PROPOSED SCOPE OF WORKS
for a
PHASE 2 ENVIRONMENTAL INVESTIGATION
at
LAND AT POTASH ROAD, MATCHING GREEN, ESSEX, CM17 0RN
for
RCT CONSTRUCTION LTD

Contaminated Land Solutions

Project No 0984
Report ref: 0984-P2E-1-A-Scope
Issued: 29 August 2019
Revision: A

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1 INTRODUCTION

The proposed re-development of the site comprises of two, two storey houses with ground and first floor levels. The dwellings will each have their own private garden and a shared access drive, with private parking available next to each property.

A Phase 1 Environmental report has been prepared by GO Contaminated Land Solutions Limited and this has identified potential for contamination from the site's former use as a fuel storage facility. The site is currently vacant with a decommissioned pumping station building, with six associated underground storage tanks (USTs) 3m below the surface (approximately located at the centre of the development site).

Possible exposure mechanisms may have occurred through leaks within pipe works, spillages from transfer processes and corrosion of the underground storage tanks resulting in product loss. It is therefore possible that localised hot spots of hydrocarbons, within soil and groundwater could exist at the site.

With reference to the DoE industry profile for airports, contamination of the soil and groundwater at the development site may have occurred. This is likely to be associated with activities occurring on the wider site of the military airfield. Activities may include refuelling, de-icing operations, waste management, servicing and maintenance and other airport operations. Any existing contamination associated with the former airfield will likely exist as hydrocarbons and PCBs.

A preliminary Investigation Report has been prepared by GO Contaminated Land Solutions Limited A total of 7 samples were taken and analysed for contaminants. These include, heavy metals, aromatic and aliphatic hydrocarbons, in accordance with Environment Agency guidelines, and speciated PolyAromatic Hydrocarbon (PAH).

Three samples were also analysed for the presence of PCB, pesticides and herbicides. Seven samples were screened for the presence of asbestos and three samples from the boreholes with highest PID readings were submitted for VOC, SVOC and TPH testing.

The contaminants identified to exceed the environmental screening level were Arsenic, Naphthalene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno (1,2,3-cd) pyrene, Dibenzo(a,h)anthracene and Aromatic Hydrocarbons (>C8-C10 and >C21-C35). Exceedances of VOC Benzene and 1,2,4-Trimethylbenzene were also recorded. Significant vapour concentrations were noted in the boreholes.

The identified exceedances pose a risk to both on-site and off-site receptors.

Further investigation should be undertaken after the removal of the underground storage tanks.

2 REFERENCE SOURCES

- GO Contaminated Land Solutions Limited Phase 1 Environmental Report dated 12 October 2016.
- GO Contaminated Land Solutions Preliminary Site Investigation Report dated 27 November 2017.
- BS 10175 Investigation of Potentially Contaminated Sites - Code of Practice
- Environmental Protection Act 1990 - Part IIA
- Contaminated Land (England) Regulations 2000
- BS 5930 The Code of Practice for Site Investigation
- BS 1377 The Code of Practice for methods of tests for soils for Civil Engineering Purposes
- CIRIA C665

3 SITE LOCATION

The site is situated on the western side of Potash Road. To the east of the junction with Downhall Road and to the south of Matching Green. Refer to Figure 1.

The National Grid Reference for the approximate site centre is 554170, 211400.

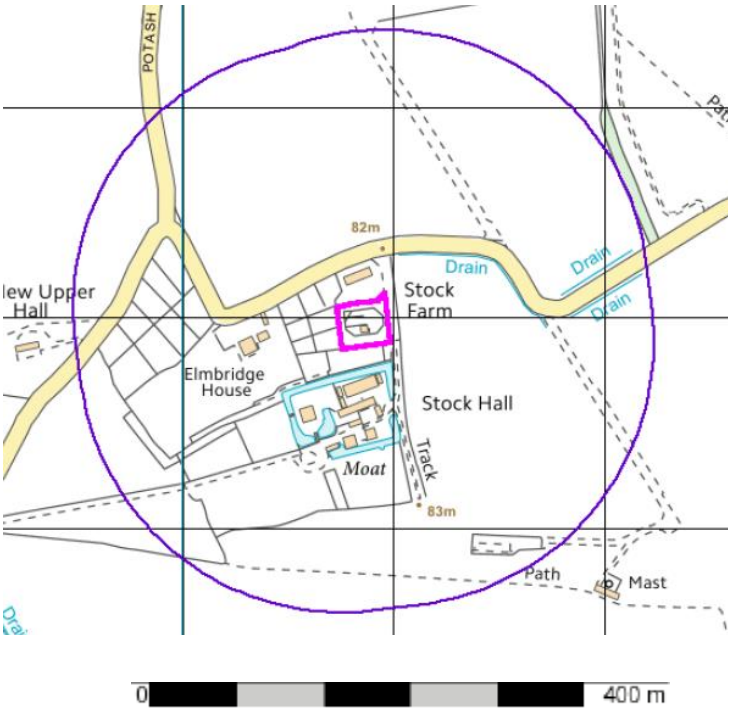


Figure 1: Site Location Plan

4 SITE DESCRIPTION

The site is rectangular shaped in plan, generally flat and level and covers an area of approximately 0.2ha.

