Phase II Environmental Assessment Report
GoCold Ltd
Old Station Yard
Meldreth
Royston
Cambridgeshire
SG8 6JR

Prepared for:

Trustees of the GoCold Pension Fund
C/O GoCold Ltd
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NON TECHNICAL CLIENT SUMMARY

This report is a Phase II Environmental Assessment which was undertaken to identify the presence, nature and extent of any potential sources of contamination at the site so that appropriate measures can be take to control the risks that these may pose to human and environmental receptors. Pertinent findings and conclusions are summarised as follows:

- Drilling investigations found approximately 1m thickness of made ground overlying a approximately 0.5m clayey sand / sandy clay, whereupon chalk was encountered, which extended beyond the maximum borehole depth of 4.0m below ground level (bgl).
- Made ground comprised mainly gravels and sands and occasional re-worked natural ground and it contained small quantities of ash, clinker and brick.
- Groundwater was encountered in all boreholes at depths ranging between 1.417mbgl (WS103) to 2.855mbgl.
- Laboratory analyses of representative soil and groundwater samples collected from site did not identify contaminants at concentrations that could pose a significant risk to humans or controlled waters.
- Given the results of this investigation and the proposed use of the site for on-going commercial operations, no recommendations have been made for remedial action on contaminated soils. However, precautionary gas protection measures have been recommended in the absence of an extended dataset and appropriate health and safety precautions for site workers (such as suitable PPE) have been recommended as a precaution during any excavation works to avoid unnecessary exposure to the ash and clinker materials observed in made ground.

The above points represent a simplified summary of the findings of this assessment and should not form the basis for key decisions for the proposed development. A thorough review of the details contained within the following report, or discussion with EPS is recommended.

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1 INTRODUCTION

In December 2010, Environmental Protection Strategies Ltd (EPS) was commissioned by by the Trustees of the GoCold Pension Fund C/O GoCold Ltd (via Mr Robin Gomm of Complete Fabrications Architectural Design and Construction) to complete a Phase II Environmental Investigation of the GoCold Ltd property situated at Old Station Yard, Meldreth, Royston, Cambridgeshire, SG8 6JR (the 'site'); see Figure 1.

This report presents a brief summary of the Phase I desk study work for the site as well as providing details of the work carried out in the Phase II intrusive investigation together with it's findings. The report also draws conclusions from the results and makes recommendations for further work that may be necessary to control any risks arising through the proposed development.

Development proposals for the site include the partial demolition of the existing commercial building at the property and construction of a replacement with extension.

1.1 Objectives

The objectives of this investigation were as follows:

1. To investigate any potential pollutant linkages identified by the Conceptual Site Model, defined in the Phase I desk study, by means of investigating shallow soil and groundwater.
2. To determine the potential risks posed by the site and make recommendations for any further work that may be required, to ensure safe development in accordance with the Model Procedures for the Management of Land Contamination - Contaminated Land Report 11.

1.2 Scope of Work

To perform an exploratory assessment of the site in accordance with the principles and requirements of DEFRA Circular 01/2006, BS10175 –'Investigation of Potentially Contaminated Sites', and BS5930 – 'Code of Practice for Site Investigations' the following tasks were undertaken:

Site Work:

- Site walkover, inspection of any visual evidence of contamination at the site, obtaining photographic records.
- Health and safety briefing / site supervision.
- Drilling of window sampling boreholes to a maximum depth of 4.0m at four locations across the site.
- Continual logging of ground conditions including inspection of samples for any visual and olfactory contamination, and laboratory analysis of selected soil samples.

- Installation of gas and groundwater monitoring wells at four window sampling locations.
- Sampling of groundwater from onsite monitoring wells and monitoring of ground gases.

Reporting:

- Data collection and interpretation.
- Reporting.

The findings of these investigations and their conclusions are presented in the following sections.

1.3 Limitations and Constraints

The purpose of this report is to present the findings of a soil and water sampling investigation conducted at the location(s) specified. When examining the data collected from the investigations made during the assessment, Environmental Protection Strategies Ltd (EPS) makes the following statements.

No investigation method is capable of completely identifying all the contaminants that might be present in the soil or groundwater under a site. Where outlined in our report, we have examined the ground beneath a site by constructing a number of boreholes and/or trial pits to recover soil and/or groundwater samples. The locations of these excavations and sampling points are considered to be representative of the condition of the whole site subsurface. However, ground conditions are naturally variable and it may be possible that localised ground controls could influence the spread of contaminants within the site subsurface. For this reason it is possible that samples collected during the investigation may not represent the conditions across the entire site**.**

The investigation was carried out to assess the significance of contamination resulting from the use of the site as identified in this report. Unless EPS has otherwise indicated, no assessment of potential impact of any other previous uses has been made.

If third parties have been contracted / consulted during compilation of this report, the validity of any data they may have supplied, and which are included in the report, have been assessed as far as possible by EPS. However, EPS cannot guarantee the validity of these data.

The report has been prepared for the client(s) listed on the report title page and has been subject to standard internal EPS review procedures. EPS accepts no liability or responsibility for use of, or reliance upon, this report and or the information contained within it by third parties.

No part of this report, or references to it, may be included in published documents of any kind without approval from EPS.

This report and its contents, together with any supporting correspondence or other documentation, remain the property of Environmental Protection Strategies Ltd until paid for in full.

2 SUMMARY OF PREVIOUS REPORTS

This assessment supplements a Phase I Desk Study for the site undertaken by EPS in October 2009. For detailed background information, it is recommended that the reader review the following report:

- *Environmental Desk Study Report, Old Station Yard, Meldreth, Royston, Cambridgeshire, SG8 6JR (October 2009)* - EPS Project Ref: UK09.0788.

The information in this section is provided to summarise the key findings of the Phase I Desk Study.

2.1 Environmental Setting

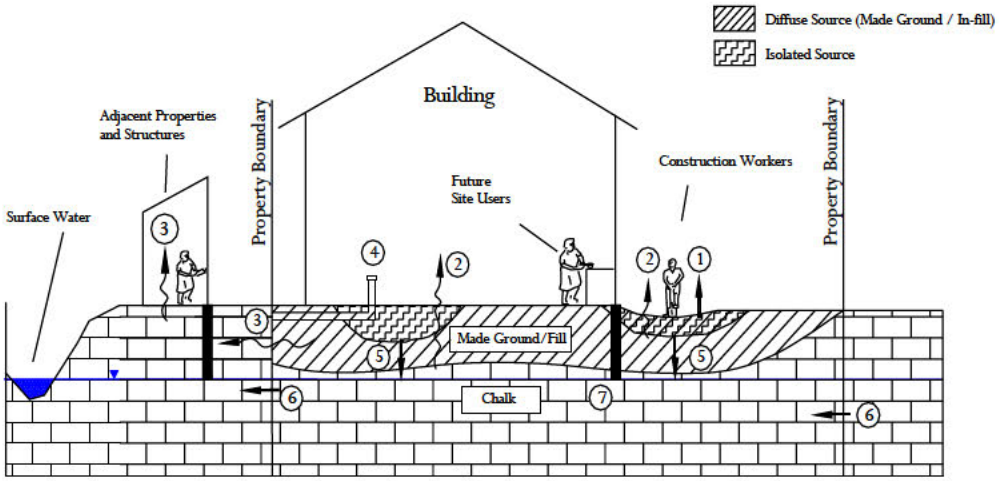
Site Location and Description	The site is located in the southern area of the village of Meldreth, Cambridgeshire (see Figure 1). The site is irregular in shape, measuring a total surface area of approximately 5,200m^2 and lies at an approximate topographic elevation of 22m above ordnance datum; the site itself is relatively level. The site is currently used by a company that manufactures and supplies ice cream; 'GoCold Ltd.' A factory building lies in the south-western quarter of the site, which houses a cold-store, a vehicle loading area and administrative offices. The remaining site area is principally covered by concrete hardstanding with small tarmac areas and is currently used as car-parking, for access and overnight parking of delivery vehicles. Soft landscaped areas border the site to the west and southwest. Development proposals include partial demolition of the northern half of the existing facility and subsequent redevelopment to include an extended cold storage warehouse, loading bays and associated new offices. The yard area will also be refurbished to formalise staff parking and delivery vehicle access routes and small landscaped areas will be introduced. Plans showing the site layout and proposed development layout are included as Figure 2 and Appendix B respectively.
Geology	Geological maps of the area report the site to be directly underlain by the West Melbury Marly Chalk Member of the Lower Chalk Formation.
Hydrogeology	The Groundwater Vulnerability Map for the area indicates that the underlying geology is classed as Principal Aquifer with overlying soils of High (H1) leaching potential.
Hydrology	The closest surface watercourse is an unnamed drain, located approximately 130m to the northeast. The unnamed drain connects to the River Mel, which is located approximately 260m to the northeast and flows in a generally northerly direction. The Environment Agency (EA) Flood Zone map reports the site to lie within Flood Zone 1, defined as the area with lowest potential risk of flooding from fluvial or tidal sources.

Environmental Databases	A search of environmental databases shows that the site does lie within a nitrate vulnerable zone but no other environmentally sensitive areas are located in close proximity to the site. The EA does not list any historic landfills, active landfills or pollution incidents within a 1km radius of the site however a number of potentially contaminative land uses have been identified within 250m of the site including a rubber and plastics manufacturer located adjacent to the site and an engineering services firm and a vehicle servicing and repair garage both located around 40m west. A railway line also lies adjacent to the site.
Site History	A study of historical maps indicates that the site was in use as a railway siding from the late 1800s and, at a time between 1952 and 1972, the site was redeveloped to form a works in the western area and a coal yard in the eastern area.
Potential Contaminants of Concern	Based upon the site's former use and operations in the surrounding area, the desk study determined that the following potential contaminants of concern may be present at the property: • Total Petroleum Hydrocarbons • Volatile Organic Compounds (VOC) • Semi-volatile Organic Compounds (SVOC) • Metals
Potential Receptors	EPS identified construction workers, existing and future site users, neighbouring site users and controlled waters as potential receptors to the contaminants of concern.

2.2 Conceptual Site Model

A conceptual site model was developed for the site and this is summarised in the diagram below:

Station Yard, Meldreth - Conceptual Site Model



Potential Pathways:

1 Direct Contact with / Ingestion of Soil (Construction Workers)
2 Migration of Organic Vapours to Indoor and Outdoor Air
3 Off-site Migration of Organic Vapours
4 Infiltration to Subsurface Utility Pipes
5 Vertical Migration of Contaminants into Underlying Groundwater
6 Lateral Migration of Contaminants in Groundwater
7 Direct Contact between Contaminated Soil and / or Groundwater and Subsurface Infrastructure

3 SUMMARY OF INTRUSIVE INVESTIGATIONS

Two phases of intrusive investigation have been carried out at the site; one on 2nd September 2010 and a second on the 16th of December 2010. Both were completed in accordance with EPS standard operating procedures, copies of which will be made available on request however a summary of all site activities is presented in the following subsections.

3.1 Trial Pit Investigations

On the 2nd of September 2010, EPS inspected and collected representative soil samples from two trial pits excavated adjacent to the existing site buildings as part of a coincident geotechnical investigation for the property. The trial pits (TP1 & TP2) were excavated adjacent to the existing on-site buildings by hand tools to a maximum depth of 2.5mbgl.

EPS also collected a groundwater sample from an existing onsite monitoring well which was discovered near the centre of the site during the site visit.

A plan showing the location of the trial pits and borehole is included as Figure 3 of this report and photographs are included as Appendix A.

3.2 Borehole Investigations

On 16th December 2010, EPS visited the site to conduct a borehole investigation with the intention of collecting supplementary soil and groundwater samples from around the site. Borehole locations were selected through consideration of the potential pollutant linkages identified in Section 2 above and operation and health & safety considerations associated with an active commercial site.

A total of four boreholes (WS101 – WS104) were drilled using a track-mounted cable percussion window sampling rig in order to assess the nature and quality of soils and groundwater to depths of up to 4.0m below ground level (bgl).

The overall objective in terms of borehole location was to supplement the previous investigation work so that an appropriate lateral and vertical inspection of the site around the potential contaminative on-site sources could be made.

Combined gas and groundwater monitoring wells were installed at all borehole locations. Each monitoring well was installed using 50mm diameter uPVC well casing and fitted with a gas tap. Slotted casing (1mm slot) was installed at each location from the base of the borehole to 1m below the surface. The installations were completed to ground surface using plain casing. A filter pack of 2-3mm washed gravel extended from the base of the borehole to approximately 0.1m above the slotted section with a bentonite seal to surface. All EPS boreholes were finished with flush–mounted, forecourt rated, bolt-down headworks.

