Our Ref: SKT/JK/J16272(rev.1)

Southern Testing
Environmental & Geotechnical

Southern Testing Laboratories Ltd
Keeble House, Stuart Way
East Grinstead, West Sussex RH19 4QA

t 01342 333100 f 01342 410321
e info@southerntesting.co.uk w southerntesting.co.uk

Directors Dr L D Mockett BSc PhD PGDip FGS (Joint Managing Director)
Dr J Kelly BSc PhD DIC (Joint Managing Director)
S F Pratt BSc MSc CGeol FGS DIC
P J Sugden BSc MSc FGS
C Lennard BEng
D Spearman BEng ACSM MSc CGeol FGS EurGeol RoGEP
Co. Secretary P L Noble
Consultant D Illingworth BSc FGS

30 October 2026

Mr S Keeney
c/o HUUK Developments Limited
14 Clifton Street Passage
Brighton
BN1 3PU

For the attention of Darren Manton
By e-mail: dmanton@huuk-architects.com

Dear Sirs,

Re: Phase 2 Intrusive Geoenvironmental Investigation at: 11a West Street, Shoreham-by-Sea, East Sussex, BN43 5WF
National Grid Reference: TQ 21359 05128
Geology: Head over Newhaven Chalk Formation

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 by Darren Manton of HUUK Developments Ltd. on behalf of the client Mr Steven Keeney.

2 Background and Objectives

The above site has been the subject of a Phase 1 Desk Study (STL ref. J16272 dated 28th August 2026) to which the reader is referred. This report concluded that there was a low to moderate contamination risk with respect to the site, with the main uncertainty relating to the presence, thickness and composition of Made Ground beneath the site.

It was recommended that an intrusive investigation and risk assessment be undertaken to verify the preliminary conceptual model. This was to include shallow trial holes within the areas of proposed private garden/soft landscaped areas, with soil samples taken for analysis for metals, PAHs and asbestos. Should any visual or olfactory evidence of potential contamination be encountered, analysis for petroleum hydrocarbons and volatile organic compounds (VOCs) was also be undertaken.

The object of this investigation was to undertake sampling and laboratory analysis of the existing shallow soils on site in order to satisfy the above recommendations.

3 Scope

This letter report presents the findings of the intrusive site works, laboratory test results and our interpretation of these data. As with any site there may be differences in soil conditions between exploratory hole positions and below the depth of investigation. Southern Testing assumes no liability in respect of such differences.

Any contamination screening values used are valid at the time of writing but may be subject to change and any such changes will have implications for the assessments based upon them. Their validity should be confirmed at the time of site development.

The findings and opinions conveyed via this Site 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 site investigation was conducted and this report has been prepared for the sole internal use and reliance of HUUK Developments Limited and their appointed Engineers. This report shall not be relied upon or transferred to any other parties without the express written authorization 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.

Recommendations contained in this report may not be appropriate to alternative development schemes.

4 Background

4.1 Geology

The British Geological Survey Map No 318 indicates that the site is underlain by superficial Head Deposits over Newhaven Chalk Formation bedrock.

4.2 Hydrology and Hydrogeology

The site is mapped as underlain by Head Deposits which are classified as a Secondary aquifer over the Newhaven Chalk Formation, which is Principal aquifer, with groundwater classified as being of Medium Vulnerability. Therefore, groundwater beneath the site would be classified as vulnerable to potentially mobile sources of contamination arising on site, and/or from the migration of contaminants from off-site sources.

Groundwater at the site is estimated to be at around 5m bgl. and is anticipated to flow in a southerly direction. It will be tidal due to the sites location, approximately 135m to the north of the River Adur and 780m north of the south coast.

4.3 Site History

The earliest available mapping, dating from 1875, shows the site as an area of undeveloped land, likely forming part of the rear gardens to cottages along the west side of West Street.

By 1898, a large rectangular building had been constructed along the southern boundary of the site. The mapped footprint of this structure remained largely unchanged through to 2025. Historical mapping identified the building as a 'Boys Club' between 1974 and 1994, after which it was simply labelled as a 'Club'.

An additional square-shaped building was erected in the north-west corner of the site by approximately 1912. This structure remained in place until around 1952, when it was demolished. Prior to 1965, a new building of a similar size and form had been constructed immediately to the north of the club building.

