



Environmental Monitoring Report

Reporting Period
15/03/2010-30/04/2010

Former Bayer Crop Science Site
Hauxton
Cambridgeshire

May 2010

On behalf of:

Harrow Estates Plc

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1.0 Introduction

1.1. General

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

The time period that this report represents is from the 15th of March 2010, when Vertase FLI mobilised to site, until the 30th of April 2010.

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 1. Week Commencing 15th March 2010

Site works commenced on 15th March 2010 with mobilisation to site. The site perimeter and security was first established. Welfare, offices and decontamination facilities were established in the compound area to the north of the site. An access to the clean area of the site was also established adjacent to the main entrance to the site. The concrete pavement to the rear of the former High Bay Warehouse (processing area) was sealed and a bund constructed to contain materials for processing. Final preparations were made to the waste water treatment plant with servicing and repairs as required.

Week 2. Week Commencing 22nd March 2010

Concrete was broken out across the first phase of excavation. The excavation was commenced for the installation of the lagoon area. (site grid references K14, K15 J15, see drawing D907_07, Appendix A) and also in the area for the main excavation (J8, J9, K8 and K9, see drawing D907_07, Appendix A). An odour control system was established around the area of the excavation with mobile units located within the processing area. Cemented (white) asbestos contaminated soils generated by the demolition of an out building (occurred in 2008) located in the garden areas of the former houses on Church Road, were quarantined for disposal later.

Week 3. Week Commencing 29th March 2010

The excavation for the lagoon area continued with lightly impacted shallow made ground and gravels being removed and screened before placement in treatment beds. Concrete piles were broken out and excavated in the lagoon area. Fragmentation of concrete, using a muncher commenced to facilitate subsequent crushing. Former garden areas to the south of the site were re-validated with the revised testing suite, including GCMS scans. Excavation encountered more odourous materials with higher VOC content within the lagoon area excavation. Screening continued within the High Bay Warehouse area to the south of site.

Week 4. Week Commencing 5th April 2010

Water treatment plant was changed to recirculation mode to allow for the recirculation of water pumped from excavations with testing before discharge. Excavation continued and was

completed in the lagoon area and a further excavation commenced to the north of the site to become the main excavation. Made Ground and shallow materials in this area (K9 to K13) were removed and found to be significantly more odorous than materials from the lagoon area and were processed before placement in treatment beds.

Week 5. Week Commencing 12th April 2010

On receipt of the water monitoring analysis for the waste water treatment plant the water was seen to be within consent and discharge commenced 14th April 2010. Lagoons were lined and brought into commission. Main excavation progressed deeper to a depth of approximately 3.7m below ground level, the top of the Gault Clay. Minor water seepages with visible contamination was encountered. Screening of material continued and an additional screening bucket mobilised to help break up clays and cohesive materials. Very little granular material encountered. Water treatment system continued to operate below capacity with all backlog from recirculation now discharged.

Week 6. Week Commencing 19th April 2010

Odour control systems were expanded to cover the entire perimeter of the site to deal with the odorous nature of the impacted material being excavated. Excavation and screening/processing continued.

Week 7. Week Commencing 26th April 2010

Excavations continued and extended to the south to a depth of approximately 4.5m (coincidental with the top of the Gault Clay). Continued collection of small quantities of effluent/water released from pockets in the West Melbury Mary Chalk Formation (WMMCF) collecting in the base of the excavation. No groundwater ingress other than from a shallow gravel horizon. Material was excavated slowly and stockpiled within the excavation to control the release of VOC's before movement to the processing area. Initial testing results from the off site Air monitoring (ATD) tubes are received and forwarded to South Cambridgeshire District Council for information and feedback from SCDC and the Health Protection Agency.

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 form 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.

Odour controlling suppressants and masking agent are being used around the site boundary to mitigate the impact of odour migration off site. Initially two mobile telescopic misting fans were used on site and a full boundary misting system was also erected to supplement the mobile units. The odour controlling solutions used in the misting and telescopic fan systems vary in fragrance from melon, to pine, to bubblegum.

Site generated odours were observed during the monitoring rounds beyond the site boundary on:

- 23/03/10 (15:10): Very faint odour control fragrance noted to the south, southeast and west of the site.
- 06/04/10 (15:20): Faint hydrocarbon odour noted to the north of the site.
- 12/04/10 (09:35): Very faint odour control fragrance noted to the west of the site.
- 14/04/10 (10:00): Faint odour control fragrance noted to the southwest and west of the site.
- 19/04/10 (17:00): Faint pesticide and diesel odour detected to the southwest of the site, odour control fragrance noted to the northwest of the site.
- 20/04/10 (08:15): Very faint odour detected to the southeast of the site, and again at 15:25 a very faint indescribable odour noted to the south of the site.

- 21/04/10 (10:23): Strong odour control fragrance noted to the southwest and west of the site.
- 22/04/10 (12:15): Moderate odour control fragrance noted to the southwest and a very faint odour control fragrance noted to the west of the site.
- 23/04/10 (09:35): Faint odour control fragrance noted beyond north eastern boundary, at 10:10 a very faint odour control odour noted to the northwest, at 11:25 a very faint odour control odour fragrance noted to the west which was also noted again at 17:05.
- 26/04/10 (17:07): Moderate odour control fragrance to the northeast.
- 28/04/10 (11:20): Faint odour control fragrance noted to the north of the site, at 16:00 faint odours generated from excavations on site were noted at the northern monitoring location, at 16:40 faint odour control was noted at the northwest monitoring location.
- 30/04/10 (from 09:15-09:45) very faint odour control fragrance noted from the northeast monitoring location through to the southeast monitoring location. The strength and influence of the odour control fragrance was maintained through the afternoon and was noted at the above location again from 15:35 to 15:50.

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. During the reported period no VOC's, were detected by the PID (Limit of detection of 0.1ppm).

Long term passive VOC monitoring is carried out at eight compass point locations around the site boundary, in the public accessible areas. A further monitoring location is located within the centre of the waste water treatment works.

Baseline VOC data was sampled for a 28 day period from the 18th February to the 18th March, the monitoring continued for the next 28 day period (18th March to 15th April) as works on site commenced. The laboratory analysis for all the passive VOC monitoring is presented in Appendix C.

Where possible results have been compared to UK air quality standards and World Health Organisations recommendations by the Health Protection Agency, they have concluded that there is unlikely to be any toxicological hazard to people off site (email to SCDC date 30th April 2010). The VOC's identified on the sampling media over the monthly periods are a mixture of traffic exhaust related compounds, site related compounds, odour controlling compound, and other general background compounds.

Due to the variety of the VOC's identified around the site detailed examination and comparison is difficult at this stage, but comparing the compounds that occur in both sets of results illustrates the actual volumes present in air are similar in both the baseline and primary set of results, therefore a significant increase from baseline data to initial sets of results is not evident.

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).

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 dust reading around the site is 127ug/m³, where a potential for dust has been observed on site dust suppression methods have been deployed immediately to reduce the generation of site dust and all haul routes are continually wetted to prevent dust release.

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

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

Between 19/03/2010 to 01/04/2010 (6 locations monitored) the maximum dust deposition rate was 1.31 %EAC at the north, north eastern 1, north eastern 2 and western monitoring locations.

The third set of directional dust deposition results monitored during the initial excavation works between the 01/04/2010 to 13/04/2010 recorded a maximum dust deposition rate of 2% EAC at the western monitoring location. All other locations had a maximum dust deposition rate of 1.58%EAC.

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 complaints or 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 noise levels are consistently at an acceptable low background level. The only exceedance's of the 80dB threshold as stipulated in the Environmental Permit deployment document has been caused by excessive off site traffic along the A10. 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 was present around the majority of the boundaries during the site set up in March, the litter was collected and disposed of by site personnel. 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 rises or falls in Riddy Brook water levels and there has been a constant flow throughout its length.

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 at the end of February and end of March 2010 are presented in Appendix F.

The surface water analysis for February 2010 shows traces of the contaminants of concern (Ethofumesate, Cis-1,2-Dichloroethylene, Tetrachloroethylene and Trichloroethylene) in the downstream sample taken from the Riddy Brook. Contaminants of concern were not detected in any of the other surface water samples taken for February. The traces of the COC's present in the downstream sample taken from the Riddy Brook are consistent with baseline water quality data monitored in August 2008, previously issued to the Environment Agency.

The surface water samples taken at the end of March (2010), have contaminants of concern traces similar to the previous months analysis, in the downstream sample taken from the Riddy Brook. However Tetrachloroethylene is present at trace levels (<3 µg/l) in both upstream and downstream Riddy Brook and River Cam samples. These trace levels of Tetrachloroethylene were present in the baseline data collected during the summer of 2008.

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 western 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 thin sand and gravel bands have also produced some limited quantities of water, which have tended to dry up within 24hrs.

The groundwater levels measured at locations around the are show in drawing D907_31E, 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_67, D907_69 through to D907_72 (Appendix G) illustrate the weekly groundwater levels for the reported period.

The five contour plots constructed (Appendix G) illustrate that there has been very little change in groundwater levels during the initial phase of works, the contour plots are very similar in pattern and actual measured values to the baseline data established throughout 2008 and 2009. The remediation works are not having a significant impact on the groundwater levels across the site, and therefore the groundwater has remained in a relatively static condition during the initial phase of excavations on site.



Appendix A

Drawings

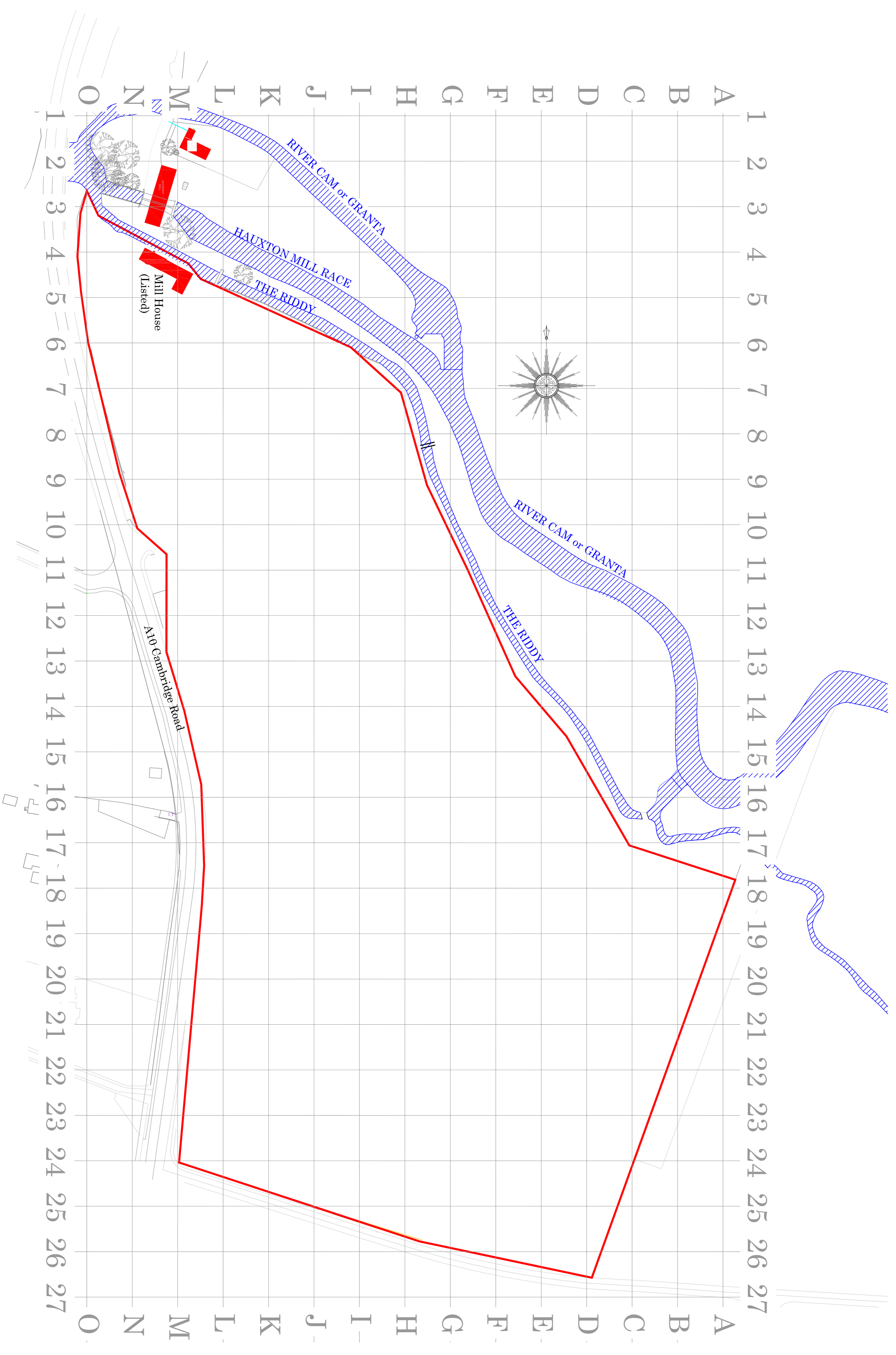
Legend

Buildings to Remain

Water Course

Site Boundary

Drawing Base : Ref
LW/HAUX-002/2006



Rev.	Description	Revised By	Date
1	FIRST ISSUE		21 April 2008

- Brixeld Head Office: Tel: 01275 397600
 Fax: 01275 397601
- Sheffield Office: Tel: 01246 813289
 Fax: 01246 813289
- Hertford Office: Tel: 09922 525626
 Fax: 09922 525626
- Manchester Office: Tel: 01614 372708
 Fax: 01614 372700

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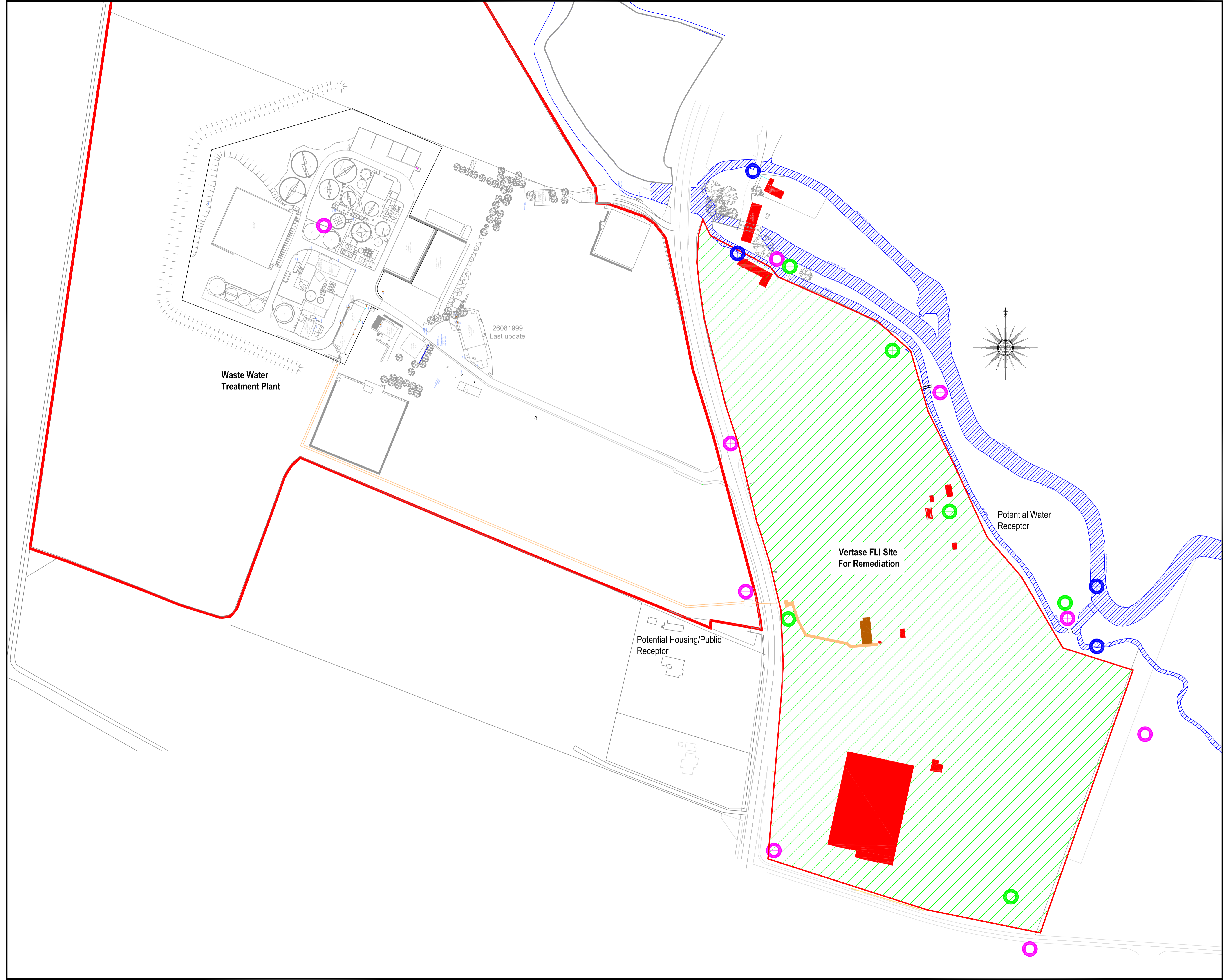
Site Address:
Bayer Site
Hauxton
Cambridge

Client: Harrow Estates

Title: Blank Site Plan with Grid

Drawn: JWH Checked: MA Approver: MA

Dwg: 0907_07 Contact: 907BR4 Scale: 1:1000



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

Waste Water Treatment Plant

26081999
Last update

Vertase FLI Site For Remediation

Potential Water Receptor

Potential Housing/Public Receptor

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 FIRST ISSUE	JWH	15 May 2008 21 April 2008

Rev.	Description	Revised By	Date
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Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601
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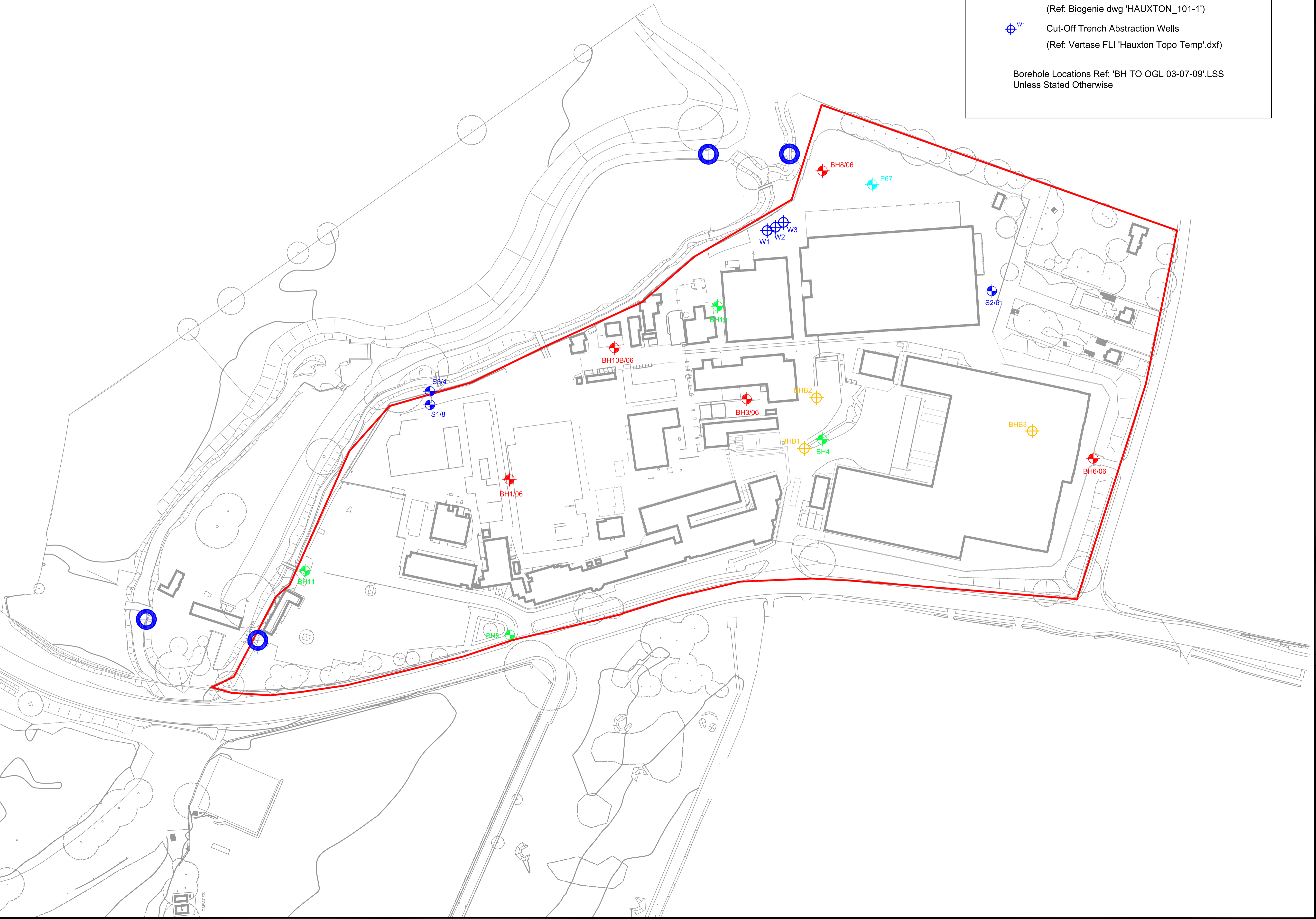
Site Address: Bayer Site, Hauxton, Cambridge
 Rev: C

Title: Environmental Monitoring Plan
 Client: Harrow Estates
 Drawn: JWH Checked: MA Approved: MA
 Dwg: D907_33 Contract: 907BRI Scale: 1:1250

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



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

Rev.	Description	Revised By	Date
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Site Address: Bayer Site Hauxton Cambridge	Rev: E
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Title: Retained Boreholes for Monitoring & Reference

Client: Harrow Estates

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

Environmental Monitoring Data

Date	Activity	Location	Time	Wind	Temp	Humidity	Pressure	Visibility	Clouds	Soil	Water	Vegetation	Other	Notes					
20/04/2010	K7 dig	W	15.40	15.45h	1	no odour	0	3	1	0	144.2	78.8	No	No	None	No			
20/04/2010	K7 dig	NW	15.45	15.50h	1	no odour	0	2	1	0	141	80.2	No	No	None	No			
21/04/2010	Turning treatment beds, pumping water	N	10.40	10.45h	1	No odour	0	1	1	0	171	31.4	No	No	Clear	2.1	1	dry	Very slight odour between S and SW but almost undetectable
21/04/2010	Turning treatment beds, pumping water	W	10.45	10.50h	1	No odour	0	1	1	0	27.9	34.8	No	No	Clear				
21/04/2010	Turning treatment beds, pumping water	NE	10.50	10.55h	1	No odour	0	1	1	0	29.7	41.4	No	No	Clear				
21/04/2010	Turning treatment beds, pumping water	E	10.55	11.00h	1	no odour	0	1	1	0	38.4		No	No	Clear				
21/04/2010	Turning treatment beds, pumping water	SE	11.00	11.05h	1	no odour	0	1	1	0	59.4		No	No	Clear				
21/04/2010	Turning treatment beds, pumping water	S	10.20	10.25h	7	no odour	0	3	1	0	127.6	53.4	No	No	Clear				
21/04/2010	Turning treatment beds, pumping water	SW	10.23	10.28h	7	no odour	0	2	1	0	127.6	54.7	No	No	Clear				
21/04/2010	Turning treatment beds, pumping water	W	10.30	10.35h	5	odour suppressant, but+3	0	2	1	0	298.1	67.4	No	No	Clear				
21/04/2010	Turning treatment beds, pumping water	NW	10.35	10.40h	1	no odour	0	2	1	0	28.1		No	No	Clear				
21/04/2010	K7, L7 & K8 excavation	N	15.30	15.35h	1	no odour	0	1	1	0	8.1	63.2	No	No	Clear	19.5 cm		dry	Strong odour of bubblegum deodoriser along southern boundary
21/04/2010	K7, L7 & K8 excavation	NE	15.35	15.40h	1	no odour	0	1	1	0	103.8	56.6	No	No	Clear				
21/04/2010	K7, L7 & K8 excavation	E	15.40	15.45h	1	no odour	0	1	1	0	10.7		No	No	Clear				
21/04/2010	K7, L7 & K8 excavation	SE	15.45	15.50h	1	no odour	0	1	1	0	12	51.2	No	No	Clear	22.5cm			
21/04/2010	K7, L7 & K8 excavation	S	15.50	15.55h	1	no odour	0	1	1	0	59.4		No	No	Clear				
21/04/2010	K7, L7 & K8 excavation	SW	15.55	16.00h	1	no odour	0	2	1	0	160.4	62.4	No	No	Clear				
21/04/2010	K7, L7 & K8 excavation	W	16.00	16.05h	1	no odour	0	3	1	0	70		No	No	Clear				
21/04/2010	K7, L7 & K8 excavation	NW	16.05	16.10h	1	no odour	0	3	1	0	513.5	69.8	No	No	Clear				
21/04/2010	K7, L7 & K8 excavation	W	16.10	16.15h	1	no odour	0	2	1	0	64.5		No	No	Clear				
22/04/2010	K8 excavation	N	11.45	11.50h	1	no odour	0	1	1	0	19.1	69.2	No	No	Clear	19.5		dry	slight bed odour between S & SW, mostly intense bubblegum smell. Odour between SW & W, unclear if beds or odour control - investigate further. Strong odour of excavation on footpath near millhouse, moved Odour control
22/04/2010	K8 excavation	NE	11.50	11.55h	1	no odour	0	1	1	0	100.6	56.2	No	No	Clear				
22/04/2010	K8 excavation	E	11.55	12.00h	1	no odour	0	1	1	0	3.7		No	No	Clear				
22/04/2010	K8 excavation	SE	12.00	12.05h	1	no odour	0	1	1	0	29	56.8	No	No	Clear	20.5			
22/04/2010	K8 excavation	S	12.05	12.10h	1	no odour	0	1	1	0	55.9		No	No	Clear				
22/04/2010	K8 excavation	SW	12.10	12.15h	1	no odour	0	2	1	0	61.9	54.8	No	No	Clear				
22/04/2010	K8 excavation	W	12.15	12.20h	5	bubblegum	+2	3	6	0	69.2		No	No	Clear				
22/04/2010	K8 excavation	NW	12.20	12.25h	1	no odour	0	2	1	0	10.2	60.8	No	No	Clear				
22/04/2010	K8 excavation	W	12.25	12.30h	1	no odour	0	2	1	0	73.8		No	No	Clear				
22/04/2010	Excavation of K8	N	16.30	16.35h	1	No odour	0	1	1	0	35.4	60.7	No	No	Clear			dry	Slight smell of beds between Sw & W on A10, slight smell of odour control between W & NW. Strong smell of odour control on footpath before W
22/04/2010	Excavation of K8	NE	16.35	16.40h	1	No odour	0	1	1	0	325.9	59.8	No	No	Clear				
22/04/2010	Excavation of K8	E	16.40	16.45h	1	No odour	0	1	1	0	111.3	51.5	No	No	Clear				
22/04/2010	Excavation of K8	SE	16.45	16.50h	1	No odour	0	1	1	0	30.9		No	No	Clear				
22/04/2010	Excavation of K8	S	17.00	17.05h	1	No odour	0	2	1	0	35.5	56.3	No	No	Clear				
22/04/2010	Excavation of K8	SW	17.05	17.10h	1	No odour	0	3	1	0	68.2		No	No	Clear				
22/04/2010	Excavation of K8	W	17.10	17.15h	2	odour control	0	3	1	0	11.3	69.8	No	No	Clear				
22/04/2010	Excavation of K8	NW	17.15	17.20h	1	No odour	0	2	1	0	67.5		No	No	Clear				
23/04/2010	Excavation of K8	N	9.30	9.35h	1	No odour	0	1	1	0	129.6	56.1	No	No	Clear	19.5cm		dry	No odour at organic health shop, no odour at church 12mg/m3 dust, Atkins confirmed no odour on church lane, ATKINS ACCOMPANIED
23/04/2010	Excavation of K8	NE	9.35	9.40h	1	No odour	1	5	0	0	63.7	56.9	No	No	Clear				
23/04/2010	Excavation of K8	E	9.40	9.45h	1	No odour	1	1	1	0	22.3		No	No	Clear				
23/04/2010	Excavation of K8	SE	9.45	9.50h	1	No odour	1	1	1	0	66.3	51.5	No	No	Clear	28.5cm			
23/04/2010	Excavation of K8	S	9.50	9.55h	1	No odour	1	1	1	0	61.6		No	No	Clear				
23/04/2010	Excavation of K8	SW	9.55	10.00h	1	No odour	0	2	1	0	7.3	65.8	No	No	Clear				
23/04/2010	Excavation of K8	W	10.00	10.05h	1	No odour	0	3	1	0	69.6		No	No	Clear				
23/04/2010	Excavation of K8	NW	10.05	10.10h	1	No odour	0	3	1	0	54.5	64.0	No	No	Clear				
23/04/2010	Excavation of K8	W	10.10	10.15h	2	odour control	0	1	5	0	71.2		No	No	Clear				
23/04/2010	Excavation of K8	N	10.45	10.50h	1	No odour	0	1	1	0	11	56.6	No	No	Clear			dry	No odour at church/organic health, dust: 22.5mg/m3. No odour down church lane. Odour of treatment beds (slight) along A10, move odour control? Faint smell of odour control up A10 past W NW. Odour on footpath between NW-N
23/04/2010	Excavation of K8	NE	10.50	10.55h	3	bubblegum	1	1	1	0	92.2	50.1	No	No	Clear				
23/04/2010	Excavation of K8	E	11.00	11.05h	1	No odour	0	1	1	0	45.5	47.9	No	No	Clear				
23/04/2010	Excavation of K8	SE	11.05	11.10h	1	No odour	0	1	1	0	20.4	46	No	No	Clear				
23/04/2010	Excavation of K8	S	11.15	11.20h	1	No odour	0	2	1	0	74	50.6	No	No	Clear				
23/04/2010	Excavation of K8	SW	11.20	11.25h	1	No odour	0	3	1	0	66.4		No	No	Clear				
23/04/2010	Excavation of K8	W	11.25	11.30h	2	odour control	1	3	1	0	113.5	68.1	No	No	Clear				
23/04/2010	Excavation of K8	NW	11.30	11.35h	1	No odour	0	2	1	0	69.2		No	No	Clear				
23/04/2010	K8 excavation	N	13.45	13.50h	1	no odour	0	1	1	0	78.7	58.2	No	No	Clear			dry	No odour at church or organic food shop, dust 105.2mg/m3
23/04/2010	K8 excavation	NE	13.50	13.55h	1	no odour	0	1	1	0	44.2	59.7	No	No	Clear				
23/04/2010	K8 excavation	E	14.00	14.05h	1	no odour	0	1	1	0	29.3		No	No	Clear				
23/04/2010	K8 excavation	SE	14.10	14.15h	1	no odour	0	1	1	0	18	62.6	No	No	Clear				
23/04/2010	K8 excavation	S	14.15	14.20h	1	no odour	0	2	1	0	51.8	58.6	No	No	Clear				
23/04/2010	K8 excavation	SW	14.20	14.25h	1	no odour	0	3	1	0	10.8	68.4	No	No	Clear				
23/04/2010	K8 excavation	W	14.25	14.30h	1	no odour	0	3	1	0	14.8	68.2	No	No	Clear				
23/04/2010	K8 excavation	NW	14.30	14.35h	1	no odour	0	2	1	0	60.4		No	No	Clear				
23/04/2010	K8 excavation	N	16.30	16.35h	1	no odour	0	1	1	0	38.7	62.8	No	No	Clear			dry	Small odour control between NW-N
23/04/2010	K8 excavation	NE	16.35	16.40h	1	no odour	0	1	1	0	50	58.2	No	No	Clear				
23/04/2010	K8 excavation	E	16.40	16.45h	1	no odour	0	1	1	0	9		No	No	Clear				
23/04/2010	K8 excavation	SE	16.45	16.50h	1	no odour	0	1	1	0	6.9	50.8	No	No	Clear				
23/04/2010	K8 excavation	S	16.50	16.55h	1	no odour	0	1	1	0	55.7		No	No	Clear				
23/04/2010	K8 excavation	SW	16.55	17.00h	1	no odour	0	2	1	0	10.2	68.2	No	No	Clear				
23/04/2010	K8 excavation	W	17.00	17.05h	1	no odour	0	3	1	0	71.3		No	No	Clear				
23/04/2010	K8 excavation	NW	17.05	17.10h	3	odour control	1	3	5	0	8.9	69.4	No	No	Clear				
23/04/2010	K8 excavation	W	17.10	17.15h	1	no odour	0	2	1	0	72.9		No	No	Clear				
26/04/2010	screening material in warehouse	N	8.00	8.05h	1	no odour	0	1	1	0	11.8	59.6	No	No	Clear	19.5 cm		dry	No odour at church or organic health store, N.B Sunday - heavy rain. Very fresh test this morning. Slight smell of odour control along eastern boundary if beds "wooded". Not intense or invasive. Strong odour on boundary between NE and NE1
26/04/2010	screening material in warehouse	NE	8.05																



