Environmental Monitoring Report

Reporting Period
04/04/2011-01/05/2011

Former Bayer Crop Science Site
Hauxton
Cambridgeshire

6th May 2011

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APPENDICIES

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 4th of April 2011, until the 1st 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 56. Week Commencing 4th April 2011

No excavation undertaken. Turning of treatment beds undertaken and spent mushroom compost was added to a number of treatment beds to assist in the stimulation of the biological process within the treatment bed. The biological filter on the force ventilation vapour extraction plant was replaced. Relocating of existing treatment beds and stockpiles was undertaken to create space for validation and backfilling.

Week 57. Week Commencing 11th April 2011

No excavation undertaken. Turning of treatment beds was undertaken to aid biological degradation and dry the material in preparation for reinstatement. The north of the site was validated and prepared for reinstatement.

Week 58. Week Commencing 18th April 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 and spent mushroom compost was added to a number of treatment beds to assist in the stimulation of the biological process within the treatment bed. Relocating of existing treatment beds and stockpiles was undertaken to create space for validation and backfilling.

Week 59. Week Commencing 26th April 2011

Restoration of remediated soils in the north of the site to grid squares K6, J6, K7, J7, I7, K8, J8, and I8. Excavation in I10, J10 and K10 material was formed in to treatment bed adjacent to the dig, to reduce odour generation. Turning of treatment beds was undertaken to assist in the biodegradation of the contaminants and reduce the moisture content of the material. Relocating of existing treatment beds and stockpiles was undertaken to create space for validation and backfilling.

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 variety of 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 not detected by the PID (Limit of detection of 0.1ppm) beyond the site boundary.

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 17/03/2011 and 14/04/2011 are reported in appendix C. The analysis undertaken for this monitoring period indicates that the majority of the VOC's detected are around the baseline, except for Tetrachloroethene which is on occasion slightly raised above the baseline values but are well below the levels considered to be within acceptable limits for published criteria.

The analysis for Church Road, Hauxton indicates there are some site related VOC's detected at these locations, but at levels that are considered to be within acceptable limits for published criteria. The monitoring undertaken at Queens Close, Harston was not successfully analysed at the laboratory and this data was lost.

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 141.92µg/m^3, the average PM10 dust reading around the site is 86.36µg/m^3. 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 21/03/2011 to 05/04/2011 (6 locations monitored) recorded a maximum dust deposition rate was 0.93%EAC at the west monitoring location. All other locations had a maximum dust deposition rate of 0.87%EAC, or less.

Dust monitoring undertaken from the 05/04/2011 to 18/04/2011 (6 locations monitored) recorded a maximum dust deposition rate was 1.38%EAC at the east monitoring location. All other locations had a maximum dust deposition rate of 1.31%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. During the monitoring period there have not been any significant changes in levels along the Riddy Brook.

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 March 2011 are presented in Appendix F. The results for samples taken on 27th April 2011 are pending and will be presented in a supplemental report.

The surface water analysis of the 31st March 2011 shows traces of Tetrachloroethylene (3 µg/l), were detected in all surface water samples analysed, the Riddy Brook upstream and downstream and the River Cam upstream and down stream. Trichloroethylene (9 µg/l), Cis1,2-Dichloroethylene (6 µg/l) and Ethofumesate (0.2 µg/l) were detected in both the downstream samples of the Riddy Brook and River Cam. These trace levels of have been recorded in the baseline data collected prior to the commencement of the remediation project and are not related to a specific 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_164, D907_165, D907_166, and D907_167 (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 March 2011 are presented in Appendix F. The results for samples taken on 27th April 2011 are pending and will be presented in a supplemental report.

The contaminant concentrations present in the samples taken on the 31st of March 2011 are similar to the baseline data collected during the summer of 2008, but there appears to be gradual reduction in concentration of the main contaminants in the groundwater samples adjacent to the areas that have undergone remediation.

Note: sample references 233231011 and 233231012 are not relevant to the assessment of groundwater quality on the site.

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 01/05/2011, eighty three 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 Seven characterisation samples analysed contained a total of twenty three 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.

Appendix A

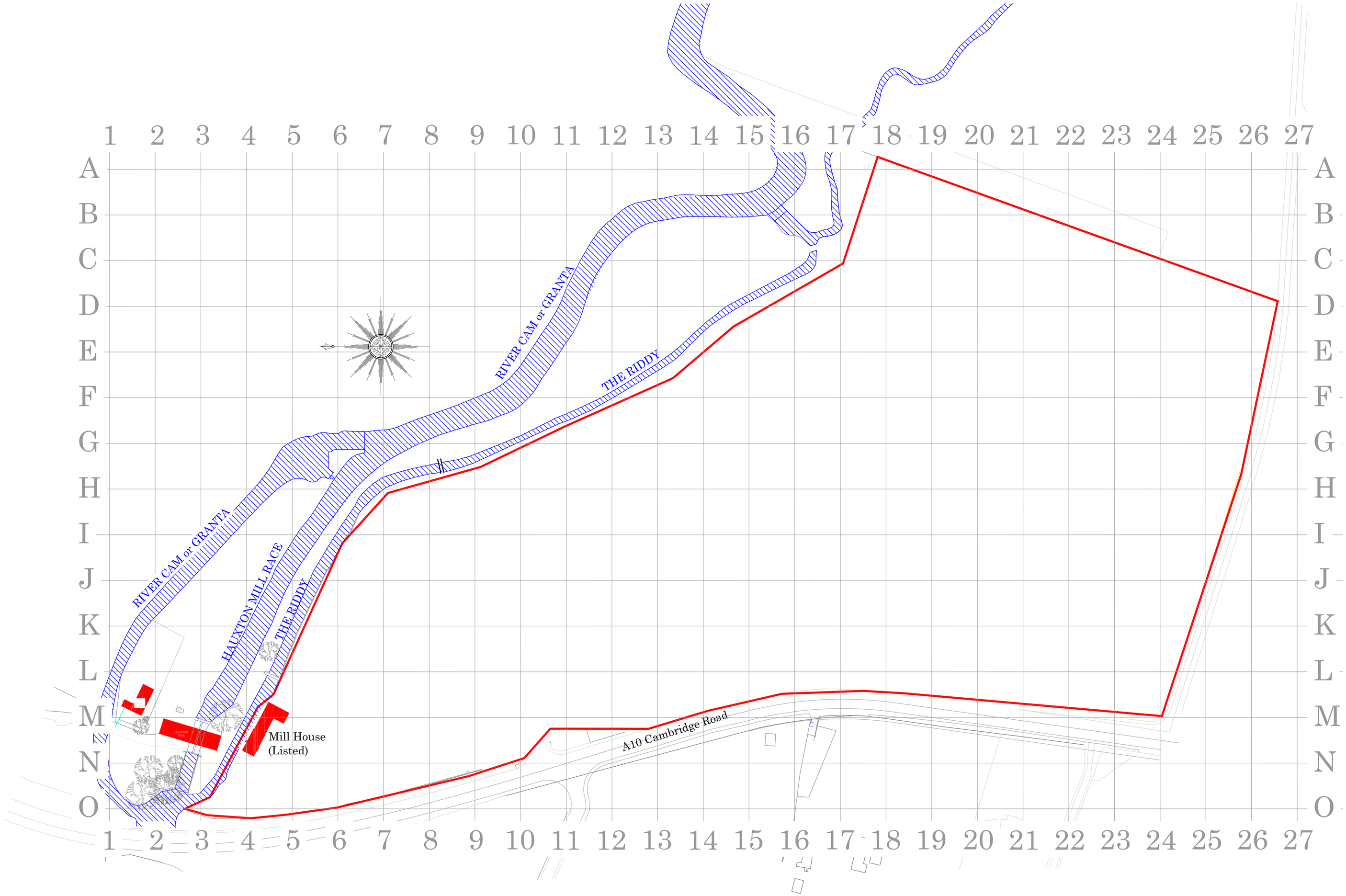
Drawings

A1

Legend

- Buildings to Remain
- Water Course
- Site Boundary

Drawing Base : Ref
LW/HAUX-002/2006



Rev.	Description	Revised By	Date
	FIRST ISSUE		21 April 2008

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Site Address:

Bayer Site
Hauxton
Cambridge

Rev:

Title: Blank Site Plan with Grid

Client: Harrow Estates

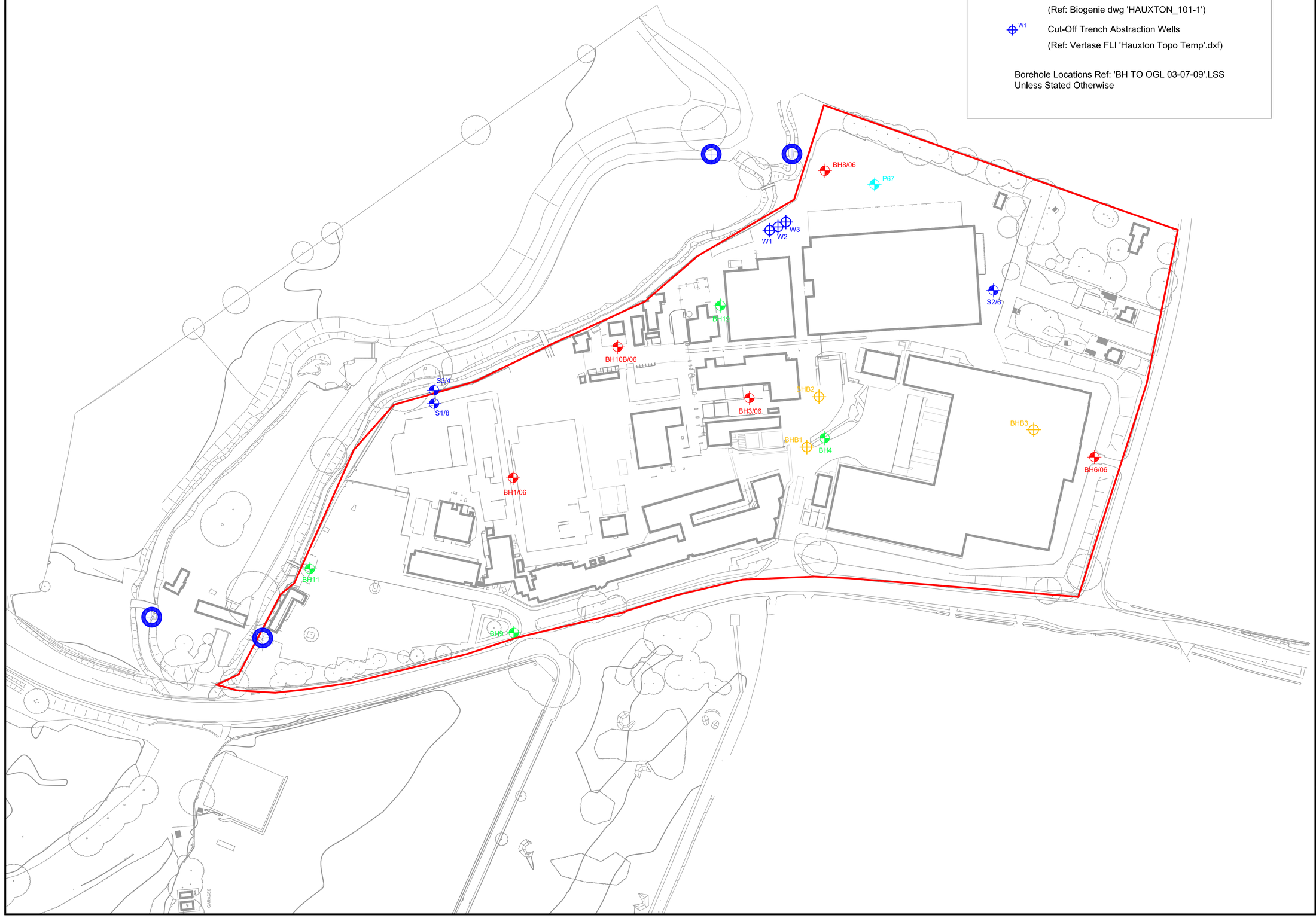
Drawn: JWH	Checked: MA	Approved: MA
Dwg: D907_07	Contract: 907BRI	Scale: 1:1000

A1

Legend

- BH1/06 — Atkins Exploratory Hole Location
- BH7 / P67 — Previous Borehole Location
- Water Sampling Location
- BHB1 — Biogenie Boreholes (Ref: Biogenie dwg 'HAUXTON_101-1')
- W1 — Cut-Off Trench Abstraction Wells (Ref: Vertase FLI 'Hauxton Topo Temp'.dxf)

Borehole Locations Ref: 'BH TO OGL 03-07-09'.LSS
Unless Stated Otherwise



Rev.	Description	Revised By	Date
E	BHB1,BHB2,BHB3, W1,W2,W3,BH3-06 & BH08-06 Added (BH3-06 & BH08-06 Ref:D907_31 Iss 0)	MRG	17-08-09
D	BH1 Removed & BH19 Added	MRG	07-07-08
C	BH1 Added	JWH	11 June 2008
B	BH5/06 Erased S2/6 Added	JWH	09 June 2008
A	Boreholes Erased	JWH	14 May 2008
	FIRST ISSUE		23 April 2008

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Site Address:
Bayer Site
Hauxton
Cambridge

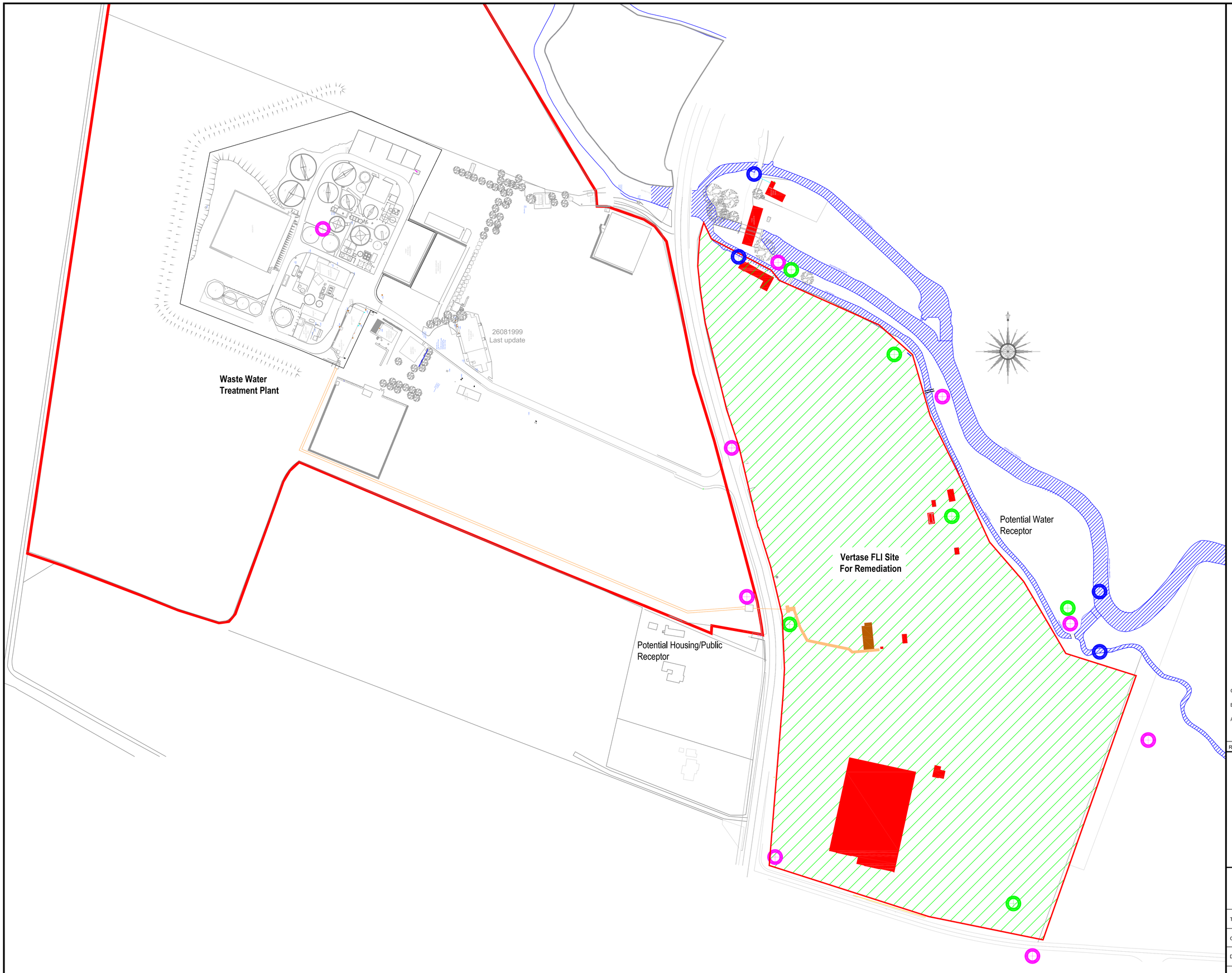
Rev: E

Title: Retained Boreholes for Monitoring & Reference

Client: Harrow Estates

Drawn: JWH	Checked: MA	Approved: MA
Dwg: D907_31	Contract: 907BRI	Scale: 1:1000

A1



Legend

- Sub-Station/Buildings to Remain
- Water Course
- Vertase FLI Site for Remediation
- Mobile Treatment Licence Boundary
- Site Effluent Sump and Ducting
- Diffusion Tubes /Monitoring Location
- Dust Monitoring Location
- Water Sampling Location

Drawing Base : Ref
LW/HAUX-002/2006

Rev.	Description	Revised By	Date
C	Dust Monitoring Locations Amended	MRG	14 July 08
B	Dust Monitoring Location Amended	JWH	09 June 08
A	Water Sampling Points Added Treatment Building Amended	JWH	15 May 2008
	FIRST ISSUE		21 April 2008

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Site Address:
Bayer Site
Hauxton
Cambridge