5 Site Description

The site is situated on the west side of West Street and is accessed from the street via a passage way beneath the 1st floor to no. 11 West Street. There is also a pedestrian gate in the north-west corner of the site, which leads to a passageway, leading out onto Shoreham High Street. The existing building covers the majority of the site, with a small area of unsurfaced ground to the north.

The lower elevations, on the south and west sides of the building comprise flint walls at ground floor level, with brick elevations at first floor level. The remainder of the building comprises a predominately wooden framed structure. The outer elevations are clad predominantly with corrugated asbestos cement sheet, with wooden boarding to some of the internal walls. The roof consists of a wooden truss clad internally in wood and externally with corrugated asbestos cement sheet. There is a wooden framed, corrugated asbestos cement sheet clad extension on the north side of the building.

The building is generally in a poor state of repair, with broken windows, damp patches and rotten floor boards. Some of the asbestos cement sheeting and rain goods were also noted to be in a poor state of repair.

It appeared that the site had most recently been used as a nightclub, or similar, with a dance floor and bar at ground floor level.

6 Proposed Site Use

It is proposed to part demolish the existing building and convert the structure into single dwelling house with private garden. The proposed site layout is shown on the enclosed Figure 1.

7 Conceptual Site Model

The conceptual model (as presented in the above referenced Phase 1 Desk Study, to which the reader is referred) is based upon the historic and current uses of the site, the surrounding area, and the environmental database.

The site has a long history of development, and therefore it is possible that Made Ground is present. Such material can be highly variable in both depth and composition, and can contain a range of potential contaminants.

The existing building on site is clad with corrugated asbestos cement sheet.

Radon protection requirements should be confirmed.

The findings indicated a generally low to moderate contamination risk, with the main uncertainty relating to the presence, thickness and composition of Made Ground beneath the site.

7.1 Preliminary Relevant Pollution Linages

The potential sources of contamination which have been identified as potentially relevant and, therefore, require investigation, are summarised in the table below:

	Sources	Pathway	Receptors	Risk Category
Human Heath	Asbestos	• Inhalation of soil and/ or dust.	• Construction Workers	Moderate
	Heavy Metals PAHs Petroleum Hydrocarbons	• Ingestion of soil and/ or dust. • Inhalation of soil and/ or dust. • Plant Uptake	• Future Site Residents • Intrusive Maintenance Workers	Moderate/Low
Gases & Vapours	Radon	• Inhalation	• Future Site Residents	Moderate/Low

Very Low	Low	Moderate/ Low	Moderate	High	Very High

8 Intrusive Site Investigation Works

The intrusive site works comprised four shallow hand excavated trial holes within the proposed area of soft landscaping in the north-east of the site. See enclosed Figure 1 for details.

8.1 Soils as Found

The soils encountered are described below:

Trial Hole	Depth (m)	Soil Type	Description
HP01	0.8	Made Ground	GL – 0.8m Dark brown clayey silt with occasional fine to medium sub-rounded flint, rare pottery, clinker, slate and brick, with clay (smoking) pipe and oyster shells at depth.*
HP02	0.6	Made Ground	GL – 0.2m Dark brown sandy clayey silt with abundant rootlets. 0.2 – 0.4m Foil milk bottle tops, ash and clay tile. 0.4 – 0.6m Dark brown clayey silt with occasional fine to medium sub-rounded flint, rare pottery, clinker, slate and brick.
HP03	0.5	Made Ground	GL – 0.3m Dark brown sandy clayey silt with roots and rootlets. 0.3 – 0.5m Dark brown sandy clayey silt with occasional fine to medium rounded to sub-rounded flint, rare glass, plastic, brick and ash.
HP04	0.6	Made Ground	GL – 0.15m Concrete slab (no obvious reinforcement). 0.15m – 0.6m Dark brown silty sandy clay with rare frequent to occasional coarse sub-rounded to rounded flint, brick and pottery.

** Clay (smoking) pipe and oyster shells are indicative of historical Made Ground*

Evidence of possible contamination in the form of Made Ground was recorded in all four trial hole locations. A series of photographs showing the soils encountered is enclosed.

No visual or olfactory evidence of any of potentially mobile contamination (petroleum hydrocarbons and/or volatile organic compounds (VOCs) was observed.

Groundwater was not encountered during the shallow intrusive site works.

