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Verification Report



Project Name: The Cobblers

Location: Slinfold, West Sussex. RH13 0SA

Client: Sunninghill Construction Co. Limited

Project ID: V0978

Report Date: 25 March 2025

Report Issue: 1

SUMMARY

The site, which extends to around 0.3ha, was previously occupied by a block of 17 No. flats, a Scout hut and lock-up garages. The site is currently undergoing redevelopment with 12No. residential properties, with 6No. of the ground floor units having private garden areas. There is also a parking area and areas of soft landscaping.

A Desk Study was carried out and indicates that the site has a history of agricultural fields with a building on the western boundary followed by development of The Cobblers (care home), with lock up garages and a Scout Hut in the mid 1970s.

A single phase of intrusive investigation was carried out by Southern Testing, in October 2019.

Relevant pollutant linkages were identified in respect of PAH compounds in the Made Ground in one location. The potential for petroleum fuel hydrocarbon contamination to be present in the vicinity of the above ground tank (and to a lesser extent, the domestic garages), and the potential for asbestos containing materials beneath the buildings and in the Made Ground, was also identified.

A Remediation Strategy comprising the removal or capping (within tree root protection zones) of the Made Ground from all private garden and soft landscaped areas was carried out.

No additional contamination was discovered in the course of construction.

Verification testing carried out demonstrates that the remedial works have been successful.

The verification work was conducted and this report has been prepared for the sole internal use and reliance of Sunninghill Construction Co. Limited and their appointed Engineers. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Southern Testing Laboratories Limited. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

The findings and opinions conveyed via this report are based on information obtained from a variety of sources as detailed within this report, and which Southern Testing Laboratories Limited believes are reliable. Nevertheless, Southern Testing Laboratories Limited cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

The conclusions contained in this report are drawn in respect of the particular development works as described in the report and may not be appropriate to alternative development schemes. This report should be considered in its entirety and Southern Testing Laboratories Ltd accepts no responsibility for and excludes liability in respect of any omission or alteration made by others, and any use of the report for any purpose other than that for which it was produced.

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For and on behalf of Southern Testing Laboratories Limited

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A INTRODUCTION

1 Authority

Our authority for carrying out this work is contained in a copy of our completed Project Order Form, which was signed and returned on the 19th December 2024, by Colin Coulthard, on behalf of Sunninghill Construction Co. Limited.

2 Location

The site is located to the south of the junction between Lyons Road and Hayes Lane, in Slinfold, West Sussex, approximately 6km west of Horsham railway station. The site location is indicated on Figure 1 within Appendix A. The approximate National Grid Reference of the site is TQ 11853 31264.

3 Construction

The site has been redeveloped with 12No. residential properties, with 6No. of the ground floor units having private garden areas. There is also a parking area, and areas of soft landscaping. The site layout is shown on Figure 2 within Appendix A.

For the purposes of the contamination risk assessment, the proposed development land use is classified as Residential with consumption of Homegrown Produce. CLEA Model Ref [1].

4 Scope

Southern Testing have been employed on a watching brief in respect of verification of remedial measures to deal with the soil contamination identified at the site. This report presents the data collected in the verification process, and our interpretation of that data.

This report should be read in conjunction with the supporting information appended, and the relevant reports referred to.

The findings and opinions conveyed via this investigation report are based on information obtained from a variety of sources as detailed within this report, and which Southern Testing Laboratories Limited believes are reliable. Nevertheless, Southern Testing Laboratories Limited cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

The verification work was conducted and this report has been prepared for the sole internal use and reliance of Sunninghill Construction Co. Limited and their appointed Engineers. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Southern Testing Laboratories Limited. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

Waste transfer certificates collated and attached to this report are provided solely as evidence of the volumes of soil exported from site. Southern Testing Laboratories Limited have not been responsible for verification that the exported soils reached their destination, nor that the receiving tip was licensed to receive the waste. This has been and remains the responsibility of the Client.

The conclusions contained in this report are drawn in respect of the particular development works as described in the report and may not be appropriate to alternative development schemes. This report should be considered in its entirety and Southern Testing Laboratories Ltd accepts no responsibility for and excludes liability in respect of any omission or alteration made by others, and any use of the report for any purpose other than that for which it was produced.

B BACKGROUND

5 Site History

The site has been the subject of a desk study and an intrusive investigation. These are detailed in our Remediation strategy and Verification Plan, report reference V0978, dated 30th January 2025, to which the reader is referred.

The site has a history of agricultural use, comprising part of a large open field, with a small building being shown on the western edge of the site, since the earliest map extract dated 1876. The first change to the site were small buildings, thought to be the present day lock-up garages which south eastern area of the site, and a unspecified building in the north east corner (thought to be the current day Scout Hut) in the early 1970's.

By the 1975-1977 map edition, the site was occupied by a building named The Cobblers within the central and western area of the site. The building in the north east had been demolished. No further changes were observed on site over further map editions.

The intrusive site investigation works comprised 7No. windowless sampler boreholes to depths of 2.45 – 3.45m bgl. and 3No. hand-augured boreholes to depths of 1.0 – 1.35m bgl.

Laboratory analysis for potential contamination, including asbestos, metals, polyaromatic hydrocarbons (PAHs) and petroleum hydrocarbons was undertaken.

An elevated concentration of the PAH compound benzo(a)pyrene was found in a sample of Made Ground taken from BH9 at 0.35m, which was located on the south-east of the site. This is the area of the proposed car park.

Although on the basis of the laboratory testing undertaken, the Made Ground would not be considered to pose a risk to human health, the physical composition of these soils, which contains various anthropogenic material including glass, concrete and brick, means that they would not be considered suitable to be retained in private garden and soft landscaped areas post redevelopment.

The presence of existing buildings, hardstanding, parking areas, and services restricted the fieldwork. No access was available within the current buildings or garages on site. Therefore, further investigation was recommended following the demolition of the existing building. Further assessment was also recommended beneath the above ground fuel storage tank, following its removal.

6 Relevant Pollutant Linkages

The following Relevant Pollutant Linkages have been identified for the site:

	Pathways	Receptor
Isolated PAH compounds in Made Ground (within BH9 in SE corner of the site)	Soil/dust dermal exposure	Site/construction workers Future site residents
	Soil/dust ingestion	Site/construction workers Future site residents
	Direct contact	Structures/services
Above ground petroleum hydrocarbon fuel storage tank on the north of the site	Soil/dust dermal exposure Soil/dust ingestion	Site/construction workers
	Direct contact	Structures/services

It was recommended in the Desk Study and Preliminary Site Investigation Report (ref. J14185, dated 23 October 2019) that further investigation be undertaken following demolition and site clearance works.

However, these works were not undertaken, the developer who was responsible for the site at that time having gone into liquidation, and the site having been left with the new development at ground/first floor level.

C REMEDIAL OBJECTIVES AND REMEDIATION STRATEGY

7 Introduction

The remedial objectives, options, appraisal and remediation strategy are set out in our report reference V0978, dated 30th January 2025 to which the reader is referred. The remediation strategy was submitted to the Local Authority for their approval. A summary of the remedial objectives and strategy adopted is given below.

8 Remedial Objectives

The site is to be developed for a residential end-use. In the absence of significant off-site risk, the principal objective of the remediation is to remove or reduce to an acceptable level the identified potential risks to end-users of the site. Additional objectives are to achieve the remediation goal in a cost effective and timely manner, whilst minimising impact from associated traffic movements, landfill and resource consumption.

9 Remediation Strategy

The Remediation Strategy comprised the following:

Location	Details
Private Gardens	Excavation and removal of the Made Ground down to natural soils, and the placement of 600mm of certified clean soils, including a minimum depth of 150mm of topsoil; **or alternatively;** Excavation and removal of the Made Ground to sufficient depth to allow for the placement of a minimum depth of 600mm of certified clean soils, including a minimum depth of 150mm of topsoil, with the placement of a barrier membrane above the residual Made Ground.
Soft Landscaped Areas	Excavation and removal of the Made Ground down to natural soils, and the placement of 300mm of certified clean soils, including a minimum depth of 150mm of topsoil; **or alternatively;** Excavation and removal of the Made Ground to sufficient depth to allow for the placement of a minimum depth of 300mm of certified clean soils, including a minimum depth of 150mm of topsoil, with the placement of a barrier membrane above the residual Made Ground.
Tree Root Protection Zones on the northern and southern site boundaries	Site levels have previously been reduced to 300mm below finished level. A deter-to-dig membrane is to be installed, with the placement of clean subsoil and a minimum depth of 150mm of certified imported topsoil above this.
Zone A – Location of the former above ground fuel storage tank	Inspection and sampling of the residual soils, with confirmatory laboratory analysis for potential petroleum hydrocarbons. (Remedial measures may be required depending on the outcome of laboratory testing)
Buried Services	Guidance should be sought from the relevant companies regarding the specification of materials for proposed new services runs.