The perimeter of the site is covered by concrete paving which has been poured in bays and provides a vehicle access route. The concrete paving has some surface weathering and cracking but generally appears to be in sound condition. The central part of the site is enclosed by a dilapidated concrete post and chain link fence with a steel framed personnel gate. Drawings provided by the client show that the central part of the site contains six underground storage tanks. The tanks cannot be seen on the site but the tank access covers and valve assemblies are clearly visible along with other ancillary equipment. The central area has stoned surfacing laid on a plastic membrane and is overgrown with brambles and other vegetation. Within the central area is a single storey building constructed in rendered masonry under a corrugated concrete panel roof. The building has a concrete floor which appears to be in good condition and is currently being used to store mainly timber and corrugated steel sheeting. The building contains redundant pipework, electrical equipment and what appears to be a pumping mechanism. There is also an empty steel drum container, two empty plastic water butts and a part filled five gallon plastic container labelled flammable liquid.

The northern boundary is formed by a scaffold tube fence and the edge of the perimeter concrete paving where it abuts the adjoining property, behind is a timber panel fence, a timber palisade fence and the rear walls of outbuildings on the adjoining property. The eastern boundary is formed by a scaffold tube fence and the edge of the perimeter concrete paving where it abuts the shared access road, behind is a timber panel fence. The southern boundary is formed by the edge of the perimeter concrete paving where it abuts a small earth bank on the adjoining property, behind which is a beech hedgerow. The western boundary is formed by the edge of the perimeter concrete paving where it abuts the adjoining property, behind which is a post and wire fence.

Beyond the northern boundary are the private garden and building at nos.6 & 7 Potash Road and a small stable block and beyond that the roadway of Potash Road and then open fields. Beyond to the east is a shared access road and then a ditch and hedgerow leading to open fields. Beyond to the south is a riding school arena and then a moat which surrounds a barn which provides an indoor riding arena. Beyond to the west is open land divided into equine paddocks and beyond that the private garden and

buildings at Elmbridge House.

Anecdotal information provided by the owners of the neighbouring property advised that the site provided a fuel storage facility during the Second World War and was constructed by American Air Force personnel and was subsequently used as a storage facility by the Harlow Chemical Company following the Flixborough disaster.

The site lies in a remote rural area with some residential properties in close proximity. The surrounded land is mainly in agricultural use.

No visual or olfactory evidence of contamination was noted during the site walkover.

Photograph 1: View looking south west across site

5 GROUND CONDITIONS

5.1 Geology

Reference to the geological survey of Great Britain indicates that beneath made ground, the area generally is underlain by superficial deposits comprising of diamicton of the Lowestoft Formation. Underlying the Lowestoft formation is bedrock comprising of clay, silt and sand of the London Clay Formation.

This was confirmed by the Geo-technical investigation which found Made Ground to maximum depth of 0.6m, underlain by the Lowestoft Formation.

5.2 Hydrogeology

The Environment Agency map identifies the superficial aquifer designation as a Secondary Undifferentiated Aquifer. The Bedrock aquifer is classified as unproductive strata.

Secondary Undifferentiated Aquifers has been assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

The soils overlying the aquifers are assumed to have a high leaching potential (U) and a worst-case vulnerability classification (H) is assumed due to a lack of data available.

The assumed groundwater flow direction has been based on the site topography and has been interpreted to flow from the east to the west across the site.

The Environment Agency maps show the site is not located within a source protection zone of a borehole abstraction point.

5.3 Hydrology

The Envirocheck report identified several water course features located close by to the proposed development site. Within a 250m radius of the site, a moat lays approximately 18m south, however this appears to be an artificial feature not

connected to any significant water course. There is a drain feature approximately 41m north east of the site. An unnamed secondary river is approximately situated 402m southwest from the site.

The Environment Agency maps show the site is not located within a flood zone.

The British Geological Society data does not provide a classification for groundwater flood risk potential, this is due to the sites bedrock and superficial aquifer designations of Unproductive Strata and Secondary Differentiated, respectively. Therefore, any risk from groundwater flooding is assumed to have limited potential for flooding of the property situated below ground level or at the surface level.

6 PREVIOUS INVESTIGATION

6.1 Site Investigation

In order to determine if the current or former usage of the property is a potential cause of contamination a preliminary site investigation was undertaken based upon the requirements of BS 10175: 2001 which is the code of practice for the investigation of potentially contaminated sites. The preliminary geo-environmental investigation report, 0984-PGE-1 was issued on 27 November 2017. A total of 7 samples were taken and analysed for a range of contaminants. These include, heavy metals, aromatic and aliphatic hydrocarbons, in accordance with Environment Agency guidelines, and speciated PolyAromatic Hydrocarbon (PAH).

Three samples were also analysed for the presence of PCB, pesticides and herbicides. Seven samples were screened for the presence of asbestos and three samples from the boreholes with highest PID readings were submitted for VOC, SVOC and TPH testing.