9 Laboratory Test Results

The potential for contamination by metals, polyaromatic hydrocarbons (PAH), and asbestos containing materials was identified in the preliminary conceptual model. Therefore, a sample of the Made Ground from each of the trial holes was submitted for laboratory analysis for these potential contaminants. As discussed, there was no visual or olfactory evidence to adjust the analytical strategy.

9.1 Analytical Framework

There is no single methodology that covers all the various aspects of the assessment of potentially contaminated land and groundwater. Therefore, the analytical framework adopted for this investigation is made up of a number of procedures, which are outlined below. All of these are based on a Risk Assessment methodology centred on the identification and analysis of Source – Pathway – Receptor linkages.

The CLEA model Ref [1], provides a methodology for quantitative assessment of the long-term risks posed to human health by exposure to contaminated soils. Toxicological data is used to calculate a Soil Guideline Value (SGV) for an individual contaminant, based on the proposed site use; these represent minimal risk concentrations and may be used as screening values.

In the absence of any published SGVs for certain substances, Southern Testing have derived or adopted Tier 1 screening values for initial assessment of the soil, based on available current UK guidance including the LQM/CIEH S4UL's[1] and CL:AIRE Soil Generic Assessment Criteria Ref[2]. In addition, in 2014, DEFRA[3] published the results of a research programme to develop screening values to assist decision making under Part 2A of the Environmental Protection Act. Category 4 screening levels were published for 6 substances, with reference to human health risk only. This guidance includes revisions of the CLEA exposure parameters, presenting parameters for public open space land use scenarios, and also of the toxicological approach. The screening levels represent a low risk scenario, based on a 'Low Level of Toxicological Concern' rather than the 'Minimal Risk' of CLEA. Category 4 screening levels for further substances have been published subsequently. The analytical results of this investigation may be considered relative to these levels.

Given the small sample size statistical analysis is not possible. Therefore, for each parameter in each population the concentration compared to a Tier 1 screening value. If the concentration exceeds the screening value, the soil may be regarded as contaminated and further assessment may be required. If the concentration for each individual contaminant is below the relevant screening value, the soil may be regarded as not contaminated, though further confirmatory assessment may be required.

[1] C. Nathanail, C. McCaffrey, A. Gillett and R. &. N. J. Ogden, "The LQM/CIEH S4ULs for Human Health Risk Assessment," Land Quality Press, Nottingham, 2015.
[2] EIC/AGS/CL:AIRE, "Soil Generic Assessment Criteria for Human Health Risk Assessment," 2010.
[3] DEFRA, "SP1010 Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination," 2014.

9.2 General Contaminants

Summary data is presented in the table below. The laboratory test certificates are enclosed.

Contaminants	Units	HP01 0.3m	HP02 0.4m	HP03 0.3m	HP04 0.3m	Residential with Home-grown Produce Consumption Tier 1 Screening Values
Arsenic (As) [2]	mg/kg	31	22	26	27	37
Cadmium (Cd) [2]	mg/kg	0.6	0.6	1.6	0.9	11
Trivalent Chromium (CrIII) [2]	mg/kg	23	24	30	22	910
Hexavalent Chromium (CrVI) [2]	mg/kg	<1.8	<1.8	2	<1.8	6
Lead (Pb) [3]	mg/kg	**1,400**	**940**	**1,500**	**1,400**	200
Mercury (Hg) [1,2,6]	mg/kg	2.4	0.3	1.3	2.1	7.6-11
Selenium (Se) [2]	mg/kg	<1.0	<1.0	<1.0	<1.0	250
Nickel (Ni) [2,4]	mg/kg	34	27	30	27	130
Copper (Cu) [2,4]	mg/kg	170	120	120	130	2,400
Zinc (Zn) [2,4]	mg/kg	360	530	930	810	3,700
Benzo[a]pyrene [1,5]	mg/kg	**2.9**	**9.6**	**24**	**19**	1.7-2.4
Naphthalene [1,2]	mg/kg	0.16	0.32	0.78	0.73	2.3-13
Acidity (pH values)	/	8	8	7.5	7.8	/
Soil Organic Matter	mg/kg	5.8	5.5	12	5.5	/

Notes:

[1] Where ranges of values are given for organic contaminants the screening value is dependant on the Soil +Organic Matter.

[2] LQM/CIEH S4UL (2014). Copyright Land Quality Management Ltd reproduced with permission; Publication Number S4UL 3116. All rights reserved.