Rev: C

Title: Environmental Monitoring Plan

Client: Harrow Estates

Drawn: JWH	Checked: MA	Approved: MA
Dwg: D907_33	Contract: 907BRI	Scale: 1:1250

Appendix B

Environmental Monitoring Data

						ODOUR						DUST		NOISE	LITTER		RIDDY BROOK				METEOROLOGICAL AND ENVIRONMENTAL CONDITIONS							
Assessor	Date	Daily Activity	Boundary	Start Time	Finish Time	Detectability (Yes or No)	Intensity (1 to 9)	Quality (Description)	Hedonic Tone (-3 to+3)	Location Sensitivity (1 to 5)	Odour Source (1 to 5)	PID (ppm)	TSP	PM10	Average (dBa)	Present (Description)	Materials attracting scavengers	Inspection	Water Level (mAOD)	Complaints	Action Required	Wind Speed (1 to 6)	Wind Direction	Air Temp (C)	Description (Rain, Sun)	Cloud Cover (0 to 8)	Ground Conditions (Wet, dry)	General Notes
Stephenson	04/04/2011	excavating in grids	N	10.40	10.55	n						0	229	198.6	84.5	no	no		9.19	no								no odour at church
Stephenson	04/04/2011	excavating in grids	NE	10.40	10.45	y	3	slight hydrocarbon odour/exhaust	0	2	5	0	326.7	89.2	81.4	no	no	clear		no								
Stephenson	04/04/2011	excavating in grids	NE1	10.35	10.40								100.5	84.7				clear		no								
Stephenson	04/04/2011	excavating in grids	E	10.30	10.35	y	4	chlorinated phenols and odour control	-1	2	5	0	175.8	67.4	57.6	no	no	clear	9.631	no								
Stephenson	04/04/2011	excavating in grids	SE	10.25	10.30	y	2	indistinguishable pesticides	0	2	3	0			55.2	no	no			no								
Stephenson	04/04/2011	excavating in grids	S	10.20	10.25	n			0	3		0	166.3	112.7	47.3	no	no			no								
Stephenson	04/04/2011	excavating in grids	SW	10.15	10.20	y	5	car fumes	-1	4	5	0			69.9	no	no			no								
Stephenson	04/04/2011	excavating in grids	W	10.10	10.15	n				4		0	52.1	53.9	76.8	no	no			no								
Stephenson	04/04/2011	excavating in grids	NW	10.05	10.10	y	3	vegetation	0	2	5	0			74.7	no	no			no								
Stephenson	04/04/2011	bed turning	N	17.40	17.45	n				2		0	48	34	68.2	no	no	clear	9.19	no		5	SW	11	sunny spells	6	dry	no odour at church
Stephenson	04/04/2011	bed turning	NE	17.35	17.40	y	4	slight chemical odour with odour control	-1	2	3	0	19.3	42.4	68.3	no	no	clear		no								
Stephenson	04/04/2011	bed turning	NE1	17.30	17.35								67.7	40.8				clear		no								
Stephenson	04/04/2011	bed turning	E	17.25	17.30	y	5	slight chemical odour with odour control	2	2	5	0	103.9	100.7	83.2	no	no	clear	9.631	no								
Stephenson	04/04/2011	bed turning	SE	17.20	17.25	n				3		0			67.3	no	no			no								
Stephenson	04/04/2011	bed turning	S	17.15	17.20	n				3		0	129.3	90.5	79.2	no	no			no								
Stephenson	04/04/2011	bed turning	SW	17.10	17.15	n				4		0			69.8	no	no			no								
Stephenson	04/04/2011	bed turning	W	17.05	17.10	n				4		0	63.5	50.5	81.7	no	no			no								
Stephenson	04/04/2011	bed turning	NW	17.00	17.05	n				2		0			78.1	no	no			no								
T Walker	05/04/2011	bed turning	N	12.00	12.05	n				2		0	96	56	54	no	no	clear	9.19	no		6	SW	11	dry	8	dry	
T Walker	05/04/2011	bed turning	NE	12.05	12.10	n				2		0	104	47	56	no	no	clear		no								
T Walker	05/04/2011	bed turning	NE1	12.05	12.10								127	108				clear		no								
T Walker	05/04/2011	bed turning	E	12.10	12.15	n				2		0	308	191	82	no	no	clear	9.631	no								
T Walker	05/04/2011	bed turning	SE	12.15	12.20	n				3		0			70	no	no			no								
T Walker	05/04/2011	bed turning	S	12.20	12.25	n				3		0	124	73	82	no	no			no								
T Walker	05/04/2011	bed turning	SW	12.28	12.30	n				4		0			54	no	no			no								
T Walker	05/04/2011	bed turning	W	12.30	12.38	n				4		0	196	47	57	no	no			no								
T Walker	05/04/2011	bed turning	NW	12.38	12.40	n				2		0			84	no	no			no								
T Walker	05/04/2011	bed turning	N	17.00	17.05	n				2		0	132	86	52	no	no	clear	9.19	no		8	sw	11	dry	8	dry	slight odour on Riddy Brook but not considered to be problematic
T Walker	05/04/2011	bed turning	NE	17.05	17.10	y	2	chlorinated solvents	-1	2	5	0	164	74	54	no	no	clear		no								
T Walker	05/04/2011	bed turning	NE1	17.05	17.10								108	68				clear		no								
T Walker	05/04/2011	bed turning	E	17.15	17.20	n				2		0	205	104	61	no	no	clear	9.631	no								
T Walker	05/04/2011	bed turning	SE	17.20	17.25	n				3		0			68	no	no			no								
T Walker	05/04/2011	bed turning	S	17.25	17.30	n				3		0	171	96	82	no	no			no								
T Walker	05/04/2011	bed turning	SW	17.30	17.35	n				4		0			60	no	no			no								
T Walker	05/04/2011	bed turning	W	17.35	17.40	n				4		0	164	108	58	no	no			no								
T Walker	05/04/2011	bed turning	NW	17.40	17.45	n				2		0			60	no	no			no								
T Walker	06/04/2011	bed turning	N	9.45	9.50	n				2		0	146	86	64	no	no	clear	9.19	no		7	SW	16	dry	2	dry	
T Walker	06/04/2011	bed turning	NE	9.50	9.55	y	2	odour control	-1	2	5	0	96	35	68	no	no	clear		no								
T Walker	06/04/2011	bed turning	NE1	9.55	10.00								68	34				clear		no								
T Walker	06/04/2011	bed turning	E	10.00	10.05	n				2		0	146	86	70	no	no	clear	9.632	no								
T Walker	06/04/2011	bed turning	SE	10.05	10.10	n				3		0			60	no	no			no								
T Walker	06/04/2011	bed turning	S	10.10	10.15	n				3		0	106	71	60	no	no			no								
T Walker	06/04/2011	bed turning	SW	10.15	10.20	n				4		0			58	no	no			no								
T Walker	06/04/2011	bed turning	W	10.20	10.25	n				4		0	96	77	56	no	no			no								
T Walker	06/04/2011	bed turning	NW	10.25	10.30	n				2		0			61	no	no			no								
Stephenson	06/04/2011	bed turning	N	17.55	18.00	n				2		0	16.4	26.1	58.6	no	no		9.19	no		6.7	SW	23.3	sun	0	dry	no odour at church
Stephenson	06/04/2011	bed turning	NE	17.50	17.55	y	4	chlorinated phenols	-1	2	4	0	14.3	22.6	61.4	no	no	clear		no	check odour control							
Stephenson	06/04/2011	bed turning	NE1	17.45	17.50								13	49.9				clear		no								
Stephenson	06/04/2011	bed turning	E	17.40	17.45	y	2	pesticides/odour control	0	2	5	0	38	17	65.2	no	no	clear	9.632	no								
Stephenson	06/04/2011	bed turning	SE	17.35	17.40	n				3		0			44.6	no	no			no								
Stephenson	06/04/2011	bed turning	S	17.30	17.35	n				3		0	21.9	10.7	52.5	no	no			no								
Stephenson	06/04/2011	bed turning	SW	17.25	17.30	y	6	blossom	2	4	1	0			71.5	no	no			no								
Stephenson	06/04/2011	bed turning	W	17.20	17.25	n				4		0	150	15.5	75.5	no	no			no								
Stephenson	06/04/2011	bed turning	NW	17.15	17.20	n				2		0			72.3	no	no			no								
T Walker	07/04/2011	bed turning	N	9.20	9.25	n				2		0	104	46	55	no	no	clear	9.19	no		6	nw	19	dry	1	dry	
T Walker	07/04/2011	bed turning	NE	9.25	9.30	n				2		0	158	86	64	no	no	clear		no								
T Walker	07/04/2011	bed turning	NE1	9.30	9.35								111	71				clear		no								
T Walker	07/04/2011	bed turning	E	9.40	9.48	n				2		0	104	33	58	no	no	clear	9.632	no								
T Walker	07/04/2011	bed turning	SE	9.48	9.50	n				2		0			64	no	no			no								
T Walker	07/04/2011	bed turning	S	9.40	9.45	y	3	chlorinated solvents	-2	3	5	0	106	61	71	no	no			y	increased odour control							
T Walker	07/04/2011	bed turning	SW	9.50	9.55	y	4/5	chlorinated solvents	-2	4	5	0			70	no	no			y	increased odour control							
T Walker	07/04/2011	bed turning	W	9.55	10.00	n				4		0	181	73	67	no	no			no								
T Walker	07/04/2011	bed turning	NW	10.05	10.10	n				2		0			62	no	no			no								
T Walker	07/04/2011	bed turning	N	17.00	17.05	n				2		0	186	74	67.4	no	no	clear	9.19	no		4	nw	17	dry	1	dry	
T Walker	07/04/2011	bed turning	NE	17.05	17.10	n				2		0	104	82	58	no	no	clear		no								
T Walker	07/04/2011	bed turning	NE1	17.05	17.10								111	180				clear		no								
T Walker	07/04/2011	bed turning	E	17.10	17.15	n				2		0	131	76	69	no	no	clear	9.632	no								
T Walker	07/04/2011	bed turning	SE	17.15	17.20	n				3		0			41	no	no			no								
T Walker	07/04/2011	bed turning	S	17.20	17.25	n				3		0	74	38	47	no	no			no								
T Walker	07/04/2011	bed turning	SW	17.25	17.30	n				4		0			65	no	no			no								
T Walker	07/04/2011	bed turning	W	17.30	17.35	n				4		0	171	86	70	no	no			no								
T Walker	07/04/2011	bed turning	NW	17.35	17.40	n				2		0			71	no	no			no								
T Walker	08/04/2011	bed turning	N	10.00	10.05	n				2		0			56	no	no	clear	9.18	no		3	nw	17	dry	1	dry	
T Walker	08/04/2011	bed turning	NE	10.05	10.10	n				2		0			54	no	no	clear		no								
T Walker	08/04/2011	bed turning	NE1	10.05	10.10													clear		no								
T Walker	08/04/2011	bed turning	E	10.10	10.15	n				2		0			62	no	no	clear	9.619	no								
T Walker	08/04/2011	bed turning	SE	10.15	10.20	y	3	chlorinated solvents	-1	3	5	0			64	no	no			no								
T Walker	08/04/2011	bed turning	S	10.20	10.25	y	2	chlorinated solvents	-1	3	5	0			62	no	no			no								
T Walker	08/04/2011	bed turning	SW	10.25	10.30	n				4		0			4	no	no			no								
T Walker	08/04/2011	bed turning	W	10.30	10.35	n				4		0			60	no	no			no								
T Walker	08/04/2011	bed turning	NW	10.35	10.40	n				2		0			56	no	no			no								
T Walker	08/04/2011	bed turning	N	15.00	15.05	y	2	odour control	2	2	5	0	171	36	58	no	no	clear	9.18	no		3.1	nw	20	dry	0	dry	
T Walker	08/04/2011	bed turning	NE	15.05	15.10	n				2		0	146	57	61	no	no	clear		no								
T Walker	08/04/2011	bed turning	NE1	15.10	15.15								94	73				clear		no								
T Walker	08/04/2011	bed turning	E	15.10	15.15	n				2		0	204	101	70	no	no	clear	9.619	no								
T Walker	08/04/2011	bed turning	SE	15.15	15.20	n				3		0			69	no	no			no								
T Walker	08/04/2011	bed turning	S	15.20	15.25	y	2	slight HC odour	-1	3	5	0	133	78	71	no	no			no								
T Walker	08/04/2011	bed turning	SW	15.25	15.30	n				4		0			60	no	no			no								
T Walker	08/04/2011	bed turning	W	15.30	15.35	n				4		0	148	56	79	no	no			no								
T Walker	08/04/2011	bed turning	NW	15.35	15.40	n				2		0			63	no	no			no								
T Walker	11/04/2011	bed turning	N	12.10	12.15	n				2		0	170	89	65.1	no	no	clear	9.198	no		8	nw	17	dry	7	dry	diesel spill on corner of church road and A10 strong odour
T Walker	11/04/2011	bed turning	NE	12.15	12.20	n				2		0	121	101	70	no	no	clear		no								
T Walker	11/04/2011	bed turning	NE1	12.15	12.20								146	36				clear		no								
T Walker	11/04/2011	bed turning	E	12.20	12.25	n				2		0	204	114	68	no	no	clear	9.629	no								
T Walker	11/04/2011	bed turning	SE	12.25	12.30	n				3		0			49	no	no			no								
T Walker	11/04/2011	bed turning	S	12.30	12.35	n				3		0	104	53	63	no	no			no								
T Walker	11/04/2011	bed turning	SW	12.35	12.40	n				4		0			62	no	no			no								
T Walker	11/04/2011	bed turning	W	12.40	12.45	y	6	diesel	2	4	1	0	121	71	60	no	no			no								
T Walker	11/04/2011	bed turning	NW	12.45	12.50	n				4		0			79	no	no			no								
Stephenson	11/04/2011	bed turning	N	17.40	17.45	n				2		0	128	124	67.1	no	no	clear	9.198	no		18	nw	13	rain	8	wet	no odour at church
Stephenson	11/04/2011	bed turning	NE	17.35	17.40	n				2		0	93.6	104	54.8	no	no	clear		no								
Stephenson	11/04/2011	bed turning	NE1	17.30	17.35								274	185				clear		no								
Stephenson	11/04/2011	bed turning	E	17.25	17.35	n				2		0	149.7	19.1	63.2	no	no	clear	9.629	no								
Stephenson	11/04/2011	bed turning	SE	17.20	17.25	y	3	pesticides wet veg and oc	-1	3	3	0			68.8	no	no			no								
Stephenson	11/04/2011	bed turning	S	17.15	17.20	y	3	pesticides wet veg and oc	0	3	3	0	78	27	69.5	no	no			no								
Stephenson	11/04/2011	bed turning	SW	17.10	17.15	n				4		0			71.3	no	no			no								
Stephenson	11/04/2011	bed turning	W	17.05	17.10	n				4		0	133	73	78.9	no	no			no								
Stephenson	11/04/2011	bed turning	NW	17.00	17.05	n				2		0			76.2	no	no			no								
T Walker	12/04/2011	bed turning	N	9.30	9.35	n				2		0	141	70	57	no	no	clear	9.196	no		3.1	nw	17	dry	2	dry	
T Walker	12/04/2011	bed turning	NE	9.35	9.40	y	4	odour control	3	2	5	0	138	68	62	no	no	clear		no								
T Walker	12/04/2011	bed turning	NE1	9.35	9.40								104	60	58	no	no	clear		no								
T Walker	12/04/2011	bed turning	E	9.40	9.45	n				2		0	104	71	58	no	no	clear	9.645	no								
T Walker	12/04/2011	bed turning	SE	9.45	9.50	y	2	solvents	-1	3	5	0			62	no	no			no								
T Walker	12/04/2011	bed turning	S	9.50	9.55	n				3		0	98	60	58	no	no			no								
T Walker	12/04/2011	bed turning	SW	9.55	10.00	n				4		0			62	no	no			no								
T Walker	12/04/2011	bed turning	W	10.00	10.05	n				4		0	96	27	59	no	no			no								
T Walker	12/04/2011	bed turning	NW	10.05	10.10	n				2		0			80	no	no			no								
T Walker	12/04/2011	bed turning	N	15.15	15.20	n				2		0	146	52	64	no	no	clear	9.196	no		4	nw	17	dry	5	dry	Dusts ranging from solvents to odour control on Riddy boundary. Not deemed problematic
T Walker	12/04/2011	bed turning	NE	15.20	15.25	y	4	odour control	1	2	5	0	186	71	72	no	no	clear		no								
T Walker	12/04/2011	bed turning	NE1	15.25	15.30								100	71				clear		no								
T Walker	12/04/2011	bed turning	E	15.30	15.35	y	3	chlorinated solvents	-1	2	5	0	186	91	82	no	no	clear	9.645	no								
T Walker	12/04/2011	bed turning	SE	15.35	15.40	n				3		0			70	no	no			no								
T Walker	12/04/2011	bed turning	S	15.40	15.45	n				3		0	102	67	68	no	no			no								
T Walker	12/04/2011	bed turning	SW	15.45	15.50	n				4		0			62	no	no			no								
T Walker	12/04/2011	bed turning	W	15.50	15.55	n				4		0	97	54	71	no	no			no								
T Walker	12/04/2011	bed turning	NW	15.55	16.00	n				2		0			62	no	no			no								
T Walker	13/04/2011	bed turning	N	10.46	10.45	n				2		0	146	78	56	no	no	clear	9.195	no		2	sw	11.7	dry	7	dry	slight odour on banks of Riddy but not considered a problem
T Walker	13/04/2011	bed turning	NE	10.45	10.50	y	2	solvent/pesticides	-1	2	5	0	78	23	64	no	no	clear		no								
T Walker	13/04/2011	bed turning	NE1	10.48	10.50								101	96				clear		no								
T Walker	13/04/2011	bed turning	E	10.50	10.55	n				2		0	104	37	58	no	no	clear	9.645	no								
T Walker	13/04/2011	bed turning	SE	10.55	11.00	n				3		0			62	no	no			no								
T Walker	13/04/2011	bed turning	S	11.00	11.05	n				3		0	97	27	58	no	no			no								
T Walker	13/04/2011	bed turning	SW	11.05	11.10	n				4		0			62	no	no			no								
T Walker	13/04/2011	bed turning	W	11.10	11.15	n				4		0	98	72	68	no	no			no								
T Walker	13/04/2011	bed turning	NW	11.15	11.20	n				2		0			60	no	no			no								
T Walker	13/04/2011	bed turning	N	16.00	16.08	n				2		0	148	62	62	no	no	clear	9.195	no		4	wsw	15	dry	8	dry	
T Walker	13/04/2011	bed turning	NE	16.08	16.10	y	2	bis(2-chloroether)	0	2	5	0	72	26	45	no	no	clear		no								
T Walker	13/04/2011	bed turning	NE1	16.08	16.10								74	21				clear		no								
T Walker	13/04/2011	bed turning	E	16.10	16.15	n				2		0	104	60	76	no	no	clear	9.645	no								
T Walker	13/04/2011	bed turning	SE	16.15	16.20	n				3		0			58	no	no			no								
T Walker	13/04/2011	bed turning	S	16.20	16.25	y	2	burnt wood	1	3	1	0	120	81	62	no	no			no								
T Walker	13/04/2011	bed turning	SW	16.25	16.30	n	1	no odour	0	4	1	0			68	no	no			no								
T Walker	13/04/2011	bed turning	W	16.30	16.35	y	2	blossom	2	4	1	0	105	61	58	no	no			no								
T Walker	13/04/2011	bed turning	NW	16.35	16.40	n				2		0																
T Walker	14/04/2011	bed turning/restoration	N	8.30	8.35	y	3	odour control	1	2	1	0	162	76	62	no	no	clear	9.195	no		6	sw	10	dry	8	dry	

