Elemental GI Ltd

REPORT: PHASE II ENVIRONMENTAL INVESTIGATION FOR SITE OFF GOSBERTON ROAD, SURFLEET

CLIENT: SCOTT PARK DEVELOPMENTS LTD.

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PHASE II ENVIRONMENTALINVESTIGATION: SITE OFF GOSBERTON ROAD, SURFLEET

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Semi-Technical Summary

The reader is referred to the terms and conditions which accompany this report, and which are presented at the end of this document.

This non-technical summary provides a brief overview of the main conditions which have been noted on site. These features / factors (alongside others) are explained fully in the following report and the following should therefore not be referred to in isolation. **No reliance should be placed on the executive summary until the whole report has been read in full.**

Ground Conditions / Foundations	The site is underlain by made ground in most places, which is present at greater thicknesses in western areas. Th natural underlying soils mainly comprise sands, silts and clays which get significantly weaker with depth.
Contamination	There are elevated heavy metals and PAHs in made ground across the site. Gardens and other soft landscaping in these areas will need to be capped if the made ground is not removed.
Recommendations	▪ A Remedial Method Statement (RMS) is likely to be required by the local planning authority to confirm the remedial works at the site; ▪ Discussions should be undertaken with other construction stakeholders (e.g. utility suppliers, waste disposal companies etc.) to determine their requirements in relation to the site's redevelopment; and ▪ The Client's appointed Structural Engineer is preparing recommendations relating to foundations and other aspects of the site's redevelopment, which should be read and considered alongside the findings presented in this report.

1.0 INTRODUCTION

1.1 Report Status

A Phase I Environmental Assessment has been undertaken for the site by Erda Associates Ltd (ref. EAL.63.21 dated August 2021). Please see section 1.2 below for further information.

Elemental GI Ltd were appointed by Scott Park Developments Ltd of Office 10, Welland Workspace, 10 Pinchbeck Road, Spalding, Lincs, PE11 1QD (hereafter referred to as 'the Client') to undertake a Phase II Environmental Investigation for the Site off Gosberton Road, Surfleet (hereafter referred to as 'the site').

This report has been prepared on the understanding that the site is to undergo redevelopment to support residential housing. We have been supplied with a copy of the proposed layout plan, extracts of which are presented in the Proposed Site Layout Plan (Drawing 001) in Appendix I. In summary these layouts show the construction of 10 No. new residential dwellings with gardens and other soft landscaping, which are served by a single access road entering the site on its eastern boundary.

This report has been prepared in accordance with our notes concerning the terms and conditions of these works and of our engagement, which are presented at the end of this report.

Should the development proposals alter, then the recommendations in this report may be subject to change. Whilst it may be utilised by others for reference purposes at the Client's discretion, it has not been prepared for any other purposes (e.g. waste classification etc.) and therefore additional works may be required by third parties dependent upon their own requirements / works. No third party may reproduce or rely upon this report (or any of its contents) without the prior permission of the authors.

1.2 Previous Reports

Elemental GI Ltd have been supplied with copies of the following documents by the Client which relate to the subject site:

- Erda Associates Ltd: 20 Gosberton Road, Surfleet – Phase I Geo-Environmental Assessment (dated August 2021 ref. EAL.63.21)

The above referenced documents have not been reproduced herein, and they should be referred to in full alongside this report.

1.2.1 Summary of Previous Report

The site was recorded to be situated upon superficial Tidal Flat Deposits (clay and silt) overlying Oxford Clay Formation (mudstone). These are both reported to be 'unproductive aquifers'.

The site was reported to be set within an area with a very low sensitivity to controlled waters risks, with source protection zones and abstractions both be absent within the site's vicinity, although a watercourse is recorded nearby to the north.

The third party noted that "*The site is not within a Radon Affected Area as less than 1% of properties are above the action level. Therefore, the report indicates that radon protective measures are not necessary for the proposed development*."

The third-party Phase I report noted that the site currently supports a car parking area across its southern areas and a residential dwelling with garden areas across northern parts. An above ground heating oil tank was noted on the northern boundary. The tank and former parking activities were identified as potential sources of contamination.

The third party confirmed that the site supported fields until the late 1940s when a small structure was recorded in its north-eastern corner, with the current dwelling recorded from the early 1970s. The surrounding area is recorded to have supported light industrial activities (breweries, lime kilns etc.) until the mid-1950s, after which the current mix of surrounding land activities was recorded. The nearby engineering works (recently re-used as a car repair / recover garage) and garages / depots to the south of the site were identified as potential sources of contamination.

They recommended the following works to be undertaken at the site:

- *"A ground investigation designed to BS5930:2015 and comprising trial pits to confirm ground conditions and collect samples for analysis.*
- *Chemical analysis of soils followed by risk assessment so that the risk to human health and controlled waters can be determined.*
- *Geotechnical soils testing of the founding strata to assess its character and suitable grades of buried concrete and assist with foundation design."*

1.3 The Site

The site is situated on Gosberton Road, Surfleet, slightly to the north of Surfleet Village centre. The site is roughly centred at National Grid Reference 525054, 328286.

1.3.1 Site:

- The site is approximately 0.44ha in area, and forms a roughly rectangular parcel of land;
- As described in the Phase I Report, the site currently supports an open area of land which currently supports overgrown garden areas to the north and a gravel-covered parking area across remaining parts. The ground slopes downward around the south-western, western and northern edges of the parking area, suggesting the ground has been topographically modified;
- A small structure (possible former bund) is present on the southern;
- A disused heating oil tank is present on the northern boundary;
- Anecdotal evidence from site users suggests that materials may have been placed across the parking area to create a plateaux / platform associated with the adjacent Surfleet Café to the south;
- The site is set within a mixed agricultural, residential, commercial and ecumenical area of Surfleet. Land immediately surrounding the site supports housing to the north, car repair / recover garages to the east and south, a disused garden nursery to the south / south-west and open fields to the west.

Reference should be made to the third-party report for a full description of the site setting and features.

The appendices contained in this report include a Site Location Plan (Drawing 002), Site Features Plan (Drawing 003) and a General Photographic Record (Drawing 004).

2.0 SCOPE OF PHASE II INVESTIGATION

2.1 Potential Areas of Concern

The Phase I Report identified the following potential areas of concern at the site which would merit further inspection / investigation:

- Suspected former tank bund on southern boundary;
- Disused heating oil tank on northern boundary;
- Potential made / raised ground beneath parking area;
- Historic use of parking area (e.g. vehicle fluids, fuels etc.);
- Adjacent car repair / recover garages (and other light industrial / commercial activities); and
- Adjacent nursery.

2.2 Site Investigation Layout

The following exploratory holes have been positioned at the site:

Table 2.1: Site Investigation Layout

Potential Source / Issue	Exploratory Holes
General Site Coverage	ALL HOLES
Western Area (Nursery / Raised / Sloped Ground)	TP01, TP04, Bund 1
Northern Garden Area	TP02, TP06
Car Parking Area	TP01, TP03, TP04, TP05, TP07
Suspected Historic Bund	TP05
Heating Oil Tank	HTP1
Adjacent Garages	TP03, TP07

Whilst all reasonable efforts will be made to ensure sufficient coverage of the site / potential areas of concern, it should be noted that ground conditions may vary between exploratory positions.

All arisings shall be inspected following completion of each exploratory hole, and samples will be selected for analysis on the basis of their appearance (including visual or olfactory evidence of contamination). Elemental GI Ltd shall arrange for samples to be delivered to a suitably accredited laboratory for subsequent testing.

Samples shall be tested for a general range of contaminants (in accordance with NHBC Standards Chapter 4.1 'Land Quality – managing ground conditions' and CLR 8 'Potential Contaminants for the Assessment of Land' (withdrawn but used for reference purposes where applicable)). Where appropriate they shall also be analysed for specific / targeted analyses, and at the subject site this shall include:

- Heavy Metals;
- Polycyclic Aromatic Hydrocarbons (PAHs);
- pH;
- Phenols;
- Water-Soluble Sulphate;
- Total Petroleum Hydrocarbons (TPH);
- Asbestos Screens; and
- Semi-Volatile / Volatile Organic Compounds.

3.0 SITE INVESTIGATION WORKS

3.1 Completion of Works

The recent site investigation works were completed by Elemental GI Ltd in general accordance with BS 5930:2015+A1: 2020.

Underground services (including drainage) were understood to be present beneath some areas of the site. Exploratory holes which were proposed in the vicinity of these were re-positioned to alternative locations nearby. Access was not possible at the time of our investigation to the residential dwelling and surrounding garden areas.

Due to the *in situ* collapse of some soils, the depth of some trial holes was limited during our recent investigation.

No other significant limitations were encountered across the development areas of the site.

3.2 Site Investigation Details

The exploratory holes were completed by Elemental GI Ltd at the site as listed in Table 2.1 (above). These were completed to a maximum total depth of 2.75 m below existing ground level (begl). Table 3.1 (below) presents a summary of the works completed:

Table 3.1: Site Investigation Summary

Exploratory Hole(s) ID	Maximum Final Depth (m)	Notes
TP01, TP04, Bund 1	2.75	Western Area (Raised / Sloped Ground)
TP02, TP06	2.60	Northern Garden Area
TP01, TP03, TP04, TP05, TP07	2.75	Car Parking Area
TP05	2.40	Suspected Historic Bund
HTP1	0.20	Heating Oil Tank
TP04	2.30	Adjacent Nursery
TP03, TP07	2.50	Adjacent Garages

A copy of the exploratory hole records from these works is presented in Appendix VI.

4.0 GEOTECHNICAL ASSESSMENT

4.1 General Ground Conditions

4.1.1 Made Ground

Made ground was encountered in 5 No. of the 7 No. exploratory holes completed, to a maximum total depth of 1.80m (noted in trial pits TP01 and TP04 in the western area of the site). This generally comprised predominantly granular materials containing various anthropogenic inclusions including fragments of brick, pottery, concrete and tarmac and metal bars. Cobbles and boulders of brick and concrete were also present in some areas.

A plan showing the depth of made ground at each of the exploratory positions completed across the site as part of the recent works is presented in Appendix V.

4.1.2 Topsoil

Topsoil was encountered in northern-central areas of the site to a maximum total depth of 0.25m. This generally comprised brown silty sandy topsoil which was covered in vegetation.

4.1.3 Natural Soils / Bedrock

The natural soils at the subject typically comprised a mix of clay, silt and sand soils which generally became softer with depth. Sands were encountered in the south of the site (TP05 from 1.70m to 2.25m begl).

The silt / clay soils which were generally present beneath the made ground / topsoil typically comprised firm grey or orangish brown soils. These were generally noted to become grey and soft rapidly with depth, and frequently exhibited poor *in situ* stability (collapse of side walls) at some locations, particularly where groundwater ingress was also noted.

Loose grey very silty fine sands were recorded in position TP05 from 1.70m to 2.25m begl.

4.1.4 Groundwater and Stability

Water was recorded at the following locations:

- TP02: Very slight ingress encountered from 1.00m depth at southern end of pit;
- TP03: Slight ingress encountered from 1.50m depth at southern end of pit;
- TP05: Slow ingress encountered from 1.70m depth; and
- TP07: Ingress encountered from 1.50m depth.

Given the variable depth of the water strikes noted, and the absence of water at other nearby locations, it is considered likely that the above observations may be indicative of localised perched water pockets at this stage.

Based on the above, it is considered likely that dewatering or other forms of water management are likely to be required for shallow short-term excavations at the site.

Plans showing the depths of water strikes at each of the exploratory positions completed across the site as part of the recent works is presented in Appendix V.

Poor stability was noted in some exploratory holes at the site following their completion. This comprised the collapse of some made ground materials and natural soils at locations TP01 and TP03.

4.2 Geotechnical Laboratory Testing

The Client's appointed Structural Engineer has commissioned their own geotechnical laboratory testing for the subject site directly.

4.3 *In Situ* Testing

Hand shear vane (HSV) tests were undertaken during the works within appropriate materials. The following results were recorded:

Table 4.2: *In Situ* SPT 'N' Value Results v Strata Type

Strata	HSV Range Reported (kPa)	Comment
Brown silt / clay	5 - 65	-
Grey silt / clay	5 - 65	-

Table 4.3: *In Situ* SPT 'N' Value Results v Depth

Depth (m begl)	Range Reported
0.0 - 1.0m	30 - 65
1.0 - 2.0m	10 - 60
2.0 - 3.0m	5 - 45

In general, it was noted that HSV results decreased with depth.

4.4 Geotechnical Assessment

It is understood that Client's appointed Structural Engineer is undertaking their own separate geotechnical assessment of the site's ground conditions.

4.5 Foundation Recommendations

It is understood that Client's appointed Structural Engineer is preparing their own foundation assessment / recommendations under separate cover.

5.0 ENVIRONMENTAL ASSESSMENT

5.1 Selection of Screening Values

The current UK screening values for the comparison of soil test data are presented by DEFRA within their 'Category 4 Screening Levels' (C4SLs). This includes screening values for a selected range of end-uses for 6 No. determinands, and is supplemented by the CL:AIRE 'Phase 2 C4SLs', which provide screening values for a further 3 No. determinands. These screening values have been derived using an LLTC and are used as the primary comparison for risks from determinands within soil samples from the site. Where appropriate we have also reviewed and utilised screening values from other authoritative parties (e.g. LQM, CIEH etc.) who have calculated further screening values for additional determinands, although it is noted that these providers typically generate screening values which are based upon health criteria values (HCVs; as opposed to LLTCs) which represent a lower (minimal) risk level and are therefore more conservative.

At this stage screening values which assess the concentrations of determinands in comparison to a residential with plant uptake end-use have been adopted, which is considered to be appropriate for the proposed end-use at the site. However, alternative screening values (e.g. Public Open Space 1 or 2) may also be used where appropriate pending final layouts etc.