[3] C4SL (DEFRA 2014).

[4] Copper, Zinc and Nickel may have phototoxic effects at the given concentrations. Alternative criteria should be adopted for importation of Topsoil or other soils for cultivation. BS3882:2007 and BS8601:2013 suggest values of 200 to 300mg/kg for Zn, 100 to 200mg/kg for Cu, and 60 to 110mg/kg for Ni, for topsoil and subsoil, depending on pH.

[5] Based on the Surrogate Marker approach and modelled using the modified exposure parameters of C4SL but retaining 'minimal risk' HCV.

[6] S4UL for Methyl Mercury, higher concentrations may be tolerable if inorganic mercury is the only species present. Lower concentrations apply for elemental Mercury.

All four samples recorded elevated concentrations of lead and the polyaromatic hydrocarbon (PAH) benzo(a)pyrene, when compared to the tier 1 screening value for a Residential with Home-grown Produce Consumption land use.

Using the 'Surrogate Marker' approach recommended by DEFRA and HPA, benzo(a)pyrene has been used as the surrogate for all genotoxic PAH in order to assess the risk to human health. On this basis, the concentrations of the genotoxic PAHs in the four samples would be considered to pose a potential risk to human health.

9.3 Asbestos

The buildings on site were clad in what was visually identified as corrugated asbestos cement sheet, with asbestos cement rain goods. This material appeared to be in relatively good condition, with only slight damage in places. However, this does not constitute a formal asbestos survey and one should be carried out, by a specialist contractor, prior to any work being carried out.

No suspected asbestos containing materials (ACM) were noted in the soils during excavation of the trial holes, including beneath the concrete slab to the lean-to.

All four of the soil samples were subject to laboratory analysis for asbestos, with ACM recorded in two of the samples, HP01 at 0.3m and HP03 at 0.3m. Subsequent quantification testing was therefore carried out to better assess the risk.

In HP01 the asbestos comprised loose fibres of chrysotile (white) asbestos, with quantification testing reporting <0.001% asbestos by weight. In HP03 loose fibres and asbestos cement was found, containing chrysotile asbestos, with a quantification of 0.013% by weight.

10 Discussion and Conclusions

It is proposed to part demolish the existing building and convert the structure into a single dwelling house with private garden.

On the basis of the above sampling and laboratory analysis, the existing shallow soils within the proposed garden area would not be considered suitable to be retained within private garden areas, due to elevated concentrations of lead, PAH and the presence of asbestos.

At the time of writing, the proposals for the private garden area had not been finalised. However, it is understood that the majority of this area is likely to comprise a sunken patio, with levels from 200 – 600mm below finished level. It is also understood that green areas will be limited to raised planters around the margins of the patio.

The construction of the patio and new entrance courtyard (on the south of the site) will effectively break any pathway between future site residents and the contaminated soils. Certified clean imported soils will be required within the raised planters.

Therefore, in terms of potential exposure/consideration of human health, the only residual risks post redevelopment will be to future site workers who may be involved in works to the existing service connections (drainage and inspection chambers) which will be beneath the new entrance courtyard. These risks can be mitigate by the use of basic PPE and good site practice (such as the use of welfare facilities).

However, it should be noted that, if proposals change, and/or in areas of soft landscaping where no change in levels from existing are proposed, the soils will require removal down to a minimum depth of 600mm below finished levels from the garden, including beneath areas to be hard landscaped.

Given the existing building on site is to be retained, and other constraints around the perimeter of the site (neighbouring walls, properties and other structures), in some areas the removal of soils may be less than the specified 600mm, as to avoid undermining or damaging these structures. Regardless of the depth of soils removed, prior to the placement of certified clean imported soils to make levels back up, a deter-to-dig geotextile marker membrane should be placed. The remediation strategy should be agreed with the local authority.

As discussed, a formal asbestos survey and one should be carried out, by a specialist contractor, prior to any demolition/refurbishment work being carried out. Any identified ACMs should be removed by a licensed contractor and taken to a suitable tip to mitigate the risk to the contractors and end-users.

Measures are also required to mitigate the risk to site workers. Basic PPE and good site practice (such as the use of welfare facilities) is considered acceptable to mitigate the risk to the contractors, although this should be the subject of an assessment of a health and safety assessment by the contractors, on review of this report.

Given the PAH impact recorded, the providers may stipulate Protecta-Line pipes or similar regardless. This should be confirmed with the supplier.

As with any site, areas of contamination not identified during site investigation works may come to light in the course of redevelopment. Accordingly, a discovery strategy must be in place during the redevelopment to ensure that any hitherto unknown contamination is identified and dealt with in an appropriate manner. Depending on the nature of any such contamination, it may prove necessary to reassess the remedial strategy for the site.

A formal remediation strategy and verification plan should be agreed with the regulatory authorities prior to commencement of any remedial works.

If you have any queries or we can be of further assistance, please do not hesitate to contact us

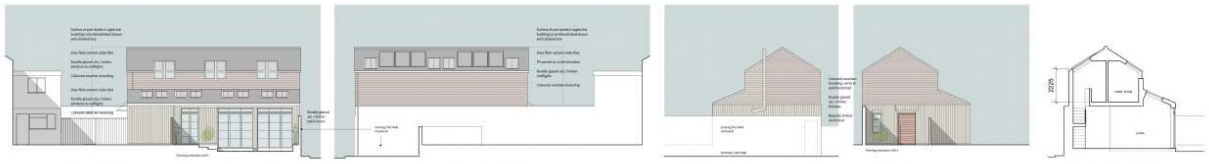
Yours faithfully,

[redacted]

Sarah Toms MSc MIEnvSc
For and on behalf of
Southern Testing Laboratories Limited
DDI: [redacted]
Email: stoms@southerntesting.co.uk

Encs

Figure 1 – Proposed site layout and trial hole locations
Photographs
Laboratory test certificates



PROPOSED NORTH ELEVATION
1:100

PROPOSED SOUTH ELEVATION
1:100

PROPOSED WEST ELEVATION
1:100

PROPOSED EAST ELEVATION
1:100

PROPOSED CROSS SECTION
1:100



PROPOSED GROUND FLOOR PLAN
1:100

PROPOSED FIRST FLOOR PLAN
1:100

NOTES:

EXISTING STRUCTURE TO BE USED WHERE POSSIBLE AND PRACTICABLE.

DEMOLITION IS TO BE KEPT AS MINIMAL AS POSSIBLE TO RETAIN EXISTING SHAPE OF THE BUILDING.

ALL EXISTING DRAINAGE AND SOAKAWAYS TO BE USED

AREA SCHEDULE

GROSS INTERNAL FLOOR AREA
Ground Floor: 71.1m2
First Floor: 49.7m2
TOTAL AREA: 110.8m2