The boreholes excavated at the site were drilled in accordance with standard EPS drilling methodologies, and subcontractors were supervised at all times by an EPS engineer. A detailed site layout plan showing the locations of the boreholes drilled during the investigation is presented as Figure 3.

3.3 Soil Sampling

Each borehole was logged for ground conditions encountered and inspected for any physical evidence of contamination, such as soil staining, odour and the presence of separate phase liquids.

At least three soil samples were obtained from each drilled location for on-site headspace monitoring (see Section 3.5) in accordance with EPS standard operating procedures. Selection of samples for laboratory analysis focused on providing an assessment of ground conditions in the vicinity of the groundwater encountered at the site.

A laboratory testing schedule is included as Table 1.

3.4 Groundwater Sampling

Groundwater samples were obtained from each borehole (where present) using the 'low flow' sampling technique in accordance with EPS standard operating procedures. Groundwater was monitored for dissolved oxygen, redox, pH and temperature before sampling.

In boreholes where limited groundwater was present and a low recharge rate prevented 'low flow' sampling, groundwater parameters were not measured.

3.5 Organic Vapour and Soil Gas Monitoring

The presence of organic vapours within soil samples was monitored at site by placing soil samples into sealed bags. The 'headspace' in the bag was then pierced using the tip of a Photoionisation Detector (PID) to measure the concentration of total organic volatiles.

In addition, the presence and extent of soil gas including carbon dioxide, oxygen and methane was also recorded at soil gas monitoring wells following the intrusive site investigation on 16th December 2010 using a gas analyser and flow meter.

3.6 Laboratory Analysis

All samples obtained for analysis of identified contaminants of concern were submitted to Chemtest Ltd of Newmarket, who hold appropriate UKAS/ MCERT accreditation for the required testing. Samples were transported in laboratory supplied containers and delivered to the laboratory by approved courier.

Copies of chain of custody documentation are held by EPS and will be made available on request.

4 FINDINGS

This section of the report provides a summary of the findings of the various aspects of the site investigation.

4.1 Ground Conditions

From inspection of subsurface soils at the two trial pits and four borehole locations, the ground conditions encountered during the site drilling work are briefly summarised as follows:

- The shallow geology encountered consisted of made ground covered by a thin layer of concrete or tarmacadam. Made ground comprised slightly silty and gravelly sand, to depths of between 0.75m below ground level (bgl) and a maximum of 1.7mbgl.
- Underlying the made ground in all boreholes was a layer of either silty / clayey sand, or sandy clay that measured between 0.45m and 0.7m in thickness which extended to a maximum depth of 2.4mbgl.
- Underlying the aforementioned layers in all boreholes, a layer of chalk was encountered which extended beyond the maximum depth of the boreholes (4.0mbgl).

EPS Site specific trial pit and borehole logs are included as Appendix C however a record for the existing on-site monitoring well at location WS1 has also been included for reference.

4.2 Hydrogeology

Groundwater was encountered in all boreholes drilled at the site, rising to depths ranging between 1.417mbgl (WS103) to 2.855mbgl (WS1) however a consistent groundwater surface was not encountered and therefore a groundwater flow direction could not be measured.

It was noted that a layer of semi-permeable sandy clay was present beneath made ground materials at WS104, which could offer limited protection to the underlying chalk aquifer from downward migration of any contaminants however this layer was not consistent beneath the site and borehole installations were therefore not considered to pose additional risks to controlled waters.

Measurement of field parameters during the sampling process in WS101-3 showed dissolved oxygen concentrations of between 3.4mg/l and 7.7mg/l and redox potentials of around -30mV. Detailed results are summarised in Table 2 of this report.

4.3 Physical Evidence of Contamination and Field Analyses

A limited quantity of ash, brick and clinker material was noted in the made ground, which was encountered across the site however no other physical evidence of contamination, such as staining or odour in soil or groundwater was encountered in any of the excavations made during the investigation.

With exception of three soil samples, concentrations of ionisable organic vapour in the headspace above soil samples for examination in the field did not exceed minimum detection limits for the Photoionisation Detector (PID). Concentrations reaching a maximum of 0.4ppmV were recorded in soil samples collected between 0.5m and 1.0mbgl in WS101-WS103 and a summary of all PID data are presented in Table 3.

4.4 Laboratory Analysis - Soil

A laboratory analysis testing schedule is presented as Table 1 of this report and all results obtained from the laboratory are included as Appendix D.

The key results of laboratory testing on soil samples are summarised as follows:

- Of all the soil samples collected during both phases of investigation, only one soil sample collected from borehole WS101 (0.4-0.9m) found concentrations of petroleum hydrocarbons (TPH) above the laboratory Method Detection Limits (MDL). This sample yielded a concentration of 14mg/kg with the majority of compounds found in carbon groups C21-C35.
- Concentrations of total PAHs were measured above Method Detection Limit (MDL) in the samples of made ground material collected from boreholes WS101 (0.4-0.9m) and WS103 (0.3-0.8m) at concentrations of 20mg/kg and 3.7mg/kg respectively.
- Concentrations of heavy metals were measured above Method Detection Limit (MDL) in the samples of made ground material collected from boreholes WS101 (0.4-0.9m) and WS103 (0.3-0.8m) and trial pits TP1 and TP2 with the exceptions of selenium and chromium VI.

4.4.1 Tier 1 Risk Screening

In order to screen laboratory data for concentrations of contaminant in soil with potential to cause harm to human health at a commercial setting, UK Soil Guideline Values (SGVs) and Generic Assessment Criteria (GACs) for contaminants in soil have been used. The technical framework used to derive the assessment criteria and the documents in which they are published are summarised as follows:

- EA Science Reports (SC050021/SR2, SC050021/SR3, and SC050021/SR7)
- EA Soil Guideline Value Science Reports
- Generic Assessment Criteria for Human Health Risk Assessment – LQM and CIEH 2nd edition (2009).

For concentrations of Lead in soil, there are currently no published human health screening criteria available and EPS has used the previously withdrawn SGV for lead as an appropriate guide for professional judgement with respect to reasonable 'minimal risk' levels in the context of this site.

In addition to screening the concentrations of contaminant in soil for risks to human health, EPS has also screened the concentrations for potential to cause harm to water resources. The criteria used for this process were derived by EPS using the following technical guidance:

- Environment Agency Remedial Targets Methodology: Hydrogeological Risk Assessment for Land Contamination

A summary of the screening criteria and the methodology used to derive them is included in Appendix E.

The results of the screening process show that none of the contaminants of concern were found at concentrations exceeding relevant SGV or GAC values for human health and controlled waters.

4.5 Laboratory Analysis - Water

A laboratory analysis testing schedule is presented as Table 1 and all results obtained from the laboratory are included as Appendix D.

The key results of laboratory testing on groundwater samples are summarised as follows:

- None of the groundwater samples collected for analysis found dissolved concentrations of any of the contaminants of concern above the relevant minimum laboratory MDL.

4.5.1 Tier 1 Risk Screening

EPS has screened the reported groundwater concentrations at an initial Tier 1 level for potential to cause harm to controlled waters within the local area. The criteria used for this process has been taken as follows:

Resource Sensitivity of Area	**Basis of Tier 1 Criteria**
High Groundwater Resource Potential (HGwRP) - Principal aquifers	UK Drinking Water Standards (UKDWS)
Low Groundwater Resource Potential (LGwRP) - Secondary aquifers not being abstracted and Non-productive aquifers	UK Environmental Quality Standards (EQS)

A summary of the screening criteria is included in Appendix E.

The results of the screening process show that no relevant EPS derived screening value was exceeded at the site.

4.6 Soil Gas Analysis & Assessment

Results of soil gas monitoring are presented as Table 4 along with calculated gas screening values, set out in CIRIA guidance 'Assessing Risks Posed by Hazardous Ground Gases to Buildings'.

A low detectable concentration of methane (0.1%) was detected from borehole WS1 however no other detectable concentration of methane was found in the other boreholes at the site. Detectable concentrations of carbon dioxide were found in all boreholes, ranging from 0.1% (WS101 & WS104) to a maximum concentration of 0.4% (WS1).

Based upon the available data, the calculated gas screening values fell into the risk classification 'very low risk' however it is recognised that at least four gas readings should be collected in order to accurately measure the gassing regime for a commercial facility.

No detectable concentrations (<0.1ppmV) of volatile organic compounds were identified within any of the boreholes at the site.

5 CONCLUSIONS

The Phase I study of this report identified a number of plausible pollutant linkages with the potential to either be currently active, or with the potential to become active as a result of the proposed development works. These were principally related to the possible presence of contaminants in the subsurface as a result of the site's historic uses and operations or from activities carried out on surrounding land in the past or present.

The pollutant linkages identified as carrying the greatest potential risks at this site comprise human health risks associated with exposure of site workers to contaminated soils during the proposed refurbishments, as well as for existing and future site users and adjacent site users/residents through volatilisation to indoor and outdoor air. Potential risks were also recognised to be posed to groundwater within the underlying principal aquifer and surrounding surface water courses.

The aim of the Phase II intrusive site investigation documented by this report was to verify the presence and activity of the above plausible linkages and to establish if additional work may be needed to control them during the proposed redevelopment works. The field results have found a layer of made ground containing minor evidence of contaminative material (ash and clinker) overlying natural soils which offer little protection to the underlying principal chalk aquifer. However, subsequent laboratory analysis of representative soil samples collected from made ground material has determined relatively low concentrations of contaminant, which do not pose significant risks to the health of commercial site users. In addition, the contaminants that have been detected have been found to be predominantly complex molecular hydrocarbon compounds, which are of limited mobility in the environment and, as such pose little threat to underlying groundwater resources, especially when the site is to be covered by impermeable hardstanding.

Laboratory analysis of representative groundwater samples collected from site has confirmed that no impact has occurred from the contaminants found in the made ground and it also shows that potential contaminants of concern have not migrated onto site from neighbouring facilities with potential to pollute.

Also, based upon the available gas monitoring data obtained from the site, the calculated gas screening values fell into the risk classification 'very low risk' which indicates that no gas control measures are required to be implemented at the site. It is recognised that industry guidance recommends that at least four gas readings should be collected in order to accurately measure the gassing regime for a commercial facility in this setting however the additional cost for completing this level of monitoring work may exceed the total cost of incorporating basic gas protection measures into the building and may also delay the proposed development programmes.

A summary of the work completed by the Phase I and II investigations in accordance with Contaminated Land Report (CLR) 11 is presented as a flow diagram in Figure 4 of this report.

6 RECOMMENDATIONS

The following recommendations are made with respect to further environmental assessment and proposed control measures during the forthcoming site improvement / redevelopment works.