5.2 Environmental Laboratory Testing

Soil samples from the site were retrieved and submitted for laboratory analysis in accordance with Section 2.2 and Table 2.1 of this report.

Laboratory testing certificates are presented in Appendix VII, with Table 5.1 (overleaf) presenting a summary of the test data.

Table 5.1: Laboratory Analysis of Soil Samples

Analyte	Concentrations Detected (mg/kg)	Screening Values (mg/kg)	No. of Samples	No. of Exceedances
Arsenic	6.3 - 19.6	37.0[b]	8	0
Cadmium	0.2 - 3.1	11.0[b]	8	0
Chromium (Total)	15.6 - 27.2	910.0[b]	8	0
Chromium VI	<0.1*	6.0[b]	8	0
Lead	14.2 - 789.9	200.0[a]	8	1
Selenium	<0.5*	250.0[b]	8	0
Nickel	10.2 - 24.2	130.0[b]	8	0
Copper	9.7 - 71.1	2400.0[b]	8	0
Zinc	54.0 - 288.3	3700.0[b]	8	0
Mercury	<0.5*	1.2[b]	8	0
Benzo(a)pyrene	0.1 - 4.38	2.2[b]	8	2
Dibenzo(a,h)anthracene	0.1 - 0.65	0.24[b]	8	4
TPH Aliphatic EC_5-EC_6	0.24 - 0.29	42.0[b]	4	0
TPH Aliphatic EC_6-EC_8	0.47 - 0.57	100.0[b]	4	0
TPH Aliphatic EC_8-EC_{10}	0.24 - 0.39	27.0[b]	4	0
TPH Aliphatic EC_{10}-EC_{12}	4.7 - 47.4	130.0[b]	4	0
TPH Aliphatic EC_{12}-EC_{16}	4.7 - 204.0	1100.0[b]	4	0
TPH Aliphatic EC_{16}-EC_{35}	18.5 - 261.3	65000.0[b]	4	0
TPH Aromatic EC_5-EC_7	0.01 - 0.02	70.0[b]	4	0
TPH Aromatic EC_7-EC_8	0.01 - 0.02	130.0[b]	4	0
TPH Aromatic EC_8-EC_{10}	0.05 - 0.07	34.0[b]	4	0
TPH Aromatic EC_{10}-EC_{12}	4.7 - 5.7	74.0[b]	4	0
TPH Aromatic EC_{12}-EC_{16}	5.3 - 95.5	140.0[b]	4	0
TPH Aromatic EC_{16}-EC_{21}	5.2 - 142.0	260.0[b]	4	0
TPH Aromatic EC_{21}-EC_{35}	19.5 - 65.2	1100.0[b]	4	0
SVOC	0.1 - 1.2	(See Below)	2	0
VOC	0.001 - 0.037	(See Below)	2	0
pH	8.3 - 9.2	N/A	8	-
Water Sol. Sulphate (as SO4)	70.0 - 1740.0	N/A	8	-
Asbestos	ND	D[c]	2	0

[a] DEFRA C4SL values for a Residential end-use with gardens;
[b] Third party UK screening values e.g. CIEH, CL:AIRE, Elemental GI Ltd and LQM 'S4UL' values for a residential end-use with private gardens. S4UL guideline values reproduced above under licence S4UL3849;
[c] Elemental GI Ltd general screening level;
* Contaminants all recorded below laboratory limits of detection; and
N/A = Not Applicable, ND = Not Detected, D = Detected.

Table 5.1 has identified the following exceedances in relation to the selected screening values (residential with private gardens):

- 1 No. exceedance of lead comprising:
  - Samples from 'Bund 1' of made ground at 0.1m begl;
- 2 No. exceedances of benzo(a)pyrene including:
  - Samples from TP01 of made ground at 1.40m begl;
  - Samples from TP03 of made ground at 0.10 begl;
- 4 No. exceedances of dibenzo(a,h)anthracene including:
  - Samples from TP01 of made ground at 1.40m begl;
  - Samples from TP02 of reworked topsoil (made ground) at 0.10m begl;
  - Samples from TP03 of made ground at 0.10 begl; and
  - Samples from 'Bund 1' of made ground at 0.1m begl.

It is noted that the exceedances summarised above were all within samples retrieved from made ground materials. No exceedances were encountered within samples retrieved from the underlying natural soils.

5.2.1 Semi-Volatile and Volatile Organic Compounds (SVOCs / VOCs)

The majority of VOC and SVOC compounds tested were recorded at or below the laboratory limits of detection, with a small number recorded within 0.1mg/kg (for SVOCs) or within 0.001mg/kg (for VOCs) of the limits of detection (indicating marginal concentrations).

However, where compounds were detected in excess of these detection limits they were compared to suitable soil screening values to confirm risks (screening values shown are taken from CL:AIRE / EIC screening values or from US EPA 'RSLs' for a residential soil). It can be confirmed that no exceedances of the relevant screening values were recorded and on this basis no risks have been identified from SVOCs or VOCs at the site at this stage.

5.3 Statistical Assessment

Statistical assessment of soil test data is only appropriate where a sufficient sample population is present. This requires a minimum number of soil samples from the same averaging zone. The data currently available for the subject site is not considered to be suitable for statistical assessment as the results may not prove reliable. As a conservative alternative the direct comparison of soil test data to the selected screening values (as outlined in the sections above) shall be adopted at this stage.

5.4 Radon and Ground Gas

The third-party report recommended that the site was not set within an area which is known to be at risk from radon gas and therefore no precautions were necessary.

The third-party report did not identify any feasible ground gas sources beneath the site or within its vicinity. No feasible ground gas sources / significant putrescible materials etc. have been identified on or around the site during any of the assessment or investigation works and therefore no feasible pollutant linkages are considered to be present at this stage.

6.0 UPDATED CONCEPTUAL SITE MODEL

The initial CSM was formed to set a basis for the assessment and investigation across the subject site. This has been used to provide focus and direction for certain parts of the site investigation works, and the data gathered from these works (including laboratory analyses and visual / olfactory observations) can now be used to update the CSM.

6.1 Human Health CSM

The site was developed from open fields to support the current residential dwelling and car parking area in the mid 20th Century. The western part of the car parking area appears to have been raised to create a development plateau through the deposition of various materials which have been recorded to extend to depths of up to 1.80m begl. A heating oil tank is present on the site's northern boundary.

The site is underlain by made ground in most areas, beneath which are natural soils of the Tidal Flat Deposits. Water was encountered within several trial pits during excavation although this is considered to be possibly indicative of perched water.

The laboratory testing of soil samples indicated that the following exceedances are present in relation to the chosen initial screening values:

- Exceedance of lead in made ground materials in the far western area of the site;
- Exceedances of benzo(a)pyrene in made ground materials beneath the gravel / tarmac parking area; and
- Exceedances of dibenzo(a,h)anthracene in reworked topsoil, made ground materials beneath the gravel / tarmac parking area and in the far western area of the site.

In accordance with our standard risk assessment methodology (presented at the end of this report), the following sources, pathways and receptors have been identified at the subject site at this stage:

Table 6.1: Updated Human Health CSM

***Investigated* Onsite Sources**	**Pathways**	**Receptors**	**Comment / Risk Rating[#]**
Oil Tank (TPH)	• Migration in Soils • Groundwater • Vapour Migration • Direct Contact • Plant Uptake	• End Users • Groundwater	**RISKS ABSENT** Contamination not recorded during investigation works
Suspected Historic Bund	• Migration in Soils • Groundwater • Vapour Migration • Direct Contact • Plant Uptake	• End Users • Groundwater	**RISKS ABSENT** Contamination not recorded during investigation works
Made Ground (PAHs)	• Direct Contact • Plant Uptake • Plant Uptake	• End Users	**MODERATE RISK** Contamination recorded in made ground across most areas of the site.
Made Ground (Lead)	• Direct Contact • Plant Uptake • Plant Uptake	• End Users	**MODERATE RISK** Contamination recorded in made ground across far western areas.
***Investigated* Offsite Sources**			
Adjacent Garages / Nursery	• Migration in Soils • Groundwater • Vapour Migration • Direct Contact • Plant Uptake	• End Users • Groundwater	**RISKS ABSENT** Contamination not recorded during investigation works

[#] Risk ratings are described in Table A1 within the 'Standard Risk Assessment – Considerations and Methodology' section at the end of this report.

6.1.1 Potential Pollutant Linkages:

For an identified / confirmed pollutant linkage to be present, potential sources, pathways and receptors must be present. With reference to the proposed residential end use, feasible potential pollutant linkages have been identified at the site as outlined in table 6.1 above. Remediation works are therefore considered necessary to break these linkages to the satisfaction of the Client and regulatory authorities (and other parties, as appropriate e.g. NHBC).

6.1.2 Controlled Waters Summary

The site is underlain by 'unproductive strata'. The nearest surface water body is a small watercourse in close proximity to the site to the north. The site is not recorded to be set within a 'source protection zone' and there aren't any water abstractions recorded within the site's vicinity.

As summarised above, exceedances have been recorded within soils at the site including elevated concentrations of lead and PAHs in made ground.

Based on the above, the site is not considered to present significant risks to controlled waters at this stage due to the lack of significantly elevated / mobile contamination, the absence of shallow groundwater and the aquifer status of the underlying natural soils.

6.1.3 Model Status and Uncertainty

The potential significant linkages discussed in this section are based on available data reviewed to date.

7.0 RECOMMENDATIONS

A review of the available site information (as discussed herein) has been undertaken to inform the following conclusions and recommendations. However, this report should be submitted to the appropriate regulators (and other stakeholders, as necessary) by the Client prior to the start of any irrecoverable works associated with the site.

7.1 Foundations and Enabling Works

It is understood that the Client's appointed Structural Engineer is undertaking an assessment of the foundations directly. However, at this stage Elemental GI Ltd would recommend consideration of the shallow soft soils (which may require a piled foundation solution) and the sloped ground which is present in some areas of the site (which may require profiling and / or management with regards to future layouts and structures).

7.2 Groundwater

Water ingress was noted at variable depths and positions during the recent site works and was absent within around half of the exploratory holes completed. Given the variable depth of the water strikes noted, and the absence of water at other nearby locations, it is considered likely that the above observations may be indicative of localised perched water pockets at this stage.

At this stage it is considered likely that dewatering (or similar) is likely to be required for excavations across parts of the site subject during construction.

7.3 Road Construction

It is understood that the Client's appointed Structural Engineer is undertaking an assessment of the road construction considerations directly.

7.4 Drainage

Elemental GI Ltd noted that *in situ* soakaway testing which was being undertaken at the site by others at the same time as the recent exploratory investigation works reported herein. It is understood that the results of these works shall be reported separately by others, although it can be confirmed that the natural soils beneath the site did not appear suitable (in terms of their test performance) for the consideration of *in situ* soakaway features.

7.5 Radon and Ground Gas

The third-party report recommended that the site was not set within an area which is known to be at risk from radon gas and therefore no precautions were necessary.

The third-party report did not identify any feasible ground gas sources beneath the site or within its vicinity. No feasible ground gas sources / significant putrescible materials etc. have

been identified on or around the site during any of the assessment or investigation works and therefore no feasible pollutant linkages are considered to be present at this stage.

7.6 Excavations

Generally poor stability was observed within both the made ground and natural soils beneath the site. All future excavations should therefore be assumed to be unstable as a conservative and risk-averse measure. The Client and / or site operators should assess risks associated with entry into excavations based upon these observations and should apply suitably safe working practices / support measures (in accordance with current best practice / guidance) to avoid risks to site workers / construction activities.

Concrete debris and other large anthropogenic items were encountered within the made ground at variable depths in some parts of the site. These conditions should be considered with regards to the excavations of foundations, utility / service trenches etc.

7.7 Contamination

The Phase II Conceptual Model and the Qualitative Risk Assessment outlined herein indicate that feasible pollutant linkages have been identified. This relates to elevated concentrations of various PAH compounds and lead within made ground beneath the site. In areas of the site where the thickness of the made ground is not excessive, these materials may be removed to expose the 'clean' underlying natural soils (which would not need capping), although in other areas the capping of the made ground within gardens, soft landscaping etc., will be necessary, subject to Regulatory Authority / NHBC (or similar) approval.

Any future construction works (e.g. demolition, deep foundation works etc.) should fully consider the risks from cross-contamination and creation of 'pathways'.

7.8 Remediation

Remediation works to protect human health are considered necessary subject to the approval of the Regulatory Authority / NHBC (or similar). It is recommended that a remedial method statement (RMS) is produced to guide future remedial works, although at this stage the capping and / or removal of made ground soils (provisionally recommended to be within 600mm of the finished surface levels) will be required for garden / soft landscaped areas where these materials remain *in situ* subject to Regulatory Authority / NHBC (or similar) approval.

7.9 Topsoil

Topsoil was not widely encountered during the recent investigation and therefore will need to be imported as part of future redevelopment.

As with all schemes / sites, all movements of soils (including their re-use one site, importation and exportation) must be undertaken in full compliance with all relevant licenses / permits / exemptions etc. as applicable (i.e. U1, MMP etc).

Any soils which are brought onto site should be suitably tested and approved by the Local Authority in advance (this may include classification of 'topsoil' against standards such as BS3882: 2015 'Specification for Topsoil').

7.10 Mining

No coal mining issues have been identified at the site at this stage, subject to regulatory authority approval.

7.11 Further Works

At this stage the following further works will be necessary, subject to comments from the Regulatory Authorities:

- Completion of foundation assessment by the Client's appointed Structural Engineer (including consideration of slopes and other features as discussed herein);
- Production of a Remedial Method Statement (RMS) confirm remediation requirements across the site;
- Liaison with utility providers to ensure the selection of appropriate construction materials; and
- Liaison with appropriate / licenced waste management contractors to confirm their requirements for any additional analysis etc. (i.e. WAC tests) where materials are chosen for off-site removal / disposal.