M Allsobrook	28/04/2011	Excavating in grids J10, H10, I10/bed turning	SW	11.39	11.44	y	4	odour control	-1	4	5	0			73.7	no	no			no	reduce odour control solution									
M Allsobrook	28/04/2011	Excavating in grids J10, H10, I10/bed turning	W	11.45	11.50	y	5	odour control	-1	4	5	0	140.1	124.6	77.2	no	no			no	reduce odour control solution									
M Allsobrook	28/04/2011	Excavating in grids J10, H10, I10/bed turning	NW	11.51	11.56	y	3	traffic and odour control	-1	2	3	0			79.4	no	no			no										
S Stephenson	28/04/2011	Excavating in grid J,K and I10, bed turning	N	15.40	15.45	n				2		0	216	117	99.6	no	no	clear	9.222	no	no	1.5	ne	14.4	sunny spells	6	dry	no odour at church			
S Stephenson	28/04/2011	Excavating in grid J,K and I10, bed turning	NE	15.35	15.40	n				2		0	383	70.8	98.5	no	no	clear		no	no									
S Stephenson	28/04/2011	Excavating in grid J,K and I10, bed turning	NE1	15.30	15.35	n						0	506	210.8				clear		no	no									
S Stephenson	28/04/2011	Excavating in grid J,K and I10, bed turning	E	15.25	15.30	y	5	blossom	0	2	5	0	554.9	299.8	86.7	no	no	clear	8.645	no	no									
S Stephenson	28/04/2011	Excavating in grid J,K and I10, bed turning	SE	15.20	15.25	y	3	soil - clean	0	3	5	0			87.4	no	no			no	no									
S Stephenson	28/04/2011	Excavating in grid J,K and I10, bed turning	S	15.15	15.20	y	6	blossom	1	3	5	0	120	97.3	95.2	no	no			no	no									
S Stephenson	28/04/2011	Excavating in grid J,K and I10, bed turning	SW	15.10	15.15	y	4	odour control, chlorinated solvents	-1	4	5	0			72.4	no	no			no	covering lb142									
S Stephenson	28/04/2011	Excavating in grid J,K and I10, bed turning	W	15.05	15.10	n				4		0	297	200	70.1	no	no			no	no									
S Stephenson	28/04/2011	Excavating in grid J,K and I10, bed turning	NW	15.00	15.05	n				2		0			72.9	no	no			no	no									

Appendix C

Long term Passive VOC Monitoring

gradko environmental
(A division of Gradko International Ltd.)

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UKAS TESTING
2187

LABORATORY ANALYSIS REPORT

REPORT NUMBER	**GCMS 4711**
CUSTOMER	**Vertase FLI Ltd**
GRADKO LAB REFERENCE	**GMSF 0576-0585**
DATE SAMPLES RECEIVED	**18.04.11**
JOB NUMBER	**907BRI/5311**
BOOKING IN REF.	**E 1992**

SEMI-QUANTITATIVE ANALYSIS FOR TOP 10 VOC'S ON TENAX DIFFUSION TUBES BY GC/MS

Analysis has been carried out in accordance with in-house method GLM 13

Tube Number	**GRA 09663**
Exposure Time(mins)	**39980**
Sample ID	**North**

Top 10 VOC'S

Compounds	**ng on tube**	**ppb in air***
Tetrachloroethylene	311.12	3.89
Naphthalene	182.85	2.29
Toluene	55.14	0.69
Naphthalene, 2-methyl-	48.54	0.61
Benzene, 1,2,3-trichloro-4-methyl-	42.16	0.53
Trichloroethylene	28.85	0.36
m/p-Xylene	25.88	0.32
Naphthalene, 1-methyl-	20.62	0.26
Naphthalene, 2,7-dimethyl-	20.58	0.26
Acenaphthene	20.29	0.25

Tube Number	**GRA 06118**
Exposure Time(mins)	**39980**
Sample ID	**North East**

Top 10 VOC'S

Compounds	**ng on tube**	**ppb in air***
Tetrachloroethylene	683.06	8.54
Toluene	149.70	1.87
Trichloroethylene	141.81	1.77
Benzene, 1,2,3-trichloro-4-methyl-	103.76	1.30
Benzene, 1,2-dichloro-	88.57	1.11

The Diffusion Tubes have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures calculations and assessments involving the exposure procedures and periods provided by the client are not within the scope of our UKAS accreditation. 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.

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Supervisor

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UKAS TESTING 2187

LABORATORY ANALYSIS REPORT

m/p-Xylene	84.51	1.06
Benzene, 1,2,4-trichloro-3-methyl-	66.11	0.83
Naphthalene	42.42	0.53
Benzene, 1,4-dichloro-2-methyl-	39.89	0.50
o-Xylene	29.05	0.36

Tube Number **GRA 09616**
Exposure Time(mins) **39980**
Sample ID **East**

Top 10 VOC'S

Compounds	**ng on tube**	**ppb in air***
Tetrachloroethylene	785.87	9.83
Benzene, 1,2,3-trichloro-4-methyl-	169.38	2.12
Toluene	160.23	2.00
Benzene, 1,2,4-trichloro-3-methyl-	80.41	1.01
Benzene, 1,4-dichloro-2-methyl-	69.62	0.87
Trichloroethylene	60.07	0.75
m/p-Xylene	55.85	0.70
Benzene, 1,2,4-trichloro-	43.95	0.55
Phenol, 2,4-dichloro-6-methyl-	43.55	0.54
Naphthalene	36.55	0.46

Tube Number **GRA 00146**
Exposure Time(mins) **39980**
Sample ID **South East**

Top 10 VOC'S

Compounds	**ng on tube**	**ppb in air***
Tetrachloroethylene	464.17	5.80
Toluene	100.40	1.26
Benzene, 1,2,3-trichloro-4-methyl-	79.46	0.99
Benzene, 1,4-dichloro-2-methyl-	41.84	0.52
m/p-Xylene	40.27	0.50
Heptane, 2,2,4,6,6-pentamethyl-	36.69	0.46
Benzene, 1,2,4-trichloro-	35.59	0.45
Benzamide, N,N-dimethyl-	35.36	0.44
Trichloroethylene	30.60	0.38
Benzene, 1,2,4-trichloro-3-methyl-	30.46	0.38

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REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Supervisor

gradko environmental
(A division of 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

UKAS TESTING 2187

LABORATORY ANALYSIS REPORT

Tube Number	**GRA 09759**
Exposure Time(mins)	**39980**
Sample ID	**South**

Top 10 VOC'S

Compounds	**ng on tube**	**ppb in air***
Tetrachloroethylene	139.58	1.75
Toluene	45.50	0.57
Benzene, 1,2,3-trichloro-4-methyl-	29.58	0.37
Naphthalene	24.08	0.30
m/p-Xylene	20.96	0.26
1S-.alpha.-Pinene	19.99	0.25
Benzene, 1,2,4-trichloro-3-methyl-	18.07	0.23
Phenol	17.26	0.22
Benzene, 1,4-dichloro-2-methyl-	15.51	0.19
Benzene	11.56	0.14

Tube Number	**GRA 09348**
Exposure Time(mins)	**39980**
Sample ID	**South West**

Top 10 VOC'S

Compounds	**ng on tube**	**ppb in air***
Tetrachloroethylene	201.19	2.52
Toluene	78.76	0.98
Benzene, 1,2,3-trichloro-4-methyl-	41.40	0.52
Benzamide, N,N-dimethyl-	40.76	0.51
Benzothiazole	31.87	0.40
m/p-Xylene	29.86	0.37
Dodecane	23.89	0.30
o-Xylene	21.46	0.27
Benzene, 1,2,4-trichloro-3-methyl-	18.57	0.23
Pentadecane	13.95	0.17

The Diffusion Tubes have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures calculations and assessments involving the exposure procedures and periods provided by the client are not within the scope of our UKAS accreditation. 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.

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
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UKAS TESTING 2187

LABORATORY ANALYSIS REPORT

Tube Number	**GRA 02574**
Exposure Time(mins)	**39980**
Sample ID	**West**

Top 10 VOC'S

Compounds	**ng on tube**	**ppb in air***
Tetrachloroethylene	298.66	3.74
Toluene	64.38	0.81
m/p-Xylene	36.18	0.45
Benzene, 1,2,3-trichloro-4-methyl-	25.52	0.32
Naphthalene	24.34	0.30
Nonadecane	20.44	0.26
Trichloroethylene	20.34	0.25
Heptadecane	16.74	0.21
Ethylbenzene	16.71	0.21
o-Xylene	16.41	0.21

Tube Number	**GRA 05938**
Exposure Time(mins)	**39980**
Sample ID	**North West**

Top 10 VOC'S

Compounds	**ng on tube**	**ppb in air***
Tetrachloroethylene	266.47	3.33
Toluene	84.67	1.06
m/p-Xylene	60.49	0.76
Octadecane	32.48	0.41
o-Xylene	31.18	0.39
Dodecane	29.71	0.37
Benzene, 1,2,3-trichloro-4-methyl-	28.59	0.36
Heptadecane	22.67	0.28
Tridecane	21.42	0.27
Tetradecane	19.80	0.25

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UKAS TESTING 2187

LABORATORY ANALYSIS REPORT

Tube Number	**GRA 05951**
Exposure Time(mins)	**39980**
Sample ID	**WWTW**

Top 10 VOC'S

Compounds	**ng on tube**	**ppb in air***
Tetrachloroethylene	33.41	0.42
Toluene	22.22	0.28
Benzene	13.05	0.16
o-Xylene	11.40	0.14
Benzothiazole	10.75	0.13
Octane	9.66	0.12
Pentadecane	9.48	0.12
m/p-Xylene	9.45	0.12
Benzene, 1,2,3-trichloro-4-methyl-	6.53	0.08
Phenol	6.16	0.08

Tube Number	**GRA 09746**
Exposure Time(mins)	**39980**
Sample ID	**Church Road**

Top 10 VOC'S

Compounds	**ng on tube**	**ppb in air***
Naphthalene	136.22	1.70
Tetrachloroethylene	39.76	0.50
m/p-Xylene	17.78	0.22
Tridecane	15.04	0.19
Toluene	14.93	0.19
Naphthalene, 2-methyl-	13.57	0.17
o-Xylene	13.08	0.16
Dodecane	11.11	0.14
Heptane, 2,2,4,6,6-pentamethyl-	10.21	0.13
Undecane	9.70	0.12

The Diffusion Tubes have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures calculations and assessments involving the exposure procedures and periods provided by the client are not within the scope of our UKAS accreditation. 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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UKAS TESTING
2187

LABORATORY ANALYSIS REPORT

Tube Number	GRA 05160
Exposure Time(mins)	39980
Sample ID	Queen's Close

Unicarb tube.Has to be analysed on a different method.

Semi-quantitative results for ng on tube are calculated using toluene standards.

Analysts Name M.Angelova Date of Analysis 19.04.11

Date of Report 20.04.11

REPORT OFFICIALLY CHECKED

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Signed.....
L. Gates, Laboratory Supervisor

Appendix D

Directional Dust Monitoring

Chemtest
The right chemistry to deliver results

Sticky Pad Data

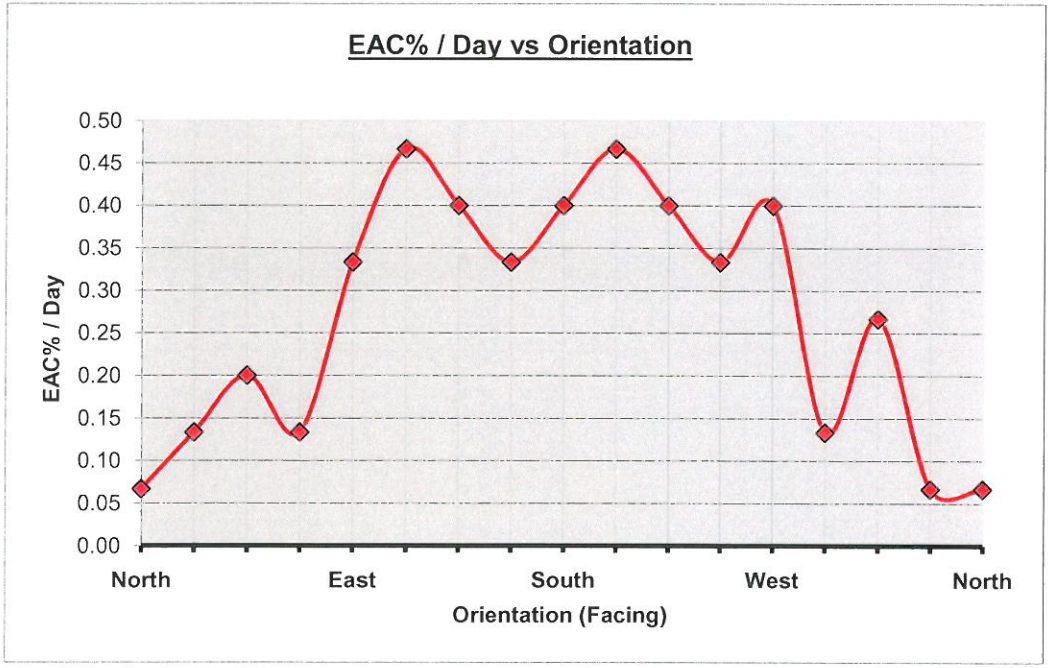
Gauge Number-North Location 907BRI

Sticky Pad Data

Date On 21/03/2011 Date Off 05/04/2011 Days = 15

Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	89	360	North	0.07
20	89	337		0.07
40	86	314		0.27
60	88	291		0.13
80	84	269	West	0.40
100	85	246		0.33
120	84	223		0.40
140	83	200		0.47
160	84	177	South	0.40
180	85	154		0.33
200	84	131		0.40
220	83	109		0.47
240	85	86	East	0.33
260	88	63		0.13
280	87	40		0.20
300	88	17		0.13
315	89	0	North	0.07



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
The right chemistry to deliver results

Sticky Pad Data

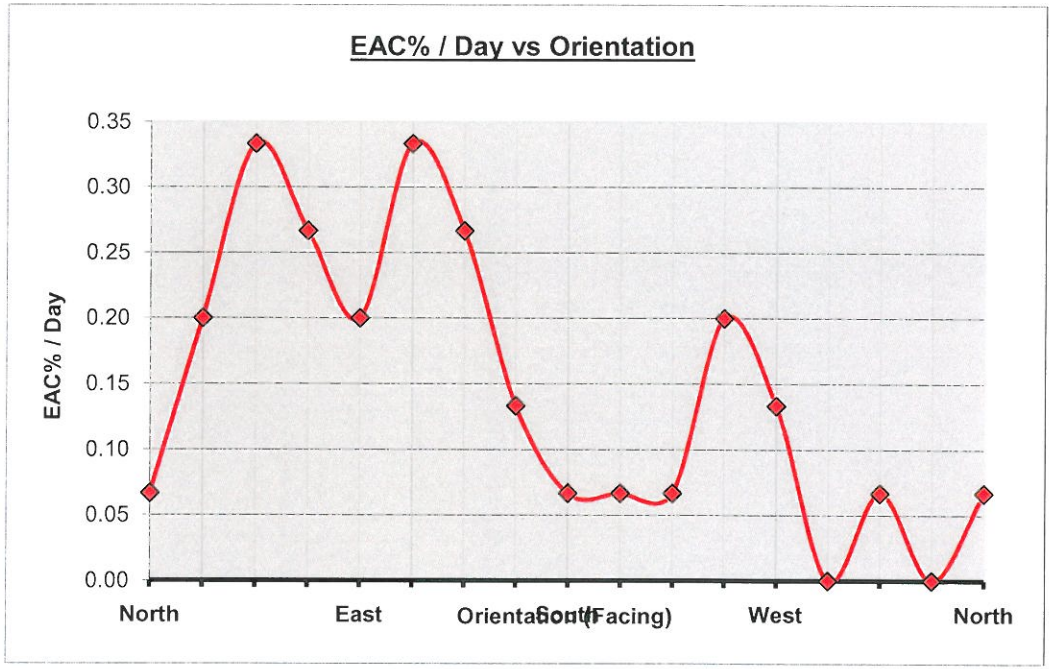
Gauge Number-East Location 907BRI

Sticky Pad Data

Date On 21/03/2011 Date Off 05/04/2011 Days = 15

Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	89	360	North	0.07
20	90	337		0.00
40	89	314		0.07
60	90	291		0.00
80	88	269	West	0.13
100	87	246		0.20
120	89	223		0.07
140	89	200		0.07
160	89	177	South	0.07
180	88	154		0.13
200	86	131		0.27
220	85	109		0.33
240	87	86	East	0.20
260	86	63		0.27
280	85	40		0.33
300	87	17		0.20
315	89	0	North	0.07



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
The right chemistry to deliver results

Sticky Pad Data

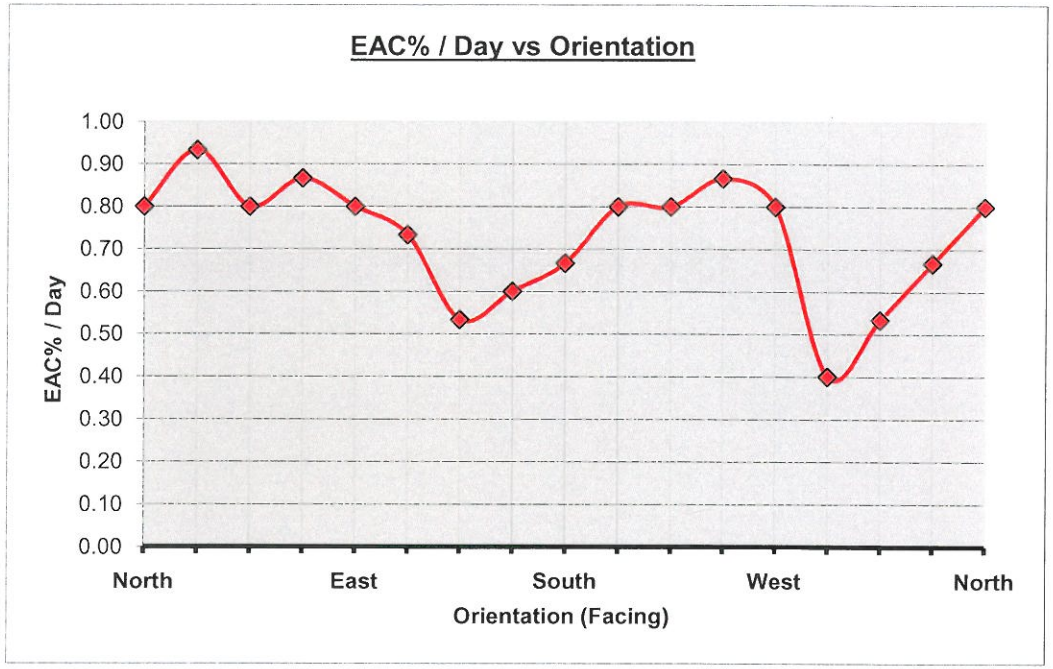
Gauge Number-West Location 907BRI

Sticky Pad Data

Date On 21/03/2011 Date Off 05/04/2011 Days = 15

Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	78	360	North	0.80
20	80	337		0.67
40	82	314		0.53
60	84	291		0.40
80	78	269	West	0.80
100	77	246		0.87
120	78	223		0.80
140	78	200		0.80
160	80	177	South	0.67
180	81	154		0.60
200	82	131		0.53
220	79	109		0.73
240	78	86	East	0.80
260	77	63		0.87
280	78	40		0.80
300	76	17		0.93
315	78	0	North	0.80



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
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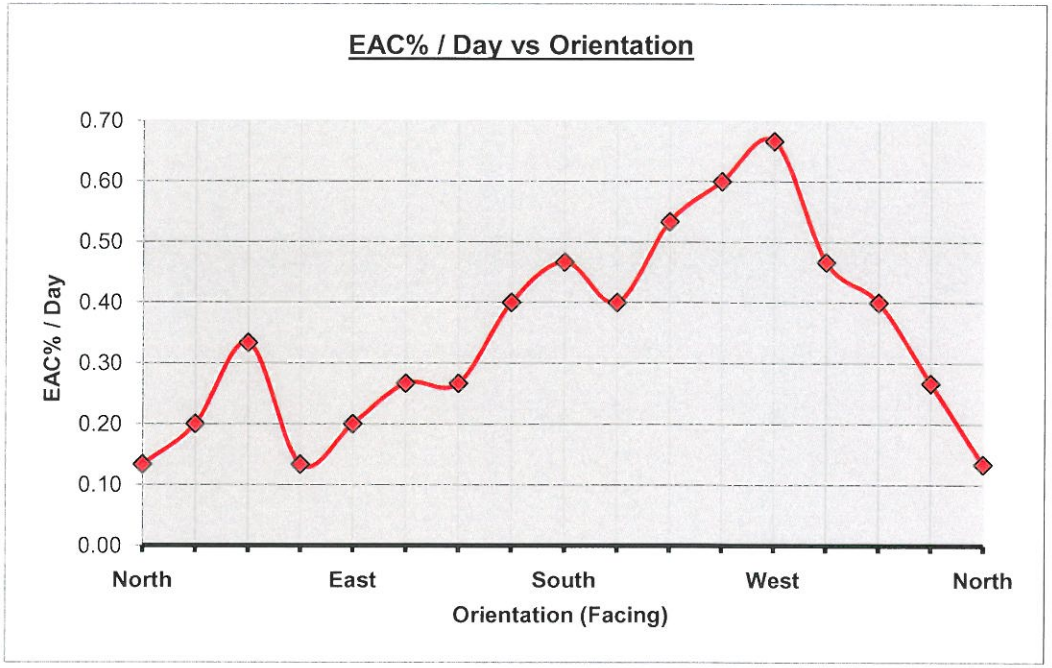
Sticky Pad Data

Gauge Number-NE1 Location 907BRI

Sticky Pad Data

Date On 21/03/2011 Date Off 05/04/2011 Days = 15
Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	88	360	North	0.13
20	86	337		0.27
40	84	314		0.40
60	83	291		0.47
80	80	269	West	0.67
100	81	246		0.60
120	82	223		0.53
140	84	200		0.40
160	83	177	South	0.47
180	84	154		0.40
200	86	131		0.27
220	86	109		0.27
240	87	86	East	0.20
260	88	63		0.13
280	85	40		0.33
300	87	17		0.20
315	88	0	North	0.13



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
The right chemistry to deliver results

Sticky Pad Data

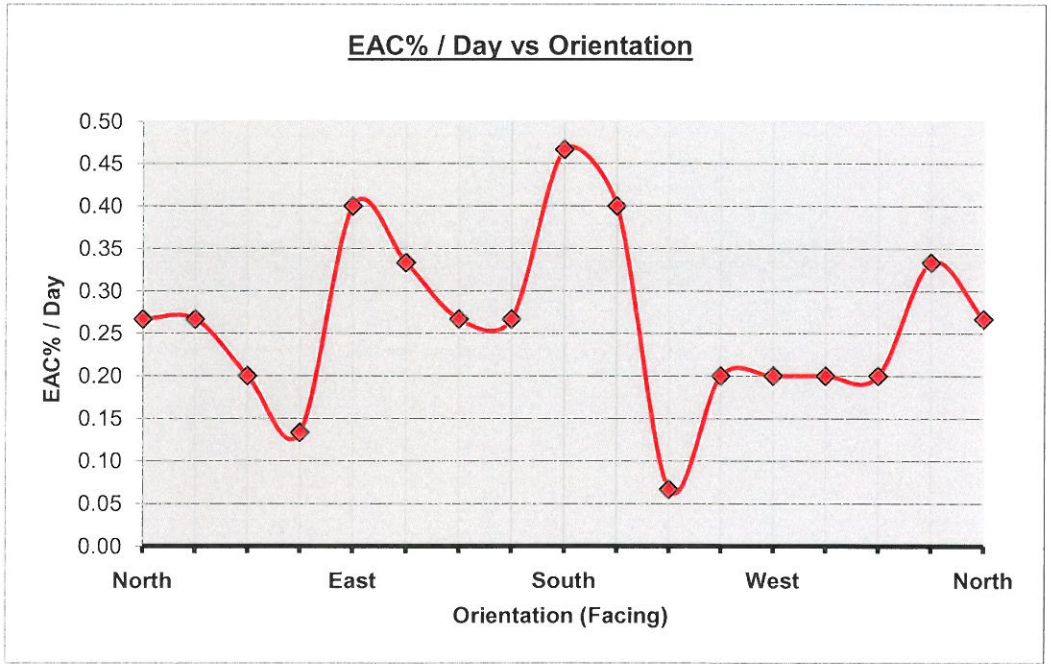
Gauge Number-NE2 Location 907BRI

Sticky Pad Data

Date On 21/03/2011 Date Off 05/04/2011 Days = 15

Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	86	360	North	0.27
20	85	337		0.33
40	87	314		0.20
60	87	291		0.20
80	87	269	West	0.20
100	87	246		0.20
120	89	223		0.07
140	84	200		0.40
160	83	177	South	0.47
180	86	154		0.27
200	86	131		0.27
220	85	109		0.33
240	84	86	East	0.40
260	88	63		0.13
280	87	40		0.20
300	86	17		0.27
315	86	0	North	0.27



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
The right chemistry to deliver results

Sticky Pad Data

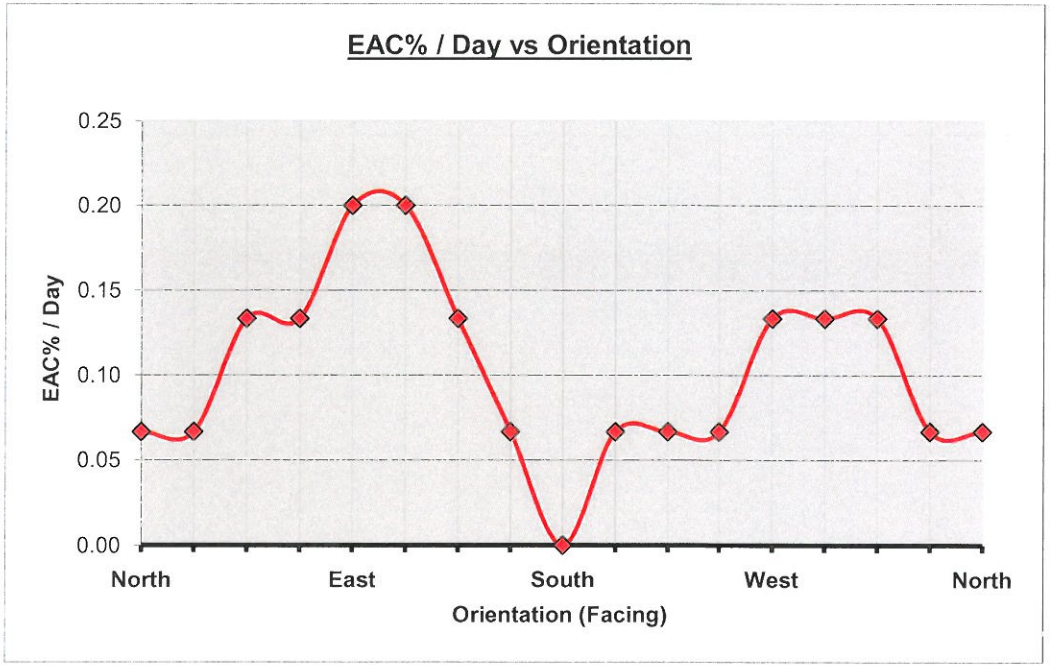
Gauge Number-South Location 907BRI

Sticky Pad Data

Date On 21/03/2011 Date Off 05/04/2011 Days = 15

Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	89	360	North	0.07
20	89	337		0.07
40	88	314		0.13
60	88	291		0.13
80	88	269	West	0.13
100	89	246		0.07
120	89	223		0.07
140	89	200		0.07
160	90	177	South	0.00
180	89	154		0.07
200	88	131		0.13
220	87	109		0.20
240	87	86	East	0.20
260	88	63		0.13
280	88	40		0.13
300	89	17		0.07
315	89	0	North	0.07



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
The right chemistry to deliver results

Sticky Pad Data

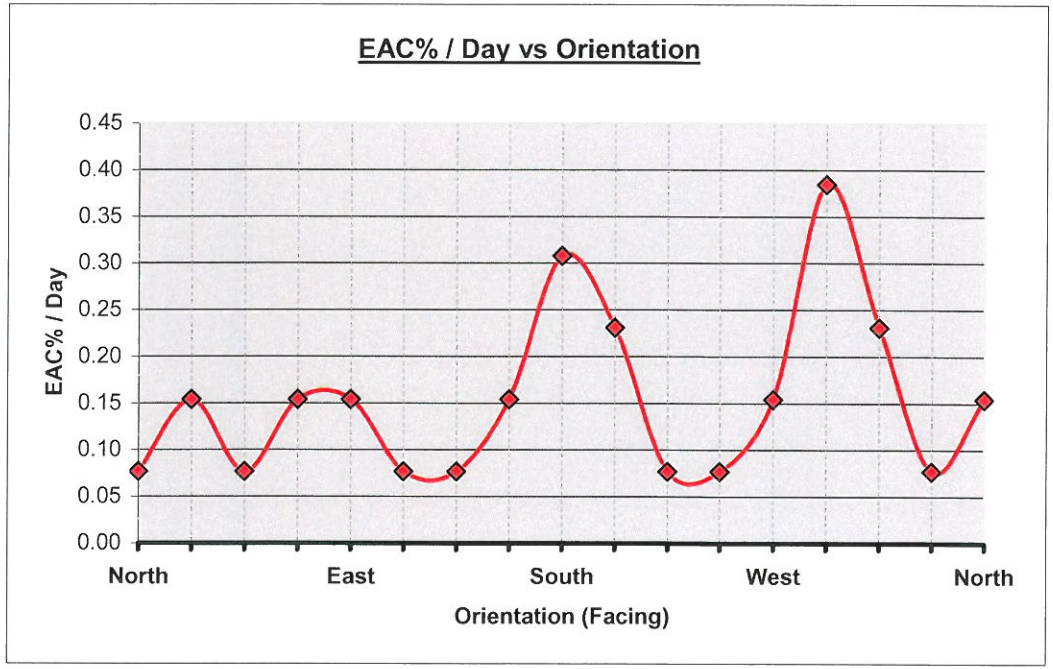
Gauge Number-North Location 907BRI

Sticky Pad Data

Date On 05/04/2011 Date Off 18/04/2011 Days = 13

Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	88	360	North	0.15
20	89	337		0.08
40	87	314		0.23
60	85	291		0.38
80	88	269	West	0.15
100	89	246		0.08
120	89	223		0.08
140	87	200		0.23
160	86	177	South	0.31
180	88	154		0.15
200	89	131		0.08
220	89	109		0.08
240	88	86	East	0.15
260	88	63		0.15
280	89	40		0.08
300	88	17		0.15
315	89	0	North	0.08



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
The right chemistry to deliver results

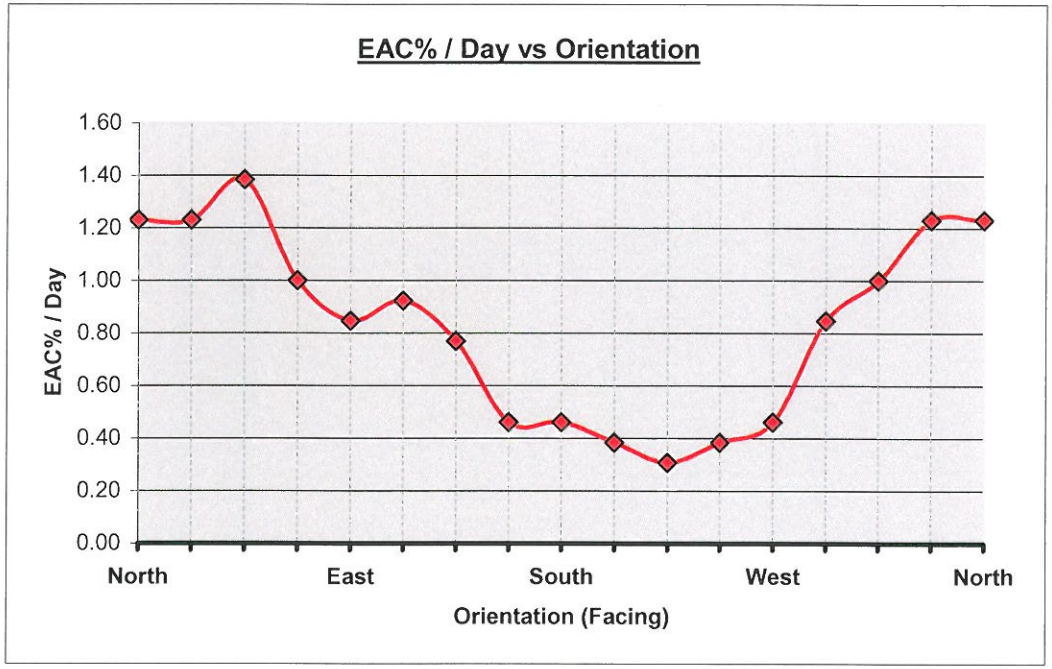
Sticky Pad Data

Gauge Number-East Location 907BRI

Sticky Pad Data

Date On 05/04/2011 Date Off 18/04/2011 Days = 13
Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	74	360	North	1.23
20	74	337		1.23
40	77	314		1.00
60	79	291		0.85
80	84	269	West	0.46
100	85	246		0.38
120	86	223		0.31
140	85	200		0.38
160	84	177	South	0.46
180	84	154		0.46
200	80	131		0.77
220	78	109		0.92
240	79	86	East	0.85
260	77	63		1.00
280	72	40		1.38
300	74	17		1.23
315	74	0	North	1.23