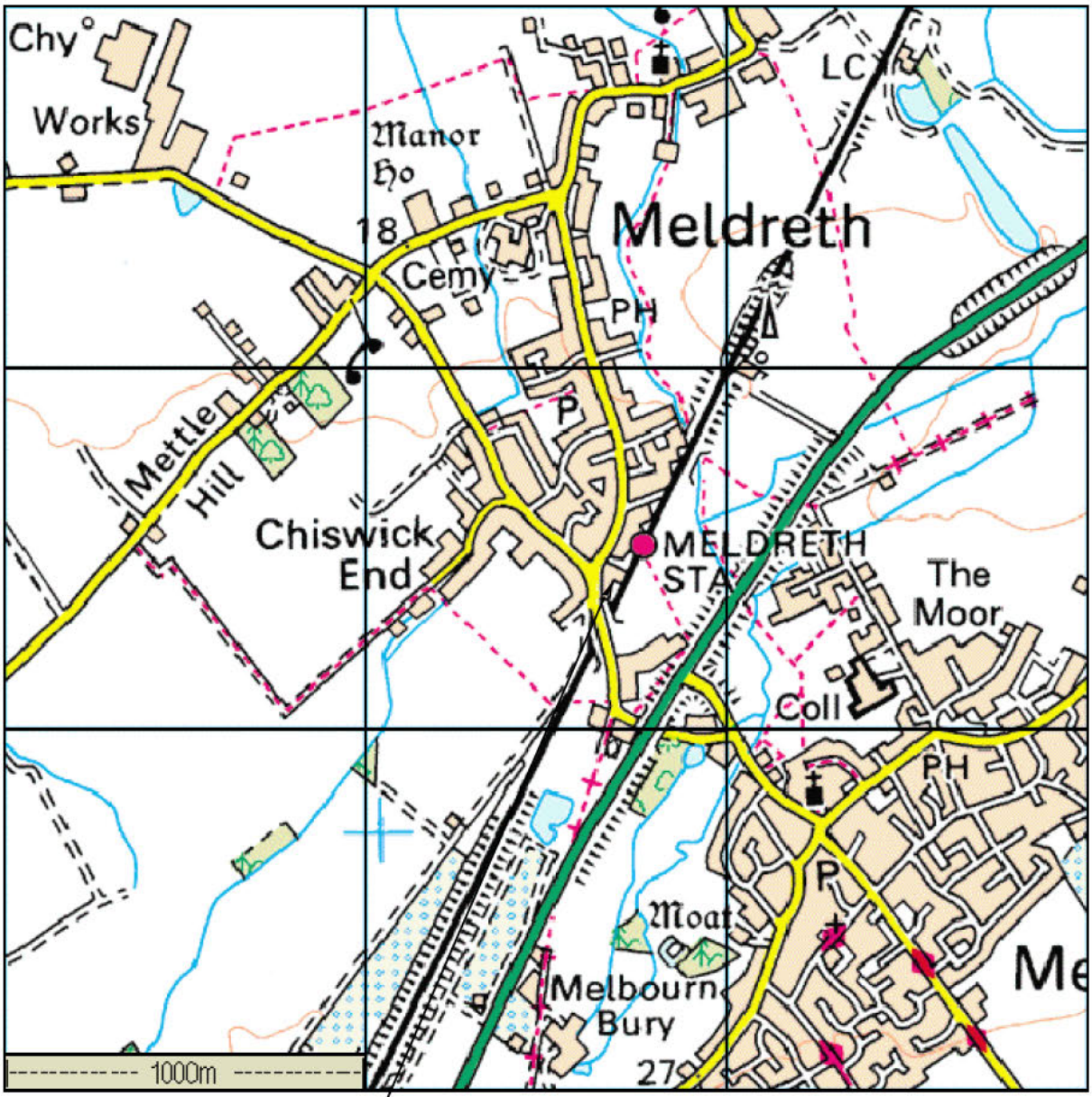
1) All construction workers operating at the site should be advised of the potential for exposure to made ground in the subsurface at the site and appropriate health and safety precautions should also be adopted during any excavation works to avoid unnecessary exposure to soils or inadvertent ingestion. Detailed advice and precautions can be found in the HSE Document: "Protection of Workers and the General Public during Development of Contaminated Land".
2) Any significant palpable evidence of contamination encountered during exposure of shallow soils beneath the site during the proposed redevelopment work should be reported to EPS so that an inspection can be made and appropriate sampling and assessment work carried out. Construction workers should have a procedure in place for dealing with any previously unidentified contamination if it is encountered during their redevelopment activities and to this end an example method statement has been provided as Appendix F.
3) Areas of proposed soft landscaping may require import of topsoil and therefore any imported topsoil should be obtained from a reputable source, which should hold representative sample analysis results or additional validation samples may be required to ensure imported materials are fit for purpose and pose no additional risks.
4) Appropriate pipework materials should be selected for any new potable water supply pipes installed at the site as part of refurbishment work. For guidance, the Water Regulations and Advisory Scheme (WRAS) – *The Selection of Materials for Water Supply Pipes to be Laid in Contaminated Land* should be referred to. It is assumed that existing pipework would have been installed using appropriate materials however if not, then a sample of drinking water could be tested to measure any potential impact.
5) In accordance with CIRIA Report C659 – *'Assessing Risks Posed by Hazardous Ground Gases to Buildings'*, additional ground gas measurements should be collected, or alternatively one of the following protection measures could be adopted as a precautionary measure to control conceivable risks from ground gas at a commercial/industrial development:

    a) *Reinforced concrete cast in situ floor slab (suspended, non-suspended or raft) with at least 1200 g damp-proof membrane.*
    b) *Beam and block or pre-cast concrete and 2000g damp proof membrane/reinforced damp gas membrane.*
    c) *Possibly underfloor venting or pressurisation in combination with a) and b) depending on use.*

    With: *All joints and penetrations sealed.*

It is also recommended that a copy of this report be provided to South Cambridgeshire District Council and the Environment Agency so that the information may be incorporated into planning correspondence and their land quality records, as well as pursuance of the discharge of associated planning conditions regarding the proposed redevelopment of the site.

FIGURES

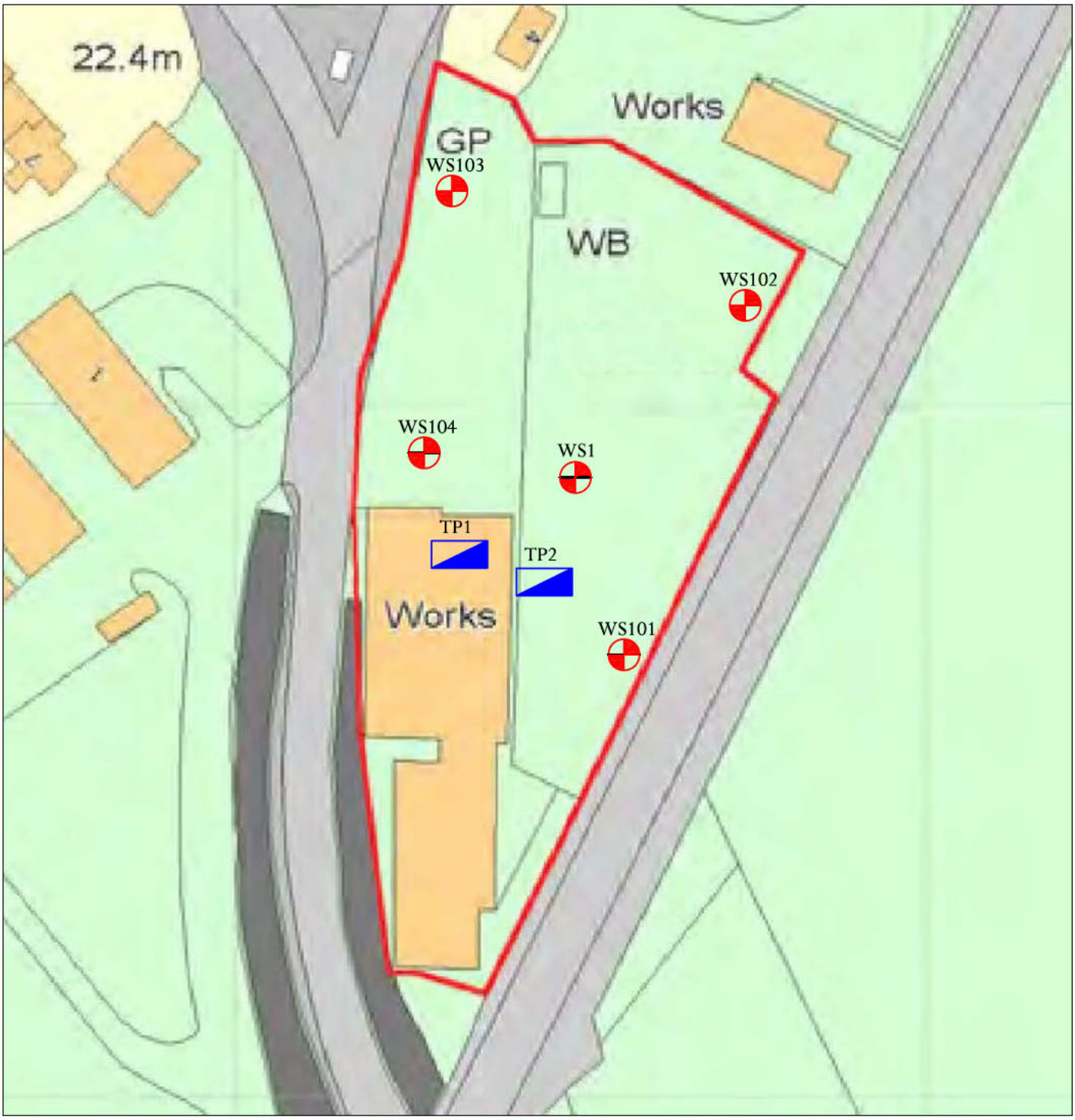


Approximate Site Location

Title:	**Site Location Plan**
Project:	GoCold Ltd, Old Station Yard, Meldreth, Royston, SG8 6JR
Client:	GoCold Pension Fund C/O GoCold Ltd
Fig No:	1
Scale:	As Shown
Drawn By:	TJ
Approved By:	GL
Job No:	UK09.0787
Dwg No:	GoCold/Meldreth/0111/1
Date:	10th January 2011

Approximate Site Boundary

Title:	**Site Layout Plan**
Project:	Go Cold Ltd, Old Station Yard, Meldreth, Royston, SG8 6JR
Client:	GoCold Pension Fund C/O GoCold Ltd
Fig No:	2
Scale:	Not to scale
Drawn By:	TJ
Approved By:	GL
Job No:	UK09.0787
Dwg No:	GoCold/Meldreth/0111/2
Date:	10th January 2011



Key:

WS1 – WS104 — Approximate Borehole Locations

TP1 – TP2 — Approximate Trial Pit Locations

eps

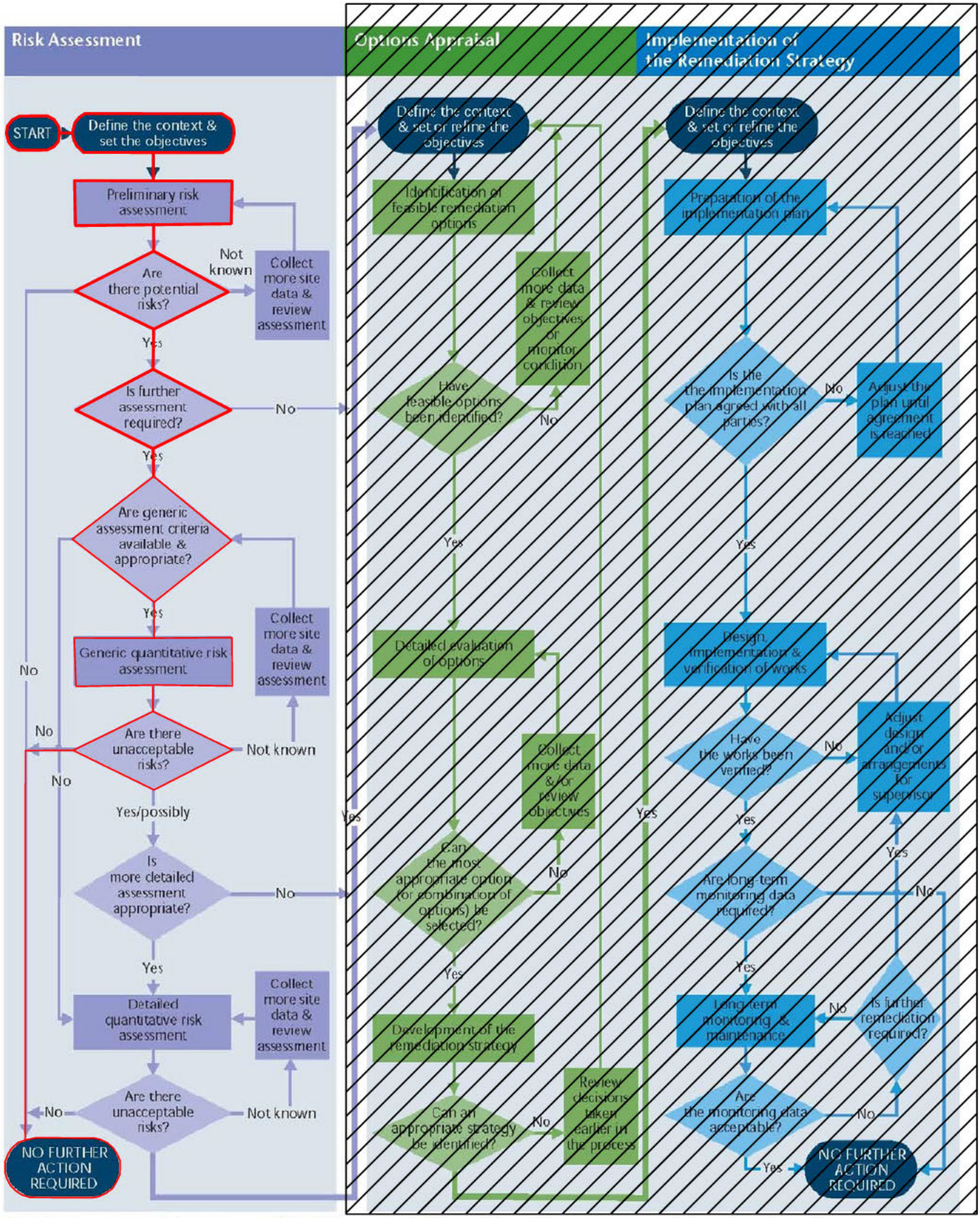
Title: Borehole & Trial Pit Location Plan

Project: GoCold Ltd, Old Station Yard, Meldreth, Royston, SG8 6JR

Client: GoCold Pension Fund C/O GoCold Ltd

Fig No: 3

Scale:	Not to scale
Drawn By:	TJ
Approved By:	GL
Job No:	UK09.0787
Dwg No:	GoCold/Meldreth/0111/3
Date:	10th January 2011



Note: The process may apply to one or more pollutant linkages each of which may follow a different route. For some linkages, it may be possible to stop at an

Assessment Pathway for Site

Title:	**Site Context - CLR11**		
Project:	GoCold Ltd, Old Station Yard, Meldreth, Royston, SG8 6JR	Scale:	n/a
		Drawn By: TJ	Approved By: GL
Client:	GoCold Pension Fund c/o GoCold Ltd	Job No:	UK09.0787
		Dwg No:	GoCold/Meldreth/0111/4
Fig No:	4	Date:	10th January 2011

TABLES

Table 1 – Laboratory Testing Schedule

Sample ID	Sample Depth (mbgl)	TPH	VOCs	SVOCs	PAHs	Metals
TP1 (soil)	0.5-1.0	1	1	-	1	1
TP1 (soil)	2.0-2.5	1	1	-	1	1
TP2 (soil)	0.5-1.0	1	1	-	1	1
WS101 (soil)	0.4-0.9	1	-	-	1	1
WS101 (soil)	2.0-2.5	1	-	-	-	-
WS102 (soil)	2.0-2.5	1	-	-	-	-
WS103 (soil)	0.3-0.8	1	-	-	1	1
WS1 (water)	n/a	1	1	-	-	-
WS101 (water)	n/a	1	1	1	-	-
WS102 (water)	n/a	1	1	-	1	-
WS103 (water)	n/a	1	1	-	1	-
WS104 (water)	n/a	1	1	-	1	-

Note

mbgl		meters below ground level
TPH		Total Petroleum Hydrocarbons
VOCs		Volatile Organic Compounds
SVOCs		Semi-Volatile Organic Compounds
PAHs		Polycyclic Aromatic Hydrocarbons
1	=	Sample Taken
-	=	Sample Not Analysed
n/a		not applicable

Table 2 – Groundwater Monitoring Data

Borehole No.	Depth to Floating Product (mbgl)	Depth to Groundwater (mbgl)	Groundwater Elevation (mASD)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	pH	Temperature (°C)
WS1*	n/a	2.855	9.600	-	-	-	-
WS101	n/a	2.261	9.947	-30	3.43	6.88	15.3
WS102	n/a	2.230	10.000	-33	7.70	6.85	13.3
WS103	n/a	1.417	9.308	-30	3.71	6.80	13.3
WS104	n/a	2.805	9.672	-	-	-	-

Notes

Mbgl	Meters below ground level
mASD	Meters above site datum
mV	Millivolts
mg/l	Milligrams per litre
-	No data collected
n/a	Floating product not encountered
*	Groundwater sample obtained from borehole WS1 during September 2010. All other data including groundwater elevation of WS1 obtained during December 2010.

Table 3 – Field Screening Results by PID

WS101	
Depth	**ppmV**
0.5-1.0	0.4
1.0-1.5	-
1.5-2.0	-
2.0-2.5	-
2.5-3.0	-
3.0-4.0	-

WS102	
Depth	**ppmV**
0.5-1.0	0.1
1.0-1.5	-
1.5-2.0	-
2.0-2.5	-
2.5-3.0	-
3.0-4.0	-

WS103	
Depth	**ppmV**
0.5-1.0	0.1
1.0-1.5	-
1.5-2.0	-
2.0-2.5	-
2.5-3.0	-
3.0-4.0	-

WS104	
Depth	**ppmV**
0.5-1.0	-
1.0-1.5	-
1.5-2.0	-
2.0-2.5	-
2.5-3.0	-
3.0-4.0	-

Notes:
All depths in mbgl (metres below ground level)
ppmV = parts per million Vapour
' – ' = no reading above instrument detection limit of 0.1ppmV.

Table 4 – Gas Monitoring Well Analysis

Sample ID	WS1	WS101	WS102	WS103	WS104
CH_4 (%)	0.1	<0.1	<0.1	<0.1	<0.1
CO_2 (%)	0.4	0.1	0.2	0.3	0.1
O_2 (%)	19.6	19.7	19.6	19.4	20.0
Flow Rate (l/hr)	<0.1	<0.1	<0.1	<0.1	<0.1
VOC (ppmV)	<0.1	<0.1	<0.1	<0.1	<0.1
Gas Screening Value (l/hr) (CH_4)	≤0.0001	-	-	-	-
Gas Screening Value (l/hr) (CO_2)	≤0.0004	≤0.0001	≤0.0002	≤0.0003	≤0.0001

Readings collected on 16th December 2010 at an atmospheric pressure of 1014mbar.

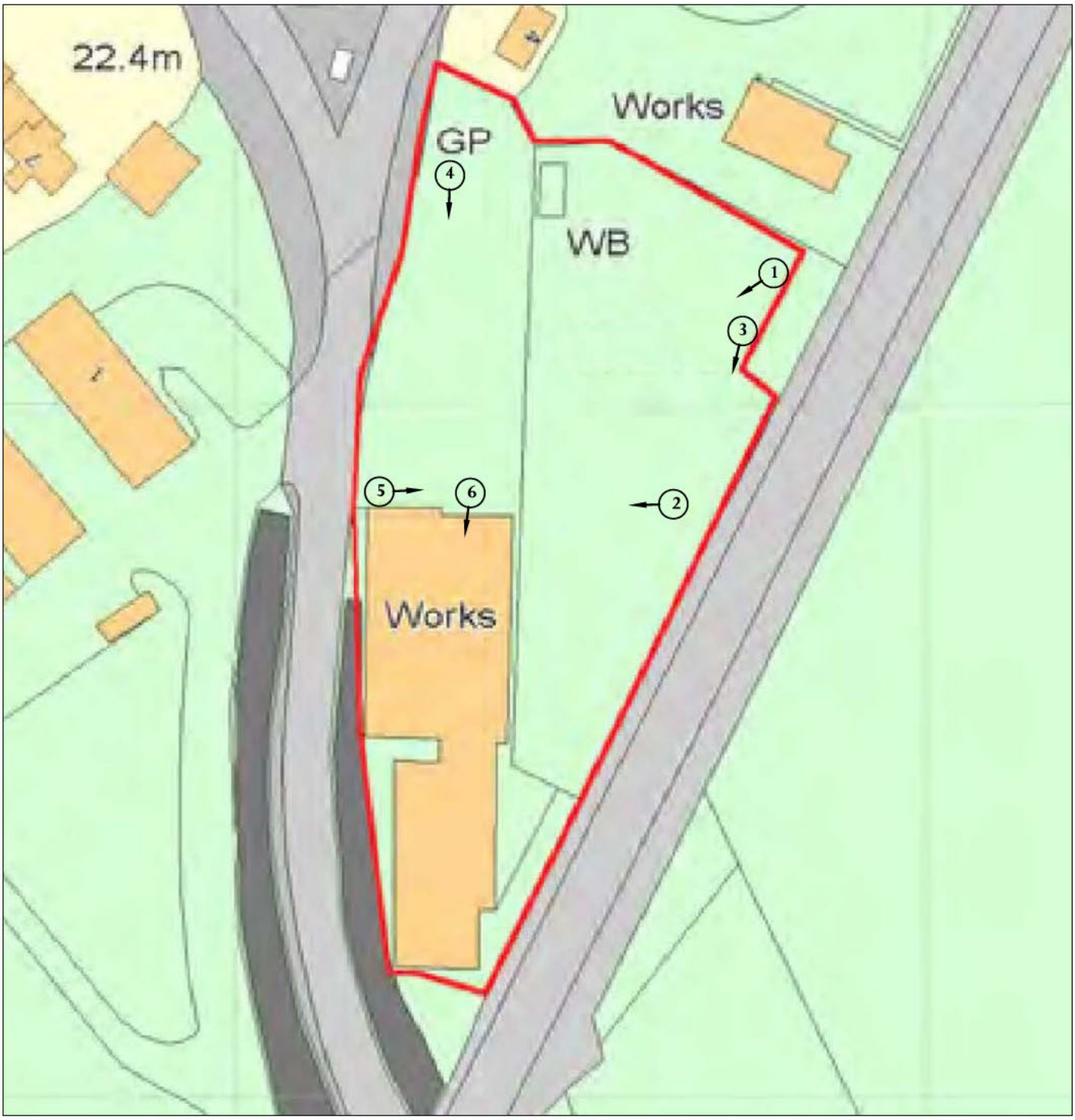
Notes

CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
VOC	Volatile Organic Compounds
-	Not calculable

APPENDICES

APPENDIX A

Selected Site Photographs & Photograph Location Plan



Key:

1 — Approximate photograph location and direction

eps

Appendix B: Photograph Location Plan

Project:	Go Cold Ltd, Old Station Yard, Meldreth, Royston, SG8 6JR
Client:	GoCold Pension Fund C/O GoCold Ltd

Scale:	Not to scale		
Drawn By:	TJ	Approved By:	GL
Job No:	UK09.0787		
Dwg No:	GoCold/Meldreth/0111/B		
Date:	10th January 2011		

Photo 1: View looking southwest from the north-eastern corner of the site	Photo 2: View looking west across the existing on-site building and the locations of WS1, TP1 and TP2.
	
Photo 3: View looking south from the north-eastern corner of the site	Photo 4: View looking south from the north-western corner of the site.
	
Photo 5: View looking east across the location of borehole WS1	Photo 6: View of trial pit TP1.
	

APPENDIX B

Proposed Development Plan

EXISTING COLD STORE.

EXISTING OFFICES

NEW COLD STORE

NEW SITE FENCE

CAR PARK

OFFICES

STORE

LORRY PARK

STATION ROAD

HIGH STREET

RESIDENCES

RESIDENCE

NEW PLANT ROOM

EXISTING PLANT ROOM

NEW ENLARGED SITE AREA.

RAILWAY

TRACKS

NEW BUILDINGS (BOLD SHADED)

PROPOSED NIGHTSTAND (1)

PROPOSED NIGHTSTAND (2)

PROPOSED NIGHTSTAND (3)

NOTE TRUCKS CAN ENTER & LEAVE THE SITE IN FORWARD GEAR

COMPLETE FABRICATIONS

Site: GOCOLD, THE OLD STATION YARD MELDRETH

Drawing no: 843-51

Title: SITE LAYOUT DIAGRAM [ACOUSTIC & TRAFFIC IMPACT]

Scale: 1:400 Drawn: RG Date: JULY '09

Original drawing size: A2

CHURCH FARMHOUSE
HASLINGFIELD ROAD
BARRINGTON

TEL: 01223 477578
FAX: 01223 510426
CAMBS CB2 5RG

APPENDIX C

Site Specific Trial Pit & Borehole Logs

TRIAL PIT LOG

CLIENT: Complete Fabrications Architectural Design and Construction

PROJECT: UK09.0788

DATE: 2nd September 2010

BOREHOLE N°: TP1 | HOLE SIZE: 600mm bucket | GROUND LVL (mAOD):

EQUIPMENT & METHODS: Excavated by JCB

DESCRIPTION	LEGEND	DEPTH (mbgl)	REDUCED LEVEL (mAOD)	SAMPLE/TESTS				Notes
				DEPTH (mbgl)	SAMPLE TYPE	SAMPLE N°	TEST	
Concrete Slab		0.1						
Dark brown, sandy gravelly silty Made Ground containing some fragments of ash and clinker		0.65		0.5-0.9	Bulk			
Light brown silty chalk rubble Made Ground with a silty/fine sandy matrix		1.1						
Brown fine to medium sandy Clay with rare flint gravel		2.5		2.0-2.5	Bulk			

REMARKS:

LOGGED BY: TJ

NOT TO SCALE

PAGE:

TRIAL PIT LOG

CLIENT: Complete Fabrications Architectural Design and Construction

PROJECT: UK09.0788

DATE: 2nd September 2010

BOREHOLE N°: TP2 | HOLE SIZE: 600mm bucket | GROUND LVL (mAOD):

EQUIPMENT & METHODS: Excavated by JCB

DESCRIPTION	LEGEND	DEPTH (mbgl)	REDUCED LEVEL (mAOD)	SAMPLE/TESTS				Notes
				DEPTH (mbgl)	SAMPLE TYPE	SAMPLE N°	TEST	
Concrete Slab		0.1						
Made Ground comprising layer of dark brown / black silt overlying grey brown chalky aggregate		0.3						
Light brown sandy silty clay / clayey silt with minor flint gravels - Made Ground		1.0		0.5-1.0	Bulk			

REMARKS:

LOGGED BY: TJ

NOT TO SCALE

PAGE:

Soil Property Testing Ltd.

Telephone : Huntingdon (01480) 455579 Fax : (01480) 453619

BOREHOLE LOG

Borehole WS1

Sheet 1 of 1

Method	Date	Site
Windowless Sampling	20/07/09 - 20/07/09	Go Cold, MELDRETH

Dia mm	Coord	Ground Level m O.D.	Client
115			Charles Tallack Engineering Consultancy

Soil Samples/Tests		Casing [Water] Depths m	Field Records	Legend	Depth m.	Description of Strata (thickness in m.) [reduced level in m.]
Type/Test	Depth m.					
U1 (85%)	0.10 - 1.00	1.00			0.10	CONCRETE (0.10)
						Black cinder and coal fragments of coarse angular gravel size to fine sand with occasional brown chert (MADE GROUND) (0.58)
					0.68	
U2 (85%)	1.00 - 2.00	1.00				Firm greyish brown marly CHALK with occasional brick fragments of fine to coarse gravel size and rare sandstone cobbles (MADE GROUND) (0.62)
					1.30	
						Soft becoming firm greyish brown marly CHALK with occasional sub rounded chalk fragments of fine to medium gravel size and rare black angular flint (LOWER CHALK) (0.70)
U3 (90%)	2.00 - 3.00	1.00			2.00	
S1 (12)	2.15 - 2.45	1.00				Firm very pale brown and yellowish brown marly CHALK (LOWER CHALK) (0.40)
					2.40	
						Stiff becoming very stiff white marly CHALK with occasional yellow staining (LOWER CHALK) (0.60)
			STRIKE at 3.00m seepage		3.00	
S2 (50)	3.15 - 3.45	1.00 [3.00]				SAMPLING COMPLETED AT 3.0m BGL - SPT TO 3.45m BGL

Remarks

Water level at start of windowless sampling: DRY
Water level at end of windowless sampling: 3.00m
Water level when casing removed: 3.00m
(n%) equals percentage of sample recovered in a 1.00m plastic liner tube.
Standpipe installed to 3.00m.

Logged by	Scale	End Casing Depth m.	Job No.
Tim F	1:25	1.00	S22370

Sample/Test key:

U()	U100 Sample (blows)	S ()	Standard (N value)
D	Disturbed sample	C ()	Cone (N value)
B	Bulk sample	*	Blows and penetration when 300mm not achieved
W	Water sample		
-	Progress & Day Groundwater level		

Penetration Tests

Site: Go Cold Meldreth

WINDOW SAMPLE
WS101

Date: 16/12/10 to 16/12/10

Hole Size: mm dia to 4.00m

Ground Level:

Samples and in-situ Tests			(Date) Water	Inst.	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result						
0.10-1.00	U1		1.00		MADE GROUND: Tarmacadam (diamond cored).		0.10	
					MADE GROUND: Brown with some grey slightly silty gravelly fine to coarse SAND. Gravel consists of fine to coarse angular flint with rare brick (hardcore).		0.45	
					MADE GROUND: Firm grey slightly sandy CLAY with occasional pockets of white chalk.		0.70	
					MADE GROUND: Black fine to coarse SAND with ash and clinker.		0.80	
					MADE GROUND: Firm grey and white CLAY with pockets of chalk.		0.90	
1.00-2.00	U2		1.00		Brown clayey fine and medium SAND.		1.40	
					Greyish white with some orange brown staining CHALK.			
2.00-3.00	U3		1.00					
			C 1		Light grey CHALK.		2.30	
3.00-4.00	U4		1.00 1					
							4.00	

REMARKS
1. 50mm diameter UPVC gas/water monitoring standpipe installed to 4.00m depth.
2. Gas valve and steel security cover fitted to standpipe.

Project No
UK10.962

Scale 1:25

Page 1/1

KEY
D - Disturbed Sample
B - Bulk Sample
U - Undisturbed Sample
W - Water Sample
▽ Water Strike
▼ Depth to Water on completion
Mx - Mexe Probe
Mc - Mackintosh Probe
V - Vane Shear Test Cohesion ( ) kPa
P( ) - Hand Penetrometer Cohesion ( ) kPa
▼s Standpipe Level

Groundwater Strikes

No	Depth m Struck	Rose to	Rate	Cased	Sealed
1	3.00	2.60	Steady	1.00	

Groundwater Observations

Date	Depth m Hole	Casing	Water

Site: Go Cold Meldreth

WINDOW SAMPLE
WS102

Date: 16/12/10 to 16/12/10

Hole Size: mm dia to 4.00m

Ground Level:

Samples and in-situ Tests			(Date) Water	Inst.	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result						
0.10-1.00	U1		1.00		MADE GROUND: Tarmacadam (diamond cored).		0.08	
					MADE GROUND: Grey and dark grey slightly silty gravelly fine to coarse SAND. Gravel consists of fine to coarse angular flint with rare brick and pockets of ash (hardcore).		0.50	
					MADE GROUND: Firm grey slightly sandy CLAY with occasional pockets of white chalk.		0.65	
					MADE GROUND: Yellow angular COBBLE size fragment of brick.		0.80	
1.00-2.00	U2		1.00		Brown silty fine and medium SAND with rare fine and medium sub-angular flint gravel.		1.50	
					Greyish white with some orange brown staining CHALK.			
2.00-3.00	U3		1.00					
3.00-4.00	U4		1.00		Light grey CHALK.		3.00	
							4.00	

REMARKS
1. 50mm diameter UPVC gas/water monitoring standpipe installed to 4.00m depth.
2. Gas valve and steel security cover fitted to standpipe.

Project No UK10.962

Scale 1:25

Page 1/1

KEY
D - Disturbed Sample
B - Bulk Sample
U - Undisturbed Sample
W - Water Sample
▽ Water Strike
▼ Depth to Water on completion
Mx - Mexe Probe
Mc - Mackintosh Probe
V - Vane Shear Test Cohesion ( ) kPa
P( ) - Hand Penetrometer Cohesion ( ) kPa
▼s Standpipe Level

Groundwater Strikes						Groundwater Observations			
	Depth m						Depth m		
No	Struck	Rose to	Rate	Cased	Sealed	Date	Hole	Casing	Water
1	3.00	1.90	Steady	1.00					

Site: Go Cold Meldreth

WINDOW SAMPLE WS103

Date: 16/12/10 to 16/12/10

Hole Size: mm dia to 4.00m

Ground Level:

Samples and in-situ Tests			(Date) Water	Inst.	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result						
					MADE GROUND: Concrete (diamond cored).		0.16	
0.16-1.00	U1		1.00		MADE GROUND: Grey very sandy fine to coarse angular to rounded flint GRAVEL (hardcore).		0.35	
					MADE GROUND: Firm grey with some brown very sandy CLAY with rare fine to coarse angular gravel size fragments of brick, ash and clinker. Rare fine rootlets.		0.75	
1.00-2.00	U2		1.00		Soft greyish brown very sandy CLAY with rare fine rootlets.		1.20	
			C 1		Greyish white with some orange brown staining CHALK.		1.70	
2.00-3.00	U3		1.00 1		Light grey CHALK.			
3.00-4.00	U4		1.00				4.00	

REMARKS
1. 50mm diameter UPVC gas/water monitoring standpipe installed to 4.00m depth.
2. Gas valve and steel security cover fitted to standpipe.

Project No UK10.962

Scale 1:25 | Page 1/1

KEY
D - Disturbed Sample
B - Bulk Sample
U - Undisturbed Sample
W - Water Sample
▽ Water Strike
▼ Depth to Water on completion
Mx - Mexe Probe
Mc - Mackintosh Probe
V - Vane Shear Test Cohesion ( ) kPa
P( ) - Hand Penetrometer Cohesion ( ) kPa
▼s Standpipe Level

Groundwater Strikes

No	Depth m Struck	Rose to	Rate	Cased	Sealed
1	2.00	1.41	Steady	1.00	

Groundwater Observations

Date	Depth m Hole	Casing	Water

Site: Go Cold Meldreth

WINDOW SAMPLE
WS104

Date: 16/12/10 to 16/12/10

Hole Size: mm dia to 4.00m

Ground Level:

Samples and in-situ Tests			(Date) Water	Inst.	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result						
					MADE GROUND: Concrete (diamond cored).		0.22	
0.22-1.00	U1		1.00		MADE GROUND: Grey very sandy fine to coarse angular to rounded flint GRAVEL (hardcore).		0.30	
					MADE GROUND: Firm grey with some brown very sandy CLAY with rare fine to coarse angular gravel size fragments of brick, ash and clinker. Rare fine rootlets.		0.70	
					POSSIBLE MADE GROUND: Greyish white with some orange brown staining CHALK.			
1.00-2.00	U2		1.00					
							1.70	
					Firm brown slightly sandy CLAY.			
2.00-3.00	U3		1.00				2.00	
					Firm grey slightly sandy CLAY.			
							2.40	
					Light grey CHALK.			
				1				
3.00-4.00	U4		1.00	1				
				C			4.00	

REMARKS
1. 50mm diameter UPVC gas/water monitoring standpipe installed to 4.00m depth.
2. Gas valve and steel security cover fitted to standpipe.

Project No
UK10.962

Scale 1:25

Page 1/1

KEY
D - Disturbed Sample
B - Bulk Sample
U - Undisturbed Sample
W - Water Sample
▽ Water Strike
▼ Depth to Water on completion
Mx - Mexe Probe
Mc - Mackintosh Probe
V - Vane Shear Test Cohesion ( ) kPa
P( ) - Hand Penetrometer Cohesion ( ) kPa
▼s Standpipe Level

Groundwater Strikes

No	Depth m Struck	Rose to	Rate	Cased	Sealed
1	3.00	2.80	Steady	1.00	

Groundwater Observations

Date	Depth m Hole	Casing	Water

APPENDIX D

Formal Laboratory Reports

Environmental Protection Strategies Ltd
Unit 7B Caxton House
Broad Street
Cambourne, Cambs
CB23 6JN

FAO T Jones / S Smith

LABORATORY TEST REPORT

Results of analysis of 4 samples
received 03 September 2010

UK09.0788

Chemtest

Report Date
13 September 2010

Login Batch No					**120766**		
Chemtest LIMS ID					AF26521	AF26522	AF26523
Sample ID					TP1	TP1	TP2
Sample No							
Sampling Date					2/9/2010	2/9/2010	2/9/2010
Depth					0.5m - 1m	2m - 2.5m	0.5m - 1m
Matrix					*SOIL*	*SOIL*	*SOIL*
SOP↓	Determinand↓	CAS No↓	Units↓	*			
2490	Chromium (hexavalent)	18540299	mg kg-¹	N	< 0.5		< 0.5
2450	Arsenic	7440382	mg kg-¹	M	45		18
	Cadmium	7440439	mg kg-¹	M	0.11		0.15
	Chromium	7440473	mg kg-¹	M	8.2		15
	Copper	7440508	mg kg-¹	M	8.0		21
	Mercury	7439976	mg kg-¹	M	0.11		<0.10
	Nickel	7440020	mg kg-¹	M	15		21
	Lead	7439921	mg kg-¹	M	12		16
	Selenium	7782492	mg kg-¹	M	<0.20		<0.20
	Zinc	7440666	mg kg-¹	M	16		52
2676	TPH >C6-C8		mg kg-¹	U	< 0.1	< 0.1	< 0.1
	TPH >C8-C10		mg kg-¹	M	< 0.1	< 0.1	< 0.1
	TPH >C10-C12		mg kg-¹	M	< 0.1	< 0.1	< 0.1
	TPH >C12-C16		mg kg-¹	M	< 0.1	< 0.1	< 0.1
	TPH >C16-C21		mg kg-¹	M	< 0.1	< 0.1	< 0.1
	TPH >C21-C25		mg kg-¹	M	< 0.1	< 0.1	< 0.1
	TPH >C25-C35		mg kg-¹	M	< 0.1	< 0.1	< 0.1
	TPH >C35-C40		mg kg-¹	M	< 0.1	< 0.1	< 0.1
	Total Petroleum Hydrocarbons		mg kg-¹	U	< 10	< 10	< 10
2700	Naphthalene	91203	mg kg-¹	M	< 0.1		0.12
	Acenaphthylene	208968	mg kg-¹	M	< 0.1		< 0.1
	Acenaphthene	83329	mg kg-¹	M	< 0.1		< 0.1
	Fluorene	86737	mg kg-¹	M	< 0.1		< 0.1
	Phenanthrene	85018	mg kg-¹	M	0.14		0.12
	Anthracene	120127	mg kg-¹	M	< 0.1		< 0.1
	Fluoranthene	206440	mg kg-¹	M	0.11		< 0.1
	Pyrene	129000	mg kg-¹	M	< 0.1		< 0.1
	Benzo[a]anthracene	56553	mg kg-¹	M	< 0.1		0.18
	Chrysene	218019	mg kg-¹	M	< 0.1		0.17

All tests undertaken between 06-Sep-2010 and 13-Sep-2010

* Accreditation status

This report should be interpreted in conjunction with the notes on the accompanying cover page

Environmental Protection Strategies Ltd
Unit 7B Caxton House
Broad Street
Cambourne, Cambs
CB23 6JN

FAO T Jones / S Smith

LABORATORY TEST REPORT

Results of analysis of 4 samples
received 03 September 2010

UK09.0788

Chemtest

Report Date
13 September 2010

					120766		
					AF26521	AF26522	AF26523
					TP1	TP1	TP2
					2/9/2010	2/9/2010	2/9/2010
					0.5m - 1m	2m - 2.5m	0.5m - 1m
					SOIL	*SOIL*	*SOIL*
2700	Benzo[b]fluoranthene	205992	mg kg-¹	M	0.17		0.11
	Benzo[k]fluoranthene	207089	mg kg-¹	M	< 0.1		< 0.1
	Benzo[a]pyrene	50328	mg kg-¹	M	0.13		< 0.1
	Dibenzo[a,h]anthracene	53703	mg kg-¹	M	0.25		0.36
	Indeno[1,2,3-cd]pyrene	193395	mg kg-¹	M	< 0.1		0.2
	Benzo[g,h,i]perylene	191242	mg kg-¹	M	< 0.1		< 0.1
	Total (of 16) PAHs		mg kg-¹	M	< 2		< 2
2760	Methyl tert-butyl ether	1634044	µg kg-¹	N	<1.0	<1.0	<1.0
	Dichlorodifluoromethane	75718	µg kg-¹	U	<1.0	<1.0	<1.0
	Chloromethane	74873	µg kg-¹	U	<1.0	<1.0	<1.0
	Vinyl chloride	75014	µg kg-¹	M	<1.0	<1.0	<1.0
	Bromomethane	74839	µg kg-¹	U	<20	<20	<20
	Chloroethane	75003	µg kg-¹	U	<2.0	<2.0	<2.0
	Trichlorofluoromethane	75694	µg kg-¹	U	<1.0	<1.0	<1.0
	1,1-Dichloroethene	75354	µg kg-¹	U	<1.0	<1.0	<1.0
	Dichloromethane	75092	µg kg-¹	U	ne	ne	ne
	trans-1,2-Dichloroethene	156605	µg kg-¹	M	<1.0	<1.0	<1.0
	1,1-Dichloroethane	75343	µg kg-¹	M	<1.0	<1.0	<1.0
	cis-1,2-Dichloroethene	156592	µg kg-¹	M	<1.0	<1.0	<1.0
	Bromochloromethane	74975	µg kg-¹	U	<1.0	<1.0	<1.0
	Trichloromethane	67663	µg kg-¹	M	<1.0	<1.0	<1.0
	1,1,1-Trichloroethane	71556	µg kg-¹	M	<1.0	<1.0	<1.0
	Tetrachloromethane	56235	µg kg-¹	M	<1.0	<1.0	<1.0
	1,1-Dichloropropene	563586	µg kg-¹	U	<1.0	<1.0	<1.0
	Benzene	71432	µg kg-¹	M	<1.0	<1.0	<1.0
	1,2-Dichloroethane	107062	µg kg-¹	M	<2.0	<2.0	<2.0
	Trichloroethene	79016	µg kg-¹	U	<1.0	<1.0	<1.0
	1,2-Dichloropropane	78875	µg kg-¹	U	<1.0	<1.0	<1.0
	Dibromomethane	74953	µg kg-¹	U	<10	<10	<10
	Bromodichloromethane	75274	µg kg-¹	U	<5.0	<5.0	<5.0

All tests undertaken between 06-Sep-2010 and 13-Sep-2010

* Accreditation status

This report should be interpreted in conjunction with the notes on the accompanying cover page

Environmental Protection Strategies Ltd
Unit 7B Caxton House
Broad Street
Cambourne, Cambs
CB23 6JN

FAO T Jones / S Smith

LABORATORY TEST REPORT

Results of analysis of 4 samples
received 03 September 2010

UK09.0788

Chemtest

Report Date
13 September 2010

					120766		
					AF26521	AF26522	AF26523
					TP1	TP1	TP2
					2/9/2010	2/9/2010	2/9/2010
					0.5m - 1m	2m - 2.5m	0.5m - 1m
					SOIL	*SOIL*	*SOIL*
2760	cis-1,3-Dichloropropene	10061015	µg kg-¹	U	<10	<10	<10
	Toluene	108883	µg kg-¹	M	<1.0	<1.0	<1.0
	trans-1,3-Dichloropropene	10061026	µg kg-¹	U	<10	<10	<10
	1,1,2-Trichloroethane	79005	µg kg-¹	M	<10	<10	<10
	Tetrachloroethene	127184	µg kg-¹	M	<1.0	<1.0	<1.0
	1,3-Dichloropropane	142289	µg kg-¹	U	<2.0	<2.0	<2.0
	Dibromochloromethane	124481	µg kg-¹	U	<10	<10	<10
	1,2-Dibromoethane	106934	µg kg-¹	U	<5.0	<5.0	<5.0
	Chlorobenzene	108907	µg kg-¹	M	<1.0	<1.0	<1.0
	1,1,1,2-Tetrachloroethane	630206	µg kg-¹	M	<2.0	<2.0	<2.0
	Ethylbenzene	100414	µg kg-¹	M	<1.0	<1.0	<1.0
	m- & p-Xylene	1330207	µg kg-¹	M	<1.0	<1.0	<1.0
	o-Xylene	95476	µg kg-¹	M	<1.0	<1.0	<1.0
	Styrene	100425	µg kg-¹	U	<1.0	<1.0	<1.0
	Tribromomethane	75252	µg kg-¹	U	<10	<10	<10
	Isopropy benzene	98828	µg kg-¹	U	<1.0	<1.0	<1.0
	Bromobenzene	108861	µg kg-¹	U	<1.0	<1.0	<1.0
	1,1,2,2-Tetrachloroethane	79345	µg kg-¹	N	ne	ne	ne
	1,2,3-Trichloropropane	96184	µg kg-¹	U	<50	<50	<50
	n-Propylbenzene	103651	µg kg-¹	U	<1.0	<1.0	<1.0
	2-Chlorotoluene	95498	µg kg-¹	U	<1.0	<1.0	<1.0
	1,2,4-Trimethylbenzene	95636	µg kg-¹	U	<1.0	<1.0	<1.0
	4-Chlorotoluene	106434	µg kg-¹	U	<1.0	<1.0	<1.0
	tert-Butylbenzene	98066	µg kg-¹	U	<1.0	<1.0	<1.0
	1,3,5-Trimethylbenzene	108678	µg kg-¹	U	<1.0	<1.0	<1.0
	sec-Butylbenzene	135988	µg kg-¹	U	<1.0	<1.0	<1.0
	1,3-Dichlorobenzene	541731	µg kg-¹	U	<1.0	<1.0	<1.0
	4-Isopropyltoluene	99876	µg kg-¹	U	<1.0	<1.0	<1.0
	1,4-Dichlorobenzene	106467	µg kg-¹	U	<1.0	<1.0	<1.0
	n-Butylbenzene	104518	µg kg-¹	U	<1.0	<1.0	<1.0

All tests undertaken between 06-Sep-2010 and 13-Sep-2010

* Accreditation status

This report should be interpreted in conjunction with the notes on the accompanying cover page

Environmental Protection Strategies Ltd
Unit 7B Caxton House
Broad Street
Cambourne, Cambs
CB23 6JN

FAO T Jones / S Smith

LABORATORY TEST REPORT

Results of analysis of 4 samples
received 03 September 2010

UK09.0788

Chemtest

Report Date
13 September 2010

					120766		
					AF26521	AF26522	AF26523
					TP1	TP1	TP2
					2/9/2010	2/9/2010	2/9/2010
					0.5m - 1m	2m - 2.5m	0.5m - 1m
					SOIL	*SOIL*	*SOIL*
2760	1,2-Dichlorobenzene	95501	µg kg-¹	U	<1.0	<1.0	<1.0
	1,2-Dibromo-3-chloropropane	96128	µg kg-¹	U	<50	<50	<50
	1,2,4-Trichlorobenzene	120821	µg kg-¹	U	<1.0	<1.0	<1.0
	Hexachlorobutadiene	87683	µg kg-¹	U	<1.0	<1.0	<1.0
	1,2,3-Trichlorobenzene	87616	µg kg-¹		<2.0	<2.0	<2.0
2030	Moisture		%	n/a	13.3	20.4	17.7
	Stones content (>50mm)		%	n/a	<0.02	<0.02	<0.02
2140	Soil colour			n/a	beige	brown	brown
	Soil texture			n/a	sand	clay	clay
	Other material			n/a	stones	stones	stones

All tests undertaken between 06-Sep-2010 and 13-Sep-2010

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Environmental Protection Strategies Ltd
Unit 7B Caxton House
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CB23 6JN

FAO T Jones / S Smith

LABORATORY TEST REPORT

Results of analysis of 4 sample
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Chemtest

Report Date
13 September 2010

Login Batch No					**120766**
Chemtest LIMS ID					AF26524
Sample ID					WS1
Sample No					
Sampling Date					2/9/2010
Depth					
Matrix					*WATER*
SOP↓	Determinand↓	CAS No↓	Units↓	*	
1676	TPH >C6-C8		µg l-¹	U	<0.10
	TPH >C8-C10		µg l-¹	U	<0.10
	TPH >C10-C12		µg l-¹	U	<0.10
	TPH >C12-C16		µg l-¹	U	<0.10
	TPH >C16-C21		µg l-¹	U	<0.10
	TPH >C21-C25		µg l-¹	U	<0.10
	TPH >C25-C35		µg l-¹	U	<0.10
	TPH >C35-C40		µg l-¹	U	<0.10
	Total Petroleum Hydrocarbons		µg l-¹	U	<10
1760	Methyl tert-butylether	1634044	µg l-¹	N	<1.0
	Dichlorodifluoromethane	75718	µg l-¹	U	<1.0
	Chloromethane	74873	µg l-¹	U	<1.0
	Vinyl chloride	75014	µg l-¹	U	<1.0
	Bromomethane	74839	µg l-¹	U	<20
	Chloroethane	75003	µg l-¹	U	<2.0
	Trichlorofluoromethane	75694	µg l-¹	U	<1.0
	1,1-Dichloroethene	75354	µg l-¹	U	<1.0
	Dichloromethane	75092	µg l-¹	N	ne
	trans-1,2-Dichloroethene	156605	µg l-¹	U	<1.0
	1,1-Dichloroethane	75343	µg l-¹	U	<1.0
	cis-1,2-Dichloroethene	156592	µg l-¹	U	<1.0
	Bromochloromethane	74975	µg l-¹	U	<1.0
	Trichloromethane	67663	µg l-¹	U	<1.0
	1,1,1-Trichloroethane	71556	µg l-¹	U	<1.0
	Tetrachloromethane	56235	µg l-¹	U	<1.0
	1,1-Dichloropropene	563586	µg l-¹	U	<1.0
	Benzene	71432	µg l-¹	U	<1.0
	1,2-Dichloroethane	107062	µg l-¹	U	<2.0
	Trichloroethene	79016	µg l-¹	N	<1.0

All tests undertaken between 06-Sep-2010 and 13-Sep-2010

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Environmental Protection Strategies Ltd
Unit 7B Caxton House
Broad Street
Cambourne, Cambs
CB23 6JN