Terms and Conditions

We have obtained and reviewed information relating to the site, but this may not be complete, and liability cannot be accepted for information not available to Elemental GI Ltd at the time of writing this report. This report has been written in consideration of construction / development proposals (or similar) as described in Section 1.0 of this report. If any of these proposals change (e.g. layout), then this report may be subject to change.

This report has been prepared for the sole use and reliance of the Client. No other third party may rely upon or reproduce the content of this report without our prior written approval. If any unauthorised third party comes into possession of this report, they rely upon it entirely at their own risk and the authors do not owe them any warranty, duty of care or skill.

Our report, including the conclusions and recommendations, are considered reasonable based on the findings of the Phase I assessment. However, these cannot be guaranteed to gain regulatory approval and therefore the Client should submit it to them (as necessary) for their comments and approval prior to undertaking any irrecoverable works associated with the subject site.

The findings and recommendations made in this report are based on published information (as presented in the accompanying appendices). Elemental GI Ltd cannot accept responsibility for the reliability and authenticity of published information or reports prepared by third parties. There may be conditions prevailing on site which have not been revealed by this assessment and which have not been taken into account by this report (e.g. ground conditions between exploratory locations). Responsibility cannot be accepted for any conditions not revealed by this investigation and assessment. It should be noted that groundwater levels etc. may vary due to seasonal and other effects. Whilst it may be utilised by others for reference purposes at the Client's discretion, it has not been prepared for any other purposes (e.g. waste classification, drainage excavations etc.) and therefore additional works may be required by third parties dependent upon their own requirements / works. Any works which are proposed at greater depths than reported herein may require confirmatory investigation works as necessary.

The conclusions and recommendations presented herein are considered reasonable based on the assessments of the site undertaken by Elemental GI Ltd. However, these cannot be guaranteed to gain regulatory approval and therefore copies of this report should be sent to the appropriate regulatory authorities and / or other organisations (as appropriate) by the Client for their comments and approval prior to undertaking any irrecoverable works associated with the site.

The possibility of significant variation in ground conditions existing between / beneath test locations / depths cannot be discounted and must be considered within the design proposals for the subject site. All soakaway designs should be approved by the relevant statutory authority prior to implementation and must adhere to the standard design and ground setting requirements, upon which your appointed drainage design engineers should advise you.

Where comments / recommendations have been made relating to specific depths it cannot be guaranteed that ground conditions shall be similar at surrounding / underlying depths, which should be taken into consideration as necessary by other.

Standard Risk Assessment – Considerations and Methodology

Elemental GI Ltd have based our standard risk assessment methodology upon current legislation and prevailing best practice and available guidance. This includes the following:

- DEFRA / EA document 'Contaminated Land Report 11 (CLR11) Model Procedures for the Management of Land Contamination' (2004) [*withdrawn but used for general reference purposes*];
- NHBC / EA / CIEH document 'Guidance for the Safe Development of Housing on Land Affected by Contamination' (2008);
- DEFRA 'Environmental Protection Act 1990: Part 2A – Contaminated Land Statutory Guidance (2012); and
- Environment Agency 'Collection: Land Contamination Technical Guidance (2014) held at:
  - https://www.gov.uk/government/collections/land-contamination-technical-guidance

Construction of Conceptual Site Model

Elemental GI Ltd have based our standard risk assessment methodology upon current legislation and prevailing best practice and available guidance. This includes the assessment of potentially contaminated land in terms of 'significant pollutants' and 'pollutant linkages', using SOURCE-PATHWAY-RECEPTOR' scenarios for the site. For a pollutant linkage to exist all three of these elements must be present. These have been clearly defined in the guidance as follows:

- …..potential source as 'a contaminant which is in, or under the land and which has the potential to cause significant harm or to cause pollution of controlled waters'.
- …..potential pathway as 'one or more routes or means by, or through, which a receptor is being exposed to, or affected by a contaminant, or could be so exposed or affected'.
- …..potential receptor as 'a living organism, a group of living organisms, an ecological system or a piece of property which is being or could be, harmed by a contaminant or controlled waters which are being, or could be, polluted by a contaminant'.

Within this report, pathways including the following have been considered:

- Ingestion of soil;
- Ingestion of site-grown vegetables;
- Ingestion of site-reared livestock / fish;
- Dermal contact with soils;
- Inhalation of vapours;
- Inhalation of soil-derived dust.

The receptors which we have considered are described in Section 1.0 of this report.

Risk Assessment Methodology

Our risk assessment methodology is based upon a phased approach, which takes the following steps:

1. Hazard Identification and Assessment:
    a. Establishing potential contaminant sources through the derivation of initial conceptual site model (CSM); and
    b. Analysing the potential for unacceptable risks (what pathways and receptors could be present, what pollutant linkages could result and what could the effects be).

2. Risk Estimation and Evaluation:
    a. Prediction of the magnitude and probability of the possible consequences;
    b. Investigation of the potential risks;
    c. Completion of Generic Quantitative Risk Assessment (GQRA); and
    d. Evaluation of risks / confirmation of pollutant linkages (leading onto step '3' if identified).

3. Remediation Design / Implementation / Verification:
    a. Completion of Detailed Quantitative Risk Assessment (DQRA) if necessary;
    b. Collation of remedial strategy;
    c. Implementation of remedial strategy / validation; and
    d. Final reporting.

Risk terminology and classification is defined through standard wording and descriptions, as contained in the documents referenced above. This includes the balance, comparison and assessment of risk as a dynamic categorisation / classification of probability vs. possible consequence(s), as shown in the table A1 below:

Table A1: Risk Categorisation

Probability (Likelihood)		Consequence			
		Severe	Medium	Mild	Minor
	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Not likely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

Risk levels are described as follows:

Table A2: Risk Level Descriptions

Term	Description
Very High Risk	A high probability exists that severe / significant harm could arise to someone or something from the hazard which has been identified. Remedial action is required.
High Risk	Harm is likely to arise to someone or something from the hazard which has been identified. Remedial action is usually required.
Moderate Risk	Harm could potentially arise to someone or something from the hazard which has been identified without remedial action, although it is considered to be relatively unlikely that such harm would be severe.
Low Risk	Harm could theoretically arise to someone or something from the hazard which has been identified without remedial action, although it is considered that any effects would be mild.
Very Low Risk	Harm is not likely to arise to someone or something from the hazard which has been identified.

The NHBC / EA / CIEH document 'Guidance for the Safe Development of Housing on Land Affected by Contamination' (2008) defines the following (reproduced verbatim):

"**Severity** (consequence) can be defined as the adverse effects (or harm) arising from a defined hazard, which impairs the quality of human health or the environment in the short or longer term. For example a consequence defined as "Severe" could be defined as "Highly elevated concentrations likely to result in 'significant harm' to human health as defined by the EPA 1990, Part 2A, if exposure occurs". The type and form of the contaminant needs to be known in order to understand the effect on humans and therefore severity of potential harm. For instance different forms of cyanide behave differently. Complex cyanide ("blue billy") is relatively "non toxic" whereas free cyanide is "highly toxic" (Environment Agency 2002b).

Probability can be defined as the chance of a particular event occurring in a given period of time. For example, a "High Likelihood" could be defined as "where an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution"."

APPENDIX I

Proposed Site Layout Plan



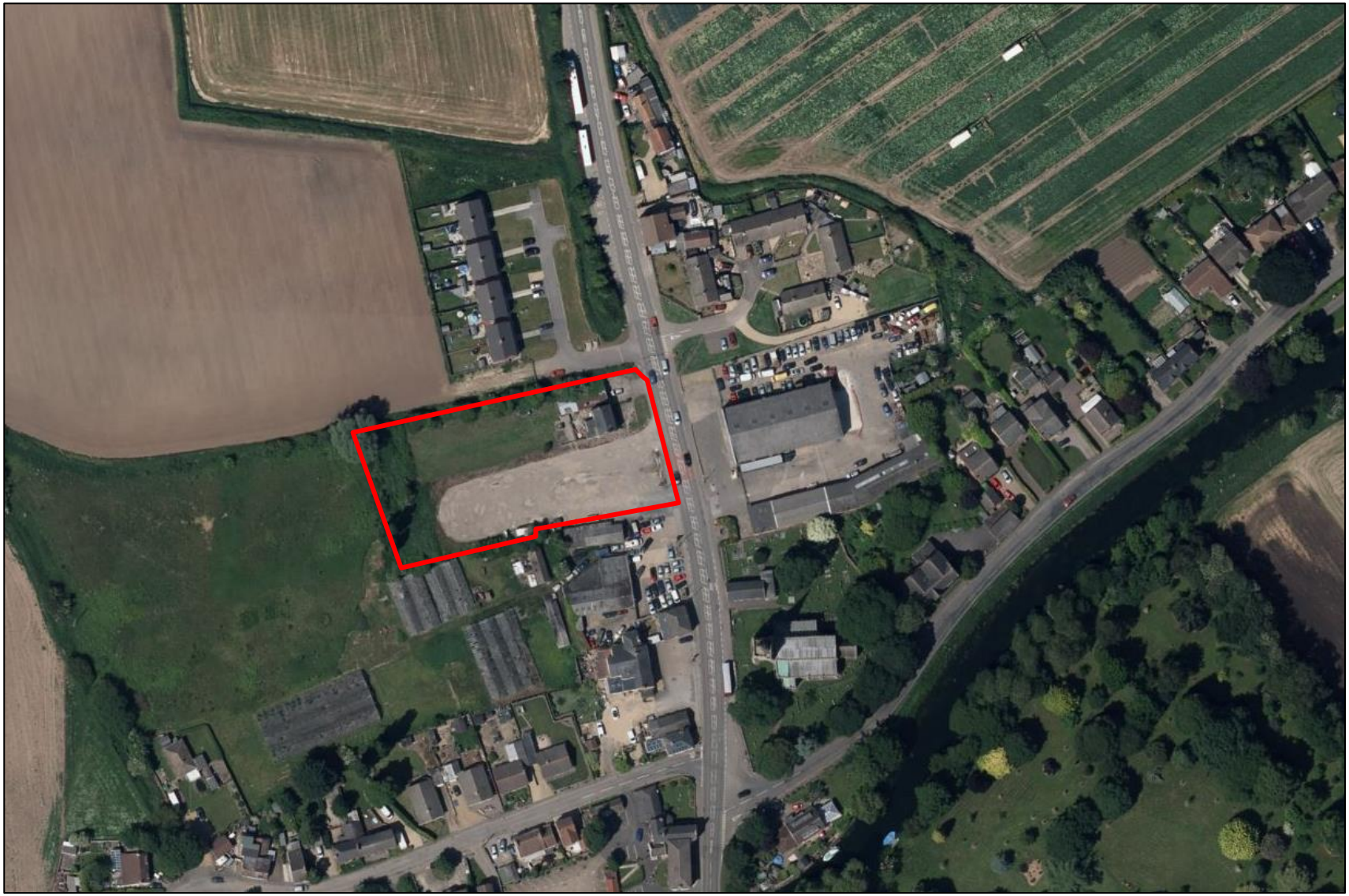
CLIENT:	TITLE:	DATE:	SCALE@SIZE:	
Scott Park Developments Ltd	Proposed Site Layout Plan	Aug. 2021	NOT TO SCALE	Elemental GI Ltd
		DRAWING No: E21106_001 FINAL	DESIGN/DRAWN: JR	

APPENDIX II

Site Location Plan

NOTES:

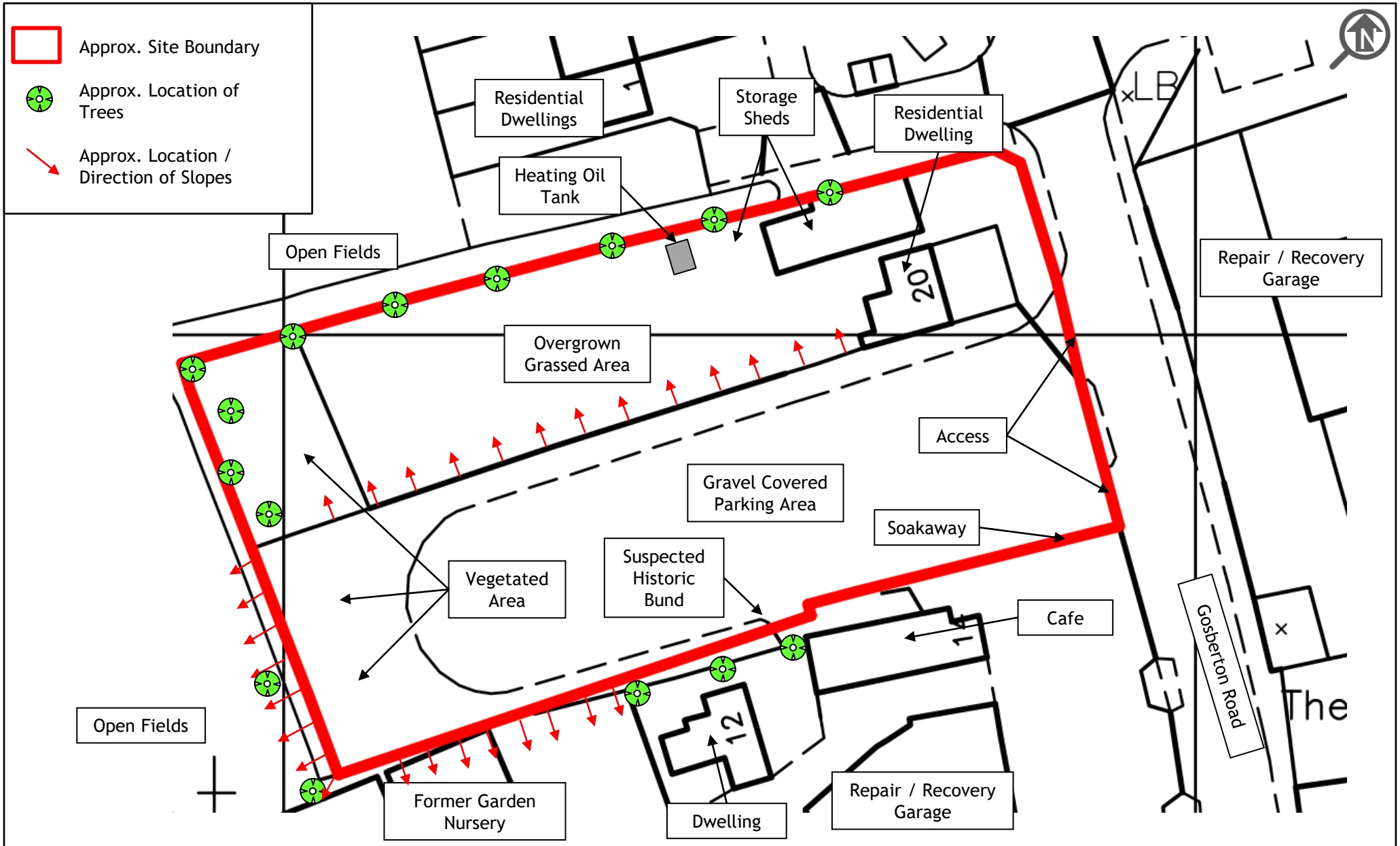
= Approx. Site Location



CLIENT:	TITLE:	DATE:	SCALE@SIZE:	
Scott Park Developments Ltd	Site Location Plan	Aug. 2021	NOT TO SCALE	Elemental GI Ltd
		DRAWING No: E21106_002 FINAL	DESIGN/DRAWN: JR	