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
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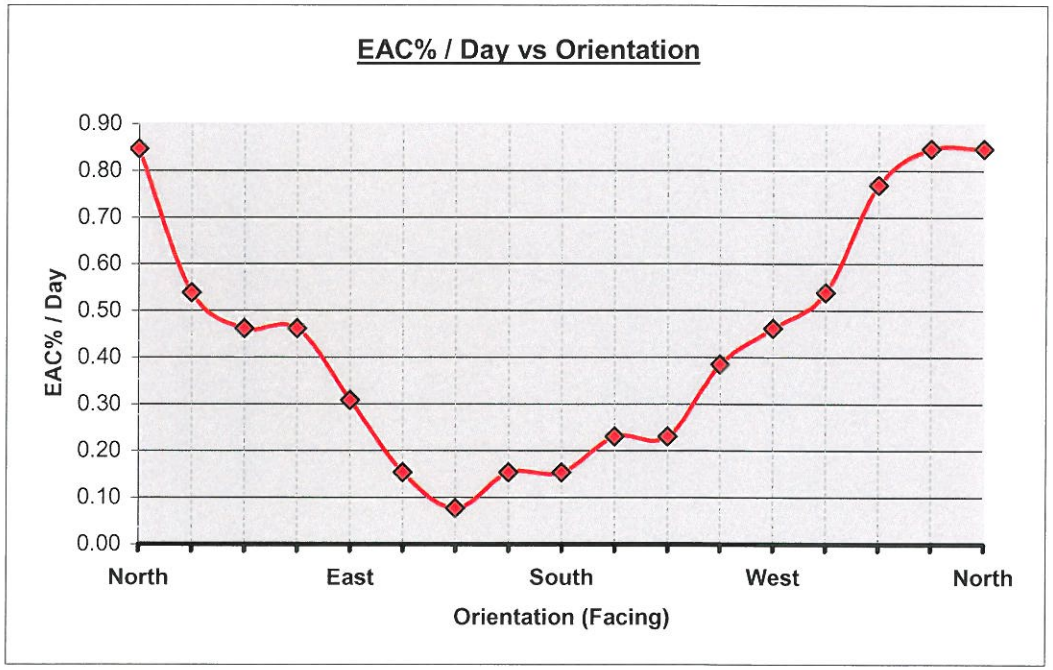
Sticky Pad Data

Gauge Number-West Location 907BRI

Sticky Pad Data

Date On 05/04/2011 Date Off 18/04/2011 Days = 13
Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	79	360	North	0.85
20	79	337		0.85
40	80	314		0.77
60	83	291		0.54
80	84	269	West	0.46
100	85	246		0.38
120	87	223		0.23
140	87	200		0.23
160	88	177	South	0.15
180	88	154		0.15
200	89	131		0.08
220	88	109		0.15
240	86	86	East	0.31
260	84	63		0.46
280	84	40		0.46
300	83	17		0.54
315	79	0	North	0.85



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
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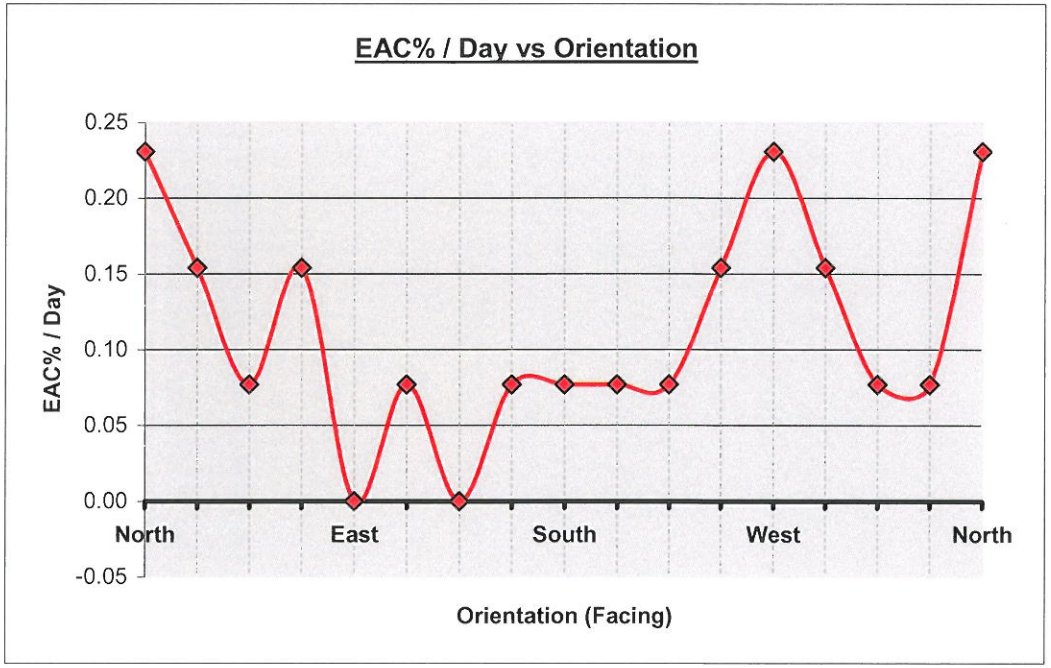
Sticky Pad Data

Gauge Number-NE1 Location 907BRI

Sticky Pad Data

Date On 05/04/2011 Date Off 18/04/2011 Days = 13
Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	87	360	North	0.23
20	89	337		0.08
40	89	314		0.08
60	88	291		0.15
80	87	269	West	0.23
100	88	246		0.15
120	89	223		0.08
140	89	200		0.08
160	89	177	South	0.08
180	89	154		0.08
200	90	131		0.00
220	89	109		0.08
240	90	86	East	0.00
260	88	63		0.15
280	89	40		0.08
300	88	17		0.15
315	87	0	North	0.23



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
The right chemistry to deliver results

Sticky Pad Data

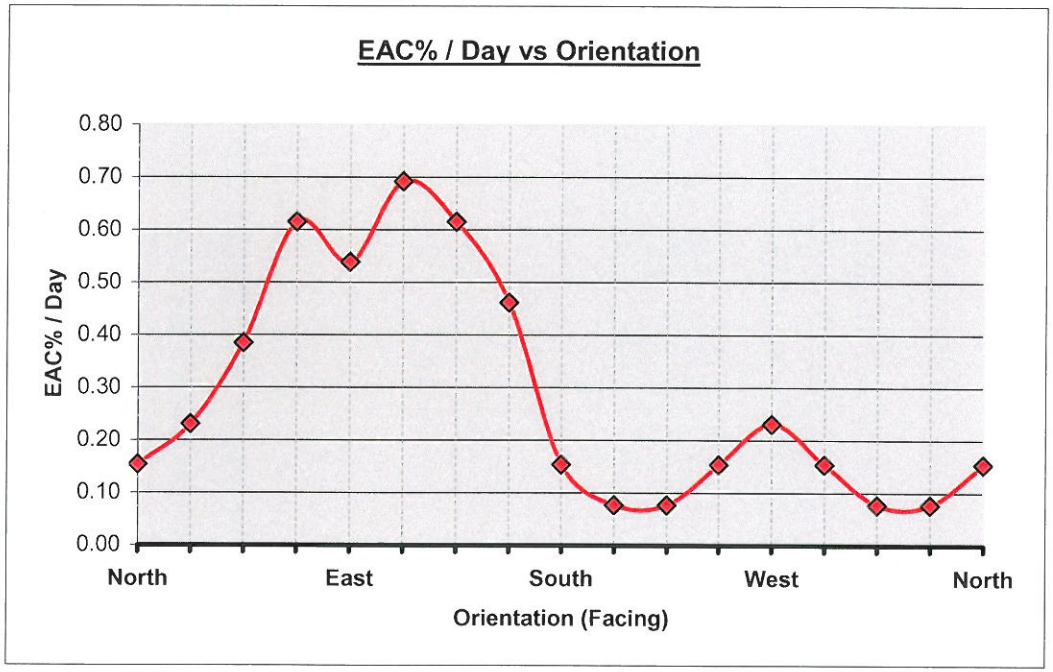
Gauge Number-NE2 Location 907BRI

Sticky Pad Data

Date On 05/04/2011 Date Off 18/04/2011 Days = 13

Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	88	360	North	0.15
20	89	337		0.08
40	89	314		0.08
60	88	291		0.15
80	87	269	West	0.23
100	88	246		0.15
120	89	223		0.08
140	89	200		0.08
160	88	177	South	0.15
180	84	154		0.46
200	82	131		0.62
220	81	109		0.69
240	83	86	East	0.54
260	82	63		0.62
280	85	40		0.38
300	87	17		0.23
315	88	0	North	0.15



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Chemtest
The right chemistry to deliver results

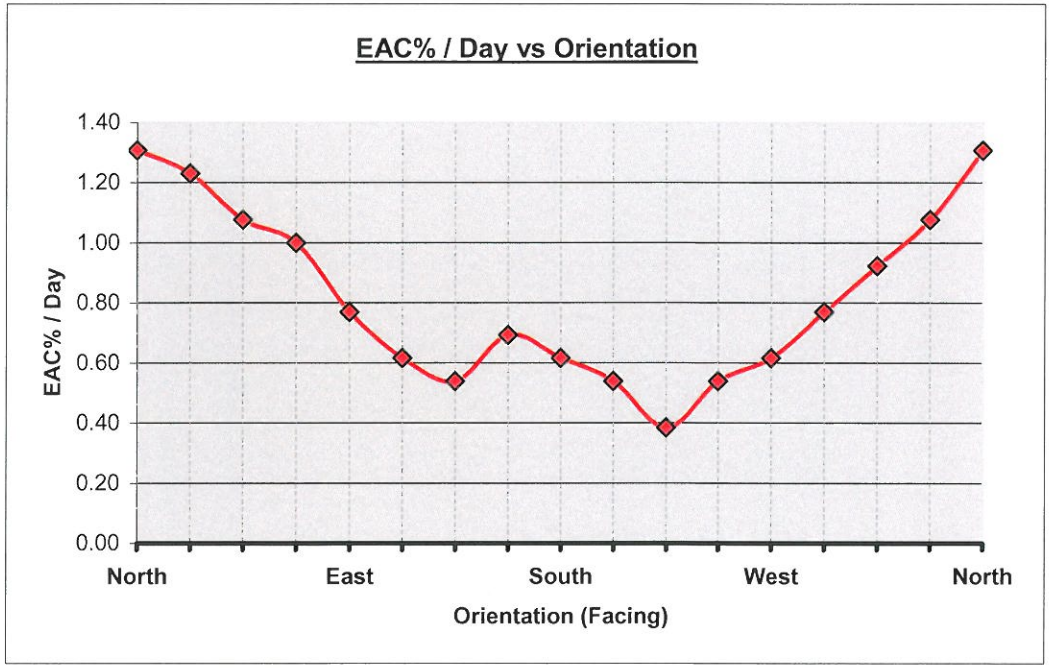
Sticky Pad Data

Gauge Number-South Location 907BRI

Sticky Pad Data

Date On 05/04/2011 Date Off 18/04/2011 Days = 13
Clean = 90

X Axis mm	Meter	Angle Deg	Orientation	EAC% / Day
0	73	360	North	1.31
20	76	337		1.08
40	78	314		0.92
60	80	291		0.77
80	82	269	West	0.62
100	83	246		0.54
120	85	223		0.38
140	83	200		0.54
160	82	177	South	0.62
180	81	154		0.69
200	83	131		0.54
220	82	109		0.62
240	80	86	East	0.77
260	77	63		1.00
280	76	40		1.08
300	74	17		1.23
315	73	0	North	1.31



Note: Cells coloured red are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 20mm intervals along the sticky pad.

Appendix E
Groundwater Level Data

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
04/04/2011	10.247	10.365	9.873	Covered	10.467	Lost	9.640	Covered	9.270	No Access	No Access	9.620	9.190	9.295	9.528	9.631	9.936	10.052	10.056	10.113	10.320
05/04/2011	10.035	10.365	9.873	Covered	10.467	Lost	9.640	Covered	9.281	No Access	No Access	9.615	9.190	9.295	9.529	9.631	9.936	10.051	10.057	10.118	10.319
06/04/2011	10.269	10.371	9.921	Covered	10.414	Lost	9.652	Covered	9.279	No Access	No Access	9.620	9.190	9.296	9.528	9.632	9.978	10.010	10.032	10.116	9.931
07/04/2011	10.269	10.371	9.921	Covered	10.414	Lost	9.652	Covered	9.279	No Access	No Access	9.620	9.190	9.296	9.528	9.632	9.978	10.010	10.032	10.116	9.931
08/04/2011	10.248	10.366	9.922	Covered	10.408	Lost	9.687	Covered	9.300	No Access	No Access	9.620	9.180	9.273	9.515	9.619	9.988	10.004	10.027	10.090	10.265
11/04/2011	10.221	10.394	9.920	Covered	10.405	Lost	9.654	Covered	9.322	No Access	No Access	9.620	9.198	9.315	9.528	9.629	9.997	10.009	10.023	10.055	10.273
12/04/2011	10.204	10.414	9.909	Covered	10.390	Lost	9.650	Covered	9.289	No Access	No Access	9.620	9.196	9.322	9.508	9.645	10.032	10.000	10.010	10.057	10.263
13/04/2011	10.203	10.413	9.908	Covered	10.390	Lost	9.649	Covered	9.280	No Access	No Access	9.620	9.195	9.321	9.507	9.645	10.033	9.992	9.964	10.057	10.263
14/04/2011	10.203	10.413	9.908	Covered	10.390	Lost	9.649	Covered	9.280	No Access	No Access	9.620	9.195	9.321	9.507	9.645	10.033	9.992	9.964	10.057	10.263
15/04/2011	10.181	10.401	9.791	Covered	10.386	Lost	9.641	Covered	9.182	No Access	No Access	9.620	9.195	9.321	9.507	9.645	10.033	9.992	9.964	10.057	10.263
18/04/2011	10.179	10.400	9.785	Covered	10.379	Lost	9.640	Covered	9.181	No Access	No Access	9.620	9.198	9.322	9.507	9.639	9.978	9.972	9.956	10.055	10.264
19/04/2011	10.012	10.000	9.732	Covered	10.340	Lost	9.558	Covered	9.129	No Access	No Access	9.620	9.191	9.264	9.528	9.636	9.993	9.991	9.748	10.041	10.225
20/04/2011	9.999	10.000	9.706	Covered	10.339	Lost	9.557	Covered	9.117	No Access	No Access	DRY	9.201	9.265	9.527	9.636	9.986	9.992	9.749	10.040	10.224
21/04/2011	10.010	9.974	9.724	Covered	10.337	Lost	9.553	Covered	9.120	No Access	No Access	DRY	9.200	9.264	9.527	9.635	9.990	8.522	9.747	10.040	9.954
26/04/2011	10.134	10.134	9.831	Covered	10.343	Lost	9.334	Covered	9.273	No Access	No Access	DRY	9.243	9.270	9.527	9.646	9.952	9.943	9.955	10.057	9.793
27/04/2011	10.088	10.080	9.813	Covered	10.299	Lost	9.325	Covered	9.202	No Access	No Access	DRY	9.234	9.272	9.530	9.646	9.962	9.884	9.373	10.036	9.762
28/04/2011	10.088	10.080	9.824	Covered	10.323	Lost	9.327	Covered	9.247	No Access	No Access	DRY	9.222	9.265	9.534	9.645	9.957	9.890	9.954	10.037	9.780

Appendix F
Surface Water Analysis Reports

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

Scientific Analysis Laboratories

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 233231-1

Date of Report: 08-Apr-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: 04-Apr-2011
Date Analysis Started: 04-Apr-2011
Date Analysis Completed: 08-Apr-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

UKAS TESTING
1549

Report checked and authorised by :
Amelia McVennon
Project Manager

Issued by :
Amelia McVennon
Project Manager

SAL Reference: 233231
Customer Reference: 907 BRI

Soil Analysed as Soil
Moisture

				SAL Reference	**233231 011**	**233231 012**
				Customer Sample Reference	**J7 BV**	**J8 BV**
				Date Sampled	**21-MAR-2011**	**21-MAR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**		
Moisture	T277	AR	0.1	%	**17**	**19**

SAL Reference: 233231
Customer Reference: 907 BRI

Soil Analysed as Soil
Vertase Hauxton Suite

				SAL Reference	**233231 011**	**233231 012**
				Customer Sample Reference	**J7 BV**	**J8 BV**
				Date Sampled	**21-MAR-2011**	**21-MAR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**		
Electrical Conductivity	T7	AR	10	µS/cm	**2600**	**2300**
pH	T7	AR			**7.8**	**8.0**

SAL Reference: 233231
Customer Reference: 907 BRI

Soil Analysed as Soil
Vertase Hauxton OP/ON Suite

				SAL Reference	**233231 011**	**233231 012**
				Customer Sample Reference	**J7 BV**	**J8 BV**
				Date Sampled	**21-MAR-2011**	**21-MAR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**		
Dimefox	T16	AR	10	µg/kg	<10	<10
Ethofumesate	T16	AR	10	µg/kg	<10	**140**
Hempa	T16	AR	10	µg/kg	<10	<10
Schradan	T16	AR	10	µg/kg	<10	<10
Simazine	T16	AR	10	µg/kg	<10	<10

SAL Reference: 233231
Customer Reference: 907 BRI

Soil Analysed as Soil
Vertase Hauxton Phenoxy Acid Herbs Suite

				SAL Reference	**233231 011**	**233231 012**
				Customer Sample Reference	**J7 BV**	**J8 BV**
				Date Sampled	**21-MAR-2011**	**21-MAR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**		
Dicamba	T16	AR	10	µg/kg	<10	<10
Dichlorprop	T16	AR	10	µg/kg	<10	<10
Phenoxy Acetic acid herbicide: MCPA	T16	AR	10	µg/kg	<10	<10
Mecoprop	T16	AR	10	µg/kg	<10	<10