LABORATORY TEST REPORT

Results of analysis of 4 sample
received 03 September 2010

Report Date
13 September 2010

FAO T Jones / S Smith

UK09.0788

					120766
					AF26524
					WS1
					2/9/2010
					WATER
1760	1,2-Dichloropropane	78875	µg l-¹	U	<1.0
	Dibromomethane	74953	µg l-¹	U	<10
	Bromodichloromethane	75274	µg l-¹	U	<5.0
	cis-1,3-Dichloropropene	10061015	µg l-¹	U	<10
	Toluene	108883	µg l-¹	U	<1.0
	trans-1,3-Dichloropropene	10061026	µg l-¹	U	<10
	1,1,2-Trichloroethane	79005	µg l-¹	U	<10
	Tetrachloroethene	127184	µg l-¹	U	<1.0
	1,3-Dichloropropane	142289	µg l-¹	U	<2.0
	Dibromochloromethane	124481	µg l-¹	U	<10
	1,2-Dibromoethane	106934	µg l-¹	U	<5.0
	Chlorobenzene	108907	µg l-¹	U	<1.0
	1,1,1,2-Tetrachloroethane	630206	µg l-¹	U	<2.0
	Ethylbenzene	100414	µg l-¹	U	<1.0
	m- & p-Xylene	1330207	µg l-¹	U	<1.0
	o-Xylene	95476	µg l-¹	U	<1.0
	Styrene	100425	µg l-¹	U	<1.0
	Tribromomethane	75252	µg l-¹	U	<10
	Isopropy benzene	98828	µg l-¹	U	<1.0
	Bromobenzene	108861	µg l-¹	U	<1.0
	1,1,2,2-Tetrachloroethane	79345	µg l-¹	N	ne
	1,2,3-Trichloropropane	96184	µg l-¹	U	<50
	n-Propylbenzene	103651	µg l-¹	U	<1.0
	2-Chlorotoluene	95498	µg l-¹	U	<1.0
	1,2,4-Trimethylbenzene	95636	µg l-¹	U	<1.0
	4-Chlorotoluene	106434	µg l-¹	U	<1.0
	tert-Butylbenzene	98066	µg l-¹	U	<1.0
	1,3,5-Trimethylbenzene	108678	µg l-¹	U	<1.0
	sec-Butylbenzene	135988	µg l-¹	U	<1.0
	1,3-Dichlorobenzene	541731	µg l-¹	U	<1.0

All tests undertaken between 06-Sep-2010 and 13-Sep-2010

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Report Date
13 September 2010

FAO T Jones / S Smith

					120766
					AF26524
					WS1
					2/9/2010
					WATER
1760	4-Isopropyltoluene	99876	µg l-¹	U	<1.0
	1,4-Dichlorobenzene	106467	µg l-¹	U	<1.0
	n-Butylbenzene	104518	µg l-¹	U	<1.0
	1,2-Dichlorobenzene	95501	µg l-¹	U	<1.0
	1,2-Dibromo-3-chloropropane	96128	µg l-¹	U	<50
	1,2,4-Trichlorobenzene	120821	µg l-¹	U	<1.0
	Hexachlorobutadiene	87683	µg l-¹	U	<1.0
	1,2,3-Trichlorobenzene	87616	µg l-¹	U	<2.0

All tests undertaken between 06-Sep-2010 and 13-Sep-2010

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Environmental Protection Strategies Ltd
Unit 7B Caxton House
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CB23 6JN

LABORATORY TEST REPORT

Results of analysis of 8 samples
received 21 December 2010

UK09.0788

Chemtest

Report Date
07 January 2011

FAO T.Jones/S Smith

Login Batch No					**133283**			
Chemtest LIMS ID					AF60051	AF60052	AF60053	AF60054
Sample ID					WS101	WS101	WS102	WS103
Sample No								
Sampling Date					16/12/2010	16/12/2010	16/12/2010	16/12/2010
Depth					0.4m - 0.9m	2m - 2.5m	2m - 2.5m	0.3m - 0.8m
Matrix					*SOIL*	*SOIL*	*SOIL*	*SOIL*
SOP↓	Determinand↓	CAS No↓	Units↓	*				
2490	Chromium (hexavalent)	18540299	mg kg-¹	N	<0.5			<0.5
2450	Arsenic	7440382	mg kg-¹	M	13			5.8
	Cadmium	7440439	mg kg-¹	M	<0.10			<0.10
	Chromium	7440473	mg kg-¹	M	7.3			6.6
	Copper	7440508	mg kg-¹	M	150			8.7
	Mercury	7439976	mg kg-¹	M	0.12			<0.10
	Nickel	7440020	mg kg-¹	M	9.0			8.2
	Lead	7439921	mg kg-¹	M	93			24
	Selenium	7782492	mg kg-¹	M	<0.20			<0.20
	Zinc	7440666	mg kg-¹	M	23			19
2676	TPH >C5-C6		mg kg-¹	U	< 0.1	< 0.1	< 0.1	< 0.1
	TPH >C6-C7		mg kg-¹	U	< 0.1	< 0.1	< 0.1	< 0.1
	TPH >C7-C8		mg kg-¹	M	< 0.1	< 0.1	< 0.1	< 0.1
	TPH >C8-C10		mg kg-¹	M	< 0.1	< 0.1	< 0.1	< 0.1
	TPH >C10-C12		mg kg-¹	M	< 0.1	< 0.1	< 0.1	< 0.1
	TPH >C12-C16		mg kg-¹	M	1.8	< 0.1	< 0.1	< 0.1
	TPH >C16-C21		mg kg-¹	M	5.0	< 0.1	< 0.1	2.0
	TPH >C21-C35		mg kg-¹	M	7.7	< 0.1	< 0.1	7.5
	Total Petroleum Hydrocarbons		mg kg-¹	U	14	< 10	< 10	< 10
2700	Naphthalene	91203	mg kg-¹	M	0.32			< 0.1
	Acenaphthylene	208968	mg kg-¹	M	< 0.1			0.18
	Acenaphthene	83329	mg kg-¹	M	0.23			< 0.1
	Fluorene	86737	mg kg-¹	M	< 0.1			0.2
	Phenanthrene	85018	mg kg-¹	M	2.2			0.21
	Anthracene	120127	mg kg-¹	M	0.41			< 0.1
	Fluoranthene	206440	mg kg-¹	M	3.4			0.45
	Pyrene	129000	mg kg-¹	M	3			0.34
	Benzo[a]anthracene	56553	mg kg-¹	M	1.7			0.41
	Chrysene	218019	mg kg-¹	M	1.9			0.32

All tests undertaken between 21-Dec-2010 and 7-Jan-2011

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Environmental Protection Strategies Ltd
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LABORATORY TEST REPORT

Results of analysis of 8 samples
received 21 December 2010

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Report Date
07 January 2011

FAO T.Jones/S Smith

					133283			
					AF60051	AF60052	AF60053	AF60054
					WS101	WS101	WS102	WS103
					16/12/2010	16/12/2010	16/12/2010	16/12/2010
					0.4m - 0.9m	2m - 2.5m	2m - 2.5m	0.3m - 0.8m
					SOIL	*SOIL*	*SOIL*	*SOIL*
2700	Benzo[b]fluoranthene	205992	mg kg-¹	M	2.3			0.42
	Benzo[k]fluoranthene	207089	mg kg-¹	M	0.98			0.18
	Benzo[a]pyrene	50328	mg kg-¹	M	1.3			0.56
	Dibenzo[a,h]anthracene	53703	mg kg-¹	M	0.19			< 0.1
	Indeno[1,2,3-cd]pyrene	193395	mg kg-¹	M	1.2			0.18
	Benzo[g,h,i]perylene	191242	mg kg-¹	M	1.1			0.25
	Total (of 16) PAHs		mg kg-¹	M	20			3.7
2030	Moisture		%	n/a	15.2	15.1	14.8	21
	Stones content (>50mm)		%	n/a	<0.02	<0.02	<0.02	<0.02
2140	Soil colour			n/a	Brown	Brown	Brown	Brown
	Soil texture			n/a	Sand	Sand	Sand	Sand
	Other material			n/a	Stones	Stones	Stones	Stones

All tests undertaken between 21-Dec-2010 and 7-Jan-2011

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Environmental Protection Strategies Ltd
Unit 7B Caxton House
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FAO T.Jones/S Smith

LABORATORY TEST REPORT

Results of analysis of 8 samples
received 21 December 2010

UK09.0788

Chemtest

Report Date
07 January 2011

Login Batch No					**133283**			
Chemtest LIMS ID					AF60055	AF60056	AF60057	AF60058
Sample ID					WS101	WS102	WS103	WS104
Sample No								
Sampling Date					16/12/2010	16/12/2010	16/12/2010	16/12/2010
Depth								
Matrix					*WATER*	*WATER*	*WATER*	*WATER*
SOP↓	Determinand↓	CAS No↓	Units↓	*				
1675	TPH aliphatic >C5-C6		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aliphatic >C6-C8		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aliphatic >C8-C10		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aliphatic >C10-C12		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aliphatic >C12-C16		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aliphatic >C16-C21		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aliphatic >C21-C35		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aliphatic >C35-C44		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aromatic >C5-C7		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aromatic >C7-C8		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aromatic >C8-C10		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aromatic >C10-C12		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aromatic >C12-C16		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aromatic >C16-C21		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aromatic >C21-C35		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	TPH aromatic >C35-C44		µg l-¹	N	<0.1	<0.1	<0.1	<0.1
	Total Petroleum Hydrocarbons		µg l-¹	N	<10	<10	<10	<10
1700	Naphthalene	91203	µg l-¹	U		<0.1	<0.1	<0.1
	Acenaphthylene	208968	µg l-¹	U		<0.1	<0.1	<0.1
	Acenaphthene	83329	µg l-¹	U		<0.1	<0.1	<0.1
	Fluorene	86737	µg l-¹	U		<0.1	<0.1	<0.1
	Phenanthrene	85018	µg l-¹	U		<0.1	<0.1	<0.1
	Anthracene	120127	µg l-¹	U		<0.1	<0.1	<0.1
	Fluoranthene	206440	µg l-¹	U		<0.1	<0.1	<0.1
	Pyrene	129000	µg l-¹	U		<0.1	<0.1	<0.1
	Benzo[a]anthracene	56553	µg l-¹	U		<0.1	<0.1	<0.1
	Chrysene	218019	µg l-¹	U		<0.1	<0.1	<0.1
	Benzo[b]fluoranthene	205992	µg l-¹	U		<0.1	<0.1	<0.1
	Benzo[k]fluoranthene	207089	µg l-¹	U		<0.1	<0.1	<0.1

All tests undertaken between 21-Dec-2010 and 7-Jan-2011

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Unit 7B Caxton House
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Cambourne, Cambs
CB23 6JN

LABORATORY TEST REPORT

Results of analysis of 8 samples
received 21 December 2010

UK09.0788

Chemtest

Report Date
07 January 2011

FAO T.Jones/S Smith

					133283			
					AF60055	AF60056	AF60057	AF60058
					WS101	WS102	WS103	WS104
					16/12/2010	16/12/2010	16/12/2010	16/12/2010
					WATER	*WATER*	*WATER*	*WATER*
1700	Benzo[a]pyrene	50328	µg l-¹	U		<0.1	<0.1	<0.1
	Dibenzo[a,h]anthracene	53703	µg l-¹	U		<0.1	<0.1	<0.1
	Indeno[1,2,3-cd]pyrene	193395	µg l-¹	U		<0.1	<0.1	<0.1
	Benzo[g,h,i]perylene	191242	µg l-¹	U		<0.1	<0.1	<0.1
	Total (of 16) PAHs		µg l-¹	U		<2	<2	<2
1760	Methyl tert-butylether	1634044	µg l-¹	N	<1.0	<1.0	<1.0	<1.0
	Dichlorodifluoromethane	75718	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Chloromethane	74873	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Vinyl chloride	75014	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Bromomethane	74839	µg l-¹	U	<20	<20	<20	<20
	Chloroethane	75003	µg l-¹	U	<2.0	<2.0	<2.0	<2.0
	Trichlorofluoromethane	75694	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,1-Dichloroethene	75354	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Dichloromethane	75092	µg l-¹	N	ne	ne	ne	ne
	trans-1,2-Dichloroethene	156605	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,1-Dichloroethane	75343	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	cis-1,2-Dichloroethene	156592	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Bromochloromethane	74975	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Trichloromethane	67663	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,1,1-Trichloroethane	71556	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Tetrachloromethane	56235	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,1-Dichloropropene	563586	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Benzene	71432	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,2-Dichloroethane	107062	µg l-¹	U	<2.0	<2.0	<2.0	<2.0
	Trichloroethene	79016	µg l-¹	N	<1.0	<1.0	<1.0	<1.0
	1,2-Dichloropropane	78875	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Dibromomethane	74953	µg l-¹	U	<10	<10	<10	<10
	Bromodichloromethane	75274	µg l-¹	U	<5.0	<5.0	<5.0	<5.0
	cis-1,3-Dichloropropene	10061015	µg l-¹	U	<10	<10	<10	<10
	Toluene	108883	µg l-¹	U	<1.0	<1.0	<1.0	<1.0

All tests undertaken between 21-Dec-2010 and 7-Jan-2011

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CB23 6JN

LABORATORY TEST REPORT

Results of analysis of 8 samples
received 21 December 2010

UK09.0788

Chemtest

Report Date
07 January 2011

FAO T.Jones/S Smith

					133283			
					AF60055	AF60056	AF60057	AF60058
					WS101	WS102	WS103	WS104
					16/12/2010	16/12/2010	16/12/2010	16/12/2010
					WATER	*WATER*	*WATER*	*WATER*
1760	trans-1,3-Dichloropropene	10061026	µg l-¹	U	<10	<10	<10	<10
	1,1,2-Trichloroethane	79005	µg l-¹	U	<10	<10	<10	<10
	Tetrachloroethene	127184	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,3-Dichloropropane	142289	µg l-¹	U	<2.0	<2.0	<2.0	<2.0
	Dibromochloromethane	124481	µg l-¹	U	<10	<10	<10	<10
	1,2-Dibromoethane	106934	µg l-¹	U	<5.0	<5.0	<5.0	<5.0
	Chlorobenzene	108907	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,1,1,2-Tetrachloroethane	630206	µg l-¹	U	<2.0	<2.0	<2.0	<2.0
	Ethylbenzene	100414	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	m- & p-Xylene	1330207	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	o-Xylene	95476	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Styrene	100425	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Tribromomethane	75252	µg l-¹	U	<10	<10	<10	<10
	Isopropy benzene	98828	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	Bromobenzene	108861	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,2,3-Trichloropropane	96184	µg l-¹	U	<50	<50	<50	<50
	n-Propylbenzene	103651	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	2-Chlorotoluene	95498	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,2,4-Trimethylbenzene	95636	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	4-Chlorotoluene	106434	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	tert-Butylbenzene	98066	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,3,5-Trimethylbenzene	108678	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	sec-Butylbenzene	135988	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,3-Dichlorobenzene	541731	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	4-Isopropyltoluene	99876	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,4-Dichlorobenzene	106467	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	n-Butylbenzene	104518	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,2-Dichlorobenzene	95501	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,2-Dibromo-3-chloropropane	96128	µg l-¹	U	<50	<50	<50	<50
	1,2,4-Trichlorobenzene	120821	µg l-¹	U	<1.0	<1.0	<1.0	<1.0

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CB23 6JN

LABORATORY TEST REPORT

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received 21 December 2010

UK09.0788

Chemtest

Report Date
07 January 2011

FAO T.Jones/S Smith

					133283			
					AF60055	AF60056	AF60057	AF60058
					WS101	WS102	WS103	WS104
					16/12/2010	16/12/2010	16/12/2010	16/12/2010
					WATER	*WATER*	*WATER*	*WATER*
1760	Hexachlorobutadiene	87683	µg l-¹	U	<1.0	<1.0	<1.0	<1.0
	1,2,3-Trichlorobenzene	87616	µg l-¹	U	<2.0	<2.0	<2.0	<2.0
1790	Acenaphthene	83329	µg l-¹	N	<0.50			
	Acenaphthylene	208968	µg l-¹	N	<0.50			
	Anthracene	120127	µg l-¹	N	<0.50			
	Azobenzene	103333	µg l-¹	N	<0.50			
	Benzo[a]anthracene	56553	µg l-¹	N	<0.50			
	Benzo[a]pyrene	50328	µg l-¹	N	<0.50			
	Benzo[b]fluoranthene	205992	µg l-¹	N	<0.50			
	Benzo[g,h,i]perylene	191242	µg l-¹	N	<0.50			
	Benzo[k]fluoranthene	207089	µg l-¹	N	<0.50			
	bis(2-Chloroethoxy)methane	111911	µg l-¹	N	<0.50			
	bis(2-Chloroethyl)ether	111444	µg l-¹	N	<0.50			
	bis(2-Chloroisopropyl)ether	108601	µg l-¹	N	<0.50			
	bis(2-Ethylhexyl)phthalate	117817	µg l-¹	N	<0.50			
	Butylbenzylphthalate	85687	µg l-¹	N	<0.50			
	Carbazole	86748	µg l-¹	N	<0.50			
	Chrysene	218019	µg l-¹	N	<0.50			
	Di-n-butylphthalate	84742	µg l-¹	N	<0.50			
	Di-n-octylphthalate	117840	µg l-¹	N	<0.50			
	Dibenzo[a,h]anthracene	53703	µg l-¹	N	<0.50			
	Dibenzofuran	132649	µg l-¹	N	<0.50			
	Diethylphthalate	84662	µg l-¹	N	<0.50			
	Dimethylphthalate	131113	µg l-¹	N	<0.50			
	Fluoranthene	206440	µg l-¹	N	<0.50			
	Fluorene	86737	µg l-¹	N	<0.50			
	Hexachlorobenzene	118741	µg l-¹	N	<0.50			
	Hexachlorobutadiene	87683	µg l-¹	N	<0.50			
	Hexachlorocyclopentadiene	77474	µg l-¹	N	<0.50			
	Hexachloroethane	67721	µg l-¹	N	<0.50			

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					16/12/2010	16/12/2010	16/12/2010	16/12/2010
					WATER	*WATER*	*WATER*	*WATER*
1790	Indeno[1,2,3-cd]pyrene	193395	µg l-¹	N	<0.50			
	Isophorone	78591	µg l-¹	N	<0.50			
	N-Nitrosodi-n-propylamine	621647	µg l-¹	N	<0.50			
	N-Nitrosodimethylamine	62759	µg l-¹	N	<0.50			
	Naphthalene	91203	µg l-¹	N	<0.50			
	Nitrobenzene	98953	µg l-¹	N	<0.50			
	Pentachlorophenol	87865	µg l-¹	N	<0.50			
	Phenanthrene	85018	µg l-¹	N	<0.50			
	Phenol	108952	µg l-¹	N	<0.50			
	Pyrene	129000	µg l-¹	N	<0.50			
	1,2-Dichlorobenzene	95501	µg l-¹	N	<0.50			
	1,2,4-Trichlorobenzene	120821	µg l-¹	N	<0.50			
	1,3-Dichlorobenzene	541731	µg l-¹	N	<0.50			
	1,4-Dichlorobenzene	106467	µg l-¹	N	<0.50			
	2-Chloronaphthalene	91587	µg l-¹	N	<0.50			
	2-Chlorophenol	95578	µg l-¹	N	<0.50			
	2-Methyl-4,6-dinitrophenol	534521	µg l-¹	N	<0.50			
	2-Methylnaphthalene	91576	µg l-¹	N	<0.50			
	2-Methylphenol	95487	µg l-¹	N	<0.50			
	2-Nitroaniline	88744	µg l-¹	N	<0.50			
	2-Nitrophenol	88755	µg l-¹	N	<0.50			
	2,4-Dichlorophenol	120832	µg l-¹	N	<0.50			
	2,4-Dimethylphenol	105679	µg l-¹	N	<0.50			
	2,4-Dinitrophenol	51285	µg l-¹	N	<0.50			
	2,4,5-Trichlorophenol	95954	µg l-¹	N	<0.50			
	2,4,6-Trichlorophenol	88062	µg l-¹	N	<0.50			
	2,6-Dinitrotoluene	606202	µg l-¹	N	<0.50			
	3-Nitroaniline	99092	µg l-¹	N	<0.50			
	4-Bromophenylphenylether	101553	µg l-¹	N	<0.50			
	4-Chloro-3-methylphenol	59507	µg l-¹	N	<0.50			

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					AF60055	AF60056	AF60057	AF60058
					WS101	WS102	WS103	WS104
					16/12/2010	16/12/2010	16/12/2010	16/12/2010
					WATER	*WATER*	*WATER*	*WATER*
1790	4-Chloroaniline	106478	µg l-¹	N	<0.50			
	4-Chlorophenylphenylether	7005723	µg l-¹	N	<0.50			
	4-Methylphenol	106445	µg l-¹	N	<0.50			
	4-Nitroaniline	100016	µg l-¹	N	<0.50			
	4-Nitrophenol	100027	µg l-¹	N	<0.50			

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APPENDIX E

Tier 1 Screening Levels

EPS Tier 1 Qualitative Risk Assessment

Generic Assessment Criteria - Commercial Land Use

Contaminant	Tier 1 Soil Targets			Tier 1 Groundwater Targets	
	Human Health	Controlled Waters		Controlled Waters	
		LGwRP	HGwRP	LGwRP	HGwRP
Unit	mg/kg			ug/l	
Benzene	95	0.252	0.008	30	1
Toluene	4.40E+03	1.17	1.17	50	50
Ethy benzene	2.80E+03	15.0	10.0	300	200
Xylene	2.60E+03	0.885	0.885	30	30
MTBE	4.40E+03	0.138	0.0276	75	15
Aliphatic C5-C6	>SOL	5.27	1.05	50	10
Aliphatic C6-C8	>SOL	23.2	4.64	50	10
Aliphatic C8-C10	>SOL	175	35.1	50	10
Aliphatic C10-C12	>SOL	1380	276	50	10
Aliphatic C12-C16	>SOL	27500	5490	50	10
Aliphatic C16-C35	>SOL	3.46E+06	6.91E+05	50	10
Aromatic C8-C10	>SOL	8.74	1.75	50	10
Aromatic C10-C12	>SOL	13.8	2.76	50	10
Aromatic C12-C16	>SOL	27.5	5.5	50	10
Aromatic C16-C21	>SOL	86.9	17.4	50	10
Aromatic C21-C35	>SOL	690	138	50	10

Notes:
LGwRP - Low Groundwater Resource Potential
HGwRP - High Groundwater Resource Potential
>SOL - GAC exceeds solubility saturation limit

Tier 1 Soil Targets
Targets for Human Health have been taken from Soil Guideline Values (SGVs) where available and otherwise as GACs from LQM & CIEH ' *Generic Assessment Criteria for Human Health Risk Assessment - 2nd edition (2009)* '
Targets for Controlled waters have been derived using EA Remedial Targets Worksheet (v3.1) - using standard Sandy Loam ground conditions as described in Science Report SC050021/SR3, assuming no degradation for a 10m compliance distance with criteria of EQS or UKDWS for LGwRP and HGwRP respectively (see notes for Tier 1 GW targets)

Tier 1 Groundwater Targets
For LGwRP, targets have been taken as Freshwater EQS where available. For Ethylbenzene the WHO Health limit has been used and for MTBE and individual TPH fractions a 5 times multiplier of taste threshold and UKDWS has been taken repectively.
For HGwRP, targets have been taken as UKDWS where available. For Ethlylbenzene the upper WHO ATO limit has been used. For Toluene and Xylene, the WHO ATO limit is higher than the EQS and so the lower value has been taken. For MTBE the taste threshold has been taken.

APPENDIX F

Example Method Statement for Construction Workers Encountering Unexpected Contamination

METHOD STATEMENT

ACTIONS TO BE TAKEN IN THE EVENT OF DISCOVERING UNEXPECTED CONTAMINATION DURING INTRUSIVE GROUNDWORKS

If at any point during intrusive groundworks, evidence of unforeseen contamination is encountered in the form of significant noxious odours, dark staining within soils or sheen on groundwater, the following actions will be taken:

- Intrusive works in the immediate area of the impacted ground will be suspended and the continuation of work in other areas of the site will be considered within the context of the site specific health & safety plan.
- Environmental Protection Strategies Ltd (EPS) will be contacted and appraised of the situation so that arrangements can be made to characterise the impact and determine what action may be necessary in addition to the scheduled site works. Where possible / health & safety plan permits, digital photographs of the impacted ground will be taken and emailed to EPS at the address below to assist in the initial assessment.
- It may well be necessary for EPS to attend site to undertake visual inspection and obtain samples for field and/or laboratory analysis, although the actions taken will be dependent on the nature of what is encountered.
- In cases where EPS consider the unforeseen contamination likely to pose a significant risk of significant harm to adjacent site users or local environmental receptors, the local authority and the Environment Agency will be informed of the situation and the actions being taken.
- Once appropriate action has been agreed and undertaken a written summary will be produced by EPS for submission to the Local Authority (and where relevant, the Environment Agency) in accordance with planning requirements. The submission will include details of work undertaken, analytical results of investigative and validation samples obtained and conclusions and recommendations for any further actions considered necessary.
- Where regulatory bodies have been involved, site works should only recommence following their agreement and in all cases should only recommence when the site manager considers it safe to do so within the context of the site specific health & safety plan.

EPS Contact Details:

Principal Contact [redacted] [redacted] [redacted] [redacted]

Email: info@epstrategies.co.uk (automatically forwarded to both of the above and office based personnel)