6.2 Test results

The contaminants identified to exceed the environmental screening level were Arsenic, Naphthalene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno (1,2,3-cd) pyrene, Dibenzo(a,h)anthracene and Aromatic Hydrocarbons (>C8-C10 and >C21-C35). Exceedances of VOC Benzene and 1,2,4-Trimethylbenzene were also recorded. Significant vapour concentrations were noted in the boreholes. The exceedances can be found in the following table :

TEST RESULTS ABOVE SCREENING VALUES				
Determinand	**Reference**	**Depth**	**Value (mg/kg)**	**Screening value (mg/kg)**
Arsenic	S1	0.35-0.50	52.4	37
	S4	0.35-0.50	39.4	
Naphthalene	S2	0.40-0.80	6.4	5.6
	S4	0.35-0.50	17.2	
Benzo(a)anthracene	S2	0.40-0.80	31.5	11
	S4	0.35-0.50	67.2	
Chrysene	S2	0.40-0.80	33.6	22
	S4	0.35-0.50	72.8	
Benzo(b)fluoranthene	S2	0.40-0.80	29.5	3.3
	S4	0.35-0.50	65.0	
Benzo(a)pyrene	S2	0.40-0.80	34.7	2.7
	S4	0.35-0.50	74.0	
Indeno (1,2,3-cd) pyrene	S4	0.35-0.50	49.0	36
Dibenzo(a,h)anthracene	S2	0.40-0.80	6.2	0.28
	S4	0.35-0.50	11.8	
>C8-C10 Aromatic	BH2	0.35-0.50	116	83
>C21-C35 Aromatic	S4	0.35-0.50	1690	1500
Benzene	BH2	2.50-3.00	1.72	0.087
1,2,4-Trimethylbenzene*	BH1	1.00-1.50	0.816	0.35
	BH2	2.50-3.00	1.57	
	BH3	1.00-1.50	4.5	

The identified exceedances pose a risk to both on-site and off-site receptors.

Further investigation is proposed to more fully characterise the extent of contamination after the removal of the underground storage tanks.

7 RISK ASSESSMENT

A qualitative risk assessment has been undertaken as part of the Phase 1 report in order to identify the severity, likelihood of occurrence and significance of the risk presented by potential pollutants identified in the preliminary conceptual model and the conclusions of this assessment have determined whether any further investigation is necessary and what form this should take. The items requiring further investigation are tabulated below.

Testing was undertaken for PCB, pesticides and herbicides and none was detected, therefore the risk from these contaminants is not considered further.

An asbestos survey of existing structures and infrastructure (as defined under Section 5(a) of the Control of Asbestos Regulations 2012) was beyond the brief of this report. The risk assessment has been undertaken on the basis that should asbestos be identified within buildings or infrastructure, these materials will be removed appropriately by licensed contractors and asbestos materials disposed of in accordance with legal requirements prior to demolition or other works in order to avoid contaminating soils at the site.

Sources	Potential Pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk/ Significance	Comment & control measures
Former site use for fuel & chemical storage	Metals Hydrocarbons PAHs VOCs	Residents & Site Users	Dermal contact	Mild	Likely	Moderate/Low risk	Further contamination testing
			Inhalation of vapours, indoors and outdoors	Mild	Likely	Moderate/Low risk	
			Soil Ingestion and Home Produce Consumption	Medium	Likely	Moderate risk	
			Inhalation of contaminated dust	Mild	Likely	Moderate/Low risk	
			Drinking of water from supply impacted by contaminated soil	Mild	Likely	Moderate/Low risk	Upgraded water supply pipe may be required by water supply company. It is recommended that this report is provided to the water supplier with a request for the testing, if any, that they require.

Sources	Potential Pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk/ Significance	Comment & control measures
Former site use for fuel & chemical storage	Metals Hydrocarbons PAHs VOCs	Construction & Maintenance operatives	Dermal contact	Mild	Likely	Moderate/Low risk	Information to be contained in site Health & Safety Plan. Use of appropriate PPE and normal good hygiene measures. Appropriate dust control measures during construction
			Inhalation of vapours, indoors and outdoors	Mild	Likely	Moderate/Low risk	
			Inhalation of contaminated dust	Mild	Likely	Moderate/Low Risk	
		Neighbours	Inhalation of vapours, indoors and outdoors	Mild	Low likelihood	Low risk	Further contamination testing
			Inhalation of contaminated dust	Mild	Likely	Moderate/Low risk	Appropriate dust control measures during construction.

Sources	Potential Pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk/ Significance	Comment & control measures
Former site use for fuel & chemical storage	Metals Hydrocarbons PAHs VOCs	Aquifer	Vertical percolation to groundwater via Foundations & Drainage	Medium	Low likelihood	Moderate/low risk	Foundations & drainage should be designed in such a way that they do not create a pathway for surface water percolation.
			Vertical percolation to groundwater via soft landscaped and permeable areas	Medium	Likely	Moderate risk	Further contamination testing
	Sulphates pH	Proposed Building	Direct contact of soil with building materials	Medium	Low likelihood	Moderate/Low risk	Protection of concrete is normally resolved in the building design process; the designer of the foundations should determine the requirement to any investigation.

Sources	Potential Pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk/ Significance	Comment & control measures
Naturally Occurring Contaminants	Sulphates pH	Proposed Building	Direct contact of soil with building materials	Medium	Low likelihood	Moderate/Low risk	As the protection of concrete is normally resolved in the building design process, the designer of the foundations should determine the requirement to undertake any investigation.
Nearby former Military Airfield	PAHs, TPH	Residents & Site Users	Lateral migration of groundwater transporting contaminants to soil/made ground on site	Medium	Likely	Moderate risk	Further contamination testing
		Construction & Maintenance Operatives		Medium	Likely	Moderate risk	Information to be contained in site Health & Safety Plan. Use of appropriate ppe and normal good hygiene measures. Appropriate dust control measures during construction.

Sources	Potential Pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk/ Significance	Comment & control measures
hardcore below slabs or past use of asbestos containing materials	Asbestos	Residents & Site Users	Inhalation	Severe	Low likelihood	Moderate risk	7No. samples from made ground were tested for asbestos. Asbestos was not present in any of them. No further action required.
		Construction operatives		Severe	Likely	High Risk	Any debris from earlier demolition found during site strip is to be inspected for asbestos by a suitably experienced contractor.

Any visual or olfactory evidence of contamination noted during works should be investigated by a suitably qualified person and their recommendations implemented.

8 INVESTIGATION STRATEGY

The qualitative risk assessment and site investigation have determined that further investigation of potential on and off-site contamination identified by the conceptual model is necessary. As contamination testing has been recommended after the removal of the tanks, any potential risk from these sources will be remediated if required. While it is assumed that the USTs were probably purged and filled there is no documentation available and the status of the USTs is unknown.

The objectives of the investigation will be to obtain further information in relation to the potential sources of contamination, likely pathways and other features of concern and to obtain data on the nature and extent of contamination, the geology, geochemistry, soil hydrogeology and hydrology of the site. This information and data will be used to inform the conceptual model and allow the risk assessment to be updated if necessary. In addition, the data obtained will be sufficient for the design of any remedial works that may be required.

9 INVESTIGATIVE TECHNIQUES

It is intended to carry out the intrusive works using a hand auger to take samples from shallow depth and a Drive-in-Sampler or Mechanical Flight Auger method to construct boreholes.

During the previous investigation three monitoring installations were installed to allow the monitoring of land gas and groundwater if necessary. The monitoring installations comprise HDPE slotted and plain casing as required, wrapped in a geotextile sock if necessary to prevent silting up of the pipe, with a lockable stopcock cover concreted in place at ground level to allow for subsequent monitoring.

Monitoring for VOCs and SVOCs will be undertaken with a MiniRAE Lite PID manufactured by RAE System fitted with a 10.6 eV lamp.

A Method Statement for the Investigative works is contained in Appendix C.

10 SAMPLING STRATEGY

The following sets out the envisaged sampling, however as stated in R&D 66 "*the decision of what soil material should be sampled will be determined by the sampling and analysis plan including consideration of the likely source and likely behaviour of the substances being sampled, as well as site observations regarding the geology and any evidence of contamination.*" Therefore, locations and numbers of samples may be varied to take account of site observations. A hand held PID monitor will be used to determine appropriate sample locations.

Incoming services could form a localised constraint to the investigation and the position of service runs, etc will be established either by reference to plans obtained from the service providers or by the use of Cable Avoidance Tools.

The sampling strategy will be sufficiently flexible in order to allow for samples to be collected from all strata and materials encountered during the investigation.

The samples will be collected by suitably qualified person in accordance with methodology set out in clause 8.3 and 8.6 of BS 10175.

The number of sampling locations for the targeted sampling will be reviewed using empirical judgement when on site, based on visual or olfactory evidence.

All samples will be placed immediately in cool boxes with ice packs and collected by courier for transport to the laboratory.

The results will be compared to soil guideline values and where none are available to LQM/CIEH Suitable 4 Use Levels (S4ULs). Assessment levels used will be for residential with plant uptake.

The initial sampling strategy will include 6 samples at the bottom of each tank (S5-10) and 6 samples from the face of the excavation (S11-16), approximately level with the base of the tanks. As the previous site investigation did not identify any contamination in S3 and BH3, 5 more samples will be collected from this area (S17-21) from made ground and natural strata. Initially only the samples taken from made ground will be tested, if contamination is present then samples from natural strata will be tested for the corresponding contaminants. At the north of the site as contamination was present, 3 samples will be collected from the top 0.3m of the natural strata (S22-24) and tested for PAH and TPH.
The initial sampling and testing regime for soil is shown in the table below:

Location	Sampling Depth	Testing Suite
S5-S10	Between approximately 0.20 and 0.6 metres below the excavated ground level	PAHs and TPH.
S11-S16	Face samples taken from the side of the excavation, approximately level with the base of the tanks.	PAHs and TPH.
S17-S21	Between approximately 0.20 and 0.6 metres (made ground) and top 0.3m of natural strata.	Samples taken from made ground: Heavy metals, pH, speciated PAHs and TPH. If there are exceedances samples from natural strata will be tested
S22-S24	Top 0.3m of natural strata	PAHs and TPH.
BH1-BH3	-	Vapours monitoring, groundwater samples tested for heavy metals, pH, speciated PAHs and TPH.

