y BROOK		Ī	METEO	ROLOGICAL	AND ENVIRONMEN	TAL CONDI	TIONS	
Column	Assessor Date					bity Intensity No. (1 to 9) Quality (Description)	Tone Sensitivity Sour	PID TSP	PM10	Average Present (dBa) (Description)	Materials attracting scavenners	Inspection	Water Level (mAOD)	Complaints	Action Required	Wind W Speed Dire	ind Temp	Description (Rain, Sun)	Cloud C Cover C	Ground onditions Ver (No.) General	Nones
	T Walker 03/05/2011 E T Walker 03/05/2011	Bad turning/restoration Bad turning/restoration	N NE	10.45 1	0.50 y 0.55 in	3 solvents	1 2 5	0 104	86 74	12 no 14 no	no no	dear	9.216	10 01	2	E	17	dry	6 dry	vai, ciy)	
	T Walker 03/05/2011 E T Walker 03/05/2011 E	an ingression	NE1 E	10.55 1	1.00 1.10 n		2	0 241	69 71	37 no	no	dear	9.645	10 fts	10						
	T Walker 03/05/2011 E T Walker 03/05/2011 E	Bed turning/restoration Bed turning/restoration	SE S	11.10 1	1.15 n 1.20 n		3 3	0 204	86	12 no 14 no	no no		n	10 01	10						
Column	T Walker 03/05/2011 E T Walker 03/05/2011 E	Bed turning/restoration Bed turning/restoration	SW W	11.20 1 11.25 1	1.25 n 1.30 n		4 4	0 256	71	12 no 10 no	no no		ĥ	10 ft	10	=					
Column	Stephenson 03/05/2011	sed turning/restoration Sed turning/restoration	N N	17.10 1	7.15 y	5 chlorinated solvents	0 2 5	0 130	150	98 no	10	dear	9.216	10 10	eposition foggers	.6 se	16	sun	1 dry	no odour	r at church
Column	Stephenson 03/05/2011 Stephenson 03/05/2011 Stephenson 03/05/2011	Sed turning/restoration Sed turning/restoration Sed turning/restoration	NE1	17.00 1	7.10 y 7.05	7 cow parsies vegetation	3 2 1	283	35	31 00	00	dear	0.645	10 110	10						
Column	Stephenson 03/05/2011 Stephenson 03/05/2011	Bed turning/restoration Bed turning/restoration	SE S	16.50 1	6.55 n 6.50 n		3 3	0 91	61	5.4 no 3.4 no	10			10 00	10	==	==				
Column	Stephenson 03/05/2011 E Stephenson 03/05/2011 E	Sed turning/restoration Sed turning/restoration	SW W	16.40 1	6.45 y 6.40 y	5 vegetation 4 odour control and solvents	-1 4 1 1 4 5	0 212	64	15.8 no 14.5 no	no no			10 ftc	10						
Column	I Stephenson 03/05/2011 E T Walker 04/05/2011 E	Bed turning/restoration Bed turning/restoration	NW N	16.30 1 10.00 1	6.35 y 0.05 n	5 odour control	2 2 5	0 210	21	18.2 no 12 no	10	dear	9.199	10 ft	10	ssw	17	dry	5 dry		
Column	T Walker 04/05/2011 E T Walker 04/05/2011 E	Bed turning/restoration Bed turning/restoration	NE1	10.10 1	0.15 in 0.20		2	0 180 187	67 60	54 no	no	dear		10 ft	10						
	T Walker 04/05/2011 E		SE .	10.20 1	0.25 n 0.30 n		3	0 178	88	96 NO	10	near	9.844	10 11	10	=					
	T Walker 04/05/2011 6	sed turring/restoration Bed turring/restoration	SW	10.30 1	0.40 n		3 4	0 136	54 6	12 no 18 no	no		n n	10 11	10						
	T Walker 04/05/2011 E T Walker 04/05/2011	Sed turning/restoration Sed turning/restoration	NW N	10.45 1	0.50 n 5.05 n		2 2	0 206	76	10 no 12 no	no no	dear	9.199	10 11	10	Se	17	dry	3 dry		
	T Walker 04/05/2011 E T Walker 04/05/2011 E	Bed turning/restoration Bed turning/restoration	NE NE1	15.05 1 15.10 1	5.10 n 5.15		2	0 186	67 68	it no	no	dear		10 fts	10						
	T Walker 04/05/2011 E T Walker 04/05/2011 E	Bed turning/restoration Bed turning/restoration	E SE	15.15 1 15.20 1	5.20 n 5.25 n		2 3	0 185	67	7 00	no no	dear	9.644	10 fts	10						
	T Walker 04/05/2011 E T Walker 04/05/2011 E	Bed turning/restoration Bed turning/restoration	SW SW	15.25 1 15.30 1	5.35 n		3 4	0 182	68	58 no 59 no	no no		n	10 no	10						
Mathematical Content	T Walker 04/05/2011 E T Walker 04/05/2011 E	Bed turning/restoration Bed turning/restoration	W NW	15.35 1	5.40 n 5.45 n		2	0 107	87	13 no 11 no	no		n n	10 ft	10	=					
Mathematical Content	T Walker 05/05/2011	Bed turning/restoration Bed turning/restoration	NE NE1	8.35	8.40 n 8.46		2	0 204	97	54 no	no	dear		10 10	10		-	,	- dy	confitair	THE PARTY OF THE P
Column	T Walker 05/05/2011 E T Walker 05/05/2011 E	Bed turning/restoration Bed turning/restoration	E SE	8.45 8.50	8.50 n 8.55 n		2 3	0 204	147	57 no 50 no	10	dear	9.639	10 no	10	=					
Column	T Walker 05/05/2011 6	Bed turningirestoration Bed turningirestoration	S SW	8.55 9.00	9.00 n 9.05 n		3 4	0 221	200	19 no 56 no	no no		n n	10 ft	10	Ⅎ	▆				
Call	T Walker 05/05/2011 E T Walker 05/05/2011 E	Bed turning/restoration Bed turning/restoration	W NW	9.05 9.10	9.10 n 9.15 n		4 2	0 241	197	90 no 12 no	no no			10 fts	10		\pm				
Call	T Walker 05/05/2011 E T Walker 05/05/2011 E	sed turning/restoration Sed turning/restoration	N NE	16.00 1	6.15 n		2 2	0 200	78 101	66 no	10	dear	9.194	10 fts	500	SE	20	ay	U dry		
Call	T Walker 05/05/2011 T Walker 05/05/2011 T Walker 05/05/2011	seo cummignisoronicon Bed turning/restoracion Bed turning/restoracion	ne1 E SE	16.20 1 16.20 1	6.25 n 6.30 n		2	0 201	74	10 no	10	clear	9.639	10 fts 10 fts	10	#	\pm		Ħ		
Call	T Walker 05/05/2011 E T Walker 05/05/2011	Bed turning/restoration Bed turning/restoration	S SW	16.30 1	6.35 n 6.40 n	+ +	3 4	0 194	91	10 no	10			10 10	10	_	\pm				
Call	T Walker 05/05/2011 E T Walker 05/05/2011 E	Bed turning/restoration Bed turning/restoration	W NW	16.40 1 16.45 1	6.45 n 6.50 n		4 2	0 137	84	74 no 80 no	10			10 no	10	==			ΕĦ		
Call	T Walker 06/05/2011 E T Walker 06/05/2011 E	Bed turning/restoration Bed turning/restoration	N NE	9.30 9.35	9.35 y 9.40 y	4 blossom/odour control 6 odour control	2 2 1	0 206 0 241	104 5 208 6	it no	no no	dear dear	9.193 n	10 ft	4	50	18	dry	3 dry	On site F	PID readings up to 5ppm steady at 2.0-3.0ppm force vent bed covered and sealed
Column	T Walker 06/05/2011 6	Bed turning/restoration	NE1 E	9.40 9.45	9.45 9.50 y	3 odour control	2 2 1	0 176	104 173	4 no	no	dear	9.639	10 ft	10	Ŧ	I		H		
Column	T Walker 06/05/2011 E T Walker 06/05/2011 E	Bed turning/restoration Bed turning/restoration	SE S	9.50 10.00 1	9.55 y 0.05 n	6 odour control	3 3 1	0 108	74	96 00	no no		in the second se	10 ft	10	=					
Column	T Walker 06/05/2011 6	Sed turning/restoration Sed turning/restoration Sed turning/restoration	W	10.10 1	0.10 n 0.15 y	8 solvents	0 4 1	2.4 74	36	57 NO 80 NO	no no		n n	10 11	10						
Column	T Walker 06/05/2011 E T Walker 06/05/2011 E	Sed turning/restoration Sed turning/restoration	N NF	15.30 1	5.35 n		2 2	0		96 no	10	dear	9.193	10 01	10	SW	19	dry	3 dry		
Column	T Walker 06/05/2011 E T Walker 06/05/2011 E	Sed turning/restoration Sed turning/restoration	NE1	15.35 1	5.40 5.46 y	1 edour control	2 2 5	0		i0 no	no	dear	9.639	10 10	10	==	==				
Column	T Walker 06/05/2011 6	Bed turning/restoration Bed turning/restoration	SE S	15.45 1 15.50 1	5.50 y 5.55 n	1 edour control	0 3 1	0		0 no 12 no	no no		h	10 ft	10						
Column			SW W	15.55 1 16.00 1	6.00 n 6.05 n		4 4	0		0 no 2 no	no no		h	10 ft	10	=					
Column	T Walker 06/05/2011 E T Walker 09/05/2011 E	Bed turning/restoration Bed turning/restoration	NW N	11.00 1	6.10 n 1.05 y	4 solvents/odour control	-1 2 5	0 146	104	60 no	no	dear	9.191	10 110	50	1 sw	25	dry	7 dry		
Column	T Walker 09/05/2011 B	Sed turning/restoration Ped turning/restoration Ped turning/restoration	NE1	11.05 1	1.10 y	2 sovents	1 2		67	M 60	10	dear	0.630	10 11	10						
Column	T Walker 09/05/2011 E	Bad turning/restoration	SE S	11.15 1	1.20 n		3 3	0 204	121	2 00	no no		,	10 11	10	==	==				
Column	T Walker 09/05/2011 6 T Walker 09/05/2011 6	Bed turning/restoration Bed turning/restoration	SW W	11.25 1	1.30 n 1.35 n		4 4	0 206	186	12 no 18 no	no no			10 fts	10						
Second	T Walker 09/05/2011 E T Walker 09/05/2011 E	Bed turning/restoration Bed turning/restoration	NW N	11.35 1 16.00 1	1.40 n 6.05 n		2 2	0 146	76	12 no 18 no	no	dear	9.191	10 no	10	ssw	20	dry	4 dry		
Second	T Walker 09/05/2011 E T Walker 09/05/2011 E	Bed turning/restoration Bed turning/restoration	NE1	16.10 1	6.15 n 6.15		2	0 172	82 67	6 no	no	dear	0.000	10 fts	10						
Second	T Walker 09/05/2011 E T Walker 09/05/2011 E T Walker 09/05/2011	sed turring/restoration Bed turring/restoration Bud turring/restoration	SE S	16.20 1 16.20 1	6.25 y 6.30 n	2 diesel	1 3 1	0 182	20	94 no 12 no 11 no	no no	SHAF	9.639	10 10	10						
Second	T Walker 09/05/2011 F T Walker 09/05/2011	Sed turning/restoration Sed turning/restoration	SW W	16.30 1	6.35 n 6.45 n		4 4	0 141	76	72 no	10			10 11	10	=	_				
Second	T Walker 10/05/2011	Bed turning/restoration	NW N	16.45 1 10.00 1	6.50 in 0.05 in		2 2	0 206	71		no no	dear	9.19	10 fts	10	.1 sw	19	dry	0 dry		
Part 1965 1		Bed turning/restoration Bed turning/restoration	NE1	10.05 1 10.05 1	0.10 n 0.10		2	0 186	82 72	58 no	no	dear	n n	10 ft	10						
Part 1965 1	I Walker 10/05/2011 E T Walker 10/05/2011 E	sed turning/restoration Bed turning/restoration Aud turning/restoration	SE o	10.10 1	0.20 n		3 3	0 106	73		10	Sear	9.638	10 fts	10	_					
Part 1965 1	T Walker 10/05/2011 E	sed turring/restoration Bed turring/restoration	SW	10.25 1	0.25 n 0.30 n		3 4	0 182	82 8	94 no 12 no	no		n n	10 11	10						
Part 1965 1	T Walker 10/05/2011 T Walker 10/05/2011	sed turring/resistration	NW N	10.35 1	0.40 n 6.05 n	+ +	2 2	0 188	101	31 no 32 no	no no	Sear	9.19	10 ft	10	SSW	19	dry	5 drv	Eastern :	side slight solvent small, odour control increased in this are:
Part 1965 1	T Walker 10/05/2011 E T Walker 10/05/2011 E	Bed turning/restoration	NE NE1	16.05 1 16.10 1	6.10 n 6.15		2	0 97 136	33 71	58 no	10	dear		10 01	10	ΞĒ			Ħ		
Control Cont	T Walker 10/05/2011 E T Walker 10/05/2011 E	Bed turning/restoration Bed turning/restoration	SE SE	16.15 1 16.20 1	6.20 y 6.25 n	3 solvents	-1 2 1 3	0 170	122	12 no 18 no	no no	dear	9.638	10 fts	10	==					
Control Cont	T Walker 10/05/2011 E	ses surrespressoration Sed surring/restoration Aud surring-restoration	SW W	16.30 1	6.35 n		4	0 204	122 6		10		ĥ	10 fts	10	\pm	\pm				
Control Cont	T Walker 10/05/2011 T Walker 11/05/2011	Seed turning/restoration Bed turning/restoration	NW N	16.40 1 9,00	6.45 n 9.05 n		2	0 315	200	10 no 12 no	10	Sear	9.188	io no	10	Ga-	14	dry	8 4		
Control Cont	T Walker 11/05/2011 F T Walker 11/05/2011	Bed turning/restoration Bed turning/restoration	NE NE1	9.05	9.10 n 9.15		2	ō	1 1	i8 no	no	dear		10 ft	10	f			- 1		
Control Cont	T Walker 11/05/2011 E T Walker 11/05/2011	Bed turning/restoration Bed turning/restoration	E SE	9.15 9.20	9.20 n 9.25 n		2 3	0		i3 no	no no	dear	9.637	10 fts	10	==			ΕĦ		
Control Cont	T Walker 11/05/2011 E T Walker 11/05/2011 E	Bed turning/restoration Bed turning/restoration	S SW	9.25 9.30	9.30 n 9.35 n		3 4	0		12 no 19 no	10		n n	10 fts	10	I	I		Ħ		
Control Cont	I Walker 11/05/2011 E T Walker 11/05/2011 E	sed turning/restoration Bed turning/restoration	W NW	9.35 9.40	9.40 n 9.45 n		2	0		15 NO	no no			10 fts	10	Æ	==		J		
Column C	T Walker 11/05/2011 E	ses surrespresitoristion Sed surring/restoration Aud surring-restoration	N NE NE1	16.05 1	6.10 n		2 2	0 189	90 e	0 no	10	cener clear	w.ie8	10 fts	10 10	SW	19	cry	z dry		
Table 126(2011) 104 transplantation E 15.11 (2.2)	T Walker 11/05/2011 T Walker 11/05/2011	Seed turning/restoration Bed turning/restoration	E SE	16.10 1	6.20 n 6.25 n		2	0 124 0	86	i1 no 2 no	10	dear	9.637	io no	10	#	\pm		Ħ		
Table 126(2011) 104 transplantation E 15.11 (2.2)	T Walker 11/05/2011 F T Walker 11/05/2011	Bed turning/restoration Bed turning/restoration	S SW	16.25 1	6.30 n 6.35 n		3 4	0 204	88	37 no 38 no	no no		n	10 fri	10	==	=		H		
Table 126(2011) 104 transplantation E 15.11 (2.2)	T Walker 11/05/2011 E T Walker 11/05/2011 E	Bed turning/restoration	W NW	16.35 1 16.40 1	6.40 y 6.45 y	2 odour control 3 odour control	0 4 5	0 256	100	ia no H no	no no			10 11	10	≢					
Table 126(2011) 104 transplantation E 15.11 (2.2)	T Walker 12/05/2011 6	Sed turning/restoration	N NE	10.00 1 10.05 1	0.05 n 0.10 y		-1 2 1	0 186 0 182	91 90	12 no 18 no	10	dear dear	9.188	10 fts	700	.6 w	17	dry	6 dry	increase	d adour control on eastern boundary
Table 126(2011) 104 transplantation E 15.11 (2.2)	T Walker 12/05/2011 E T Walker 12/05/2011 E	Bed turning/restoration Bed turning/restoration	NE1 E	10.05 1	0.10 0.15 y	4 solvents diesel	1 2 1	174 0 204	101 104	3 00	no	dear	9.637	10 10	10	#					
Table 126(2011) 104 transplantation E 15.11 (2.2)	T Walker 12/05/2011 E	sed turning/restoration Bed turning/restoration Aud turning/restoration	S S	10.15 1	0.25 y 0.25 y		2 3 1	0 161	71	94 (no 98 (no 90 (no	10		n h	10 fts	10	_					
Table 126(2011) 104 transplantation E 15.11 (2.2)	T Walker 12/05/2011	suo sur mingrinasionaleori Bed turningfrestoriation Bud turningfrestoriation	W W	10.25 1	0.35 n 0.40 n		4	0 146	71 6	12 no	10		ĥ	10 01	10	#					
Table 126(2011) 104 transplantation E 15.11 (2.2)	T Walker 12/05/2011 T Walker 12/05/2011	Bed turning/restoration Bed turning/restoration	N NE	15.00 1 15.05 1	5.05 n 5.10 n		2 2	0 186	60 76	12 no 18 no	no no	dear	9.188	10 ft	10 10	w	18	dry	2 dry		
Calcal C	T Walker 12/05/2011 T Walker 12/05/2011	Bed turning/restoration Bed turning/restoration	NE1 E	15.10 1	5.15 5.20 n		2	208	89 101	68 no	no	Slear	9.637	10 no	10	==	=		H		
Value Valu	T Walker 12/05/2011 E	Bed turning/restoration Bed turning/restoration	SE S	15.20 1 15.25 1	5.25 n 5.30 n		3 3	0 104	97	57 no 52 no	10			10 ft	10	1					
Visual V		Red turning/restoration	SW	15.30 1	5.35 n	1 1	4	0		1 00	no.		0	10 01	10	\neg	-				
	T Walker 12/05/2011 E T Walker 12/05/2011 E	Bed turning/restoration	W	15.35 1	5.40 n		4	0 156	98	10 no	no		n	10 no	10		Ĺ		Π		