D VERIFICATION PLAN

10 Introduction

The verification plan is set out in our report reference V0978, dated 30th January 2025, to which the reader is referred.

11 Data Collection

The data to be collected as part of the verification works are described below.

Location	Data	Responsible Party
Private Gardens	Post strip inspection and sampling of residual soils (4 no. samples)	Southern Testing
	Post placement check of thickness of cover soils (1no. trial hole per plot)	Southern Testing
	Post placement soil samples for laboratory analysis (one per private garden area, topsoil & subsoil)	Southern Testing
	Provisional of Consignment Notes & suppliers test certificates for the imported subsoil and topsoil	Groundworker
Soft Landscaped Areas	Post strip inspection and sampling of residual soils (2 no. samples)	Southern Testing
	Post placement check of thickness of cover soils (4 no. trial hols)	Southern Testing
	Provisional of Consignment Notes & suppliers test certificates for the imported subsoil and topsoil	Groundworker
Tree Root Protection Zones (TRPZ)	Confirmation of the placement of a deter-to-dig membrane and 300mm of clean soils, including 150mm topsoil.	Southern Testing
	Provisional of Consignment Notes & suppliers test certificates for the imported subsoil and topsoil	Groundworker
Zone A	Inspection, sampling & laboratory analysis of the residual soils for petroleum hydrocarbons. (Remedial measures may be required depending on the outcome of laboratory testing)	Southern Testing

The proposed remedial works are shown on Figure 2 within Appendix A.

12 Variations from Verification Plan

It was recommended in the Desk Study and Preliminary Site Investigation Report (ref. J14185, dated 23 October 2019) that further investigation be undertaken following demolition and site clearance works. However, these works were not undertaken. The previous developer went into liquidation, leaving the site with the new development already at ground/first floor level.

Some of the remedial works with respect to the garden and soft landscaped areas had also been completed by the previous developer. This comprised the completion of the reduced level dig within the TRPZs and partial removal of the Made Ground from the areas of private gardens and soft landscaping. In these areas some Made Ground/debris from the ongoing building work remained. The site plan provided by Sunninghill Construction Co. Limited (Figure 3 within Appendix A) shows the remedial works required following their taking on the redevelopment of the site.

The above verification works required the inspection and sampling of the residual soils following removal of the Made Ground. This was not undertaken.

E VERIFICATION PROGRESS AND DATA

13 Works Completed

At the time of writing, the bulk of the remediation has been completed, as follows:

- Inspection, sampling & laboratory analysis of the residual soils for petroleum hydrocarbons – Zone A.
- Post placement check of thickness of cover soils in the private garden and soft landscaped areas.
- Sampling and laboratory analysis of the subsoil and topsoil placed within the private garden and soft landscaped areas.
- Verification of the placement of a deter-to-dig membrane in the Tree Root Protection Zone (TRPZ).

14 Site Visits

The site was visited on two occasions by representatives of Southern Testing Laboratories Limited, as follows:

Date	Details
10/01/2025	Site visit to inspect and sample the residual soils in the location of the former above ground fuel storage tank (Zone A) and across the private garden and soft landscaped areas. A trial hole was dug in the location of the former tank. No evidence of any potential fuel leaks of spillages (stained or malodorous soils) were found. A sample was taken for confirmatory laboratory analysis. This confirmed that the soils were free from petroleum hydrocarbons. A copy of the laboratory test certificate is given in in Appendix C. With respect to the garden areas to Plot nos. 1, 5, 8 and 12, trial holes were excavated to inspect the residual soils in these areas. Access to Plots 9 and 10 was not possible, due to the storage of building materials. It is understood that the previous developer had undertaken some reduction of the levels across these areas, in order to remove the Made Ground. On inspection levels appear to currently be around 300mm below finished levels. In accordance with the proposed Remediation Method Statement and Verification Plan, either the Made Ground should be removed down to natural soils; or alternatively a 600mm deep capping layer of clean soils should be provided above any residual Made Ground, with the placement of a deter-to-dig membrane at the base. On excavation of a trial hole in each of the Plots 1, 5, 8 & 12, Made Ground soils comprising re-worked clay with brick, concrete and flint gravel was found across the proposed garden areas. This was encountered to at least 300mm below existing site level in Plots 1, 5 and 8. In Plot 12 a machine dug trial hole found 250mm of clayey flint gravel, with natural yellow-brown silty clay soils encountered below this. Further removal of the Made Ground was therefore required in Plots 1, 5, 8 and 12. From discussions on site, it was understood that the tree root protection zone (TRPZ) along the south of the site (Plots 8 & 12), and on the north of the site (Plots 9 and 10), extends into the garden areas by around 3.0m. It is also understood that a TRPZ no longer applies to Plots 1 and 5, as the trees along this part of the site boundary are to be replaced. Within the TRPZ the soils had already been reduced to 300mm below finished level. A deter-to-dig layer was to be placed, followed by the placement of 150mm of subsoil and 150mm of topsoil. The specification for the deter-to-dig membrane is given in Appendix E. The required relocation of a drain through the rear garden areas to Plots 1, 5, 8 and 12 was also discussed. It was suggested that if onsite constraints allow, and the Made Ground is kept separate from the underlying natural soils during excavation, the natural clay soils from the drainage excavation could be retained on site and reused as subsoil to make up levels within the garden areas, following the further removal of the Made Ground. It is understood that this was subsequently undertaken.

Date	Details
14/03/2025	Site visit to inspect and sample the subsoil and topsoil placed within the private garden and soft landscaped areas. At the time of the site visit site won soils had been placed across the private garden and soft landscaped areas to make up levels, with topsoil also placed within the majority of these areas. A trial hole was excavated in each of the garden areas to the ground floor units (Plots 1, 5, 8, 9, 10 & 12) and within the areas of soft landscaping. The soils encountered were as follows: Plot 1: Yellow brown silty loamy sand topsoil to 0.2m bgl. Yellow-brown silty clay with organic matter to 0.5m bgl. Plot 5: Yellow brown silty loamy sand topsoil to 0.25m bgl. Re-worked yellow-brown silty clay with occasional fine to coarse concrete and limestone to 0.60m bgl. Plot 8: Topsoil yet to be placed. Re-worked yellow-brown silty clay with occasional roots, brick and flint to 0.45m bgl. Plot 9: Yellow brown silty loamy sand topsoil to 0.2m bgl. Re-worked yellow-brown silty clay with occasional roots, brick and flint to 0.5m bgl. Plot 10: Yellow brown silty loamy sand topsoil to 0.2m bgl. Re-worked yellow-brown silty clay with occasional roots, brick and flint to 0.6m bgl. S1: Yellow brown silty loamy sand topsoil to 0.2m bgl. Re-worked yellow-brown clay with roots to 0.4m. S2 & S3: Topsoil yet to be placed. Re-worked yellow-brown clay with roots to 0.4m. Samples of the site won and (where placed) imported topsoil were taken from each of the trial holes and submitted for laboratory analysis.

Plans showing the verification sampling locations are included in Figure 2 within Appendix A.

Photographs showing the various phases of site work are included in Appendix B.

15 Test Results

The results of the laboratory analysis of samples of the topsoil imported to site are summarised in the tables below, with a copy of the laboratory test certificate included in Appendix C.