A plan showing the proposed Site Investigation Layout is contained in Appendix D.

Should any further visual or olfactory evidence of contamination be noted during the investigation additional samples will be taken and tested.

It is proposed to undertake three rounds of vapour monitoring initially and if significant flows are detected to undertake three further rounds of monitoring.

The excavation should be kept dry until it is ready to be infilled.

11 LABORATORY ANALYSIS

Soil samples collected during the investigation will be analysed at a specialist testing house generally using accredited methods in accordance with ISO 17025 /MCERTS Performance Standards for Laboratories Undertaking the Chemical Testing of Soil, or if no MCERTS test is available, a United Kingdom Accreditation Service (UKAS) method of testing.

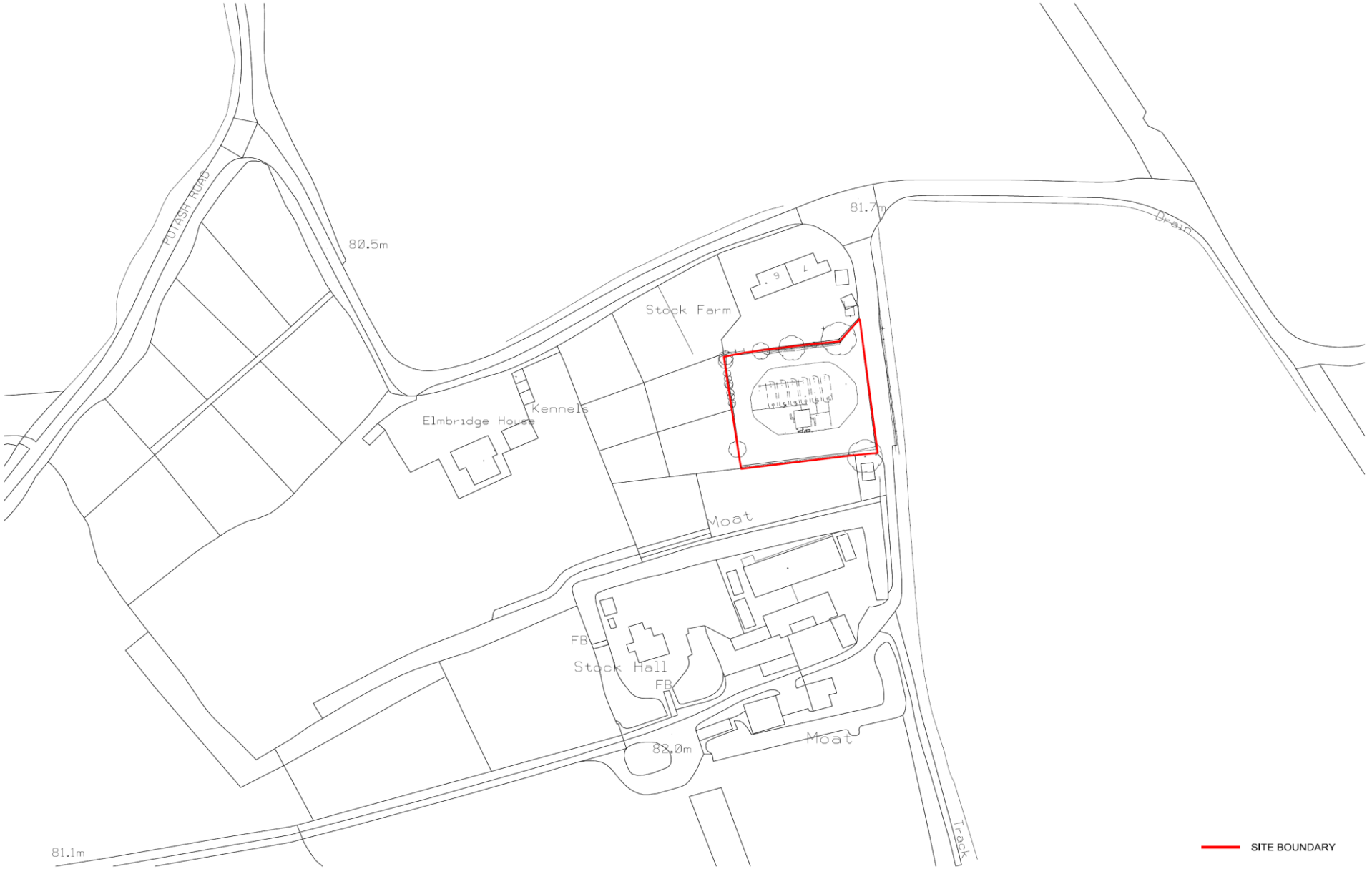
The list in Appendix E confirms the determinands contained in the GO Contaminated Land Solutions Ltd standard suite. For the full range of contamination testing required refer to the body of this scope.

12 REPORTING

On completion of the intrusive investigation and the laboratory analysis of soil samples, an interpretive report will be prepared which will provide the following information:

- A summary of the fieldwork undertaken
- An assessment of the results of the field investigation
- An updated conceptual model
- Recommendations for supplementary investigation or monitoring and proposal for any remedial works that may be required.

Appendix A – Site Location Plan



0984-P2E-1-A-Scope: Land at Potash Road, Matching Green
RCT Construction

Appendix B – Proposed Site Plan

Notes
1. All dimensions to be checked on site.
2. All dimensions are to masonry unless otherwise stated (ie not plaster finishes)
3. All information is to be checked and verified by the contractors and sub-contractors for accuracy and fit.
4. Discrepancies or omissions to be brought to the attention of Douglas & King prior to construction.
5. Do not scale from this drawing.

0m 12.5m 25.0m

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revision	date	notes
A	09.08.2019	Planning Issue

project: Potash Road Houses, Matching Green
client: RCT Construction
drawing title: Proposed Ground Floor Site Plan
scale: 1:250@A3
date: Aug 2019
drawing no: POTr_PL_100_A
PLANNING

0984-P2E-1-A-Scope: Land at Potash Road, Matching Green
RCT Construction

Appendix C – Method Statements

METHOD STATEMENT FOR
Drive-in-Sampler or Mechanical Flight Auger Method

It is anticipated that a shallow drive-in-sampler or mechanical flight auger boreholes will be undertaken at this site.

Borehole locations will be checked for buried services with a Cable Avoidance Tool (CAT).

Both machineries are operated by a two-man crew.

- The drive-in-sampler comprises a series of 1 metre and 2 metre long 80mm to 35mm diameter tubes that are driven into the ground using a mini-hydraulic breaker. The tubes are subsequently jacked out of the ground and side windows enable the tubes to be cleaned and small disturbed samples to be taken. During site operations there will be a certain amount of noise from the hydraulic power pack and breaker unit as the sample tubes are driven into the ground.

- Mechanical Flight Auger is rotary system of piling where an auger is screwed into the ground by the piling rig with minimal vibration. Additional flight extensions can be added until the specified depth has been reached.

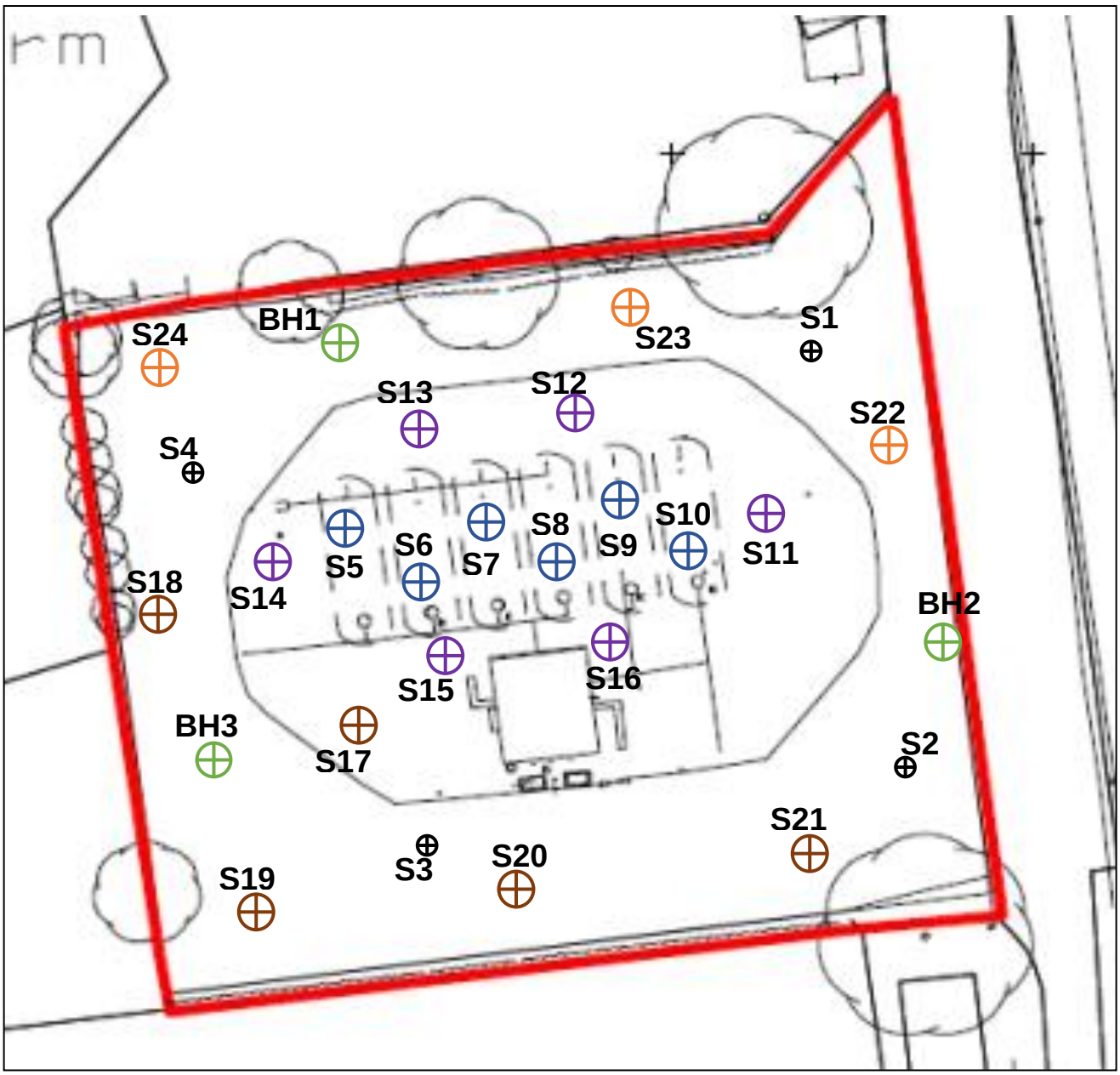
The power pack for the rig is usually positioned remotely and connected to the rig by hydraulic hoses. This allows the actual drilling to be carried out in areas sensitive to noise and exhaust emissions. Following completion of the boreholes the area is backfilled and the surface reinstated.