Holizat 1950-011 bil turing insteaded. Fridak 1950-011 bil turing insteaded strateg.	NE 10.05 10.10 n	2 0 308 104	54 ho ho clear	10 10	
T Walker 13/05/2011 Bed turning/restoration T Walker 13/05/2011 Bed turning/restoration	NE1 10.10 10.15 E 10.15 10.20 n	2 0 201 184	54 no no clear 9.637	60 60	
T Walker 13/05/2011 Bed turning/restoration T Walker 13/05/2011 Bed turning/restoration	SE 10.20 10.25 h S 10.25 10.39 h SW 10.30 10.39 h	3 0 246 91	52 no no	00 00	
T Walker 13/05/2011 Bed turning/restoration T Walker 13/05/2011 Bed turning/restoration	SW 10.30 10.35 n W 10.35 10.40 y 4 solvents	-2 4 5 0.1 194 40	74 no no	no no	
T Walker 13/05/2011 Bed turning/restoration I Stachenson 13/05/2011 bed turning	NW 10.40 10.45 y 3 solvents N 15.40 15.45 n	-1 2 5 0 743 146.5	80 ho ho los clear 9,188	no no no 3 waw 18 sunty spells 3 dry	no odour at church
Stephenson 13/05/2011 bed turning Stephenson 13/05/2011 bed turning Stephenson 13/05/2011 bed turning	## 10.98 10.98 y 4 solvents ## 10.98 10.98 y 4 solvents ## 15.90 10.98 y 5 solvents ## 15.90 15.90 10.98 y 9 solvents ## 15.90 15.90 10.90 1	1 2 5 0 139 53.4	55.2 no no dear	60 90 90 90 90 90 90 90 90 90 90 90 90 90	
Stepherson 13/05/2011 bed suming	E 15.25 15.30 y 3 odour control and v	station 1 2 3 0 125.6 61.4	61.5 no no dear 9.637	00 00	
I Stephenson 13/05/2011 (sed turning I Stephenson 13/05/2011 (sed turning	SE 15.20 15.29 n S 15.15 15.20 n	3 0 59 98.5	64.4 ho ho	80 80 80 80	
I Stephenson 13/05/2011 bed turning I Stephenson 13/05/2011 bed turning	W 15.05 15.10 y 5 car furnes and asph	4 0 297.4 37.2	77.3 no no	90 90 90 90 90 90 90 90 90 90 90 90 90 9	
Stephenson 13052011 bed suring	S 15.15 15.20 h SW 15.10 15.10 h WY 15.00 15.10 h WY 15.00 15.10 h NW 15.00 15.00 h NW 10.00 10.00 h NE 10.00 10.00 h NE 10.00 10.00 h	2 0 206 110	78.9 no no clear 9.193	100 100 100 100 100 100 100 100 100 100	solvent odour on NW A10 boundary, no action taken as odours in gusts. Max PID 0.1ppn
T Walker 16/05/2011 excessing in grids/bed turning T Walker 16/05/2011 excessing in grids/bed turning	NE 10.05 10.10 n NE1 10.10 10.15	2 0 231 76 189 104	54 no no clear	90 90 90 90 90 90 90 90 90 90 90 90 90 9	
T Walker 16/05/2011 excavating in grids/bed turning T Walker 16/05/2011 excavating in grids/bed turning T Walker 16/05/2011 excavating in grids/bed turning	100.00 1	2 0 176 104	84 no no clear 9.639	00 00	
T Walker 16/05/2011 excavating in grids/bed turning	S 10.25 10.30 n	3 0 156 123	67 10 10	10 10 10	
T Walker 16/05/2011 excavating in grids/bed turning T Walker 16/05/2011 excavating in grids/bed turning	SW 10.30 10.35 h W 10.35 10.45 h WW 10.40 10.45 y 3 solvents	4 0 204 122 0 2 1 0.2	81 80 80	00 00	
T Walker 16/05/2011 excessing in grids/bed turning T Walker 16/05/2011 excessing in grids/bed turning T Walker 16/05/2011 excessing in grids/bed turning	NW 10.40 10.45 y 1 solvents N 16.30 16.35 n	2 0 161 71	67 no no clear 9.193	50 N0	
T Walker 16/05/2011 excavating in grids/bed turning T Walker 16/05/2011 excavating in grids/bed turning	N 16:30 16:35 is NE 16:35 16:40 is NE1 16:35 16:40 is	2 0 161 71 2 0 156 70 123 97	58 NO NO CHEEF	10 10	
T Walker 16/05/2011 excavating in grids/bed turning T Walker 16/05/2011 excavating in grids/bed turning	E 16.40 16.45(y 1 lodour control	1 2 5 0 200 100 3 0	62 ho ho dear 9.639	no no	
T Walker 16/05/2011 excavating in grids/bed turning T Walker 16/05/2011 excavating in grids/bed turning	S 16.50 16.55 h SW 16.55 17.00 h	3 0 121 71 4 0	62 no no 60 no no	no no	
T Walker 16/05/2011 excessiting in gridsshed turning T Walker 16/05/2011 excessiting in gridsshed turning T Walker 16/05/2011 excessiting in gridsshed turning	SE 16.45 16.50 6 S 16.50 16.55 6 SW 16.55 17.00 6 W 17.00 17.05 6 WW 17.00 17.05 6		71 00 00	00 00 00 00	
T Walker 17/05/2011 excessing in grids/bed turning T Walker 17/05/2011 excessing in grids/bed turning	N 9.00 9.05 n	2 0 210 104 104 11 2 5 0 200 146 12 100 12 100 12 100 12 100 12 100 12 100 173	60 no no clear 9.159	90 M0	significant water level dropped in Riddy brook, odour at NW boundary confined to public footpat
T Walker 17/05/2011 excernating in grids/bed turning	NE1 9.05 9.10	321 103	dear	10 10	
Wolker 1955001 Secretaring registrated survey Wolker 1955001 Secretarin	SE 9.15 9.20 n	3 0 210 173	62 no no	00 00 00	
vnewer 17/05/2011 excavating in grids/bed turning Walker 17/05/2011 excavating in grids/bed turning	S 9.20 9.25 e SW 9.25 9.30 e	3 0 310 152 4 0	00 10 10 60 10 10	90 90 90 90	
1 Water 17/05/2011 excessing in grids/bed turning T Walker 17/05/2011 excessing in grids/bed turning	W 2.30 2.35 n NW 2.35 2.40 y 4 Bis 2	4 0 104 73 -3 2 1 0	82 110 110 84 110 110	no no no	<u> </u>
T Walker 17/05/2011 excavating in grids/bed turning T Walker 17/05/2011 excavating in grids/bed turning T Walker 17/05/2011 excavating in grids/bed turning	Columbia	2 0 204 100 2 0 241 106 2 2 46 147	58 no no clear 9.159 58 no no clear	0.0	1 complaint from Gt shelfford, nothing detected on visit
T Walker 17/05/2011 excavating in grids/bed turning T Walker 17/05/2011 excavating in orids/bed turning	NE1 16.10 16.15 E 16.15 16.20 n	2 0 187 1.41	60 no no clear 9.613	80 80 80 80 80 80 80 80 80 80 80 80 80 8	
T Walker 17/05/2011 excessing in grids/bed turning T Walker 17/05/2011 excessing in grids/bed turning T Walker 17/05/2011 excessing in grids/bed turning	SE 16.20 16.25 n S 16.25 16.90 n	3 0 0	72 no no 168 no 160	00 00 00 00 00 00 00 00 00 00 00 00 00	
T Walker 17/05/2011 seconding in grids/bed turning T Walker 17/05/2011 seconding in grids/bed turning	SW 16.30 16.35 n	4 0 900 144	72 00 00	00 00 00 00 00 00 00 00 00 00 00 00 00	
T Walker 17/05/2011 excavating in grids/bed turning T Walker 17/05/2011 excavating in grids/bed turning	\$\frac{1}{8}\$ \text{1.62} \text{1.62} \text{1.62} \text{1.62} \qua	2 0 300 141	80 00 00	90 90 90 90 90 90 90 90 90 90 90 90 90 9	en bleb ald southers but Sin 2 often reproduct adur
Trades W. 1900-1911 Securing a problem turning with the control of	N 10.00 10.05 n NE 10.05 10.10 n	2 0 186 90 2 0 120 100	52 no no clear 9,165 58 no no clear	no no sw dry 8 dry no no	nu nign pia newanga juak ali 2 odourii stepped up odour contro
T Walker 18/05/2011 excavating in grids/bed turning T Walker 18/05/2011 excavating in grids/bed turning T Walker 18/05/2011 excavating in grids/bed turning	NE 10.08 10.10 s NE1 10.10 10.10 E 10.10 10.15 y 4 solvents	-1 2 5 0 200 100	62 no no dear 9.598	no no	
T Walker 18/05/2011 excessing in grids/bed turning T Walker 18/05/2011 excessing in grids/bed turning T Walker 18/05/2011 excessing in grids/bed turning	SE 10.15 10.20 h S 10.20 10.20 h SW 10.25 10.30 h WW 10.25 10.30 h WW 10.35 10.35 h SW 10.35 10.40 h SW 10.35 10.40 h SW 10.35 10.40 h	3 0 200 126	58 no no no	90 90 90 90 90 90 90 90 90 90 90 90 90 9	
T Walker 18/05/2011 excessing in grids/bed turning T Walker 18/05/2011 excessing in grids/bed turning	SW 10.25 10.30 n	4 0 200 110	60 00 00	90 NO	
T Walker 18/05/2011 excavating in grids/bed turning T Walker 18/05/2011 excavating in grids/bed turning	NW 10.35 10.40 y 8 8is 2	-3 2 5 0			
T-Walker 1805/2011 excavating in grids/bad purring	NE 16.05 16.10 h	2 0 178 104 2 0 178 104	56 90 90 clear 9.165	90 80 8 w 17 89 8 89 89 89 89 89 89 89 89 89 89 89 8	
T Walker 18/05/2011 exceivating in grids/bed turning T Walker 18/05/2011 exceivating in grids/bed turning	NE1 16:10 16:15 E 16:15 16:20 y 3 solvents	-2 2 5 0 204 104	61 no no clear 9.598	10 10	
Walker 1805/2011 International professional professional strategy Walker 1805/2011 International professional training Walker 1805/2011 International Professional Professional Training Walker 1805/2011 International Professional Training Walker 1805/2011 International Professional	SE 16.20 16.25 n S 16.25 16.30 n	3 0 245 26	67 no no 63 no no	no no	
T Walker 18/05/2011 excessing in grids/bed turning T Walker 18/05/2011 excessing in grids/bed turning	SW 16.30 16.35 n W 16.35 16.40 n	4 0 261 126	70 no no 71 no no	no no	
T Walker 18/05/2011 excavating in grids/bed turning T Walker 19/05/2011 excavating in grids/bed turning	NW 16.40 16.45 n N 8.00 8.05 y 2 odour control	1 2 5 0 161 83	84 no no no nes	NO N	Riddy brook water level still low but has risen slightly. Odour from excevation on public footpath in gust
T Walker 19/05/2011 excavating in grids/bed turning T Walker 19/05/2011 excavating in grids/bed turning	NE 8.05 8.10 h	2 0 140 76 140 71	54 no no clear	10 10	
T Walker 19/05/2011 excessing in grids/bed turning	N 16,20 16,00	2 0 170 80	80 no no clear 9.647	90 90 90 90 90 90 90 90 90 90 90 90 90 9	
T Walker 19/05/2011 excavating in grids/bed turning T Walker 19/05/2011 excavating in grids/bed turning	SE 8.16 8.20 h S 8.20 8.25 h SW 8.25 8.30 h	3 0 122 90	58 00 00	no no no	
T Walker 19/05/2011 excavating in grids/bed turning T Walker 19/05/2011 excavating in grids/bed turning	SW 8.25 8.30m W 8.30 8.35m	4 0 220 100	58 no no	90 90 90 90	
T Walker 19/05/2011 leconvating in grids/baid turning I Sauphenson 19/05/2011 Baid turning/insobration Sauphenson 19/05/2011 Baid turning/insobration I Sauphenson 19/05/2011 Baid turning/insobration I Sauphenson 19/05/2011 Baid turning/insobration Sauphenson 19/05/2011 Baid turning/insobration	501 5.20 5.30 1	2 2 5 0	70 no no dear 9.166	no no 0 see 20.6 sunny spells 6 dry	no odour at church
I Stephenson 19/05/2011 Bed turning/restoration I Stephenson 19/05/2011 Bed turning/restoration	NE 17.35 17.40 y 4 hydrocarbons engir NE1 17.30 17.36	1 2 5 0	55.8 ho ho dear	90 90 90 90 90 90 90 90 90 90 90 90 90 9	
Saphanoon 1905.0011 Bed tuninghisopration	E 17.30 17.30 y 4 trees and veg	-1 2 1 0	54.3 no no dear 9.647	00 00	
I Stephenson 19/05/2011 Bed turning/restoration	17 17 17 17 17 17 17 17	1 3 1 0	51.8 to to 22.3 to to	90 90	
Staghanson 1905/2011 Bod turninghestoration Staghanson 1905/2011 Bod turninghestoration Staghanson 1905/2011 Bod turninghestoration Tolkaker 2005/2011 Bod turninghestoration TWalker 2005/2011 Bod turninghestoration	W 17.05 17.10 n	4 0	74.5 00 00		
T Walker 20/05/2011 Bed turning/restoration	N 8.30 8.35 h	2 0 2 0 200 150	50 no no clear 9.196	80 80 8 W 19 dry 0 dry	
T Walker 20/05/2011 Bad turning/restoration	NE 8.35 8.40 y 1 odcur control NE1 8.40 8.45	0 2 5 0 220 137 184 71	ts no no stear	00 00	
T Walker 2005/2011 Sed turning/restoration T Walker 2005/2011 Sed turning/restoration	E 8.45 8.50 y 5 wood smoke SE 8.50 8.55 y 6 oddur control	-3 2 1 0 196 76 -1 3 5 0	60 no no dear 9.647	no no	
	S 8.55 9.00 n SW 9.00 9.05 y 2/3 pesticides	3 0 208 171 -1 4 5 0	68 no no 62 no no	50 50 50 50 50 50 50 50 50 50 50 50 50 5	
T Walker 20/05/2011 Bed turning/restoration	W 9.05 9.10 h	4 0 171 71 2 0	67 no no no	00 00 00 00 00 00 00 00 00 00 00 00 00	
I Stephenson 20/05/2011 Bed turning/restoration I Stephenson 20/05/2011 Bed turning/restoration	N 16.00 16.05 h NE 15.55 16.00 h NE1 15.50 15.55	2 0 60 36 2 0 68.9 35.4	81.4 no no clear 9.195 53.5 no no clear	20 80 11 w 18 suntry spatts 2 dry 90 No	no odour at church
Stephenson 20/05/2011 Bed turning/restoration	NE1 15.90 15.95 E 15.45 15.90 n	17 33.5 2 0 308.2 50.3	58.2 to to clear 9.647	no no no no	
Stephenson 2005/2011 Bad turning/restoration Stephenson 2005/2011 Bad turning/restoration Stephenson 2005/2011 Bad turning/restoration	E 15-61 15-50 SE 15-0 15-60 SE 15-30 15-60 SW 15-30 15-60 W 15-30 15-50 W 15-30 15-50	3 0 70.4 64.7	61.6 no no	00 00 00 00 00 00 00 00 00 00 00 00 00	
Stephenson 20/05/2011 Bed turning/restoration	SW 15.30 15.35 n	4 0 70.2 53.3	80.4 10 10	00 00	
Staphenson 20/05/2011 Bad turning/instoration Staphenson 20/05/2011 Bad turning/restoration Staphenson 23/05/2011 Bad turning/testoration	NW 15.20 15.25 h NN 10.40 10.45 h	2 0 702 533 2 0 348 33	72.9 10 10	90 90 90 90 90 90 90 90 90 90 90 90 90 9	
Staphenson 23/05/2011 Bad turning/restoration Staphenson 23/05/2011 Bad turning/restoration Staphenson 23/05/2011 Bad turning/restoration	NE 10.95 10.40 y 4 chlorinated solvents	2 0 348 33 -1 2 4 0 27 35	53 to to dear 9.194	90 90 90 90 90 90 90 90 90 90 90 90 90 9	no odour at church
	NE 10.28 10.46 y 4 desirables solvents 10.28 10.46 y 4 desirables solvents 10.28 10.25 y 4 desirables and cart 10.28 10.25 y 4 desirables an	2 57 23 2 0 198 81	SS 10 10 clear 9.844	00 check odour centrol	
Stuphenson 23/05/2011 Sed turninghisstoration Stuphenson 23/05/2011 Sed turninghisstoration Stuphenson 23/05/2011 Sed turninghisstoration Stuphenson 23/05/2011 Sed turninghisstoration	SE 10.20 10.25 n S 10.15 10.20 n	3 0 41.8 34.9	70 ho ho	90 80 90 90 90 90 90 90 90 90 90 90 90 90 90	
Stepherson 23/05/2011 Bed turning/restoration Stepherson 23/05/2011 Bed turning/restoration	SW 10.10 10.15 y 5 vegetation and car W 10.05 10.10 n	es -2 4 1 0 298.7 51.3	79 no no 74 no no	60 60 60	
I Stephenson 23/05/2011 Bed turning/restoration T Walker 23/05/2011 Bed turning/restoration	NW 10.00 10.05 n N 16.00 16.05 y 2 exhaust fumes	2 0 148 01	78 no no dear 9,194	no no	
Stuphaneon 2055/2011 Bed suninghestoration	Value 10,00 10,00 10,00 1	2 0 200 147 220 171	52 no no clear	90	
Walker 23/05/2011 Bed turning/heatonation	E 16.10 16.15 y 1 odour control	1 2 5 0 188 104 3 0	58 no no dear 9.844	00 00	
T Walker 23/05/2011 Bed turning/restoration	S 16.00 16.25 a	3 0 190 90	52 no no	no no	
T Walker 23/05/2011 Bed turning/restoration T Walker 23/05/2011 Bed turning/restoration	SW 16.25 16.30 n W 16.30 16.35 n	4 0 188 71	00 10 10 10	00 00 00 00 00 00 00 00 00 00 00 00 00	
The same of the sa	NV 16.35 16.40 n	2 0 204 100	50 ho ho clear 9.191	no no 4 W 17 dry 4 dry	
Walker	NE 10.05 10.10 y 2 odour control	1 2 5 0 186 74 141 86	52 ho ho dear clear	60 60 60	
Walker	NE1 10.10 10.15	2 0 180 40	56 to no clear 9.644	00 00 00 00	
Walker	NE 10.05 10.10 y 2 edeur control NE1 10.10 10.15 E 10.15 10.20 h SE 10.20 10.25 h		Ten En En	la la	
TWalker 2505/2011 Sed turnigibestation TWalker 2405/2011 Sed turnigibestation	NE1 10:10 10:15 E 10:15 10:20 6 SE 10:20 10:25 6 S 10:23 10:30 6 S 10:25 10:30 6	3 0 156 101			
Walker	S 10.25 10.30 10 S 10.25 10.30 in SW 10.30 10.35 in	3 0 156 101 4 0 4 0 186 100	62 100 100 100 100 100 100 100 100 100 10	no n	
TWaker	SE 10.25 10.25 10.25 10.35 10.	3 0 156 101 4 0 186 100 2 0 186 100	62 ho ha 68 ho ho	90 N0	complaint of odour in church meadow engineer noted no odour present upon inspection. Complaint 17:25 from
T Walker 24/05/2011 Bed turning/restoration T Mollor 24/05/2011 Bod turning/restoration	SE 10.25 10.25 10.25 10.35 10.	3 0 1560 1001 4 0 1560 1001 4 0 1560 1000 2 0 1560 01 2 0 1560 07	62 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	kan kana ka ku ta ku ta ku	complaint of obsert in church masdow engineer noted no obser present upon inspection. Complaint 17 25 from the lains again no obser defected
T Walker 24/05/2011 Bed turning/restoration T Mollor 24/05/2011 Bod turning/restoration	SE 10.25 10.25 10.25 10.35 10.	3 0 156 107 4 0 156 107 2 0 166 100 2 0 166 100 2 0 166 170 2 0 166 170 2 0 166 170 2 0 166 170 2 0 166 170	50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	kan kana ka ku ta ku ta ku	complained of colours in shouth meadow engineer robed his obserpment upon respection. Complains 17,25 foor the lates again no obser-detected.
T Walker 24/05/2011 Bed turning/instoration	\$ 16.024 16.006 9W 10.00 10.026 W 10.00 10.006 W 10.00 10.006 W 10.00 10.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006	9 9 156 101 4 9 156 102 7 9 186 102 9 9 186 116 9 9 186 117 9 186	C C C C C C C C C C	Yes none 4.8 W 19 dy 2 dry no 10 no	congisient of observe church measter engineer redied no other present upon respection. Complaint 17 25 for the farm again no oblind detected
T Walker 24/05/2011 Bed turning/instoration	\$ 16.024 16.006 9W 10.00 10.026 W 10.00 10.006 W 10.00 10.006 W 10.00 10.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006		2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Yes Some 4.8 VV 19 by 2 day 60 40 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	complete of other in sharth meadow engineer robot to other present quin respection. Complete V 25 for the five again no obtain detected.
T Walker 24/05/2011 Bed turning/instoration	\$ 16.024 16.006 9W 10.00 10.026 W 10.00 10.006 W 10.00 10.006 W 10.00 10.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006	1	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Yea some 4.5 W 19 day 2 day 3	complained and control through recording regiment record on other present open inspection. Complaint 17.25 for the larm again on other detected.
T Walker 24/05/2011 Bed turning/instoration	\$ 16.024 16.006 9W 10.00 10.026 W 10.00 10.006 W 10.00 10.006 W 10.00 10.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006 W 16.00 16.006	1	1	Yea none 4.8 W 19 by 2 by 00 00 <	Completed of other in church massless engineer resid in other present given respective. Completed 17.25 for the large again in other described.
T Walker 24/05/2011 Bed turning/restoration T Mollor 24/05/2011 Bod turning/restoration	SE 10.25 10.25 10.25 10.35 10.	1	2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Yea some 4.5 W 19 day 2 day 3	complete of other in the child matcher originary rolled in older present quin respection. Congest of 25 for the law agen no older diseased.

T Walker 25/05/2011 Bed turning/restoration	3	10.50	10.55 n				3	0	188	8 74	R4	00				00	00					T
T Walker 25/05/2011 Bed turning/restoration	3W	10.55	11.00 n				4		- 100		71	no no				00	10					·
T Walker 25/06/2011 Bed turning/restoration	N	11.00	11.05 n				4	0	176	6 56	74	no no				no	no					-
T Walker 25/05/2011 Bed turning/restoration	aw .	11.05	11 10 n				2	0			78	00				00	00					1
T Walker 25/05/2011 excepting in grids H14-bed turning/restoration	4	15.00	15.05 n				2	0	_		62	00 00		lear	9 191	00	00	14 9	19	dry 2	dev	1
T Walker 25/05/2011 excepting in ords H14-bed turning restoration	VE .	15.05	15.10 n				2				64	no no		dear		00	10					·
T Walker 25/05/2011 excavating in grids H14/bed turning/restoration	ØF1	15.05	15 10											lear		00	00					1
T Walker 25/05/2011 excepting in ords H14-bed turning restoration		15 10	15 15 v	2	solvent	-1	2	5 0	_		68	00 00		fear	9.642	00	00					1
T Walker 25/05/2011 excepting in grids H14-bed turning/restoration		15.15					3	. 0			70	no no				00	10					·
T Walker 25/05/2011 exceptains in ords H14-bed turning restoration	3	15.20	15.25 n				9	0	_		68	00				00	00					1
T Walker 25/05/2011 excavating in grids H14/bed turning/restoration		15.25					4	0			74	00 00				00	00					·
T Walker 25/05/2011 excavating in grids H14/bed turning/restoration	N	15.30	15.35 n				4	0	_		78	00 00				00	00					1
T Walker 25/05/2011 acrosotion in mids H14/had turning/astroption		15.35		-	odour control	0	2	1 0	_		82	00 00				00	00		_			+
T Walker 26/05/2011 Bed turning/restoration	4	8.45					2	0	208	6 141	62	00 00		lear	9.186	00	00	5 0	16	dry 8	dev	·
T Walker 26/05/2011 Bed turning/restoration	ØF.	8.50	8.55 V	2	odour control	2	2	1 0	146	6 91	60	00 00		fear		00	00	-	- 1			·
T Walker 26/05/2011 Bart turninn/testuration	ØF1	8.50							180	0 89			-	fear		00	00		_		-1	1
T Walker 26/05/2011 Bad turning/restoration		8.55			1		2		160		62	00 00		Sear	0.644	00	00		_		-1	1
T Walker 26/05/2011 Bed turning/restoration		9.00		3	odour control	1	3	1 0	10.		60	no no				00	10	-	_	1		1
T Walker 26/05/2011 Bed turning/restoration		9.05		_ F		_	3		158	8 70	70	no no				00	10		_			-
T Walker 26/05/2011 Bed turning/restoration	SW .	9.10	915.0				4	0			68	00				00	00					·
T Walker 28/05/2011 Bed turning/restoration	N	9.15	9.20 0				4	0	218	8 108	72	00 00				00	00					·
T Walker 26/05/2011 Bed turning/restoration	w	9.20	9.25 n				2	0	-		76	no no				00	10		_			-
T Walker 28/05/2011 Bed turning/restoration	9	16.30	16 35 n				2	0	201	0 101	56	00		lear	9.186	00	00	6 w	16	rain 7	mor.	·
T Walker 26/05/2011 Bart turninn/testuration	ØF.	16.35	16.40 6				2	0	180	0 171	58	00 00		lear		00	00		- 1			·
T Walker 26/05/2011 Bed turning/restoration	VE1	16.35	16.40					_	170	0 184	-			lear		00	00	-	_			1
T Walker 26/05/2011 Bed turning/restoration		16.40					2	- 0	201	1 191	60	00 00		Sear	0.644	00	00		_			+
T Walker 26/05/2011 Bed turning/restoration		16.45					3	0			62	00 00				00	00					1
T Walker 26/05/2011 Bed turning/restoration		16.50					3		201	1 204	64	no no				00	10					1
T Walker 26/05/2011 Bad turning/restoration		17.00					4		-		70	00 00				00	00		_			+
T Walker 26/05/2011 Bed turning/restoration	N	17.05	17.10 n				4	0	240	0 236	72	00 00				00	00					1
T Walker 28/05/2011 Bed turning/restoration	aw .	17.10	17.15 n				2	0			80	00 00				00	00					1
	-								_								-		_			1 complaint from Church Road of very strong chemical odours 45. Investigated complaint non odours detected
T Walker 27/05/2011 Bed turning/restoration	a a	10.30	10.35 v	2	odour control	.1	2	5 0	186	6 101	56	00		tear	0.186	00	on.	13 mw	15	a dry 8	dev	upon visiting location.
T Walker 27/05/2011 Bed turning/restoration	ØF.	10.35	10.40 v	4	odour control	-1	2	5 0	171	1 104	50	00 00		dear		00	00	1.00	- 1			
T Walker 27/05/2011 Bad turning/restoration		10.40							204	4 141				lear		00	00		_			-
T Walker 27/05/2011 Bed turning/restoration		10.46					2	0	186		60	00 00		lear	9.644	00	00					*
T Walker 27/05/2011 Bed turning/restoration	3F	10.50					3	0	-		67	00 00				00	00					*
T Walker 27/06/2011 Bed turning/restoration		10.55					9	1 6	191	1 76	70	00 00	_			00	00		_		-1	1
T Walker 27/05/2011 Bad turning/restoration		11.00		2	odour control	1	4	5 0	- 12		80	00 00				00	00		_		-1	1
T Walker 27/05/2011 Bed turning/restoration	N	11.05	11.10 n				4		246	6 121	80	no no				00	10					-
T Walker 27/05/2011 Bad turning/restoration	an .	11 10		9	traffic fumes	.1	2	1 0	-		79	00 00	_			00	00		_		-1	1
I Stephenson 27/05/2011 excavating in grids/bed turning/moving beds/sealing up for weekend	4	15.40		,		_	2	ľ	128	8 112	62	00 00		lear	9.206	00	00	2 nw	15	cloudy 6	damo	no odour at church
Stephenson 27/05/2011 excevating in ords/bed turning/moving beds/sealing up for weekend	VE.	15.35	15.40 n				2	0	101	9 63	61	no no		lear		00	10	-	- 13		- Land	
I Stephenson 27/05/2011 excavating in grids/bed turning/moving beds/sealing up for weekend	VE1	15.30							56	92				dear		no	ne		_		-1	1
Stephenson 27/05/2011 excevating in orids/bed turning/moving beds/sealing up for weekend		15.25			1		2		198	8 261	56	00 00		Sear	9.641	00	00		_		-1	1
Stephenson 27/05/2011 excevating in ords/bed turning/moving beds/sealing up for weekend		15.20					3	l ő	1.00		69	00 00				00	00		_		-1	1
Stephenson 27/55/2011 excevating in ands/bed turning/moving beds/sealing up for weakerd		15.15	15.20 n				3	0	61	42	68	no no				00	10		_			-
Stephenson 27/05/2011 excevating in orids/bed turning/moving beds/sealing up for weekend	3W	15 10	15 15 6				4	1 6	-		77	00 00	_			00	00		_		-1	1
Stephenson 27/05/2011 exceptating in grids/bed turning/moving beds/sealing up for weekend	N	15.05	15.10 n				4	0	207	7 19	74	no no				00	10	-	_	1		+
I Stephenson 27/05/2011 excavating in grids/bed turning/moving beds/sealing up for weekend	w	15.00	15.05 n				2	0			78	no no				00	10		_			-
											_						•					



Appendix C

Long term Passive VOC Monitoring



St. Martins House, 77 Wales Street Winchester, Hampshire SO23 0RH tel.: 01962 860331 fax: 01962 841339 e-mail: diffusion@gradko.co.uk

LABORATORY ANALYSIS REPORT

PE6MS0990 **REPORT NO. CUSTOMER VERTASE FLI GRADKO LAB REF** PE6F0720-0729 **BOOKING REF. NUMBER** E 2541A

SEMI- QUANTITATIVE ANALYSIS FOR TOP 10 COMPOUNDS ON UNICARB DIFFUSION TUBES BY GCMS Analysis has been carried out in accordance with in-house method GLM 13

23.05.11

Tube Number GRA 04751 Tube Location Church Rd **Exposure Time (mins)** 40320

TOP 10 Compounds ng on tube ppb in air* µат-3* 4.42 0.05 0.36 Tetrachloroethylene

1 Compound Detected

DATE SAMPLES RECEIVED

Tube Number GRA 04131 Tube Location WWTW 40320 **Exposure Time (mins)**

TOP 10 Compounds

No Compounds Detected

Tube Number GRA 08100 Tube Location South **Exposure Time (mins)** 40320

TOP 10 Compounds ng on tube ppb in air* μgm-3* 3.62 0.04 0.29 Tetrachloroethylene

1 Compound Detected

GRA 08142 **Tube Number Tube Location South West Exposure Time (mins)** 40320

TOP 10 Compounds ng on tube ppb in air* μgm-3* 5.67 Tetrachloroethylene 69.74 0.86 Acetone 4.29 0.05 0.12 Trichloromonofluoromethane 4.08 0.05 0.28

3 Compounds Detected

REPORT OFFICIALLY CHECKED

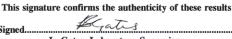
Calculations and assessments involving the exposure procedures and periods provided by the client are not within the scope of our Quality System. Those results obtained using exposure data shall be indicated by an asterisk. Any queries concerning the data in this report should be directed to the Laboratory Manager Gradko International Ltd.

Form LQF32e Issue 3 - March 2011

Report Number PE6MS0990

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Gradko International Ltd



St. Martins House, 77 Wales Street Winchester, Hampshire SO23 0RH tel.: 01962 860331 fax: 01962 841339 e-mail:diffusion@gradko.co.uk

LABORATORY ANALYSIS REPORT

Tube Number Tube Location Exposure Time (mins)	GRA 05167 West 40320			
TOP 10 Compounds Tetrachloroethylene Butane Acetone Trichloromonofluoromethane Trichloroethylene 5 Compounds Detected		ng on tube 152.69 8.11 5.18 3.93 2.57	ppb in air* 1.89 0.10 0.06 0.05 0.03	μgm-3* 12.42 0.23 0.15 0.27 0.17
Tube Number Tube Location Exposure Time (mins)	GRA 05356 North West 40320			
TOP 10 Compounds Tetrachloroethylene Butane Acetone Trichloroethylene Trichloromonofluoromethane Butane, 2-methyl- 6 Compounds Detected		ng on tube 136.35 10.26 7.86 4.92 4.58 3.41	ppb in air* 1.69 0.13 0.10 0.06 0.06 0.04	μgm-3* 11.09 0.30 0.23 0.32 0.31 0.12
Tube Number Tube Location Exposure Time (mins)	GRA 03242 North 40320			
TOP 10 Compounds Tetrachloroethylene 1 Compound Detected		ng on tube 27.54	ppb in air* 0.34	μgm-3* 2.24
Tube Number Tube Location Exposure Time (mins)	GRA 08131 North East 40320			
TOP 10 Compounds Tetrachloroethylene Trichloroethylene Acetone Butane		ng on tube 118.32 9.65 7.70 7.40	ppb in air* 1.47 0.12 0.10 0.09	μgm-3* 9.63 0.62 0.22 0.21

Calculations and assessments involving the exposure procedures and periods provided by the client are not within the scope of our Quality System. Those results obtained using exposure data shall be indicated by an asterisk. Any queries concerning the data in this report should be directed to the Laboratory Manager Gradko International Ltd.

Form LQF32e Issue 3 - March 2011

Report Number PE6MS0990

Gradko International Ltd
This signature confirms the authenticity of these results

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L. Gates, Laboratory Supervisor

REPORT OFFICIALLY CHECKED



St. Martins House, 77 Wales Street Winchester, Hampshire SO23 0RH tel.: 01962 860331 fax: 01962 841339 e-mail:diffusion@gradko.co.uk

LABORATORY ANALYSIS REPORT

Trichloromonofluoromethane 4.87 0.06 0.33

5 Compounds Detected

Tube Number GRA 06601
Tube Location East
Exposure Time (mins) 40320

TOP 10 Compoundsng on tubeppb in air*μgm-3*Tetrachloroethylene77.840.976.33Trichloroethylene3.350.040.22

2 Compounds Detected

Tube NumberGRA 06715Tube LocationSouth EastExposure Time (mins)40320

TOP 10 Compoundsng on tubeppb in air*μgm-3*Tetrachloroethylene104.911.308.53Trichloroethylene2.400.030.15

2 Compounds Detected

Date of Analysis 02.06.11

Analyst's Name G. Aikman Date of Report 06.06.11

Calculations and assessments involving the exposure procedures and periods provided by the client are not within the scope of our Quality System. Those results obtained using exposure data shall be indicated by an asterisk. Any queries concerning the data in this report should be directed to the Laboratory Manager Gradko International Ltd.

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Report Number PE6MS0990

Gradko International Ltd
This signature confirms the authenticity of these results

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Appendix D

Directional Dust Monitoring

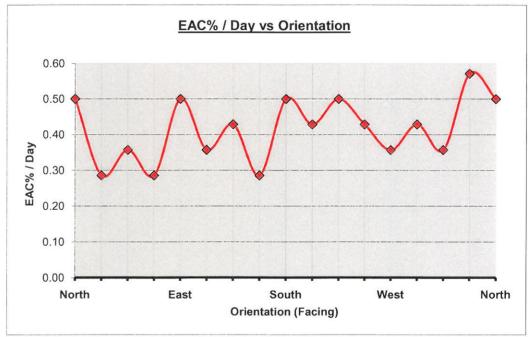


Gauge Number-North Location 907BRI

Sticky Pad Data

Date On O3/05/2011 Date Off 17/05/2011 Days = 14
Clean = 100

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	93	360	North	0.50
20	92	337		0.57
40	95	314		0.36
60	94	291		0.43
80	95	269	West	0.36
100	94	246		0.43
120	93	223		0.50
140	94	200		0.43
160	93	177	South	0.50
180	96	154		0.29
200	94	131	3,5,000	0.43
220	95	109		0.36
240	93	86	East	0.50
260	96	63		0.29
280	95	40		0.36
300	96	17		0.29
315	93	0	North	0.50



Note:

Cells coloured red are inputs.

The rest are either constants or calculated values.

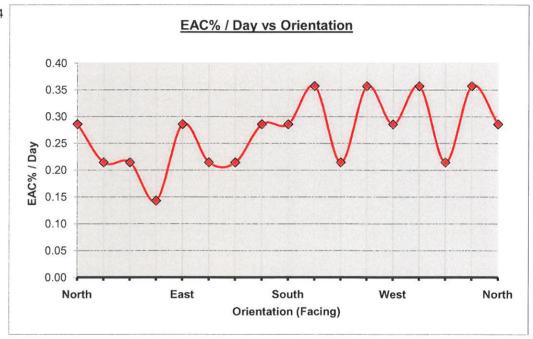


Gauge Number-East Location 907BRI

Sticky Pad Data

Date On 03/05/2011 Date Off 17/05/2011 Days = 14
Clean = 100

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	96	360	North	0.29
20	95	337		0.36
40	97	314		0.21
60	95	291		0.36
80	96	269	West	0.29
100	95	246		0.36
120	97	223		0.21
140	95	200		0.36
160	96	177	South	0.29
180	96	154		0.29
200	97	131		0.21
220	97	109		0.21
240	96	86	East	0.29
260	98	63		0.14
280	97	40		0.21
300	97	17		0.21
315	96	0	North	0.29



Note:

Cells coloured red are inputs.

The rest are either constants or calculated values.

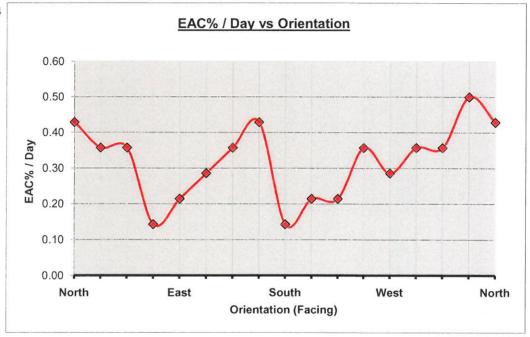


Gauge Number-West Location 907BRI

Sticky Pad Data

Date On 03/05/2011 Date Off 17/05/2011 Days = 14 Clean = 100

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	94	360	North	0.43
20	93	337		0.50
40	95	314		0.36
60	95	291		0.36
80	96	269	West	0.29
100	95	246		0.36
120	97	223		0.21
140	97	200		0.21
160	98	177	South	0.14
180	94	154		0.43
200	95	131		0.36
220	96	109		0.29
240	97	86	East	0.21
260	98	63		0.14
280	95	40		0.36
300	95	17		0.36
315	94	0	North	0.43



Note:

Cells coloured red are inputs.

The rest are either constants or calculated values.

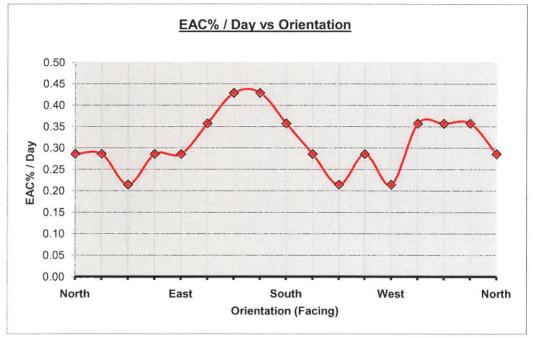


Gauge Number-NE1 Location 907BRI

Sticky Pad Data

Date On O3/05/2011 Date Off 17/05/2011 Days = 14
Clean = 100

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	96	360	North	0.29
20	95	337		0.36
40	95	314		0.36
60	95	291		0.36
80	97	269	West	0.21
100	96	246		0.29
120	97	223		0.21
140	96	200		0.29
160	95	177	South	0.36
180	94	154		0.43
200	94	131		0.43
220	95	109		0.36
240	96	86	East	0.29
260	96	63		0.29
280	97	40		0.21
300	96	17		0.29
315	96	0	North	0.29



Note:

Cells coloured red are inputs.

The rest are either constants or calculated values.

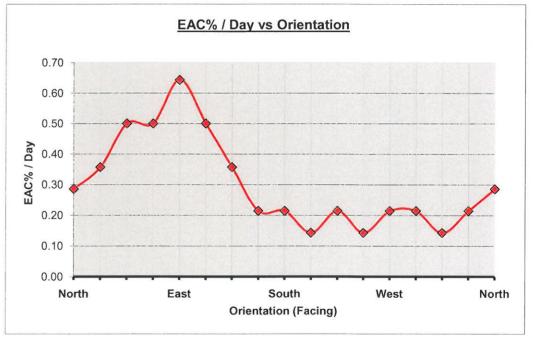


Gauge Number-NE2 Location 907BRI

Sticky Pad Data

Date On O3/05/2011 Date Off 17/05/2011 Days = 14 Clean = 100

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	96	360	North	0.29
20	97	337		0.21
40	98	314		0.14
60	97	291		0.21
80	97	269	West	0.21
100	98	246		0.14
120	97	223		0.21
140	98	200		0.14
160	97	177	South	0.21
180	97	154		0.21
200	95	131		0.36
220	93	109		0.50
240	91	86	East	0.64
260	93	63		0.50
280	93	40		0.50
300	95	17		0.36
315	96	0	North	0.29



Note:

Cells coloured red are inputs.

The rest are either constants or calculated values.

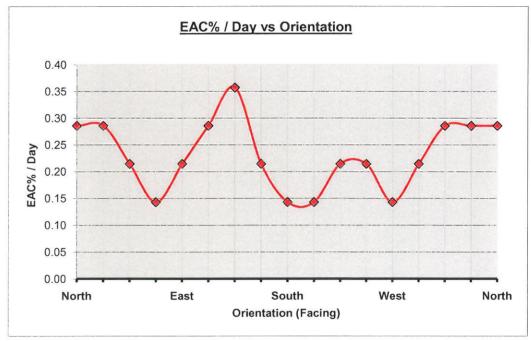


Gauge Number-South Location 907BRI

Sticky Pad Data

Date On O3/05/2011 Date Off 17/05/2011 Days = 14
Clean = 100

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	96	360	North	0.29
20	96	337		0.29
40	96	314		0.29
60	97	291		0.21
80	98	269	West	0.14
100	97	246		0.21
120	97	223		0.21
140	98	200		0.14
160	98	177	South	0.14
180	97	154		0.21
200	95	131		0.36
220	96	109		0.29
240	97	86	East	0.21
260	98	63		0.14
280	97	40		0.21
300	96	17		0.29
315	96	0	North	0.29



Note:

Cells coloured red are inputs.

The rest are either constants or calculated values.

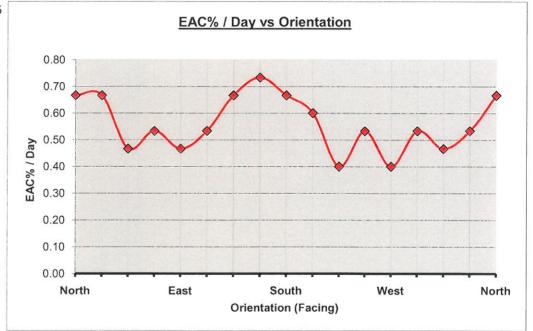


Gauge Number-East Location 907BRI

Sticky Pad Data

Date On Clean = 17/05/2011 Date Off 01/06/2011 Days = 15

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	90	360	North	0.67
20	92	337		0.53
40	93	314		0.47
60	92	291		0.53
80	94	269	West	0.40
100	92	246		0.53
120	94	223		0.40
140	91	200		0.60
160	90	177	South	0.67
180	89	154		0.73
200	90	131		0.67
220	92	109		0.53
240	93	86	East	0.47
260	92	63		0.53
280	93	40		0.47
300	90	17		0.67
315	90	0	North	0.67



Note:

Cells coloured red are inputs.

The rest are either constants or calculated values.

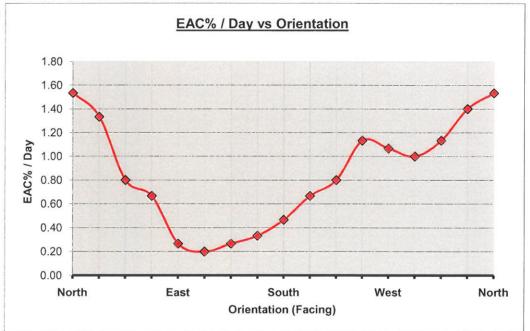


Gauge Number-West Location 907BRI

Sticky Pad Data

Date On Clean = 17/05/2011 Date Off 01/06/2011 Days = 15

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	77	360	North	1.53
20	79	337		1.40
40	83	314		1.13
60	85	291		1.00
80	84	269	West	1.07
100	83	246		1.13
120	88	223		0.80
140	90	200		0.67
160	93	177	South	0.47
180	95	154		0.33
200	96	131		0.27
220	97	109		0.20
240	96	86	East	0.27
260	90	63		0.67
280	88	40		0.80
300	80	17		1.33
315	77	0	North	1.53



Note:

Cells coloured red are inputs.

The rest are either constants or calculated values.

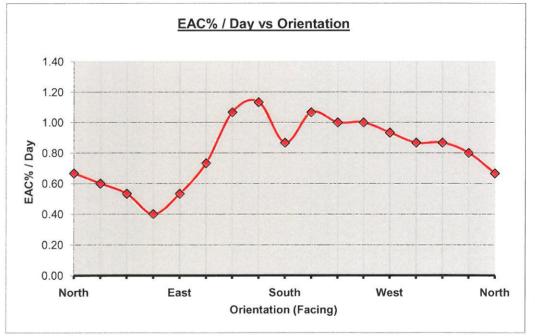


Gauge Number-NE1 Location 907BRI

Sticky Pad Data

Date On Clean = 17/05/2011 Date Off 01/06/2011 Days = 15

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	90	360	North	0.67
20	88	337		0.80
40	87	314		0.87
60	87	291		0.87
80	86	269	West	0.93
100	85	246		1.00
120	85	223		1.00
140	84	200		1.07
160	87	177	South	0.87
180	83	154		1.13
200	84	131		1.07
220	89	109		0.73
240	92	86	East	0.53
260	94	63		0.40
280	92	40		0.53
300	91	17		0.60
315	90	0	North	0.67



Note:

Cells coloured red are inputs.

The rest are either constants or calculated values.



Appendix E Groundwater Level Data

Former Bayer Cropscience Site Groundwater and surface water levels

Date	BH6/06	S3/4	BH4	BH10B/06	BH9	S1/8	BH11*	S2/6	BHB1	W1 (n)	W2	W3 (s)	Riddy 1	Riddy 2	Riddy 3	Riddy 4	V F12	V N3	WS16	P107	P73
03/05/2011	10.090	10.200	9.784	Covered	10.299	Lost	9.489	Covered	9.240	No Access	No Access	DRY	9.216	9.264	9.532	9.645	9.948	9.902	9.956	10.023	10.105
04/05/2011	10.100	10.269	9.754	Covered	10.299	Lost	9.545	Covered	9.230	No Access	No Access	DRY	9.199	9.264	9.530	9.644	9.948	9.912	9.956	10.007	10.106
05/05/2011	10.098	10.262	9.633	Covered	10.297	Lost	9.537	Covered	9.213	No Access	No Access	DRY	9.194	9.261	9.529	9.639	9.940	9.906	9.956	10.005	10.104
06/05/2011	10.099	10.266	9.823	Covered	10.299	Lost	9.536	Covered	9.194	No Access	No Access	DRY	9.193	9.260	9.530	9.639	9.944	9.902	No Access	10.006	10.104
09/05/2011	10.088	10.267	9.813	Covered	10.289	Lost	9.544	Covered	9.167	No Access	No Access	DRY	9.191	9.257	9.529	9.639	9.939	9.872	No Access	9.993	10.104
10/05/2011	10.083	10.262	9.800	Covered	10.283	Lost	9.549	Covered	9.160	No Access	No Access	DRY	9.190	9.255	9.528	9.638	9.938	9.833	No Access	9.951	10.110
11/05/2011	9.977	10.270	9.772	Covered	10.278	Lost	9.550	Covered	9.145	No Access	No Access	DRY	9.188	9.253	9.525	9.637	9.925	9.819	No Access	9.930	10.091
12/05/2011	9.960	10.267	9.771	Covered	10.268	Lost	9.550	Covered	9.141	No Access	No Access	DRY	9.188	9.253	9.527	9.637	9.932	9.816	No Access	9.925	10.087
13/05/2011	9.957	10.239	9.767	Covered	10.267	Lost	9.549	Covered	9.138	No Access	No Access	DRY	9.188	9.252	9.526	9.637	9.931	9.818	No Access	9.925	10.085
16/05/2011	9.951	10.247	10.764	Covered	10.447	Lost	9.622	Covered	9.130	No Access	No Access	DRY	9.193	9.243	9.520	9.639	9.930	9.792	9.829	9.880	9.983
17/05/2011	10.089	10.243	9.813	Covered	10.241	Lost	9.644	Covered	9.170	No Access	No Access	DRY	9.159	9.222	9.519	9.613	9.963	9.783	9.821	9.852	9.983
18/05/2011	10.083	10.241	9.807	Covered	10.240	Lost	9.654	Covered	9.180	No Access	No Access	DRY	9.165	9.203	9.518	9.598	9.962	9.851	No Access	9.871	9.958
19/05/2011	9.988	10.110	9.741	Covered	10.239	Lost	9.658	Covered	9.117	No Access	No Access	DRY	9.166	9.220	9.528	9.647	9.932	9.822	No Access	9.863	9.943
20/05/2011	9.990	10.060	9.712	Covered	10.228	Lost	9.665	Covered	9.100	No Access	No Access	DRY	9.195	9.256	9.524	9.647	9.935	9.767	No Access	9.860	9.942
23/05/2011	9.990	10.000	9.711	Covered	10.224	Lost	9.662	Covered	9.099	No Access	No Access	DRY	9.194	9.256	9.524	9.644	9.937	9.769	9.875	-1.347	9.914
24/05/2011	9.970	9.990	9.709	Covered	10.220	Lost	9.656	Covered	9.096	No Access	No Access	DRY	9.191	9.254	9.520	9.644	9.952	9.766	9.870	9.852	9.904



Appendix F Surface Water Analysis Reports



Scientific Analysis Laboratories Certificate of Analysis

Hadfield House Hadfield Street Cornbrook Manchester M16 9FE : 0161 874 2400

Tel: 0161 874 2400 Fax: 0161 874 2468

Scientific Analysis Laboratories is a limited company registered in England and Wales (No 2514788) whose address is at Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 239394-1

Date of Report: 14-Jun-2011

Customer: VertaseFLI Limited

19 Napier Court
Barlborough Links
Barlborough
S43 4PZ

Customer Contact: The Project Management

Customer Job Reference: 907 BRI

Date Job Received at SAL: 03-Jun-2011

Date Analysis Started: 03-Jun-2011

Date Analysis Completed: 14-Jun-2011

The results reported relate to samples received in the laboratory

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with SAL SOPs



Report checked and authorised by : Amelia McVennon Project Manager Issued by : Amelia McVennon Project Manager SAL Reference: 239394 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton Suite

			SA	L Reference	239394 001	239394 002	239394 003	239394 004	239394 005	239394 006	239394 007	239394 008
	Custon	ner Sampl	e Reference	BH11	ВН9	S3/4	N3	WS107	P73	P107	BH4	
			Da	ate Sampled	31-MAY-2011							
Determinand	Method	Test Sample	LOD	Units								
Electrical Conductivity	T7	AR	10	μS/cm	1400	2500	3500	2700	3800	2800	4700	1600
pH	T7	AR			6.0	6.9	6.9	7.0	6.6	7.0	7.1	7.0

SAL Reference: 239394 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton Suite

			SA	L Reference	239394 009	239394 010	239394 011	239394 012	239394 013	239394 014	239394 015
		Custon	ner Sampl	e Reference	VF12	S3/6	BH606	RIDDY UP	RIDDY DOWN	CAM UP	CAM DOWN
			Da	te Sampled	31-MAY-2011						
Determinand	Method	Test Sample	LOD	Units			MAN DE				
Electrical Conductivity	T7	AR	10	μS/cm	1100	2900	950	880	870	1900	870
pH	T7 AR					7.0	7.1	7.6	8.0	7.7	8.0

SAL Reference: 239394 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton OP/ON Suite

			SA	L Reference	239394 001	239394 002	239394 003	239394 004	239394 005	239394 006	239394 007	239394 008
Customer Sample Reference				e Reference	BH11	ВН9	S3/4	N3	WS107	P73	P107	BH4
			D	ate Sampled	31-MAY-2011							
Determinand	Method	Test Sample	LOD	Units			70 E.K.		1000			
Dimefox	T16	AR	0.1	μg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	⁽⁹⁾ <1.0
Ethofumesate	T16	AR	0.1	μg/l	<0.1	17	3.1	12	0.2	1.2	9.7	230
Hempa	T16	AR	0.1	μg/l	<0.1	2.6	520	<0.1	6.9	<0.1	<0.1	⁽⁹⁾ <1.0
Schradan	T16	AR	0.1	μg/l	20	<0.1	1200	<0.1	9.3	(2) < 0.5	<0.1	140
Simazine	T16	AR	0.01	μg/l	0.37	<0.01	88	0.19	<0.01	1.4	9.5	0.09

SAL Reference: 239394 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton OP/ON Suite

			SA	L Reference	239394 009	239394 010	239394 011	239394 012	239394 013	239394 014	239394 015
		Custon	ner Sampl	e Reference	VF12	S3/6	BH606	RIDDY UP	RIDDY DOWN	CAM UP	CAM DOWN
			Da	ate Sampled	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011
Determinand	Method	Test Sample	LOD	Units							
Dimefox	T16	AR	0.1	μg/l	⁽⁹⁾ <1.0	⁽⁹⁾ <1.0	<0.1	<0.1	<0.1	<0.1	<0.1
Ethofumesate	T16	AR	0.1	μg/l	290	270	3.7	0.4	0.3	0.3	0.4
Hempa	T16	AR	0.1	μg/l	⁽⁹⁾ <1.0	⁽⁹⁾ <1.0	<0.1	<0.1	<0.1	<0.1	<0.1
Schradan	T16	AR	0.1	μg/l	27	8800	2.9	<0.1	<0.1	<0.1	3.4
Simazine	T16	AR	0.01	μg/l	3.2	(2) < 2.0	<0.01	<0.01	<0.01	<0.01	<0.01

SAL Reference: 239394 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton Phenoxy Acid Herbs Suite

			SA	L Reference	239394 001	239394 002	239394 003	239394 004	239394 005	239394 006	239394 007	239394 008
		Custor	ner Samp	le Reference	BH11	ВН9	S3/4	N3	WS107	P73	P107	BH4
			D	ate Sampled	31-MAY- 2011							
Determinand	Method	Test Sample	LOD	Units								
Dicamba	T16	AR	0.1	μg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorprop	T16	AR	0.1	μg/l	<0.1	<0.1	1.6	<0.1	0.5	<0.1	<0.1	1.1
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	μg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	5.2
Mecoprop	T16	AR	0.1	μg/l	7.2	32	29	31	33	34	28	28

SAL Reference: 239394 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton Phenoxy Acid Herbs Suite

			SA	L Reference	239394 009	239394 010	239394 011	239394 012	239394 013	239394 014	239394 015
		Custon	ner Sampl	e Reference	VF12	S3/6	BH606	RIDDY UP	RIDDY DOWN	CAM UP	CAM DOWN
		- 2	Da	ate Sampled	31-MAY- 2011						
Determinand	Method	Test Sample	LOD	Units							
Dicamba	T16	AR	0.1	μg/l	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorprop	T16	AR	0.1	μg/l	<0.1	18	6.9	1.5	0.2	<0.1	<0.1
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	μg/l	0.4	47	27	7.4	2.9	1.4	0.1
Mecoprop	T16	AR	0.1	µg/l	14	31	13	7.6	3.6	2.8	3.4

SAL Reference: 239394 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton SVOC Suite

			SA	L Reference	239394 001	239394 002	239394 003	239394 004	239394 005	239394 006	239394 007	239394 008
		Custor	ner Sampl	e Reference	BH11	ВН9	S3/4	N3	WS107	P73	P107	BH4
			Da	ate Sampled	31-MAY-2011							
Determinand	Method	Test Sample	LOD	Units	77437		Part .		2/			
2,4,6-Trichlorophenol	T16	AR	10	μg/l	<10	<10	<10	<10	<10	<10	30	<10
2-Methyl-4,6-dinitrophenol	T16	AR	10	μg/l	<10	<10	<10	<10	<10	<10	<10	<10
4-Chloro-2-methylphenol	T16	AR	10	μg/l	<10	<10	20	<10	<10	710	1500	<10
Bis (2-chloroethyl) ether	T16	AR	10	μg/l	20	510	1900	610	2700	1800	4700	150
Phenol	T16	AR	10	μg/l	<10	<10	<10	<10	<10	<10	<10	<10

SAL Reference: 239394
Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton SVOC Suite

			SA	L Reference	239394 009	239394 010	239394 011	239394 012	239394 013	239394 014	239394 015
	ner Sampl	e Reference	VF12	S3/6	BH606	RIDDY UP	RIDDY DOWN	CAM UP	CAM DOWN		
	ate Sampled	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011			
Determinand	Method	Test Sample	LOD	Units							
2,4,6-Trichlorophenol	T16	AR	10	μg/l	<10	1400	<10	<10	<10	<10	<10
2-Methyl-4,6-dinitrophenol	T16	AR	10	μg/l	<10	<10	<10	<10	<10	<10	<10
4-Chloro-2-methylphenol	T16	AR	10	μg/l	<10	1300	<10	<10	<10	<10	<10
Bis (2-chloroethyl) ether	T16	AR	10	μg/l	25	5400	20	<10	<10	<10	<10
Phenol	T16	AR	10	μg/l	<10	<10	<10	<10	<10	<10	<10

SAL Reference: 239394 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton VOC Suite

			SA	L Reference	239394 001	239394 002	239394 003	239394 004	239394 005	239394 006	239394 007	239394 008
		Custon	ner Sampl	e Reference	BH11	ВН9	S3/4	N3	WS107	P73	P107	BH4
			Da	ate Sampled	31-MAY-2011							
Determinand	Method	Test Sample	LOD	Units								
1,2-Dichlorobenzene	T54	AR	1	μg/l	<1	<1	<1	<1	<1	<1	<1	2
1,2-Dichloroethane	T54	AR	1	μg/l	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,2-Dichloroethylene	T54	AR	1	μg/l	3	1	<1	1	34	47	390	⁽¹⁷⁵⁾ 1300
Cyclohexanone	T54	AR	10	μg/l	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	T54	AR	1	μg/l	<1	<1	<1	<1	2	1	1	4
Toluene	T54	AR	1	μg/l	<1	<1	6	<1	<1	<1	49	6
Trichloroethene	T54	AR	1	μg/l	<1	<1	<1	<1	1	2	<1	34
Vinyl chloride	T54	AR	1	μg/l	<1	<1	<1	<1	28	31	430	370
Xylene (Total)	T54	AR	1	μg/l	<1	<1	34	<1	<1	<1	79	72

SAL Reference: 239394 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton VOC Suite

			SA	L Reference	239394 009	239394 010	239394 011	239394 012	239394 013	239394 014	239394 015
		Custon	ner Sampl	e Reference	VF12	S3/6	BH606	RIDDY UP	RIDDY DOWN	CAM UP	CAM DOWN
	Date Sample			ate Sampled	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011	31-MAY-2011
Determinand	Method	Test Sample	LOD	Units							
1,2-Dichlorobenzene	T54	AR	1	μg/l	1	⁽¹⁹⁾ 640	<1	<1	<1	<1	<1
1,2-Dichloroethane	T54	AR	1	μg/l	<1	(9,19) <100	<1	<1	<1	<1	<1
Cis-1,2-Dichloroethylene	T54	AR	1	μg/l	10	⁽¹⁹⁾ 5700	2	<1	1	<1	<1
Cyclohexanone	T54	AR	10	μg/l	<10	(19,9) < 1000	<10	<10	<10	<10	<10
Tetrachloroethene	T54	AR	1	μg/l	670	⁽¹⁹⁾ 49000	50	4	2	3	1
Toluene	T54	AR	1	μg/l	6	⁽¹⁹⁾ 12000	8	<1	<1	<1	<1
Trichloroethene	T54	AR	1	μg/l	62	⁽¹⁹⁾ 27000	19	<1	<1	<1	<1
Vinyl chloride	T54	AR	1	μg/l	2	⁽¹⁹⁾ 410	<1	<1	<1	<1	<1
Xylene (Total)	T54	AR	1	μg/l	<1	⁽¹⁹⁾ 3600	3	<1	<1	<1	<1

Index to symbols used in 239394-1

Value	Description
AR	As Received
2	LOD Raised Due to Matrix Interference
9	LOD raised due to dilution of sample
175	Results should be viewed with caution due to being outside of the instrument calibration range
19	Due to high levels the analysis was conducted on a diluted sample
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Method Index

Value	Description
T16	GC/MS
T7	Probe
T54	GC/MS (Headspace)

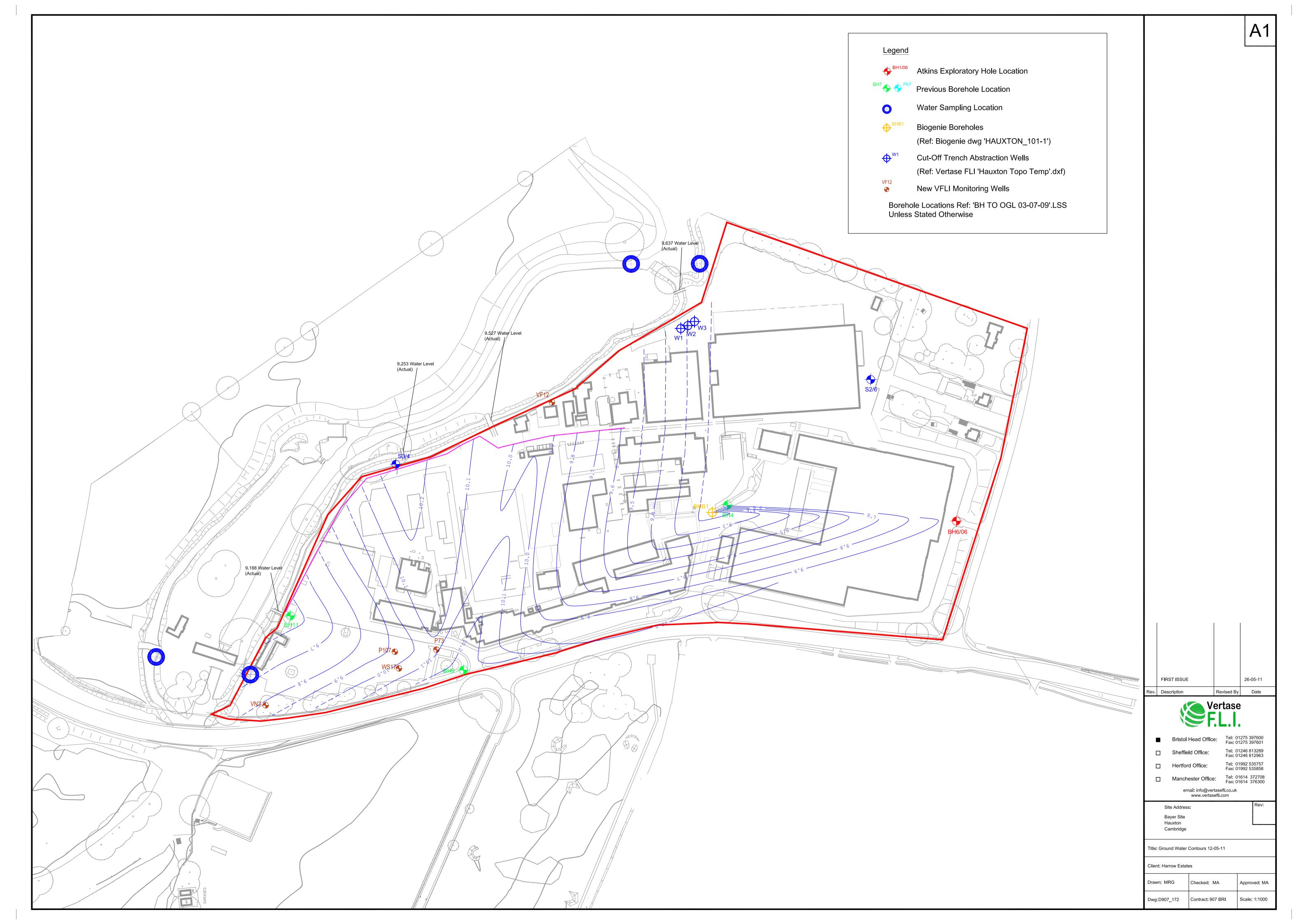
Accreditation Summary

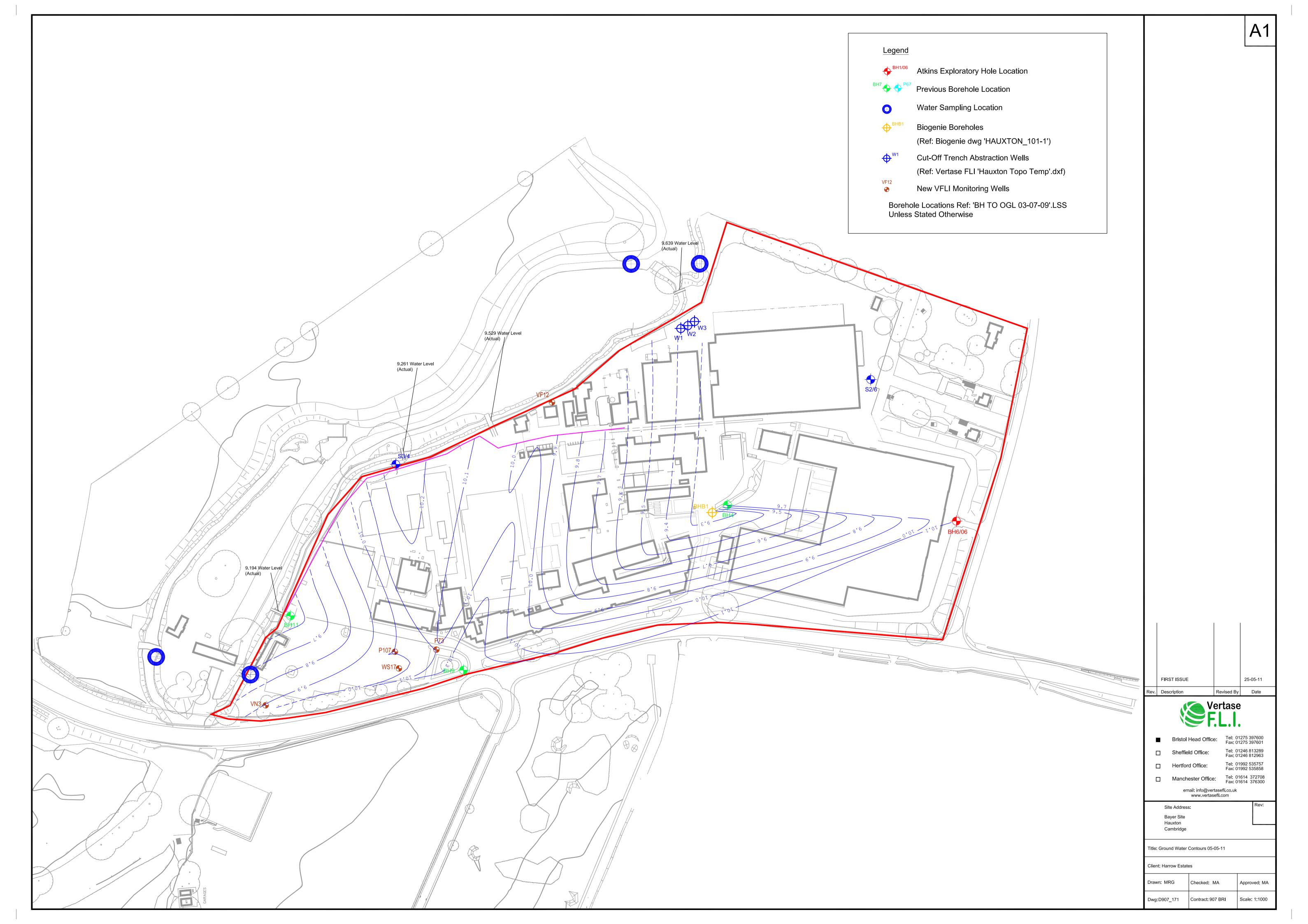
Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Electrical Conductivity	T7	AR	10	μS/cm	N	001-015
pH	T7	AR			U	001-015
Dimefox	T16	AR	0.1	μg/l	N	001-015
Ethofumesate	T16	AR	0.1	μg/l	N	001-015
Hempa	T16	AR	0.1	μg/l	N	001-015

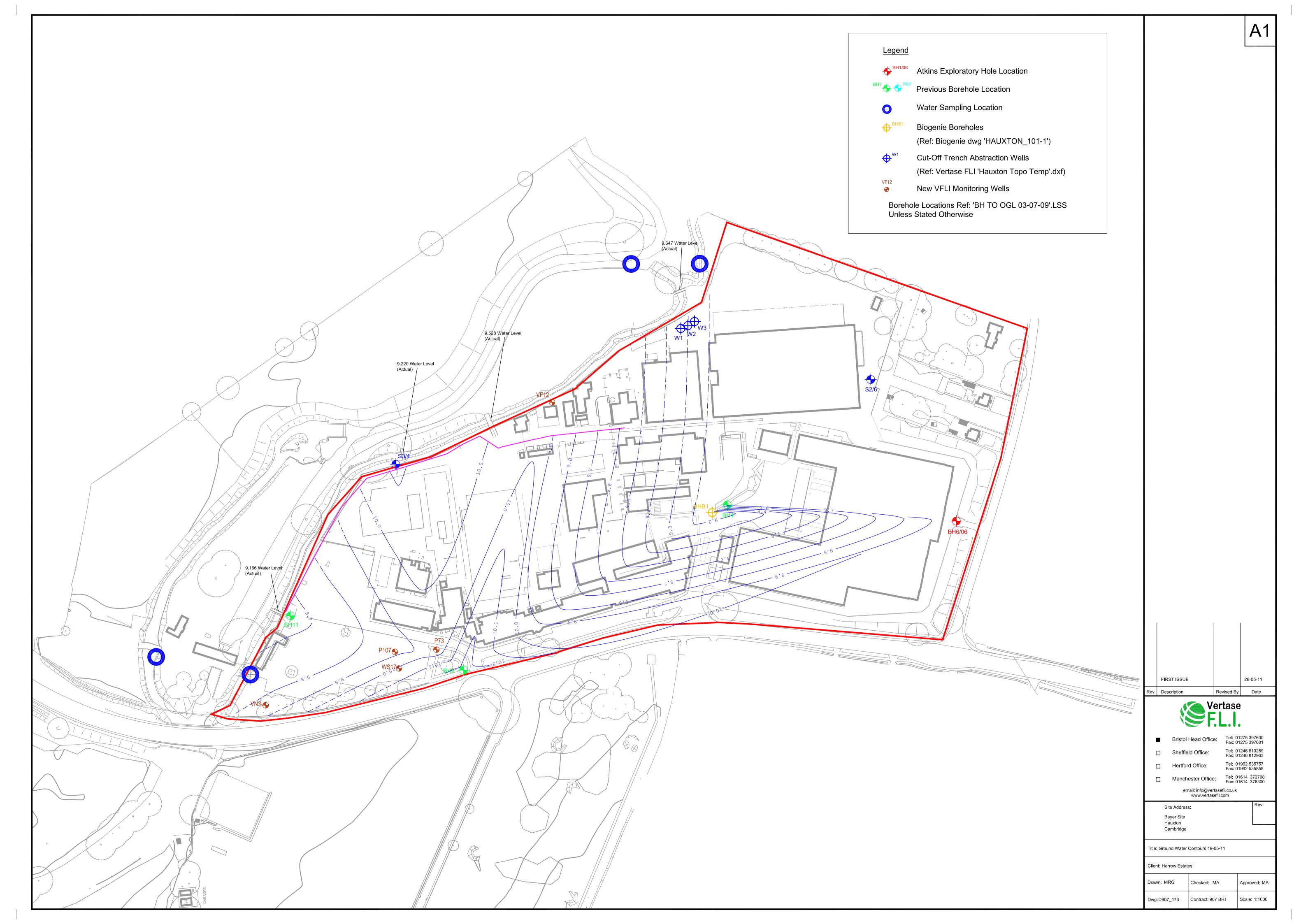
Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Schradan	T16	AR	0.1	μg/l	N	001-015
Simazine	T16	AR	0.01	μg/l	N	001-015
Dicamba	T16	AR	0.1	μg/l	N	001-015
Dichlorprop	T16	AR	0.1	μg/l	N	001-015
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	μg/l	N	001-015
Mecoprop	T16	AR	0.1	μg/l	N	001-015
2,4,6-Trichlorophenol	T16	AR	10	μg/l	U	001-015
2-Methyl-4,6-dinitrophenol	T16	AR	10	μg/l	N	001-015
4-Chloro-2-methylphenol	T16	AR	10	μg/l	N	001-015
Bis (2-chloroethyl) ether	T16	AR	10	μg/l	U	001-015
Phenol	T16	AR	10	μg/l	U	001-015
1,2-Dichlorobenzene	T54	AR	1	μg/l	U	001-015
1,2-Dichloroethane	T54	AR	1	μg/l	U	001-015
Cis-1,2-Dichloroethylene	T54	AR	1	μg/l	U	001-015
Cyclohexanone	T54	AR	10	μg/l	N	001-015
Tetrachloroethene	T54	AR	1	μg/l	U	001-015
Toluene	T54	AR	1	μg/l	U	001-015
Trichloroethene	T54	AR	1	μg/l	U	001-015
Vinyl chloride	T54	AR	1	μg/l	U	001-015
Xylene (Total)	T54	AR	1	μg/l	U	001-015

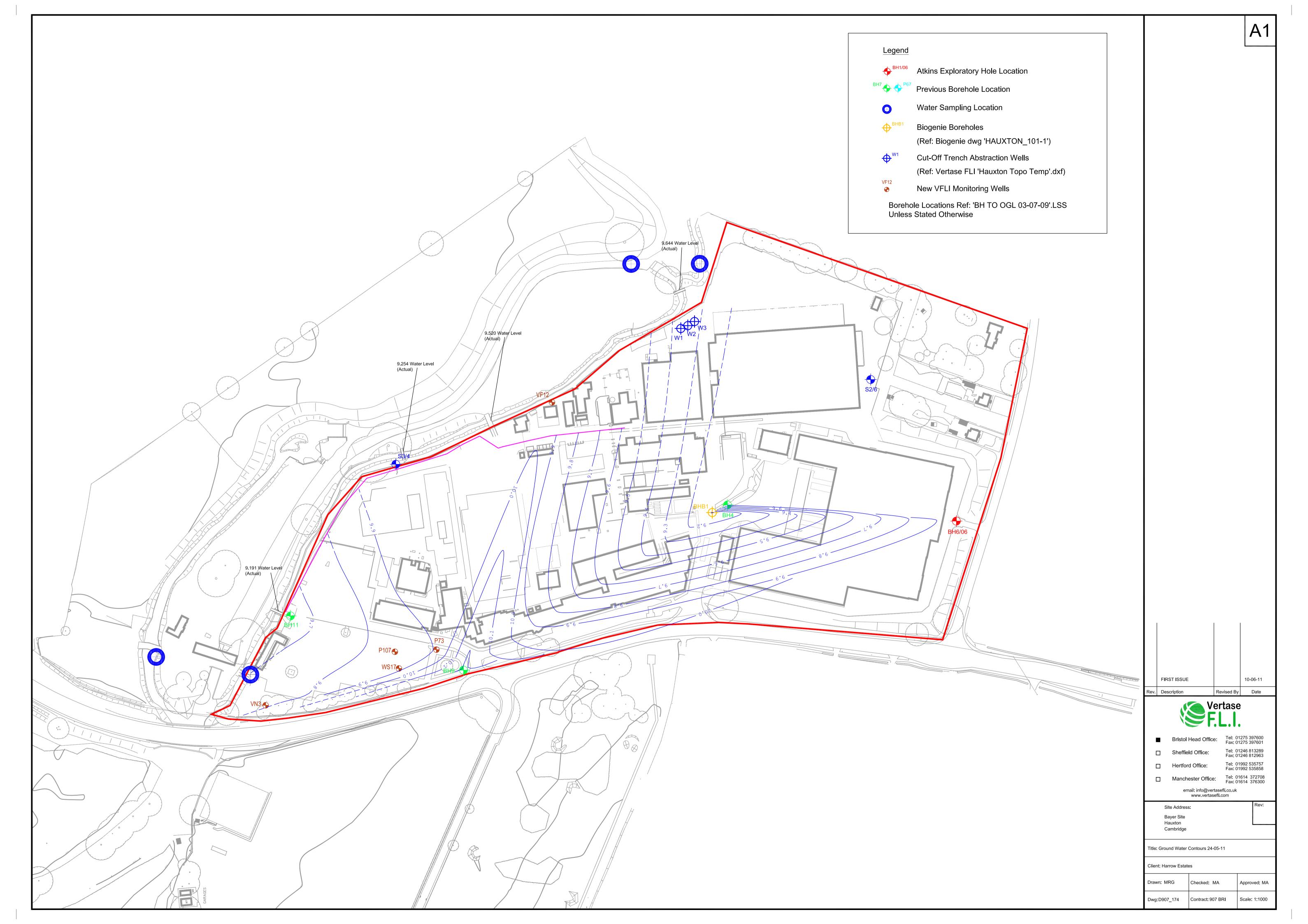


Appendix G
Groundwater Contour Plots











Appendix H
Waste Water Treatment Plant Discharge Analysis

							Suspended		Biochemical					Total Atrazine, Trietazine					
				Bromide	Chloride	Sulphate Ion	Solids (Total)	Ammoniacal Nitrogen	Oxygen Demand	рН	Atrazine	Trietazine	Simazine	and Simazine	Benazolin	2,3,6-TBA	Dicamba	Hempa	Schradan
Sample Taken	Report Date	Report Number	Sample Location	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		μg/l	μg/l	μg/l	ug/l	μg/l	μg/l	μg/l	μg/l	μg/l
	Cons	sented Levels	•	50	3000	5000	45	15	30	na	To	otal of all th	ree	250	50	20	50	274	135
01/03/2010	17/03/2010	193447	7 Discharge Point	0.30	84.00	150.00	<10	< 0.05	<3	8.4	< 0.02	0.07	< 0.01	0.07	<0.1	0.40	<0.1	<0.1	<0.1
30/03/2010	09/04/2010	195429	Discharge Point	0.40	110.00	180.00	<10	< 0.05	<3	8.7	<0.01	<0.01	<0.01	0.00	<0.1	0.30	<0.1	0.40	<0.1
08/04/2010	13/04/2010	196139	T99 Circ	<1.0	110.00	190.00	<10	< 0.05	<3	8.0	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.1	2.90	0.40
10/04/2010	19/04/2010		T100 Circ	<1.0	110.00	190.00	<10	0.05	<3	7.9	<0.01	0.01	<0.01	0.01	<0.1	<0.1	<0.1	0.90	0.30
12/04/2010		196517	7 T100 Circ	<1.0	1100.00	200.00	<10	< 0.05	<3	8.2	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.1	1.50	<0.1
28/04/2010	19/05/2010		Discharge Point	<1.0	130.00	200.00	<10	< 0.05	<3	8.1	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.1	5.10	1.50
07/05/2010			T99 Discharge	<1.0	110.00	200.00	<10	< 0.05	6.6	8.2	<0.01	<0.01	<0.01	0.00	<0.2	3.00	<0.2	3.30	0.60
18/05/2010			Discharge Point	<1.0	180.00	280.00	<10	0.09	<3	8.0	<0.01	0.01	<0.01	0.01	0.60	5.20	0.20	6.30	3.80
28/05/2010	17/06/2010		Discharge Point	<1.0	130.00	210.00	<10	< 0.05	<3	8.1	<0.01	<0.01	<0.01	0.00	<0.1	1.30	<0.1	4.30	1.10
15/06/2010	28/06/2010		WTW Discharge	2.7	240.00	320.00	<10	0.05	<3	8.1	<0.01	0.02	<0.01	0.02	<0.1	2.40	0.2	4.10	1.00
01/07/2010	19/07/2010		WWTW Discharge	3.3	290.00	370.00	13	0.07	<3	8.1	<0.01	<0.01	<0.01	0.00	<0.1	0.40	<0.1	<0.1	<0.1
05/08/2010	16/08/2010		WWTW Discharge	<1.0	160.00	300.00	<10	< 0.05	<3	8.0	0.02	0.09	0.02	0.13	<0.5	0.40	<0.1	<0.1	<0.1
19/08/2010	26/08/2010		WWTW Discharge	<0.1	160.00	260.00	<10	< 0.05	<3	7.7	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.1	<0.1	<0.1
01/09/2010	09/09/2010		WWTW Discharge	2.6	180.00	280.00	<10	< 0.05	5	8.1	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.1	2.9	<0.1
16/09/2010	29/09/2010		WWTW Discharge	<0.1	86.00	170.00	<10	0.08	<3	7.9	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.1	24	3.5
24/09/2010	04/10/2010		WWTW Discharge	<0.1	160.00	340.00	35	< 0.05	<3	8.0	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.1	24	0.6
08/10/2010	21/10/2010		WWTW Discharge	<0.1	150.00	270.00	<10	< 0.05	<3	8.2	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.1	52	2.2
21/10/2010	01/11/2010		WWTW Discharge	<0.1	200.00	240.00	11	< 0.05	<3	7.7	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.1	24	9.4
10/11/2010	22/11/2010		WWTW Discharge	<0.1	81.00	120.00	<10	< 0.05	<3	8.1	<0.01	0.03	<0.01	0.03	<0.1	0.7	<0.1	15	6.2
16/11/2010	23/11/2010		WWTW Discharge	<0.1	150.00	160.00	<10	< 0.05	<3	8.0	<0.01	<0.01	<0.01	0.00	<0.1	0.9	0.1	14	24
09/12/2010	23/12/2010		WWTW Discharge	<0.2	64.00	120.00	<10	0.73	<3	8.1	<0.01	<0.01	<0.01	0.00	<0.1	2.9	0.3	10	5.1
22/12/2010	13/01/2011		WWTW Discharge	<0.1	66.00	100.00	<10	<0.05	<3	8.0	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.01	11	8.5
13/01/2011	25/01/2011		WWTW Discharge	<0.2	92.00	140.00	<10	0.38	<3	7.6	<0.01	0.05	<0.01	0.05	<0.1	<0.1	0.1	15	6.5
15/02/2011	23/02/2011		WWTW Discharge	<0.1	170.00	220.00	<10	0.08	<3	9.1	<0.01	<0.01	<0.01	0.00	1.1	<0.1	<0.01	<0.1	<0.1
23/02/2011	09/03/2011		WWTW Discharge	1.70	200.00	250.00	<10	<0.05	<3	8.1	<0.01	<0.01	<0.01	0.00	<0.1	0.20	<0.1	0.40	0.20
02/03/2011	15/03/2011		WWTW Discharge	<0.1	220.00	290.00	<10	<0.05	<3	8.2	<0.01	0.02	<0.01	0.02	<0.1	0.4	<0.1	0.9	0.4
07/03/2011	18/03/2011		WWTW Discharge	NT	NT	NT	NT	NT	NT	8.1	NT	NT	<0.01	NT	NT	NT	0.20	0.6	0.3
23/03/2011	01/04/2011		WWTW Discharge	<0.1	190.00	210.00	<10	< 0.05	<3	7.9	<0.01	0.02	<0.01	0.02	<0.1	<0.1	<0.1	0.5	0.2
05/04/2011	13/04/2011		WWTW Discharge	<0.1	190.00	200.00	<10	< 0.05	<3	8.0	<0.01	0.03	<0.01	0.03	<0.1	0.8	<0.1	1.1	0.5
20/04/2011	03/05/2011		WWTW Discharge	<0.1	150.00	190.00	<10	<0.05	<3	4.0	<0.01	<0.01	<0.01	0.00	<0.1	<0.1	<0.1	1.2	0.4
04/05/2011	16/05/2011		WWTW Discharge	<0.2	150.00	180.00	<10	<0.01	<3	8.1	0.03	0.07	0.01	0.11	<0.1	0.8	<0.1	0.8	0.3
12/05/2011	26/05/2011		WWTW Discharge	<0.1	160.00	190.00	15	0.18	<3	8.1	0.03	0.09	<0.01	0.12	<0.1	0.3	<0.1	0.5	<0.1
18/05/2011	31/05/2011	237962	WWTW Discharge	<0.1	130.00	170.00	<10	<0.05	<3	7.9	<0.01	<0.01	<0.01	0.00	<0.1	0.2	0.1	0.4	0.1