Appendix C

Long term Passive VOC Monitoring

LABORATORY ANALYSIS REPORT

REPORT NUMBER	GCMS 4196
CUSTOMER	Vertase FLI
	1 Middle Bridge Business park
	Bristol Road
	Portishead
	Bristol BS21 6PN
GRADKO LAB REFERENCE	GMSE 0597-0605
DATE SAMPLES RECEIVED	24.03.10
BOOKING IN REF.	D 1595
JOB NUMBER:	907/BRI/3973

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

Tube Number	GRA 03718**
Exposure Time (mins)	40458
Sample ID	NW

Top 10 VOC's

Compounds	ng on tube	ppb in air*
Naphthalene	28.44	0.35
p-Xylene	12.11	0.15
Ethylbenzene	6.03	0.07
o-Xylene	5.05	0.06
Biphenylene	3.38	0.04
Benzothiazole	2.90	0.04

6 Compounds detected

Tube Number	GRA 06463
Exposure Time (mins)	40482
Sample ID	N

Top 10 VOC's

Compounds	ng on tube	ppb in air*
p-Xylene	164.04	2.03
Benzene, 1,2,4-trimethyl-	112.46	1.39

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Naphthalene	95.58	1.18
Benzene, 1-ethyl-2-methyl-	88.64	1.09
Dodecane	51.25	0.63
Naphthalene, 1-methyl-	49.98	0.62
o-Xylene	43.75	0.54
Ethylbenzene	40.38	0.50
Toluene	36.46	0.45
Naphthalene, 2-methyl-	35.58	0.44

Tube Number GRA 05990
Exposure Time (mins) 40478
Sample ID E

Top 10 VOC's

Compounds	ng on tube	ppb in air*
p-Xylene	1530	19
Benzene, 1,2,4-trimethyl-	868.28	10.73
Benzene, 1-ethyl-2-methyl-	706.50	8.73
o-Xylene	443.31	5.48
Ethylbenzene	343.76	4.25
Benzene, 1,3,5-trimethyl-	291.91	3.61
Benzene, 1,2,3-trimethyl-	270.44	3.34
Benzene, 2-ethyl-1,4-dimethyl-	195.35	2.41
Benzene, 1-methyl-3-propyl-	194.84	2.41
Benzene, 1-ethyl-3-methyl-	172.38	2.13

Tube Number GRA 00514
Exposure Time (mins) 40481
Sample ID SE

Top 10 VOC's

Compounds	ng on tube	ppb in air*
p-Xylene	52.52	0.65
Naphthalene	33.80	0.42
Toluene	22.51	0.28

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Benzene, 1,2,4-trimethyl-	21.00	0.26
o-Xylene	20.32	0.25
Ethylbenzene	20.30	0.25
Acetone	19.16	0.24
Phenol	13.36	0.17
Benzene	13.21	0.16
Benzamide, N,N-dimethyl-	8.54	0.11

Tube Number GRA 04158
Exposure Time (mins) 40401
Sample ID S

Top 10 VOC's

Compounds	ng on tube	ppb in air*
Octadecane	48.21	0.60
Nonadecane	44.05	0.55
Heptadecane	42.13	0.52
p-Xylene	24.75	0.31
Naphthalene	21.04	0.26
Toluene	17.34	0.21
Hexadecane	13.74	0.17
Benzene, 1,2,4-trimethyl-	12.87	0.16
Benzene	12.83	0.16
Phenol	11.09	0.14

Tube Number GRA 06278
Exposure Time (mins) 40402
Sample ID SW

Top 10 VOC's

Compounds	ng on tube	ppb in air*
p-Xylene	66.29	0.82
Ethylbenzene	44.80	0.55
Naphthalene	37.87	0.47
Toluene	27.27	0.34

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o-Xylene	26.78	0.33
Benzene, 1,2,4-trimethyl-	18.75	0.23
Heptadecane	18.52	0.23
Benzamide, N,N-dimethyl-	17.79	0.22
Acetone	12.62	0.16
Benzene	11.98	0.15

Tube Number GRA 06194
Exposure Time (mins) 40402
Sample ID W

Top 10 VOC's

Compounds	ng on tube	ppb in air*
Octadecane	169.27	2.09
Nonadecane	155.71	1.93
Heptadecane	105.21	1.30
Eicosane	78.30	0.97
Naphthalene	39.84	0.49
Ethylbenzene	34.54	0.43
Heptadecane, 3-methyl-	32.04	0.40
Benzene, 1,2,4-trimethyl-	31.97	0.40
Naphthalene, 1-methyl-	31.45	0.39
Heptadecane, 2-methyl-	30.94	0.38

Tube Number GRA 04796
Exposure Time (mins) 40539
Sample ID WTW

Top 10 VOC's

Compounds	ng on tube	ppb in air*
1S-.alpha.-Pinene	405.11	5.00
p-Xylene	38.79	0.48
Bicyclo[3.1.1]hept-3-en-2-one, 4,6,6-trimethyl-, (1S)-	49.93	0.62
Phenanthrene, 7-ethenyl-1,2,3,4,4a,4b,5,6,7,8,10,10a-dodecahydro-1,1,4a,7-tetramethyl-, [4aS-	75.78	0.93

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(4a.alpha.,4b.beta.,7.beta.,10a.beta.)]-

Camphene	29.28	0.36
Benzamide, N,N-dimethyl-	25.60	0.32
Naphthalene	24.24	0.30
Ethylbenzene	22.59	0.28
Acetone	21.56	0.27
Toluene	16.10	0.20

Tube Number GRA 05214
Exposure Time (mins) 40480
Sample ID NE

Top 10 VOC's

Compounds	ng on tube	ppb in air*
Naphthalene	303.80	3.75
Dodecane	90.57	1.12
Undecane	79.60	0.98
Naphthalene, 1-methyl-	67.11	0.83
Indene	55.10	0.68
Tridecane	53.85	0.67
p-Xylene	53.17	0.66
Benzene, 1,2,4-trimethyl-	52.39	0.65
Naphthalene, 2-methyl-	46.81	0.58
Ethylbenzene	29.28	0.36

Comments: Results greater than 1000ng are outside of our UKAS accredited calibration range.

****Tube contained moisture.**

MOU 8.24%+-(Unspecified peak-Toluene)

Analyst Name M.Angelova **Date of Analysis** 14.04.10
Analyst Signature **Date of Report** 20.04.10

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LABORATORY ANALYSIS REPORT

REPORT NUMBER	GCMS 4231
CUSTOMER	Vertase FLI 1 Middle Bridge Business park Bristol Road Portishead Bristol BS21 6PN
GRADKO LAB REFERENCE	GMSE 0723-0731
DATE SAMPLES RECEIVED	20.04.10
BOOKING IN REF.	D 2088
JOB NUMBER:	907/BRI/3973

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

Tube Number	GRA 01736
Exposure Time (mins)	38640
Sample ID	N

Top 10 VOC's

Compounds	ng on tube	ppb in air*
p-Xylene	501.93	6.49
Benzene, 1,2,4-trimethyl-	384.27	4.97
Benzene, 1-ethyl-4-methyl-	222.96	2.89
Toluene	164.88	2.13
o-Xylene	157.39	2.04
Benzene, 1,2,3-trimethyl-	143.08	1.85
Naphthalene	136.81	1.77
Benzene, 1,3,5-trimethyl-	125.41	1.62
Ethylbenzene	108.28	1.40
Benzene, 2-ethyl-1,4-dimethyl-	93.36	1.21


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LABORATORY ANALYSIS REPORT

Tube Number GRA 03495
Exposure Time (mins) 38580
Sample ID S

Top 10 VOC's

Compounds	ng on tube	ppb in air*
p-Xylene	63.19	0.82
Acetone	62.50	0.81
Ethylbenzene	53.13	0.69
o-Xylene	40.41	0.52
Toluene	26.84	0.35
Benzene, 1,2,4-trimethyl-	15.82	0.21
Phenol	13.38	0.17
Benzene	11.25	0.15
Tetrachloroethylene	10.94	0.14
Dodecane	10.59	0.14

Tube Number GRA 02539
Exposure Time (mins) 38700
Sample ID E

Top 10 VOC's

Compounds	ng on tube	ppb in air*
1R-.alpha.-Pinene	30.46	0.39
Toluene	29.71	0.38
p-Xylene	14.74	0.19
Tetrachloroethylene	11.99	0.15
Phenol	11.28	0.15
Benzene, 1,2,3-trimethyl-	9.43	0.12
o-Xylene	8.27	0.11
Ethylbenzene	4.63	0.06

8 Compounds detected

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LABORATORY ANALYSIS REPORT

Tube Number GRA 03053
Exposure Time (mins) 38640
Sample ID W

Top 10 VOC's

Compounds	ng on tube	ppb in air*
Naphthalene	46.58	0.60
Toluene	37.00	0.48
Tetrachloroethylene	17.57	0.23
p-Xylene	15.59	0.20
Cyclohexanone	15.13	0.20
Benzene, 1,2,4-trimethyl-	13.90	0.18
Hexadecane	9.34	0.12
Benzene	8.52	0.11
Naphthalene, 1-methyl-	7.53	0.10
Pentadecane	6.64	0.09

Tube Number GRA 03778
Exposure Time (mins) 38640
Sample ID NW

Top 10 VOC's

Compounds	ng on tube	ppb in air*
Toluene	56.55	0.73
p-Xylene	19.06	0.25
Tetrachloroethylene	15.13	0.20
Phenol	14.60	0.19
Benzene	10.26	0.13
Benzene, 1,2,4-trimethyl-	9.65	0.12
o-Xylene	8.42	0.11
Ethylbenzene	6.31	0.08

8 Compounds detected

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LABORATORY ANALYSIS REPORT

Tube Number GRA 05997
Exposure Time (mins) 38580
Sample ID NE

Top 10 VOC's

Compounds	ng on tube	ppb in air*
Sulfanilamide	108.05	1.40
Toluene	84.73	1.10
p-Xylene	33.29	0.43
Tetrachloroethylene	20.88	0.27
Benzamide, N,N-dimethyl-	13.40	0.17
Naphthalene	12.31	0.16
o-Xylene	11.78	0.15
Acetic acid	11.14	0.14
Benzene, 1,2,4-trimethyl-	9.97	0.13
Benzene	9.12	0.12

Tube Number GRA 06067
Exposure Time (mins) 38640
Sample ID SW

Top 10 VOC's

Compounds	ng on tube	ppb in air*
p-Xylene	20.45	0.26
Toluene	19.12	0.25
Acetic acid	17.47	0.23
Benzamide, N,N-dimethyl-	16.01	0.21
Benzothiazole	13.26	0.17
Phenol	11.36	0.15
Benzene	10.96	0.14
Heptadecane	10.72	0.14
Benzene, 1,2,4-trimethyl-	9.76	0.13
Hexadecane	9.62	0.12

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LABORATORY ANALYSIS REPORT

Tube Number GRA 05447
Exposure Time (mins) 38580
Sample ID SE

Top 10 VOC's

Compounds	ng on tube	ppb in air*
Cyclohexane, isocyanato-	40.80	0.53
Toluene	32.85	0.43
Acetic acid	16.03	0.21
Heptadecane	15.61	0.20
Phenol	15.22	0.20
p-Xylene	12.26	0.16
Decane	11.80	0.15
Hexadecane	11.38	0.15
Benzene	10.54	0.14
Formamide, N,N-dimethyl-	9.89	0.13

Tube Number GRA 04615**
Exposure Time (mins) 38640
Sample ID WTW

Top 10 VOC's

Compounds	ng on tube	ppb in air*
Naphthalene	162.12	2.10
Naphthalene, 1-methyl-	61.16	0.79
Decane	58.75	0.76
Naphthalene, 2-methyl-	51.87	0.67
Tetrachloroethylene	39.64	0.51
p-Xylene	31.33	0.41
Naphthalene, 1,4-dimethyl-	27.98	0.36
Benzamide, N,N-dimethyl-	23.90	0.31
Acenaphthylene	22.72	0.29
Naphthalene, 2,7-dimethyl-	22.00	0.28

**Tube was received unlabelled

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 this document
Signed.....
A. Grout, Laboratory Manager

LABORATORY ANALYSIS REPORT

MOU 8.24%+-(Unspecified peak-Toluene)

Analyst Name	M.Angelova	Date of Analysis	26.04.10
Analyst Signature		Date of Report	27.04.10


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.

Form LQF32 Issue 2

Report Number GCMS4231

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This signature confirms the authenticity of this document
Signed.....
A. Grout, Laboratory Manager



Appendix D

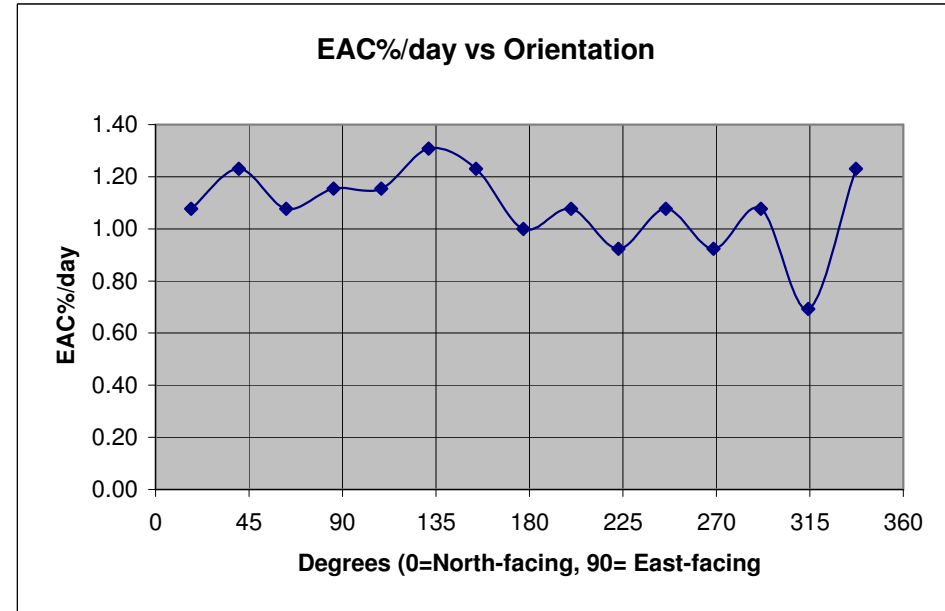
Directional Dust Monitoring

Gauge Number - North location 907BRI

Sticky Pad Data

Date On **19/03/2010** Date Off **01/04/2010** Days = 13
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	74	337	1.23
40	81	314	0.69
60	76	291	1.08
80	78	269	0.92
100	76	246	1.08
120	78	223	0.92
140	76	200	1.08
160	77	177	1.00
180	74	154	1.23
200	73	131	1.31
220	75	109	1.15
240	75	86	1.15
260	76	63	1.08
280	74	40	1.23
300	76	17	1.08



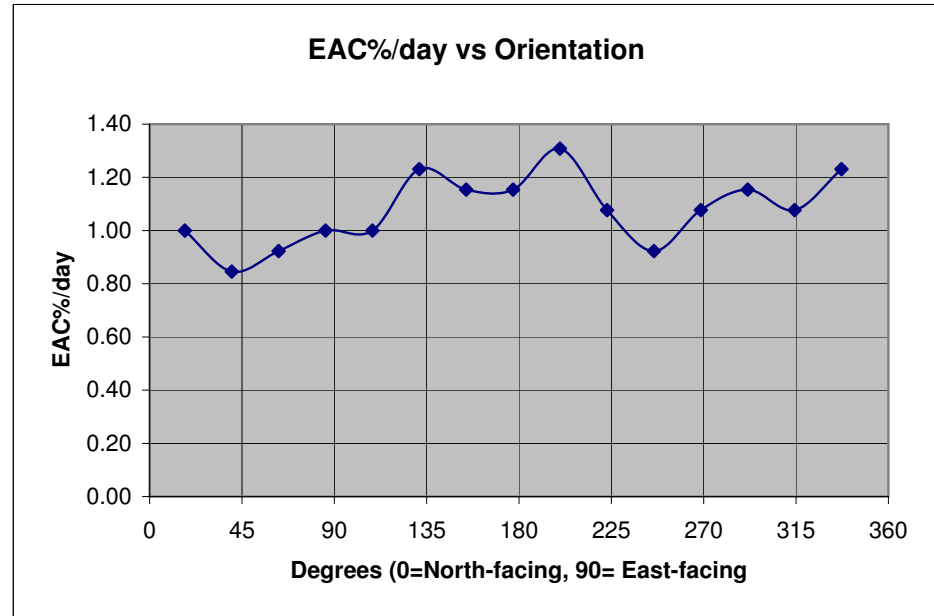
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - NE1 location 907BRI

Sticky Pad Data

Date On **19/03/2010** Date Off **01/04/2010** Days = 13
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	74	337	1.23
40	76	314	1.08
60	75	291	1.15
80	76	269	1.08
100	78	246	0.92
120	76	223	1.08
140	73	200	1.31
160	75	177	1.15
180	75	154	1.15
200	74	131	1.23
220	77	109	1.00
240	77	86	1.00
260	78	63	0.92
280	79	40	0.85
300	77	17	1.00



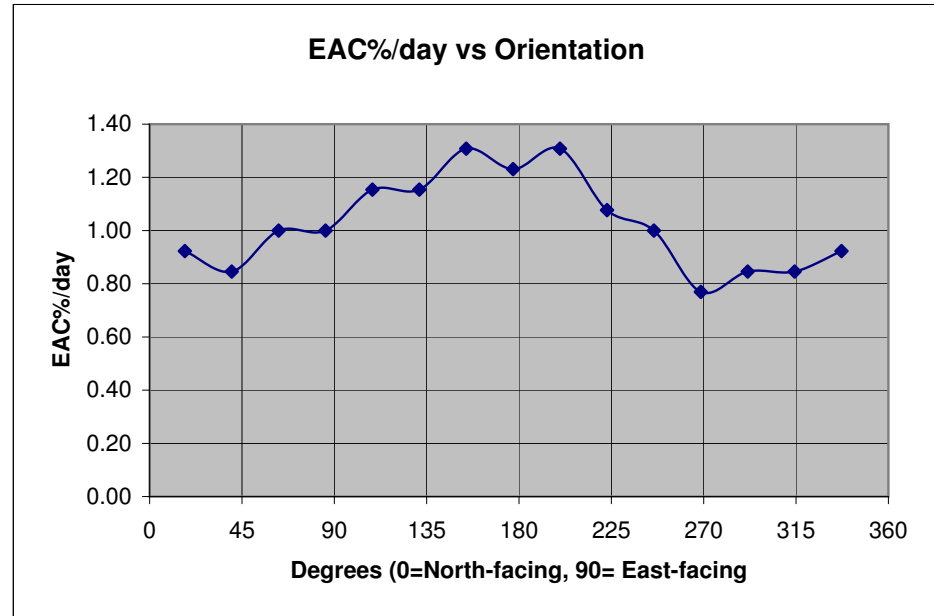
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - NE2 location 907BRI

Sticky Pad Data

Date On **19/03/2010** Date Off **01/04/2010** Days = 13
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	78	337	0.92
40	79	314	0.85
60	79	291	0.85
80	80	269	0.77
100	77	246	1.00
120	76	223	1.08
140	73	200	1.31
160	74	177	1.23
180	73	154	1.31
200	75	131	1.15
220	75	109	1.15
240	77	86	1.00
260	77	63	1.00
280	79	40	0.85
300	78	17	0.92



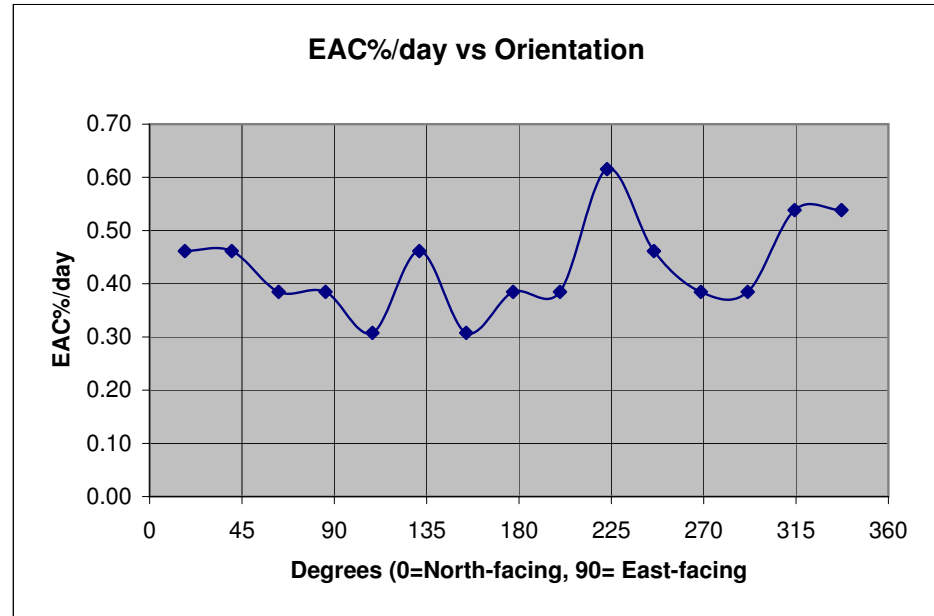
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - South location 907BRI

Sticky Pad Data

Date On **19/03/2010** Date Off **01/04/2010** Days = 13
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	83	337	0.54
40	83	314	0.54
60	85	291	0.38
80	85	269	0.38
100	84	246	0.46
120	82	223	0.62
140	85	200	0.38
160	85	177	0.38
180	86	154	0.31
200	84	131	0.46
220	86	109	0.31
240	85	86	0.38
260	85	63	0.38
280	84	40	0.46
300	84	17	0.46



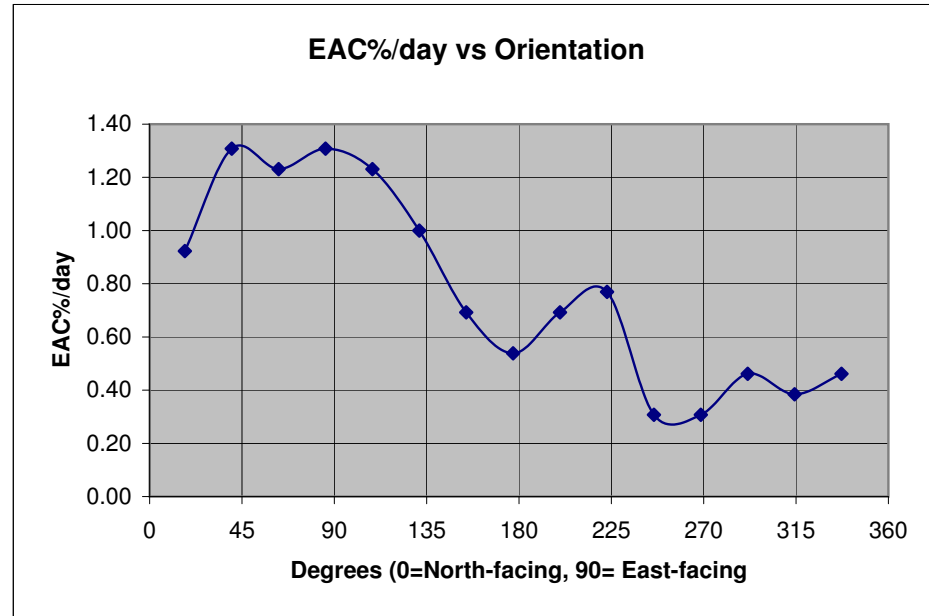
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - West location 907BRI

Sticky Pad Data

Date On **19/03/2010** Date Off **01/04/2010** Days = 13
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	84	337	0.46
40	85	314	0.38
60	84	291	0.46
80	86	269	0.31
100	86	246	0.31
120	80	223	0.77
140	81	200	0.69
160	83	177	0.54
180	81	154	0.69
200	77	131	1.00
220	74	109	1.23
240	73	86	1.31
260	74	63	1.23
280	73	40	1.31
300	78	17	0.92



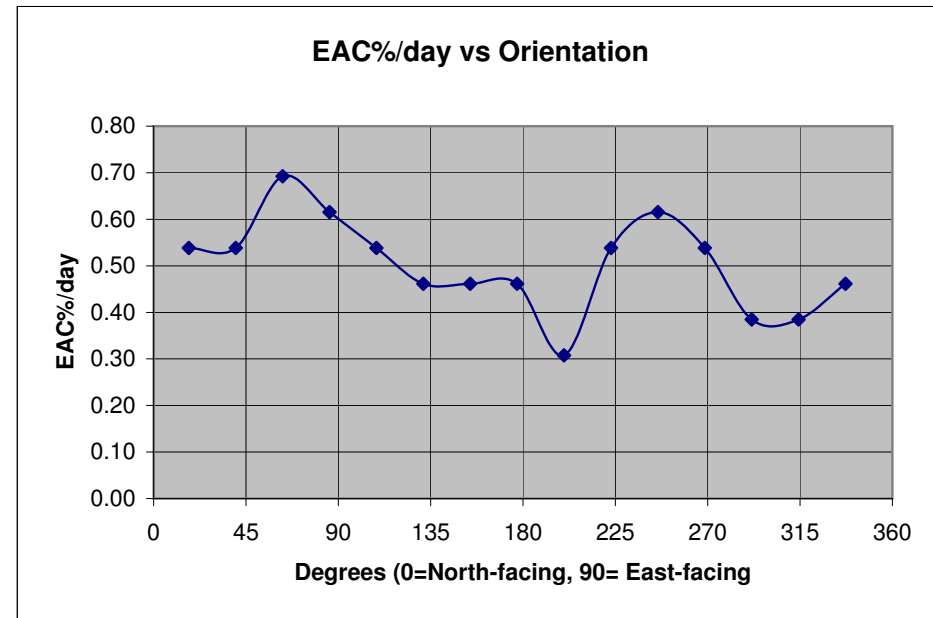
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - East location 907BRI

Sticky Pad Data

Date On **19/03/2010** Date Off **01/04/2010** Days = 13
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	84	337	0.46
40	85	314	0.38
60	85	291	0.38
80	83	269	0.54
100	82	246	0.62
120	83	223	0.54
140	86	200	0.31
160	84	177	0.46
180	84	154	0.46
200	84	131	0.46
220	83	109	0.54
240	82	86	0.62
260	81	63	0.69
280	83	40	0.54
300	83	17	0.54



Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

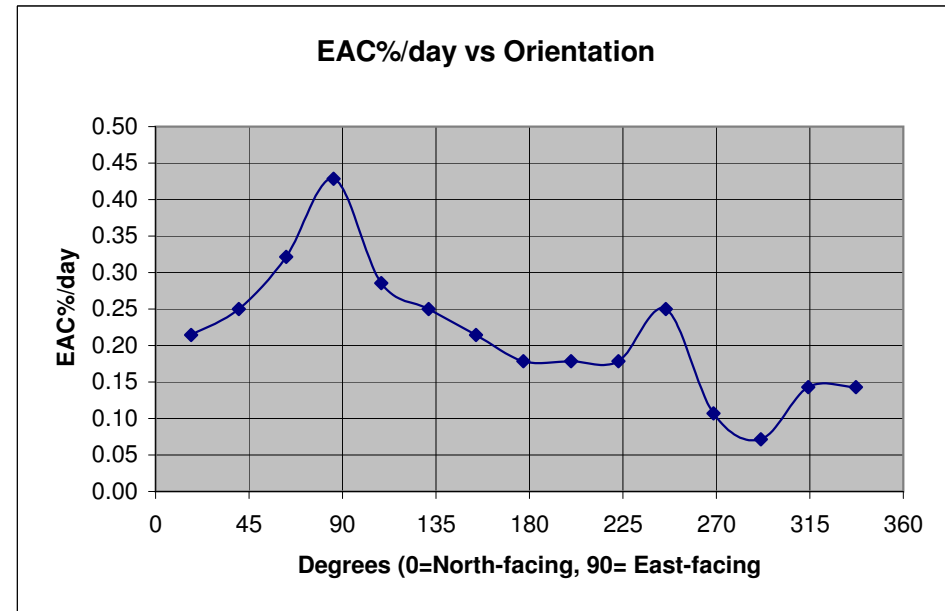
Gauge Number - North location 907BRI

Sticky Pad Data

Date On **19/02/2010** Date Off **19/03/2010** Days = 28

Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	86	337	0.14
40	86	314	0.14
60	88	291	0.07
80	87	269	0.11
100	83	246	0.25
120	85	223	0.18
140	85	200	0.18
160	85	177	0.18
180	84	154	0.21
200	83	131	0.25
220	82	109	0.29
240	78	86	0.43
260	81	63	0.32
280	83	40	0.25
300	84	17	0.21



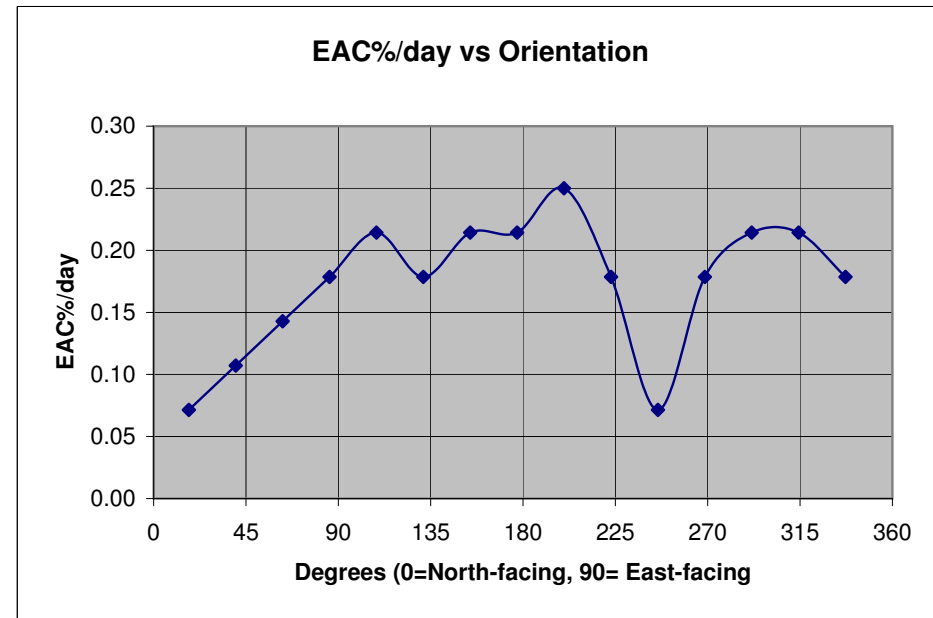
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - NE1 location 907BRI

Sticky Pad Data

Date On **19/02/2010** Date Off **19/03/2010** Days = 28
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	85	337	0.18
40	84	314	0.21
60	84	291	0.21
80	85	269	0.18
100	88	246	0.07
120	85	223	0.18
140	83	200	0.25
160	84	177	0.21
180	84	154	0.21
200	85	131	0.18
220	84	109	0.21
240	85	86	0.18
260	86	63	0.14
280	87	40	0.11
300	88	17	0.07



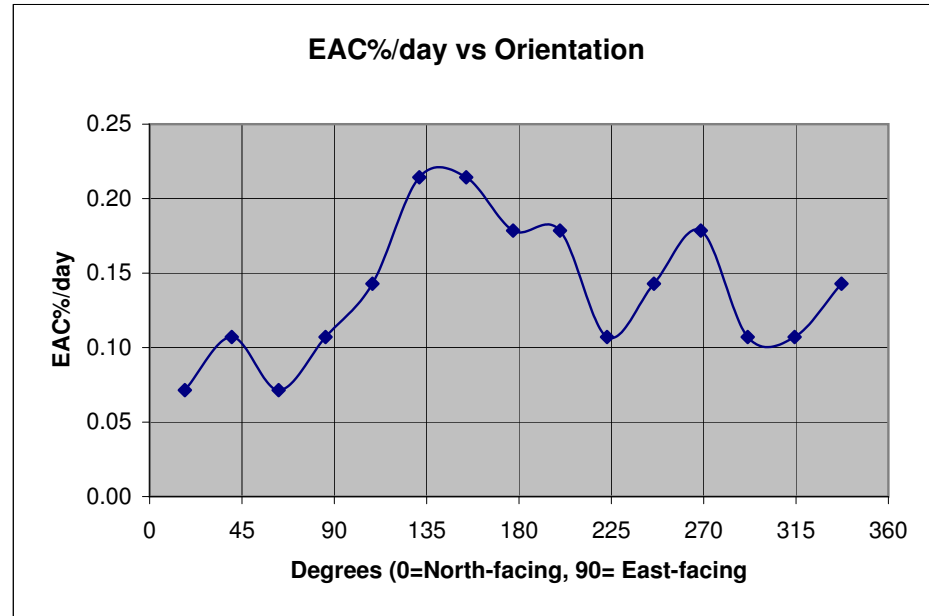
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - South location 907BRI

Sticky Pad Data

Date On **19/02/2010** Date Off **19/03/2010** Days = 28
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	86	337	0.14
40	87	314	0.11
60	87	291	0.11
80	85	269	0.18
100	86	246	0.14
120	87	223	0.11
140	85	200	0.18
160	85	177	0.18
180	84	154	0.21
200	84	131	0.21
220	86	109	0.14
240	87	86	0.11
260	88	63	0.07
280	87	40	0.11
300	88	17	0.07



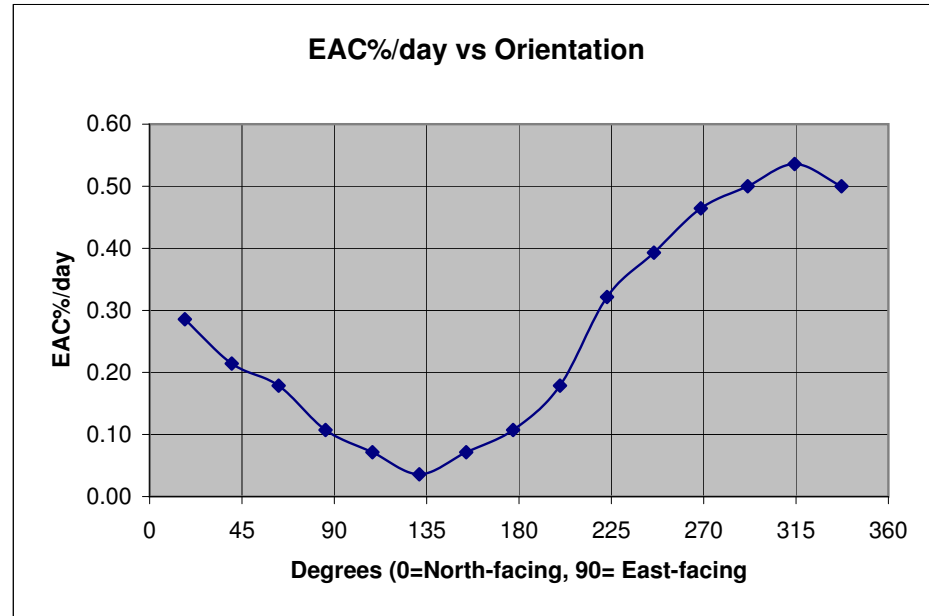
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - West location 907BRI

Sticky Pad Data

Date On **19/02/2010** Date Off **19/03/2010** Days = 28
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	76	337	0.50
40	75	314	0.54
60	76	291	0.50
80	77	269	0.46
100	79	246	0.39
120	81	223	0.32
140	85	200	0.18
160	87	177	0.11
180	88	154	0.07
200	89	131	0.04
220	88	109	0.07
240	87	86	0.11
260	85	63	0.18
280	84	40	0.21
300	82	17	0.29



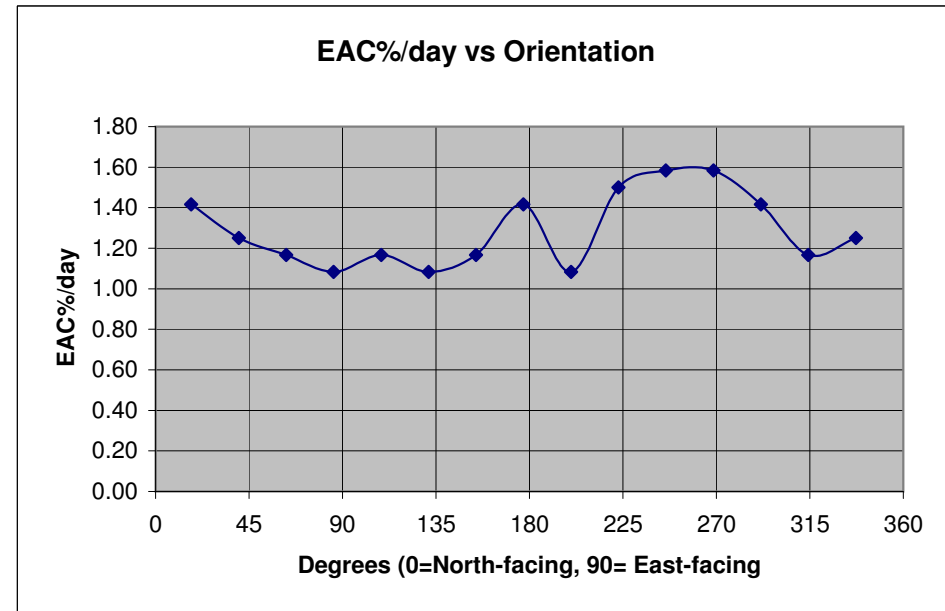
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - North location 907BRI

Sticky Pad Data

Date On **01/04/2010** Date Off **13/04/2010** Days = 12
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	75	337	1.25
40	76	314	1.17
60	73	291	1.42
80	71	269	1.58
100	71	246	1.58
120	72	223	1.50
140	77	200	1.08
160	73	177	1.42
180	76	154	1.17
200	77	131	1.08
220	76	109	1.17
240	77	86	1.08
260	76	63	1.17
280	75	40	1.25
300	73	17	1.42



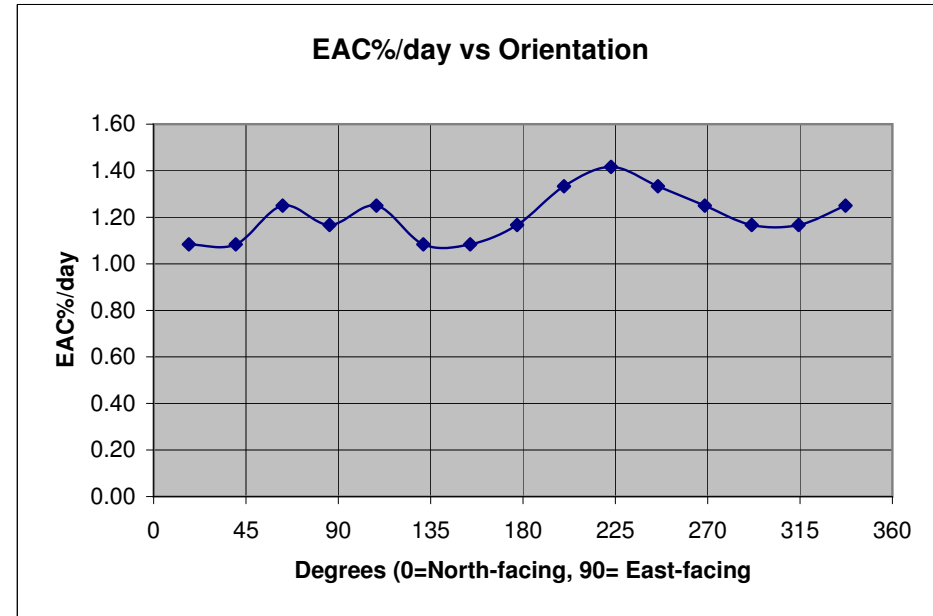
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - NE1 location 907BRI

Sticky Pad Data

Date On **01/04/2010** Date Off **13/04/2010** Days = 12
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	75	337	1.25
40	76	314	1.17
60	76	291	1.17
80	75	269	1.25
100	74	246	1.33
120	73	223	1.42
140	74	200	1.33
160	76	177	1.17
180	77	154	1.08
200	77	131	1.08
220	75	109	1.25
240	76	86	1.17
260	75	63	1.25
280	77	40	1.08
300	77	17	1.08



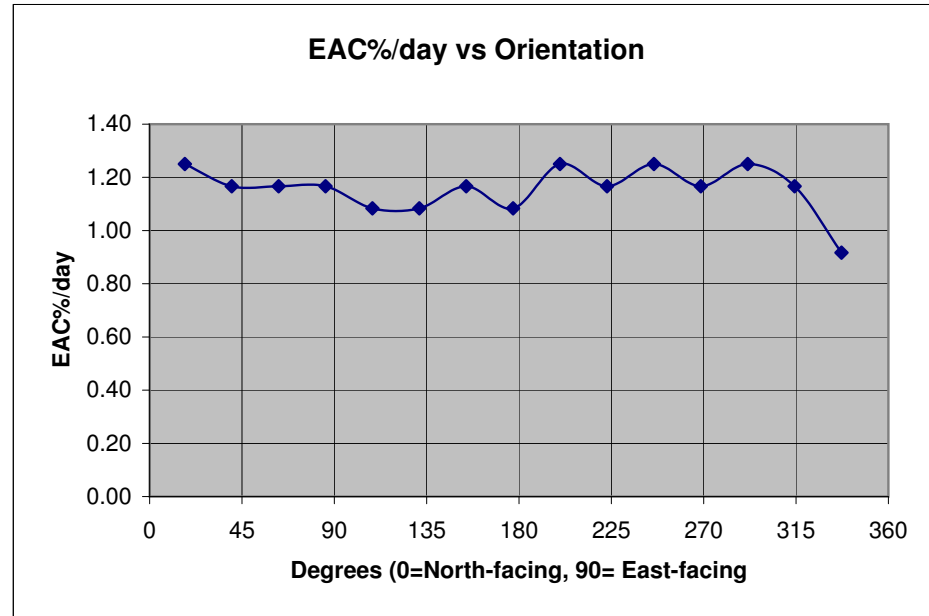
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - NE2 location 907BRI

Sticky Pad Data

Date On **01/04/2010** Date Off **13/04/2010** Days = 12
Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	79	337	0.92
40	76	314	1.17
60	75	291	1.25
80	76	269	1.17
100	75	246	1.25
120	76	223	1.17
140	75	200	1.25
160	77	177	1.08
180	76	154	1.17
200	77	131	1.08
220	77	109	1.08
240	76	86	1.17
260	76	63	1.17
280	76	40	1.17
300	75	17	1.25



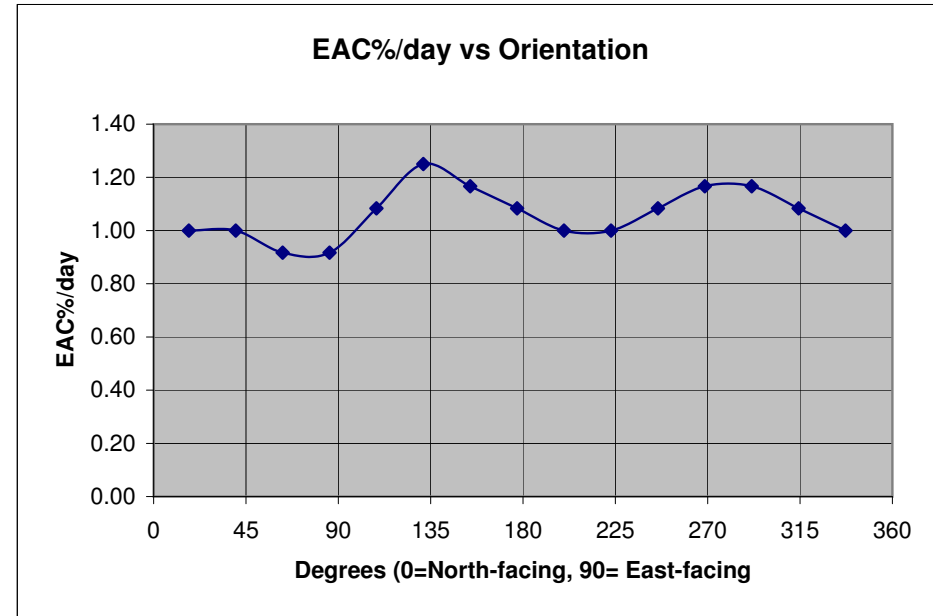
Note: Cells coloured yellow are inputs.
The rest are either constants or calculated values.
The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - South location 907BRI

Sticky Pad Data

Date On **01/04/2010** Date Off **13/04/2010** Days = 12
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	78	337	1.00
40	77	314	1.08
60	76	291	1.17
80	76	269	1.17
100	77	246	1.08
120	78	223	1.00
140	78	200	1.00
160	77	177	1.08
180	76	154	1.17
200	75	131	1.25
220	77	109	1.08
240	79	86	0.92
260	79	63	0.92
280	78	40	1.00
300	78	17	1.00



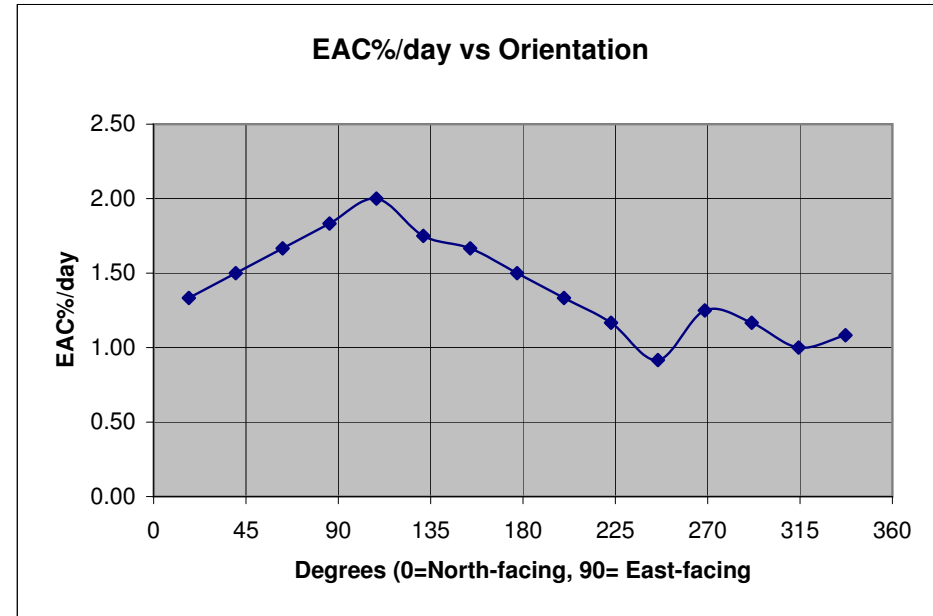
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - West location 907BRI

Sticky Pad Data

Date On **01/04/2010** Date Off **13/04/2010** Days = 12
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	77	337	1.08
40	78	314	1.00
60	76	291	1.17
80	75	269	1.25
100	79	246	0.92
120	76	223	1.17
140	74	200	1.33
160	72	177	1.50
180	70	154	1.67
200	69	131	1.75
220	66	109	2.00
240	68	86	1.83
260	70	63	1.67
280	72	40	1.50
300	74	17	1.33



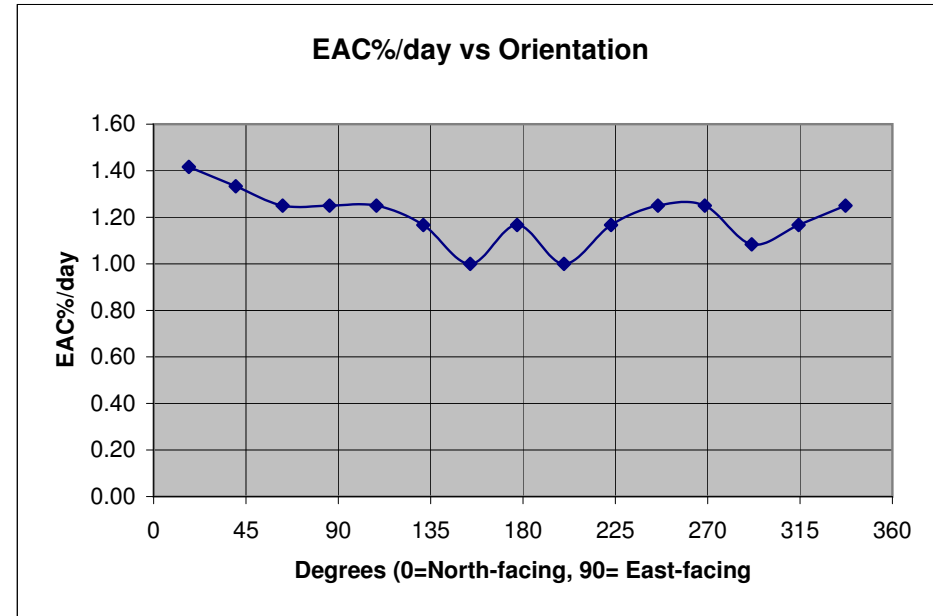
Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.

Gauge Number - East location 907BRI

Sticky Pad Data

Date On **01/04/2010** Date Off **13/04/2010** Days = 12
 Clean = **90**

X Axis mm	Meter	Angle deg	EAC%/day
20	75	337	1.25
40	76	314	1.17
60	77	291	1.08
80	75	269	1.25
100	75	246	1.25
120	76	223	1.17
140	78	200	1.00
160	76	177	1.17
180	78	154	1.00
200	76	131	1.17
220	75	109	1.25
240	75	86	1.25
260	75	63	1.25
280	74	40	1.33
300	73	17	1.42



Note: Cells coloured yellow are inputs.
 The rest are either constants or calculated values.
 The calculation is based on taking readings at 40mm intervals along the sticky pad.



Appendix E
Groundwater Level Data

Date	BH6/06	S3/4	BH4	P67**	BH19	BH10B/06	BH9	S1/8	BH11*	S2/3	S2/6	BH1/06	BH2/06	BH3/06	BH4/06	BH5/06	S1/29	BH8/06	S1/15	RIDDY	CAM	BHB1	BHB2	BHB3	W1 (n)	W2	W3 (s)	Riddy 1	Riddy 2	Riddy 3	Riddy 4	
24/03/2010	10.709		10.491		11.377	11.728		11.352			11.330	12.231		11.327								9.969	9.971	10.389	9.858	9.838	12.510					
25/03/2010	10.640	10.175	10.764	Lost	11.295	10.711	10.869	11.355	10.363		11.340	11.770		12.027								10.270	10.440	10.432	10.330	10.300	10.310	9.179	9.292	9.567	9.651	
26/03/2010																																
29/03/2010	10.548	10.458	10.293	Lost	11.382	10.729	10.723	11.326	10.159		11.251	11.708		11.301								9.921	9.811	9.895	10.187	9.838	9.834	9.859	9.179	9.292	9.567	9.651
30/03/2010	10.527	10.394	10.290	Lost	11.396	10.742	10.707	11.382	10.115		11.247	11.808		12.118								9.941	9.797	9.876	12.010	9.847	9.839	9.861	9.239	9.288	9.616	9.660
31/03/2010	10.518		11.260	Lost	11.528	-1268.939		11.350				11.241	11.813	11.337								9.949	10.769	10.873	12.010	9.839	9.838	9.858				
01/04/2010	10.440	10.530	10.544	Lost	11.425	10.851	10.929	11.124	10.363			11.103	11.611	11.220								9.912	10.080	10.310	10.320	10.340	10.290	10.050	9.219	9.304	9.570	10.169
06/04/2010	10.402		10.615	Lost	11.554	11.032		11.279			11.169	11.649		11.229								9.979	10.019	10.232	10.106	10.349	10.291	10.309				
07/04/2010	10.391	10.749	10.687	Lost	11.534	10.996	11.000	11.281	10.257		11.157	11.736		11.228								9.993	10.211	10.046	10.340	10.290	10.297	9.136	9.285	9.499	9.648	
08/04/2010	10.362	10.742	10.663	Lost	11.487	10.940	10.990	11.225	10.221		11.125	11.643		11.199								9.983	9.991	10.183	10.046	10.323	9.866	10.286	9.129	9.278	9.578	9.647
09/04/2010	10.348	10.759	10.640	Lost	11.434	10.908	10.978	11.231	10.194		11.122	11.657		11.189								9.991	9.966	10.162	9.989	10.299	10.241	10.257	9.135	9.280	9.549	9.650
12/04/2010	10.289	10.756	10.636	Lost	11.314	10.837	10.978	11.292	10.193		11.095	11.710		11.121								9.999	9.929	10.017	9.943	10.257	10.187	10.214	9.134	9.280	9.551	9.649
13/04/2010	10.277	10.756	10.585	Lost	11.493	10.872	10.978	11.296	10.193		11.091	11.710		11.181								10.000	9.919	10.099	9.916	10.040	10.271	10.192	9.134	9.281	9.551	9.650
14/04/2010	10.260	10.759	10.566	Lost	11.845	11.257	10.946	11.323	10.972		11.062	11.719		11.201								10.001	9.906	10.146	9.890	10.228	10.180	10.390	9.138	9.229	9.568	9.647
15/04/2010	10.239	10.500	10.552	Lost	11.883	11.518	10.769	11.292	10.843		11.071	11.721		11.206								10.002	9.900	10.075	9.861	10.181	10.136	10.151	9.179	9.294	9.570	9.649
16/04/2010	10.221	Locked	10.563	Lost	11.945	11.430	Locked	11.283	Locked		11.070	11.660		11.229								10.001	9.857	10.066	9.857	10.167	10.228	10.248	9.189	9.284	9.599	9.687
19/04/2010	10.206	10.746	10.552	Lost	11.945	11.465	10.997	11.313	11.031		11.081	11.689		11.272								10.006	9.891	10.120	9.838	9.890	10.206	10.233	9.147	9.274	9.569	9.646
20/04/2010	10.198	10.752	10.548	Lost	12.135	11.452	10.980	11.304	11.033		11.039	11.657		11.278								10.007	9.890	10.109	9.828	10.145	10.089	10.118	9.149	9.912	9.568	9.649
21/04/2010	10.188	10.756	10.543	Lost	12.245	11.444	10.899	11.291	11.031		11.034	11.651		11.287								10.021	9.887	10.069	9.829	10.147	10.127	10.139	9.189	9.294	9.569	9.649
23/04/2010	10.190	10.758	10.544	Lost	12.245	11.450	10.939	11.294	11.033		11.034	11.660		11.282								10.013	9.890	10.070	9.830	10.148	10.160	10.160	9.148	9.284	9.570	9.649
27/04/2010	10.129	10.746	10.523	Lost	11.851	11.372	10.865	11.278	10.414		10.994	11.590		11.258								10.009	9.877	10.066	Lost	10.149	10.089	10.062	9.128	9.271	9.559	9.641
28/04/2010	10.111	10.747	10.481	Lost	11.732	11.283	10.867	11.260	10.415		10.980	11.612		11.239								10.011	9.782	10.059	Lost	10.141	9.997	10.043	9.129	9.264	9.560	9.641
29/04/2010	10.107	10.763	10.514	Lost	11.606	11.283	10.850	11.328	10.200		10.969	11.539		11.209								10.009	9.879	10.050	Lost	10.148	10.087	10.031	9.128	9.264	9.552	9.639
30/04/2010	10.048	10.740	10.514	Lost	11.534	11.120	10.848	11.315	10.182		10.959	11.555		11.168								10.012	9.871	10.048	Lost	10.146	10.092	10.016	9.128	9.272	9.556	9.639



Appendix F
Surface Water Analysis Reports



Scientific Analysis Laboratories

Certificate of Analysis

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

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

Report Number: 192230-1

Date of Report: 08-Mar-2010

Customer: VertaseFLI Limited
Number One
Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Customer Contact: The Project Management

Customer Job Reference: 907BRI

Customer Site Reference: Hauxton

Date Job Received at SAL: 01-Mar-2010

Date Analysis Started: 02-Mar-2010

Date Analysis Completed: 08-Mar-2010

The results reported relate to samples received in the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs



Report checked
and authorised by :
Miss Emma Tibbitts
Project Manager

Issued by :
Miss Emma Tibbitts
Project Manager

Index to symbols used in 192230-1

Value	Description
AR	As Received
-	Not Required
162	LOD determined by matrix spike recovery
13	Results have been blank corrected.
U	Analysis is UKAS accredited
N	Analysis is not accredited

Method Index

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

Accreditation Summary

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



SAL Reference: 192230 Project Site: Hauxton Customer Reference: 907BRI Water Analysed as Water Vertase Hauxton Suite								
SAL Reference					192230 001	192230 002	192230 003	192230 004
Customer Sample Reference					RIDDY US	RIDDY DS	CAM US	CAM DS
Determinand	Method	Test Sample	LOD	Units				
Electrical Conductivity	T7	-	10	µS/cm	700	680	630	620
pH	T7	-			7.7	7.7	7.9	7.9

SAL Reference: 192230 Project Site: Hauxton Customer Reference: 907BRI Water Analysed as Water Vertase Hauxton OP/ON Suite								
SAL Reference					192230 001	192230 002	192230 003	192230 004
Customer Sample Reference					RIDDY US	RIDDY DS	CAM US	CAM DS
Determinand	Method	Test Sample	LOD	Units				
Dimefox	T16	-	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Ethofumesate	T16	-	0.1	µg/l	<0.1	0.2	<0.1	<0.1
Hempa	T16	-	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Schradan	T16	-	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Simazine	T16	-	0.01	µg/l	<0.01	<0.01	<0.01	<0.01

SAL Reference: 192230 Project Site: Hauxton Customer Reference: 907BRI Water Analysed as Water Vertase Hauxton Phenoxy Acid Herbs Suite								
SAL Reference					192230 001	192230 002	192230 003	192230 004
Customer Sample Reference					RIDDY US	RIDDY DS	CAM US	CAM DS
Determinand	Method	Test Sample	LOD	Units				
Dicamba	T16	-	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Dichlorprop	T16	-	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Phenoxy Acetic acid herbicide: MCPA	T16	-	0.1	µg/l	<0.1	<0.1	<0.1	<0.1
Mecoprop	T16	-	0.1	µg/l	<0.1	<0.1	<0.1	<0.1

SAL Reference: 192230 Project Site: Hauxton Customer Reference: 907BRI Water Analysed as Water Vertase Hauxton SVOC Suite								
SAL Reference					192230 001	192230 002	192230 003	192230 004
Customer Sample Reference					RIDDY US	RIDDY DS	CAM US	CAM DS
Determinand	Method	Test Sample	LOD	Units				
2,4,6-Trichlorophenol	T16	-	10	µg/l	<10	<10	<10	<10
2-Methyl-4,6-dinitrophenol	T16	-	10	µg/l	<10	<10	<10	<10
4-Chloro-2-methylphenol	T16	-	10	µg/l	<10	<10	<10	<10
Bis (2-chloroethyl) ether	T16	-	10	µg/l	<10	<10	<10	<10
Phenol	T16	-	10	µg/l	(162) <50	(162) <50	(162) <50	(162) <50

SAL Reference: 192230
 Project Site: Hauxton
 Customer Reference: 907BRI

Water Analysed as Water
 Vertase Hauxton VOC Suite

SAL Reference					192230 001	192230 002	192230 003	192230 004
Customer Sample Reference					RIDDY US	RIDDY DS	CAM US	CAM DS
Determinand	Method	Test Sample	LOD	Units				
1,2-Dichlorobenzene	T54	-	1	µg/l	<1	<1	<1	<1
1,2-Dichloroethane	T54	-	1	µg/l	(13) <1	(13) <1	(13) <1	(13) <1
Cis-1,2-Dichloroethylene	T54	-	1	µg/l	<1	2	<1	<1
Cyclohexanone	T54	-	10	µg/l	<10	<10	<10	<10
Tetrachloroethylene	T54	-	1	µg/l	<1	2	<1	<1
Toluene	T54	-	1	µg/l	<1	<1	<1	<1
Trichloroethylene	T54	-	1	µg/l	<1	4	<1	<1
Vinyl chloride	T54	-	1	µg/l	<1	<1	<1	<1
Xylene (Total)	T54	-	1	µg/l	<1	<1	<1	<1





Scientific Analysis Laboratories

Certificate of Analysis

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

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

Report Number: 195208-1

Date of Report: 07-Apr-2010

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

Customer Contact: The Project Management

Customer Job Reference: 907BRI

Customer Site Reference: HAUXTON

Date Job Received at SAL: 29-Mar-2010

Date Analysis Started: 29-Mar-2010

Date Analysis Completed: 07-Apr-2010

The results reported relate to samples received in the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs



Report checked
and authorised by :
Mr Ross Walker
Customer Services Manager

Issued by :
Mr Ross Walker
Customer Services Manager

Index to symbols used in 195208-1

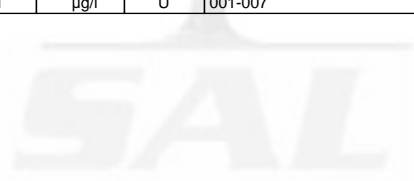
Value	Description
AR	As Received
2	LOD Raised Due to Matrix Interference
162	LOD determined by matrix spike recovery
U	Analysis is UKAS accredited
N	Analysis is not accredited

Method Index

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

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Electrical Conductivity	T7	AR	10	µS/cm	N	001-007
pH	T7	AR			U	001-007
Dimefox	T16	AR	0.1	µg/l	N	001-007
Ethofumesate	T16	AR	0.1	µg/l	N	001-007
Hempa	T16	AR	0.1	µg/l	N	001-007
Schradan	T16	AR	0.1	µg/l	N	001-007
Simazine	T16	AR	0.01	µg/l	N	001-007
Dicamba	T16	AR	0.1	µg/l	N	001-007
Dichlorprop	T16	AR	0.1	µg/l	N	001-007
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	µg/l	N	001-007
Mecoprop	T16	AR	0.1	µg/l	N	001-007
2,4,6-Trichlorophenol	T16	AR	10	µg/l	U	001-007
2-Methyl-4,6-dinitrophenol	T16	AR	10	µg/l	N	001-007
4-Chloro-2-methylphenol	T16	AR	10	µg/l	N	001-007
Bis (2-chloroethyl) ether	T16	AR	10	µg/l	U	001-007
Phenol	T16	AR	10	µg/l	U	001-007
1,2-Dichlorobenzene	T54	AR	1	µg/l	U	001-007
1,2-Dichloroethane	T54	AR	1	µg/l	U	001-007
Cis-1,2-Dichloroethylene	T54	AR	1	µg/l	U	001-007
Cyclohexanone	T54	AR	10	µg/l	N	001-007
Tetrachloroethylene	T54	AR	1	µg/l	U	001-007
Toluene	T54	AR	1	µg/l	U	001-007
Trichloroethylene	T54	AR	1	µg/l	U	001-007
Vinyl chloride	T54	AR	1	µg/l	U	001-007
Xylene (Total)	T54	AR	1	µg/l	U	001-007



SAL Reference: 195208 Project Site: HAUXTON Customer Reference: 907BRI											
Water Analysed as Water Vertase Hauxton Suite											
SAL Reference					195208 001	195208 002	195208 003	195208 004	195208 005	195208 006	195208 007
Customer Sample Reference					Riddy Brook U/S	Riddy Brook D/S	River Cam U/S	River Cam D/S	BH11	BH9	S3/4
Determinand	Method	Test Sample	LOD	Units							
Electrical Conductivity	T7	AR	10	µS/cm	720	720	730	710	1100	2400	3500
pH	T7	AR			6.5	7.7	8.0	8.1	7.1	7.0	6.9

SAL Reference: 195208 Project Site: HAUXTON Customer Reference: 907BRI											
Water Analysed as Water Vertase Hauxton OP/ON Suite											
SAL Reference					195208 001	195208 002	195208 003	195208 004	195208 005	195208 006	195208 007
Customer Sample Reference					Riddy Brook U/S	Riddy Brook D/S	River Cam U/S	River Cam D/S	BH11	BH9	S3/4
Determinand	Method	Test Sample	LOD	Units							
Dimefox	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethofumesate	T16	AR	0.1	µg/l	<0.1	0.2	<0.1	<0.1	<0.1	8.7	0.8
Hempa	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1	0.5	0.5	⁽²⁾ <1.0
Schradan	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1	2.2	0.2	8.8
Simazine	T16	AR	0.01	µg/l	<0.01	<0.01	<0.01	<0.01	0.07	0.02	<0.01

SAL Reference: 195208 Project Site: HAUXTON Customer Reference: 907BRI											
Water Analysed as Water Vertase Hauxton Phenoxy Acid Herbs Suite											
SAL Reference					195208 001	195208 002	195208 003	195208 004	195208 005	195208 006	195208 007
Customer Sample Reference					Riddy Brook U/S	Riddy Brook D/S	River Cam U/S	River Cam D/S	BH11	BH9	S3/4
Determinand	Method	Test Sample	LOD	Units							
Dicamba	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	6.5
Dichlorprop	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20
Phenoxy Acetic acid herbicide: MCPA	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.5
Mecoprop	T16	AR	0.1	µg/l	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	96

SAL Reference: 195208 Project Site: HAUXTON Customer Reference: 907BRI											
Water Analysed as Water Vertase Hauxton SVOC Suite											
SAL Reference					195208 001	195208 002	195208 003	195208 004	195208 005	195208 006	195208 007
Customer Sample Reference					Riddy Brook U/S	Riddy Brook D/S	River Cam U/S	River Cam D/S	BH11	BH9	S3/4
Determinand	Method	Test Sample	LOD	Units							
2,4,6-Trichlorophenol	T16	AR	10	µg/l	<10	<10	<10	<10	<10	<10	130
2-Methyl-4,6-dinitrophenol	T16	AR	10	µg/l	<10	<10	<10	<10	<10	<10	<10
4-Chloro-2-methylphenol	T16	AR	10	µg/l	<10	<10	<10	<10	<10	<10	210
Bis (2-chloroethyl) ether	T16	AR	10	µg/l	<10	<10	<10	<10	28	400	6500
Phenol	T16	AR	10	µg/l	⁽¹⁶²⁾ <50	⁽¹⁶²⁾ <50	⁽¹⁶²⁾ <50	⁽¹⁶²⁾ <50	⁽¹⁶²⁾ <50	⁽¹⁶²⁾ <50	⁽¹⁶²⁾ <50

SAL Reference: 195208
 Project Site: HAUXTON
 Customer Reference: 907BRI

Water Analysed as Water
 Vertase Hauxton VOC Suite

SAL Reference					195208 001	195208 002	195208 003	195208 004	195208 005	195208 006	195208 007
Customer Sample Reference					Riddy Brook U/S	Riddy Brook D/S	River Cam U/S	River Cam D/S	BH11	BH9	S3/4
Determinand	Method	Test Sample	LOD	Units							
1,2-Dichlorobenzene	T54	AR	1	µg/l	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	T54	AR	1	µg/l	<1	<1	<1	<1	<1	<1	<1
Cis-1,2-Dichloroethylene	T54	AR	1	µg/l	<1	4	<1	<1	3	3	28
Cyclohexanone	T54	AR	10	µg/l	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethylene	T54	AR	1	µg/l	2	3	2	2	<1	<1	7
Toluene	T54	AR	1	µg/l	<1	<1	<1	<1	14	<1	860
Trichloroethylene	T54	AR	1	µg/l	<1	7	<1	<1	<1	<1	12
Vinyl chloride	T54	AR	1	µg/l	<1	<1	<1	<1	<1	<1	32
Xylene (Total)	T54	AR	1	µg/l	<1	<1	<1	<1	1	<1	89



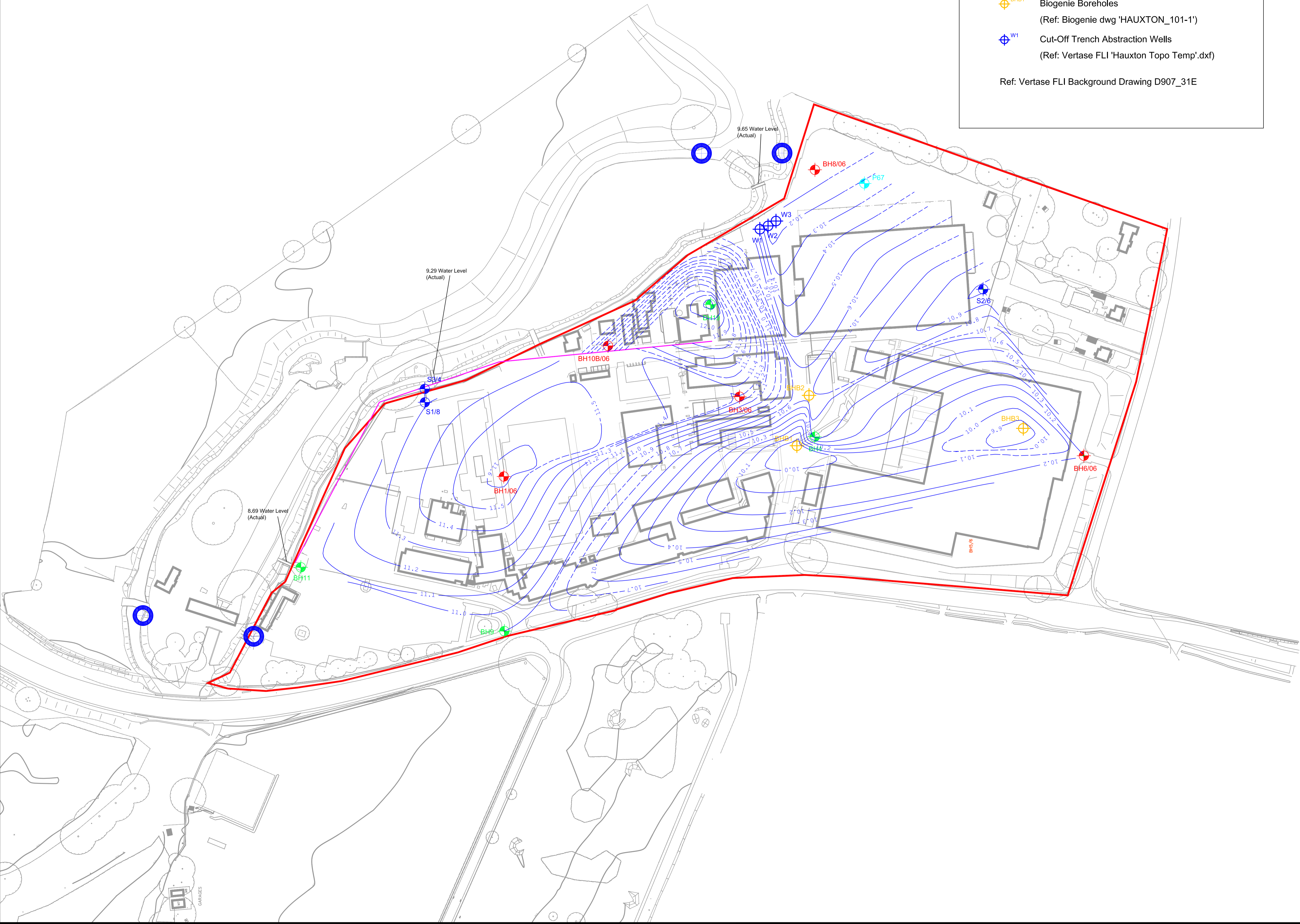


Appendix G
Groundwater Contour Plots

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)

Ref: Vertase FLI Background Drawing D907_31E



FIRST ISSUE	30-04-10		
Rev.	Description	Revised By	Date

Vertase F.L.I.

- Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601
- Sheffield Office: Tel: 01246 813289 Fax: 01246 812983
- Hertford Office: Tel: 01992 535757 Fax: 01992 535858
- Manchester Office: Tel: 01614 372708 Fax: 01614 376300

email: info@vertasefli.co.uk
www.vertasefli.com

Site Address:	Rev:
Bayer Site Hauxton Cambridge	

Title: Ground Water Contours 21-04-10

Client: Harrow Estates

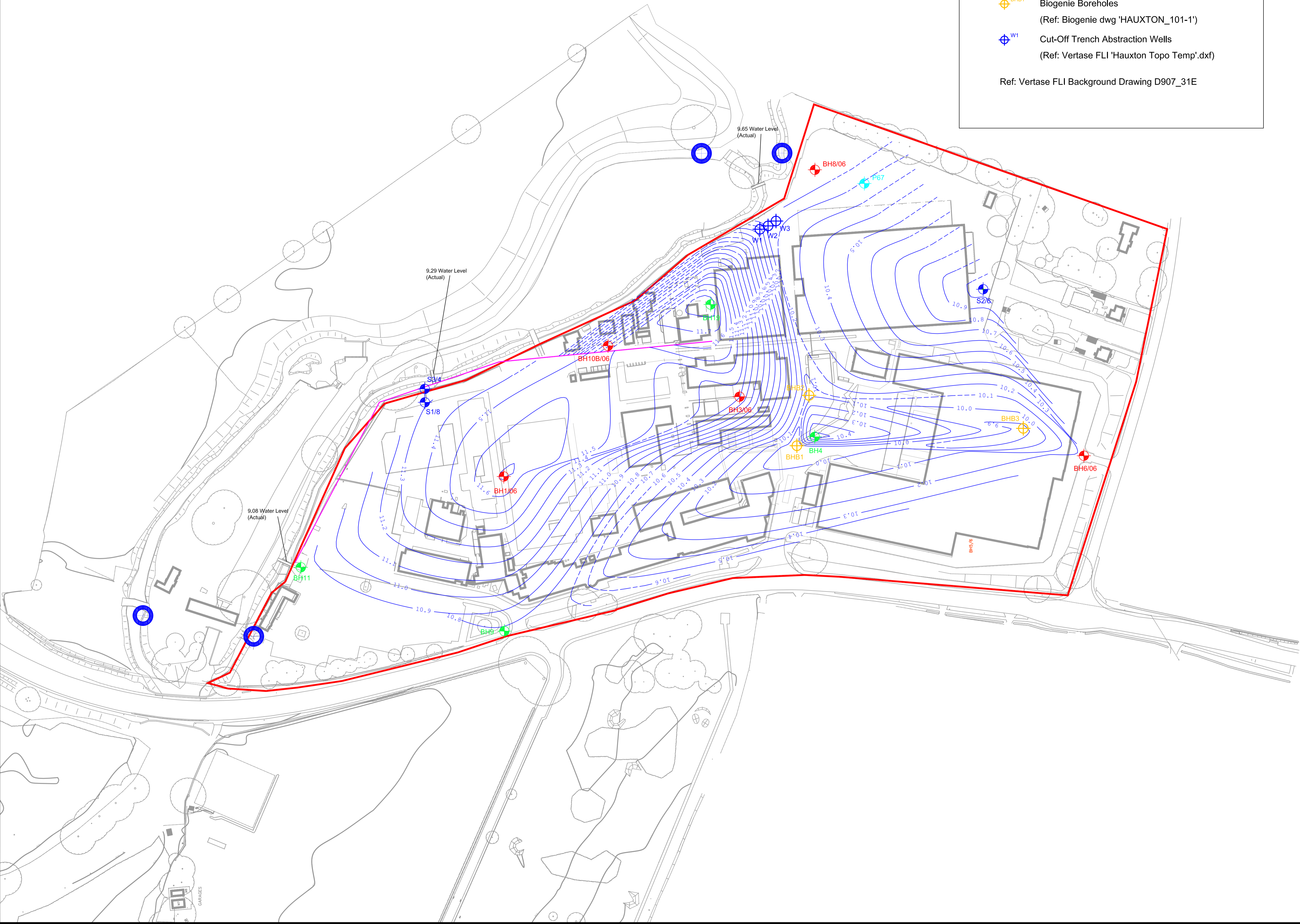
Drawn: MRG	Checked: DL	Approved: MA
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Dwg: D907_71	Contract: 907 BR1	Scale: 1:1000
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Legend

- 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)

Ref: Vertase FLI Background Drawing D907_31E



Rev.	Description	Revised By	Date
	FIRST ISSUE		30-04-10

Vertase F.L.I.

- Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601
- Sheffield Office: Tel: 01246 813289 Fax: 01246 812983
- Hertford Office: Tel: 01992 535757 Fax: 01992 535858
- Manchester Office: Tel: 01614 372708 Fax: 01614 376300

email: info@vertasefli.co.uk
www.vertasefli.com

Site Address: Bayer Site, Hauxton, Cambridge

Title: Ground Water Contours 15-04-10

Client: Harrow Estates

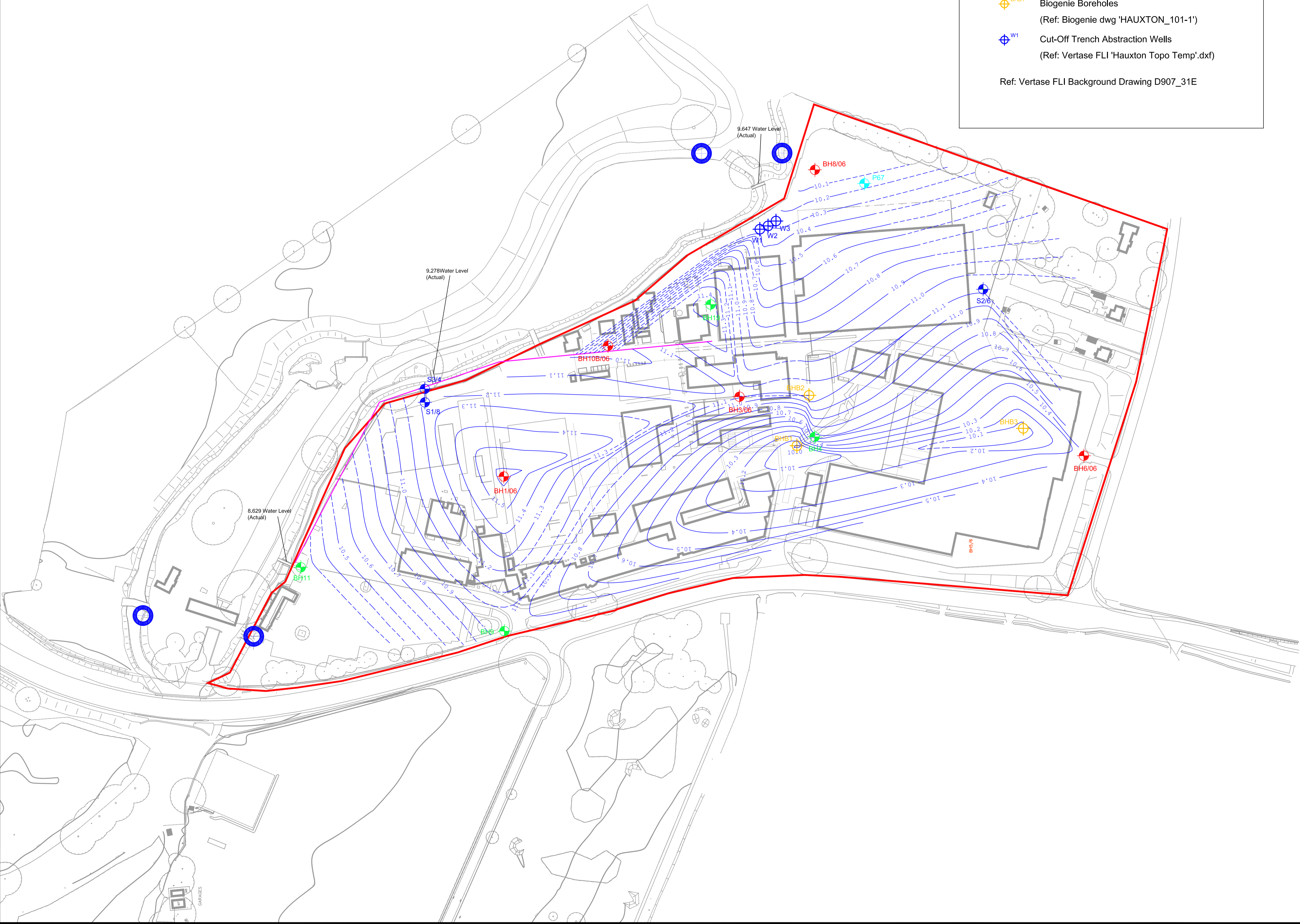
Drawn: MRG Checked: DL Approved: MA

Dwg: D907_70 Contract: 907 BR1 Scale: 1:1000

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)

Ref: Vertase FLI Background Drawing D907_31E



Rev.	Description	Revised By	Date
	FIRST ISSUE		30-04-10

Vertase F.L.I.

- Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601
- Sheffield Office: Tel: 01246 813289 Fax: 01246 812983
- Hertford Office: Tel: 01992 535757 Fax: 01992 535858
- Manchester Office: Tel: 01614 372708 Fax: 01614 376300

email: info@vertasefli.co.uk
www.vertasefli.com

Site Address:	Rev:
Bayer Site Hauxton Cambridge	

Title: Ground Water Contours 08-04-10

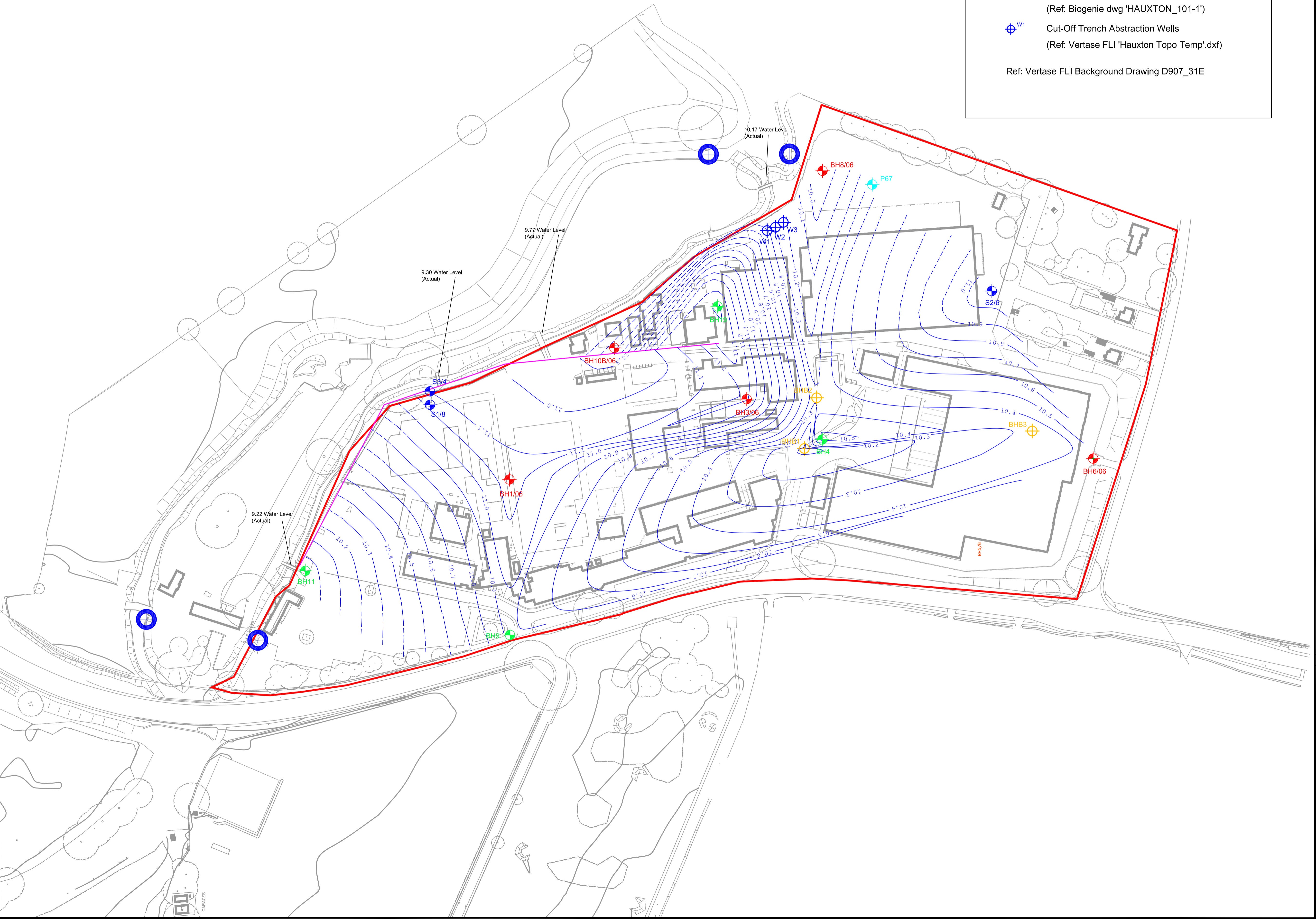
Client: Harrow Estates

Drawn: MRG	Checked: DL	Approved: MA
Dwg: D907_69	Contract: 907 BR1	Scale: 1:1000

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)

Ref: Vertase FLI Background Drawing D907_31E



Rev.	Description	Revised By	Date
	FIRST ISSUE		26-04-10

Vertase F.L.I.

- Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601
- Sheffield Office: Tel: 01246 813289 Fax: 01246 812983
- Hertford Office: Tel: 01992 535757 Fax: 01992 535858
- Manchester Office: Tel: 01614 372708 Fax: 01614 376300

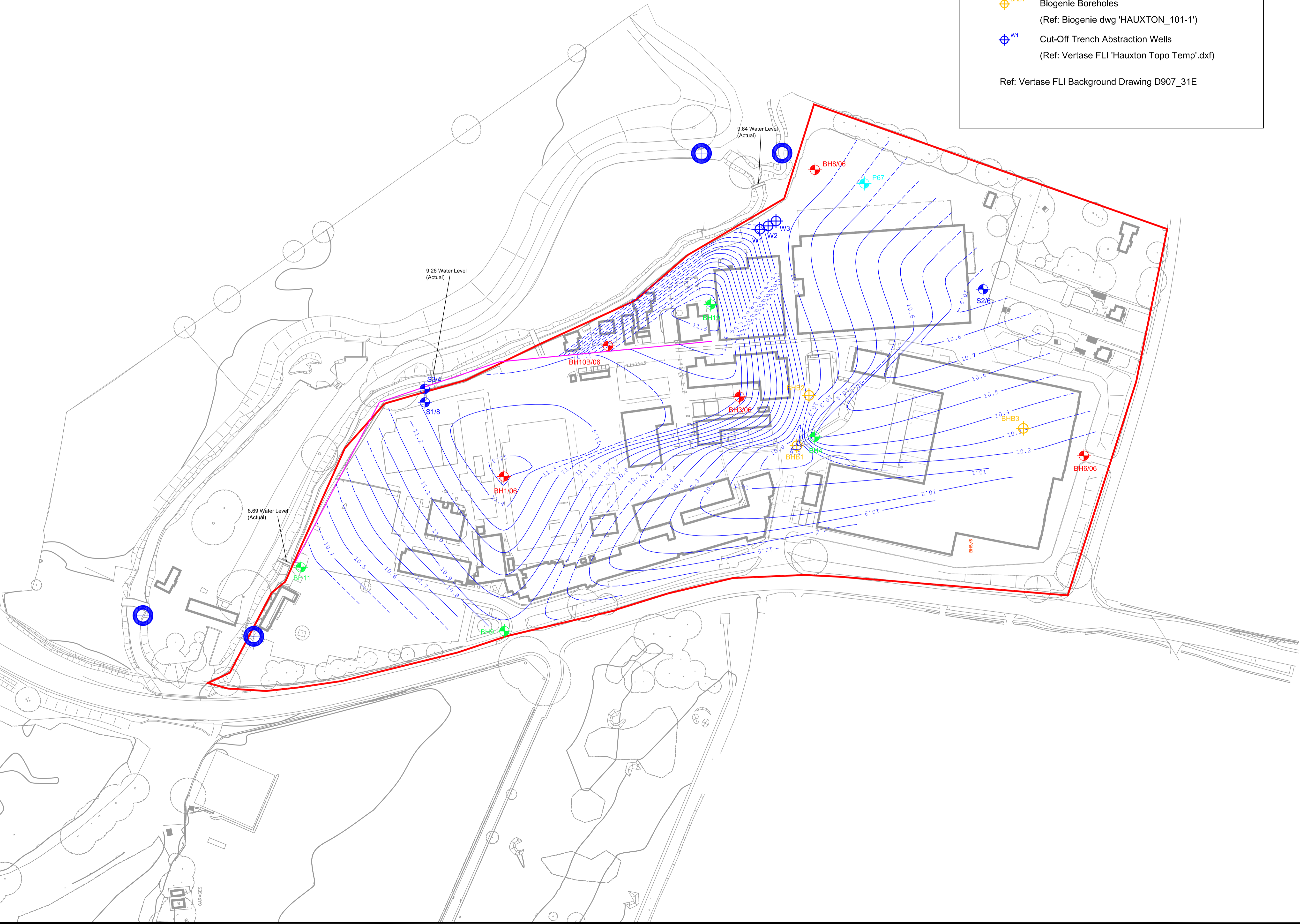
email: info@vertasefli.co.uk
www.vertasefli.com

Site Address:		Rev:
Bayer Site Hauxton Cambridge		
Title: Ground Water Contours 01-04-10		
Client: Harrow Estates		
Drawn: MRG	Checked: DL	Approved: MA
Dwg: D907_67	Contract: 907 BR1	Scale: 1:1000

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)

Ref: Vertase FLI Background Drawing D907_31E



FIRST ISSUE	04-05-10		
Rev.	Description	Revised By	Date



- Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601
 - Sheffield Office: Tel: 01246 813289 Fax: 01246 812983
 - Hertford Office: Tel: 01992 535757 Fax: 01992 535858
 - Manchester Office: Tel: 01614 372708 Fax: 01614 376300
- email: info@vertasefli.co.uk
www.vertasefli.com

Site Address: Bayer Site, Hauxton, Cambridge

Title: Ground Water Contours 29-04-10

Client: Harrow Estates

Drawn: MRG	Checked: DL	Approved: MA
Dwg: D907_72	Contract: 907 BR1	Scale: 1:1000