Imported Topsoil

	Units	Plot 1 0.1m	Plot 5 0.1m	Plot 9 0.1m	Plot 10 0.1m	S1 0.1m	Residential with Home-grown Produce Consumption Tier 1 Screening Values
Arsenic (As)	mg/kg	11	2.2	3.3	0.1m	2.7	37
Cadmium (Cd)	mg/kg	< 0.2	< 0.2	< 0.2	2.6	< 0.2	11
Trivalent Chromium (CrIII)*	mg/kg	26	8.1	8.3	< 0.2	9.9	910
Hexavalent Chromium (CrVI)	mg/kg	< 1.8	< 1.8	< 1.8	7.3	< 1.8	6
Lead (Pb)	mg/kg	28	8.3	11	< 1.8	12	200
Mercury (Hg)	mg/kg	< 0.3	< 0.3	< 0.3	11	< 0.3	7.6-11
Selenium (Se)	mg/kg	< 1.0	< 1.0	< 1.0	< 0.3	< 1.0	250

	Units	Plot 1 0.1m	Plot 5 0.1m	Plot 9 0.1m	Plot 10 0.1m	S1 0.1m	Residential with Home-grown Produce Consumption Tier 1 Screening Values
Nickel (Ni)	mg/kg	14	3.6	4	< 1.0	4.3	130 (<110)•
Copper (Cu)	mg/kg	16	8.4	11	3.6	11	2,400 (<200)•
Zinc (Zn)	mg/kg	58	16	28	12	35	3,700 (<300)•
Phenol	mg/kg	< 1.0	< 1.0	< 1.0	23	< 1.0	120-380
Benzo(a)pyrene (BaP)	mg/kg	< 0.05	< 0.05	< 0.05	< 1.0	< 0.05	1.7-2.4
Naphthalene	mg/kg	0.07	< 0.05	< 0.05	< 0.05	< 0.05	2.3-13
Total PAHs (16)	mg/kg	< 0.80	< 0.80	< 0.80	< 0.05	< 0.80	/
Total Cyanide (CN)	mg/kg	< 1.0	< 1.0	< 1.0	< 0.80	< 1.0	/
Acidity (pH values)	Units	7.4	8.5	8.9	< 1.0	8.6	/
Soil Organic Matter	%	4.6	2.9	3.2	9.4	3.8	/
Asbestos	/	ND	ND	ND	3.6	ND	None Detected (ND)

** Assumed as Total Cr minus CrVI.*

• *() Screening values shown in brackets are the screening values (for the phytotoxic metals) as given in the British Standard for Topsoil (BS3882:2015).*

The laboratory testing confirms that the imported topsoil would be considered suitable for use within the private garden and soft landscaped areas (sample S1).

Site Won Subsoils

Contaminants	Units	Plot 1 0.4m	Plot 5 0.4m	Plot 8 0.4m	Plot 9 0.4m	Plot 10 0.4m	Residential with Home-grown Produce Consumption Tier 1 Screening Values
Arsenic (As)	mg/kg	4.2	19	12	24	13	37
Cadmium (Cd)	mg/kg	0.4	0.9	0.4	< 0.2	<0.2	11
Trivalent Chromium (CrIII)*	mg/kg	12	32	27	33	27	910
Hexavalent Chromium (CrVI)	mg/kg	<1.8	<1.8	<1.8	<1.8	<1.8	6
Lead (Pb)	mg/kg	15	110	30	40	26	200
Mercury (Hg)	mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3	7.6-11
Selenium (Se)	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	250
Nickel (Ni)	mg/kg	5.3	24	15	15	14	130 (<110)•

Contaminants	Units	Plot 1 0.4m	Plot 5 0.4m	Plot 8 0.4m	Plot 9 0.4m	Plot 10 0.4m	Residential with Home-grown Produce Consumption Tier 1 Screening Values
Copper (Cu)	mg/kg	15	90	22	26	22	2,400 (<200)•
Zinc (Zn)	mg/kg	32	270	75	92	67	3,700 (<300)•
Phenol	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	120-380
Benzo(a)pyrene (BaP)	mg/kg	<0.05	< 0.05	0.64	< 0.05	<0.05	1.7-2.4
Naphthalene	mg/kg	<0.05	0.09	0.06	0.11	<0.05	2.3-13
Total PAHs (16)	mg/kg	<0.80	7.58	< 0.80	6.94	<0.80	/
Total Cyanide (CN)	mg/kg	<1.0	< 1.0	< 1.0	< 1.0	<1.0	/
Acidity (pH values)	Units	8.2	8.4	7.1	7.9	7	/
Soil Organic Matter	%	3.8	3	5.9	1.3	2	/
Asbestos	/	ND	ND	ND	ND	ND	None Detected (ND)

** Assumed as Total Cr minus CrVI.*

• *() Screening values shown in brackets are the screening values (for the phytotoxic metals) as given in the British Standard for Topsoil (BS3882:2015).*

Contaminants	Units	Plot 12 0.4m	S1 0.4m	S2 0.3m	S3 0.3m	Residential with Home-grown Produce Consumption Tier 1 Screening Values
Arsenic (As)	mg/kg	19	27	15	12	37
Cadmium (Cd)	mg/kg	<0.2	<0.2	<0.2	<0.2	11
Trivalent Chromium (CrIII)*	mg/kg	36	27	26	26	910
Hexavalent Chromium (CrVI)	mg/kg	<1.8	<1.8	<1.8	<1.8	6
Lead (Pb)	mg/kg	35	24	29	29	200
Mercury (Hg)	mg/kg	<0.3	<0.3	<0.3	<0.3	7.6-11
Selenium (Se)	mg/kg	<1.0	<1.0	<1.0	<1.0	250
Nickel (Ni)	mg/kg	16	23	17	15	130 (<110)•
Copper (Cu)	mg/kg	35	18	19	25	2,400 (<200)•
Zinc (Zn)	mg/kg	73	83	70	75	3,700 (<300)•
Phenol	mg/kg	<1.0	<1.0	<1.0	<1.0	120-380
Benzo(a)pyrene (BaP)	mg/kg	<0.05	< 0.05	< 0.05	0.08	1.7-2.4
Naphthalene	mg/kg	<0.05	< 0.05	0.08	0.09	2.3-13

Contaminants	Units	Plot 12 0.4m	S1 0.4m	S2 0.3m	S3 0.3m	Residential with Home-grown Produce Consumption Tier 1 Screening Values
Total PAHs (16)	mg/kg	<0.80	< 0.80	< 0.80	< 0.80	/
Total Cyanide (CN)	mg/kg	<1.0	<1.0	<1.0	<1.0	/
Acidity (pH values)	Units	7.2	7.4	8.2	9.4	/
Soil Organic Matter	%	2.1	4.6	3.8	3.6	/
Asbestos	/	ND	ND	ND	ND	None Detected (ND)

** Assumed as Total Cr minus CrVI.*

- *() Screening values shown in brackets are the screening values (for the phytotoxic metals) as given in the British Standard for Topsoil (BS3882:2015).*

The laboratory testing confirms that the site won soils placed as subsoil would be considered suitable for use within the private garden and soft landscaped areas (samples S1 – S3).

16 Discovery Strategy

No previously undiscovered contamination was encountered in the course of the remediation/redevelopment works.

17 Imported Soils

Consignment Notes relating to 75 m^3 of topsoil imported to site have been provided by Sunning Hill Construction Co. Ltd. Supplier test results have also been provided. The documents are included in Appendix D.

F SUMMARY

18 Conclusions

At the time of writing, the specified remedial works have been completed. To the best of our knowledge, the site remediation has been carried out by Sunninghill Construction Co. Limited, and their appointed representatives, in accordance with the approved method statement.

The results of the laboratory analysis carried out on samples taken from the site meet the assessment criteria for the remedial works.

REFERENCES

[1] Environment Agency, “Updated technical background to the CLEA model,” 2009.

[2] Contaminated Land: Applications in Real Environments (CL:AIRE), “Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination,” 2014.

[3] CIRIA, “C665 Assessing risks posed by hazardous ground gases to buildings,” 2007.