APPENDIX III

Site Features Plan



CLIENT:	TITLE:	DATE:	SCALE@SIZE:
Scott Park Developments Ltd	Site Features Plan	Aug. 2021	NOT TO SCALE
		DRAWING No: E21106_003 FINAL	DESIGN/DRAWN: JR

Elemental GI Ltd

APPENDIX IV

General Photographic Record



Photo 1 – Eastern Area of Site



Photo 2 – View of Site from West



Photo 3 – View of Site from Gosberton Rd.



Photo 4 – Central Area of Site

CLIENT:	TITLE:	DATE:	SCALE@SIZE:	
Scott Park Developments Ltd	General Photographic Record	Aug. 2021	-	Elemental GI Ltd
		DRAWING No: E21106_004 FINAL	DESIGN/DRAWN: JR	



Photo 5 – Trial Pit TP01



Photo 6 – Vegetation in Western Area / 'BUND 1'



Photo 7 – Trial Pit TP03



Photo 8 – Trial Pit TP07.

CLIENT:	TITLE:	DATE:	SCALE@SIZE:	
Scott Park Developments Ltd	General Photographic Record	Aug. 2021	-	Elemental GI Ltd
		DRAWING No: E21106_004 FINAL	DESIGN/DRAWN: JR	

APPENDIX V

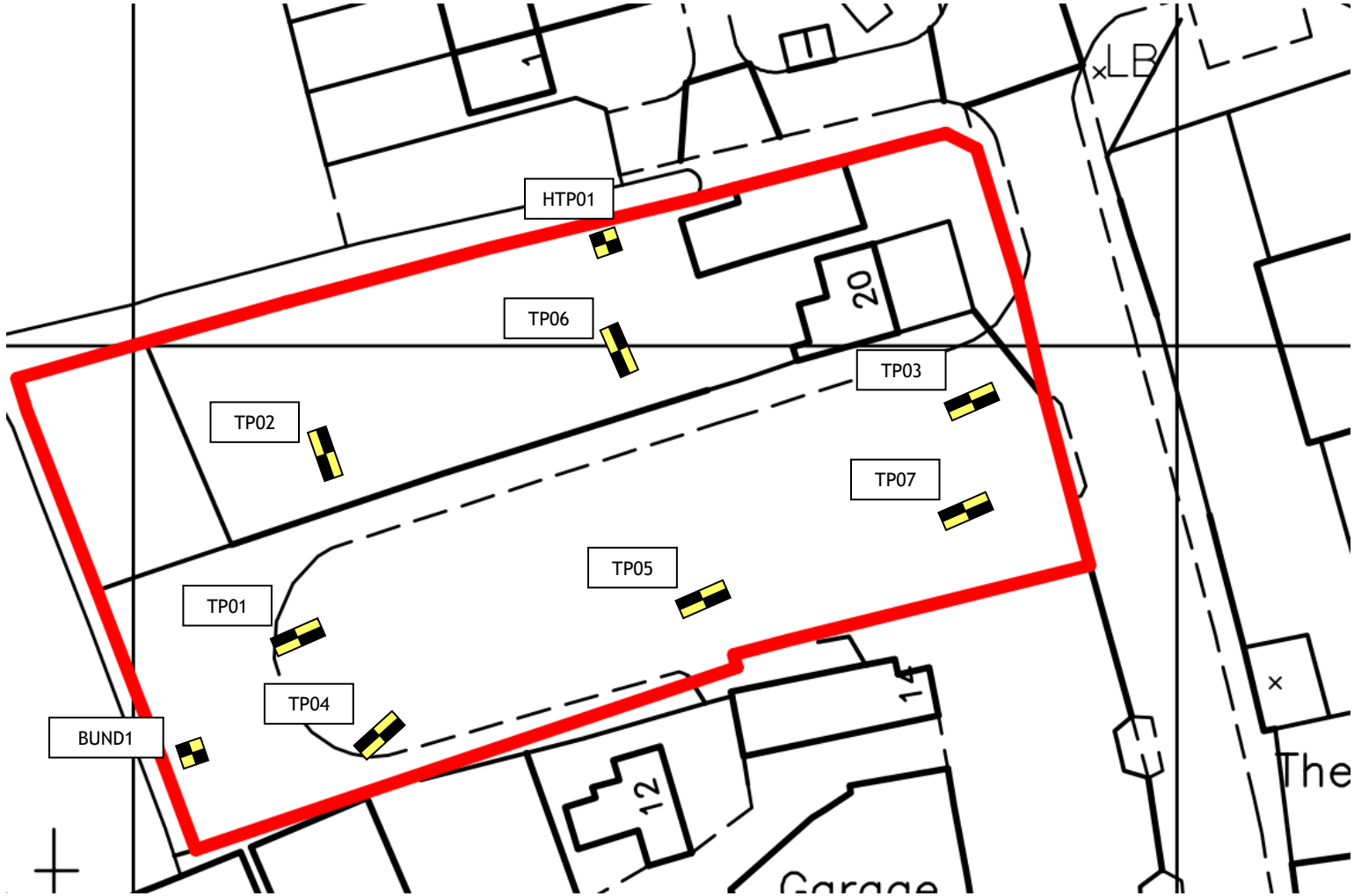
Site Investigation Plan

NOTES:

Approx. Site Boundary

Approx. Location of Trial Pits

Approx. Location of Hand Dug Trial Pits



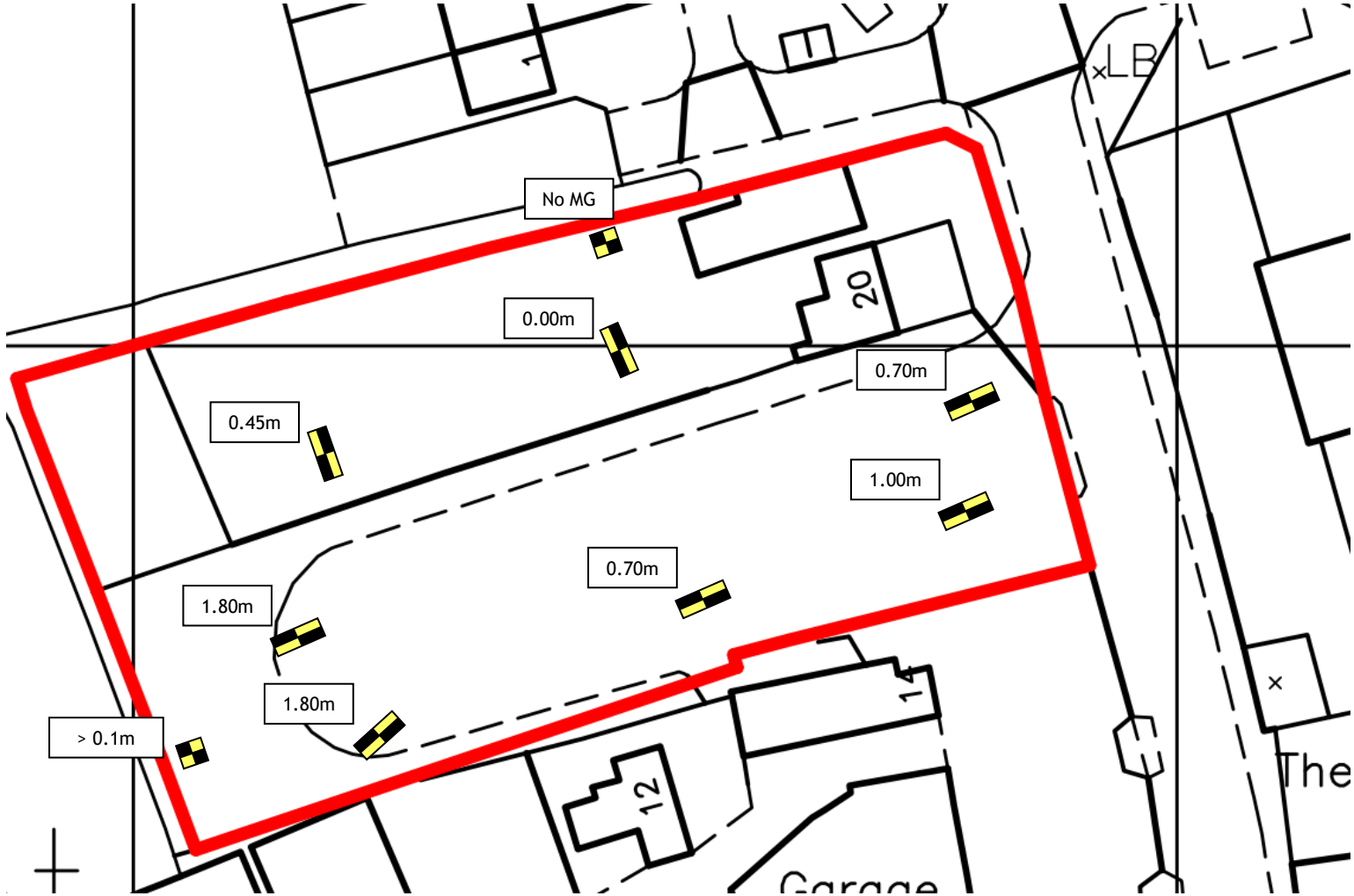
CLIENT:	TITLE:	DATE:	SCALE@SIZE:	
Scott Park Developments Ltd	Site Investigation Layout Plan	Aug. 2021	NOT TO SCALE	Elemental GI Ltd
		DRAWING No: E21106_005 FINAL	DESIGN/DRAWN: JR	

NOTES:

Approx. Site Boundary

Approx. Location of Trial Pits

Approx. Location of Hand Dug Trial Pits



CLIENT:	TITLE:	DATE:	SCALE@SIZE:
Scott Park Developments Ltd	Site Investigation Layout Plan: Depth to Base of Made Ground (m)	Aug. 2021	NOT TO SCALE
		DRAWING No: E21106_005.2 FINAL	DESIGN/DRAWN: JR

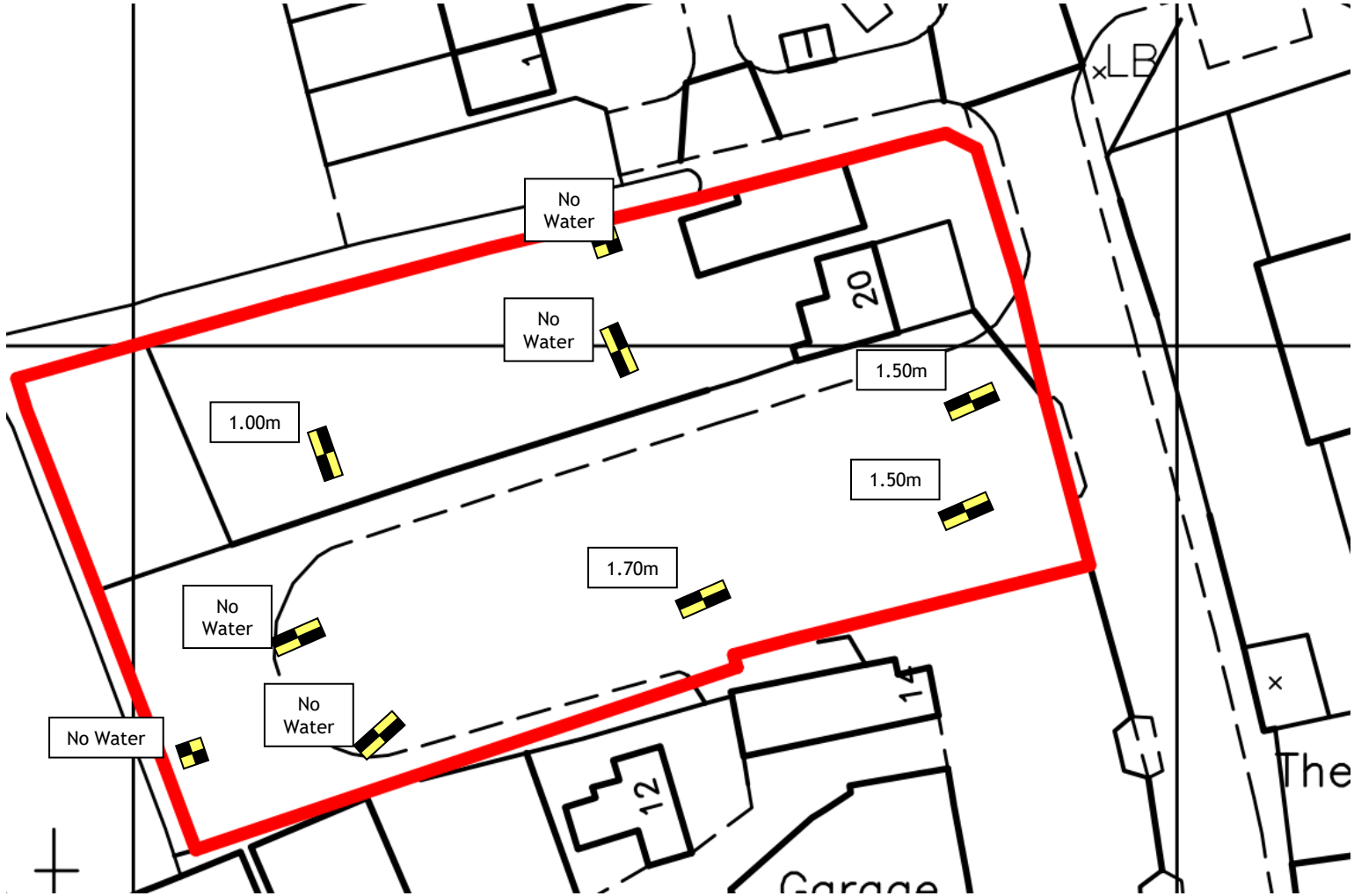
Elemental GI Ltd

NOTES:

Approx. Site Boundary

Approx. Location of Trial Pits

Approx. Location of Hand Dug Trial Pits



CLIENT:	TITLE:	DATE:	SCALE@SIZE:	
Scott Park Developments Ltd	Site Investigation Layout Plan: Depth of Water Strikes (m)	Aug. 2021	NOT TO SCALE	Elemental GI Ltd
		DRAWING No: E21106_005.3 FINAL	DESIGN/DRAWN: JR	

APPENDIX VI

Exploratory Hole Logs

Site:	Site off Gosberton Road, Surfleet	**Elemental GI Ltd**	
Client:	Scott Park Developments Ltd		
Contractor: S A Parker Construction Services Ltd		Project No: E21106	Sheet: 1 of 1
Equipment: JCB 3CX		Logged by: JR	Date: 10th August 2021

TP01

Field Monitoring and Sampling			Strata		Legend
Depth (m)	Type	Result (HSV/PP)	Depth (m)	Description	
			1m	MADE GROUND (Comprising grey and brown very sandy fine to coarse and subangular gravel of brick, tarmac and concrete). … with frequent whole bricks, wood fragments and boulders of tarmac and concrete present from 0.60m depth. … with a bituminous odour present from 0.80m depth.	
			1.20		
1.40	JVT			MADE GROUND (Comprising light yellowish brown very gravelly sand. Gravel is fine to coarse and subangular of brick and concrete with boulders and concrete with boulders and metal bars also present).	
			1.80		
2.00	JVT	HSV @ 2.50m = 45, 25, 40	2m	Soft to firm grey slightly gravelly sandy clayey SILT. Gravel is fine and subrounded of mixed lithology. … becoming soft from 2.10m depth. … becoming slightly damp from 2.40m depth.	
			2.75		
			3m	Exploratory location completed at 2.75m depth.	
			4m		
			5m		

Groundwater:
No groundwater encountered during excavation.

Remarks:
1) Trial pit terminated on completion of testing at 2.75m depth.
2) Poor stability and localised collapse of walls noted from 0.90m depth.

Strength descriptions of granular soils are based on Engineer's field description(s)
HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm^2)

Site:	Site off Gosberton Road, Surfleet	**Elemental GI Ltd**	
Client:	Scott Park Developments Ltd		
Contractor: S A Parker Construction Services Ltd		Project No: E21106	Sheet: 1 of 1
Equipment: JCB 3CX		Logged by: JR	Date: 10th August 2021

TP02

Field Monitoring and Sampling			Strata		Legend
Depth (m)	Type	Result (HSV/PP)	Depth (m)	Description	
0.10	JVT		0.45	MADE GROUND (Comprising vegetation over reworked brown silty sandy topsoil with rare fine to coarse and subangular fragments of pottery, brick and concrete).	
0.60	JT	HSV @ 0.65m = 65, 65, 65 HSV @ 0.85m = 40, 30, 35 HSV @ 1.10m = 40, 30, 30	0.95	Firm orangish brown sandy SILT. … becoming soft to firm from 0.80m depth.	
			1.40	Soft to firm light grey and brown mottled sandy SILT/CLAY. … becoming damp from 1.00m depth.	
				Exploratory location completed at 1.40m depth.	

2m

3m

4m

5m

Groundwater:
Very slight ingress of water encountered at 1.00m depth at southern end of pit.

Remarks:
1) Trial pit terminated on completion of testing at 1.40m depth.

Strength descriptions of granular soils are based on Engineer's field description(s)
HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm^2)

Site:	Site off Gosberton Road, Surfleet	Elemental GI Ltd	
Client:	Scott Park Developments Ltd		
Contractor: S A Parker Construction Services Ltd		Project No: E21106	Sheet: 1 of 1
Equipment: JCB 3CX		Logged by: JR	Date: 10th August 2021

TP03

Field Monitoring and Sampling			Strata		Legend
Depth (m)	Type	Result (HSV/PP)	Depth (m)	Description	
0.10	JVT		0.30	MADE GROUND (Comprising light grey and orange fine to coarse and subrounded to subangular sandy gravel of mixed lithology including tarmac and brick).	
0.60	JVT		0.70	MADE GROUND (Comprising possibly reworked grey sandy silt/clay).	
		HSV @ 0.80m = 60, 60, 65 HSV @ 1.00m = 20, 30, 20 HSV @ 1.20m = 20, 20, 30	1m	Firm grey slightly sandy silty CLAY. … becoming damp and soft from 1.00m depth.	
			2m	… becoming very silty and very sandy from 1.50m depth.	
			2.50		
			3m	Exploratory location completed at 2.50m depth.	
			4m		
			5m		

Groundwater:
Ingress of water encountered at 1.50m depth at southern end of pit.

Remarks:
1) Trial pit terminated on completion of testing at 2.50m depth.
2) With collapse of side walls noted from 1.40m depth after completion of pit.

Strength descriptions of granular soils are based on Engineer's field description(s)
HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm^2)

Site:	Site off Gosberton Road, Surfleet	**Elemental GI Ltd**	
Client:	Scott Park Developments Ltd		
Contractor: S A Parker Construction Services Ltd		Project No: E21106	Sheet: 1 of 1
Equipment: JCB 3CX		Logged by: JR	Date: 10th August 2021

TP04

Field Monitoring and Sampling			Strata		Legend
Depth (m)	Type	Result (HSV/PP)	Depth (m)	Description	
0.20	JVT		0.35	MADE GROUND (Comprising grey fine to medium and subrounded gravel of mixed lithology with fragments of brick and concrete present). … becoming brown from 0.15m depth.	
			1.80	MADE GROUND (Comprising brown slightly silty gravelly sand. Gravel is fine to coarse and of brick and concrete). … with concrete post encountered at 1.00m depth. … with metal bars, plastic bags and concrete boulders encountered from 1.20m depth.	
2.10	JV		2.30	Firm grey SILT/CLAY. … with a slight hydrocarbon odour and staining noted from 2.10m depth.	
				Exploratory location completed at 2.30m depth.	

Groundwater:
No groundwater encountered during excavation.

Remarks:
1) Trial pit terminated on completion of testing at 2.30m depth.

Strength descriptions of granular soils are based on Engineer's field description(s)
HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm^2)

Site:	Site off Gosberton Road, Surfleet	**Elemental GI Ltd**	
Client:	Scott Park Developments Ltd		
Contractor: S A Parker Construction Services Ltd		Project No: E21106	Sheet: 1 of 1
Equipment: JCB 3CX		Logged by: JR	Date: 10th August 2021

TP05

Field Monitoring and Sampling			Strata	
Depth (m)	Type	Result (HSV/PP)	Depth (m)	Description
0.80	JV	HSV @ 2.30m = 20, 20, 25	0.70	MADE GROUND (Comprising black and grey silty very gravelly sand. Gravel is fine to medium and subrounded to subangular of mixed lithology). … becoming light brown from 0.10m depth. … becoming dark grey from 0.20m depth with whole bricks and concrete cobbles also present.
			1.70	Soft grey very sandy SILT. … becoming damp from 1.10m depth.
			2.25	Loose grey very silty fine SAND.
			2.40	Soft brown and grey mottled sandy SILT/CLAY.
				Exploratory location completed at 2.40m depth.

Legend

Groundwater:
Slow ingress of water encountered at 1.70m depth.

Remarks:
1) Trial pit terminated on completion of testing at 2.40m depth.

Strength descriptions of granular soils are based on Engineer's field description(s)
HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm^2)

Site:	Site off Gosberton Road, Surfleet	**Elemental GI Ltd**	
Client:	Scott Park Developments Ltd		
Contractor: S A Parker Construction Services Ltd		Project No: E21106	Sheet: 1 of 1
Equipment: JCB 3CX		Logged by: JR	Date: 10th August 2021

TP06

Field Monitoring and Sampling			Strata		Legend
Depth (m)	Type	Result (HSV/PP)	Depth (m)	Description	
			0.25	TOPSOIL comprising vegetation over brown silty sand.	
		HSV @ 0.80m = 40, 50, 40		Firm greyish brown very sandy SILT.	
			1m	… becoming soft from 0.90m depth.	
		HSV @ 1.10m = 60, 20, 25		… becoming clayey fom 1.20m depth.	
			2m		
		HSV @ 2.20m = 15, 5, 5			
			2.60	… becoming grey from 2.50m depth.	
				Exploratory location completed at 2.60m depth.	
			3m		
			4m		
			5m		

Groundwater:
No groundwater encountered during excavation.

Remarks:
1) Trial pit terminated on completion of testing at 2.60m depth.

Strength descriptions of granular soils are based on Engineer's field description(s)
HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm^2)

Site:	Site off Gosberton Road, Surfleet	**Elemental GI Ltd**	
Client:	Scott Park Developments Ltd		
Contractor: S A Parker Construction Services Ltd		Project No: E21106	Sheet: 1 of 1
Equipment: JCB 3CX		Logged by: JR	Date: 10th August 2021

TP07

Field Monitoring and Sampling			Strata		Legend
Depth (m)	Type	Result (HSV/PP)	Depth (m)	Description	
			0.40	MADE GROUND (Comprising black and grey silty very gravelly sand. Gravel is fine to medium and subrounded to subangular of mixed lithology).	
			1.00	MADE GROUND (Comprising reworked grey sandy silt with rare fragments of brick).	
1.50	JVT	HSV @ 1.10m = 10, 15, 10	1.75	Soft grey and black sandy SILT/CLAY.	
			2m	Exploratory location completed at 1.75m depth.	
			3m		
			4m		
			5m		

Groundwater:
Ingress of water encountered at 1.50m depth.

Remarks:
1) Trial pit terminated on completion of testing at 1.75m depth.

Strength descriptions of granular soils are based on Engineer's field description(s)
HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm^2)

Site:	Site off Gosberton Road, Surfleet	Elemental GI Ltd	
Client:	Scott Park Developments Ltd		
Contractor:		Project No: E21106	Sheet: 1 of 1
Equipment: Hand Tools		Logged by: JR	Date: 10th August 2021

HTP1

Field Monitoring and Sampling			Strata		Legend
Depth (m)	Type	Result (HSV/PP)	Depth (m)	Description	
0.20	JV		0.20	TOPSOIL comprising vegetation over brown silty sand.	
				Exploratory location completed at 0.20m depth.	

1m

2m

3m

4m

5m

Groundwater:
No groundwater encountered during excavation.

Remarks:
1) Completed as a hand dug trial pit at 0.20m depth, adjacent to disused tank.