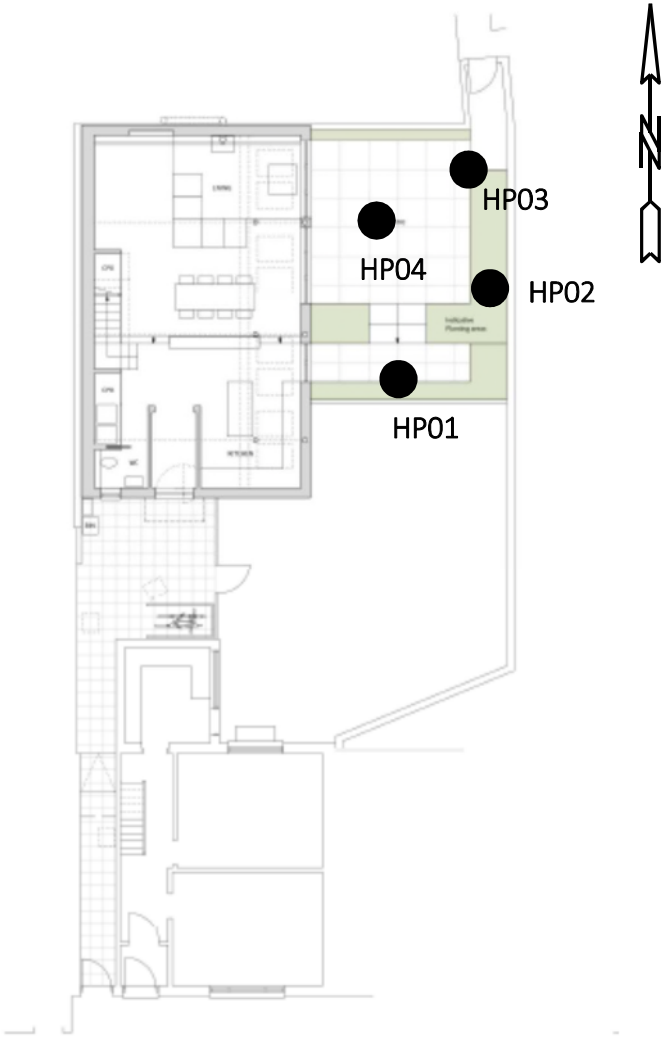
PROPOSED SECOND FLOOR PLAN
1:100





Dwg No. 26003-P-110 C
Drawing Title Proposed Plans, Section & Elevs
Address 11a West St, Shoreham
Client Steve & Philippa
Scale 1:100 @A1
Stage Planning
Drawn by ns
Checked by

STICKLAND WRIGHT
architecture + interiors
www.sticklandwright.co.uk



PROPOSED GROUND FLOOR PLAN
1:100

Site: 11a West Street, Shoreham-by-Sea, BN43 5WF	STL: J16272	Fig No: 1 – Proposed Site Layout & Sample Locations
Date: 21/10/2026		Not to scale

Southern Testing
Environmental & Geotechnical

Southern Testing: Keeble House, Stuart Way, East Grinstead, West Sussex RH19 4QA
ST Consult: Twigden Barns, Brixworth Road, Creaton, Northampton NN6 8LU

ST Consult
Environmental & Geotechnical



Plate 1: HP01 to 750mm bgl.



Plate 2: Arisings from HP01.



Plate 3: HP02 to 600mm bgl.



Plate 4: Arisings from HP02.



Plate 5: HP03 to 500mm bgl.



Plate 6: Arisings from HP03.



Plate 7: Existing soft landscaping.



Plate 8: Trial hole through the floor slab to the lean-to.



Plate 9: HP04 to 600mm bgl.



Plate 10: Arisings from HP04.

Southern Testing Laboratories Ltd
Keeble House
Stuart Way
East Grinstead
West Sussex
RH19 4QA

t: 01342 333100

e: stoms@southerntesting.co.uk; contamresults@southerntesting.co.uk; contamresults@southerntesting.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: info-i2analytical@normecgroup.com

Analytical Report Number : 26-053024

Replaces Analytical Report Number: 26-053024, issue no. 1
Additional analysis undertaken.
Asbestos Quantification added to samples 1061530 & 32 as per client's request

Project / Site name:	11a West Street, Shoreham-by-Sea	**Samples received on:**	25/09/2026
Your job number:	J16272	**Samples instructed on/ Analysis started on:**	25/09/2026
Your order number:	J16272_1	**Analysis completed by:**	13/10/2026
Report Issue Number:	2	**Report issued on:**	13/10/2026
Samples Analysed:	4 soil samples		

[redacted]

Signed:

Trevor Hill
Customer Service
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: 26-053024
Project / Site name: 11a West Street, Shoreham-by-Sea
Your Order No: J16272_1

Lab Sample Number				1061530	1061531	1061532	1061533
Sample Reference				HP01	HP02	HP03	HP04
Sample Number				ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A
Depth (m)				0.30	0.40	0.30	0.30
Date Sampled				22/09/2026	22/09/2026	22/09/2026	22/09/2026
Time Taken				0900	0915	0930	1030
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status				
Mass of stone >10mm	%	0.1	NONE	< 0.1	7.6	11	< 0.1
Moisture Content	%	0.01	NONE	8.5	7.2	17	6.3
Total mass of sample received	kg	0.1	NONE	1.1	1.3	1.2	1.3
Asbestos							
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Detected	Not-detected	Detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SPU	SPU	SPU	SPU
Analysis completed	N/A	N/A	N/A	02/10/2026	02/10/2026	02/10/2026	02/10/2026
Actinolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-
Amosite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-
Anthophyllite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-
Chrysotile detected	Type	N/A	ISO 17025	Detected	-	Detected	-
Crocidolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-
Tremolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	< 0.001	-	0.013	-
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	Loose Fibres	-	Loose Fibres, Asbestos Cement	-
General Inorganics							
pH (L099)	pH Units	N/A	MCERTS	8	8	7.5	7.8
Organic Matter (automated)	%	0.1	MCERTS	5.8	5.5	12	5.5
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	0.16	0.32	0.78	0.73
Acenaphthylene	mg/kg	0.05	MCERTS	0.19	0.59	1.5	1.2
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.06	0.21	0.21
Fluorene	mg/kg	0.05	MCERTS	0.07	0.16	0.58	0.47
Phenanthrene	mg/kg	0.05	MCERTS	1.4	2.8	8.5	7.3
Anthracene	mg/kg	0.05	MCERTS	0.4	1.1	3.9	2.5
Fluoranthene	mg/kg	0.05	MCERTS	3.9	12	35	25
Pyrene	mg/kg	0.05	MCERTS	3.4	11	33	23
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.4	8.1	22	15
Chrysene	mg/kg	0.05	MCERTS	2.4	7.8	21	16
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	3.5	11	28	21
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	1.4	4.5	15	11
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.9	9.6	24	19
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.3	4.2	10	8.1
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.41	1.3	< 0.05	2.7
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.5	4.5	11	8.5
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	25.3	79.4	214	161

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: 26-053024
Project / Site name: 11a West Street, Shoreham-by-Sea
Your Order No: J16272_1

Lab Sample Number				1061530	1061531	1061532	1061533
Sample Reference				HP01	HP02	HP03	HP04
Sample Number				ES	ES	ES	ES
Water Matrix				N/A	N/A	N/A	N/A
Depth (m)				0.30	0.40	0.30	0.30
Date Sampled				22/09/2026	22/09/2026	22/09/2026	22/09/2026
Time Taken				0900	0915	0930	1030
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	31	22	26	27
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.6	0.6	1.6	0.9
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	U/S *U/S g	U/S *U/S g
Chromium (III)	mg/kg	1	NONE	23	24	U/S *U/S g	U/S *U/S g
Chromium (hexavalent) by IC	mg/kg	1.8	NONE	-	-	2	< 1.80
Chromium (III) by IC	mg/kg	1	NONE	-	-	30	22
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	24	30	22
Copper (aqua regia extractable)	mg/kg	1	MCERTS	170	120	120	130
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1400	940	1500	1400
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	2.4	1.9	1.3	2.1
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	34	27	30	27
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	360	530	930	810

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 are representative of the samples submitted for analysis.

UKAS TESTING
4041

Normec i2 Analytical

Analytical Report Number: **26-053024**
Project / Site name: **11a West Street, Shoreham-by-Sea**
Your Order No: **J16272_1**

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample	Analysis completed	Analyst ID
1061530	HP01	0.3	185	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**	13/10/2026	SPU
1061532	HP03	0.3	139	Loose Fibres, Asbestos Cement	**Chrysotile**	0.013	**0.013**	13/10/2026	SPU

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

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 : 26-053024
Project / Site name: 11a West Street, Shoreham-by-Sea

* 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 *
1061530	HP01	ES	0.3	Brown sand with gravel
1061531	HP02	ES	0.4	Brown sand with vegetation and stones
1061532	HP03	ES	0.3	Brown sand with vegetation and stones
1061533	HP04	ES	0.3	Brown sand with gravel and vegetation

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 : 26-053024
Project / Site name: 11a West Street, Shoreham-by-Sea

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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references	HSE Report No: 83/1996, HSG 248 (2021), HSG 264 (2012) & SCA Blue Book (draft)	A006B	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
Moisture Content (Wet Weight)	Moisture content (% wet weight), determined gravimetrically (up to 30°C)	In-house-procedure based on BS EN 12880:2000	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
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
Chromium III in soil	In-house method by calculation from total Cr and Cr VI	In-house method by calculation	L080-PL/L130B	W	NONE
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
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

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 : 26-053024
Project / Site name: 11a West Street, Shoreham-by-Sea

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
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE
Hexavalent chromium in soil by Ion Chromatography	Determination of hexavalent chromium in alkaline soil extract by use of ion chromatography with spectrophotometric detection	In-house method	L130B	W	NONE

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.

Where coal tar is reported as "indicative/not indicative", PAH source attribution has been assessed using the ratio of parent PAHs to alkylated PAHs to indicate a likely pyrogenic (coal tar–related) or petrogenic (bitumen-related) origin. This assessment is independent of total residue and/or benzo(a)pyrene concentrations and is provided for indicative purposes only; it represents a single line of evidence and does not, in isolation, constitute confirmation or classification as hazardous under WM3 guidance.

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

*U/S g- Unsuitable for analysis due to high colour intensity.

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.