Scientific Analysis Laboratories Certificate of Analysis

Hadfield House Hadfield Street Cornbrook Manchester M16 9FE

Tel: 0161 874 2400 Fax: 0161 874 2468

Scientific Analysis Laboratories is a limited company registered in England and Wales (No 2514788) whose address is at Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 237211-2

Date of Report: 26-May-2011

Customer: VertaseFLI Limited

19 Napier Court
Barlborough Links
Barlborough
S43 4PZ

Customer Contact: The Project Management

Customer Job Reference: 907 BRI
Customer Purchase Order: 907 BRI
Date Job Received at SAL: 13-May-2011
Date Analysis Started: 13-May-2011
Date Analysis Completed: 26-May-2011

The results reported relate to samples received in the laboratory

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

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Tests covered by this certificate were conducted in accordance with SAL SOPs



Report checked and authorised by : Amelia McVennon Project Manager Issued by : Amelia McVennon Project Manager SAL Reference: 237211 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton Suite

			L Reference	237211 001	237211 002	237211 003				
Customer Sample Reference INLET DISCHARGE PRIMA										
Date Sampled 12-MAY-2011 12-MAY-2011 12-MAY-201										
	I		I							
Determinand	Method	Test Sample	LOD	Units						
Electrical Conductivity	T7	AR	10	μS/cm	1200	1200	1300			
pH	T7	AR			8.4	8.1	8.1			

SAL Reference: 237211
Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton OP/ON Suite

vertase nauxion OF/G	JN Suite							
			SA	L Reference	237211 001	237211 002	237211 003	
		INLET	DISCHARGE	PRIMARY				
Date Sampled 12-MAY-2011 12-MAY-2011 12-MA								
Determinand	Method	Test Sample	LOD	Units			WAS A	
Dimefox	T16	AR	0.1	μg/l	0.2	<0.1	0.1	
Ethofumesate	T16	AR	0.1	μg/l	0.3	<0.1	<0.1	
Hempa	T16	AR	0.1	μg/l	7.4	0.5	6.6	
Schradan	T16	AR	0.1	μg/l	13	(162) < 1.0	16	
Simazine	T16	ΔR	0.01	ug/l	0.94	<0.01	<0.01	

SAL Reference: 237211 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton Phenoxy Acid Herbs Suite

		F-1607 No.	SA	L Reference	237211 001	237211 002	237211 003
	-	Custon	ner Samp	le Reference	INLET	DISCHARGE	PRIMARY
			D	ate Sampled	12-MAY-2011	12-MAY-2011	12-MAY-2011
Determinand	Method	Test Sample	LOD	Units			
Dicamba	T16	AR	0.1	μg/l	0.8	<0.1	0.7
Dichlorprop	T16	AR	0.1	μg/l	<0.1	<0.1	<0.1
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	μg/l	<0.1	<0.1	<0.1

μg/l

SAL Reference: 237211 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton SVOC Suite

Mecoprop

			SA	L Reference	237211 001	237211 002	237211 003
		Custor	ner Sampl	e Reference	INLET	DISCHARGE	PRIMARY
			D	ate Sampled	12-MAY-2011	12-MAY-2011	12-MAY-2011
Determinand	Method	Test Sample	LOD	Units			
2,4,6-Trichlorophenol	T16	AR	10	μg/l	<10	<10	<10
2-Methyl-4,6-dinitrophenol	T16	AR	10	μg/l	<10	<10	<10
4-Chloro-2-methylphenol	T16	AR	10	μg/l	<10	<10	<10
Bis (2-chloroethyl) ether	T16	AR	10	μg/l	<10	<10	<10
Phenol	T16	AR	10	μg/l	<10	<10	<10

SAL Reference: 237211 Customer Reference: 907 BRI

Water Analysed as Water

Vertase Hauxton VOC Suite

		237211 001	237211 002	237211 003			
		INLET	DISCHARGE	PRIMARY			
		12-MAY-2011	12-MAY-2011	12-MAY-2011			
Determinand	Method	Test Sample	LOD	Units			
1,2-Dichlorobenzene	T54	AR	1	μg/l	<1	<1	<1
1,2-Dichloroethane	T54	AR	1	μg/l	<1	<1	<1
Cis-1,2-Dichloroethylene	T54	AR	1	μg/l	<1	<1	<1
Cyclohexanone	T54	AR	10	μg/l	<10	<10	<10
Tetrachloroethene	T54	AR	1	μg/l	<1	<1	<1
Toluene	T54	AR	1	μg/l	<1	<1	<1
Trichloroethene	T54	AR	1	ua/l	<1	<1	<1

μg/l

μg/l

<1

<1

<1

<1

SAL Reference: 237211 Customer Reference: 907 BRI

T54

T54

AR

AR

Water Analysed as Water

Miscellaneous

Vinyl chloride

Xylene (Total)

		237211 001	237211 002	237211 003				
		INLET	DISCHARGE	PRIMARY				
Date Sampled 12-MAY-2011 12-MAY-2011 12-MA								
Determinand	Method	Test Sample	LOD	Units				
Ammoniacal nitrogen	T4	AR	50	μg/l	<50	180	420	
Biochemical Oxygen Demand	T7	AR	3000	μg/l	<3000	<3000	<3000	

SAL Reference: 237211 Customer Reference: 907 BRI

Water Analysed as Water

Suite A									
			SA	L Reference	237211 001	237211 002	237211 003		
Customer Sample Reference INLET DISCHARGE PRIMAR									
		ate Sampled	12-MAY-2011	12-MAY-2011	12-MAY-2011				
Determinand	Method	Test Sample	LOD	Units					
Atrazine	T16	AR	0.01	μg/l	0.67	0.03	⁽²⁾ <0.05		
Triotozino	T16	ΛD	0.01	ua/l	25	0.00	0.06		

SAL Reference: 237211 Customer Reference: 907 BRI

Water Analysed as Water

Suite B

		237211 001	237211 002	237211 003			
		INLET	DISCHARGE	PRIMARY			
	12-MAY-2011	12-MAY-2011	12-MAY-2011				
Determinand	Method	Test Sample	LOD	Units			
Benazolin	T16	AR	0.1	μg/l	<0.1	<0.1	<0.1
2,3,6-TCB	T16	AR	0.1	μg/l	58	0.3	9.1

SAL Reference: 237211 Customer Reference: 907 BRI Water Analysed as Water Suite C SAL Reference 237211 001 237211 002 237211 003 **Customer Sample Reference** INLET DISCHARGE PRIMARY Date Sampled | 12-MAY-2011 | 12-MAY-2011 | 12-MAY-2011 Test LOD Determinand Method Units ⁽⁹⁾ <1000 ⁽⁹⁾ <1000 ⁽⁹⁾ <1000 Bromide T253 AR 100 μg/l 160000 150000 Chloride T253 AR 200 μg/l 190000 T253 Sulphate ion AR 100 190000 190000 190000 μg/l Suspended Solids (Total) T2 AR 10000 <10000 15000 <10000 μg/l

SAL Reference: 237211 Customer Reference: 907 BRI Water Analysed as Water Suite D SAL Reference 237211 001 237211 002 237211 003 INLET DISCHARGE PRIMARY **Customer Sample Reference** Date Sampled | 12-MAY-2011 | 12-MAY-2011 | 12-MAY-2011 Test Sample Determinand Method LOD T16 Dicamba 0.1 0.8 < 0.1 0.7 AR μg/l T16 Hempa AR 0.1 µg/l 7.4 0.5 6.6 ⁽¹⁶²⁾ <1.0 Schradan T16 AR 0.1 13 16 <0.01 Simazine T16 AR 0.01 <0.01 μg/l

SAL Reference: 237211 Customer Reference: 907 BRI Water Analysed as Water Suite E SAL Reference 237211 001 237211 002 237211 003 **Customer Sample Reference** INLET DISCHARGE PRIMARY Date Sampled 12-MAY-2011 12-MAY-2011 12-MAY-2011 Determinand Method LOD Units Sample TVC at 22 C T34 10 cfu/ml 1600 900 4000 TVC at 37 C T34 10 560 1800 AR cfu/ml

Index to symbols used in 237211-2

Value	Description
AR	As Received
2	LOD Raised Due to Matrix Interference
162	LOD determined by matrix spike recovery
9	LOD raised due to dilution of sample
W	Analysis was performed at another SAL laboratory
S	Analysis was subcontracted
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Method Index

Value	Description
T34	Micro
T7	Probe
T2	Grav
T4	Colorimetry
T54	GC/MS (Headspace)
T253	IC(EID299)
T16	GC/MS

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Electrical Conductivity	T7	AR	10	μS/cm	N	001-003
Dimefox	T16	AR	0.1	μg/l	N	001-003
Ethofumesate	T16	AR	0.1	μg/l	N	001-003
Hempa	T16	AR	0.1	μg/l	N	001
Simazine	T16	AR	0.01	μg/l	N	001
Dicamba	T16	AR	0.1	μg/l	N	001
Dichlorprop	T16	AR	0.1	μg/l	N	001-003
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	μg/l	N	001-003
Mecoprop	T16	AR	0.1	μg/l	N	001-003
2,4,6-Trichlorophenol	T16	AR	10	μg/l	U	001-003
2-Methyl-4,6-dinitrophenol	T16	AR	10	μg/l	N	001-003
4-Chloro-2-methylphenol	T16	AR	10	μg/l	N	001-003
Bis (2-chloroethyl) ether	T16	AR	10	μg/l	U	001-003
Phenol	T16	AR	10	μg/l	U	001-003
1,2-Dichlorobenzene	T54	AR	1	μg/l	U	001-003
1,2-Dichloroethane	T54	AR	1	μg/l	U	001-003
Cis-1,2-Dichloroethylene	T54	AR	1	μg/l	U	001-003
Cyclohexanone	T54	AR	10	μg/l	N	001-003
Tetrachloroethene	T54	AR	1	μg/l	U	001-003
Toluene	T54	AR	1	μg/l	U	001-003
Trichloroethene	T54	AR	1	μg/l	U	001-003
Vinyl chloride	T54	AR	1	μg/l	U	001-003
Xylene (Total)	T54	AR	1	μg/l	U	001-003
Ammoniacal nitrogen	T4	AR	50	μg/l	U	001-003
Biochemical Oxygen Demand	T7	AR	3000	μg/l	N	001-003
рН	T7	AR			U	001
Atrazine	T16	AR	0.01	μg/l	N	001-003
Trietazine	T16	AR	0.01	μg/l	N	001-003
Benazolin	T16	AR	0.1	μg/l	N	001-003
2,3,6-TCB	T16	AR	0.1	μg/l	N	001-003
Bromide	T253	AR	100	μg/l	WU	001-003
Chloride	T253	AR	200	μg/l	WU	001-003
Sulphate ion	T253	AR	100	μg/l	WU	001-003
Suspended Solids (Total)	T2	AR	10000	μg/l	N	001-003
Schradan	T16	AR	0.1	μg/l	N	001
TVC at 22 C	T34	AR	10	cfu/ml	SN	001-003
TVC at 37 C	T34	AR	10	cfu/ml	SN	001-003



Scientific Analysis Laboratories Certificate of Analysis

Hadfield House Hadfield Street Cornbrook Manchester M16 9FE

Tel: 0161 874 2400 Fax: 0161 874 2468

Scientific Analysis Laboratories is a limited company registered in England and Wales (No 2514788) whose address is at Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 237962-1

Date of Report: 31-May-2011

Customer: VertaseFLI Limited

19 Napier Court
Barlborough Links
Barlborough
S43 4PZ

Customer Contact: The Project Management

Customer Job Reference: 907 BRI WWTW

Date Job Received at SAL: 20-May-2011

Date Analysis Started: 20-May-2011

Date Analysis Completed: 31-May-2011

The results reported relate to samples received in the laboratory

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

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Tests covered by this certificate were conducted in accordance with SAL SOPs



Report checked and authorised by : Amelia McVennon Project Manager Issued by : Amelia McVennon Project Manager

SAL Reference: 237962 Customer Reference: 907 BRI WWTW Water Analysed as Water Miscellaneous

			L Reference	237962 001	237962 002	237962 003	
		Discharge	Primary Carbon	Influent			
			ate Sampled	18-MAY-2011	18-MAY-2011	18-MAY-2011	
Determinand	Method	Test Sample	LOD	Units			
Ammoniacal nitrogen	T4	AR	50	μg/l	<50	<50	2500
Biochemical Oxygen Demand	T7	AR	3000	μg/l	<3000	<3000	4800
nH	T7	ΔR			79	8.3	8.2

SAL Reference: 237962 Customer Reference: 907 BRI WWTW Water Analysed as Water Suite A SAL Reference 237962 001 237962 002 237962 003 **Customer Sample Reference** Discharge **Primary Carbon** Influent Date Sampled 18-MAY-2011 18-MAY-2011 18-MAY-2011 Test Sample Determinand Method LOD Units

Atrazine		T16	AR	0.01	μg/l	<0.01	(2) < 0.20	3.0
Trietazine		T16	AR	0.01	μg/l	<0.01	0.13	13
	SAL Re	ference:	237962	50				
	Customer Re	ference:	907 BRI V	WTW				
Water			Analysed	as Water				
Suite B								

SAL Reference 237962 001 237962 002 237962 003 **Customer Sample Reference** Discharge **Primary Carbon** 18-MAY-2011 18-MAY-2011 18-MAY-2011 Date Sampled Test Sample Determinand Method LOD Units T16 μg/l 23 Benazolin AR 0.1 <0.1 <0.1 2,3,6-TCB T16 0.1 17 61 AR μg/l 0.2

SAL Reference: 237962 Customer Reference: 907 BRI WWTW Water

Suite C

Analysed as Water

		Custon	Discharge	Primary Carbon	Influent		
			18-MAY-2011	18-MAY-2011	18-MAY-2011		
Determinand	Method	Test Sample	LOD	Units			
Bromide	T253	AR	100	μg/l	⁽⁹⁾ <1000	⁽⁹⁾ <1000	⁽⁹⁾ <1000
Chloride	T253	AR	200	μg/l	130000	130000	130000
Sulphate ion	T253	AR	100	μg/l	170000	170000	170000
Suspended Solids (Total)	T2	AR	10000	ug/l	<10000	<10000	35000

SAL Reference

237962 001

237962 002

237962 003

SAL Reference: 237962 Customer Reference: 907 BRI WWTW Water Analysed as Water Suite D SAL Reference 237962 001 237962 002 237962 003 **Customer Sample Reference** Discharge **Primary Carbon** Influent Date Sampled 18-MAY-2011 18-MAY-2011 18-MAY-2011 Test Determinand Method LOD Units T16 2.7 Dicamba AR 0.1 0.1 1.3 μg/l T16 Hempa AR 0.1 μg/l 0.4 4.7 0.2 T16 Schradan AR 0.1 0.1 6.6 4.3 μg/l (2) < 0.05 Simazine T16 AR 0.01 <0.01 7.0 μg/l

SAL Reference: 237962 Customer Reference: 907 BRI WWTW Water Analysed as Water Suite E SAL Reference 237962 001 237962 002 237962 003 Discharge **Primary Carbon Customer Sample Reference** Influent Date Sampled 18-MAY-2011 18-MAY-2011 18-MAY-2011 Test Sample Determinand Method LOD T34 TVC at 22 C 10 cfu/ml 4800 1200 5600 AR TVC at 37 C T34 AR 10 600 360 4000 cfu/ml

Index to symbols used in 237962-1

Value	Description
AR	As Received
2	LOD Raised Due to Matrix Interference
9	LOD raised due to dilution of sample
W	Analysis was performed at another SAL laboratory
S	Analysis was subcontracted
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Method Index

Value	Description
T4	Colorimetry
T2	Grav
T16	GC/MS
T253	IC(EID299)
T34	Micro
T7	Probe

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Ammoniacal nitrogen	T4	AR	50	μg/l	U	001-003
Biochemical Oxygen Demand	T7	AR	3000	μg/l	N	001-003
pH	T7	AR			U	001-003
Atrazine	T16	AR	0.01	μg/l	N	001-003
Trietazine	T16	AR	0.01	μg/l	N	001-003
Benazolin	T16	AR	0.1	μg/l	N	001-003
2,3,6-TCB	T16	AR	0.1	μg/l	N	001-003
Bromide	T253	AR	100	μg/l	WU	001-003
Chloride	T253	AR	200	μg/l	WU	001-003
Sulphate ion	T253	AR	100	μg/l	WU	001-003
Suspended Solids (Total)	T2	AR	10000	μg/l	N	001-003
Dicamba	T16	AR	0.1	μg/l	N	001-003
Hempa	T16	AR	0.1	μg/l	N	001-003
Schradan	T16	AR	0.1	μg/l	N	001-003

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Simazine	T16	AR	0.01	μg/l	N	001-003
TVC at 22 C	T34	AR	10	cfu/ml	SN	001-003
TVC at 37 C	T34	AR	10	cfu/ml	SN	001-003





Appendix I Soil Characterisation Results Summary

Results	Reported to	Grid square	Contaminant	Concentration	Likely use/origin
Received	SCDC			(µg/kg)	
12.04.2010	06.05.2010	K15		VOC/SVOC peal	vs detected
12.04.2010	06.05.2010	K16	Series of Aromatic Hydrocarbons	17,000	Potential herbicide degradation products.
12.04.2010	00.00.2010	1010	circa C ₁₃ -C ₁₆	17,000	The structures are smaller and less complex
			0.100 0 13 0 16		than contaminants of concern and will
					therefore degrade more readily than the
					target contaminants and will be captured by
					the remediation process.
			2(1-methylpropyl)-phenol	10,000	Encountered and assessed during site
					investigation, not a priority contaminant
			2,6-bis(1-methylpropyl)-phenol	100,000	Commonly used in the manufacture of
					specialty surfactants used as wetting agents
					for agrochemicals.
45.04.0040	06.05.2010	140	2,6-bis(1,1-dimethylethyl)-4-(1-	6,000	Commonly used as an antioxidant and
15.04.2010	(09.06.2010)	J16	methylpropyl)-phenol		stabiliser, also used in oils used in industrial applications.
			Unidentified branched aromatic	240,000	Potential herbicide degradation products.
			alcohol, C ₁₄	240,000	The structures are smaller and less complex
			Unidentified branched aromatic	290,000	than contaminants of concern and will
			alcohol, C ₁₈	290,000	therefore degrade more readily than the
			alconol, 0 ₁₈		target contaminants and will be captured by
			Phenanthrene	4,100	Encountered and assessed during site
15.04.2010	06.05.2010	K14	Fluoranthene	4,800	investigation, concentration below target
10.04.2010	00.00.2010		Pyrene	3,900	value
			Benzo(b/k)Fluoranthene	2,200	
			Dodecanoic acid (Lauric acid),	2,400	Lauric acid - main acid in coconut oil and
			isooctyl ester		palm kernel oil, is non-toxic and safe to handle, is used in many soaps, shampoos
					and body butters.
			Unidentified Aliphatic	2,300	Potential herbicide degradation products.
07.05.2010	24.05.2010	K9	Hydrocarbon circa C ₃₀	2,000	The structures are smaller and less complex
			. , ,		than contaminants of concern and will
					therefore degrade more readily than the
					target contaminants and will be captured by
					the remediation process.
			2,4-Dichloro-o-cresol	9,000	Potential herbicide degradation product
			Bis(2-ethylhexyl) maleate	3,800	Commonly used as an intermediate in
					hydrogenation or acetylation reactions, possibly used in agrochemicals manufacture
					possibly used in agrocilemicals manufacture
			Cyclo octaatomic sulphur	2,800	S ₈ is the most common form of sulphur in
			Syste solution is sulpriu.	2,000	the solid state, widely used in insecticide
					and fungicide manufacture
07.05.2010	24.05.2010	L8	Dodecanoic acid (Lauric acid),	7,400	Lauric acid - main acid in coconut oil and
(09.06.2	(09.06.2010)	Lo	isooctyl ester	,	palm kernel oil, is non-toxic and safe to
	. ,		•		handle, is used in many soaps, shampoos
					and body butters.
			Unidentified aromatic	8,400	Potential herbicide degradation products.
			hydrocarbon containing O and Cl		The structures are smaller and less complex
			circa C ₇		than contaminants of concern and will
					therefore degrade more readily than the
					target contaminants and will be captured by the remediation process.
		l			ure remediation process.

07.05.2010	24.05.2010	L9	Unidentified Aliphatic Hydrocarbon circa C ₃₀	2,300	Potential herbicide degradation products. The structures are smaller and less complex than contaminants of concern and will therefore degrade more readily than the target contaminants and will be captured by the remediation process.
13.05.2010	24.05.2010	H8	No VOC/SVOC peaks detected		
			1,2-bis(2,4,6- trichlorophenoxy)ethane	6,900	Potential Prochloraz degradation product
13.05.2010	24.05.2010 (09.06.2010)	H9	Prochloraz Unidentified aromatic hydrocarbon containing CI circa C ₈ Unidentified aromatic amine containing CI circa C ₁₁	9,100 9,400 2,100	Fungicide Potential herbicide degradation products. The structures are smaller and less complex than contaminants of concern and will therefore degrade more readily than the target contaminants and will be captured by the remediation process.
13.05.2010	24.05.2010	17	No SVOC pooks detected		and remodiation process.
13.05.2010	24.05.2010	17	No SVOC peaks detected 2,4-Dichloro-o-cresol	29,000	T
			2.3.6-Trichlorotoluene	47,000	┥
			1-(2-Chloroethoxy)-2-(o- Tolyloxy)-ethane	20,000	Potential herbicide degradation product
13.05.2010	13.05.2010 24.05.2010 (09.06.2010)	19	Unidentified aromatic alcohol containing CI circa C ₇	25,000	Potential herbicide degradation products. The structures are smaller and less complex
		Unidentified aromatic hydrocarbon containing O circa C ₁₆₋₁₈	12,000	than contaminants of concern and will therefore degrade more readily than the target contaminants and will be captured the the remediation process.	
13.05.2010	24.05.2010	J7	No VOC/SVOC peaks detected		
20.05.2010	24.05.2010	J8	No VOC/SVOC peaks detected		
26.05.2010		J9	No VOC/SVOC peaks detected		
04.06.2010	16.06.2010 (09.06.2010)	H7	Dichloromethyl phenol	2,100	Same as 2,4-Dichloro-o-cresol (I9)
05.05.2010	16.06.2010 (09.06.2010)	K7	1,2-bis(2,4,6- trichlorophenoxy)ethane	2400.0	As for H9
05.05.2010	16.06.2010	K8	No VOC/SVOC peaks detected		
18.06.2010	29.06.2010	18	2-methyl phenol	5,500	Encountered and assessed during site investigation, not a priority contaminant
10.00.2010	29.00.2010		1,2-dichlorobenzene	3,600	Contaminant of concern, already included in the standard validation suite
17.06.2010	29.06.2010 (09.06.2010)	K10	2,4-Dichloro-o-cresol	550,000	As for I9 and H7
22.06.2010		L10	Cyclo octaatomic sulphur	16,000	As for L8 - Sulphur
			Dichloromethyl phenol	1,800,000	As for 2,4-Dichloro-o-cresol (I9, H7, K10)
			Naphthalene	4,600,000	Encountered and assessed during site
			2-methylnaphthalene	3,900,000	investigation, not a priority contaminant
20.07.2010 21.07.2010	K10 NAPL	1-methylnaphthalene CAS 90-12-0	2,400,000	More toxic than 2-methylnaphthalene, must be assessed separately	
		Dinoseb CAS 88-85-7	68,000,000	2-(1-methylpropyl)-4,6-dinitro- phenol - herbicide and insecticide. Yellow crystalline solid.	
			Dichloromethyl phenol	24,000	As for 2,4-Dichloro-o-cresol (I9, H7, K10)
			1-(2-Chloroethoxy)-2-(o- Tolyloxy)-ethane CAS 21120-80-9	13,000	Same as I9
			1,2,4-Trichlorobenzene	28,000	
21.07.2010 22.07.2	22.07.2010	7.2010 J10	Trichlorobenzene	32,000	Encountered and assessed during site
			2-Chlorotoluene	60,000	investigation, not a priority contaminant
		ı	Trichloro toluene isomer	48,000	Same as I9

		Trichloro benzenamine isomer	11,000	
		CAS 32768-54-0	290,000	Potential herbicide degradation product
22.07.2010	L11	, ,	5,000	As for 2,4-Dichloro-o-cresol (I9, H7, K10, J10)
		2,4-Dichloro-o-cresol CAS 1570-65-6	10,000	As for I9, H7, K10, J10, L11
02.08.2040	1110	Trichloro toluene isomers	58,000	Same as I9, J10
02.06.2010	HIU	Dichlorotoluene isomer	52,000	6 possible isomers, but very little data, using surrogate.
		2-Chlorotoluene	39,000	Encountered and assessed during site
			350,000	investigation, not a priority contaminant
02 08 2010	110	CAS 1570-65-6	5,000	As for I9, H7, K10, J10, L11, H10
02.00.2010	110	Trichloro toluene isomers	24,000	Same as I9, J10, H10
04.08.2010	L12	2,4-Dichloro-o-cresol CAS 1570-65-6	7,000	As for I9, H7, K10, J10, L11, H10, I10
04.08.2010	L13	No VOC/SVOC peaks detected		
04.08.2010	K12	2,4-Dichloro-o-cresol CAS 1570-65-6	7,000	As for I9, H7, K10, J10, L11, H10, I10, L12
04.08.2010	K13 sand & gravel	Cyclo octaatomic sulphur	68,000	As for L8, L10 - Sulphur
N/A	K13 chalk	2,4-Dichloro-o-cresol	650,000	As for I9, H7, K10, J10, L11, H10, I10, L12,
		CAS 1570-65-6		K12
			1,140,000	Same as I9, J10, H10, I10
			140,000	Same as I9 and J10
			99,000	Same as J10, H10
				Encountered and assessed during site
			,	investigation, not a priority contaminant
N/A	K11	2,4-Dichloro-o-cresol	22,000	As for I9, H7, K10, J10, L11, H10, I10, L12,
		CAS 1570-65-6		K12, K13
N/A	J11	,	220,000	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13
		Trichloro toluene isomers	376,000	Same as I9, J10, H10, I10, K13
		Dinoseb CAS 88-85-7	90,000	Same as K10
		Dichlorotoluene isomer	18,000	Same as H10, K13
		2-Chlorotoluene	13,000	Encountered and assessed during site investigation, not a priority contaminant
17.08.2010	J12	2-chloro Benzenemethanol CAS 17849-38-6	620	Potential agrochemical synthesis ingredient further investigation is required
		2-Chlorobenzalazine CAS 5328-80-3	5,900	
		2,4-Dichloro-o-cresol CAS 1570-65-6	2,000	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13, J11
		2(1-methylpropyl)-phenol	610	Encountered and assessed during site investigation, not a priority contaminant
N/A	J13	2,4-Dichloro-o-cresol CAS 1570-65-6	3,400	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13, J11, J12
25.08.2010	J14	Total Petroleum	43,000	Encountered and assessed during site investigation, not a priority contaminant
		1,3,5-Trimethylbenzene CAS 108-67-8	1,600	Encountered and assessed during site investigation, not a priority contaminant
	02.08.2010 04.08.2010 04.08.2010 04.08.2010 04.08.2010 N/A N/A N/A N/A N/A	02.08.2010 H10 02.08.2010 I10 04.08.2010 L13 04.08.2010 K12 04.08.2010 K12 04.08.2010 K13 sand & gravel N/A K13 chalk N/A J11 N/A J11 N/A J11	2,3-Dichlorotoluene CAS 32768-54-0 Dichloromethyl phenol	23-Dichlorotoluene 290,000

			1,2,4-Trimethylbenzene	600	7
			CAS 95-63-6		
		1,2,3-Trimethylbenzene CAS 526-73-8	700	Isomers encountered and assessed during site investigation, quantitative risk assessment not required	
			1-Ethyl-2-Methylbenzene	500	Potential agrochemical synthesis ingredient
			CAS 611-14-3	000	further investigation is required
25.08.2010	N/A	I13	1-methylnaphthalene CAS 90-12-0	100	Same as K10NAPL
			Phenanthrene	200	Encountered and assessed during site
			Fluoranthene	300	investigation, not a priority contaminant
			Pyrene	300	
			Benzo(b/k)Fluoranthene	200	
01.09.2010	N/A	l14	Trichloro methyl benzene	400	Same as I9, J10, H10, I10, K13, J11
			(trichloro toluene)		
01.09.2010	N/A	l15	Dichlorocresol	2600	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13, J11, J12
			Dichlorophenoxybutyric acid	6300	Herbicide encountered and assessed during site investigation, similar to MCPA and Mecoprop which are higher risk substances, therefore not a priority contaminant
01.09.2010	N/A	H14	No VOC/SVOC peaks detected		
01.09.2010	N/A	H15	No VOC/SVOC peaks detected		
03.09.2010 N/A	N/A	l11	Dichlorocresol	3,300	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13, J11, J12, I15
			Trichloro methyl benzene (trichloro toluene)	1,000	Same as I9, J10, H10, I10, K13, J11, I14
			Prochloraz CAS 67747-09-5	800	Same as H9
03.09.2010	N/A	l12	1-methylnaphthalene CAS 90-12-0	40,000	Same as K10NAPL, I13
			Dibenzofuran	24,000	Encountered and assessed during site
			Phenanthrene	60,000	investigation, not a priority contaminant
			Fluoranthene	29,000	
			Acenaphthene	31,000	
24.09.2010	N/A	J15	Methylpropyl phenol	340	Encountered and assessed during site
	•		, , , , ,		investigation, not a priority contaminant
24.09.2010	28.09.2010	H13	Oxathiane 4,4-dioxide CAS 107-61-9	220	
	N/A		Trichloro methyl benzene (trichloro toluene)	230	Same as I9, J10, H10, I10, K13, J11, I14, I11
			Dichloromethylphenol	2100	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13, J11, J12, I15, I11
			1-(2-Chloroethoxy)-2-(o- Tolyloxy)-ethane CAS 21120-80-9	470	Same as I9, J10, K13
01.10.2010	N/A	H11	No VOC/SVOC peaks detected		
01.10.2010	05.10.2010	H12	Indane CAS 496-11-7	3700000	2-ring hydrocarbon
	N/A		Ethyltoluene (ethyl methyl benzene) isomer	4500000	As J14
			Bis methylpropyl phenol isomer	980000	As J16
			1,3,5-Trimethylbenzene	3900000	Encountered and assessed during site
			1,2,4-Trimethylbenzene	10000000	investigation, not a priority contaminant
			1,2,3-Trimethylbenzene	3100000	
22.10.2010	25.10.2010	G12	Nicotine	6400	Natural insecticide

(216017)	N/A		Dichloromethyl phenol	2900	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13, J11, J12, I15, I11, H13
			Methylpropyl phenol	9400	Encountered and assessed during site investigation, not a priority contaminant
			Schradan	1200	Contaminant of concern, already included in the standard validation suite
22.10.2010 (216017)	N/A	G13	1-methylnaphthalene CAS 90-12-0	170	Same as K10NAPL, I13, I12
, ,			Isophorone CAS 78-59-1	530	Encountered and assessed during site investigation, not a priority contaminant
			Naphthalene	690	
			2-methylnaphthalene	270	
			Phenanthrene	410	
			Fluoranthene	380	
			Pyrene	310	
22.10.2010 (216017)	N/A	G14	No VOC/SVOC peaks detected		•
29.10.2010 (216821)	N/A	H17	No VOC/SVOC peaks detected		
29.10.2010 (216821)	N/A	G17	No VOC/SVOC peaks detected		
01.11.2010 (216817)	30.11.2010	G10	Dibromochloromethane CAS 124-48-1	300	Risk Assessment
N/A		Dichloromethyl phenol	1300	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13, J11, J12, I15, I11, H13, G12	
			Isophorone	7100	Encountered and assessed during site
			Benzyl Chloride	200	investigation, not a priority contaminant
			(1-chloro-2-methylbenzene CAS 95-49-8)	200	investigation, not a phonty contaminant
			Methylpropyl phenol	7100	_
			3,3,5- trimethyl cyclohexanone	700	
01.11.2010 (216817)	N/A	G11	Dichloromethyl phenol	2300	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13, J11, J12, I15, I11, H13, G12, G10
			Trichloro methyl benzene (trichloro toluene)	2400	Same as I9, J10, H10, I10, K13, J11, I14, I11, H13
			1-Methyl naphthalene	760	Same as K10NAPL, I13, I12, G13
			2-methyl phenol	800	Encountered and assessed during site
			Methylpropyl phenol	22000	investigation, not a priority contaminant
			2-Methylnaphthalene	1500	
			2,4,5-Trichlorophenol	360	
			Chloroform	500	
			1,2-dibromoethane	700	
			EthylBenzene	1800	
			1,4-Dichlorobenzene	700	
			1,2,3-Trichlorobenzene	2000	
01.11.2010	30.11.2010	G15	Ethyl methyl phenol	18000	Risk Assessment
(216817)	30.11.2010	010	Dimethyl naphthalene	59000	Risk Assessment
(210017)	N/A		Dichloromethyl phenol	2400	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13, J11, J12, I15, I11, H13, G12, G10, G11
			1-Methyl naphthalene	26000	Same as K10NAPL, I13, I12, G13
			1-ethyl-3- methyl benzene (ethyl toluene)	600	As J14, H12