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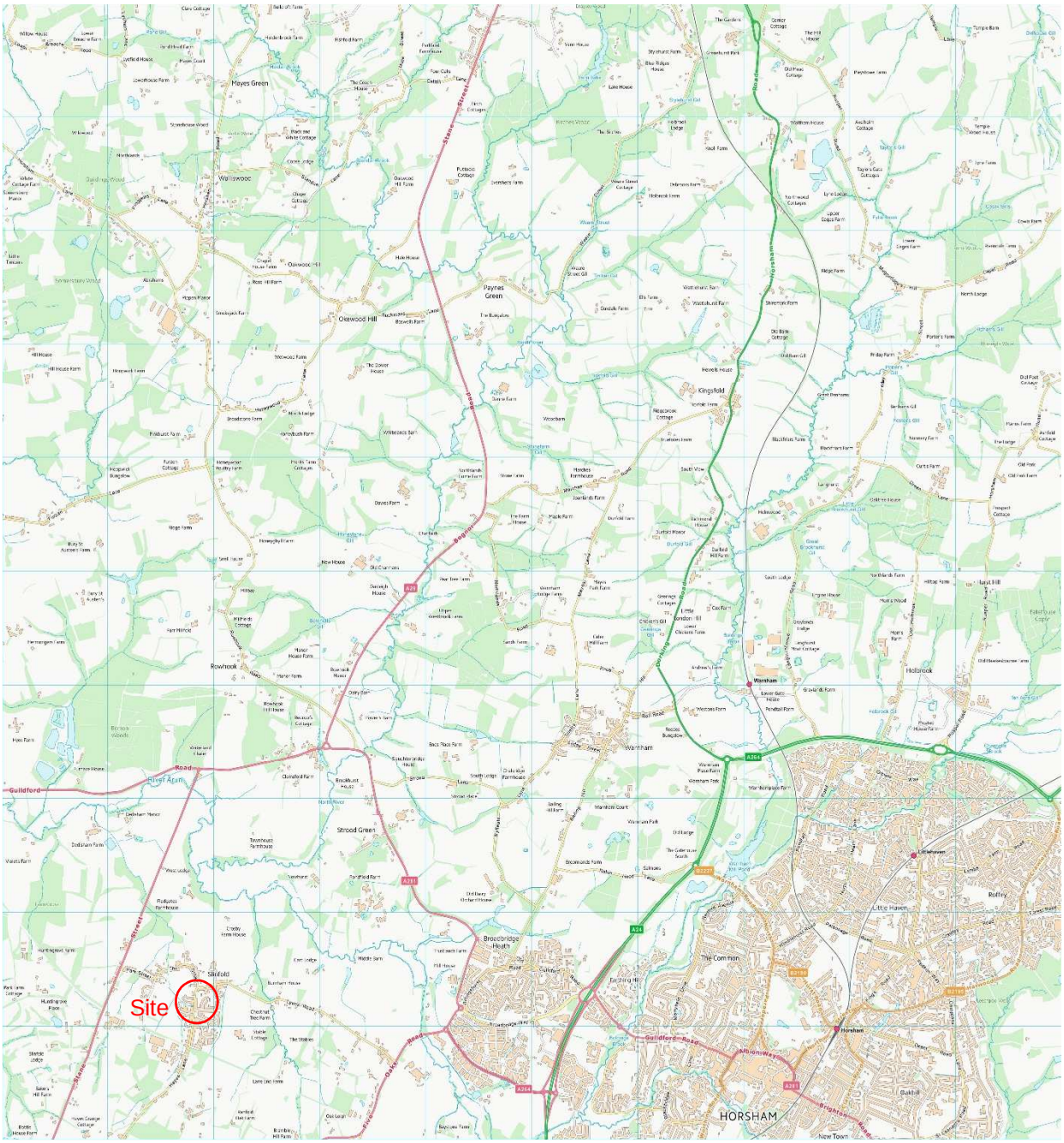


APPENDIX A

Site Plans



A



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Site:	The Cobblers, Hayes Lane, Slinfold, Horsham, West Sussex, RH13 0SA	Project ID	V0978
Figure 1	Site Location Plan	Date:	24/12/2024

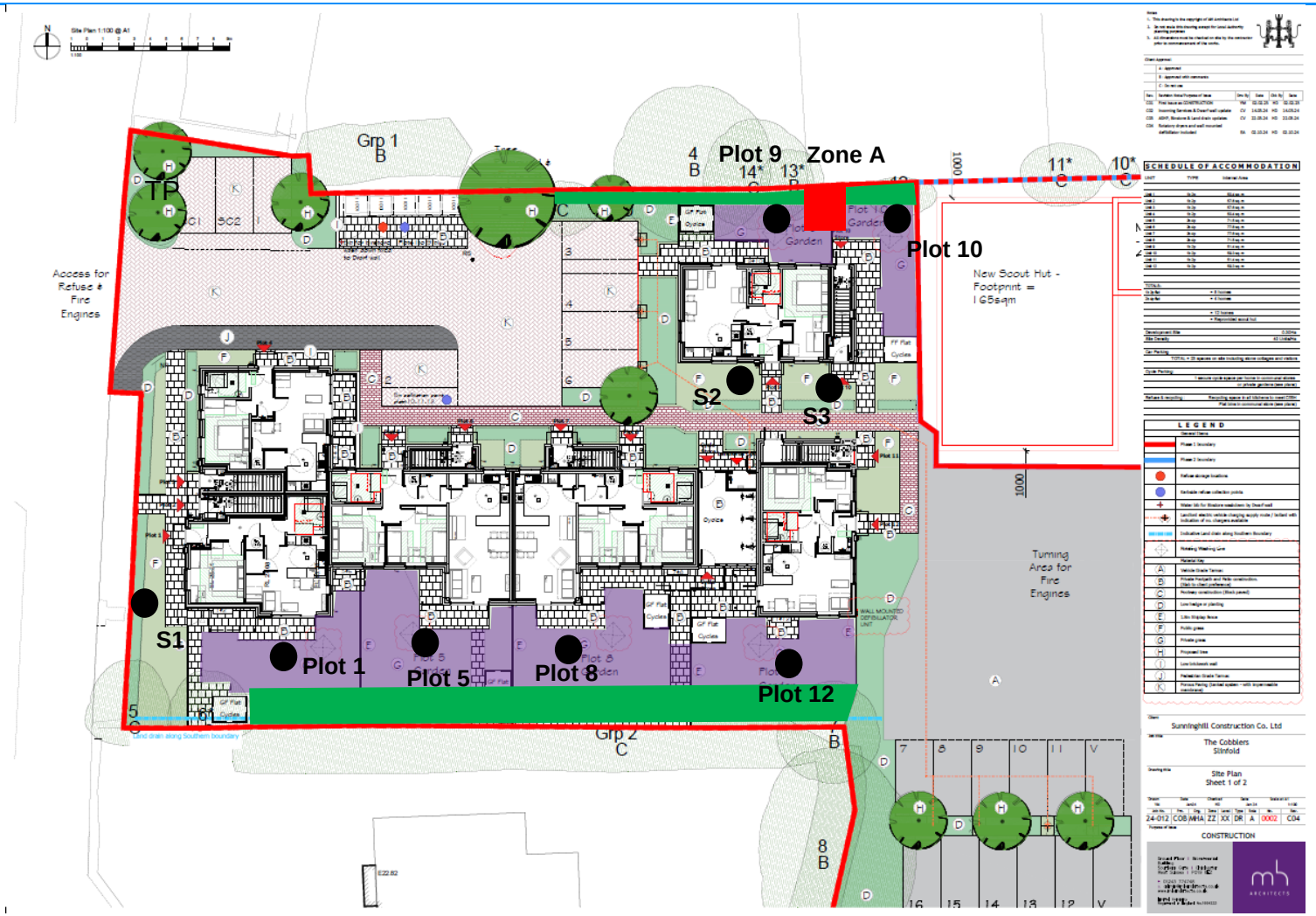
Private gardens

Soft landscaping

Tree Root Protection Zone

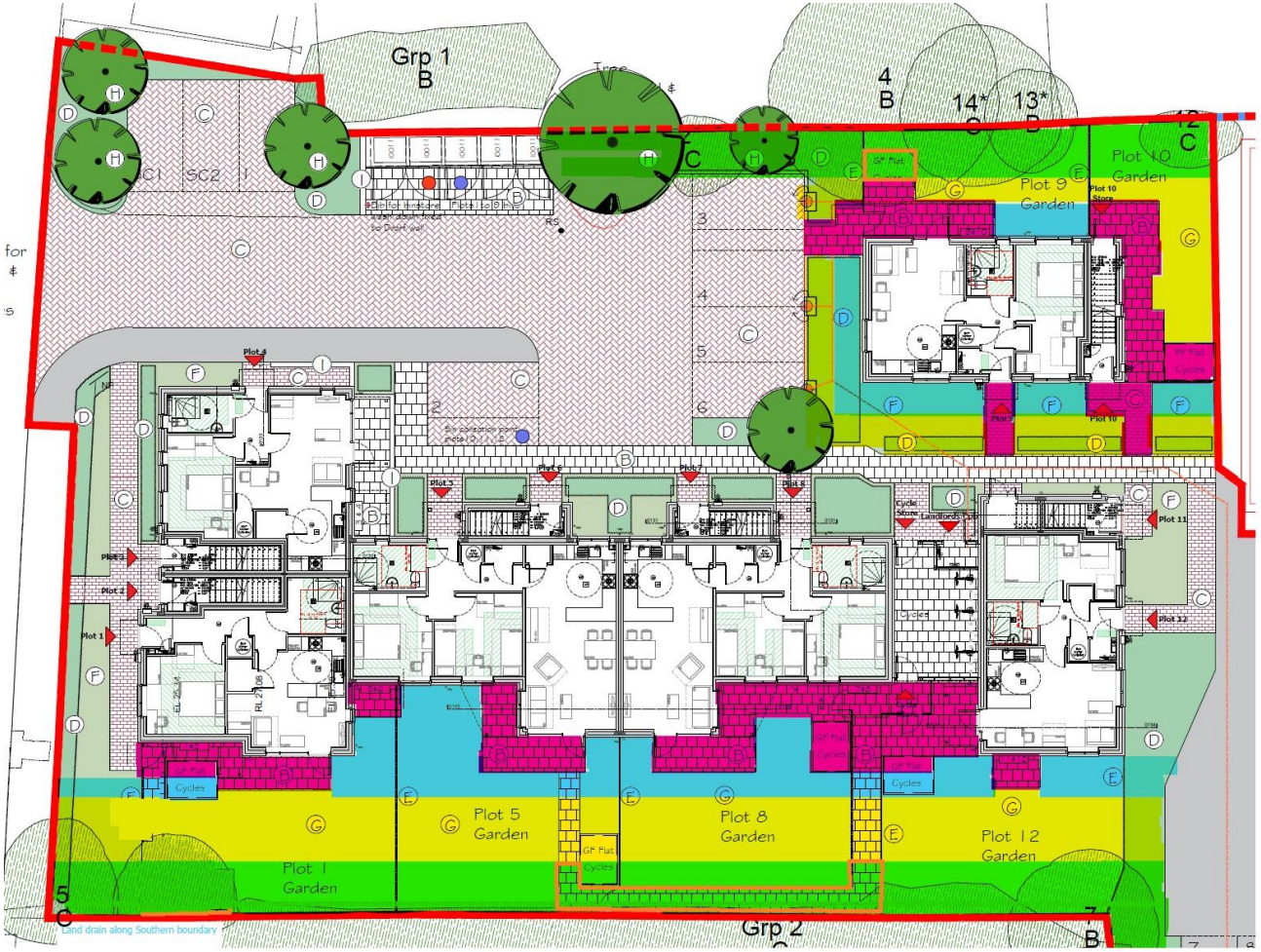
Zone A

Validation sample locations



NB: Positions of exploratory holes / test positions are only indicative unless dimensioned.

Site:	The Cobblers, Hayes Lane, Slinfold, Horsham, West Sussex, RH13 0SA	Project ID	V0978
Figure 2	Site Layout & Remediation Plan	Date:	20/03/2025



Key:

- Area of existing made ground (civilised to 150mm below FFL, 2m wide around building for scaffold) to remain below proposed hard landscape areas.
- Area of made ground (civilised to 150mm below FFL, 2m wide around building for scaffold) to be excavated down to natural soils, min 300mm below existing level in soft landscape areas and be built up to level with clean spoil from Southern Water excavation and clean sub-soil with min. 150mm imported topsoil.
- Area of existing clay sub-soil exposed (Currently reduced 300mm below FFL by Westridge) to Have existing made ground removed to remove localised foreign bodies / builders' rubble down to be excavated down to natural soils and be built up to level with clean sub-soil with min. 150mm imported topsoil.
- Area of existing clay sub-soil (currently reduced 300mm below FFL by Westridge) to remain as within Tree RPZ – this is virgin ground with tree roots present. To have deter-to-dig membrane installed and be built up to original level with clean sub-soil and min. 150mm imported topsoil.
- Area of existing clay sub-soil (currently reduced 300mm below FFL by Westridge) to remain as within Tree RPZ – this is virgin ground with tree roots present. To be built up to original level with geo-grid, porous infill and open joint paving to allow water through, as per WallerGrey no-dig construction to Arboriculturist's recommendations.



NB: Positions of exploratory holes / test positions are only indicative unless dimensioned.

Site:	The Cobblers, Hayes Lane, Slinfold, Horsham, West Sussex, RH13 0SA	Project ID	V0978
Figure 3	Sunninghill Construction Co. Limited Remediation Plan	Date:	20/03/2025

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APPENDIX B

Photographs



B



Plate 1: Location of the former above ground fuel storage tank on the northeast of the site.



Plate 2: Location of the trial hole in the vicinity of the former above ground fuel storage tank.



Plate 3: Trial hole in the vicinity of the former above ground fuel storage tank.



Plate 4: Trial hole excavated to 300mm bgl. to obtain a sample of the residual soils.



Plate 5: Residual soils to the rear of plot 1.



Plate 6: Residual soils to the rear of plots 1, 5, 8 & 12 on the south side of the site.



Plate 7: Residual soils to the south of plots 5 & 8.



Plate 8: Residual soils to the south of plot 8.



Plate 9: Residual soils to the south of plot 12.



Plate 10: 300mm deep trial hole through the residual soils to the rear of plot 1.



Plate 11: 300mm deep trial hole through the residual soils to the rear of plot 8.



Plate 12: 400mm deep trial hole through the residual soils to the rear of plot 12, down to natural soil.



Plate 1: Soft landscaping to the southwest of plot 1.



Plate 2: S1 – trial hole in the Soft landscaping to the southwest of plot 1.



Plate 3: 200mm of topsoil over re-worked yellow-brown clay.



Plate 4: Gardens to plots 1, 5, 8 & 12, on the south of the site.



Plate 5: Trial hole in the garden to plot 1.



Plate 6: Plot 1 – 200mm of topsoil over yellow-brown silty clay with organic matter.



Plate 7: Garden to plot 5.



Plate 8: Plot 5 – 200mm of topsoil over re-worked yellow-brown clay with occasional gravel.



Plate 9: Garden to plot 8.



Plate 10: Plot 8 – 450mm of re-worked yellow-brown silty clay with fine to coarse brick and occ. roots.



Plate 11: Residual soils in plots 8 & 12.



Plate 12: As plate 11.



Plate 13: Tree root protection zone along the south of the site.



Plate 14: As plate 13.



Plate 15: Soft landscaping to the front of plot 9.



Plate 16: As plate 15.



Plate 17: Soft landscaping to the west of plot 9.



Plate 18: Trial hole in the garden to plot 9.



Plate 19: Plot 9 – 200mm of topsoil over 300mm of re-worked yellow-brown silty clay.



Plate 20: Trial hole in the garden to plot 10.



Plate 21: Plot 10 - 200mm of topsoil over 400mm of re-worked yellow-brown silty clay.



Plate 22: Trial hole in plot 12.



Plate 23: 0.5m of re-worked yellow-brown silty clay in plot 12.



Plate 24: Asp plate 23.



Plate 1: Neighbouring trees removed before replacement.



Plate 2: Residual soils following the reduced level dig to plot 5.



Plate 3: Neighbours trees replaced and a no-dig cellweb installed in the TRPZ.



Plate 4: Cellweb installed below the footpath construction.



Plate 5: Deter-to-dig being installed within the TRPZ.



Plate 6: Reduced level dig to the front of plot 12.



Plate 7: Deter-to-dig to the front of plot 12.



Plate 8: Topsoil being placed within plot 12.



Plate 9: Soft landscaping to the front of plot 4.



Plate 10: Access and parking area on the southeast of the site.



Plate 11: Topsoil placed in the garden to plot 10.



Plate 12: Soft landscaping to the front of plot 11.



Plate 13: Garden area to plot 12.



Plate 14: Soft landscaping to the front of plots 9 & 10.



Plate 15: As plate 14.



Plate 16: Topsoil within plots 1 & 5.

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APPENDIX C

Laboratory Test Results



C

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Analytical Report Number : 25-001095

Project / Site name:	The Cobblers Horsham	**Samples received on:**	13/01/2025
Your job number:	V0978	**Samples instructed on/ Analysis started on:**	13/01/2025
Your order number:	V0978-1	**Analysis completed by:**	17/01/2025
Report Issue Number:	1	**Report issued on:**	17/01/2025
Samples Analysed:	1 soil sample		



Signed: _____

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 25-001095
Project / Site name: The Cobblers Horsham
Your Order No: V0978-1

Lab Sample Number	422678
Sample Reference	ZoneA
Sample Number	ES
Water Matrix	N/A
Depth (m)	0.25
Date Sampled	10/01/2025
Time Taken	0900

Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	20
Total mass of sample received	kg	0.1	NONE	0.2

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number : 25-001095
Project / Site name: The Cobblers Horsham

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
422678	ZoneA	ES	0.25	Brown clay and sand with gravel and vegetation

Analytical Report Number : 25-001095
Project / Site name: The Cobblers Horsham

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088-PL	D/W	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

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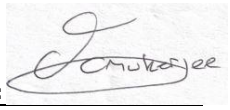
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Analytical Report Number : 25-013574

Project / Site name:	The Cobblers Horsham	**Samples received on:**	18/03/2025
Your job number:	V0978	**Samples instructed on/ Analysis started on:**	18/03/2025
Your order number:	V0978 3	**Analysis completed by:**	24/03/2025
Report Issue Number:	1	**Report issued on:**	24/03/2025
Samples Analysed:	14 soil samples		

Signed: 

Tuhina Mukerjee
Senior Customer Service Advisor
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 25-013574
Project / Site name: The Cobblers Horsham
Your Order No: V0978 3

Lab Sample Number				485536	485537	485538	485539	485540
Sample Reference				Plot 1	Plot 1	Plot 10	Plot 10	Plot 12
Sample Number				ES	ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.10	0.40	0.10	0.40	0.40
Date Sampled				14/03/2025	14/03/2025	14/03/2025	14/03/2025	14/03/2025
Time Taken				1000	1000	1030	1030	1100
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	24	15	13	17	23
Total mass of sample received	kg	0.1	NONE	0.2	0.2	0.2	0.2	0.2
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KWB	KWB	KWB	KWB	KWB
Analysis completed	N/A	N/A	N/A	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7.4	8.2	9.4	7	7.2
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	100	200	220	230	580
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0505	0.0989	0.111	0.114	0.292
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	50.5	98.9	111	114	292
Sulphide	mg/kg	1	MCERTS	< 1.0	3.3	2.3	< 1.0	< 1.0
Organic Matter (automated)	%	0.1	MCERTS	4.6	3.8	3.6	2	2.1
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	0.06
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.08	< 0.05	< 0.05	< 0.05	0.54
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.2
Fluoranthene	mg/kg	0.05	MCERTS	0.18	0.09	< 0.05	0.08	2.3
Pyrene	mg/kg	0.05	MCERTS	0.15	0.07	< 0.05	0.07	2.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	1.3
Chrysene	mg/kg	0.05	MCERTS	0.08	< 0.05	< 0.05	< 0.05	1.2
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.12	< 0.05	< 0.05	< 0.05	1.7
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	0.62
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	1.6
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.82
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.16
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.66
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	13.4
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	4.2	2.6	13	19
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.4	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	26	12	7.3	27	36
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	15	12	22	35

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 25-013574
Project / Site name: The Cobblers Horsham
Your Order No: V0978 3

Lab Sample Number				485536	485537	485538	485539	485540
Sample Reference				Plot 1	Plot 1	Plot 10	Plot 10	Plot 12
Sample Number				ES	ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.10	0.40	0.10	0.40	0.40
Date Sampled				14/03/2025	14/03/2025	14/03/2025	14/03/2025	14/03/2025
Time Taken				1000	1000	1030	1030	1100
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Lead (aqua regia extractable)	mg/kg	1	MCERTS	28	15	11	26	35
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	14	5.3	3.6	14	16
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	58	32	23	67	73

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Analytical Report Number: 25-013574
Project / Site name: The Cobblers Horsham
Your Order No: V0978 3

Lab Sample Number				485536	485537	485538	485539	485540
Sample Reference				Plot 1	Plot 1	Plot 10	Plot 10	Plot 12
Sample Number				ES	ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.10	0.40	0.10	0.40	0.40
Date Sampled				14/03/2025	14/03/2025	14/03/2025	14/03/2025	14/03/2025
Time Taken				1000	1000	1030	1030	1100
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 25-013574
Project / Site name: The Cobblers Horsham
Your Order No: V0978 3

Lab Sample Number				485541	485542	485543	485544	485545
Sample Reference				Plot 5	Plot 5	Plot 8	Plot 9	Plot 9
Sample Number				ES	ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.10	0.40	0.40	0.10	0.40
Date Sampled				14/03/2025	14/03/2025	14/03/2025	14/03/2025	14/03/2025
Time Taken				1000	1000	1000	1000	1000
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	19	26	12	18
Total mass of sample received	kg	0.1	NONE	0.2	0.2	0.2	0.2	0.2
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KWB	KWB	KWB	KWB	KWB
Analysis completed	N/A	N/A	N/A	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	8.5	8.4	7.1	8.9	7.9
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	140	400	280	200	110
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0694	0.198	0.142	0.0998	0.0528
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	69.4	198	142	99.8	52.8
Sulphide	mg/kg	1	MCERTS	1.1	4.8	< 1.0	1.1	< 1.0
Organic Matter (automated)	%	0.1	MCERTS	2.9	3	5.9	3.2	1.3
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.09	0.06	< 0.05	0.11
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.58	0.05	< 0.05	0.54
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.14	< 0.05	< 0.05	0.16
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	1.3	0.15	0.11	1.1
Pyrene	mg/kg	0.05	MCERTS	< 0.05	1.2	0.13	0.1	1
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.67	0.06	< 0.05	0.63
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.63	0.07	< 0.05	0.55
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.92	0.1	0.06	0.75
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.34	< 0.05	< 0.05	0.35
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.8	< 0.05	< 0.05	0.64
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.45	< 0.05	< 0.05	0.5
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.07	< 0.05	< 0.05	0.09
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.42	< 0.05	< 0.05	0.48
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	7.58	< 0.80	< 0.80	6.94
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	2.2	19	12	3.3	24
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.9	0.4	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	8.1	32	27	8.3	33
Copper (aqua regia extractable)	mg/kg	1	MCERTS	8.4	90	22	11	26

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Analytical Report Number: 25-013574
Project / Site name: The Cobblers Horsham
Your Order No: V0978 3

Lab Sample Number				485541	485542	485543	485544	485545
Sample Reference				Plot 5	Plot 5	Plot 8	Plot 9	Plot 9
Sample Number				ES	ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.10	0.40	0.40	0.10	0.40
Date Sampled				14/03/2025	14/03/2025	14/03/2025	14/03/2025	14/03/2025
Time Taken				1000	1000	1000	1000	1000
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Lead (aqua regia extractable)	mg/kg	1	MCERTS	8.3	110	30	11	40
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	3.6	24	15	4	15
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	16	270	75	28	92

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Analytical Report Number: 25-013574
Project / Site name: The Cobblers Horsham
Your Order No: V0978 3

Lab Sample Number				485541	485542	485543	485544	485545
Sample Reference				Plot 5	Plot 5	Plot 8	Plot 9	Plot 9
Sample Number				ES	ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.10	0.40	0.40	0.10	0.40
Date Sampled				14/03/2025	14/03/2025	14/03/2025	14/03/2025	14/03/2025
Time Taken				1000	1000	1000	1000	1000
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 25-013574
Project / Site name: The Cobblers Horsham
Your Order No: V0978 3

Lab Sample Number				485546	485547	485548	485549
Sample Reference				S1	S1	S2	S3
Sample Number				ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A
Depth (m)				0.10	0.40	0.30	0.30
Date Sampled				14/03/2025	14/03/2025	14/03/2025	14/03/2025
Time Taken				1030	1030	1030	1030
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	17	19	27	27
Total mass of sample received	kg	0.1	NONE	0.2	0.2	0.2	0.2
Asbestos							
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	DSA	DSA	DSA	DSA
Analysis completed	N/A	N/A	N/A	21/03/2025	21/03/2025	21/03/2025	21/03/2025
General Inorganics							
pH (L099)	pH Units	N/A	MCERTS	8.6	7.3	7.4	7.5
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	140	180	260	560
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0712	0.0886	0.13	0.281
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	71.2	88.6	130	281
Sulphide	mg/kg	1	MCERTS	1.7	< 1.0	< 1.0	< 1.0
Organic Matter (automated)	%	0.1	MCERTS	3.8	2.6	5.3	6
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.08	0.09
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.06
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.05	< 0.05	0.08	0.15
Pyrene	mg/kg	0.05	MCERTS	0.05	< 0.05	0.07	0.13
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.06
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	0.06	0.1
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.08
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	2.7	27	15	12
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	9.9	27	26	26
Copper (aqua regia extractable)	mg/kg	1	MCERTS	11	18	19	25

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Analytical Report Number: 25-013574
Project / Site name: The Cobblers Horsham
Your Order No: V0978 3

Lab Sample Number				485546	485547	485548	485549
Sample Reference				S1	S1	S2	S3
Sample Number				ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A
Depth (m)				0.10	0.40	0.30	0.30
Date Sampled				14/03/2025	14/03/2025	14/03/2025	14/03/2025
Time Taken				1030	1030	1030	1030
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	12	24	29	29
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	4.3	23	17	15
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	35	83	70	75

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Analytical Report Number: 25-013574
Project / Site name: The Cobblers Horsham
Your Order No: V0978 3

Lab Sample Number				485546	485547	485548	485549
Sample Reference				S1	S1	S2	S3
Sample Number				ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A
Depth (m)				0.10	0.40	0.30	0.30
Date Sampled				14/03/2025	14/03/2025	14/03/2025	14/03/2025
Time Taken				1030	1030	1030	1030
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status				

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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Analytical Report Number : 25-013574
Project / Site name: The Cobblers Horsham

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
485536	Plot 1	ES	0.1	Brown loam and clay with gravel and vegetation
485537	Plot 1	ES	0.4	Brown sandy loam with gravel and vegetation
485538	Plot 10	ES	0.1	Brown sandy loam with gravel and vegetation
485539	Plot 10	ES	0.4	Brown clay and loam with gravel and vegetation
485540	Plot 12	ES	0.4	Brown clay with gravel and vegetation
485541	Plot 5	ES	0.1	Brown loam and sand with gravel and vegetation
485542	Plot 5	ES	0.4	Brown clay and loam with gravel and vegetation
485543	Plot 8	ES	0.4	Brown clay and loam with gravel and vegetation
485544	Plot 9	ES	0.1	Brown sandy loam with gravel and vegetation
485545	Plot 9	ES	0.4	Brown clay and loam with gravel and vegetation
485546	S1	ES	0.1	Brown sandy loam with gravel and vegetation
485547	S1	ES	0.4	Brown clay and loam with gravel and vegetation
485548	S2	ES	0.3	Brown clay and loam with gravel and vegetation
485549	S3	ES	0.3	Brown clay and loam with gravel and vegetation

Analytical Report Number : 25-013574
Project / Site name: The Cobblers Horsham

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

Southern Testing
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APPENDIX D

Imported Soil Transfer Notes and Test Results



D

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Mr John Coles
Bury Hill Landscape Supplies Ltd
The Estate Office
Old Bury Hill
Westcott
Nr Dorking
Surrey, RH4 3JU

2nd January 2025
Our Ref: TOHA/25/1641/1/SS
Your Ref: see below

Bury Hill Landscape Supplies Ltd

Dear Sirs

Topsoil Analysis Report: Bury Hill Horsham Yard - GP10 Topsoil (S)

We have completed the analysis of the soil sample recently collected, referenced *GP10 Topsoil (S),* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, this sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample collected from the production site on 02/12/2024, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification or validation testing, waste designation purposes or for any project-specific application, especially after the topsoil has left the Bury Hill Landscape Supplies Ltd site.

SOIL EXAMINATION

The soil was described as a very dark greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous LOAMY SAND with a weakly developed, very fine to medium granular structure*. The soil was virtually stone-free and contained a moderate proportion of organic fines and occasional woody fragments. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.



Plate 1: Sample GP10 Topsoil (S)

Bury Hill Landscape Supplies Ltd

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- detailed particle size analysis ('5 sands', silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- saturated hydraulic conductivity;
- pH and electrical conductivity values;
- calcium carbonate;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- visible contaminants;
- heavy metals (Sb, As, B, Ba, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, V, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *loamy sand* texture class. Further detailed particle size analysis revealed the sample to have a reasonably narrow particle size distribution, with a predominance of *medium sand* (0.25-0.50mm) followed by *fine sand* (0.05-0.15mm) and *coarse sand* (0.50-1.0mm). This is acceptable for topsoil in general landscape applications as sufficient porosity levels can be maintained in a consolidated state and the risk of particle interpacking is reduced. This type of grading therefore normally provides adequate water attenuation, drainage and aeration properties for general landscape applications.

The sample was virtually stone-free and, as such, stones should not restrict the use of the soil for general landscape purposes.

Saturated Hydraulic Conductivity

The saturated hydraulic conductivity test is designed to test the sample's drainage potential under a reasonable degree of compaction. The saturated hydraulic conductivity result (34 mm/hr) was moderate and would be considered suitable for general landscape purposes.

pH and Electrical Conductivity Values

The sample was strongly alkaline in reaction (pH 8.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was moderate, which indicates that soluble salts should not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequate to well supplied with organic matter and all major plant nutrients.

The C:N ratio of the sample was acceptable for general landscape purposes.

Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with homegrown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined, none exceeded their respective guideline values.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

Bury Hill Landscape Supplies Ltd

CONCLUSION

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, this sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a strongly alkaline, non-saline, non-calcareous loamy sand with an adequate structure and very low stone content. The sample contained sufficient reserves of organic matter and all major plant nutrients. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes (trees, shrubs and amenity grass), provided species with a wide pH tolerance or those known to prefer alkaline soils are selected and the physical condition of the soil is satisfactory.

The sample was also fully compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil).*

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency. If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

Further details on soil handling are provided in Annex A of *BS3882:2015.*

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully

H.MacRae

Harriet MacRae
BSc MSc
Soil Scientist

Rebecca Roberts
BSc MSc MISoilSci
Senior Soil Scientist

For & on behalf of Tim O'Hare Associates LLP

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Bury Hill Landscape Supplies Ltd**
Project	**Bury Hill Horsham Yard**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**02/01/2025**
Job Ref No:	**TOHA/24/1641/1/SS**

Sample Reference			**GP10 Topsoil (S)**
		Accreditation	
Clay (<0.002mm)	%	UKAS	5
Silt (0.002-0.05mm)	%	UKAS	8
Very Fine Sand (0.05-0.15mm)	%	UKAS	6
Fine Sand (0.15-0.25mm)	%	UKAS	20
Medium Sand (0.25-0.50mm)	%	UKAS	39
Coarse Sand (0.50-1.0mm)	%	UKAS	18
Very Coarse Sand (1.0-2.0mm)	%	UKAS	4
Total Sand (0.05-2.0mm)	%	UKAS	87
Texture Class (UK Classification)	--	UKAS	LS
Stones (2-20mm)	% DW	GLP	1
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
Saturated Hydraulic Conductivity (m)	mm/hr	A2LA	34
pH Value (1:2.5 water extract)	units	UKAS	8.5
Calcium Carbonate	%	UKAS	< 1.0
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	821
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2891
Exchangeable Sodium Percentage	%	UKAS	5.2
Organic Matter (LOI)	%	UKAS	3.0
Total Nitrogen (Dumas)	%	UKAS	0.22
C : N Ratio	ratio	UKAS	8
Extractable Phosphorus	mg/l	UKAS	76
Extractable Potassium	mg/l	UKAS	1063
Extractable Magnesium	mg/l	UKAS	91
Visible Contaminants: Plastics >2.00mm	%	UKAS	0
Visible Contaminants: Sharps >2.00mm	%	UKAS	0
Total Antimony (Sb)	mg/kg	MCERTS	< 1.0
Total Arsenic (As)	mg/kg	MCERTS	2.0
Total Barium (Ba)	mg/kg	MCERTS	7.9
Total Beryllium (Be)	mg/kg	MCERTS	0.07
Total Cadmium (Cd)	mg/kg	MCERTS	< 0.2
Total Chromium (Cr)	mg/kg	MCERTS	5.6
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	4.7
Total Lead (Pb)	mg/kg	MCERTS	4.6
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	2.0
Total Selenium (Se)	mg/kg	MCERTS	< 1.0
Total Vanadium (V)	mg/kg	MCERTS	5.9
Total Zinc (Zn)	mg/kg	MCERTS	11
Water Soluble Boron (B)	mg/kg	MCERTS	1.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	< 0.05
Fluorene	mg/kg	MCERTS	< 0.05
Phenanthrene	mg/kg	MCERTS	< 0.05
Anthracene	mg/kg	MCERTS	< 0.05
Fluoranthene	mg/kg	MCERTS	< 0.05
Pyrene	mg/kg	MCERTS	< 0.05
Benzo(a)anthracene	mg/kg	MCERTS	< 0.05
Chrysene	mg/kg	MCERTS	< 0.05
Benzo(b)fluoranthene	mg/kg	MCERTS	< 0.05
Benzo(k)fluoranthene	mg/kg	MCERTS	< 0.05
Benzo(a)pyrene	mg/kg	MCERTS	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	< 0.05
Dibenzo(a,h)anthracene	mg/kg	MCERTS	< 0.05
Benzo(g,h,i)perylene	mg/kg	MCERTS	< 0.05
Total PAHs (sum USEPA16)	mg/kg	MCERTS	< 0.80
Aliphatic TPH (C5-C6)	mg/kg	MCERTS	< 0.010
Aliphatic TPH (C6-C8)	mg/kg	MCERTS	< 0.010
Aliphatic TPH (C8-C10)	mg/kg	MCERTS	< 0.010
Aliphatic TPH (C10-C12)	mg/kg	MCERTS	< 1.0
Aliphatic TPH (C12-C16)	mg/kg	MCERTS	< 2.0
Aliphatic TPH (C16-C21)	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C21-C35)	mg/kg	MCERTS	9.2
Aliphatic TPH (C5-C35)	mg/kg	MCERTS	< 10
Aromatic TPH (C5-C7)	mg/kg	MCERTS	< 0.010
Aromatic TPH (C7-C8)	mg/kg	MCERTS	< 0.010
Aromatic TPH (C8-C10)	mg/kg	MCERTS	< 0.020
Aromatic TPH (C10-C12)	mg/kg	MCERTS	< 1.0
Aromatic TPH (C12-C16)	mg/kg	MCERTS	< 2.0
Aromatic TPH (C16-C21)	mg/kg	MCERTS	< 10
Aromatic TPH (C21-C35)	mg/kg	MCERTS	< 10
Aromatic TPH (C5-C35)	mg/kg	MCERTS	< 10
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
Asbestos	ND/D	ISO17025	Not-detected

LS = LOAMY SAND

Visual Examination

The soil was described as a very dark greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous LOAMY SAND with a weakly developed, very fine to medium granular structure. The soil was virtually stone-free and contained a moderate proportion of organic fines and occasional woody fragments. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

H.MacRae

Harriet MacRae
BSc MSc
Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Bury Hill Landscape Supplies Ltd

Bury Hill Landscape Supplies Ltd,
The Boathouse,
Old Bury Hill, Westcott,
Nr Dorking, Surrey
RH4 3JU
Tel: 01306 772455

DELIVERY NOTE

Delivered on: 30/01/2025 (1)

DELIVER TO
Sunninghill Construction Co. Ltd The Cobbers Hayes Lane, Slinfold HORSHAM, RH13 0SA **Tel: 07540665804 Paul**

Order No	Order Date	Customer PO
90351	27/01/2025	100380/ 56746

Quantity	Model	Description	Unit	Received?
15	gp10-topsoil-LOOSE	GP10 Multi-Purpose Topsoil (S)	m3	[15]

RECEIVED BY SIGNATURE: _____ PRINT NAME: Ben Wells DATE: 30/1/25

TERMS
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Title to the goods shall remain that of Bury Hill Landscape Supplies Limited until such time as payment has been made in full.
Shortages and Damages must be reported within 3 days of receipt of goods.

92713

BURY HILL LANDSCAPE SUPPLIES

Bury Hill Landscape Supplies Ltd,
Lower Broadbridge Farm,
Billingshurst Road,
Broadbridge Heath,
West Sussex,
RH12 3LR
Tel: 01306 772455

Delivery Note

Deliver to:

Sunninghill Construction Co. Ltd

The Cobblers
Hayes Lane, Slinfold
HORSHAM, RH13 0SA

Order number: ORD92713 **Order Date: 12/03/2025** **PO No: 100380/ 56746**

Qty	Description	Unit	Received?
15	GP10 Multi-Purpose Topsoil (S) - Rigid Tipper	Loose m3	[ ]

** DELIVERED ON 14/03/2025 **

RECEIVED BY SIGNATURE: _____ PRINT NAME: DAVID MONAHEY. DATE: ___/___/_____

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92713

Bury Hill Landscape Supplies Ltd,
Lower Broadbridge Farm,
Billingshurst Road,
Broadbridge Heath,
West Sussex,
RH12 3LR
Tel: 01306 772455

Delivery Note

for invoice 92713

Deliver to:

Sunninghill Construction Co. Ltd

The Cobblers
Hayes Lane, Slinfold
HORSHAM, RH13 0SA

Order number: ORD92920 **Order Date: 12/03/2025** **PO No: 100380/ 56746**

Qty	Description	Unit	Received?
15	GP10 Multi-Purpose Topsoil (S) - Rigid Tipper	Loose m3	[✓]

** DELIVERED ON 14/03/2025 **

RECEIVED BY SIGNATURE: _____ PRINT NAME: DAVE MONKTON DATE: 14/3/25

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BURY HILL LANDSCAPE SUPPLIES

9914.

Bury Hill Landscape Supplies Ltd,
The Boathouse,
Old Bury Hill, Westcott,
Nr Dorking, Surrey
RH4 3JU
Tel: 01306 772455

DELIVERY NOTE

Delivered on: 07/03/2025 (1)

***** DELIVERY NOTES *****
Matt Verbal .

DELIVER TO
Sunninghill Construction Co. Ltd The Cobblers Hayes Lane, Slinfold HORSHAM, RH13 0SA **Tel: 07549280865 Matt**

Order No	Order Date	Customer PO
92357	28/02/2025	100380/ 56746

Quantity	Model	Description	Unit	Received?
15	gp10-topsoil-LOOSE	GP10 Multi-Purpose Topsoil (S)	**m3**	[✓] 12-3

RECEIVED BY SIGNATURE: _____ **PRINT NAME:** Damon **DATE:** 7/3/25

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BURY HILL LANDSCAPE SUPPLIES

91914

Bury Hill Landscape Supplies Ltd,
The Boathouse,
Old Bury Hill, Westcott,
Nr Dorking, Surrey
RH4 3JU
Tel: 01306 772455

DELIVERY NOTE

Delivered on: 05/03/2025 (1)

***** DELIVERY NOTES *****
Matt Verbal .

DELIVER TO
Sunninghill Construction Co. Ltd The Cobblers Hayes Lane, Slinfold HORSHAM, RH13 0SA **Tel: 07549280865 Matt**

Order No	Order Date	Customer PO
91914	28/02/2025	100380/ 56746

Quantity	Model	Description	Unit	Received?
15	gp10-topsoil-LOOSE	GP10 Multi-Purpose Topsoil (S)	**m3**	[ ]
~~15~~	~~gp10-topsoil-LOOSE~~	~~GP10 Multi-Purpose Topsoil (S)~~	**m3**	[ ]

RECEIVED BY SIGNATURE: _____ **PRINT NAME:** JACK F. **DATE:** 5/3/25

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Southern Testing
Environmental & Geotechnical

ST Consult
Environmental & Geotechnical



APPENDIX E

Deter-to-dig memebrane



E

Lotrak®

HIGH VISIBILITY

TECHNICAL DATA SHEET

Highly visible, Lotrak® Alarm18 has been specifically developed as a contaminated ground warning or marker geomembrane.

Designed to complement the existing Lotrak® range, Don & Low have drawn on their expertise and knowledge of this market sector and provided a combination of factors that has resulted in the development of this multi-functional geosynthetic material.

With increasing demand for good building land, reclamation of industrial zones are becoming more common place, potential hazards are now often buried and contained underground as an alternative to removal. Good environmental construction practice utilises Lotrak® Alarm18 to notify future contractors and excavators of these hidden hazards.

FEATURES

- With good tensile strength, CBR properties and a strong visual appearance Lotrak® Alarm18 provides a high performance underground warning system
- Based on well-established Lotrak® 1800, Lotrak® Alarm18 performs excellently as a separating geotextile in a wide range of civil engineering applications.

BENEFITS

- Proven superior performance
- UV resistant and highly durable
- Highly visible

CE

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w: www.donlow.co.uk

Issue 1
Jan 2018

Lotrak®

Don & Low
MEMBER OF THRACE GROUP

TEST	STANDARD		Alarm18
Tensile Strength (kN/m)	EN 10319	**MD** **CD**	12 12
Elongation at max. load (%)	EN 10319	**MD** **CD**	22 18
CBR Puncture Resistance (N)	EN ISO 12236		1800
Cone Drop Penetration (mm)	EN 918		14
Pore size 90% finer than (microns)	EN ISO 12956		200
Water Permeability (x 10^{-3}) (m/sec)	EN ISO 11058		18
Effect of UV Light		The polypropylene (PP) used contains a UV inhibitor	
Roll Size (m)		**Width** **Length**	4.5 100

CE

All products are manufactured under BS EN ISO 9001.

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