Strength descriptions of granular soils are based on Engineer's field description(s)
HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm^2)

APPENDIX VII

Laboratory Testing Data

Environmental Chemistry
SOCOTEC UK
Ashby Rd, Bretby,
Burton-on-Trent, UK
DE15 0YZ

Certificate of Analysis

Project No: 21080680

Client: Elemental GI Ltd

Quote Number: BEC210821042

Project Reference: E21106

Site Name: Site Off Gosberton Road, Surfleet

Number of Samples Received: 12

Date Received: 10/08/2021

Analysis Date: 20/08/2021

Date Issued: 31/08/2021

Job Status: Complete

Report Type: Final Version 01

This report supersedes any versions previously issued by the laboratory

Account Manager

Emily Jones

Authorised by the Operations Manager
Becky Batham

Client: Elemental GI Ltd

Project Name: Site Off Gosberton Road, Surfleet

Project No: 21080680

Date Issued: 31/08/2021

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type
TP01-0-ES-1.40	21080680-001	10/08/2021 00:00:00	SOLID
TP01-0-ES-2.00	21080680-002	10/08/2021 00:00:00	SOLID
TP02-0-ES-0.10	21080680-003	10/08/2021 00:00:00	SOLID
TP02-0-ES-0.60	21080680-004	10/08/2021 00:00:00	SOLID
TP03-0-ES-0.10	21080680-005	10/08/2021 00:00:00	SOLID
TP03-0-ES-0.60	21080680-006	10/08/2021 00:00:00	SOLID
TP04-0-ES-0.20	21080680-007	10/08/2021 00:00:00	SOLID
TP04-0-ES-2.10	21080680-008	10/08/2021 00:00:00	SOLID
TP05-0-ES-0.80	21080680-009	10/08/2021 00:00:00	SOLID
TP07-0-ES-1.50	21080680-010	10/08/2021 00:00:00	SOLID
HTP01-0-ES-0.20	21080680-011	10/08/2021 00:00:00	SOLID
BUNP1-0-ES-0.10	21080680-012	10/08/2021 00:00:00	SOLID

SOCOTEC

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
Date Issued: 31/08/2021

UKAS TESTING 1252

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	001	002	003	004	005	006	007
Sample ID					001	002	003	004	005	006	007
Customer ID					TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
Sample Type					SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Sampling Date					10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
>C6-C7 Aliphatic HS_1D_AL	GROHSA/BTEXHSA	0.2	mg/kg^	UM						<0.286	
>C7-C8 Aliphatic HS_1D_AL	GROHSA/BTEXHSA	0.2	mg/kg^	UM						<0.286	
>C7-C8 Aromatic HS_1D_AR	GROHSA/BTEXHSA	0.01	mg/kg^	UM						<0.014	
>C8-C10 Aliphatic HS_1D_AL	GROHSA/BTEXHSA	0.2	mg/kg^	UM						<0.286	
>C8-C10 Aromatic HS_1D_AR	GROHSA/BTEXHSA	0.04	mg/kg^	UM						<0.057	
C5-C6 Aliphatic HS_1D_AL	GROHSA/BTEXHSA	0.2	mg/kg^	UM						<0.286*	
C5-C7 Aromatic HS_1D_AR	GROHSA/BTEXHSA	0.01	mg/kg^	UM						<0.014	
Total GRO C5-C10 HS_1D_Total	GROHSA/BTEXHSA	0.2	mg/kg^	UM						<0.286	
pH (2.5:1 extraction)	PHSOIL	1	pH units	UM	8.4	8.7	8.3	8.4	9.2		8.5
Chromium (VI) as Cr	KONENS	0.1	mg/kg^	N	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1
Phenol Index	SFAPI	0.5	mg/kg^	U	<0.6	<0.7	<0.6	<0.6	<0.5		<0.5
Total Organic Carbon	WSLM59	0.02	% m/m^	U	1.67	0.73	2.60	0.48	1.30		1.42
Arsenic as As	ICPMSS	0.3	mg/kg^	UM	11.9	14.6	19.6	13.6	11.2		6.3
Cadmium as Cd	ICPMSS	0.2	mg/kg^	UM	0.5	<0.2	0.4	<0.2	0.8		1.1
Copper as Cu	ICPMSS	1.6	mg/kg^	UM	21.7	14.9	23.0	9.7	14.3		19.9
Lead as Pb	ICPMSS	0.7	mg/kg^	UM	53.4	19.8	102.4	14.2	30.4		40.9
Mercury as Hg	ICPMSS	0.5	mg/kg^	UM	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5
Nickel as Ni	ICPMSS	2	mg/kg^	UM	14.8	24.2	17.4	16.9	14.0		10.2
Selenium as Se	ICPMSS	0.5	mg/kg^	UM	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
Date Issued: 31/08/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
>C6-C7 Aliphatic HS_1D_AL	GROHSA/BTEXHSA	0.2	mg/kg^	UM		NA		<0.262	<0.236	
>C7-C8 Aliphatic HS_1D_AL	GROHSA/BTEXHSA	0.2	mg/kg^	UM		NA		<0.262	<0.236	
>C7-C8 Aromatic HS_1D_AR	GROHSA/BTEXHSA	0.01	mg/kg^	UM		<0.013		<0.013	<0.012	
>C8-C10 Aliphatic HS_1D_AL	GROHSA/BTEXHSA	0.2	mg/kg^	UM		NA		0.390	<0.236	
>C8-C10 Aromatic HS_1D_AR	GROHSA/BTEXHSA	0.04	mg/kg^	UM		0.066		<0.052	<0.048	
C5-C6 Aliphatic HS_1D_AL	GROHSA/BTEXHSA	0.2	mg/kg^	UM		NA		<0.262*	<0.236*	
C5-C7 Aromatic HS_1D_AR	GROHSA/BTEXHSA	0.01	mg/kg^	UM		<0.013		<0.013	<0.012	
Total GRO C5-C10 HS_1D_Total	GROHSA/BTEXHSA	0.2	mg/kg^	UM		NA		0.586	<0.236	
pH (2.5:1 extraction)	PHSOIL	1	pH units	UM				8.5		8.3
Chromium (VI) as Cr	KONENS	0.1	mg/kg^	N				<0.1		<0.1
Phenol Index	SFAPI	0.5	mg/kg^	U				<0.7		<0.6
Total Organic Carbon	WSLM59	0.02	% m/m^	U				0.69		4.87
Arsenic as As	ICPMSS	0.3	mg/kg^	UM				8.1		9.4
Cadmium as Cd	ICPMSS	0.2	mg/kg^	UM				<0.2		3.1
Copper as Cu	ICPMSS	1.6	mg/kg^	UM				13.7		71.1
Lead as Pb	ICPMSS	0.7	mg/kg^	UM				24.3		789.9
Mercury as Hg	ICPMSS	0.5	mg/kg^	UM				<0.5		<0.5
Nickel as Ni	ICPMSS	2	mg/kg^	UM				21.0		12.9
Selenium as Se	ICPMSS	0.5	mg/kg^	UM				<0.5		<0.5

SOCOTEC

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
Date Issued: 31/08/2021

UKAS TESTING 1252

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	001	002	003	004	005	006	007
Sample ID					001	002	003	004	005	006	007
Customer ID					TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
Sample Type					SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Sampling Date					10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Total Chromium as Cr	ICPMSS	1.2	mg/kg^	UM	19.5	27.2	19.8	21.0	19.4		15.6
Zinc as Zn	ICPMSS	16	mg/kg^	UM	68.2	76.6	107.1	54.0	62.6		60.4
Water Soluble Sulphate as SO4 by Mass	ICPWSS	20	mg/kg^	UM	1740	266	247	70	817		1730
MTBE	BTEXHSA	20	µg/kg^	U						<29*	
Benzene HS_1D_AR	BTEXHSA	10	µg/kg^	UM						<14	
Ethylbenzene HS_1D_AR	BTEXHSA	10	µg/kg^	UM						<14	
m/p-Xylene HS_1D_AR	BTEXHSA	20	µg/kg^	UM						<29	
o-Xylene HS_1D_AR	BTEXHSA	10	µg/kg^	UM						<14	
Toluene HS_1D_AR	BTEXHSA	10	µg/kg^	UM						<14	
Acenaphthene	PAHMSUS	0.08	mg/kg^	UM	0.19	0.11	<0.09	<0.10	0.71		<0.09
Acenaphthylene	PAHMSUS	0.08	mg/kg^	U	0.18	<0.11	0.12	<0.10	0.15		<0.09
Anthracene	PAHMSUS	0.08	mg/kg^	U	1.11	0.21	0.21	<0.10	1.10		0.13
Benzo[a]anthracene	PAHMSUS	0.08	mg/kg^	UM	2.54	0.36	1.55	<0.10	3.48		0.71
Benzo[a]pyrene	PAHMSUS	0.08	mg/kg^	UM	3.24	0.43	1.94	<0.10	4.38		1.09
Benzo[b]fluoranthene	PAHMSUS	0.08	mg/kg^	UM	2.90	0.38	1.78	<0.10	3.73		0.97
Benzo[g,h,i]perylene	PAHMSUS	0.08	mg/kg^	UM	1.77	0.20	1.06	<0.10	2.49		0.66
Benzo[k]fluoranthene	PAHMSUS	0.08	mg/kg^	UM	1.02	0.36	0.68	<0.10	1.40		0.35
Chrysene	PAHMSUS	0.08	mg/kg^	UM	2.28	0.35	1.32	<0.10	2.97		0.69
Dibenzo[a,h]anthracene	PAHMSUS	0.08	mg/kg^	UM	0.48	<0.11	0.28	<0.10	0.65		0.18

Client: Elemental GI Ltd
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Project No: 21080680
Date Issued: 31/08/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Total Chromium as Cr	ICPMSS	1.2	mg/kg^	UM				23.1		20.2
Zinc as Zn	ICPMSS	16	mg/kg^	UM				97.9		288.3
Water Soluble Sulphate as SO4 by Mass	ICPWSS	20	mg/kg^	UM				168		1020
MTBE	BTEXHSA	20	µg/kg^	U		<26*		62*	<24*	
Benzene HS_1D_AR	BTEXHSA	10	µg/kg^	UM		<13		<13	<12	
Ethylbenzene HS_1D_AR	BTEXHSA	10	µg/kg^	UM		<13		<13	<12	
m/p-Xylene HS_1D_AR	BTEXHSA	20	µg/kg^	UM		40		<26	<24	
o-Xylene HS_1D_AR	BTEXHSA	10	µg/kg^	UM		<13		<13	<12	
Toluene HS_1D_AR	BTEXHSA	10	µg/kg^	UM		<13		<13	<12	
Acenaphthene	PAHMSUS	0.08	mg/kg^	UM				<0.11		<0.09
Acenaphthylene	PAHMSUS	0.08	mg/kg^	U				<0.11		0.11
Anthracene	PAHMSUS	0.08	mg/kg^	U				<0.11		0.20
Benzo[a]anthracene	PAHMSUS	0.08	mg/kg^	UM				0.12		1.17
Benzo[a]pyrene	PAHMSUS	0.08	mg/kg^	UM				0.14		1.92
Benzo[b]fluoranthene	PAHMSUS	0.08	mg/kg^	UM				0.12		1.73
Benzo[g,h,i]perylene	PAHMSUS	0.08	mg/kg^	UM				<0.11		1.30
Benzo[k]fluoranthene	PAHMSUS	0.08	mg/kg^	UM				<0.11		0.64
Chrysene	PAHMSUS	0.08	mg/kg^	UM				0.12		1.17
Dibenzo[a,h]anthracene	PAHMSUS	0.08	mg/kg^	UM				<0.11		0.33

SOCOTEC

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
Date Issued: 31/08/2021

UKAS TESTING 1252

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

Analysis Results

					Sample ID	001	002	003	004	005	006	007
					Customer ID	TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Analysis	Method Code	MDL	Units	Accred.								
Fluoranthene	PAHMSUS	0.08	mg/kg^	UM		4.05	0.67	2.30	<0.10	6.12		0.88
Fluorene	PAHMSUS	0.08	mg/kg^	UM		0.20	0.11	<0.09	<0.10	0.60		<0.09
Indeno[1,2,3-cd]pyrene	PAHMSUS	0.08	mg/kg^	UM		2.29	0.26	1.30	<0.10	3.17		0.79
Naphthalene	PAHMSUS	0.08	mg/kg^	UM		0.18	<0.11	<0.09	<0.10	0.19		<0.09
Phenanthrene	PAHMSUS	0.08	mg/kg^	UM		1.50	0.64	0.65	<0.10	3.53		0.35
Pyrene	PAHMSUS	0.08	mg/kg^	UM		3.60	0.61	2.13	<0.10	5.66		0.86
Total PAH 16	PAHMSUS	1.28	mg/kg^	U		27.5	5.00	15.6	<1.63	40.3		8.01
1,2,4-Trichlorobenzene	SVOCSW	0.1	mg/kg^	N								
1,2-Dichlorobenzene	SVOCSW	0.1	mg/kg^	U								
1,3-Dichlorobenzene	SVOCSW	0.1	mg/kg^	U								
1,4-Dichlorobenzene	SVOCSW	0.1	mg/kg^	U								
1-Methylnaphthalene	SVOCSW	0.1	mg/kg^	U								
2,4,5-Trichlorophenol	SVOCSW	0.1	mg/kg^	U								
2,4,6-Trichlorophenol	SVOCSW	0.1	mg/kg^	U								
2,4-Dichlorophenol	SVOCSW	0.1	mg/kg^	U								
2,4-Dimethylphenol	SVOCSW	0.1	mg/kg^	U								
2,4-Dinitrophenol	SVOCSW	0.5	mg/kg^	N								
2,4-Dinitrotoluene	SVOCSW	0.2	mg/kg^	U								
2,6-Dinitrotoluene	SVOCSW	0.5	mg/kg^	U								

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
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Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Fluoranthene	PAHMSUS	0.08	mg/kg^	UM				0.26		1.44
Fluorene	PAHMSUS	0.08	mg/kg^	UM				<0.11		<0.09
Indeno[1,2,3-cd]pyrene	PAHMSUS	0.08	mg/kg^	UM				<0.11		1.58
Naphthalene	PAHMSUS	0.08	mg/kg^	UM				<0.11		<0.09
Phenanthrene	PAHMSUS	0.08	mg/kg^	UM				0.25		0.44
Pyrene	PAHMSUS	0.08	mg/kg^	UM				0.23		1.36
Total PAH 16	PAHMSUS	1.28	mg/kg^	U				2.18		13.7
1,2,4-Trichlorobenzene	SVOCSW	0.1	mg/kg^	N		<0.1	<0.1			
1,2-Dichlorobenzene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
1,3-Dichlorobenzene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
1,4-Dichlorobenzene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
1-Methylnaphthalene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
2,4,5-Trichlorophenol	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
2,4,6-Trichlorophenol	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
2,4-Dichlorophenol	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
2,4-Dimethylphenol	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
2,4-Dinitrophenol	SVOCSW	0.5	mg/kg^	N		<0.6	<0.6			
2,4-Dinitrotoluene	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
2,6-Dinitrotoluene	SVOCSW	0.5	mg/kg^	U		<0.6	<0.6			