SAL Reference: 233231
Customer Reference: 907 BRI

Soil Analysed as Soil
Vertase Hauxton SVOC Suite

	SAL Reference	233231 011	233231 012
	Customer Sample Reference	J7 BV	J8 BV
	Date Sampled	21-MAR-2011	21-MAR-2011

Determinand	Method	Test Sample	LOD	Units		
2,4,6-Trichlorophenol	T16	AR	100	µg/kg	<100	<100
2-Methyl-4,6-dinitrophenol	T16	AR	100	µg/kg	<100	<100
4-Chloro-2-methylphenol	T16	AR	100	µg/kg	<100	<100
Bis (2-chloroethyl) ether	T16	AR	100	µg/kg	<100	<100
Phenol	T16	AR	100	µg/kg	<100	<100

SAL Reference: 233231
Customer Reference: 907 BRI

Soil Analysed as Soil
Vertase Hauxton VOC Suite

	SAL Reference	233231 011	233231 012
	Customer Sample Reference	J7 BV	J8 BV
	Date Sampled	21-MAR-2011	21-MAR-2011

Determinand	Method	Test Sample	LOD	Units		
1,2-Dichlorobenzene	T54	AR	5	µg/kg	<5	<5
1,2-Dichloroethane	T54	AR	5	µg/kg	(13) <5	(13) <5
Cis-1,2-Dichloroethylene	T54	AR	5	µg/kg	<5	<5
Cyclohexanone	T54	AR	10	µg/kg	<10	<10
Tetrachloroethene	T54	AR	5	µg/kg	<5	<5
Toluene	T54	AR	1	µg/kg	**1**	**1**
Trichloroethene	T54	AR	5	µg/kg	<5	<5
Vinyl chloride	T54	AR	5	µg/kg	<5	<5
Xylene (Total)	T54	AR	1	µg/kg	<1	<1

SAL Reference: 233231
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton Suite

	SAL Reference	233231 001	233231 002	233231 003	233231 004	233231 005
	Customer Sample Reference	BH9	BH11	N3	S3/4	S3/6
	Date Sampled	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011

Determinand	Method	Test Sample	LOD	Units					
Electrical Conductivity	T7	AR	10	µS/cm	**3200**	**1900**	**3400**	**5000**	**4300**
pH	T7	AR			**7.0**	**7.3**	**7.3**	**7.4**	**7.4**

SAL Reference: 233231
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton Suite

	SAL Reference	233231 006	233231 007	233231 008	233231 009	233231 010
	Customer Sample Reference	VF12	BH6/06	BH4	BHB1	WS107
	Date Sampled	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011

Determinand	Method	Test Sample	LOD	Units					
Electrical Conductivity	T7	AR	10	µS/cm	**1400**	**1300**	**2800**	**3200**	**4800**
pH	T7	AR			**7.6**	**7.5**	**7.3**	**7.2**	**7.2**

SAL Reference: 233231
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton OP/ON Suite

				SAL Reference	**233231 001**	**233231 002**	**233231 003**	**233231 004**	**233231 005**
				Customer Sample Reference	**BH9**	**BH11**	**N3**	**S3/4**	**S3/6**
				Date Sampled	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**					
Dimefox	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	(9) <1.0	(9) <1.0
Ethofumesate	T16	AR	0.1	µg/l	**12**	**6.6**	**5.5**	**18**	**230**
Hempa	T16	AR	0.1	µg/l	**0.3**	<0.1	<0.1	**67**	(9) <1.0
Schradan	T16	AR	0.1	µg/l	<0.1	**2.9**	**0.2**	**29**	**430**
Simazine	T16	AR	0.01	µg/l	<0.01	**0.77**	**0.02**	(9) <1.0	(9) <1.0

SAL Reference: 233231
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton OP/ON Suite

				SAL Reference	**233231 006**	**233231 007**	**233231 008**	**233231 009**	**233231 010**
				Customer Sample Reference	**VF12**	**BH6/06**	**BH4**	**BHB1**	**WS107**
				Date Sampled	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**					
Dimefox	T16	AR	0.1	µg/l	(9) <1.0	<0.1	(9) <1.0	(9) <1.0	<0.1
Ethofumesate	T16	AR	0.1	µg/l	**350**	**2.0**	**250**	**190**	**1.1**
Hempa	T16	AR	0.1	µg/l	(9) <1.0	<0.1	(9) <1.0	(9) <1.0	**0.6**
Schradan	T16	AR	0.1	µg/l	(9) <1.0	<0.1	**18**	**15**	**0.3**
Simazine	T16	AR	0.01	µg/l	**4.6**	<0.01	**2.3**	**2.1**	<0.01

SAL Reference: 233231
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton Phenoxy Acid Herbs Suite

				SAL Reference	**233231 001**	**233231 002**	**233231 003**	**233231 004**	**233231 005**
				Customer Sample Reference	**BH9**	**BH11**	**N3**	**S3/4**	**S3/6**
				Date Sampled	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**					
Dicamba	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	**1.2**	**52**
Dichlorprop	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	**38**	**1500**
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1	**1800**
Mecoprop	T16	AR	0.1	µg/l	**60**	**3.3**	**9.3**	**140**	**1100**

SAL Reference: 233231
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton Phenoxy Acid Herbs Suite

				SAL Reference	**233231 006**	**233231 007**	**233231 008**	**233231 009**	**233231 010**
				Customer Sample Reference	**VF12**	**BH6/06**	**BH4**	**BHB1**	**WS107**
				Date Sampled	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**	**21-MAR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**					
Dicamba	T16	AR	0.1	µg/l	**0.4**	<0.1	**12**	**12**	**0.2**
Dichlorprop	T16	AR	0.1	µg/l	**2.0**	<0.1	**59**	**45**	**2.4**
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	µg/l	**4.4**	<0.1	**260**	**200**	<0.1
Mecoprop	T16	AR	0.1	µg/l	**49**	**0.3**	**210**	**200**	**96**

SAL Reference: 233231
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton SVOC Suite

	SAL Reference	233231 001	233231 002	233231 003	233231 004	233231 005
	Customer Sample Reference	BH9	BH11	N3	S3/4	S3/6
	Date Sampled	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011
Determinand	**Method** / **Test Sample** / **LOD** / **Units**					
2,4,6-Trichlorophenol	T16 / AR / 10 / µg/l	<10	<10	<10	<10	**1300**
2-Methyl-4,6-dinitrophenol	T16 / AR / 10 / µg/l	<10	<10	<10	<10	(9) <1000
4-Chloro-2-methylphenol	T16 / AR / 10 / µg/l	<10	<10	<10	**60**	**1100**
Bis (2-chloroethyl) ether	T16 / AR / 10 / µg/l	**190**	**30**	**230**	**1700**	**6400**
Phenol	T16 / AR / 10 / µg/l	<10	<10	<10	<10	(9) <1000

SAL Reference: 233231
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton SVOC Suite

	SAL Reference	233231 006	233231 007	233231 008	233231 009	233231 010
	Customer Sample Reference	VF12	BH6/06	BH4	BHB1	WS107
	Date Sampled	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011
Determinand	**Method** / **Test Sample** / **LOD** / **Units**					
2,4,6-Trichlorophenol	T16 / AR / 10 / µg/l	<10	<10	<10	<10	(9) <1000
2-Methyl-4,6-dinitrophenol	T16 / AR / 10 / µg/l	<10	<10	<10	<10	(9) <1000
4-Chloro-2-methylphenol	T16 / AR / 10 / µg/l	<10	<10	**590**	<10	(9) <1000
Bis (2-chloroethyl) ether	T16 / AR / 10 / µg/l	<10	<10	**160**	**140**	**2800**
Phenol	T16 / AR / 10 / µg/l	<10	<10	<10	<10	(9) <1000

SAL Reference: 233231
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton VOC Suite

	SAL Reference	233231 001	233231 002	233231 003	233231 004	233231 005
	Customer Sample Reference	BH9	BH11	N3	S3/4	S3/6
	Date Sampled	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011
Determinand	**Method** / **Test Sample** / **LOD** / **Units**					
1,2-Dichlorobenzene	T54 / AR / 1 / µg/l	<1	<1	<1	<1	(19) **870**
1,2-Dichloroethane	T54 / AR / 1 / µg/l	(13) <1	(13) <1	(13) <1	(13) <1	(13,19) **900**
Cis-1,2-Dichloroethylene	T54 / AR / 1 / µg/l	**2**	**4**	**1**	**1**	(19) **10000**
Cyclohexanone	T54 / AR / 10 / µg/l	<10	<10	<10	<10	(19,9) <200
Tetrachloroethene	T54 / AR / 1 / µg/l	<1	<1	<1	<1	(19) **54000**
Toluene	T54 / AR / 1 / µg/l	<1	<1	<1	**66**	(19) **19000**
Trichloroethene	T54 / AR / 1 / µg/l	<1	<1	<1	<1	(19) **39000**
Vinyl chloride	T54 / AR / 1 / µg/l	<1	<1	<1	**1**	(19) **680**
Xylene (Total)	T54 / AR / 1 / µg/l	**3**	<1	<1	**60**	(19) **5100**

SAL Reference: 233231
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton VOC Suite

	SAL Reference	233231 006	233231 007	233231 008	233231 009	233231 010
	Customer Sample Reference	VF12	BH6/06	BH4	BHB1	WS107
	Date Sampled	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011	21-MAR-2011
Determinand	Method / Test Sample / LOD / Units					
1,2-Dichlorobenzene	T54 AR 1 µg/l	**2**	<1	**2**	**2**	<1
1,2-Dichloroethane	T54 AR 1 µg/l	(13) <1	(13) <1	(13) **17**	(13) **14**	(13) <1
Cis-1,2-Dichloroethylene	T54 AR 1 µg/l	**4**	<1	(19) **1200**	(19) **700**	**33**
Cyclohexanone	T54 AR 10 µg/l	<10	<10	<10	<10	<10
Tetrachloroethene	T54 AR 1 µg/l	**40**	**24**	**31**	**58**	**3**
Toluene	T54 AR 1 µg/l	**4**	**3**	**13**	**2**	<1
Trichloroethene	T54 AR 1 µg/l	**10**	**4**	**17**	**10**	**2**
Vinyl chloride	T54 AR 1 µg/l	**3**	<1	**250**	**190**	**22**
Xylene (Total)	T54 AR 1 µg/l	<1	<1	**87**	**120**	<1

Index to symbols used in 233231-1

Value	Description
AR	As Received
9	LOD raised due to dilution of sample
13	Results have been blank corrected.
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
T7	Probe
T16	GC/MS
T54	GC/MS (Headspace)
T277	Grav (1 Dec) (40 C)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Moisture	T277	AR	0.1	%	N	011-012
Electrical Conductivity	T7	AR	10	µS/cm	N	011-012
pH	T7	AR			U	011-012
Dimefox	T16	AR	10	µg/kg	N	011-012
Ethofumesate	T16	AR	10	µg/kg	N	011-012
Hempa	T16	AR	10	µg/kg	N	011-012
Schradan	T16	AR	10	µg/kg	N	011-012
Simazine	T16	AR	10	µg/kg	N	011-012
Dicamba	T16	AR	10	µg/kg	N	011-012
Dichlorprop	T16	AR	10	µg/kg	N	011-012
Phenoxy Acetic acid herbicide: MCPA	T16	AR	10	µg/kg	N	011-012
Mecoprop	T16	AR	10	µg/kg	N	011-012
2,4,6-Trichlorophenol	T16	AR	100	µg/kg	U	011-012
2-Methyl-4,6-dinitrophenol	T16	AR	100	µg/kg	N	011-012
4-Chloro-2-methylphenol	T16	AR	100	µg/kg	N	011-012
Bis (2-chloroethyl) ether	T16	AR	100	µg/kg	U	011-012
Phenol	T16	AR	100	µg/kg	U	011-012
1,2-Dichlorobenzene	T54	AR	5	µg/kg	U	011-012
1,2-Dichloroethane	T54	AR	5	µg/kg	U	011-012
Cis-1,2-Dichloroethylene	T54	AR	5	µg/kg	U	011-012
Cyclohexanone	T54	AR	10	µg/kg	N	011-012
Tetrachloroethene	T54	AR	5	µg/kg	U	011-012
Toluene	T54	AR	1	µg/kg	U	011-012
Trichloroethene	T54	AR	5	µg/kg	U	011-012
Vinyl chloride	T54	AR	5	µg/kg	U	011-012
Xylene (Total)	T54	AR	1	µg/kg	U	011-012

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Electrical Conductivity	T7	AR	10	µS/cm	N	001-010
pH	T7	AR			U	001-010
Dimefox	T16	AR	0.1	µg/l	N	001-010
Ethofumesate	T16	AR	0.1	µg/l	N	001-010
Hempa	T16	AR	0.1	µg/l	N	001-010
Schradan	T16	AR	0.1	µg/l	N	001-010
Simazine	T16	AR	0.01	µg/l	N	001-010
Dicamba	T16	AR	0.1	µg/l	N	001-010
Dichlorprop	T16	AR	0.1	µg/l	N	001-010
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	µg/l	N	001-010
Mecoprop	T16	AR	0.1	µg/l	N	001-010
2,4,6-Trichlorophenol	T16	AR	10	µg/l	U	001-010
2-Methyl-4,6-dinitrophenol	T16	AR	10	µg/l	N	001-010
4-Chloro-2-methylphenol	T16	AR	10	µg/l	N	001-010
Bis (2-chloroethyl) ether	T16	AR	10	µg/l	U	001-010
Phenol	T16	AR	10	µg/l	U	001-010
1,2-Dichlorobenzene	T54	AR	1	µg/l	U	001-010
1,2-Dichloroethane	T54	AR	1	µg/l	U	001-010
Cis-1,2-Dichloroethylene	T54	AR	1	µg/l	U	001-010
Cyclohexanone	T54	AR	10	µg/l	N	001-010
Tetrachloroethene	T54	AR	1	µg/l	U	001-010
Toluene	T54	AR	1	µg/l	U	001-010
Trichloroethene	T54	AR	1	µg/l	U	001-010
Vinyl chloride	T54	AR	1	µg/l	U	001-010
Xylene (Total)	T54	AR	1	µg/l	U	001-010

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Scientific Analysis Laboratories

Certificate of Analysis

Hadfield House
Hadfield Street
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Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 234169-1

Date of Report: 18-Apr-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: 12-Apr-2011
Date Analysis Started: 12-Apr-2011
Date Analysis Completed: 18-Apr-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

UKAS TESTING
1549

Report checked and authorised by :
Amelia McVennon
Project Manager

Issued by :
Amelia McVennon
Project Manager

SAL Reference: 234169
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton Suite

				SAL Reference	**234169 001**	**234169 002**	**234169 003**	**234169 004**
				Customer Sample Reference	**CAM UP**	**CAM DOWN**	**RIDDY UP**	**RIDDY DOWN**
				Date Sampled	**12-APR-2011**	**12-APR-2011**	**12-APR-2011**	**12-APR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**				
Electrical Conductivity	T7	AR	10	µS/cm	**960**	**930**	**980**	**980**
pH	T7	AR			**7.2**	**8.0**	**8.1**	**8.2**

SAL Reference: 234169
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton OP/ON Suite

				SAL Reference	**234169 001**	**234169 002**	**234169 003**	**234169 004**
				Customer Sample Reference	**CAM UP**	**CAM DOWN**	**RIDDY UP**	**RIDDY DOWN**
				Date Sampled	**12-APR-2011**	**12-APR-2011**	**12-APR-2011**	**12-APR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**				
Dimefox	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Ethofumesate	T16	AR	0.1	µg/l	<0.1	**0.1**	<0.1	**0.2**
Hempa	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Schradan	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Simazine	T16	AR	0.01	µg/l	<0.01	<0.01	<0.01	<0.01

SAL Reference: 234169
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton Phenoxy Acid Herbs Suite

				SAL Reference	**234169 001**	**234169 002**	**234169 003**	**234169 004**
				Customer Sample Reference	**CAM UP**	**CAM DOWN**	**RIDDY UP**	**RIDDY DOWN**
				Date Sampled	**12-APR-2011**	**12-APR-2011**	**12-APR-2011**	**12-APR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**				
Dicamba	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Dichlorprop	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Mecoprop	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1

SAL Reference: 234169
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton SVOC Suite

				SAL Reference	**234169 001**	**234169 002**	**234169 003**	**234169 004**
				Customer Sample Reference	**CAM UP**	**CAM DOWN**	**RIDDY UP**	**RIDDY DOWN**
				Date Sampled	**12-APR-2011**	**12-APR-2011**	**12-APR-2011**	**12-APR-2011**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**				
2,4,6-Trichlorophenol	T16	AR	10	µg/l	<10	<10	<10	<10
2-Methyl-4,6-dinitrophenol	T16	AR	10	µg/l	<10	<10	<10	<10
4-Chloro-2-methylphenol	T16	AR	10	µg/l	<10	<10	<10	<10
Bis (2-chloroethyl) ether	T16	AR	10	µg/l	<10	<10	<10	<10
Phenol	T16	AR	10	µg/l	<10	<10	<10	<10

SAL Reference: 234169
Customer Reference: 907 BRI

Water Analysed as Water
Vertase Hauxton VOC Suite

	SAL Reference	234169 001	234169 002	234169 003	234169 004
	Customer Sample Reference	CAM UP	CAM DOWN	RIDDY UP	RIDDY DOWN
	Date Sampled	12-APR-2011	12-APR-2011	12-APR-2011	12-APR-2011
Determinand	**Method** / **Test Sample** / **LOD** / **Units**				
1,2-Dichlorobenzene	T54 AR 1 µg/l	<1	<1	<1	<1
1,2-Dichloroethane	T54 AR 1 µg/l	(13) <1	(13) <1	(13) <1	(13) <1
Cis-1,2-Dichloroethylene	T54 AR 1 µg/l	<1	**3**	<1	**6**
Cyclohexanone	T54 AR 10 µg/l	<10	<10	<10	<10
Tetrachloroethene	T54 AR 1 µg/l	**3**	**1**	**2**	**2**
Toluene	T54 AR 1 µg/l	<1	<1	<1	<1
Trichloroethene	T54 AR 1 µg/l	<1	**5**	<1	**9**
Vinyl chloride	T54 AR 1 µg/l	<1	<1	<1	<1
Xylene (Total)	T54 AR 1 µg/l	<1	<1	<1	<1

Index to symbols used in 234169-1

Value	Description
AR	As Received
13	Results have been blank corrected.
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Method Index

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

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Electrical Conductivity	T7	AR	10	µS/cm	N	001-004
pH	T7	AR			U	001-004
Dimefox	T16	AR	0.1	µg/l	N	001-004
Ethofumesate	T16	AR	0.1	µg/l	N	001-004
Hempa	T16	AR	0.1	µg/l	N	001-004
Schradan	T16	AR	0.1	µg/l	N	001-004
Simazine	T16	AR	0.01	µg/l	N	001-004
Dicamba	T16	AR	0.1	µg/l	N	001-004
Dichlorprop	T16	AR	0.1	µg/l	N	001-004
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	µg/l	N	001-004
Mecoprop	T16	AR	0.1	µg/l	N	001-004
2,4,6-Trichlorophenol	T16	AR	10	µg/l	U	001-004
2-Methyl-4,6-dinitrophenol	T16	AR	10	µg/l	N	001-004
4-Chloro-2-methylphenol	T16	AR	10	µg/l	N	001-004
Bis (2-chloroethyl) ether	T16	AR	10	µg/l	U	001-004
Phenol	T16	AR	10	µg/l	U	001-004
1,2-Dichlorobenzene	T54	AR	1	µg/l	U	001-004
1,2-Dichloroethane	T54	AR	1	µg/l	U	001-004
Cis-1,2-Dichloroethylene	T54	AR	1	µg/l	U	001-004
Cyclohexanone	T54	AR	10	µg/l	N	001-004
Tetrachloroethene	T54	AR	1	µg/l	U	001-004
Toluene	T54	AR	1	µg/l	U	001-004
Trichloroethene	T54	AR	1	µg/l	U	001-004
Vinyl chloride	T54	AR	1	µg/l	U	001-004
Xylene (Total)	T54	AR	1	µg/l	U	001-004

Appendix G
Groundwater Contour Plots

A1

Legend

- BH1/06 — Atkins Exploratory Hole Location
- BH7 P67 — Previous Borehole Location
- Water Sampling Location
- BHB1 — Biogenie Boreholes (Ref: Biogenie dwg 'HAUXTON_101-1')
- W1 — Cut-Off Trench Abstraction Wells (Ref: Vertase FLI 'Hauxton Topo Temp'.dxf)
- VF12 — New VFLI Monitoring Wells

Borehole Locations Ref: 'BH TO OGL 03-07-09'.LSS
Unless Stated Otherwise

9.635 Water Level (Actual)
9.527 Water Level (Actual)
9.264 Water Level (Actual)
9.200 Water Level (Actual)
W1 W2 W3
VF12
S2/6
S3/4
BH1
P67
P73
WS17a
BH8
VN3
BHB1
BH2
BH6/06
GARAGES

Rev.	Description	Revised By	Date
	FIRST ISSUE		05-05-11

Vertase F.L.I.

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email: info@vertaseffli.co.uk
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Site Address:
Bayer Site
Hauxton
Cambridge

Rev:

Title: Ground Water Contours 21-04-11

Client: Harrow Estates

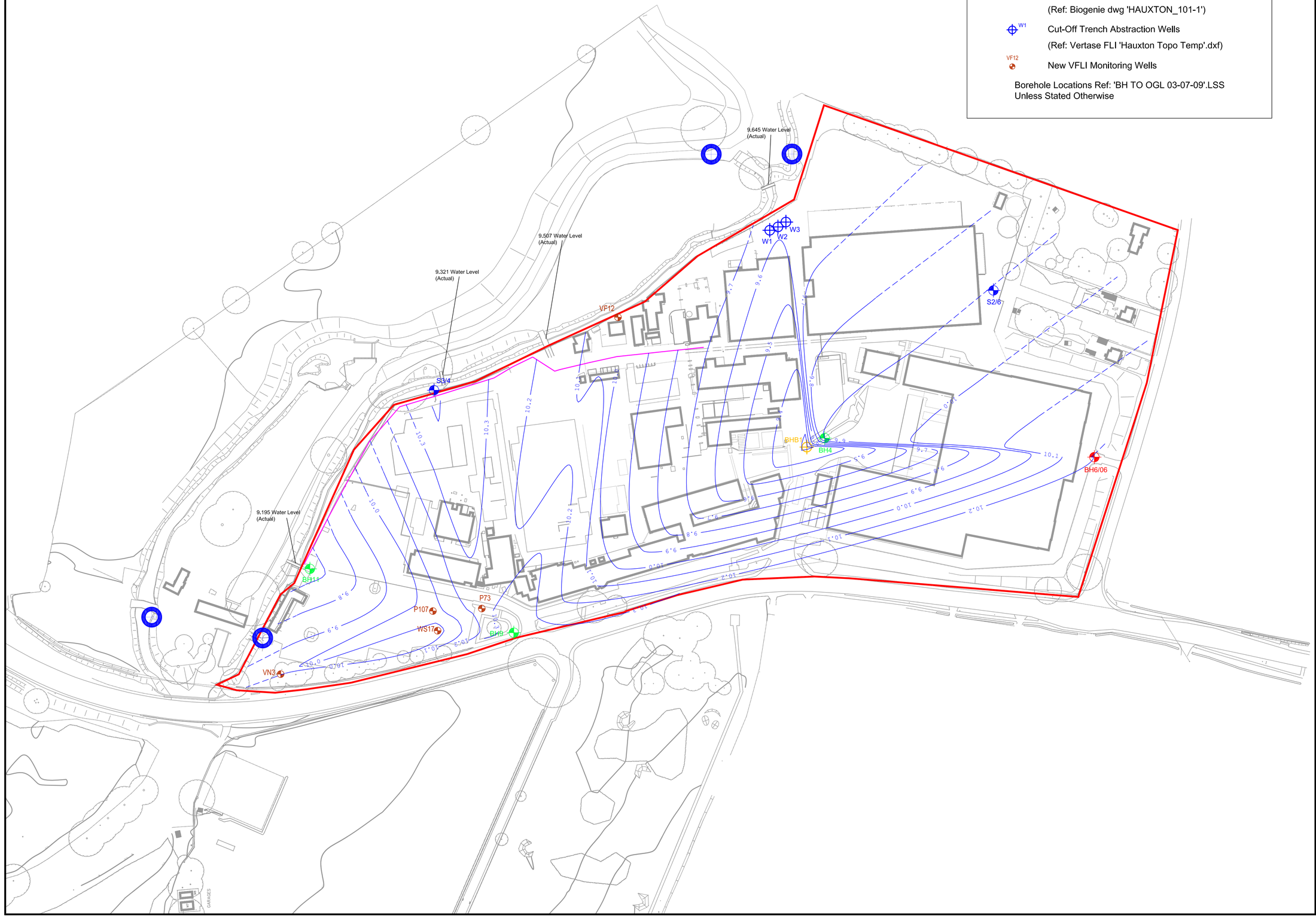
Drawn: MRG	Checked: MA	Approved: MA
Dwg: D907_166	Contract: 907 BRI	Scale: 1:1000

A1

Legend

- BH1/06 — Atkins Exploratory Hole Location
- BH7 P67 — Previous Borehole Location
- Water Sampling Location
- BHB1 — Biogenie Boreholes (Ref: Biogenie dwg 'HAUXTON_101-1')
- W1 — Cut-Off Trench Abstraction Wells (Ref: Vertase FLI 'Hauxton Topo Temp'.dxf)
- VF12 — New VFLI Monitoring Wells

Borehole Locations Ref: 'BH TO OGL 03-07-09'.LSS
Unless Stated Otherwise



Rev.	Description	Revised By	Date
	FIRST ISSUE		05-05-11

Vertase F.L.I.

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Site Address:
Bayer Site
Hauxton
Cambridge

Rev:

Title: Ground Water Contours 14-04-11

Client: Harrow Estates

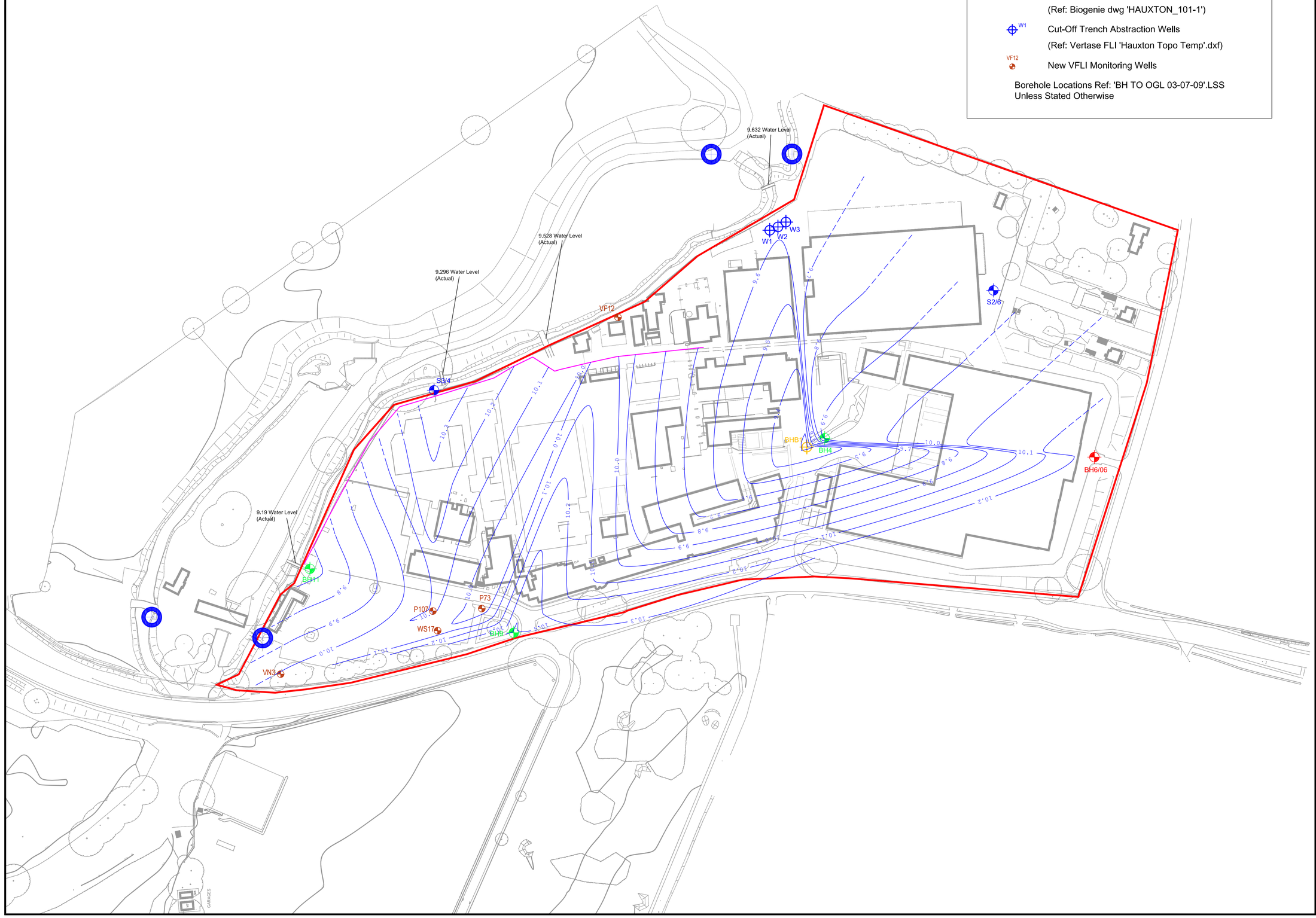
Drawn: MRG	Checked: MA	Approved: MA
Dwg: D907_165	Contract: 907 BRI	Scale: 1:1000

A1

Legend

- BH1/06 — Atkins Exploratory Hole Location
- BH7 P67 — Previous Borehole Location
- Water Sampling Location
- BHB1 — Biogenie Boreholes (Ref: Biogenie dwg 'HAUXTON_101-1')
- W1 — Cut-Off Trench Abstraction Wells (Ref: Vertase FLI 'Hauxton Topo Temp'.dxf)
- VF12 — New VFLI Monitoring Wells

Borehole Locations Ref: 'BH TO OGL 03-07-09'.LSS
Unless Stated Otherwise



Rev.	Description	Revised By	Date
	FIRST ISSUE		04-05-11

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Site Address:
Bayer Site
Hauxton
Cambridge

Rev:

Title: Ground Water Contours 07-04-11

Client: Harrow Estates

Drawn: MRG	Checked: MA	Approved: MA
Dwg: D907_164	Contract: 907 BRI	Scale: 1:1000

A1

Legend

- BH1/06 — Atkins Exploratory Hole Location
- BH7 P67 — Previous Borehole Location
- Water Sampling Location
- BHB1 — Biogenie Boreholes (Ref: Biogenie dwg 'HAUXTON_101-1')
- W1 — Cut-Off Trench Abstraction Wells (Ref: Vertase FLI 'Hauxton Topo Temp'.dxf)
- VF12 — New VFLI Monitoring Wells

Borehole Locations Ref: 'BH TO OGL 03-07-09'.LSS
Unless Stated Otherwise

9.645 Water Level (Actual)
9.534 Water Level (Actual)
9.265 Water Level (Actual)
9.222 Water Level (Actual)
W1 W2 W3
VF12
S2/6
S3/4
BHB1
BH4
BH6/06
BH11
P73
P107
WS17
BH5
VN3
GARAGES

Rev.	Description	Revised By	Date
	FIRST ISSUE		05-05-11

Vertase F.L.I.

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- Sheffield Office: Tel: 01246 813289 Fax: 01246 812963
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email: info@vertaseffli.co.uk
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Site Address:
Bayer Site
Hauxton
Cambridge

Rev:

Title: Ground Water Contours 28-04-11

Client: Harrow Estates

Drawn: MRG	Checked: MA	Approved: MA
Dwg: D907_167	Contract: 907 BRI	Scale: 1:1000

Appendix H

Waste Water Treatment Plant Discharge Analysis

Water Quality Analysis of Effluent Discharge Sample

				Bromide	Chloride	Sulphate Ion	Suspended Solids (Total)	Ammoniacal Nitrogen	Biochemical Oxygen Demand	pH	Atrazine	Trietazine	Simazine	Total Atrazine, Trietazine 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
Consented Levels				*50*	*3000*	*5000*	*45*	*15*	*30*	*na*	*Total of all three*			*250*	*50*	*20*	*50*	*274*	*135*
01/03/2010	17/03/2010	193447	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	196379	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	21/04/2010	196517	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	199291	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	17/05/2010	199176	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	01/06/2010	200382	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	201487	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	203351	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	205613	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	208693	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	209961	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	211356	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	212901	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	213745	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	215625	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	216826	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	218850	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	219447	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	222558	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	223307	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	224623	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	228099	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
02/03/2011	15/03/2011	229789	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
23/03/2011	01/04/2011	232143	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	233543	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	235339	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

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Scientific Analysis Laboratories

Certificate of Analysis

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Tel : 0161 874 2400
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Report Number: 233543-1

Date of Report: 13-Apr-2011

Customer: VertaseFLI Limited
19 Napier Court
Barlborough Links
Barlborough
S43 4PZ

Customer Contact: The Project Management

Customer Job Reference: 907BRI WWTW
Customer Purchase Order: 907BRI WWTW
Date Job Received at SAL: 06-Apr-2011
Date Analysis Started: 07-Apr-2011
Date Analysis Completed: 13-Apr-2011

The results reported relate to samples received in the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

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

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1549

Report checked and authorised by :
Amelia McVennon
Project Manager

Issued by :
Amelia McVennon
Project Manager

SAL Reference: 233543
Customer Reference: 907BRI WWTW

Water Analysed as Water
Miscellaneous

					SAL Reference	233543 001	233543 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	04-APR-2011	04-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
Ammoniacal nitrogen	T4	AR	50	µg/l		**110**	<50
Biochemical Oxygen Demand	T7	AR	3000	µg/l		<3000	<3000
pH	T7	AR				**7.2**	**8.0**

SAL Reference: 233543
Customer Reference: 907BRI WWTW

Water Analysed as Water
Suite A

					SAL Reference	233543 001	233543 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	04-APR-2011	04-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
Atrazine	T16	AR	0.01	µg/l		**0.51**	<0.01
Trietazine	T16	AR	0.01	µg/l		**49**	**0.03**

SAL Reference: 233543
Customer Reference: 907BRI WWTW

Water Analysed as Water
Suite B

					SAL Reference	233543 001	233543 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	04-APR-2011	04-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
Benazolin	T16	AR	0.1	µg/l		<0.1	<0.1
2,3,6-TCB	T16	AR	0.1	µg/l		**71**	**0.8**

SAL Reference: 233543
Customer Reference: 907BRI WWTW

Water Analysed as Water
Suite C

					SAL Reference	233543 001	233543 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	04-APR-2011	04-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
Bromide	T253	AR	100	µg/l		[9] <1000	[9] <1000
Chloride	T253	AR	200	µg/l		**240000**	**190000**
Sulphate ion	T253	AR	100	µg/l		**250000**	**200000**
Suspended Solids (Total)	T2	AR	10000	µg/l		**230000**	<10000

SAL Reference: 233543
Customer Reference: 907BRI WWTW

Water Analysed as Water
Suite D

					SAL Reference	233543 001	233543 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	04-APR-2011	04-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
Dicamba	T16	AR	0.1	µg/l		**0.6**	<0.1
Hempa	T16	AR	0.1	µg/l		**8.9**	**1.1**
Schradan	T16	AR	0.1	µg/l		**3.1**	**0.5**
Simazine	T16	AR	0.01	µg/l		**0.90**	<0.01