Upon completion of the boreholes, a groundwater and gas monitoring installation can be installed where required.

Any monitoring installations will comprise 19mm diameter HDPE slotted and plain casing as necessary wrapped in a geotextile sock if necessary to prevent silting up and finished at ground surface with a lockable stopcock cover concreted in flush with the existing ground surface.

Any installations can subsequently be monitored for either soil gas or groundwater level if required.

Appendix D – Site Investigation Layout



KEY:

- Previous contamination testing
- Vapour monitoring/Groundwater samples Standard Contamination Suite
- PAH + TPH, base of excavation
- PAH + TPH, face of excavation, approximately level with base of tanks
- Standard contamination suite, made ground and if needed top of natural strata
- PAH + TPH, top of natural strata

Appendix E – Standard Contamination Suites

Note: The following list confirms the determinands contained in the GO Contaminated Land Solutions Ltd standard suite. For the full range of contamination testing required refer to the body of this scope.

Determinand		Unit
Arsenic		mg/kg
Cadmium		mg/kg
Chromium		mg/kg
Lead		mg/kg
Mercury		mg/kg
Nickel		mg/kg
Copper		mg/kg
Zinc		mg/kg
Selenium		mg/kg
Hexavalent Chromium		mg/kg
pH Value		units
Free Cyanide		mg/kg
Naphthalene		mg/kg
Acenaphthylene		mg/kg
Acenaphthene		mg/kg
Fluorene		mg/kg
Phenanthrene		mg/kg
Anthracene		mg/kg
Fluoranthene		mg/kg
Pyrene		mg/kg
Benzo(a)anthracene		mg/kg
Chrysene		mg/kg
Benzo(b)fluoranthene		mg/kg
Benzo(k)fluoranthene		mg/kg
Benzo(a)pyrene		mg/kg
Indeno(123-cd)pyrene		mg/kg
Dibenzo(ah)anthracene		mg/kg
Benzo(ghi)perylene		mg/kg
TOTAL PAH		mg/kg
Aromatic Hydrocarbons	>C_5-C_7	mg/kg
	>C_7-C_8	mg/kg
	>C_8-C_{10}	mg/kg
	>C_{10}-C_{12}	mg/kg
	>C_{12}-C_{16}	mg/kg
	>C_{16}-C_{21}	mg/kg
	>C_{21}-C_{35}	mg/kg
Aliphatic Hydrocarbons	>C_5-C_6	mg/kg
	>C_6-C_8	mg/kg
	>C_8-C_{10}	mg/kg
	>C_{10}-C_{12}	mg/kg
	>C_{12}-C_{16}	mg/kg
	>C_{16}-C_{35}	mg/kg
TOTAL TPH		mg/kg
Asbestos		

Determinand	Codes	Units	LOD
VOC			
MTBE	U	ug/l	1
Heptane	N	ug/l	1
Octane	N	ug/l	1
Nonane	N	ug/l	1
Benzene	U	ug/l	1
Toluene	U	ug/l	1
Ethylbenzene	U	ug/l	1
m+p-xylene	U	ug/l	1
o-xylene	U	ug/l	1
cis-1,2-dichloroethene	U	ug/l	1
1,1-Dichloroethane	U	ug/l	1
Chloroform	U	ug/l	1
Tetrachloromethane	U	ug/l	1
1,1,1-Trichloroethane	U	ug/l	1
Trichloroethylene	N	ug/l	1
Tetrachloroethylene	U	ug/l	1
1,1,1,2-Tetrachloroethane	U	ug/l	1
1,1,2,2-Tetrachloroetha	N	ug/l	1
Chlorobenzene	U	ug/l	1
Bromobenzene	U	ug/l	1
Bromodichloromethane	U	ug/l	1
Methylethylbenzene	U	ug/l	1
1,1-Dichloro-1-propene	U	ug/l	1
Trans - 1-2 -dichloroethylene	U	ug/l	1
2,2-Dichloropropane	N	ug/l	1
Bromochloromethane	N	ug/l	1
1,2-Dichloroethane	U	ug/l	1
Dibromomethane	U	ug/l	1
1,2-Dichloropropane	U	ug/l	1
cis-1,3-Dichloro-1-propene	U	ug/l	1
trans-1,3-Dichloro-1-propene	U	ug/l	1
1,1,2-Trichloroethane	U	ug/l	1
Dibromochloromethane	U	ug/l	1
1,3-Dichloropropane	U	ug/l	1
Dibromoethane	U	ug/l	1
Styrene	U	ug/l	1
Propylbenzene	U	ug/l	1
2-Chlorotoluene	U	ug/l	1
1,2,4-Trimethylbenzene	U	ug/l	1
4-Chlorotoluene	U	ug/l	1
t-butylbenzene	U	ug/l	1
1,3,5-Trimethylbenzene	U	ug/l	1
1-methylpropylbenzene	U	ug/l	1
o-cymene	U	ug/l	1
1,3-Dichlorobenzene	U	ug/l	1
Butylbenzene	U	ug/l	1
1,2-Dibromo-3-chloropropane	U	ug/l	1
Hexachlorobutadiene	U	ug/l	1
1,2,3-Trichlorobenzene	U	ug/l	1
Naphthalene	U	ug/l	1
1,2,4-Trichlorobenzene	U	ug/l	1
1,4-Dichlorobenzene	U	ug/l	1
1,2-Dichlorobenzene	U	ug/l	1
Bromoform	U	ug/l	1

Determinand	Codes	Units	LOD
SVOC			
Phenol	N	ug/l	1
Aniline	N	ug/l	1
Bis(2-chloroethyl)ether	N	ug/l	1
2-Chlorophenol	N	ug/l	1
1,3-Dichlorobenzene	N	ug/l	1
1,4-Dichlorobenzene	N	ug/l	1
Benzyl Alcohol	N	ug/l	1
1,2-Dichlorobenzene	N	ug/l	1
2-Methylphenol	N	ug/l	1
Bis(2-chloroisopropyl)ether	N	ug/l	1
3 and 4-methylphenol	N	ug/l	1
N-Nitrosodi-n-propylamine	N	ug/l	1
Hexachloroethane	N	ug/l	1
Nitrobenzene	N	ug/l	1
Isophorone	N	ug/l	1
2-Nitrophenol	N	ug/l	1
2,4-Dimethylphenol	N	ug/l	1
Bis(2-chloroethoxy)methane	N	ug/l	1
2,4-Dichlorophenol	N	ug/l	1
1,3,5-Trichlorobenzene	N	ug/l	1
Naphthalene	N	ug/l	0.01
3-Chloroaniline	N	ug/l	1
Hexachloro-1,3-butadiene	N	ug/l	1
4-Chloro-3-methylphenol	N	ug/l	1
2-Methynaphthalene	N	ug/l	1
1-Methylnaphthalene	N	ug/l	1
Hexachlorocyclopentadiene	N	ug/l	1
2,4,6-Trichlorophenol	N	ug/l	1
2,4,5-Trichlorophenol	N	ug/l	1
1-Chloronaphthalene	N	ug/l	1
2-Nitroaniline	N	ug/l	1
1,4-Dinitrobenzene	N	ug/l	1
Dimethyl phthalate	N	ug/l	1
1-3-dinitrobenzene	N	ug/l	1
2-6-dinitrotoluene	N	ug/l	1
Acenaphthylene	N	ug/l	0.01
1,2-Dinitrobenzene	N	ug/l	1
3-Nitroaniline	N	ug/l	1
Acenaphthene	N	ug/l	0.01
4-nitrophenol	N	ug/l	1
Dibenzofuran	N	ug/l	1
2,3,5,6-Tetrachlorophenol	N	ug/l	1
2,3,4,6-Tetrachlorophenol	N	ug/l	1
Diethyl phthalate	N	ug/l	1
1-chloro-4-phenoxybenzene	N	ug/l	1
Fluorene	N	ug/l	0.01
4-Nitroaniline	N	ug/l	1
Dinitro-o-cresol	N	ug/l	1
Diphenylamine	N	ug/l	1
Azobenzene	N	ug/l	1
1-bromo-4-phenoxybenzene	N	ug/l	1
Hexachlorobenzene	N	ug/l	1
Pentachlorophenol	N	ug/l	1
Phenanthrene	N	ug/l	0.01
Anthracene	N	ug/l	0.01
Carbazole	N	ug/l	1
Dibutyl phthalate	N	ug/l	1
Fluoranthene	N	ug/l	0.01
Pyrene	N	ug/l	0.01
Butyl benzyl phthalate	N	ug/l	1
Bis-2-ethylhexyladipate	N	ug/l	1
Butyl benzyl phthalate	N	ug/l	1
Benzo(a)anthracene	N	ug/l	0.01
Chrysene	N	ug/l	0.01
Bis(2-ethylhexyl)phthalate	N	ug/l	1
Benzo(b)fluoranthene	N	ug/l	0.01
Benzo(k)fluoranthene	N	ug/l	0.01
Benzo(a)pyrene	N	ug/l	0.01
Indeno(1,2,3-CD)pyrene	N	ug/l	0.01
Dibenz(ah)anthracene	N	ug/l	0.01
Benzo(ghi)perylene	N	ug/l	0.01
SVOCTIC			
9-Octadecenamide, (Z)-	N	ug/l	1