SOCOTEC

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
Date Issued: 31/08/2021

UKAS TESTING 1252

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002	003	004	005	006	007
					Customer ID	TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
2-Chloronaphthalene	SVOCSW	0.1	mg/kg^	U								
2-Chlorophenol	SVOCSW	0.1	mg/kg^	U								
2-Methylnaphthalene	SVOCSW	0.1	mg/kg^	U								
2-Methylphenol	SVOCSW	0.1	mg/kg^	U								
2-Nitroaniline	SVOCSW	0.5	mg/kg^	N								
2-Nitrophenol	SVOCSW	0.1	mg/kg^	U								
3- & 4-Methylphenol	SVOCSW	0.1	mg/kg^	U								
3-Nitroaniline	SVOCSW	0.5	mg/kg^	N								
4,6-Dinitro-2-methylphenol	SVOCSW	0.2	mg/kg^	N								
4-Bromophenyl-phenylether	SVOCSW	0.1	mg/kg^	U								
4-Chloro-3-methylphenol	SVOCSW	0.1	mg/kg^	U								
4-Chloroaniline	SVOCSW	0.5	mg/kg^	N								
4-Chlorophenol	SVOCSW	0.5	mg/kg^	U								
4-Chlorophenyl-phenylether	SVOCSW	0.1	mg/kg^	U								
4-Nitroaniline	SVOCSW	0.6	mg/kg^	N								
4-Nitrophenol	SVOCSW	0.5	mg/kg^	N								
Acenaphthene	SVOCSW	0.1	mg/kg^	U								
Acenaphthylene	SVOCSW	0.1	mg/kg^	U								
Anthracene	SVOCSW	0.1	mg/kg^	U								

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
Date Issued: 31/08/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
2-Chloronaphthalene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
2-Chlorophenol	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
2-Methylnaphthalene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
2-Methylphenol	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
2-Nitroaniline	SVOCSW	0.5	mg/kg^	N		<0.6	<0.6			
2-Nitrophenol	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
3- & 4-Methylphenol	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
3-Nitroaniline	SVOCSW	0.5	mg/kg^	N		<0.6	<0.6			
4,6-Dinitro-2-methylphenol	SVOCSW	0.2	mg/kg^	N		<0.3	<0.3			
4-Bromophenyl-phenylether	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
4-Chloro-3-methylphenol	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
4-Chloroaniline	SVOCSW	0.5	mg/kg^	N		<0.6	<0.6			
4-Chlorophenol	SVOCSW	0.5	mg/kg^	U		<0.6	<0.6			
4-Chlorophenyl-phenylether	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
4-Nitroaniline	SVOCSW	0.6	mg/kg^	N		<0.8	<0.8			
4-Nitrophenol	SVOCSW	0.5	mg/kg^	N		<0.6	<0.6			
Acenaphthene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
Acenaphthylene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
Anthracene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
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Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002	003	004	005	006	007
					Customer ID	TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Azobenzene	SVOCSW	0.3	mg/kg^	N								
Benzo[a]anthracene	SVOCSW	0.2	mg/kg^	U								
Benzo[a]pyrene	SVOCSW	0.2	mg/kg^	U								
Benzo[b]fluoranthene	SVOCSW	0.2	mg/kg^	U								
Benzo[g,h,i]perylene	SVOCSW	0.5	mg/kg^	U								
Benzo[k]fluoranthene	SVOCSW	0.2	mg/kg^	U								
Benzoic Acid	SVOCSW	0.5	mg/kg^	N								
Benzyl alcohol	SVOCSW	0.5	mg/kg^	U								
Biphenyl	SVOCSW	0.1	mg/kg^	U								
bis(2-Chloroethoxy)methane	SVOCSW	0.1	mg/kg^	U								
bis(2-Chloroethyl)ether	SVOCSW	0.1	mg/kg^	U								
bis(2-Chloroisopropyl)ether	SVOCSW	0.5	mg/kg^	U								
bis(2-Ethylhexyl)phthalate	SVOCSW	0.2	mg/kg^	U								
Butylbenzylphthalate	SVOCSW	0.2	mg/kg^	U								
Carbazole	SVOCSW	0.3	mg/kg^	N								
Chrysene	SVOCSW	0.2	mg/kg^	U								
Coronene	SVOCSW	0.3	mg/kg^	N								
Dibenzo[a,h]anthracene	SVOCSW	0.5	mg/kg^	U								
Dibenzofuran	SVOCSW	0.1	mg/kg^	U								

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
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Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Azobenzene	SVOCSW	0.3	mg/kg^	N		<0.4	<0.4			
Benzo[a]anthracene	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
Benzo[a]pyrene	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
Benzo[b]fluoranthene	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
Benzo[g,h,i]perylene	SVOCSW	0.5	mg/kg^	U		<0.6	<0.6			
Benzo[k]fluoranthene	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
Benzoic Acid	SVOCSW	0.5	mg/kg^	N		<0.6	<0.6			
Benzyl alcohol	SVOCSW	0.5	mg/kg^	U		<0.6	<0.6			
Biphenyl	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
bis(2-Chloroethoxy)methane	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
bis(2-Chloroethyl)ether	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
bis(2-Chloroisopropyl)ether	SVOCSW	0.5	mg/kg^	U		<0.6	<0.6			
bis(2-Ethylhexyl)phthalate	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
Butylbenzylphthalate	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
Carbazole	SVOCSW	0.3	mg/kg^	N		<0.4	<0.4			
Chrysene	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
Coronene	SVOCSW	0.3	mg/kg^	N		<0.4	<0.4			
Dibenzo[a,h]anthracene	SVOCSW	0.5	mg/kg^	U		<0.6	<0.6			
Dibenzofuran	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
Date Issued: 31/08/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002	003	004	005	006	007
					Customer ID	TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Diethylphthalate	SVOCSW	0.1	mg/kg^	U								
Dimethylphthalate	SVOCSW	0.1	mg/kg^	U								
Di-n-butylphthalate	SVOCSW	0.1	mg/kg^	U								
Di-n-octylphthalate	SVOCSW	0.2	mg/kg^	U								
Diphenyl ether	SVOCSW	0.1	mg/kg^	U								
Fluoranthene	SVOCSW	0.2	mg/kg^	U								
Fluorene	SVOCSW	0.2	mg/kg^	U								
Hexachlorobenzene	SVOCSW	0.1	mg/kg^	U								
Hexachlorobutadiene	SVOCSW	0.1	mg/kg^	N								
Hexachlorocyclopentadiene	SVOCSW	0.1	mg/kg^	N								
Hexachloroethane	SVOCSW	0.1	mg/kg^	U								
Indeno[1,2,3-cd]pyrene	SVOCSW	0.5	mg/kg^	U								
Isophorone	SVOCSW	0.1	mg/kg^	N								
Naphthalene	SVOCSW	0.1	mg/kg^	U								
Nitrobenzene	SVOCSW	0.5	mg/kg^	U								
N-Nitroso-di-n-propylamine	SVOCSW	0.9	mg/kg^	N								
N-Nitrosodiphenylamine	SVOCSW	0.1	mg/kg^	N								
Pentachlorophenol	SVOCSW	0.5	mg/kg^	N								
Phenanthrene	SVOCSW	0.1	mg/kg^	U								

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UKAS TESTING 1252

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

Analysis Results

					Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Analysis	Method Code	MDL	Units	Accred.						
Diethylphthalate	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
Dimethylphthalate	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
Di-n-butylphthalate	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
Di-n-octylphthalate	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
Diphenyl ether	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
Fluoranthene	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
Fluorene	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
Hexachlorobenzene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
Hexachlorobutadiene	SVOCSW	0.1	mg/kg^	N		<0.1	<0.1			
Hexachlorocyclopentadiene	SVOCSW	0.1	mg/kg^	N		<0.1	<0.1			
Hexachloroethane	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
Indeno[1,2,3-cd]pyrene	SVOCSW	0.5	mg/kg^	U		<0.6	<0.6			
Isophorone	SVOCSW	0.1	mg/kg^	N		<0.1	<0.1			
Naphthalene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
Nitrobenzene	SVOCSW	0.5	mg/kg^	U		<0.6	<0.6			
N-Nitroso-di-n-propylamine	SVOCSW	0.9	mg/kg^	N		<1.2	<1.2			
N-Nitrosodiphenylamine	SVOCSW	0.1	mg/kg^	N		<0.1	<0.1			
Pentachlorophenol	SVOCSW	0.5	mg/kg^	N		<0.6	<0.6			
Phenanthrene	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			

SOCOTEC

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UKAS TESTING 1252

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002	003	004	005	006	007
					Customer ID	TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Phenol	SVOCSW	0.1	mg/kg^	U								
Pyrene	SVOCSW	0.2	mg/kg^	U								
>C10-C12 (Aliphatic) EH_CU_1D_AL	TPHFIDUS (Aliphatic)	4	mg/kg^	U							<5.72	
>C12-C16 (Aliphatic) EH_CU_1D_AL	TPHFIDUS (Aliphatic)	4	mg/kg^	U							<5.72	
>C16-C21 (Aliphatic) EH_CU_1D_AL	TPHFIDUS (Aliphatic)	4	mg/kg^	U							<5.72	
>C21-C35 (Aliphatic) EH_CU_1D_AL	TPHFIDUS (Aliphatic)	10	mg/kg^	U							16.9	
Total TPH >C8-C40 (Aliphatic) EH_CU_1D_AL	TPHFIDUS (Aliphatic)	20	mg/kg^	U							30.0	
>C10-C12 (Aromatic) EH_CU_1D_AR	TPHFIDUS (Aromatic)	4	mg/kg^	U							<5.72	
>C12-C16 (Aromatic) EH_CU_1D_AR	TPHFIDUS (Aromatic)	4	mg/kg^	U							<5.72	
>C16-C21 (Aromatic) EH_CU_1D_AR	TPHFIDUS (Aromatic)	4	mg/kg^	U							6.69	
>C21-C35 (Aromatic) EH_CU_1D_AR	TPHFIDUS (Aromatic)	10	mg/kg^	U							24.3	
Total TPH >C8-C40 (Aromatic) EH_CU_1D_AR	TPHFIDUS (Aromatic)	20	mg/kg^	U							42.7	
1,1,1,2-Tetrachloroethane	VOCHSAS	1	µg/kg^	UM								
1,1,1-Trichloroethane	VOCHSAS	1	µg/kg^	UM								
1,1,2,2-Tetrachloroethane	VOCHSAS	1	µg/kg^	N								
1,1,2-Trichloroethane	VOCHSAS	1	µg/kg^	UM								
1,1-Dichloroethane	VOCHSAS	1	µg/kg^	UM								
1,1-Dichloroethene	VOCHSAS	1	µg/kg^	U								
1,1-Dichloropropene	VOCHSAS	1	µg/kg^	UM								

Client: Elemental GI Ltd
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Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Phenol	SVOCSW	0.1	mg/kg^	U		<0.1	<0.1			
Pyrene	SVOCSW	0.2	mg/kg^	U		<0.3	<0.3			
>C10-C12 (Aliphatic) EH_CU_1D_AL	TPHFIDUS (Aliphatic)	4	mg/kg^	U		47.4		<5.24	<4.72	
>C12-C16 (Aliphatic) EH_CU_1D_AL	TPHFIDUS (Aliphatic)	4	mg/kg^	U		204		<5.24	<4.72	
>C16-C21 (Aliphatic) EH_CU_1D_AL	TPHFIDUS (Aliphatic)	4	mg/kg^	U		180		<5.24	<4.72	
>C21-C35 (Aliphatic) EH_CU_1D_AL	TPHFIDUS (Aliphatic)	10	mg/kg^	U		81.3		13.8	30.0	
Total TPH >C8-C40 (Aliphatic) EH_CU_1D_AL	TPHFIDUS (Aliphatic)	20	mg/kg^	U		530		<26.2	41.8	
>C10-C12 (Aromatic) EH_CU_1D_AR	TPHFIDUS (Aromatic)	4	mg/kg^	U		5.32		<5.24	<4.72	
>C12-C16 (Aromatic) EH_CU_1D_AR	TPHFIDUS (Aromatic)	4	mg/kg^	U		95.5		5.38	5.27	
>C16-C21 (Aromatic) EH_CU_1D_AR	TPHFIDUS (Aromatic)	4	mg/kg^	U		142		<5.24	7.07	
>C21-C35 (Aromatic) EH_CU_1D_AR	TPHFIDUS (Aromatic)	10	mg/kg^	U		65.2		19.5	54.1	
Total TPH >C8-C40 (Aromatic) EH_CU_1D_AR	TPHFIDUS (Aromatic)	20	mg/kg^	U		311		35.6	75.4	
1,1,1,2-Tetrachloroethane	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,1,1-Trichloroethane	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,1,2,2-Tetrachloroethane	VOCHSAS	1	µg/kg^	N		<1	<1			
1,1,2-Trichloroethane	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,1-Dichloroethane	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,1-Dichloroethene	VOCHSAS	1	µg/kg^	U		<1*	<1*			
1,1-Dichloropropene	VOCHSAS	1	µg/kg^	UM		<1	<1			

Client: Elemental GI Ltd
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Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002	003	004	005	006	007
					Customer ID	TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
1,2,3-Trichlorobenzene	VOCHSAS	3	µg/kg^	UM								
1,2,3-Trichloropropane	VOCHSAS	1	µg/kg^	UM								
1,2,4-Trichlorobenzene	VOCHSAS	3	µg/kg^	N								
1,2,4-Trimethylbenzene	VOCHSAS	1	µg/kg^	UM								
1,2-Dibromo-3-chloropropane	VOCHSAS	1	µg/kg^	U								
1,2-Dibromoethane	VOCHSAS	1	µg/kg^	UM								
1,2-Dichlorobenzene	VOCHSAS	1	µg/kg^	UM								
1,2-Dichloroethane	VOCHSAS	1	µg/kg^	UM								
1,2-Dichloropropane	VOCHSAS	1	µg/kg^	UM								
1,3,5-Trimethylbenzene	VOCHSAS	1	µg/kg^	UM								
1,3-Dichlorobenzene	VOCHSAS	1	µg/kg^	UM								
1,3-Dichloropropane	VOCHSAS	1	µg/kg^	UM								
1,4-Dichlorobenzene	VOCHSAS	1	µg/kg^	UM								
2,2-Dichloropropane	VOCHSAS	2	µg/kg^	UM								
2-Chlorotoluene	VOCHSAS	1	µg/kg^	UM								
4-Chlorotoluene	VOCHSAS	1	µg/kg^	UM								
Benzene	VOCHSAS	1	µg/kg^	UM								
Bromobenzene	VOCHSAS	1	µg/kg^	UM								
Bromochloromethane	VOCHSAS	1	µg/kg^	UM								