SAL Reference: 233543
Customer Reference: 907BRI WWTW

Water Analysed as Water
Suite E

					SAL Reference	233543 001	233543 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	04-APR-2011	04-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
TVC at 22 C after 3 days	T34	AR	10	cfu/ml		**9900**	**9100**
TVC at 37 C after 2 days	T34	AR	10	cfu/ml		**1800**	**2600**

Index to symbols used in 233543-1

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

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Ammoniacal nitrogen	T4	AR	50	µg/l	U	001-002
Biochemical Oxygen Demand	T7	AR	3000	µg/l	N	001-002
pH	T7	AR			U	001-002
Atrazine	T16	AR	0.01	µg/l	N	001-002
Trietazine	T16	AR	0.01	µg/l	N	001-002
Benazolin	T16	AR	0.1	µg/l	N	001-002
2,3,6-TCB	T16	AR	0.1	µg/l	N	001-002
Bromide	T253	AR	100	µg/l	WU	001-002
Chloride	T253	AR	200	µg/l	WU	001-002
Sulphate ion	T253	AR	100	µg/l	WU	001-002
Suspended Solids (Total)	T2	AR	10000	µg/l	WN	001-002
Dicamba	T16	AR	0.1	µg/l	N	001-002
Hempa	T16	AR	0.1	µg/l	N	001-002
Schradan	T16	AR	0.1	µg/l	N	001-002
Simazine	T16	AR	0.01	µg/l	N	001-002

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
TVC at 22 C after 3 days	T34	AR	10	cfu/ml	SN	001-002
TVC at 37 C after 2 days	T34	AR	10	cfu/ml	SN	001-002

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

Scientific Analysis Laboratories

Certificate of Analysis

Hadfield House
Hadfield Street
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Tel : 0161 874 2400
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Report Number: 235339-1

Date of Report: 03-May-2011

Customer: VertaseFLI Limited
19 Napier Court
Barlborough Links
Barlborough
S43 4PZ

Customer Contact: The Project Management

Customer Job Reference: 907BRI
Customer Purchase Order: 907BRI
Date Job Received at SAL: 21-Apr-2011
Date Analysis Started: 26-Apr-2011
Date Analysis Completed: 03-May-2011

The results reported relate to samples received in the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

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

UKAS TESTING
1549

Report checked and authorised by :
Amelia McVennon
Project Manager

Issued by :
Amelia McVennon
Project Manager

SAL Reference: 235339
Customer Reference: 907BRI

Water Analysed as Water
Miscellaneous

					SAL Reference	235339 001	235339 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	20-APR-2011	20-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
Ammoniacal nitrogen	T4	AR	50	µg/l		<50	<50
Biochemical Oxygen Demand	T7	AR	3000	µg/l		<3000	<3000
pH	T7	AR				**5.0**	**4.0**

SAL Reference: 235339
Customer Reference: 907BRI

Water Analysed as Water
Suite A

					SAL Reference	235339 001	235339 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	20-APR-2011	20-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
Atrazine	T16	AR	0.01	µg/l		(2) <0.50	<0.01
Trietazine	T16	AR	0.01	µg/l		**0.14**	<0.01

SAL Reference: 235339
Customer Reference: 907BRI

Water Analysed as Water
Suite B

					SAL Reference	235339 001	235339 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	20-APR-2011	20-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
Benazolin	T16	AR	0.1	µg/l		<0.1	<0.1
2,3,6-TCB	T16	AR	0.1	µg/l		**7.4**	<0.1

SAL Reference: 235339
Customer Reference: 907BRI

Water Analysed as Water
Suite C

					SAL Reference	235339 001	235339 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	20-APR-2011	20-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
Bromide	T253	AR	100	µg/l		**400**	(9) <1000
Chloride	T253	AR	200	µg/l		**140000**	**150000**
Sulphate ion	T253	AR	100	µg/l		**190000**	**190000**
Suspended Solids (Total)	T2	AR	10000	µg/l		<10000	<10000

SAL Reference: 235339
Customer Reference: 907BRI

Water Analysed as Water
Suite D

					SAL Reference	235339 001	235339 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	20-APR-2011	20-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
Dicamba	T16	AR	0.1	µg/l		**0.4**	<0.1
Hempa	T16	AR	0.1	µg/l		**6.5**	**1.2**
Schradan	T16	AR	0.1	µg/l		**7.4**	**0.4**
Simazine	T16	AR	0.01	µg/l		**0.20**	<0.01

SAL Reference: 235339
Customer Reference: 907BRI

Water Analysed as Water
Suite E

					SAL Reference	235339 001	235339 002
					Customer Sample Reference	PRIMARY	DISCHARGE
					Date Sampled	20-APR-2011	20-APR-2011
Determinand	**Method**	**Test Sample**	**LOD**	**Units**			
TVC at 22 C	T34	AR	10	cfu/ml		**2800**	**2300**
TVC at 37 C	T34	AR	10	cfu/ml		**1800**	**160**

Index to symbols used in 235339-1

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

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Ammoniacal nitrogen	T4	AR	50	µg/l	U	001-002
Biochemical Oxygen Demand	T7	AR	3000	µg/l	N	001-002
pH	T7	AR			U	001-002
Atrazine	T16	AR	0.01	µg/l	N	001-002
Trietazine	T16	AR	0.01	µg/l	N	001-002
Benazolin	T16	AR	0.1	µg/l	N	001-002
2,3,6-TCB	T16	AR	0.1	µg/l	N	001-002
Bromide	T253	AR	100	µg/l	WU	001-002
Chloride	T253	AR	200	µg/l	WU	001-002
Sulphate ion	T253	AR	100	µg/l	WU	001-002
Suspended Solids (Total)	T2	AR	10000	µg/l	N	001-002
Dicamba	T16	AR	0.1	µg/l	N	001-002
Hempa	T16	AR	0.1	µg/l	N	001-002
Schradan	T16	AR	0.1	µg/l	N	001-002

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Simazine	T16	AR	0.01	µg/l	N	001-002
TVC at 22 C	T34	AR	10	cfu/ml	SN	001-002
TVC at 37 C	T34	AR	10	cfu/ml	SN	001-002

Appendix I
Soil Characterisation Results Summary

Results Received	Reported to SCDC	Grid square	Contaminant	Concentration (µg/kg)	Likely use/origin
12.04.2010	06.05.2010	K15	VOC/SVOC peaks detected		
12.04.2010	06.05.2010	K16	Series of Aromatic Hydrocarbons circa C_{13}-C_{16}	17,000	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.
15.04.2010	06.05.2010 (09.06.2010)	J16	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.
			2,6-bis(1,1-dimethylethyl)-4-(1-methylpropyl)-phenol	6,000	Commonly used as an antioxidant and stabiliser, also used in oils used in industrial applications.
			Unidentified branched aromatic alcohol, C_{14}	240,000	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
			Unidentified branched aromatic alcohol, C_{18}	290,000	
15.04.2010	06.05.2010	K14	Phenanthrene	4,100	Encountered and assessed during site investigation, concentration below target value
			Fluoranthene	4,800	
			Pyrene	3,900	
			Benzo(b/k)Fluoranthene	2,200	
07.05.2010	24.05.2010	K9	Dodecanoic acid (Lauric acid), isooctyl ester	2,400	Lauric acid - main acid in coconut oil and palm kernel oil, is non-toxic and safe to handle, is used in many soaps, shampoos and body butters.
			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.
07.05.2010	24.05.2010 (09.06.2010)	L8	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
			Cyclo octaatomic sulphur	2,800	S_8 is the most common form of sulphur in the solid state, widely used in insecticide and fungicide manufacture
			Dodecanoic acid (Lauric acid), isooctyl ester	7,400	Lauric acid - main acid in coconut oil and palm kernel oil, is non-toxic and safe to handle, is used in many soaps, shampoos and body butters.
			Unidentified aromatic hydrocarbon containing O and Cl circa C_7	8,400	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.

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		
13.05.2010	24.05.2010 (09.06.2010)	H9	1,2-bis(2,4,6-trichlorophenoxy)ethane	6,900	Potential Prochloraz degradation product
			Prochloraz	9,100	Fungicide
			Unidentified aromatic hydrocarbon containing Cl circa C_8	9,400	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.
			Unidentified aromatic amine containing Cl circa C_{11}	2,100	
13.05.2010	24.05.2010	I7	No SVOC peaks detected		
13.05.2010	24.05.2010 (09.06.2010)	I9	2,4-Dichloro-o-cresol	29,000	Potential herbicide degradation product
			2,3,6-Trichlorotoluene	47,000	
			1-(2-Chloroethoxy)-2-(o-Tolyloxy)-ethane	20,000	
			Unidentified aromatic alcohol containing Cl circa C_7	25,000	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.
			Unidentified aromatic hydrocarbon containing O circa $C_{16\text{-}18}$	12,000	
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	I8	2-methyl phenol	5,500	Encountered and assessed during site investigation, not a priority contaminant
			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
20.07.2010	21.07.2010	K10 NAPL	Dichloromethyl phenol	1,800,000	As for 2,4-Dichloro-o-cresol (I9, H7, K10)
			Naphthalene	4,600,000	Encountered and assessed during site investigation, not a priority contaminant
			2-methylnaphthalene	3,900,000	
			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.
21.07.2010	22.07.2010	J10	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	Encountered and assessed during site investigation, not a priority contaminant
			Trichlorobenzene	32,000	

			2-Chlorotoluene	60,000	investigation, not a priority contaminant
			Trichloro toluene isomer	48,000	Same as I9
			Trichloro benzenamine isomer	11,000	Potential herbicide degradation product
			2,3-Dichlorotoluene *CAS 32768-54-0*	290,000	
21.07.2010	22.07.2010	L11	Dichloromethyl phenol	5,000	As for 2,4-Dichloro-o-cresol (I9, H7, K10, J10)
28.07.2010	02.08.2010	H10	2,4-Dichloro-o-cresol *CAS 1570-65-6*	10,000	As for I9, H7, K10, J10, L11
			Trichloro toluene isomers	58,000	Same as I9, J10
			Dichlorotoluene isomer	52,000	6 possible isomers, but very little data, using surrogate.
			2-Chlorotoluene	39,000	Encountered and assessed during site investigation, not a priority contaminant
			Trichlorobenzene	350,000	
28.07.2010	02.08.2010	I10	2,4-Dichloro-o-cresol *CAS 1570-65-6*	5,000	As for I9, H7, K10, J10, L11, H10
			Trichloro toluene isomers	24,000	Same as I9, J10, H10
03.08.2010	04.08.2010	L12	2,4-Dichloro-o-cresol *CAS 1570-65-6*	7,000	As for I9, H7, K10, J10, L11, H10, I10
03.08.2010	04.08.2010	L13	No VOC/SVOC peaks detected		
03.08.2010	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
03.08.2010	04.08.2010	K13 sand & gravel	Cyclo octaatomic sulphur	68,000	As for L8, L10 - Sulphur
05.08.2010	N/A	K13 chalk	2,4-Dichloro-o-cresol CAS 1570-65-6	650,000	As for I9, H7, K10, J10, L11, H10, I10, L12, K12
			Trichloro toluene isomers	1,140,000	Same as I9, J10, H10, I10
			1-(2-Chloroethoxy)-2-(o-Tolyloxy)-ethane CAS 21120-80-9	140,000	Same as I9 and J10
			Dichlorotoluene isomer	99,000	Same as J10, H10
			2-Chlorotoluene	12,000	Encountered and assessed during site investigation, not a priority contaminant
05.08.2010	N/A	K11	2,4-Dichloro-o-cresol CAS 1570-65-6	22,000	As for I9, H7, K10, J10, L11, H10, I10, L12, K12, K13
05.08.2010	N/A	J11	2,4-Dichloro-o-cresol CAS 1570-65-6	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
12.08.2010	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
12.08.2010	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

24.08.2010	25.08.2010	J14	Total Petroleum Hydrocarbons (C5-C12)	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
			1,2,4-Trimethylbenzene CAS 95-63-6	600	
			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 CAS 611-14-3	500	Potential agrochemical synthesis ingredient 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 investigation, not a priority contaminant
			Fluoranthene	300	
			Pyrene	300	
			Benzo(b/k)Fluoranthene	200	
01.09.2010	N/A	I14	Trichloro methyl benzene (trichloro toluene)	400	Same as I9, J10, H10, I10, K13, J11
01.09.2010	N/A	I15	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	I11	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	I12	1-methylnaphthalene CAS 90-12-0	40,000	Same as K10NAPL, I13
			Dibenzofuran	24,000	Encountered and assessed during site investigation, not a priority contaminant
			Phenanthrene	60,000	
			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 investigation, not a priority contaminant
			1,2,4-Trimethylbenzene	10000000	
			1,2,3-Trimethylbenzene	3100000	
22.10.2010 (216017)	25.10.2010	G12	Nicotine	6400	Natural insecticide
	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 investigation, not a priority contaminant
			Benzyl Chloride (1-chloro-2-methylbenzene CAS 95-49-8)	200	
			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 investigation, not a priority contaminant
			Methylpropyl phenol	22000	
			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)			Dimethyl naphthalene	59000	Risk Assessment
	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
			Ethyltoluene	300	
			Isophorone	37000	Encountered and assessed during site investigation, not a priority contaminant
			Naphthalene	43000	
			Methylpropyl phenol	30000	
			2-Methylnaphthalene	21000	
			Phenanthrene	110000	
			Fluoranthene	69000	
			1,3,5-Trimethylbenzene	900	
			1,2,4-Trimethylbenzene	1600	
			1,2,3-Trimethylbenzene	400	
08.11.2010 (217789)	N/A	M7	No VOC/SVOC peaks detected		
08.11.2010 (217789)	N/A	M8	2-methyl phenol	11,000	Encountered and assessed during site investigation, not a priority contaminant
08.11.2010 (217793)	N/A	M6	No VOC/SVOC peaks detected		
08.11.2010 (217793)	N/A	N6	No VOC/SVOC peaks detected		
08.11.2010 (217795)	N/A	L5	No VOC/SVOC peaks detected		
08.11.2010 (217795)	N/A	M4	No VOC/SVOC peaks detected		
08.11.2010 (217797)	N/A	M5	No VOC/SVOC peaks detected		
08.11.2010 (217797)	N/A	N4	No VOC/SVOC peaks detected		
08.11.2010 (217797)	N/A	N5	No VOC/SVOC peaks detected		
08.11.2010 (217800)	N/A	M9	No VOC/SVOC peaks detected		
18.11.2010 (218834)	N/A	I6	No VOC/SVOC peaks detected		
23.11.2010 (219458)	N/A	L4	No VOC/SVOC peaks detected		
23.11.2010 (219456)	N/A	N3	No VOC/SVOC peaks detected		
20.01.2011 (224432)	N/A	F11	No VOC/SVOC peaks detected		
20.01.2011 (224432)	N/A	F12	No VOC/SVOC peaks detected		
20.01.2011 (224432)	24.01.2011	F13	Total Petroleum Hydrocarbons (C8-C14)	16000	Controlled Waters risk assessment required, Human Health risk assessment previously actioned
20.01.2011 (224432)	24.01.2011	E12	Total Petroleum Hydrocarbons (C8-C14)	28000	Controlled Waters risk assessment required, Human Health risk assessment previously actioned
	N/A		1-Ethyl-2-Methylbenzene (o-ethy toluene) CAS 611-14-3	300	As J14, H12, G15

			1,2,4-Trimethylbenzene	700	Encountered and assessed during site investigation, not a priority contaminant
20.01.2011 (224432)	24.01.2011	E13	DDD	4100	Pesticide Risk Assessment Required.
	N/A		m/p ethyl toluene	1200	Encountered and assessed during site investigation, not a priority contaminants
			m-ethyl toluene:1-ethyl-3-methylbenzene, CAS 620-14-4		
			p-ethyl toluene: 1-ethyl-4-methylbenzene, CAS 622-96-8		
	24.01.2011		Total Petroleum Hydrocarbons (C8-C13)	73000	Controlled Waters risk assessment required, Human Health risk assessment previously actioned
	N/A		2,6-bis(1-methylpropyl)-phenol	5000	As J16, H12
			DDT	3200	Encountered and assessed during site investigation, not a priority contaminant
			4-(1-methylpropyl)phenol	2700	
			2(1-methylpropyl)-phenol	12000	
			1,2,3-trimethylbenzene	600	
			1,3,5-trimethylbenzene	1700	
			1,2,4-trimethylbenzene	3000	
			p-Isopropyltoluene	400	
24.01.2011 (224621)	25.01.2011	F15A	No VOC/SVOC peaks detected		
24.01.2011 (224621)	25.01.2011	F15B	No VOC/SVOC peaks detected		
09.02.2011 (226719)	10.02.2011	H6	No VOC/SVOC peaks detected		
09.02.2011 (226719)	10.02.2011	J5	No VOC/SVOC peaks detected		
09.02.2011 (226719)	10.02.2011	J6	No VOC/SVOC peaks detected		
17.03.2011 (230436)	21.03.2011	K5	Bis(2-ethylhexyl) maleate *CAS 142-16-5*	1,800	As L8
21.03.2011 (230436)	22.03.2011	K6	2,3-Dichlorotoluene *CAS 32768-54-0*	300	As J10, J11, H10, K13
			Bis(2-ethylhexyl) maleate *CAS 142-16-5*	2,000	As L8, K5
			Squalene *CAS 7683-64-9*	2,000	Natural organic compound found in the human body. Used in cosmetics, vaccines and steroid synthesis. Risk assessment not required.
			Glycerol tricaprylate CAS 538-28-8	4,700	Cosmetic ingredient. RisK Assessment notrequired.
28.03.2011 (231689)	29.03.2011	M10	No VOC/SVOC peaks detected		
30.03.2011 (232134)	01.04.2011	L14	No VOC/SVOC peaks detected		