SOCOTEC

Client: Elemental GI Ltd
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Project No: 21080680
Date Issued: 31/08/2021

UKAS TESTING 1252

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
1,2,3-Trichlorobenzene	VOCHSAS	3	µg/kg^	UM		<4	<4			
1,2,3-Trichloropropane	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,2,4-Trichlorobenzene	VOCHSAS	3	µg/kg^	N		<4	<4			
1,2,4-Trimethylbenzene	VOCHSAS	1	µg/kg^	UM		<1	37			
1,2-Dibromo-3-chloropropane	VOCHSAS	1	µg/kg^	U		<1	<1			
1,2-Dibromoethane	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,2-Dichlorobenzene	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,2-Dichloroethane	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,2-Dichloropropane	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,3,5-Trimethylbenzene	VOCHSAS	1	µg/kg^	UM		1	2			
1,3-Dichlorobenzene	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,3-Dichloropropane	VOCHSAS	1	µg/kg^	UM		<1	<1			
1,4-Dichlorobenzene	VOCHSAS	1	µg/kg^	UM		<1	<1			
2,2-Dichloropropane	VOCHSAS	2	µg/kg^	UM		<3	<3			
2-Chlorotoluene	VOCHSAS	1	µg/kg^	UM		<1	<1			
4-Chlorotoluene	VOCHSAS	1	µg/kg^	UM		<1	<1			
Benzene	VOCHSAS	1	µg/kg^	UM		<1	<1			
Bromobenzene	VOCHSAS	1	µg/kg^	UM		<1	<1			
Bromochloromethane	VOCHSAS	1	µg/kg^	UM		<1	<1			

Client: Elemental GI Ltd
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Project No: 21080680
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Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002	003	004	005	006	007
					Customer ID	TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Bromodichloromethane	VOCHSAS	1	µg/kg^	UM								
Bromoform	VOCHSAS	1	µg/kg^	UM								
Bromomethane	VOCHSAS	1	µg/kg^	UM								
Carbon Tetrachloride	VOCHSAS	1	µg/kg^	UM								
Chlorobenzene	VOCHSAS	1	µg/kg^	UM								
Chloroethane	VOCHSAS	2	µg/kg^	UM								
Chloroform	VOCHSAS	1	µg/kg^	UM								
Chloromethane	VOCHSAS	3	µg/kg^	U								
cis 1,2-Dichloroethene	VOCHSAS	5	µg/kg^	UM								
cis 1,3-Dichloropropene	VOCHSAS	1	µg/kg^	UM								
Dibromochloromethane	VOCHSAS	1	µg/kg^	UM								
Dibromomethane	VOCHSAS	1	µg/kg^	UM								
Dichlorodifluoromethane	VOCHSAS	1	µg/kg^	N								
Ethylbenzene	VOCHSAS	2	µg/kg^	UM								
Hexachlorobutadiene	VOCHSAS	2	µg/kg^	N								
iso-Propylbenzene	VOCHSAS	1	µg/kg^	UM								
m and p-Xylene	VOCHSAS	4	µg/kg^	UM								
MTBE	VOCHSAS	1	µg/kg^	UM								
Naphthalene	VOCHSAS	5	µg/kg^	UM								

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
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Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Bromodichloromethane	VOCHSAS	1	µg/kg^	UM		<1	<1			
Bromoform	VOCHSAS	1	µg/kg^	UM		<1	<1			
Bromomethane	VOCHSAS	1	µg/kg^	UM		<1*	<1*			
Carbon Tetrachloride	VOCHSAS	1	µg/kg^	UM		<1	<1			
Chlorobenzene	VOCHSAS	1	µg/kg^	UM		<1	<1			
Chloroethane	VOCHSAS	2	µg/kg^	UM		<3*	<3*			
Chloroform	VOCHSAS	1	µg/kg^	UM		<1	<1			
Chloromethane	VOCHSAS	3	µg/kg^	U		<4	<4			
cis 1,2-Dichloroethene	VOCHSAS	5	µg/kg^	UM		<6	<6			
cis 1,3-Dichloropropene	VOCHSAS	1	µg/kg^	UM		<1	<1			
Dibromochloromethane	VOCHSAS	1	µg/kg^	UM		<1	<1			
Dibromomethane	VOCHSAS	1	µg/kg^	UM		<1	<1			
Dichlorodifluoromethane	VOCHSAS	1	µg/kg^	N		<1	<1			
Ethylbenzene	VOCHSAS	2	µg/kg^	UM		<3	<3			
Hexachlorobutadiene	VOCHSAS	2	µg/kg^	N		<3	<3			
iso-Propylbenzene	VOCHSAS	1	µg/kg^	UM		<1	4			
m and p-Xylene	VOCHSAS	4	µg/kg^	UM		<5	<5			
MTBE	VOCHSAS	1	µg/kg^	UM		<1	<1			
Naphthalene	VOCHSAS	5	µg/kg^	UM		<6	<6			

Client: Elemental GI Ltd
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Analysis Results

Analysis	Method Code	MDL	Units	Accred.	001	002	003	004	005	006	007
Sample ID					001	002	003	004	005	006	007
Customer ID					TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
Sample Type					SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Sampling Date					10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
n-Butylbenzene	VOCHSAS	1	µg/kg^	U							
o-Xylene	VOCHSAS	2	µg/kg^	UM							
p-Isopropyltoluene	VOCHSAS	1	µg/kg^	UM							
Propylbenzene	VOCHSAS	1	µg/kg^	UM							
sec-Butylbenzene	VOCHSAS	1	µg/kg^	UM							
Styrene	VOCHSAS	1	µg/kg^	UM							
tert-Butylbenzene	VOCHSAS	1	µg/kg^	UM							
Tetrachloroethene	VOCHSAS	3	µg/kg^	UM							
Toluene	VOCHSAS	5	µg/kg^	UM							
trans 1,2-Dichloroethene	VOCHSAS	1	µg/kg^	UM							
trans 1,3-Dichloropropene	VOCHSAS	1	µg/kg^	UM							
Trichloroethene	VOCHSAS	1	µg/kg^	U							
Trichlorofluoromethane	VOCHSAS	1	µg/kg^	UM							
Vinyl Chloride	VOCHSAS	1	µg/kg^	UM							
Total Moisture at 105°C	TMSS	0.1	%	U	14.4	24.1	13.1	21.6	7.8	30.1	8.8
Total Moisture at 35°C	CLANDPREP	0.1	%	N	13.8	23.7	12.5	22.6	6.2	24.6	8.5
Colour of Material	CLANDPREP		-	N	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Major Constituents	CLANDPREP		-	N	SILT	CLAY	SILT	CLAY	SILT	CLAY	SILT
Minor Constituents	CLANDPREP		-	N	Sand	None	Gravel	None	Gravel	Gravel	Clay

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Date Issued: 31/08/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
n-Butylbenzene	VOCHSAS	1	µg/kg^	U		<1	<1			
o-Xylene	VOCHSAS	2	µg/kg^	UM		<3	<3			
p-Isopropyltoluene	VOCHSAS	1	µg/kg^	UM		<1	<1			
Propylbenzene	VOCHSAS	1	µg/kg^	UM		<1	<1			
sec-Butylbenzene	VOCHSAS	1	µg/kg^	UM		<1	<1			
Styrene	VOCHSAS	1	µg/kg^	UM		<1	<1			
tert-Butylbenzene	VOCHSAS	1	µg/kg^	UM		11	<1			
Tetrachloroethene	VOCHSAS	3	µg/kg^	UM		<4	<4			
Toluene	VOCHSAS	5	µg/kg^	UM		<6	<6			
trans 1,2-Dichloroethene	VOCHSAS	1	µg/kg^	UM		<1*	<1*			
trans 1,3-Dichloropropene	VOCHSAS	1	µg/kg^	UM		<1	<1			
Trichloroethene	VOCHSAS	1	µg/kg^	U		<1	<1			
Trichlorofluoromethane	VOCHSAS	1	µg/kg^	UM		<1*	<1*			
Vinyl Chloride	VOCHSAS	1	µg/kg^	UM		<1	<1			
Total Moisture at 105°C	TMSS	0.1	%	U		21.5	21.5	23.6	15.2	10.7
Total Moisture at 35°C	CLANDPREP	0.1	%	N		21.8	21.5	22.9	11.8	8.4
Colour of Material	CLANDPREP		-	N		Brown	Brown	Brown	Brown	Brown
Major Constituents	CLANDPREP		-	N		CLAY	CLAY	CLAY	SILT	SILT
Minor Constituents	CLANDPREP		-	N		None	Silt	None	Gravel	Gravel

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
Date Issued: 31/08/2021

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Analysis Results

				Sample ID	001	002	003	004	005	006	007
				Customer ID	TP01-0-ES-1.40	TP01-0-ES-2.00	TP02-0-ES-0.10	TP02-0-ES-0.60	TP03-0-ES-0.10	TP03-0-ES-0.60	TP04-0-ES-0.20
				Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
				Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Analysis	**Method Code**	**MDL**	**Units**	**Accred.**							
Miscellaneous Constituents	CLANDPREP		-	N	Gravel	na	Rootlets	na	Brick	na	Gravel
Asbestos Identification	SUB020		-	N							NAIIS

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
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Date Issued: 31/08/2021

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Analysis Results

					Sample ID	008	009	010	011	012
					Customer ID	TP04-0-ES-2.10	TP05-0-ES-0.80	TP07-0-ES-1.50	HTP01-0-ES-0.20	BUNP1-0-ES-0.10
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	10/08/2021	10/08/2021	10/08/2021	10/08/2021	10/08/2021
Analysis	**Method Code**	**MDL**	**Units**	**Accred.**						
Miscellaneous Constituents	CLANDPREP		-	N		na	na	na	Rootlets	Brick
Asbestos Identification	SUB020		-	N						NAIIS

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CERTIFICATE OF ANALYSIS

ANALYSIS REQUESTED BY: SOCOTEC UK Ltd
Environmental Chemistry
PO Box 100
Burton upon Trent
Staffordshire
DE15 0XD

CONTRACT NO: S20213-2

DATE OF ISSUE: 19.08.21

DATE SAMPLES RECEIVED: 12.08.21

DATE ANALYSIS COMPLETED: 19.08.21

DESCRIPTION: Two soil/loose aggregate samples.

ANALYSIS REQUESTED: Qualitative analysis of samples for determination of presence/type of asbestos.

METHODS:

Our method involves initial examination of the samples followed by detailed analysis of representative sub-samples. The sub-samples are analysed qualitatively for asbestos by polarised light and dispersion staining as described by the Health and Safety Executive in HSG 248.

RESULTS:

Initial Screening

No asbestos was detected in either of the soil samples by stereo-binocular and polarised light microscopy.

A summary of the results is given in Table 1.

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IOM CONSULTING LIMITED, registered in Scotland No. SC205670

UKAS TESTING
0374

CONTRACT NO: S20213-2
DATE OF ISSUE: 19.08.21

RESULTS: (cont.)

Table 1: Qualitative Results

SOCOTEC Job I.D: 21080680

IOM sample number	SOCOTEC Sample ID	Client Sample ID	ACM type detected	PLM result
S84237	21080680-007-10	TP04-0-ES-0.20	-	No Asbestos Detected
S84238	21080680-012-10	BUNP1-0-ES-0.10	-	No Asbestos Detected

Our detection limit for this method is 0.001%.

COMMENTS:

IOM Consulting cannot accept responsibility for samples that have been incorrectly collected or despatched by external clients.

Any opinions and interpretations expressed herein are out with the scope of our UKAS accreditation.

K. Parsons-Hewes

AUTHORISED BY: .....
K Parsons-Hewes
Senior Scientific Technician

Additional Report Notes

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
VOCHSAS	008, 009	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. However the remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (1,1-Dichloroethene, Bromomethane, Chloroethane, trans 1,2-Dichloroethene, Trichlorofluoromethane) . These circumstances should be taken into consideration when utilising the data.
BTEXHSA	006, 008, 010, 011	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. However the remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (MTBE) . These circumstances should be taken into consideration when utilising the data.
GROHSA	006, 010, 011	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. However the remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (C5-6) . These circumstances should be taken into consideration when utilising the data.
GROHSA	008	Sample has been marked as not amenable due to the sample matrix.

LIMS-F002 - Report Notes

SOCOTEC

Client: Elemental GI Ltd
Project Name: Site Off Gosberton Road, Surfleet
Project No: 21080680
Date Issued: 31/08/2021

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	As Received
CLANDPREP	PHYS	As Received
GROHSA	ORGANIC	As Received
GROHSA/BTEXHSA	ORGANIC	As Received
ICPMSS	METALS	Air Dried & Ground
ICPWSS	METALS	Air Dried & Ground
KONENS	INORGANIC	Air Dried & Ground
PAHMSUS	ORGANIC	As Received
PHSOIL	INORGANIC	As Received
SFAPI	INORGANIC	As Received
SUB020	SUBCON	
SVOCSW	ORGANIC	As Received
TMSS	PHYS	As Received
TPHFIDUS (Aliphatic)	ORGANIC	As Received
TPHFIDUS (Aromatic)	ORGANIC	As Received
VOCHSAS	ORGANIC	As Received
WSLM59	INORGANIC	Air Dried & Ground

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Additional Information

This report refers to samples as received, and SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105° C.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° C.

This report shall not be reproduced except in full and with approval from the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis