12.2 Open Access Land

Records within 250m	0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m	0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

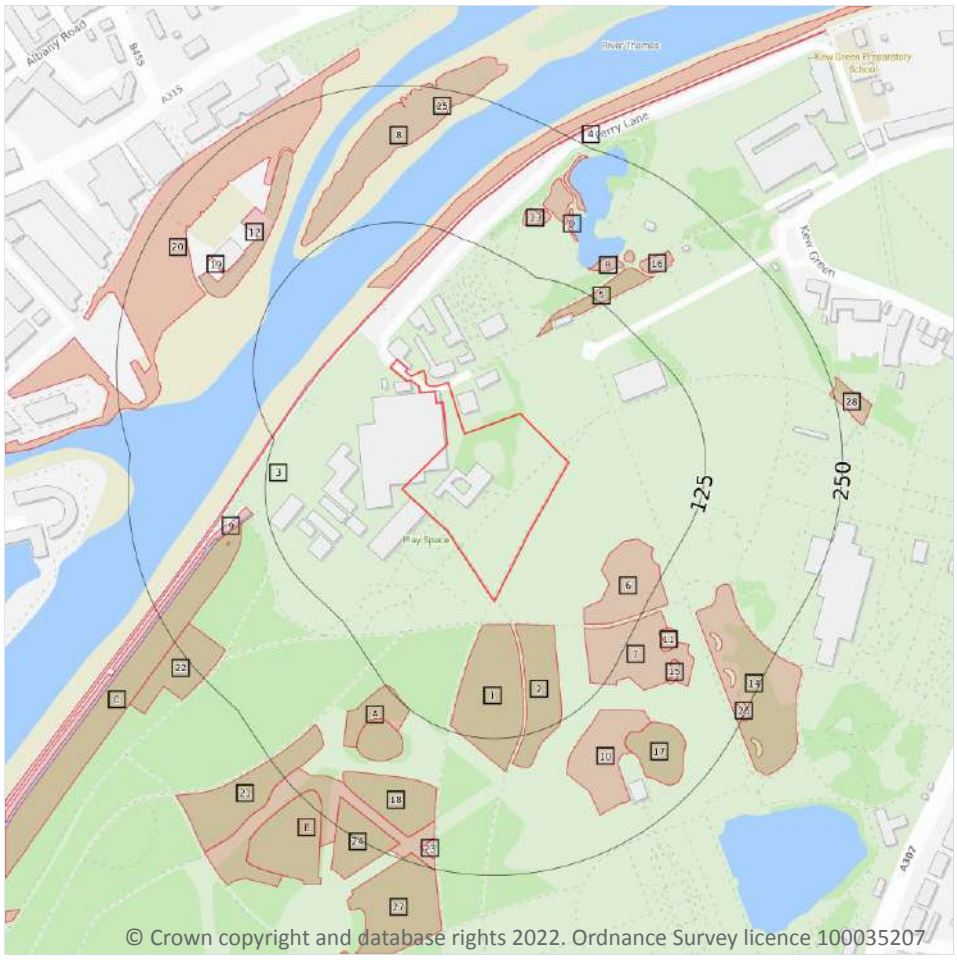
12.5 Countryside Stewardship Schemes

Records within 250m	0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	39

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 98**

ID	Location	Main Habitat	Other habitats
1	21m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	28m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	46m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	66m N	Mudflats	Main habitat: MUDFL (INV > 50%)

ID	Location	Main Habitat	Other habitats
5	72m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	73m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	84m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	122m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
8	132m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
9	138m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	138m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	146m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	147m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	147m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
C	149m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
12	157m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
13	159m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
D	166m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
14	169m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
15	169m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	170m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
16	172m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
17	172m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
18	177m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
19	177m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
D	177m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
20	181m W	Mudflats	Main habitat: MUDFL (INV > 50%)
C	187m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
D	194m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
21	198m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
E	207m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
22	218m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
23	223m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
24	227m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
25	231m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
E	238m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
26	240m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
27	241m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
28	246m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability

Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	1

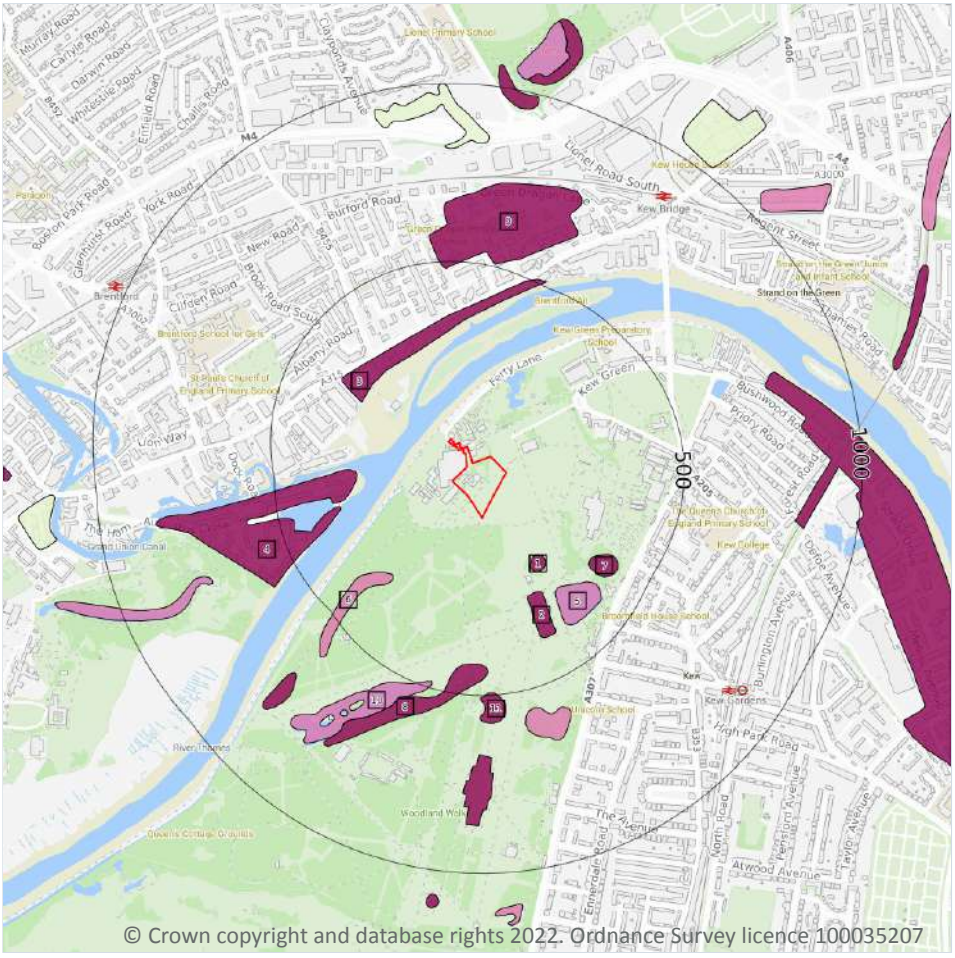
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 102**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**TQ17NE**

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground



Site Outline

Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m	11

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 103**

ID	Location	LEX Code	Description	Rock description
1	181m SE	MGR-UKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry
2	256m SE	MGR-UKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry
3	259m NW	MGR-UKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry
4	269m W	MGR-UKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry

ID	Location	LEX Code	Description	Rock description
5	289m SE	WGR-UKNOWN	Worked Ground (Undivided)	Unknown/unclassified Entry
6	299m SW	WGR-UKNOWN	Worked Ground (Undivided)	Unknown/unclassified Entry
7	323m SE	MGR-UKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry
8	412m S	MGR-UKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry
9	481m N	MGR-UKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry
10	481m S	WGR-UKNOWN	Worked Ground (Undivided)	Unknown/unclassified Entry
11	493m S	MGR-UKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m **4**

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 105**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**KPGR-XSV**	**Kempton Park Gravel Formation - Sand And Gravel**	**Sand And Gravel**
2	56m NW	ALV-Z	Alluvium - Silt (unlithified Deposits Coding Scheme)	Silt
3	259m NW	LASI-Z	Langley Silt Member - Silt (unlithified Deposits Coding Scheme)	Silt

ID	Location	LEX Code	Description	Rock description
4	279m W	KPGR-XSV	Kempton Park Gravel Formation - Sand And Gravel	Sand And Gravel

This data is sourced from the British Geological Survey.

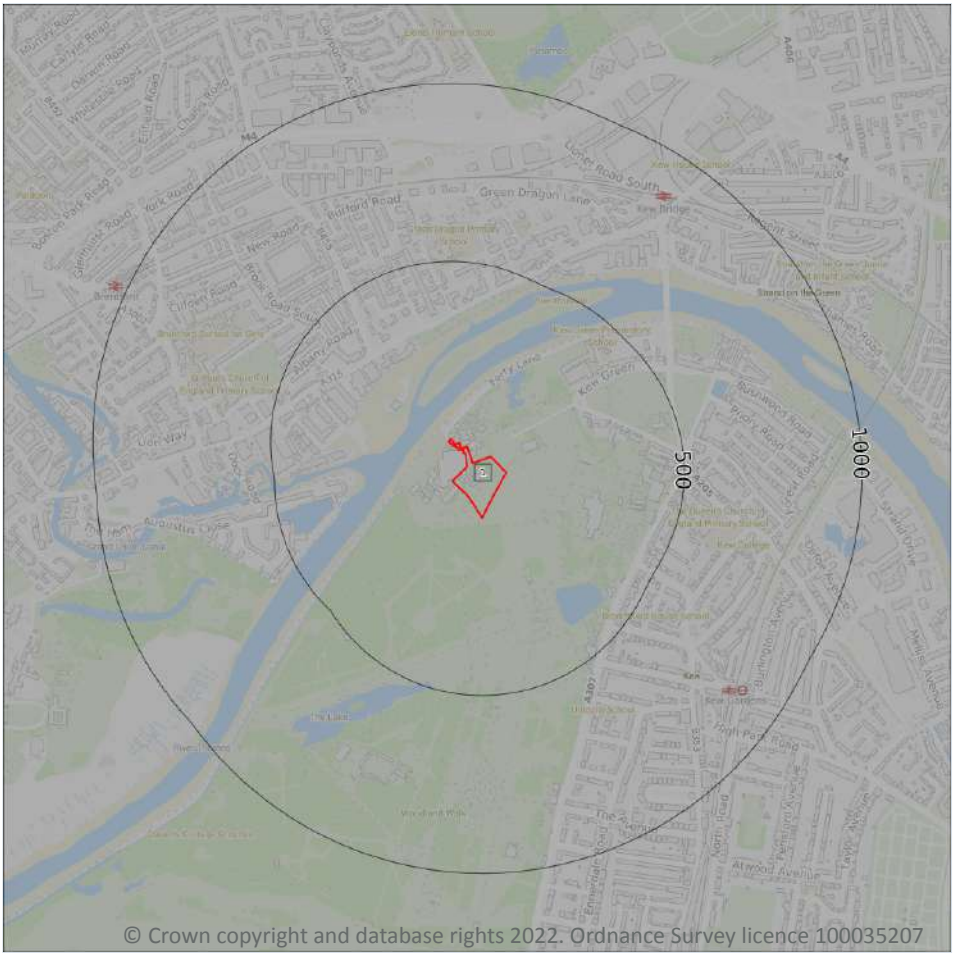
14.4 Landslip (10k)

Records within 500m	**0**

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m	1

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 107**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**LC-CLAY**	**London Clay Formation - Clay**	**Eocene Epoch**

This data is sourced from the British Geological Survey.

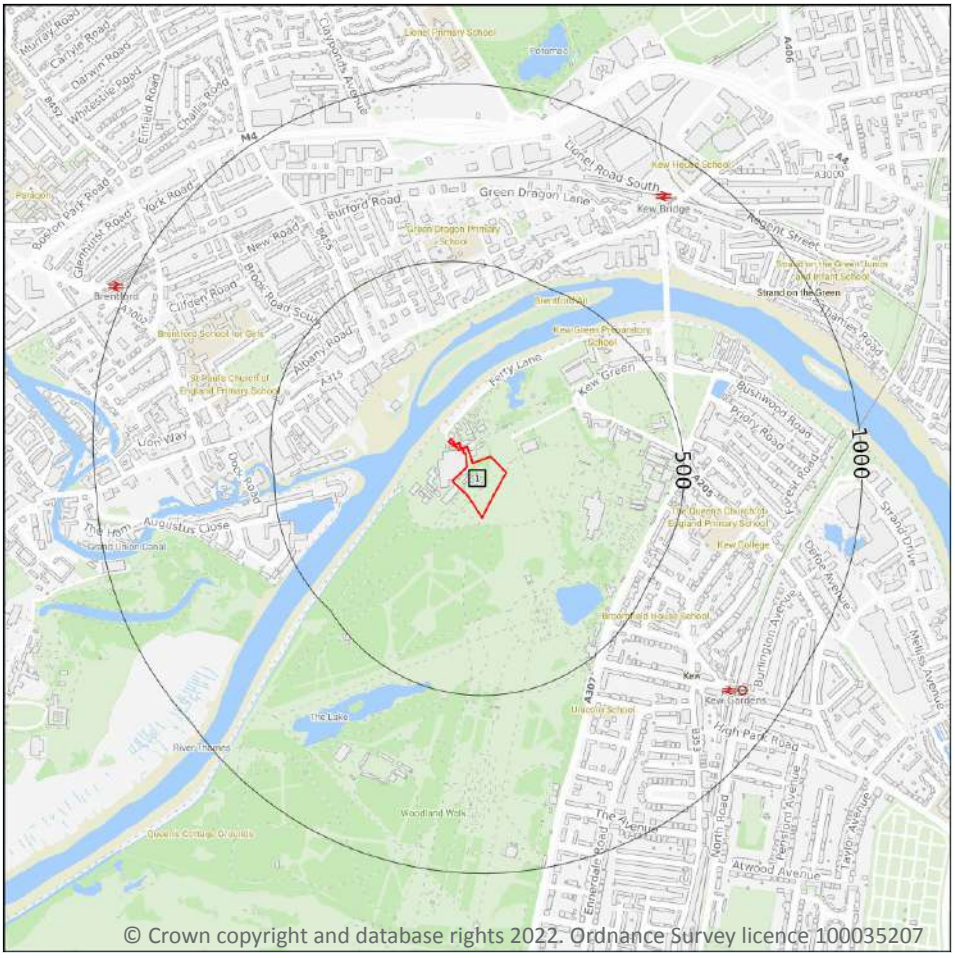
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

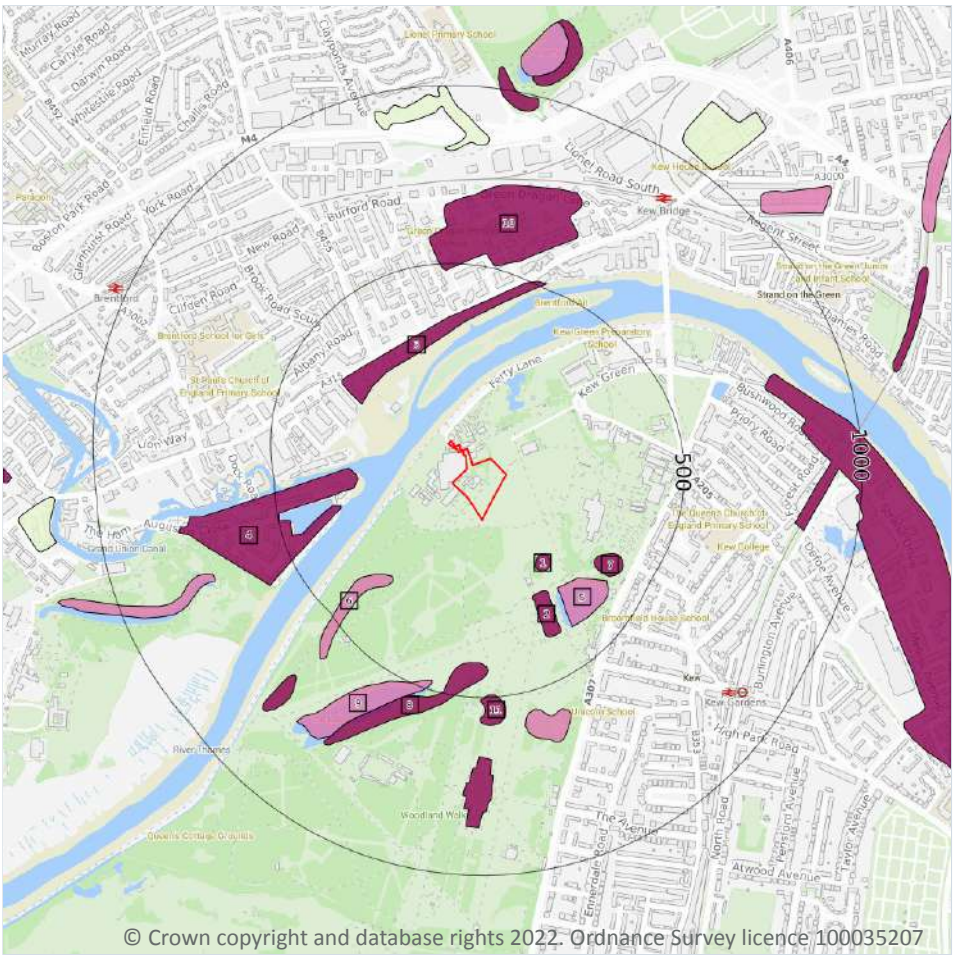
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 109**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW270_south_london_v4**

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground



Site Outline

Search buffers in metres (m)

- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m	11

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 110**

ID	Location	LEX Code	Description	Rock description
1	188m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	257m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	259m NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	265m W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

ID	Location	LEX Code	Description	Rock description
5	286m SE	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
6	300m SW	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
7	333m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
8	403m S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
9	473m S	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
10	481m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
11	493m S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

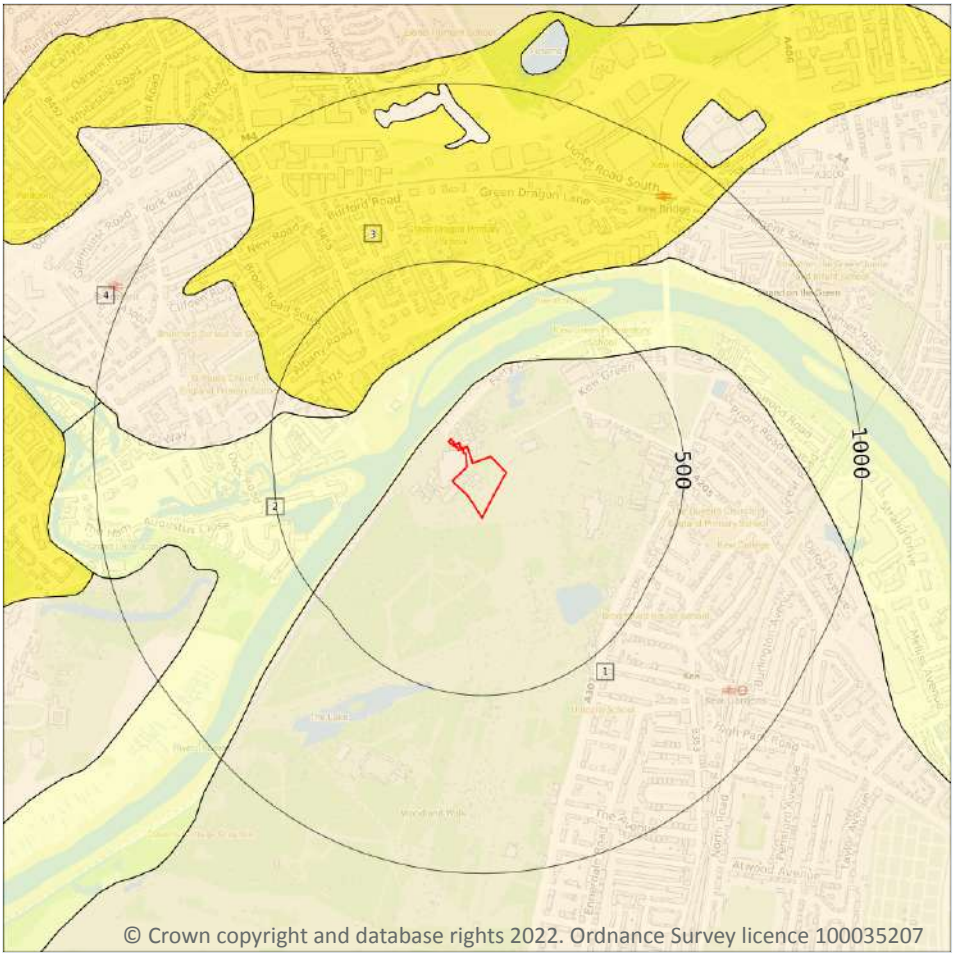
15.3 Artificial ground permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m **4**

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 112**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**KPGR-XSV**	**KEMPTON PARK GRAVEL MEMBER**	**SAND AND GRAVEL**
2	56m NW	ALV-XCZSP	ALLUVIUM	CLAY, SILT, SAND AND PEAT
3	259m NW	LASI-XCZ	LANGLEY SILT MEMBER	CLAY AND SILT
4	279m W	KPGR-XSV	KEMPTON PARK GRAVEL MEMBER	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**Very High**	**High**

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

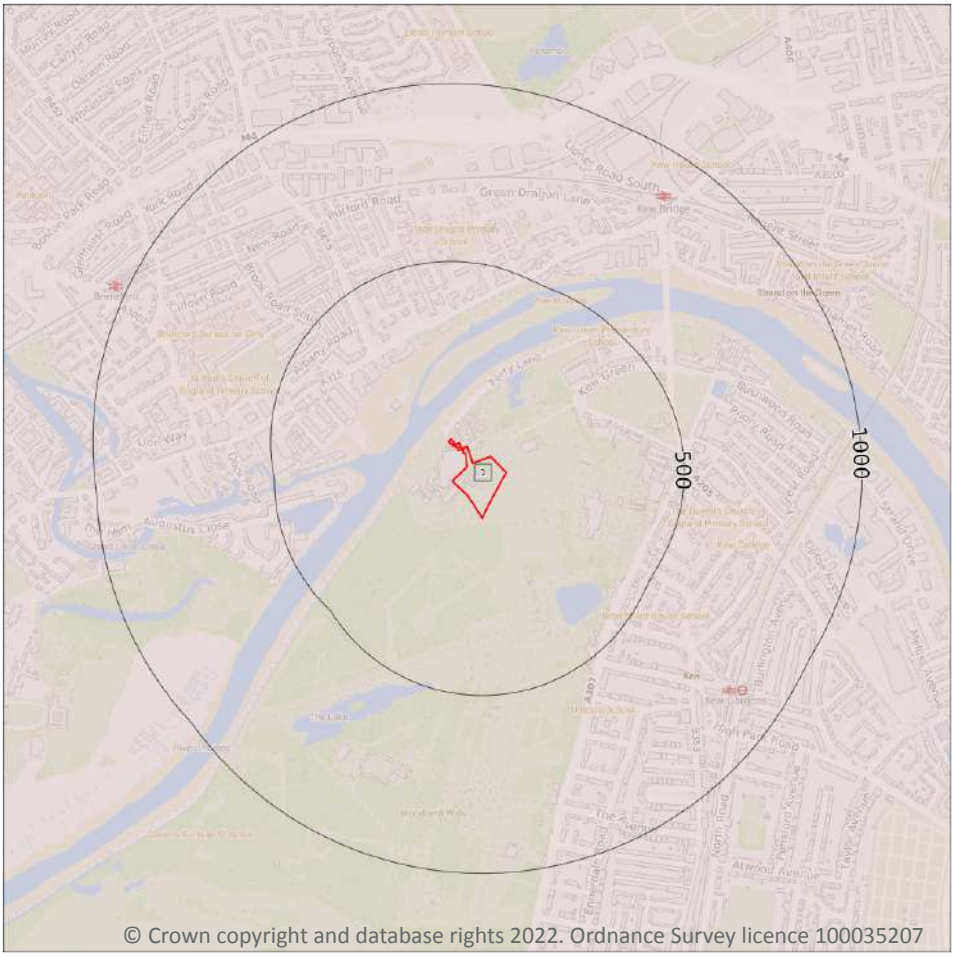
15.7 Landslip permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m	1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 114**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**LC-XCZ**	**LONDON CLAY FORMATION - CLAY AND SILT**	**YPRESIAN**

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**Low**	**Very Low**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

16 Boreholes

Site Outline

Search buffers in metres (m)

Confidential

0 - 10m

10 - 30m

30m+

Unknown

16.1 BGS Boreholes

Records within 250m	5

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

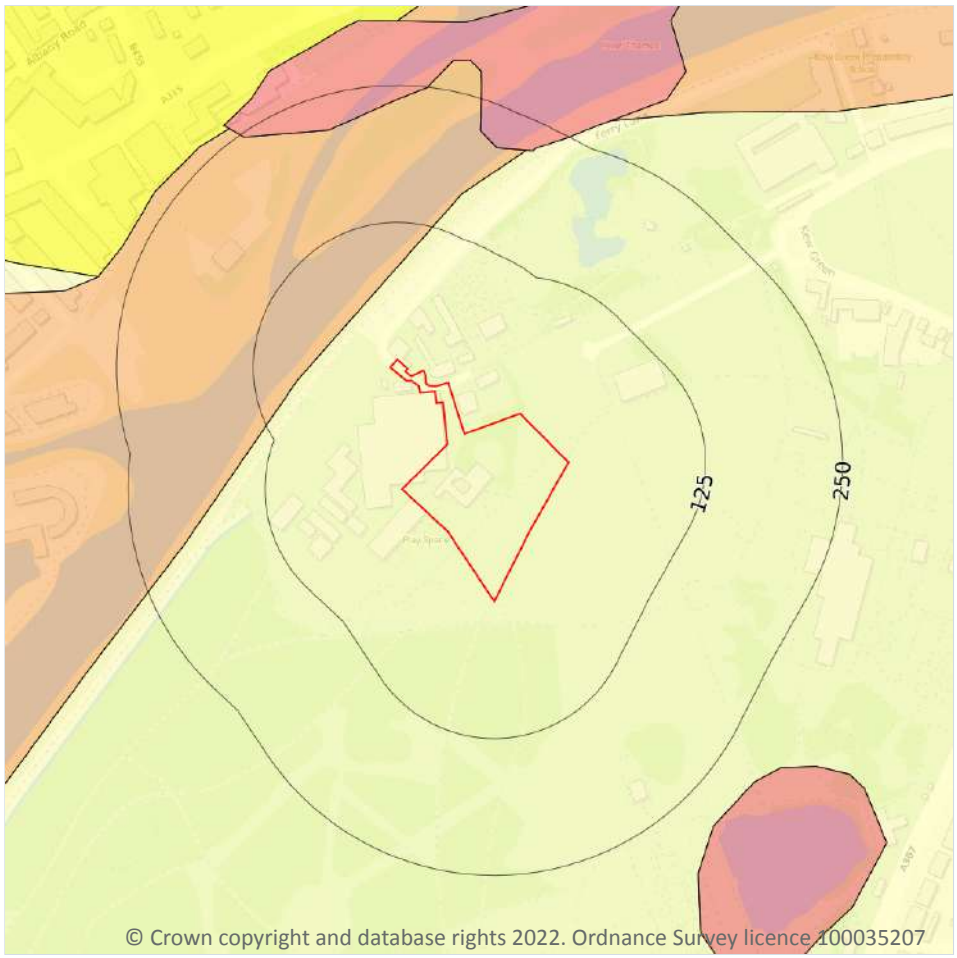
Features are displayed on the Boreholes map on **page 116**

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	179m N	518360 177620	BRENTFORD ISLANDS 3049 4	9.14	N	580724
A	191m N	518350 177630	BRENTFORD ISLANDS 3049 1	9.14	N	580721
1	207m NE	518550 177600	KEW BOT GDNS TWA EASTERN TP 1	7.0	N	580741

ID	Location	Grid reference	Name	Length	Confidential	Web link
B	225m NE	518600 177600	KEW BOT GDNS TWA EASTERN TRIAL	6.5	N	580740
B	225m NE	518600 177600	KEW BOT GDNS NEW MUSEUM 1	10.5	N	580729

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.1 Shrink swell clays

Records within 50m	1

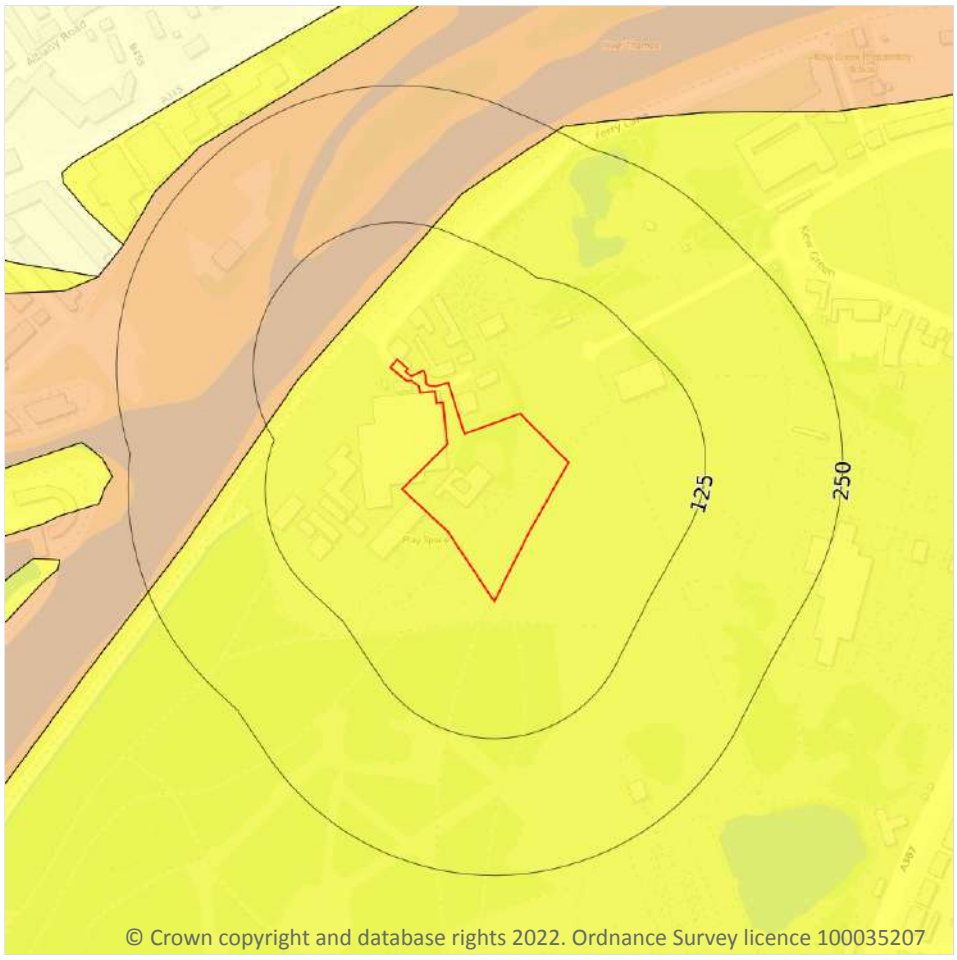
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 118**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.2 Running sands

Records within 50m	1

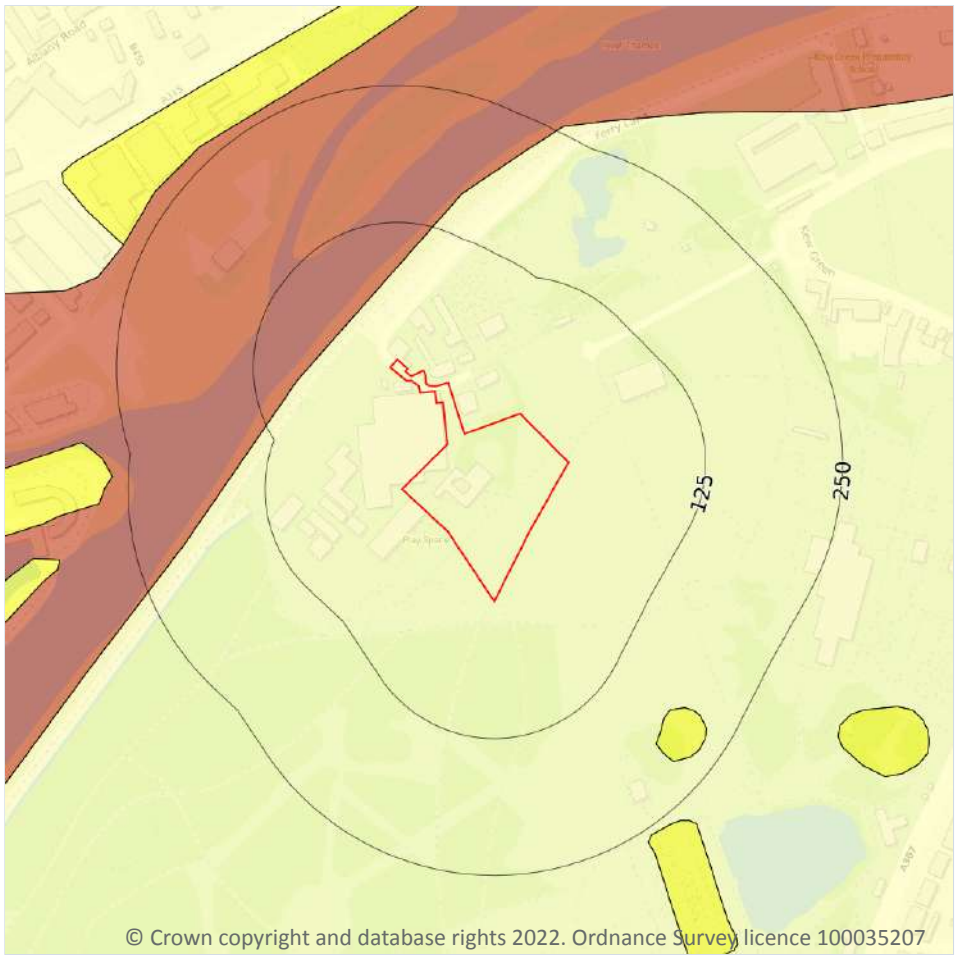
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 119**

Location	Hazard rating	Details
On site	**Very low**	**Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.3 Compressible deposits

Records within 50m	1

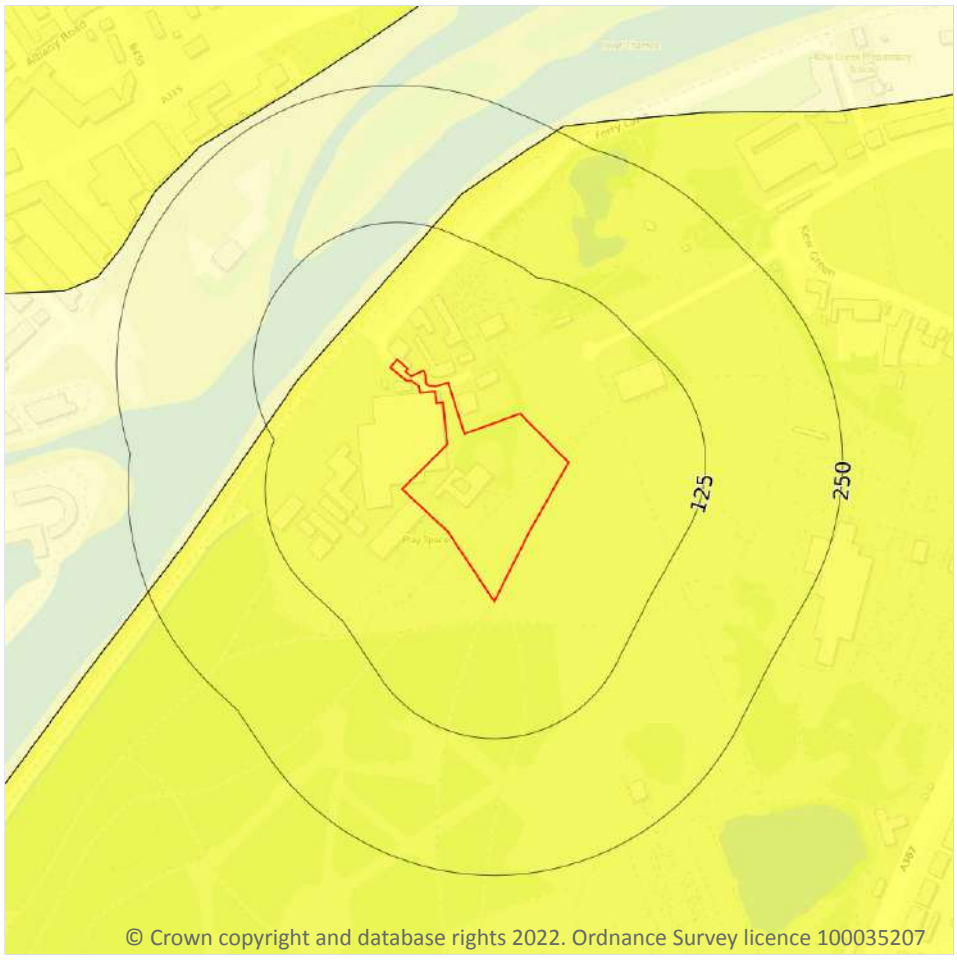
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 120**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.4 Collapsible deposits

Records within 50m	**1**

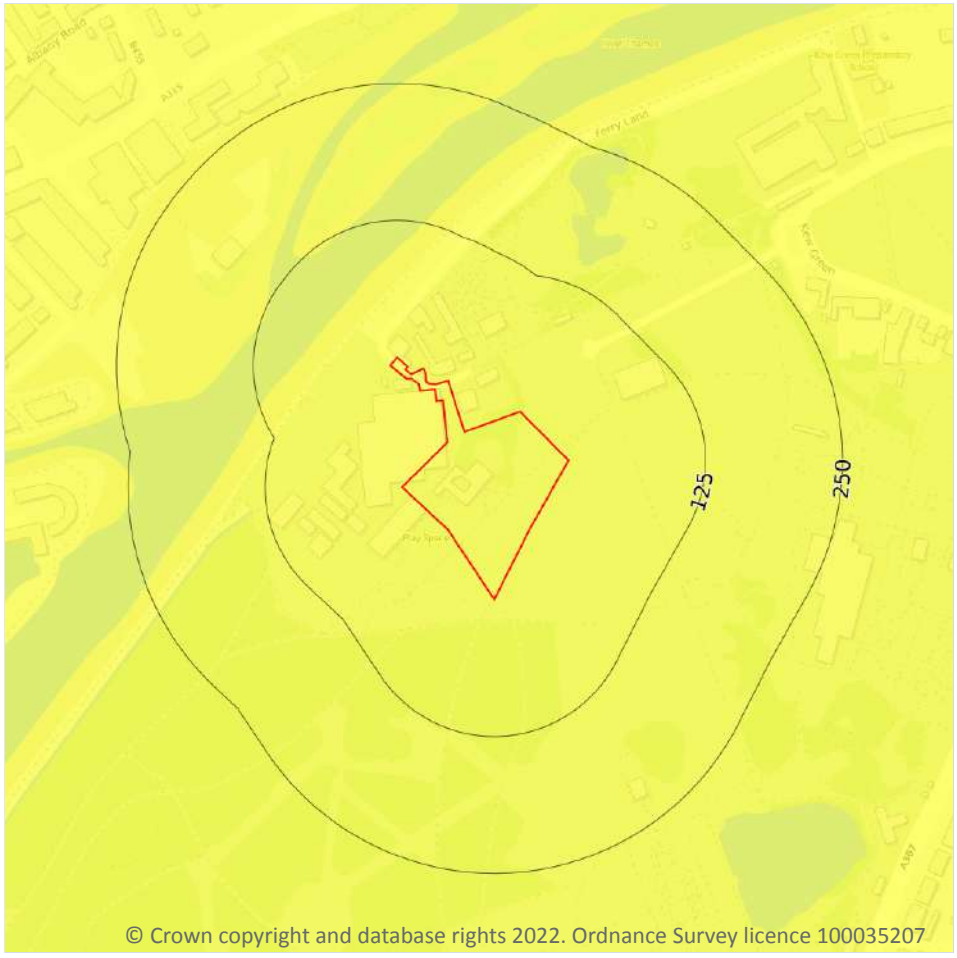
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 121**

Location	Hazard rating	Details
On site	**Very low**	**Deposits with potential to collapse when loaded and saturated are unlikely to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.5 Landslides

Records within 50m	1

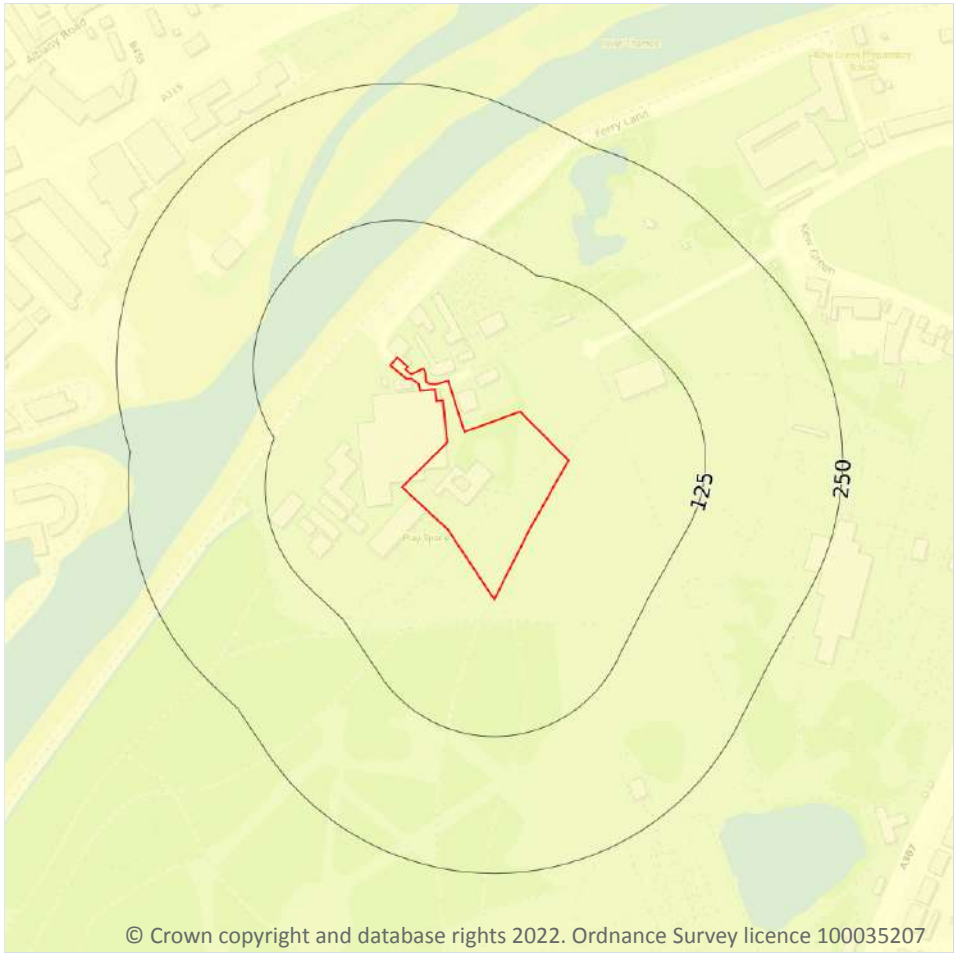
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 122**

Location	Hazard rating	Details
On site	**Very low**	**Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	1

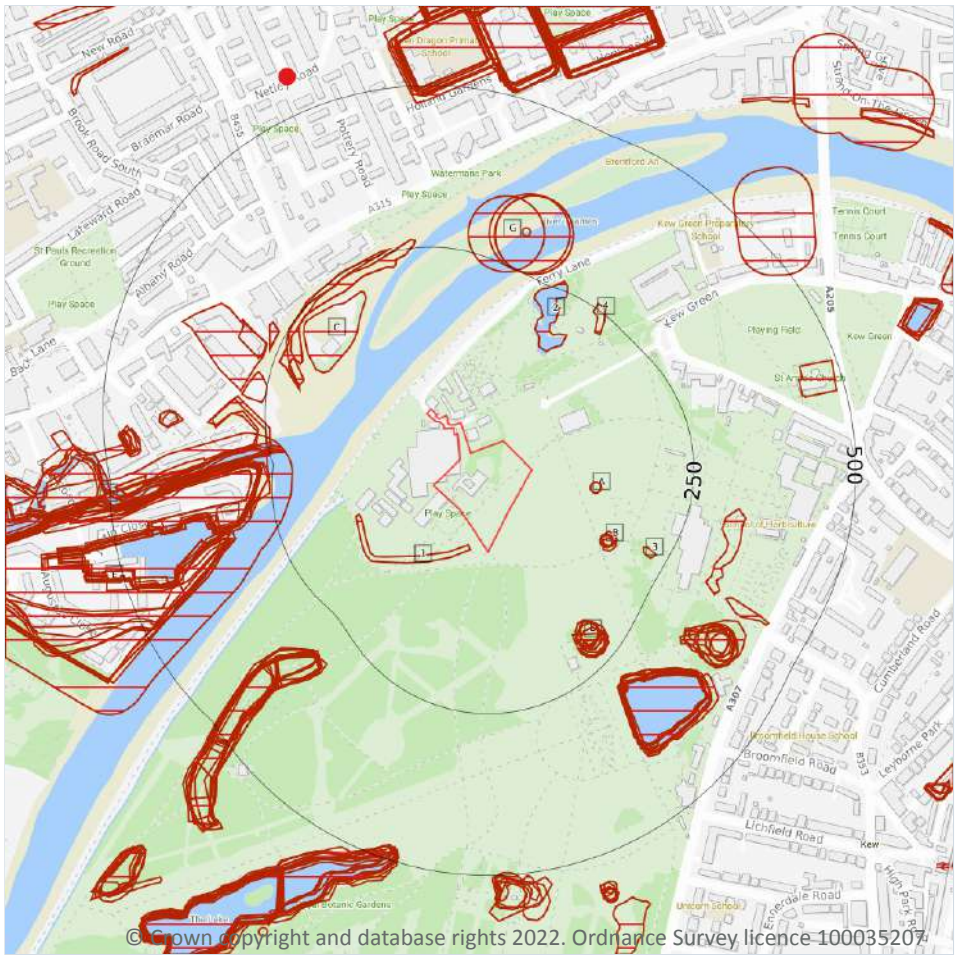
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 123**

Location	Hazard rating	Details
On site	**Negligible**	**Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.**

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



Site Outline

Search buffers in metres (m)

- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m	0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m	0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	37

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 125**

ID	Location	Land Use	Year of mapping	Mapping scale
1	19m SW	Unspecified Ground Workings	1898	1:10560
A	94m E	Unspecified Heap	1948	1:10560
A	94m E	Unspecified Heap	1948	1:10560
B	144m SE	Unspecified Heap	1961	1:10560
B	145m SE	Unspecified Heap	1948	1:10560
B	145m SE	Unspecified Heap	1948	1:10560
B	145m SE	Unspecified Heap	1913	1:10560
B	149m SE	Unspecified Pit	1933	1:10560
2	153m NE	Ponds	1987	1:10000
C	157m NW	Pond	1898	1:10560
D	178m SE	Unspecified Heap	1948	1:10560
D	178m SE	Unspecified Heap	1948	1:10560
D	182m SE	Unspecified Heap	1961	1:10560
D	182m SE	Unspecified Heap	1966	1:10560
D	182m SE	Unspecified Heap	1974	1:10000
D	183m SE	Unspecified Heap	1893	1:10560
D	184m SE	Unspecified Heap	1933	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
D	185m SE	Unspecified Heap	1867	1:10560
D	192m SE	Unspecified Heap	1920	1:10560
D	192m SE	Unspecified Heap	1938	1:10560
C	197m W	Unspecified Wharf	1961	1:10560
C	201m W	Water Body	1933	1:10560
C	201m W	Water Body	1894	1:10560
D	203m SE	Unspecified Heap	1894	1:10560
D	203m SE	Unspecified Ground Workings	1911	1:10560
D	205m SE	Unspecified Ground Workings	1898	1:10560
3	209m SE	Unspecified Heap	1933	1:10560
E	219m W	Dock	1938	1:10560
4	220m NE	Unspecified Heap	1987	1:10000
F	227m W	Canal	1894	1:10560
F	233m W	Canal	1933	1:10560
G	236m NE	Unspecified Hole	1873	1:10560
F	243m W	Canal	1938	1:10560
F	244m W	Canal	1935	1:10560
G	249m NE	Unspecified Hole	1933	1:10560
G	250m NE	Unspecified Hole	1920	1:10560
G	250m NE	Unspecified Hole	1938	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	**0**

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site	0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

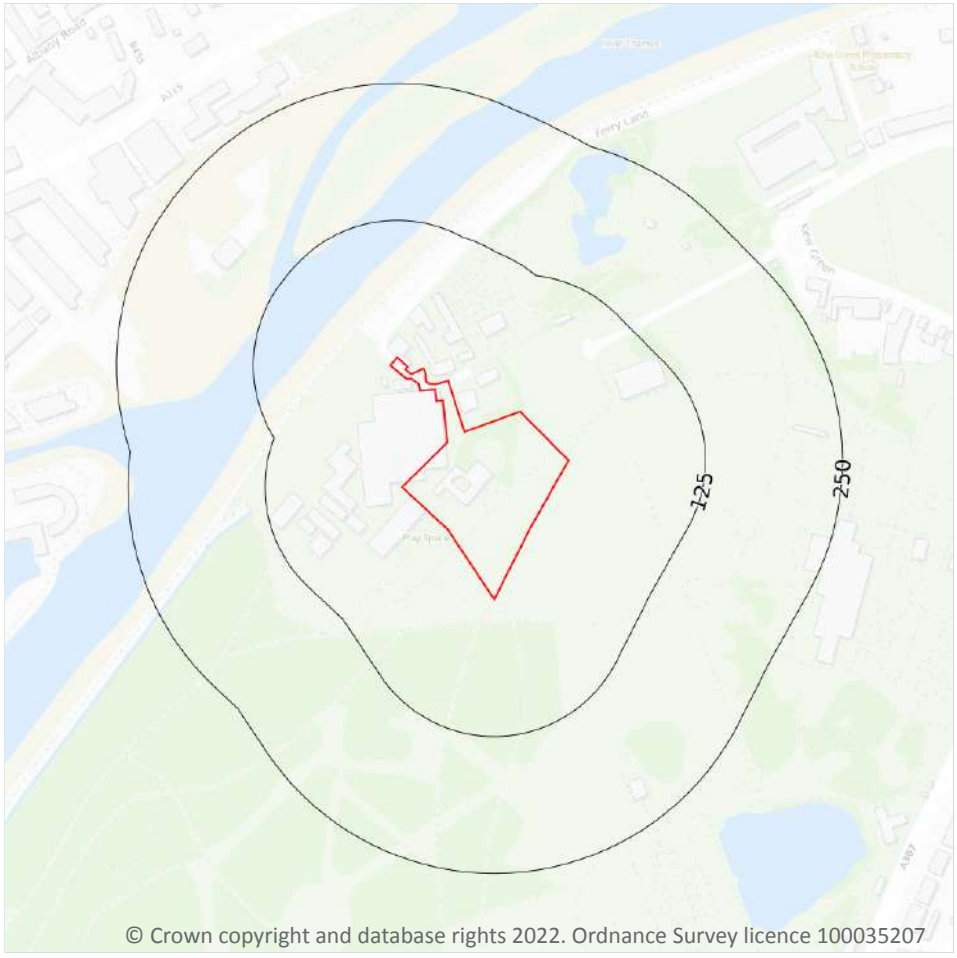
18.13 Clay mining

Records on site	0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Radon



Site Outline

Search buffers in metres (m)

Greater than 30%

Between 10% and 30%

Between 5% and 10%

Between 3% and 5%

Between 1% and 3%

Less than 1%

19.1 Radon

Records on site	1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 130**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Less than 1%**	**None****

This data is sourced from the British Geological Survey and Public Health England.

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m **2**

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**No data**	**No data**	**No data**	**No data**	**No data**	**No data**	**No data**
On site	**No data**	**No data**	**No data**	**No data**	**No data**	**No data**	**No data**

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m **12**

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	**18**	**3.2**	**127**	**87**	**0.4**	**55**	**25**	**18**	**8**
On site	**19**	**3.3**	**145**	**100**	**0.4**	**56**	**28**	**19**	**10**
On site	**20**	**3.5**	**155**	**106**	**0.4**	**59**	**31**	**19**	**11**
On site	**20**	**3.5**	**146**	**100**	**0.4**	**59**	**30**	**19**	**10**
On site	**20**	**3.5**	**178**	**122**	**0.5**	**59**	**35**	**20**	**13**
On site	**20**	**3.5**	**187**	**128**	**0.5**	**61**	**38**	**21**	**14**
On site	**20**	**3.5**	**148**	**102**	**0.5**	**63**	**33**	**19**	**11**

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
5m NE	20	3.5	166	114	0.4	56	32	20	11
20m SW	21	3.7	140	96	0.4	61	30	19	10
24m S	20	3.5	125	86	0.4	60	26	18	8
29m S	19	3.3	125	86	0.4	56	25	18	8
48m E	17	3	127	87	0.3	54	24	17	8

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: https://www.groundsure.com/terms-and-conditions-jan-2020/.

Appendix B – Contamination Assessment Data

PICK EVERARD

Head Office: Halford House, Charles Street, Leicester, LE1 1HA

Tel: 0345 045 0050,
email consultants@pickeverard.co.uk

Cable Percussive Borehole Record

Project:	RBG Kew Learning Centre	**Project No.** 210699	BH01
Client:	Royal Botanical Gardens Kew	**Date Start:**	01/02/2022
Plant:	Hand Digging Tools+Cable Percussive Rig	**Date End:**	01/02/2022
Logged by	**Checked by**	**Ground Level:**	7.14mAOD
EBE	RHG	**Coordinates:**	518440.16(E) 177317.62(N)
Sheet	**Scale**		
1 of 2	1:50		

Stratum Description	Legend	Depth (m)	Level (m)	Sample and In Situ Testing: Type	Depth (m)	Results	Water Strikes	Well
MADE GROUND: Dark brown, clayey, gravelly, coarse grained sand. Gravel is fine to coarse, sub-rounded to angular brick, concrete, clinker, slate, and quartzite.				ES	0.50			
				B	1.00			
				D	1.50			
				SPT	1.50	N=18 (3,4/4,5,4,5)		
				B	2.00			
Medium dense, light brown and yellow, very coarse grained SAND and fine to very coarse, sub-rounded to angular GRAVEL of flint. (KEMPTON PARK GRAVEL MEMBER)		2.20	4.94					
				SPT	2.50	N=36 (6,8/8,9,9,10)		
				D	3.00			
				SPT	3.50	N=37 (5,7/9,8,9,11)		
				D	4.00			
				SPT	4.50	N=34 (6,7/8,8,9,9)		
				D	5.00			
Sand and gravel becoming loose.				B	6.00			
				SPT	6.00	N=7 (2,3/2,2,1,2)		
				D	7.00			
Sand and gravel becoming medium dense.				SPT	7.50	N=22 (1,5/5,5,5,7)		
Firm to stiff, light brown, slightly gravelly, sandy CLAY. Gravel is fine to medium, sub-angular flint and quartzite. (LONDON CLAY FORMATION)		8.00	-0.86	B	8.00			
Firm becoming stiff, grey CLAY. (LONDON CLAY FORMATION)		8.40	-1.26					
				D	9.00			
				U	9.00 - 9.45	Ublow=60		
				D	10.00			

Hole Diameter		Casing Diameter		Chiselling				Groundwater			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Strike	Rising to	Time	Remarks
15.00	200	8.80	200								

Remarks

Position CAT scanned and started with hand dug inspection pit to 1.2m bgl.
Groundwater not encountered.
Position terminated at target depth of 15.00m bgl.
Location backfilled with compacted arisings.

PICK EVERARD

Head Office: Halford House, Charles Street, Leicester, LE1 1HA

Tel: 0345 045 0050,
email consultants@pickeverard.co.uk

Cable Percussive Borehole Record

Project:	RBG Kew Learning Centre	**Project No.** 210699	BH01
Client:	Royal Botanical Gardens Kew	**Date Start:**	01/02/2022
Plant:	Hand Digging Tools+Cable Percussive Rig	**Date End:**	01/02/2022
Logged by	**Checked by**	**Ground Level:**	7.14mAOD
EBE	RHG	**Coordinates:**	518440.16(E) 177317.62(N)
Sheet	**Scale**		
2 of 2	1:50		

Stratum Description	Legend	Depth (m)	Level (m)	Sample and In Situ Testing Type	Depth (m)	Results	Water Strikes	Well
Firm becoming stiff, grey CLAY. (LONDON CLAY FORMATION)				D	10.50			
				SPT	10.50	N=21 (3,4/5,5,5,6)		
		11		D	11.00			
		12		D	12.00			
				U	12.00 - 12.45	Ublow=85		
		13		D	13.00			
				D	13.50			
				SPT	13.50	N=20 (3,4/4,5,6,5)		
		14		D	14.00			
End of Borehole at 15.00m		15	15.00 -7.86	D	15.00			
				U	15.00 - 15.45	Ublow=100		
		16						
		17						
		18						
		19						
		20						

Hole Diameter		Casing Diameter		Chiselling				Groundwater			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Strike	Rising to	Time	Remarks
15.00	200	8.80	200								

Remarks

Position CAT scanned and started with hand dug inspection pit to 1.2m bgl.
Groundwater not encountered.
Position terminated at target depth of 15.00m bgl.
Location backfilled with compacted arisings.

PICK EVERARD

Head Office: Halford House,
Charles Street,
Leicester,
LE1 1HA

Tel: 0345 045 0050,
email consultants@pickeverard.co.uk

Trial Pit Record

Project:	RBG Kew Learning Centre	**Project No.**	SA01
		210699	
Client:	Royal Botanical Gardens Kew	**Date Start:**	03/02/2022
Plant:	JCB 3CX	**Date End:**	03/02/2022
Logged by	**Checked by**	**Ground Level:**	6.84mAOD
EBE	RHG	**Coordinates:**	518484.25(E)
Sheet	**Scale**		177295.50(N)
1 of 1	1:15		

Stratum Description	Legend		Depth (m)	Level (m)	Sample and In Situ Testing			Water Strikes	Well
					Type	Depth (m)	Results		
Dark brown, slightly gravelly, silty, sandy TOPSOIL with frequent rootlets. Gravel is fine to medium, sub-rounded to sub-angular flint.									
MADE GROUND: Firm, dark brown, sandy, gravelly clay. Gravel is fine to very coarse, sub-rounded to angular brick, concrete, and flint.			0.15	6.84					
Light brown and yellow, slightly clayey, very coarse grained SAND and fine to very coarse, sub-rounded to angular GRAVEL of flint and quartzite. (KEMPTON PARK GRAVEL MEMBER)		1	1.00	6.69					
		2							
End of Borehole at 2.200m			2.20	5.84					
		3							

Dimensions		Pit Stability	Groundwater			
Pit Length	Pit Width		Depth Strike	Rising to	Time	Remarks
2.60	0.50	Pit unstable during excavation.				

Remarks

Position CAT scanned and excavated with JCB 3CX.
Groundwater not encountered.
Excavation terminated at 2.2m bgl due to pit instability.
Location backfilled with gravel for soakaway testing.

PICK EVERARD

Head Office: Halford House, Charles Street, Leicester, LE1 1HA

Tel: 0345 045 0050,
email consultants@pickeverard.co.uk

Borehole Record

Project:	RBG Kew Learning Centre	**Project No.** 210699	WS01
Client:	Royal Botanical Gardens Kew	**Date Start:**	02/02/2022
Plant:	Hand Digging Tools+Windowless Sampler	**Date End:**	02/02/2022
Logged by	**Checked by**	**Ground Level:**	6.00mAOD
EBE	RHG	**Coordinates:**	518468.86(E) 177308.64(N)
Sheet	**Scale**		
1 of 1	1:22		

Stratum Description	Legend	Depth (m)	Level (m)	Sample and In Situ Testing Type	Depth (m)	Results	Water Strikes	Well
Dark brown, sandy silty gravelly TOPSOIL with frequent rootlets. Gravel is fine to medium, sub-rounded flint.				ES	0.10			
Medium dense becoming very dense, light brown to orange, clayey, silty, gravelly, very coarse grained SAND. Gravel is fine to coarse, sub-rounded to sub-angular flint and quartzite. (KEMPTON PARK GRAVEL MEMBER)		0.40	5.60	D	1.00			
				SPT	1.20	N=33 (5,7/6,8,10,9)		
End of Borehole at 2.00m		2.00	4.00	D	2.00			
				SPT	2.00	50 (27 for 105mm/50 for 190mm)		

1 2 3 4

Hole Diameter		Casing Diameter		Chiselling				Groundwater			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Strike	Rising to	Time	Remarks
2.00	102										

Remarks

Position CAT scanned and started with hand dug inspection pit to 1.2m bgl.
Groundwater not encountered.
Position refused upon dense sands at 2.00m bgl.
Location installed with monitoring well.

PICK EVERARD

Head Office: Halford House, Charles Street, Leicester, LE1 1HA

Tel: 0345 045 0050,
email consultants@pickeverard.co.uk

Borehole Record

Project:	RBG Kew Learning Centre	**Project No.** 210699	WS02
Client:	Royal Botanical Gardens Kew	**Date Start:**	01/02/2022
Plant:	Hand Digging Tools+Modular Windowless Sampler	**Date End:**	02/02/2022
Logged by	**Checked by**	**Ground Level:**	7.52mAOD
EBE	RHG	**Coordinates:**	518476.82(E) 177351.87(N)
Sheet	**Scale**		
1 of 1	1:22		

Stratum Description	Legend	Depth (m)	Level (m)	Sample and In Situ Testing: Type	Depth (m)	Results	Water Strikes	Well
Dark brown, slightly gravelly, sandy, silty TOPSOIL, with frequent rootlets. Gravel is fine to medium, sub-angular flint and quartzite.								
MADE GROUND: Light brown, clayey, silty, gravelly, very coarse grained SAND. Gravel is fine to very coarse, sub-angular to angular brick, concrete, clinker, and quartzite.		0.30	7.22	ES	0.50			
Soft, light brown, very sandy CLAY. (KEMPTON PARK GRAVEL MEMBER)		0.90	6.62	SPT	1.20	N=7 (1,1/2,1,2,2)		
				D	1.50			
Dense becoming very dense, light brown to yellow, clayey, gravelly, very coarse grained SAND. Gravel is fine to medium, sub-angular to angular flint and quartzite. (KEMPTON PARK GRAVEL MEMBER)		1.70	5.82	SPT	2.00	N=35 (6,8/6,8,10,11)		
End of Borehole at 2.20m		2.20	5.32	SPT	2.20	N=50 (10,10/50 for 292mm)		

1
2
3
4

Hole Diameter		Casing Diameter		Chiselling				Groundwater			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Strike	Rising to	Time	Remarks
2.20	102										

Remarks

Position CAT scanned and started with hand dug inspection pit to 1.2m bgl.
Groundwater not encountered.
Position refused upon dense sands at 2.20m bgl.
Location installed with monitoring well.

PICK EVERARD

Head Office: Halford House, Charles Street, Leicester, LE1 1HA

Tel: 0345 045 0050,
email consultants@pickeverard.co.uk

Borehole Record

Project:	RBG Kew Learning Centre	**Project No.** 210699	WS03
Client:	Royal Botanical Gardens Kew	**Date Start:**	01/02/2022
Plant:	Hand Digging Tools+Modular Windowless Sampler	**Date End:**	01/02/2022
Logged by	**Checked by**	**Ground Level:**	6.50mAOD
EBE	RHG	**Coordinates:**	518475.00(E) 177337.00(N)
Sheet	**Scale**		
1 of 1	1:22		

Stratum Description	Legend	Depth (m)	Level (m)	Sample and In Situ Testing: Type	Depth (m)	Results	Water Strikes	Well
CONCRETE								
MADE GROUND: Grey, sandy, fine to medium, sub-angular gravel of quartzite.		0.30	6.20					
MADE GROUND: Soft to firm, light red and brown, very gravelly, sandy clay. Gravel is fine to medium, sub-angular to angular brick, concrete, and quartzite.		0.55	5.95	ES	0.60			
MADE GROUND: BRICK FILL		0.75	5.75					
Medium dense to very dense, light brown and yellow, very coarse SAND and GRAVEL. Gravel is fine to very coarse, sub-rounded to angular flint and quartzite. (KEMPTON PARK GRAVEL MEMBER)		1.10	5.40	SPT	1.20	N=50 (10,7/50 for 285mm)		
				SPT	1.50	N=28 (14,10/7,5,8,8)		
				D	2.00			
				SPT	2.00	N=27 (8,7/5,6,8,8)		
End of Borehole at 2.60m		2.60	3.90	SPT	2.60	50 (25 for 125mm/50 for 115mm)		

Hole Diameter		Casing Diameter		Chiselling				Groundwater			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Strike	Rising to	Time	Remarks
2.60	102										

Remarks

Position CAT scanned and started with diamond coring of concrete slab. Hand dug inspection pit dug to 1.2m bgl.
Groundwater not encountered.
Position refused upon dense sand and gravel at 2.60m bgl.
Location backfilled with compacted arisings.

PICK EVERARD

Head Office: Halford House, Charles Street, Leicester, LE1 1HA

Tel: 0345 045 0050,
email consultants@pickeverard.co.uk

Borehole Record

Project:	RBG Kew Learning Centre	**Project No.** 210699	WS04
Client:	Royal Botanical Gardens Kew	**Date Start:**	01/02/2022
Plant:	Hand Digging Tools+Modular Windowless Sampler	**Date End:**	01/02/2022
Logged by	**Checked by**	**Ground Level:**	6.50mAOD
EBE	RHG	**Coordinates:**	518467.00(E) 177342.00(N)
Sheet	**Scale**		
1 of 1	1:22		

Stratum Description	Legend		Depth (m)	Level (m)	Sample and In Situ Testing: Type	Depth (m)	Results	Water Strikes	Well
MADE GROUND: CONCRETE									
MADE GROUND: Firm to stiff, dark brown, gravelly, sandy clay. Gravel is fine to medium, sub-angular to angular brick, concrete, clinker, flint, and quartzite.			0.45	6.05					
		1			ES	1.00			
					SPT	1.20	N=14 (2,4/3,3,4,4)		
		2			SPT	2.00	N=23 (6,5/5,5,6,7)		
Medium dense to very dense, light brown, very gravelly, coarse grained SAND. Gravel is fine to medium, sub-angular to angular flint and quartzite. (KEMPTON PARK GRAVEL MEMBER)			2.60	3.90					
		3			D SPT	3.00 3.00	 N=19 (6,3/3,4,6,6)		
End of Borehole at 4.00m		4	4.00	2.50	SPT	4.00	N=50 (8,11/50 for 285mm)		

Hole Diameter		Casing Diameter		Chiselling				Groundwater			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Strike	Rising to	Time	Remarks
4.00	102										

Remarks

Position CAT scanned and started with diamond coring of concrete slab. Hand dug inspection pit dug to 1.2m bgl.
Groundwater not encountered.
Position refused upon dense sands at 4.00m bgl.
Location backfilled with compacted arisings.

PICK EVERARD

Head Office: Halford House, Charles Street, Leicester, LE1 1HA

Tel: 0345 045 0050,
email consultants@pickeverard.co.uk

Borehole Record

Project:	RBG Kew Learning Centre	**Project No.** 210699	WS05
Client:	Royal Botanical Gardens Kew	**Date Start:**	01/02/2022
Plant:	Hand Digging Tools+Modular Windowless Sampler	**Date End:**	01/02/2022
Logged by	**Checked by**	**Ground Level:**	6.50mAOD
EBE	RHG	**Coordinates:**	518458.00(E) 177317.00(N)
Sheet	**Scale**		
1 of 1	1:22		

Stratum Description	Legend	Depth (m)	Level (m)	Sample and In Situ Testing: Type	Depth (m)	Results	Water Strikes	Well
MADE GROUND: CONCRETE								
MADE GROUND: Reddish brown, sandy, fine to coarse, angular gravel of quartzite.		0.34	6.16					
MADE GROUND: Soft to firm, brown, slightly gravelly, very sandy clay. Gravel is fine to medium, sub-angular brick and quartzite.		0.60	5.90	ES	0.70			
Medium dense, light brown and yellow, clayey, coarse grained SAND. (KEMPTON PARK GRAVEL MEMBER)		0.80	5.70	D	1.00			
				SPT	1.20	N=17 (4,5/4,5,4,4)		
Very dense, light brown and yellow, gravelly, clayey, very coarse grained SAND. Gravel is fine to medium, sub-rounded to sub-angular flint and quartzite. (KEMPTON PARK GRAVEL MEMBER)		1.70	4.80					
End of Borehole at 2.00m		2.00	4.50	D SPT	2.00 2.00	N=50 (5,7/50 for 280mm)		

Hole Diameter		Casing Diameter		Chiselling				Groundwater			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Strike	Rising to	Time	Remarks
2.00	102										

Remarks

Position CAT scanned and started with diamond coring of concrete slab. Hand dug inspection pit dug to 1.2m bgl.
Groundwater not encountered.
Position refused upon dense sands at 2.00m bgl.
Location installed with monitoring well.

PICK EVERARD

Head Office: Halford House, Charles Street, Leicester, LE1 1HA

Tel: 0345 045 0050,
email consultants@pickeverard.co.uk

Borehole Record

Project:	RBG Kew Learning Centre	**Project No.** 210699	WS06
Client:	Royal Botanical Gardens Kew	**Date Start:**	02/02/2022
Plant:	Hand Digging Tools+Modular Windowless Sampler	**Date End:**	02/02/2022
Logged by	**Checked by**	**Ground Level:**	6.82mAOD
EBE	RHG	**Coordinates:**	518442.10(E) 177324.98(N)
Sheet	**Scale**		
1 of 1	1:22		

Stratum Description	Legend	Depth (m)	Level (m)	Sample and In Situ Testing: Type	Depth (m)	Results	Water Strikes	Well
MADE GROUND: Light brown and yellow, very coarse sand.								
MADE GROUND: Soft to firm, dark brown, very gravelly, sandy clay. Gravel is fine to coarse, sub-rounded to angular brick, concrete, slate, quartzite, and flint. (MADE GROUND)		0.20	6.62	ES	0.30			
Loose to very dense, light brown and yellow, clayey, gravelly, very coarse grained SAND. Gravel is fine to medium, sub-angular to angular flint. (KEMPTON PARK GRAVEL MEMBER)		1.10	5.72	SPT	1.20	N=8 (2,2/2,2,2,2)		
				D	1.50			
End of Borehole at 2.00m		2.00	4.82	SPT	2.00	N=50 (5,11/50 for 285mm)		

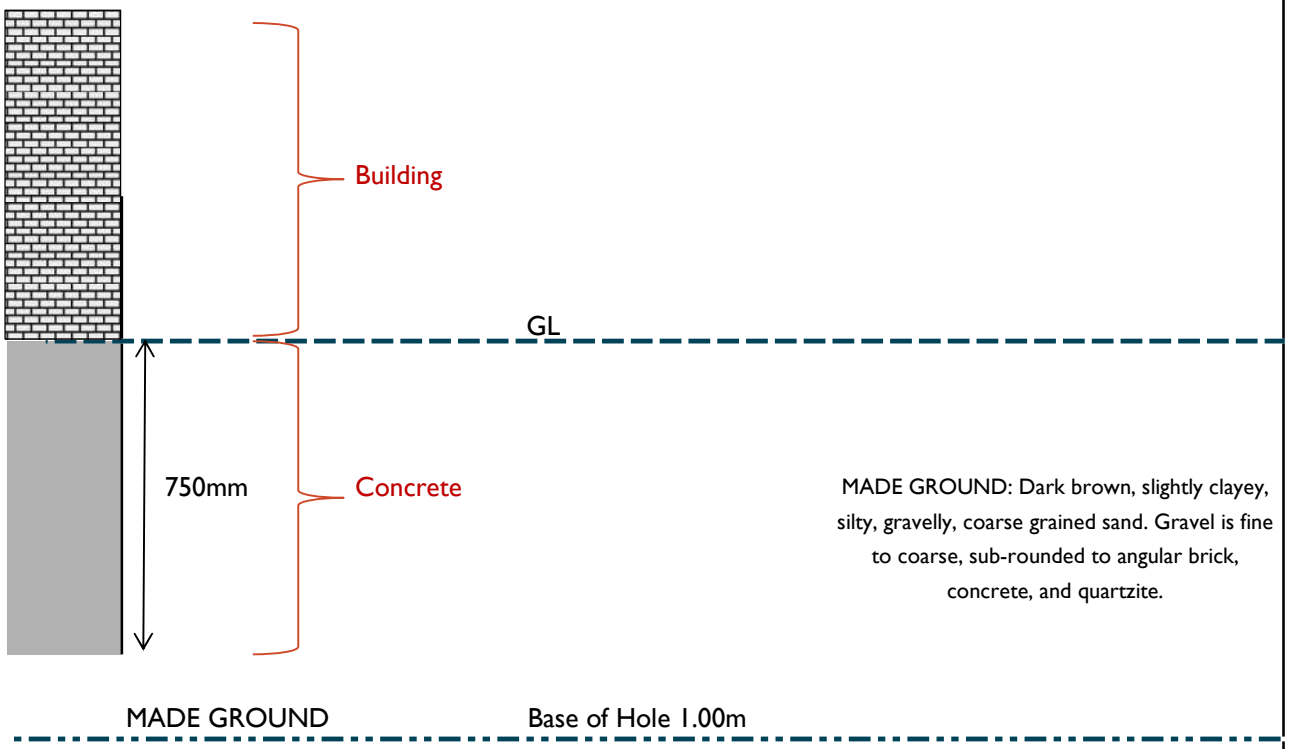
Hole Diameter		Casing Diameter		Chiselling				Groundwater			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Strike	Rising to	Time	Remarks
2.00	102										

Remarks

Position CAT scanned and started with hand dug inspection pit to 1.2m bgl.
Groundwater not encountered.
Position refused upon dense sands at 2.00m bgl.
Location backfilled with compacted arisings.

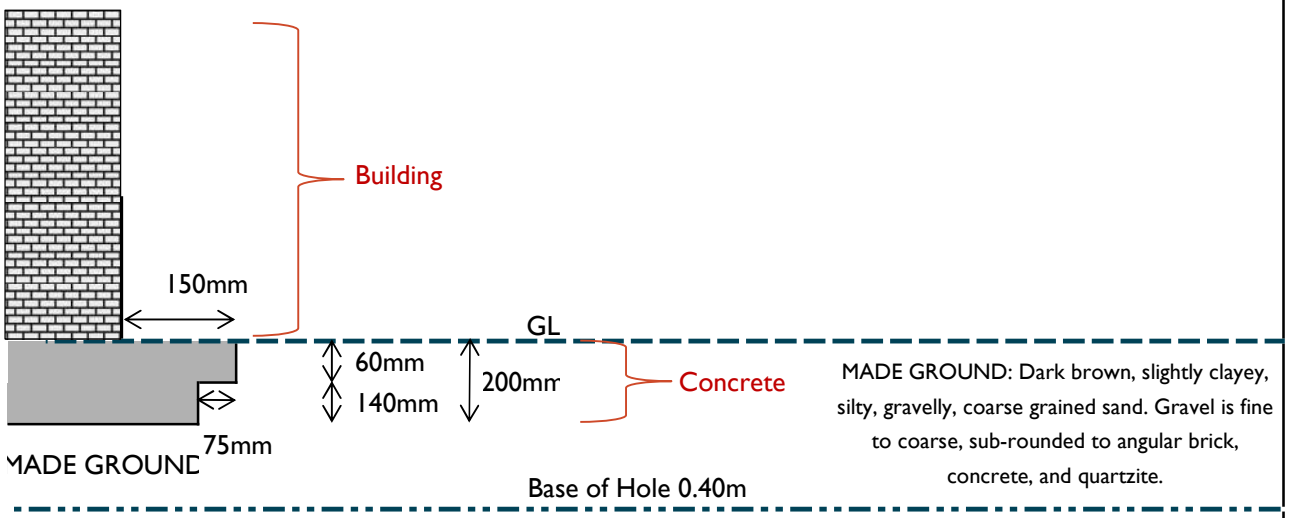
Project Name:	RBG Kew Learning Centre
Project Number:	210699
Location Number:	HP01
Drawn By:	EBE

Foundation Profile - HP01



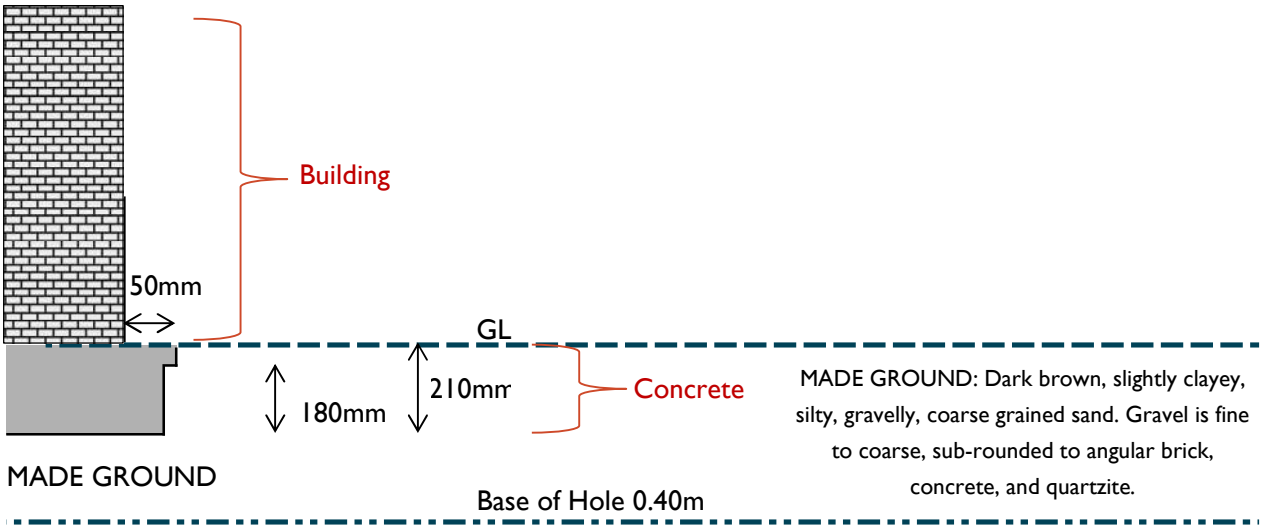
PICK EVERARD	**Project Name:**	RBG Kew Learning Centre
	Project Number:	210699
	Location Number:	HP02
	Drawn By:	EBE

Foundation Profile - HP02



PICK EVERARD	**Project Name:**	RBG Kew Learning Centre
	Project Number:	210699
	Location Number:	HP03
	Drawn By:	EBE

Foundation Profile - HP03



MADE GROUND: Dark brown, slightly clayey, silty, gravelly, coarse grained sand. Gravel is fine to coarse, sub-rounded to angular brick, concrete, and quartzite.

Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Dynamic sampling
Unit 8
Victory parkway
Victory rd
Derby
DE24 8ZF

Hammer Ref:	MR.100.87
Test Date:	09/09/2021
Report Date:	09/09/2021
File Name:	MR.100.87.spt
Test Operator:	B HUNTER

Instrumented Rod Data

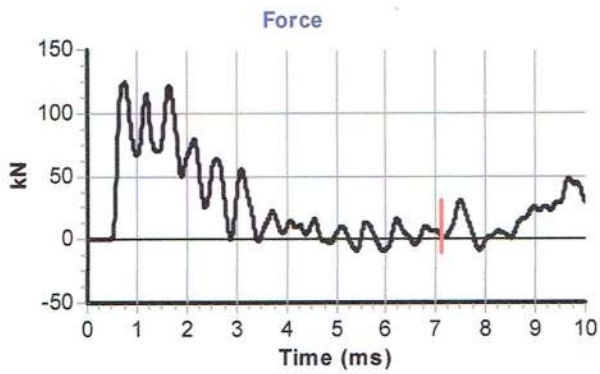
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	62901
Accelerometer No.2:	62902

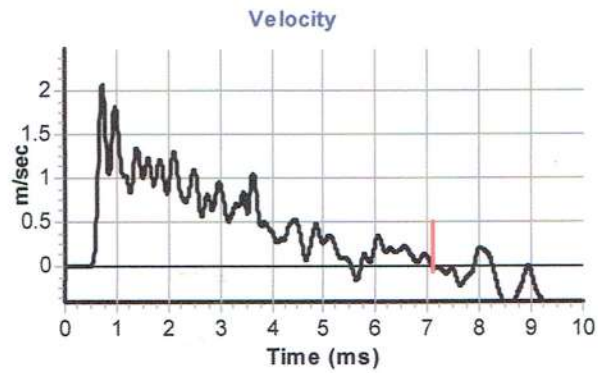
Hammer Information

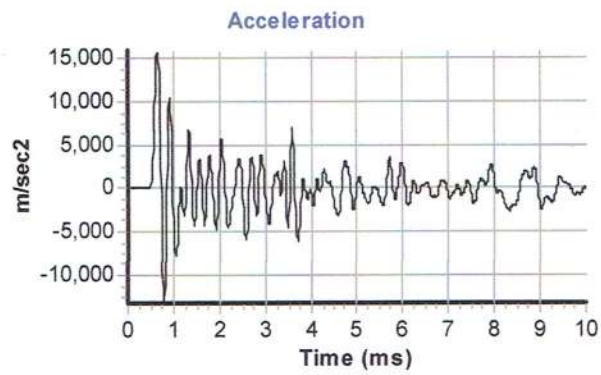
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
String Length L (m):	15.0

Comments / Location

Hammer tested at Dynamic samplings yard.







Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	353

Energy Ratio E_r (%): **75**

Signed: A.parker

Title: Associate director

The recommended calibration interval is 12 months

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Southern Testing
Unit 11
Charlwood Road
East Grinstead
West Sussex
RH19 2HU

SPT Hammer Ref:	SEDS10
Test Date:	01/05/2021
Report Date:	01/05/2021
File Name:	SEDS10.spt
Test Operator:	NPB

Instrumented Rod Data

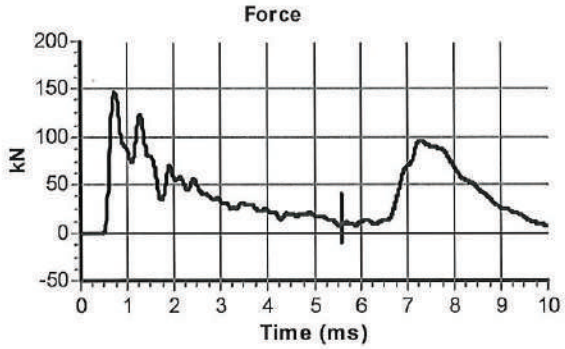
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.6
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	64786
Accelerometer No.2:	64789

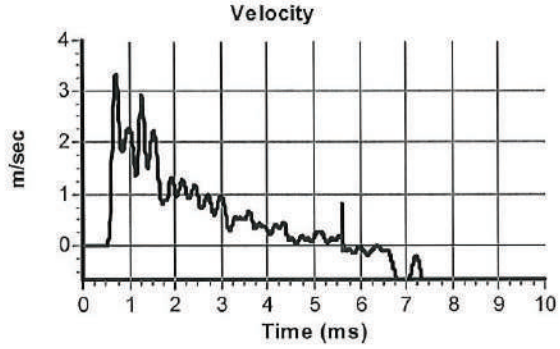
SPT Hammer Information

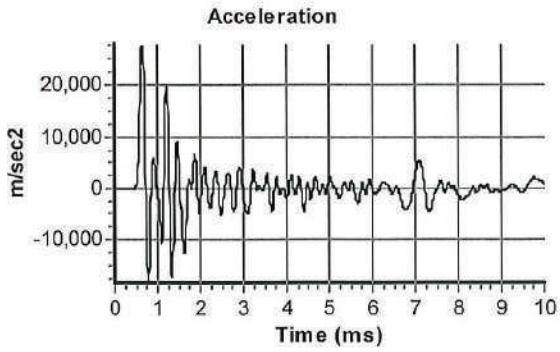
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	14.5

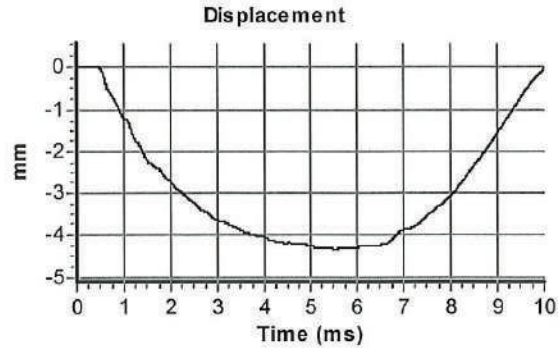
Comments / Location

CHARLWOODS









Calculations

Area of Rod A (mm2):	983
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	328

Energy Ratio E_r (%): **69**

Signed: N P Burrows

Title: Field Operations Manager

The recommended calibration interval is 12 months

PICK EVERARD

BRE 365 Soakaway Infiltration Rate Calculation

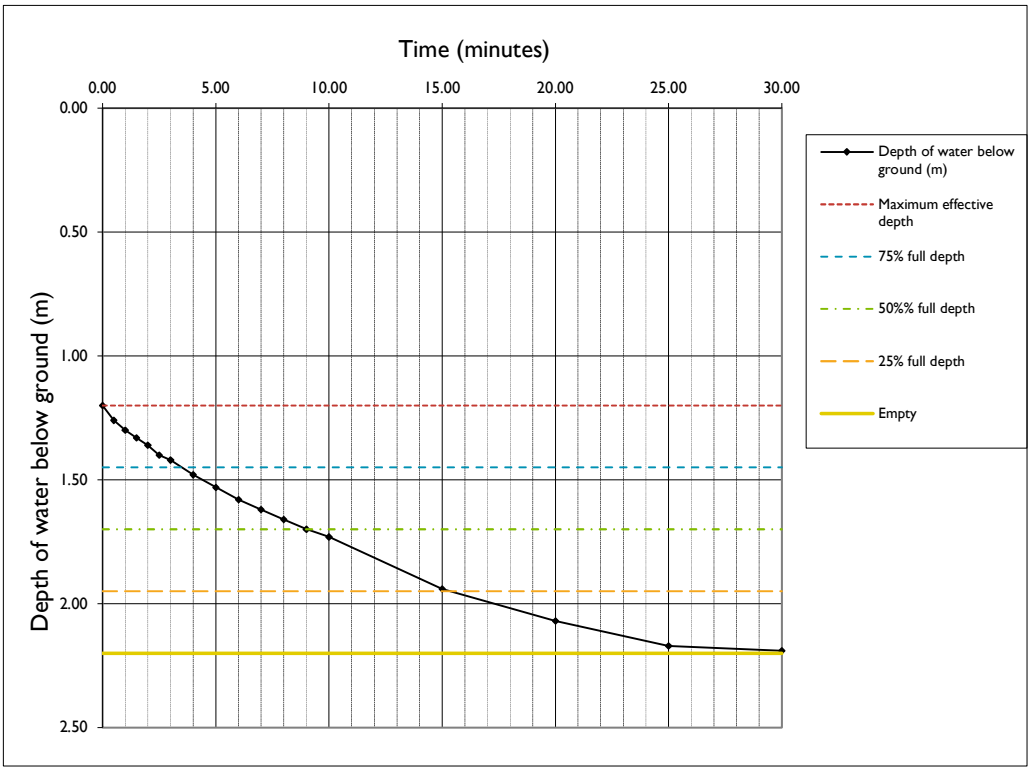
The following spreadsheet calculations are based on the method given in BRE Digest 365

Job Number:	**210699**	**Trial Pit No:**	**SA01**
Job Title:	**RBG Kew Learning Centre**	**Test No:**	**Test 1**
Engineer:	**Elliott Bell**	**Date of Test:**	**03/02/2022**

Details of pit

Actual depth of pit, D'	(m)	2.20	Width of Pit, W	(m)	0.50
Effective depth of Pit, D [1]	(m)	1.00	Proportion of pit volume occupied by gravel solids, P_g [2]		0.69
Length of Pit, L	(m)	2.60			

Volume, V, of pit between 75% and 25% depths (m^3) = L x W x ½D =	0.65
Effective volume between 75% and 25% depths, V_{p75-25}, = V x P_g =	0.20
Internal surface area of pit up to 50% level, a_{p50}, (m^2)	4.40
= area of 2 sides + 2 ends + base = (2 x L x ½D) + (2 x W x ½D) + (L x W)	



Time t_{p25} (= time water is at 75% of effective depth in minutes)		3.50
Time t_{p75} (= time water is at 25% of effective depth in minutes)		15.00
Time t_{p75-25} (=time for water to fall from 75% to 25% in minutes)		11.5
Time t_{p75-25} (=time for water to fall from 75% to 25% in seconds)		690

$$= \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}} = \frac{0.20}{4.40 \times 690}$$

Soil infiltration rate, f =	**6.64E-05 m/s**

Water Level Readings

Time elapsed (min)	Depth of water below
0.00	1.20
0.50	1.26
1.00	1.30
1.50	1.33
2.00	1.36
2.50	1.40
3.00	1.42
4.00	1.48
5.00	1.53
6.00	1.58
7.00	1.62
8.00	1.66
9.00	1.70
10.00	1.73
15.00	1.94
20.00	2.07
25.00	2.17
30.00	2.19

PICK EVERARD

BRE 365 Soakaway Infiltration Rate Calculation

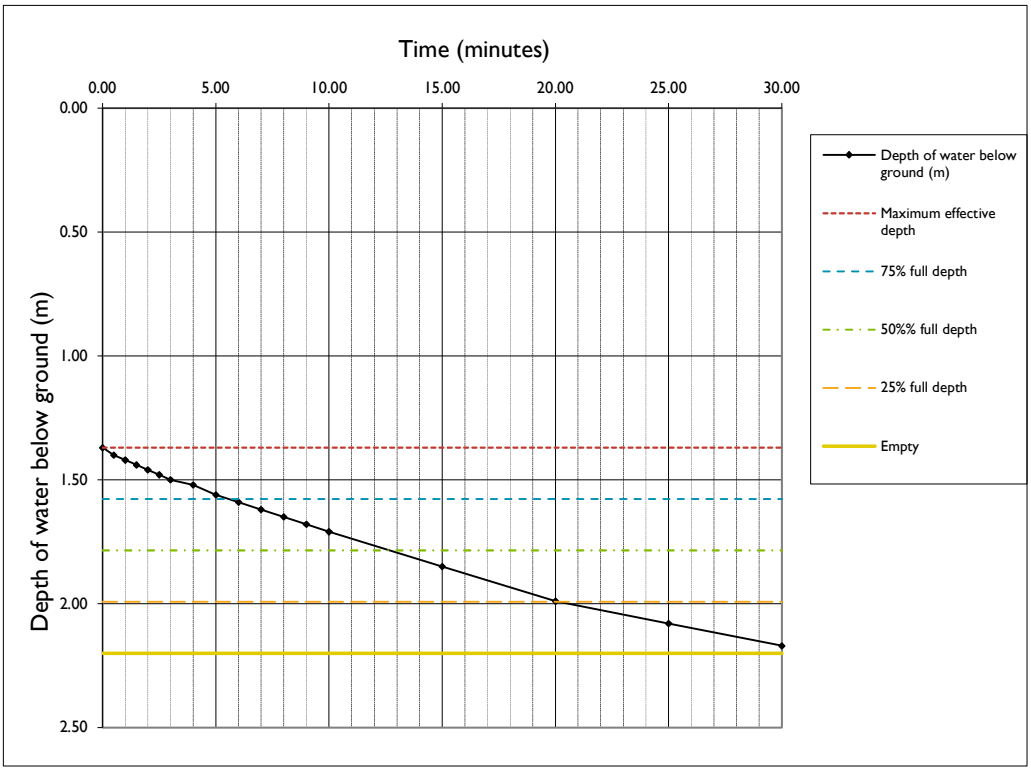
The following spreadsheet calculations are based on the method given in BRE Digest 365

Job Number:	**210699**	**Trial Pit No:**	**SA01**
Job Title:	**RBG Kew Learning Centre**	**Test No:**	**Test 2**
Engineer:	**Elliott Bell**	**Date of Test:**	**03/02/2022**

Details of pit

Actual depth of pit, D'	(m)	2.20	Width of Pit, W	(m)	0.50
Effective depth of Pit, D [1]	(m)	0.83	Proportion of pit volume occupied by gravel solids, P_g [2]		0.69
Length of Pit, L	(m)	2.60			

Volume, V, of pit between 75% and 25% depths (m^3) = L x W x ½D =	0.54
Effective volume between 75% and 25% depths, V_{p75-25}, = V x P_g =	0.17
Internal surface area of pit up to 50% level, a_{p50}, (m^2)	3.87
= area of 2 sides + 2 ends + base = (2 x L x ½D) + (2 x W x ½D) + (L x W)	



Water Level Readings

Time elapsed (min)	Depth of water below
0.00	1.37
0.50	1.40
1.00	1.42
1.50	1.44
2.00	1.46
2.50	1.48
3.00	1.50
4.00	1.52
5.00	1.56
6.00	1.59
7.00	1.62
8.00	1.65
9.00	1.68
10.00	1.71
15.00	1.85
20.00	1.99
25.00	2.08
30.00	2.17

Time t_{p25} (= time water is at 75% of effective depth in minutes)		5.50
Time t_{p75} (= time water is at 25% of effective depth in minutes)		20.00
Time t_{p75-25} (=time for water to fall from 75% to 25% in minutes)		14.5
Time t_{p75-25} (=time for water to fall from 75% to 25% in seconds)		870

$$= \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}} = \frac{0.17}{3.87 \times 870}$$

Soil infiltration rate, f =	**4.96E-05 m/s**

PICK EVERARD

BRE 365 Soakaway Infiltration Rate Calculation

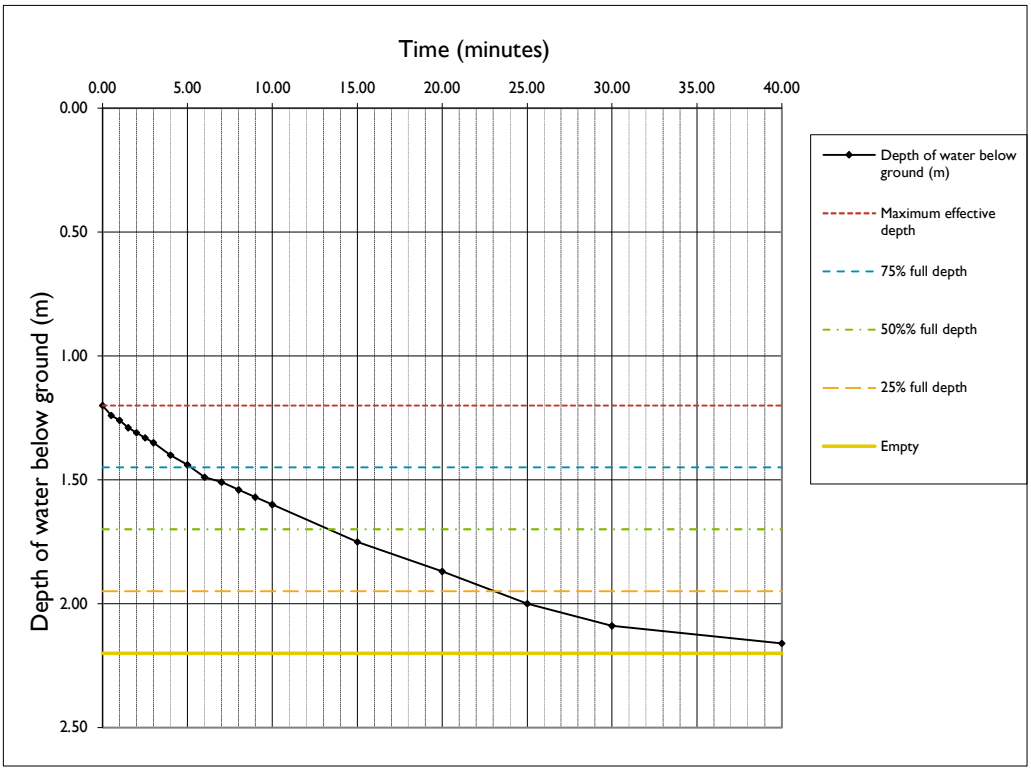
The following spreadsheet calculations are based on the method given in BRE Digest 365

Job Number:	**210699**	**Trial Pit No:**	**SA01**
Job Title:	**RBG Kew Learning Centre**	**Test No:**	**Test 3**
Engineer:	**Elliott Bell**	**Date of Test:**	**03/02/2022**

Details of pit

Actual depth of pit, D'	(m)	2.20	Width of Pit, W	(m)	0.50
Effective depth of Pit, D [1]	(m)	1.00	Proportion of pit volume occupied by gravel solids, P_g [2]		0.69
Length of Pit, L	(m)	2.60			

Volume, V, of pit between 75% and 25% depths (m^3) = L x W x ½D =	0.65
Effective volume between 75% and 25% depths, V_{p75-25}, = V x P_g =	0.20
Internal surface area of pit up to 50% level, a_{p50}, (m^2)	4.40
= area of 2 sides + 2 ends + base = (2 x L x ½D) + (2 x W x ½D) + (L x W)	



Water Level Readings

Time elapsed (min)	Depth of water below
0.00	1.20
0.50	1.24
1.00	1.26
1.50	1.29
2.00	1.31
2.50	1.33
3.00	1.35
4.00	1.40
5.00	1.44
6.00	1.49
7.00	1.51
8.00	1.54
9.00	1.57
10.00	1.60
15.00	1.75
20.00	1.87
25.00	2.00
30.00	2.09
40.00	2.16

Time t_{p25} (= time water is at 75% of effective depth in minutes)		5.00
Time t_{p75} (= time water is at 25% of effective depth in minutes)		23.00
Time t_{p75-25} (=time for water to fall from 75% to 25% in minutes)		18
Time t_{p75-25} (=time for water to fall from 75% to 25% in seconds)		1080

$$= \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}} = \frac{0.20}{4.40 \times 1080}$$

Soil infiltration rate, f =	**4.24E-05 m/s**

PICK EVERARD

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS01	**Test No:**	1
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.30	**End Water Level (mbgl)**	1.72

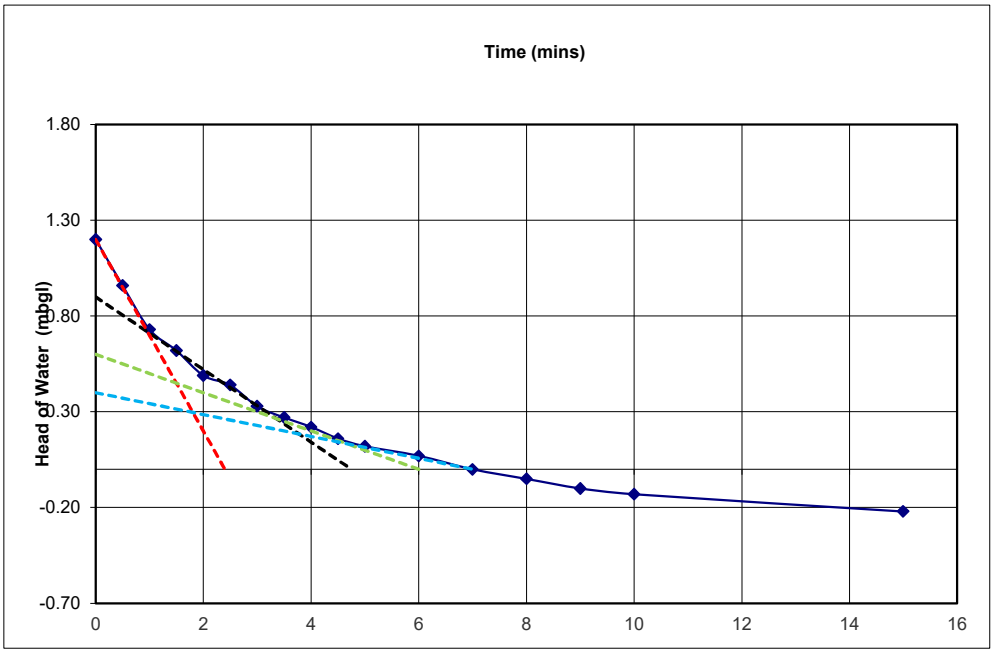
Time (Minutes)	Depth to water (m bgl)	Head Of Water above Reference Point (m)
0	0.30	1.20
0.5	0.54	0.96
1	0.77	0.73
1.5	0.88	0.62
2	1.01	0.49
2.5	1.06	0.44
3	1.17	0.33
3.5	1.23	0.27
4	1.28	0.22
4.5	1.34	0.16
5	1.38	0.12
6	1.43	0.07
7	1.50	0.00
8	1.55	-0.05
9	1.60	-0.10
10	1.63	-0.13
15	1.72	-0.22

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS01	**Test No:**	1
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.30	**End Water Level (mbgl)**	1.72

Head of Water Under Consideration (m)	Head Intercept (Hp)	Time Intercept (Ht)	Soil Infiltration Rate (m/s)
1.00	1.2	2.40	6.13E-05
0.60	0.90	4.75	2.32E-05
0.20	0.60	6.00	1.23E-05
0.10	0.40	7.00	7.00E-06



PICK EVERARD

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS01	**Test No:**	2
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.00	**End Water Level (mbgl)**	1.67

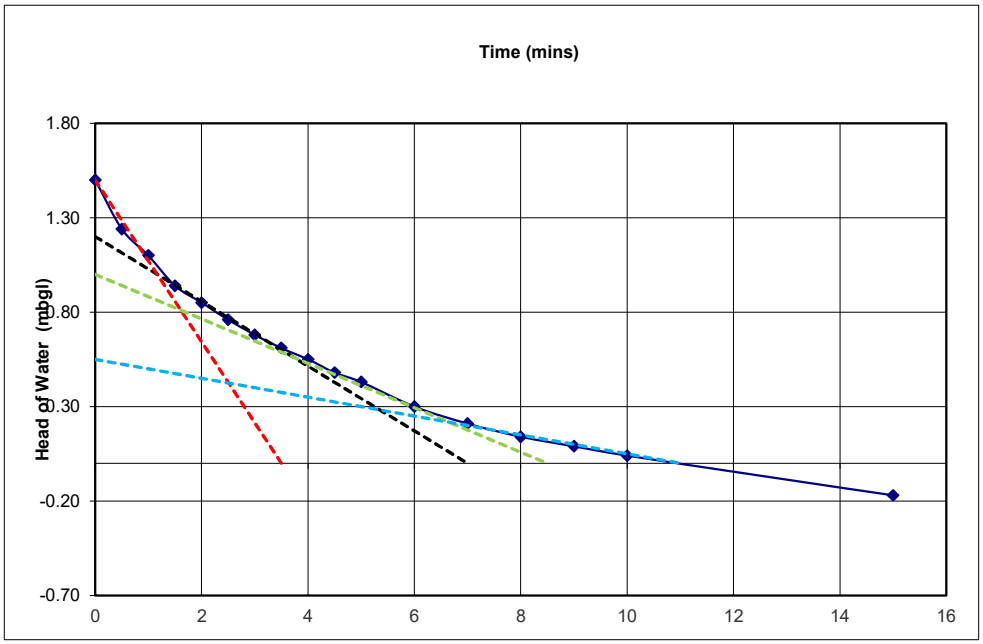
Time (Minutes)	Depth to water (m bgl)	Head Of Water above Reference Point (m)
0	0.00	1.50
0.5	0.26	1.24
1	0.40	1.10
1.5	0.56	0.94
2	0.65	0.85
2.5	0.74	0.76
3	0.82	0.68
3.5	0.89	0.61
4	0.95	0.55
4.5	1.02	0.48
5	1.07	0.43
6	1.20	0.30
7	1.29	0.21
8	1.36	0.14
9	1.41	0.09
10	1.46	0.04
15	1.67	-0.17

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS01	**Test No:**	2
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.00	**End Water Level (mbgl)**	1.67

Head of Water Under Consideration (m)	Head Intercept (Hp)	Time Intercept (Ht)	Soil Infiltration Rate (m/s)
1.20	1.5	3.50	8.93E-05
0.70	1.20	7.00	3.57E-05
0.50	1.00	8.50	2.45E-05
0.15	0.55	11.00	1.04E-05



PICK EVERARD

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS01	**Test No:**	3
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.00	**End Water Level (mbgl)**	1.76

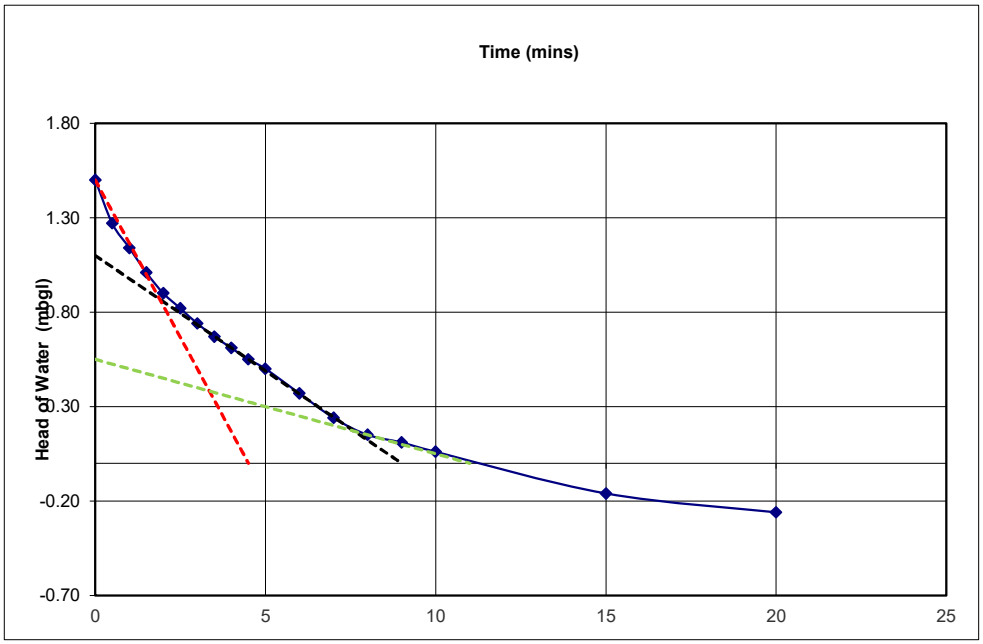
Time (Minutes)	Depth to water (m bgl)	Head Of Water above Reference Point (m)
0	0.00	1.50
0.5	0.23	1.27
1	0.36	1.14
1.5	0.49	1.01
2	0.60	0.90
2.5	0.68	0.82
3	0.76	0.74
3.5	0.83	0.67
4	0.89	0.61
4.5	0.95	0.55
5	1.00	0.50
6	1.13	0.37
7	1.26	0.24
8	1.35	0.15
9	1.39	0.11
10	1.44	0.06
15	1.66	-0.16
20	1.76	-0.26

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS01	**Test No:**	3
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.00	**End Water Level (mbgl)**	1.76

Head of Water Under Consideration (m)	Head Intercept (Hp)	Time Intercept (Ht)	Soil Infiltration Rate (m/s)
1.00	1.5	4.50	6.94E-05
0.50	1.10	9.00	2.55E-05
0.15	0.55	11.00	1.04E-05



PICK EVERARD

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS02	**Test No:**	1
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.60	**End Water Level (mbgl)**	1.72

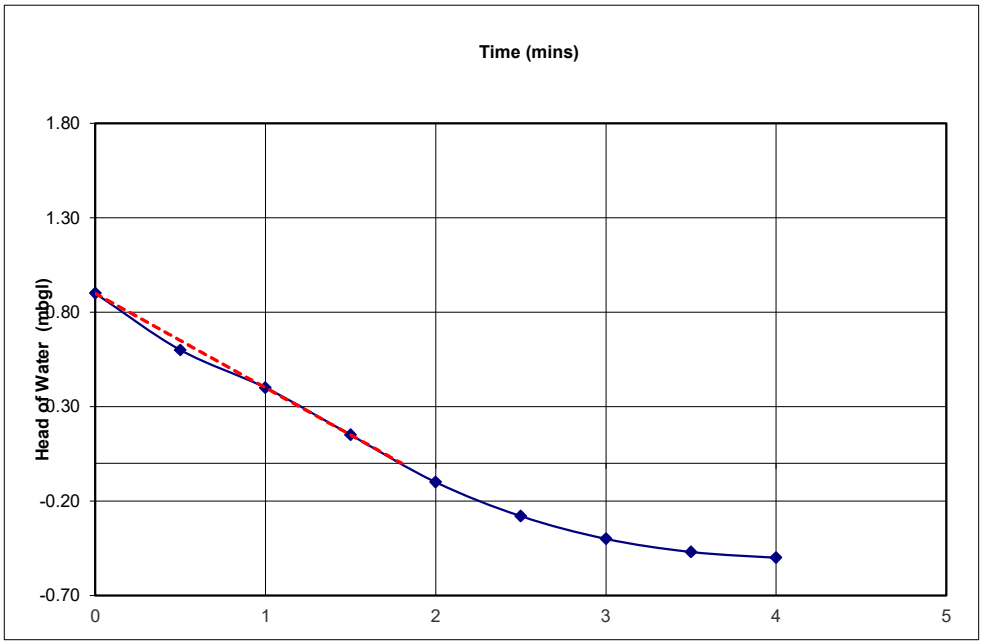
Time (Minutes)	Depth to water (m bgl)	Head Of Water above Reference Point (m)
0	0.60	0.90
0.5	0.90	0.60
1	1.10	0.40
1.5	1.35	0.15
2	1.60	-0.10
2.5	1.78	-0.28
3	1.90	-0.40
3.5	1.97	-0.47
4	2.00	-0.50

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS02	**Test No:**	1
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.60	**End Water Level (mbgl)**	1.72

Head of Water Under Consideration (m)	Head Intercept (Hp)	Time Intercept (Ht)	Soil Infiltration Rate (m/s)
0.50	0.9	1.80	7.44E-05



PICK EVERARD

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS02	**Test No:**	2
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.50	**End Water Level (mbgl)**	1.72

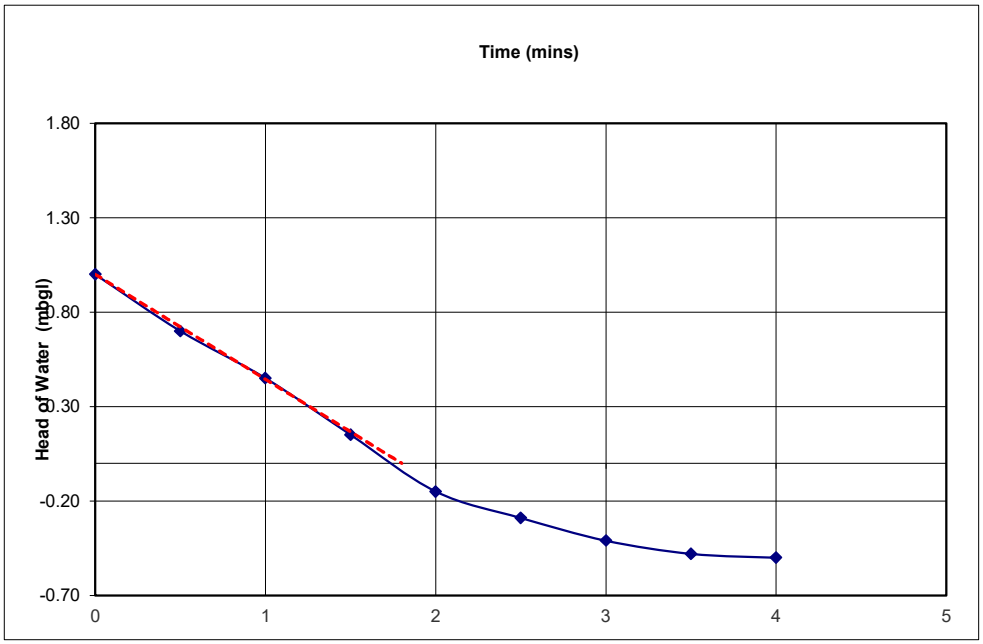
Time (Minutes)	Depth to water (m bgl)	Head Of Water above Reference Point (m)
0	0.50	1.00
0.5	0.80	0.70
1	1.05	0.45
1.5	1.35	0.15
2	1.65	-0.15
2.5	1.79	-0.29
3	1.91	-0.41
3.5	1.98	-0.48
4	2.00	-0.50

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS02	**Test No:**	2
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.50	**End Water Level (mbgl)**	1.72

Head of Water Under Consideration (m)	Head Intercept (Hp)	Time Intercept (Ht)	Soil Infiltration Rate (m/s)
0.50	1	1.80	7.72E-05



PICK EVERARD

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS02	**Test No:**	3
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.50	**End Water Level (mbgl)**	1.72

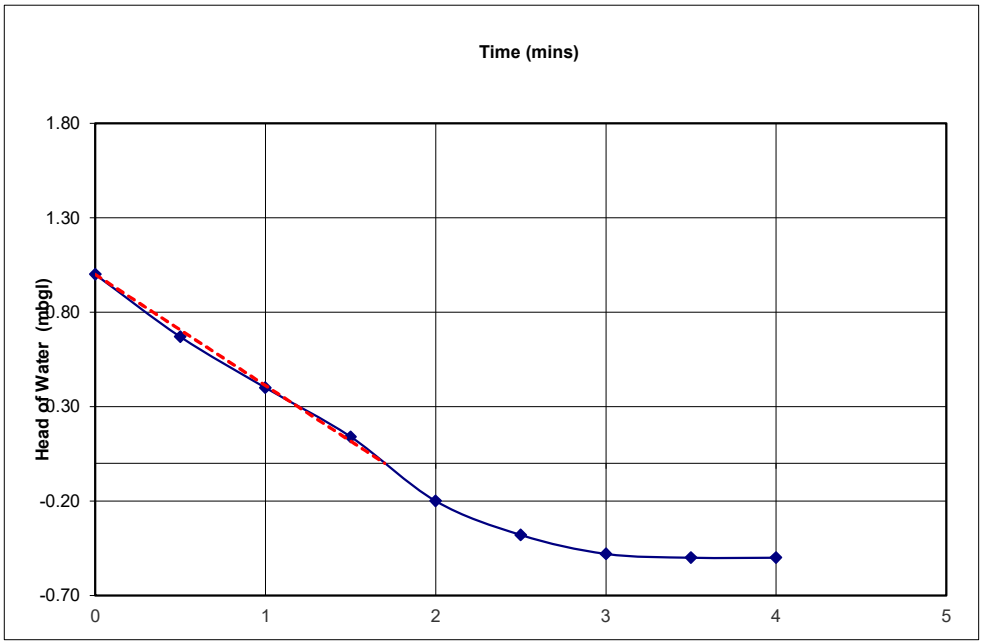
Time (Minutes)	Depth to water (m bgl)	Head Of Water above Reference Point (m)
0	0.50	1.00
0.5	0.83	0.67
1	1.10	0.40
1.5	1.36	0.14
2	1.70	-0.20
2.5	1.88	-0.38
3	1.98	-0.48
3.5	2.00	-0.50
4	2.00	-0.50

Borehole Falling Head Test

Infiltration Rate Calculated in accordance with The Soakway Design Guide (2000), Kent County Council

Site:	RBG Kew		
Job No:	210699		
Date:	02/02/2022		
BH No:	WS02	**Test No:**	3
Borehole internal diameter (m):	0.05	**Casing Depth (m)**	
Water table level (mbgl):*		**Borehole Open Length L (m)**	1.00
Borehole Base (mbgl):	2.00	**Midpoint of Open Section (mbgl)**	1.50
Start water level (mbgl):	0.50	**End Water Level (mbgl)**	1.72

Head of Water Under Consideration (m)	Head Intercept (Hp)	Time Intercept (Ht)	Soil Infiltration Rate (m/s)
0.50	1	1.70	8.17E-05



Appendix C – Geotechnical Laboratory Reports

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

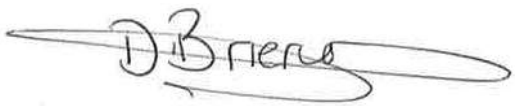
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/01085
Issue Number: 1 **Date:** 18 February, 2022

Client:
Pick Everard
Halford House
Charles Street
Leicester
LE1 1HA

Project Manager: Elliot Bell/Ross Goodband
Project Name: RBG Kew
Project Ref: 210699
Order No: 92092
Date Samples Received: 07/02/22
Date Instructions Received: 08/02/22
Date Analysis Completed: 18/02/22

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

Envirolab Job Number: 22/01085

Client Project Name: RBG Kew

Client Project Ref: 210699

Lab Sample ID	22/01085/1	22/01085/2	22/01085/3	22/01085/4	22/01085/5	22/01085/6	22/01085/7	Units	Limit of Detection	Method ref
Client Sample No	1	2	3	4	5	6	7			
Client Sample ID	BH01	WS01	WS02	WS03	WS04	WS05	WS06			
Depth to Top	0.50	0.10	0.50	0.60	1.00	0.70	0.30			
Depth To Bottom										
Date Sampled	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4A	4AE	4AB	4AB	4AB	4AB			
% Moisture at <40C$_A$	14.1	17.5	10.5	3.9	7.6	5.8	9.2	% w/w	0.1	A-T-044
% Stones >10mm$_A$	9.6	<0.1	<0.1	16.1	0.6	2.9	24.3	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.84	7.25	7.16	8.45	7.70	6.73	8.43	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.03	<0.01	<0.01	0.07	0.03	0.06	0.02	g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	1600	600	<200	610	330	390	440	mg/kg	200	A-T-028s
Cyanide (free)$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sFCN
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sTCN
Organic matter$_D$$^{M\#}$	1.4	7.5	3.9	7.3	1.9	1.7	0.8	% w/w	0.1	A-T-032 OM
Arsenic$_D$$^{M\#}$	11	11	11	7	15	11	10	mg/kg	1	A-T-024s
Boron (water soluble)$_D$	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	1.0	1.1	0.9	0.8	1.0	1.1	0.8	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	30	30	20	9	20	21	11	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	17	24	24	13	24	25	17	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	463	113	56	62	143	81	54	mg/kg	1	A-T-024s
Mercury$_D$	1.46	<0.17	<0.17	2.53	<0.17	<0.17	0.29	mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	18	18	12	20	23	14	mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	38	86	51	98	79	54	36	mg/kg	5	A-T-024s

Envirolab Job Number: 22/01085

Client Project Name: RBG Kew

Client Project Ref: 210699

Lab Sample ID	22/01085/1	22/01085/2	22/01085/3	22/01085/4	22/01085/5	22/01085/6	22/01085/7	Units	Limit of Detection	Method ref
Client Sample No	1	2	3	4	5	6	7			
Client Sample ID	BH01	WS01	WS02	WS03	WS04	WS05	WS06			
Depth to Top	0.50	0.10	0.50	0.60	1.00	0.70	0.30			
Depth To Bottom										
Date Sampled	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4A	4AE	4AB	4AB	4AB	4AB			
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 22/01085

Client Project Name: RBG Kew

Client Project Ref: 210699

Lab Sample ID	22/01085/1	22/01085/2	22/01085/3	22/01085/4	22/01085/5	22/01085/6	22/01085/7	Units	Limit of Detection	Method ref
Client Sample No	1	2	3	4	5	6	7			
Client Sample ID	BH01	WS01	WS02	WS03	WS04	WS05	WS06			
Depth to Top	0.50	0.10	0.50	0.60	1.00	0.70	0.30			
Depth To Bottom										
Date Sampled	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4A	4AE	4AB	4AB	4AB	4AB			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	0.02	<0.01	0.02	0.02	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.02	<0.02	0.10	0.05	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.23	0.13	0.55	0.26	<0.04	0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.32	0.20	0.59	0.29	<0.04	0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.39	0.22	0.65	0.36	<0.05	0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	0.16	0.12	0.26	0.13	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	0.15	0.08	0.27	0.14	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.07	0.29	0.17	0.64	0.31	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	0.06	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.13	0.36	0.26	1.20	0.56	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	0.03	0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.04	0.21	0.15	0.34	0.17	<0.03	0.03	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.06	0.11	0.09	0.50	0.24	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.13	0.33	0.22	1.00	0.47	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.65	2.59	1.64	6.23	3.01	<0.08	0.16	mg/kg	0.01	A-T-019s
TPH Banded 1										
>C6-C8$_A^{M\#}$	-	<5	<5	-	-	-	<5	mg/kg	5	A-T-007s
>C8-C10$_A^{M\#}$	-	5	2	-	-	-	<1	mg/kg	1	A-T-007s
>C10-C12$_A^{M\#}$	-	5	<1	-	-	-	<1	mg/kg	1	A-T-007s
>C12-C16$_A^{M\#}$	-	10	<2	-	-	-	<2	mg/kg	2	A-T-007s
>C16-C21$_A^{M\#}$	-	13	3	-	-	-	<2	mg/kg	2	A-T-007s
>C21-C40$_A^{M\#}$	-	46	9	-	-	-	<5	mg/kg	5	A-T-007s
Total TPH Banded 1$_A^{M\#}$	-	79	14	-	-	-	<5	mg/kg	5	A-T-007s

Envirolab Job Number: 22/01085

Client Project Name: RBG Kew

Client Project Ref: 210699

Lab Sample ID	22/01085/1	22/01085/2	22/01085/3	22/01085/4	22/01085/5	22/01085/6	22/01085/7	Units	Limit of Detection	Method ref
Client Sample No	1	2	3	4	5	6	7			
Client Sample ID	BH01	WS01	WS02	WS03	WS04	WS05	WS06			
Depth to Top	0.50	0.10	0.50	0.60	1.00	0.70	0.30			
Depth To Bottom										
Date Sampled	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22	01-Feb-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4A	4AE	4AB	4AB	4AB	4AB			
TPH CWG with Clean Up *C1										
Ali >C5-C6$_A^{\#}$	<0.01	-	-	<0.01	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01	-	-	<0.01	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	-	-	<1	<1	<1	-	mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	-	-	<1	1	1	-	mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	-	-	<1	<1	<1	-	mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	-	-	2	2	<1	-	mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	<1	-	-	3	26	<1	-	mg/kg	1	A-T-055s
Total Aliphatics$_A$	<1	-	-	5	29	1	-	mg/kg	1	A-T-055s
Aro >C5-C7$_A^{\#}$	<0.01	-	-	<0.01	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	-	-	<0.01	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	-	-	<1	<1	<1	-	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	-	-	<1	<1	<1	-	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	-	-	2	<1	<1	-	mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	-	-	20	5	<1	-	mg/kg	1	A-T-055s
Aro >C21-C35$_A$	<1	-	-	103	18	<1	-	mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	-	-	125	24	<1	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35)$_A$	<1	-	-	130	53	1	-	mg/kg	1	A-T-055s
BTEX - Benzene$_A^{\#}$	<0.01	-	-	<0.01	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	-	-	<0.01	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	-	-	<0.01	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	-	-	<0.01	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	-	-	<0.01	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	-	-	<0.01	<0.01	<0.01	-	mg/kg	0.01	A-T-022s

Envirolab Job Number: 22/01085

Client Project Name: RBG Kew

Client Project Ref: 210699

Lab Sample ID	22/01085/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS03									
Depth to Top	2.00									
Depth To Bottom										
Date Sampled	01-Feb-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
% Moisture at <40C$_A$	2.8							% w/w	0.1	A-T-044
% Stones >10mm$_A$	38.0							% w/w	0.1	A-T-044
pH$_D^{M\#}$	10.90							pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	0.07							g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D^{M\#}$	1300							mg/kg	200	A-T-028s
Cyanide (free)$_A^{M\#}$	<1							mg/kg	1	A-T-042sFCN
Cyanide (total)$_A^{M\#}$	<1							mg/kg	1	A-T-042sTCN
Organic matter$_D^{M\#}$	1.4							% w/w	0.1	A-T-032 OM
Arsenic$_D^{M\#}$	6							mg/kg	1	A-T-024s
Boron (water soluble)$_D$	<1.0							mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	0.9							mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	12							mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	53							mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1							mg/kg	1	A-T-040s
Lead$_D^{M\#}$	27							mg/kg	1	A-T-024s
Mercury$_D$	2.15							mg/kg	0.17	A-T-024s
Nickel$_D^{M\#}$	33							mg/kg	1	A-T-024s
Selenium$_D^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	86							mg/kg	5	A-T-024s

Envirolab Job Number: 22/01085

Client Project Name: RBG Kew

Client Project Ref: 210699

Lab Sample ID	22/01085/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS03									
Depth to Top	2.00									
Depth To Bottom										
Date Sampled	01-Feb-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD									A-T-045
Asbestos Matrix (visual)$_{D}$	-									A-T-045
Asbestos Matrix (microscope)$_{D}$	-									A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A									A-T-045

Envirolab Job Number: 22/01085

Client Project Name: RBG Kew

Client Project Ref: 210699

Lab Sample ID	22/01085/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS03									
Depth to Top	2.00									
Depth To Bottom										
Date Sampled	01-Feb-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08							mg/kg	0.01	A-T-019s
TPH Banded 1										
>C6-C8$_A^{M\#}$	<5							mg/kg	5	A-T-007s
>C8-C10$_A^{M\#}$	<1							mg/kg	1	A-T-007s
>C10-C12$_A^{M\#}$	3							mg/kg	1	A-T-007s
>C12-C16$_A^{M\#}$	<2							mg/kg	2	A-T-007s
>C16-C21$_A^{M\#}$	8							mg/kg	2	A-T-007s
>C21-C40$_A^{M\#}$	94							mg/kg	5	A-T-007s
Total TPH Banded 1$_A^{M\#}$	105							mg/kg	5	A-T-007s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.
Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

Key:
IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Pick Everard, Halford House, Charles Street, Leicester , LE1 1HA

Project No: 22/01085

Date Received: 08/02/2022 (am)

Project: RBG Kew

Cool Box Temperatures (°C): 6.4

Clients Project No: 210699

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/01085/1	22/01085/2	22/01085/3	22/01085/4	22/01085/5	22/01085/6	22/01085/7	22/01085/8
Client Sample No	1	2	3	4	5	6	7	
Client Sample ID/Depth	BH01 0.50m	WS01 0.10m	WS02 0.50m	WS03 0.60m	WS04 1.00m	WS05 0.70m	WS06 0.30m	WS03 2.00m
Date Sampled	01/02/22	01/02/22	01/02/22	01/02/22	01/02/22	01/02/22	01/02/22	01/02/22
A-T-004s	14/02/2022							
A-T-007s	11/02/2022	11/02/2022	11/02/2022				11/02/2022	15/02/2022
A-T-019s	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	15/02/2022
A-T-022s	14/02/2022			14/02/2022	14/02/2022	14/02/2022		
A-T-024s	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	16/02/2022
A-T-025w	18/02/2022							
A-T-026s	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022
A-T-026w	18/02/2022							
A-T-027s	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022
A-T-028s	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	16/02/2022
A-T-030s	14/02/2022							
A-T-031s	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022
A-T-031w	18/02/2022							
A-T-032 OM	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	15/02/2022
A-T-032s	16/02/2022							
A-T-032w	18/02/2022							
A-T-037w	18/02/2022							
A-T-040s	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022
A-T-042sFCN	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022	16/02/2022
A-T-042sTCN	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022	16/02/2022
A-T-044	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022
A-T-045	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-050w	18/02/2022							
A-T-055s	14/02/2022			14/02/2022	14/02/2022	14/02/2022		
A-T-ANCs	16/02/2022							
Calc-no stones	18/02/2022							
Probe (w)	18/02/2022							

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

SOIL - TIER ONE HUMAN HEALTH SCREENING VALUES

Status	End Use	Issue No	Issue Date
DRAFT	Commercial	1	04/07/16

Determinand	Units	SOIL ORGANIC MATTER			SOURCE
		1%	2.5%	6%	
pH		<5, >9			
Asbestos	%	Presence			
HEAVY METALS/METALLOIDS					
Arsenic	mg/kg	640			C4SL and CIEH/LQM S4ULs
Cadmium*	mg/kg	190			CIEH/LQM S4ULs
Chromium (III)	mg/kg	8,600			CIEH/LQM S4ULs
Chromium (VI)*	mg/kg	33			CIEH/LQM S4ULs
Lead*	mg/kg	2,300.00			C4SL
Mercury (Elemental)	mg/kg	58 [vap] (25.8)			CIEH/LQM S4ULs
Mercury (Inorganic)	mg/kg	1,100			CIEH/LQM S4ULs
Mercury (Methyl)	mg/kg	320			CIEH/LQM S4ULs
Nickel*	mg/kg	980			CIEH/LQM S4ULs
Selenium	mg/kg	12,000			CIEH/LQM S4ULs
Berylium	mg/kg	12			CIEH/LQM S4ULs
Boron	mg/kg	240,000			CIEH/LQM S4ULs
Vanadium	mg/kg	9,000			CIEH/LQM S4ULs
Copper	mg/kg	68,000			CIEH/LQM S4ULs
Zinc	mg/kg	730,000			CIEH/LQM S4ULs
GENERAL INORGANICS					
Easily Liberatable Cyanide (free)	mg/kg	36			Acute effects infant 1 dose 3g soil
US EPA PRIORITY PAHs					
Acenaphthene	mg/kg	84,000 (57.0) [sol]	97,000 (141) [sol]	100,000	CIEH/LQM S4ULs
Acenaphthylene	mg/kg	83,000 (86.1) [sol]	97,000 (212) [sol]	100,000	CIEH/LQM S4ULs
Anthracene	mg/kg	520,000	540,000	540,000	CIEH/LQM S4ULs
Benzo(a)Anthracene	mg/kg	170	170	180	CIEH/LQM S4ULs
Benzo(b)fluoranthene	mg/kg	44	44	45	CIEH/LQM S4ULs
Benzo(k)fluoranthene	mg/kg	1,200	1,200	1,200	CIEH/LQM S4ULs
Benzo(g,h,i)perylene	mg/kg	3,900	4,000	4,000	CIEH/LQM S4ULs
Benzo(a)Pyrene*	mg/kg	35	35	36	CIEH/LQM S4ULs
Chrysene	mg/kg	350	350	350	CIEH/LQM S4ULs
Di-benzo(a,h)anthracene	mg/kg	3.5	3.6	3.6	CIEH/LQM S4ULs
Fluoranthene	mg/kg	23,000	23,000	23,000	CIEH/LQM S4ULs
Fluorene	mg/kg	63000 (30.9)sol	68,000	71,000	CIEH/LQM S4ULs
Indeno(1,2,3-cd)pyrene	mg/kg	500	510	510	CIEH/LQM S4ULs
Naphthalene	mg/kg	190 (76.4)sol	460 (183)sol	1100 (432)sol	CIEH/LQM S4ULs
Phenanthrene	mg/kg	22,000	22,000	23,000	CIEH/LQM S4ULs
Pyrene	mg/kg	54,000	54,000	54,000	CIEH/LQM S4ULs
Coal Tar (Bap as surrogate marker)	mg/kg	15	15	15	CIEH/LQM S4ULs
Chlorinated Solvents					
1,2-Dichloroethane (1,2 DCA)	mg/kg	0.67	0.97	1.7	CIEH/LQM S4ULs
1,1,1-Trichloroethane (1,1,1 TCA)	mg/kg	660	1,300	3,000	CIEH/LQM S4ULs
1,1,1,2-Tetrachloroethane (1,1,1,2 PCA)	mg/kg	110	250	560	CIEH/LQM S4ULs
1,1,2,2-Tetrachloroethane (1,1,2,2 PCA)	mg/kg	270	550	1,100	CIEH/LQM S4ULs
Tetrachloroethene (PCE)	mg/kg	19	42	95	CIEH/LQM S4ULs
Tetrachloromethane (Carbon Tetrachloride)	mg/kg	2.9	6.3	14	CIEH/LQM S4ULs
Trichloroethene (TCE)	mg/kg	1.2	2.6	5.7	CIEH/LQM S4ULs
Trichloromethane (Chloroform)	mg/kg	99	170	350	CIEH/LQM S4ULs
Vinyl Chloride (VC)	mg/kg	0.059	0.077	0.12	CIEH/LQM S4ULs
Phenolics					
Phenol	mg/kg	440 [dir] (26,000)	690 [dir] (30,000)	1,300 [dir] (34,000)	CIEH/LQM S4ULs
TPH					
TPH Aliphatic >C5-6	mg/kg	3,200 (304) [sol]	5,900 (558) [sol]	12,000 (1,150) [sol]	CIEH/LQM S4ULs
TPH Aliphatic >C6-8	mg/kg	7,800 (144) [sol]	17,000 (322) [sol]	40,000 (736) [sol]	CIEH/LQM S4ULs
TPH Aliphatic >C8-10	mg/kg	2,000 (78) [sol]	4,800 (190) [vap]	11,000 (451) [vap]	CIEH/LQM S4ULs
TPH Aliphatic >C10-12	mg/kg	9,700 (48) [sol]	23,000 (118) [vap]	47,000 (283) [vap]	CIEH/LQM S4ULs
TPH Aliphatic >C12-16	mg/kg	59,000 (24) [sol]	82,000 (59) [sol]	90,000 (142) [sol]	CIEH/LQM S4ULs
TPH Aliphatic >C16-35	mg/kg	1,600,000	1,700,000	1,800,000	CIEH/LQM S4ULs
TPH Aliphatic >C35-44	mg/kg	1,600,000	1,700,000	1,800,000	CIEH/LQM S4ULs
TPH Aromatic >EC5-7 (Benzene)*	mg/kg	26,000 (1,220) [sol]	46,000 (2,260) [sol]	86,000 (4,710) [sol]	CIEH/LQM S4ULs
TPH Aromatic >EC7-8	mg/kg	56,000 (869) [vap]	110,000 (1,320) [sol]	180,000 (4,360) [vap]	CIEH/LQM S4ULs
TPH Aromatic >EC8-10	mg/kg	3,500 (613) [vap]	8,100 (1,500) [vap]	17,000 (3,580) [vap]	CIEH/LQM S4ULs
TPH Aromatic >EC10-12	mg/kg	16,000 (364) [sol]	28,000 (899) [sol]	34,000 (2,150) [sol]	CIEH/LQM S4ULs
TPH Aromatic >EC12-16	mg/kg	36,000 (169) [sol]	37,000	38,000	CIEH/LQM S4ULs
TPH Aromatic >EC16-21	mg/kg	28,000	28,000	28,000	CIEH/LQM S4ULs
TPH Aromatic >EC21-35	mg/kg	28,000	28,000	28,000	CIEH/LQM S4ULs
TPH Aromatic >EC35-44	mg/kg	28,000	28,000	28,000	CIEH/LQM S4ULs
TPH Aliphatic & Aromatic >EC44-70	mg/kg	28,000	28,000	28,000	CIEH/LQM S4ULs
Total TPH	mg/kg	**No Sum**	**No Sum**	**No Sum**	
BTEX					
Benzene*	mg/kg	27	47	70	CIEH/LQM S4ULs
Toluene	mg/kg	56,000 [vap] (869)	110,000 [vap] (1,920)	180,000 [vap] (4,360)	CIEH/LQM S4ULs
Ethylbenzene	mg/kg	5,700 [vap] (518)	13,000 [vap] (1,220)	27,000 [vap] (2,840)	CIEH/LQM S4ULs
m-Xylene	mg/kg	6,200 [vap] (625)	14,000 [vap] (1,470)	31,000 [vap] (3,460)	CIEH/LQM S4ULs
o-Xylene	mg/kg	6,600 [sol] (478)	15,000 [sol] (1,120)	33,000 [sol] (2,620)	CIEH/LQM S4ULs
p-Xylene	mg/kg	5,900 [sol] (576)	14,000 [sol] (1,350)	30,000 [sol] (3,170)	CIEH/LQM S4ULs
Xylenes (mixed isomers)	mg/kg	5,900 [sol] (576)	14,000 [sol] (1,350)	30,000 [sol] (3,170)	CIEH/LQM S4ULs

Appendix D – Soakaway Test Results

Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

Pick Everard
Halford House
Charles Street
Leicester
LE1 1HA

Analytical Test Report: L22/00765/PIC - 22-24028

Your Project Reference:	**RBG Kew Learning Centre**		
Your Order Number:	92094	Testing Received / Instructed:	09/02/2022 / 09/02/2022
Report Issue Number:	1	Sample Tested:	09/02 to 23/02/2022
Samples Analysed:	13 soil samples	Report issued:	24/02/2022

Signed

Lee Harbottle
GCM Operations Manager
Nicholls Colton Group

Notes:

Samples will be retained for 14 days after issue of this report unless otherwise requested.

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

A certificate of sampling was not supplied

Samples were supplied by customer, results apply to the samples as received.

Within the report any information provided by the client is identified with a '#'

Accreditation Key

UKAS = UKAS Accreditation, u = Unaccredited

Date of Issue10/12/2020

Owned by Emily Blissett - Commercial Reporting Supervisor
Authorised by Lee Harbottle - GCM Operations Manager
L:\DATA\REPORTS\PIC0064\[L22-00765-PIC - 22-24028.XLSM]Cover Sheet

Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

L22/00765/PIC - 22-24028

Project Reference - RBG Kew Learning Centre

Analytical Test Results - Soil

NC Reference		215731	215732	215733	215735	215736	215737
Client Sample ID (#)		-	-	-	-	-	-
Client Sample Location (#)		BH01	BH01	BH01	BH01	BH01	BH01
Client Sample Type (#)		-	-	-	-	-	-
Client Sample Number (#)		-	-	-	-	-	-
Depth - Top (m) (#)		6.00	8.00	9.00	10.00	11.00	12.00
Depth - Bottom (m) (#)		-	-	-	-	-	-
Date of Sampling (#)		01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown sandy gravel	Brown slightly silty slightly sandy clay	Brown clay	Brown clay	Brown clay	Brown clay
Determinant	**Units**						
Moisture Content	(%)	-	-	29	26	27	26
Moisture Content Prep	-	-	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)
Fines passing 425µm test sieve	(%)	-	-	100	100	100	100
Liquid Limit	(%)	-	-	77	68	70	73
Plastic Limit	(%)	-	-	29	26	27	27
Plasticity Index	(%)	-	-	48	42	43	46
PI preparation	-	-	-	from its natural state	from its natural state	from its natural state	from its natural state
PI Test Method		-	-	clause 4.4 (one point)	clause 4.4 (one point)	clause 4.4 (one point)	clause 4.4 (one point)
BS1377 PSD							
125.0	(% Passing)	100	100	-	-	-	-
90.0	(% Passing)	100	100	-	-	-	-
75.0	(% Passing)	100	100	-	-	-	-
63.0	(% Passing)	100	100	-	-	-	-
50.0	(% Passing)	100	100	-	-	-	-
37.5	(% Passing)	95	100	-	-	-	-
28.0	(% Passing)	77	100	-	-	-	-
20.0	(% Passing)	60	100	-	-	-	-
14.0	(% Passing)	38	100	-	-	-	-
10.0	(% Passing)	25	100	-	-	-	-
6.3	(% Passing)	18	100	-	-	-	-
5.0	(% Passing)	14	99	-	-	-	-
3.35	(% Passing)	11	98	-	-	-	-
2.00	(% Passing)	8	96	-	-	-	-
1.18	(% Passing)	7	93	-	-	-	-
0.600	(% Passing)	4	88	-	-	-	-
0.425	(% Passing)	3	86	-	-	-	-
0.300	(% Passing)	2	85	-	-	-	-
0.212	(% Passing)	1	84	-	-	-	-
0.150	(% Passing)	1	83	-	-	-	-
0.063	(% Passing)	1	82	-	-	-	-
PSD test Method	-	9.2 Wet Sieve	9.2 Wet Sieve	-	-	-	-

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Project Reference - RBG Kew Learning Centre

Analytical Test Results - Soil

NC Reference		215739	215876	215877	215878
Client Sample ID (#)		-	-	-	-
Client Sample Location (#)		BH01	BH01	BH01	BH01
Client Sample Type (#)		-	-	-	-
Client Sample Number (#)		-	-	-	-
Depth - Top (m) (#)		13.00	13.50	14.0	15.0
Depth - Bottom (m) (#)		-	-	-	-
Date of Sampling (#)		01/02/2022	01/02/2022	01/02/2022	01/02/2022
Sample type		Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown clay	Brown clay	Grey clay	Grey clay
Determinant	**Units**				
Moisture Content	(%)	27	28	26	28
Moisture Content Prep	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)
Fines passing 425µm test sieve	(%)	100	100	100	100
Liquid Limit	(%)	74	72	71	75
Plastic Limit	(%)	26	26	26	27
Plasticity Index	(%)	48	46	45	48
PI preparation	-	from its natural state	from its natural state	from its natural state	from its natural state
PI Test Method		clause 4.4 (one point)	clause 4.4 (one point)	clause 4.4 (one point)	clause 4.4 (one point)
BS1377 PSD					
125.0	(% Passing)	-	-	-	-
90.0	(% Passing)	-	-	-	-
75.0	(% Passing)	-	-	-	-
63.0	(% Passing)	-	-	-	-
50.0	(% Passing)	-	-	-	-
37.5	(% Passing)	-	-	-	-
28.0	(% Passing)	-	-	-	-
20.0	(% Passing)	-	-	-	-
14.0	(% Passing)	-	-	-	-
10.0	(% Passing)	-	-	-	-
6.3	(% Passing)	-	-	-	-
5.0	(% Passing)	-	-	-	-
3.35	(% Passing)	-	-	-	-
2.00	(% Passing)	-	-	-	-
1.18	(% Passing)	-	-	-	-
0.600	(% Passing)	-	-	-	-
0.425	(% Passing)	-	-	-	-
0.300	(% Passing)	-	-	-	-
0.212	(% Passing)	-	-	-	-
0.150	(% Passing)	-	-	-	-
0.063	(% Passing)	-	-	-	-
PSD test Method	-	-	-	-	-

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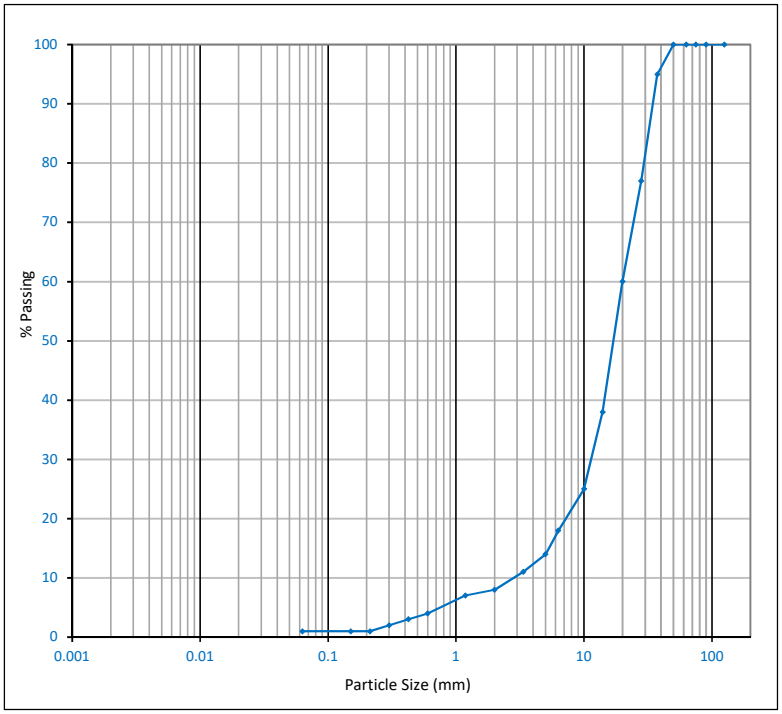
Project Reference - RBG Kew Learning Centre

Material Analysis Results

NC Reference	**215731**
Client Sample ID (#)	-
Client Sample Location (#)	BH01
Client Sample Type (#)	-
Client Sample Number (#)	-
Depth - Top (m) (#)	6.00
Depth - Bottom (m) (#)	-
Date of Sampling (#)	01/02/2022
Sample type	Disturbed
Sample Description	Brown sandy gravel



Specification:

Sieve Size (mm)	Upper Limit (%)	Lower Limit (%)	Passing (%)	
125			100	Cobbles
90			100	
75			100	
63			100	0
50			100	Gravel
37.5			95	
28			77	
20			60	
14			38	
10			25	
6.3			18	
5			14	
3.35			11	89
2			8	Sand
1.18			7	
0.6			4	
0.425			3	
0.3			2	
0.212			1	
0.15			1	
0.063			1	10
				Fines 1

NOTES :

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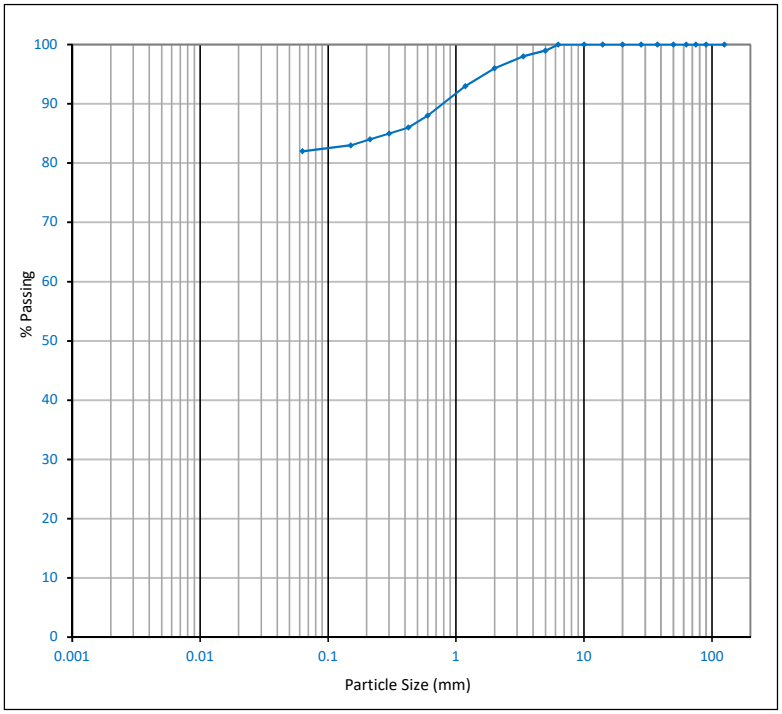
Material Analysis Results

NC Reference	**215732**
Client Sample ID (#)	-
Client Sample Location (#)	BH01
Client Sample Type (#)	-
Client Sample Number (#)	-
Depth - Top (m) (#)	8.00
Depth - Bottom (m) (#)	-
Date of Sampling (#)	01/02/2022
Sample type	Disturbed
Sample Description	Brown slightly silty slightly sandy clay



Specification:

Sieve Size (mm)	Upper Limit (%)	Lower Limit (%)	Passing (%)	
125			100	Cobbles
90			100	
75			100	
63			100	0
50			100	Gravel
37.5			100	
28			100	
20			100	
14			100	
10			100	
6.3			100	
5			99	
3.35			98	2
2			96	Sand
1.18			93	
0.6			88	
0.425			86	
0.3			85	
0.212			84	
0.15			83	
0.063			82	16
				Fines 82

NOTES :

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Project Reference - RBG Kew Learning Centre

Analytical Test Results -
Triaxial (Multi Stage)

NC Reference		215734	215738	215879
Client Sample ID (#)		-	-	-
Client Sample Location (#)		BH01	BH01	BH01
Client Sample Type (#)		-	-	-
Client Sample Number (#)		-	-	-
Depth - Top (m) (#)		9.00	12.00	15.0
Depth - Bottom (m) (#)		-	-	-
Date of Sampling (#)		01/02/2022	01/02/2022	01/02/2022
Sample type		Undisturbed	Undisturbed	Undisturbed
Sample Description		Brown silty clay	Brown silty clay	Brown silty clay
Determinant	**Units**			
Preperation Method		Undisturbed	Undisturbed	Undisturbed
Orientation within original sample		Vertical	Vertical	Vertical
Depth within original sample	mm	50	40	35
Initial Properties				
Sample height	mm	208	208	208
Sample width	mm	103	104	104
Moisture content	%	29	28	28
Bulk density	Mg/m^3	2.02	1.98	1.98
Dry density	Mg/m^3	1.57	1.54	1.55
Rate of strain	%/min	0.43	0.42	0.39
Type of membrane	-	Latex	Latex	Latex
Membrane thickness	mm	0.44	0.44	0.44
Test Data				
Cell pressure	kPa	90	120	150
Maximum deviator stress	kPa	234	221	273
Membrane correction	kPa	0.8	1.2	0.4
Corrected maximum deviator stress	kPa	233	219	273
Cumulative strain at failure	%	7	3	4
Mode of failure	-	brittle	brittle	brittle
Shear strength (c_u)	**kPa**	**117**	**110**	**136**
Cell pressure	kPa	180	240	300
Maximum deviator stress	kPa	240	-	279
Membrane correction	kPa	0.8	-	0.4
Corrected maximum deviator stress	kPa	239	-	279
Cumulative strain at failure	%	9	-	5
Mode of failure	-	brittle	-	brittle
Shear strength (c_u)	**kPa**	**120**	*****	**139**
Cell pressure	kPa	360	-	600
Maximum deviator stress	kPa	248	-	288
Membrane correction	kPa	0.8	-	0.4
Corrected maximum deviator stress	kPa	247	-	288
Cumulative strain at failure	%	10	-	8
Mode of failure	-	brittle	-	brittle
Shear strength (c_u)	**kPa**	**123**	**-**	**144**

* Sample reversed

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Project Reference - RBG Kew Learning Centre

Analysis Methodologies

Determinant	Title	Details and Test method used
1377 PI/MC	BS1377 PI and Moisture Content	1377 Plasticity Index 1. Sample preparation was in accordance with BS1377:Part 1:2016. 2. Testing was in accordance with BS1377:Part 2:1990 1377 Moisture Content 1. Sample preparation was in accordance with BS1377:Part 1:2016. 2. Moisture content testing was in accordance with BS1377 : Part 2 :1990
1377MOIST	BS1377 Moisture Content	1377 Moisture Content 1. Sample preparation was in accordance with BS1377:Part 1:2016. 2. Moisture content testing was in accordance with BS1377 : Part 2 :1990
1377PI	BS1377 Plasticity Index	1377 Plasticity Index 1. Sample preparation was in accordance with BS1377:Part 1:2016. 2. Testing was in accordance with BS1377:Part 2:1990
1377PSD	BS1377 PSD	1377 Particle Size Distribution 1. Sample preparation was in accordance with BS1377:Part 1:2016. 2. Testing was in accordance with BS1377:Part 2:1990 clause 9.2 wet sieving method
1377TRXMS	BS1377 Multi Stage Triaxial	1377 Determination of Undrained Shear Strength in Triaxial Compression 1. Sample preparation was in accordance with BS1377:Part 1:2016. 2. Testing was in accordance with BS 1377: Part 7: 1990 clause 9, multi stage loading

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Halford House
Charles Street
Leicester
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Analytical Test Report: L22/00765/PIC - 22-24057

Your Project Reference:	**210699 RBG Kew Learning Centre**		
Your Order Number:	92094	Samples Received / Instructed:	10/02/2022 / 10/02/2022
Report Issue Number:	1	Sample Tested:	10/02 to 24/02/2022
Samples Analysed:	10 soil samples	Report issued:	24/02/2022

Signed

James Gane
Data Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with NC method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with NC method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Date of Issue 10/12/2020
Owned by Emily Blissett - Customer Services Supervisor
Authorised by James Gane - Commercial Manager
L:\DATA\REPORTS\PIC0064\[L22-00765-PIC - 22-24028.XLSM]Cover Sheet

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L22/00765/PIC - 22-24057

Project Reference - 210699 RBG Kew Learning Centre

Analytical Test Results - Soil

NC Reference			216005	216006	216007	216008
Client Sample ID			-	-	-	-
Client Sample Location			BH01	BH01	BH01	BH01
Client Sample Type			-	-	-	-
Client Sample Number			-	-	-	-
Depth - Top (m)			9.00	10.50	13.00	15.00
Depth - Bottom (m)			9.00	10.50	13.00	15.00
Date of Sampling			01/02/2022	01/02/2022	01/02/2022	01/02/2022
Time of Sampling			-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**				
Ammonium (as N)	(mgN/kg)	u	22	24	30	35

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Project Reference - 210699 RBG Kew Learning Centre

Analytical Test Results - Chemical Analysis

NC Reference			216002	216003	216004	216005	216006	216007
Client Sample ID			-	-	-	-	-	-
Client Sample Location			BH01	BH01	BH01	BH01	BH01	BH01
Client Sample Type			-	-	-	-	-	-
Client Sample Number			-	-	-	-	-	-
Depth - Top (m)			3.00	5.00	7.00	9.00	10.50	13.00
Depth - Bottom (m)			3.00	5.00	7.00	9.00	10.50	13.00
Date of Sampling			01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Sand	Sand	Sand	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**						
Water soluble sulphate	(mg/l)	u	19	19	14	260	370	160
Acid Soluble Sulphate	(%)	u	-	-	-	0.12	0.15	0.10
Total Sulphur	(%)	UKAS	-	-	-	0.30	0.65	0.45
pH Value	pH Units	MCERTS	9.2	8.7	8.4	8.2	9.1	9.2
Water Soluble Chloride	(mg/l)	u	-	-	-	24	21	17
Water Soluble Nitrate	(mg/l)	u	-	-	-	< 1.0	< 1.0	< 1.0
Water Soluble Magnesium	(mg/l)	u	-	-	-	36	53	42
Ammonium (as N)	(mgN/kg)	u	-	-	-	22	24	30

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L22/00765/PIC - 22-24057

Project Reference - 210699 RBG Kew Learning Centre

Analytical Test Results - Chemical Analysis

NC Reference			216008	216009	216010	216011
Client Sample ID			-	-	-	-
Client Sample Location			BH01	WS01	WS04	WS05
Client Sample Type			-	-	-	-
Client Sample Number			-	-	-	-
Depth - Top (m)			15.00	1.00	3.00	2.00
Depth - Bottom (m)			15.00	1.00	3.00	2.00
Date of Sampling			01/02/2022	02/02/2022	01/02/2022	01/02/2022
Time of Sampling			-	-	-	-
Sample Matrix			Clay	Clay	Sand	Sand
Determinant	**Units**	**Accreditation**				
Water soluble sulphate	(mg/l)	u	200	10	36	73
Acid Soluble Sulphate	(%)	u	0.11	-	-	-
Total Sulphur	(%)	UKAS	0.34	-	-	-
pH Value	pH Units	MCERTS	9.4	5.5	7.9	5.0
Water Soluble Chloride	(mg/l)	u	22	-	-	-
Water Soluble Nitrate	(mg/l)	u	< 1.0	-	-	-
Water Soluble Magnesium	(mg/l)	u	29	-	-	-
Ammonium (as N)	(mgN/kg)	u	35	-	-	-

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Project Reference - 210699 RBG Kew Learning Centre

Sample Descriptions

NC Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
216002	-	BH01	-	-	Light brown very gravelly sand	-	-	9.7
216003	-	BH01	-	-	Light brown very gravelly sand	-	-	38
216004	-	BH01	-	-	Light brown very gravelly sand	-	-	17
216005	-	BH01	-	-	Dark grey slightly silty clay	26	0.0	100
216006	-	BH01	-	-	Dark grey slightly silty clay	19	0.0	100
216007	-	BH01	-	-	Dark grey slightly silty clay	22	0.0	100
216008	-	BH01	-	-	Dark grey slightly silty clay	28	0.0	100
216009	-	WS01	-	-	Dark red slightly silty sandy clay with rare rootlets	-	-	100
216010	-	WS04	-	-	Light brown slightly gravelly silty sand	-	-	42
216011	-	WS05	-	-	Brown slightly gravelly silty sand	-	-	67

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Project Reference - 210699 RBG Kew Learning Centre

Sample Comments

NC Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
216002	-	BH01	-	-	
216003	-	BH01	-	-	
216004	-	BH01	-	-	
216005	-	BH01	-	-	
216006	-	BH01	-	-	
216007	-	BH01	-	-	
216008	-	BH01	-	-	
216009	-	WS01	-	-	
216010	-	WS04	-	-	
216011	-	WS05	-	-	

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Project Reference - 210699 RBG Kew Learning Centre

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
AMMS	MS - CL - Ammonia in Soil by Aquakem	As Received	Passing 10mm test sieve	Determination of Ammonia in soil via Aquakem
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

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Project Reference - 210699 RBG Kew Learning Centre

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Date of sampling to receipt insufficient to allow analysis to be completed without deviation, Please note this is only a deviation if 'X' is also recorded against the sample

Observations whist in laboratory

X - Exceeds sampling to extraction or analysis timescales

NC Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
216002	-	BH01	-	-	MS - CL - pH in Soils	RX
216003	-	BH01	-	-	MS - CL - pH in Soils	RX
216004	-	BH01	-	-	MS - CL - pH in Soils	RX
216005	-	BH01	-	-	MS - CL - pH in Soils	RX
216006	-	BH01	-	-	MS - CL - pH in Soils	RX
216007	-	BH01	-	-	MS - CL - pH in Soils	RX
216008	-	BH01	-	-	MS - CL - pH in Soils	RX
216009	-	WS01	-	-	MS - CL - pH in Soils	RX
216010	-	WS04	-	-	MS - CL - pH in Soils	RX
216011	-	WS05	-	-	MS - CL - pH in Soils	RX

Appendix E – Ground Gas Monitoring Results

PICK EVERARD

GAS MONITORING RECORD SHEET

Client:	Royal Botanical Gardens Kew		
Project:	RBG Kew Learning Centre	**Job No.:**	210699
Weather:	Overcast	**Date:**	11/02/2022
Instruments Used:	GA2000		
Monitored By:	JHL		

Installation No.	Atmospheric Pressure (mbar)	Relative Pressure (mbar)	Peak [1] CH_4 (% vol)	Peak [1] CO_2 (% vol)	Steady [2] CH_4 (% vol)	Steady [2] CO_2 (% vol)	Steady [2] O_2 (% vol)	Total gas flow rate (l/hr)	Peak CH_4 flow rate (l/hr)	Peak CO_2 flow rate (l/hr)	Water Depth to top of cover	Base Depth top of cover	Elevation of cover (m AOD)	Water Depth (m AOD)	Comments
WS01	1031	-0.16	<0.1	4.3	<0.1	4.3	18.0	<0.1	0.0001	0.0043	-	-	6.00	-	
WS02	1031	-0.07	<0.1	3.1	<0.1	3.1	19.4	<0.1	0.0001	0.0031	2.07	2.10	7.52	5.45	
WS05	1031	-0.07	<0.1	3.2	<0.1	3.2	18.7	<0.1	0.0001	0.0032	-	-	6.50	-	

Background Gas Levels:	CH_4 (%)	CO_2 (%)	O_2 (%)	Atmos (mbar)
Before Monitoring	<0.1	0.1	21.2	1031
After Monitoring	<0.1	0.1	21.5	1031

Characteristic Gas Situation	
1	
2	
3	
4	

[1] The peak reading is the maximum recorded level during a monitoring event.

[2] The steady reading is the level which remained constant after approximately 1 minute.

PICK EVERARD

GAS MONITORING RECORD SHEET

Client:	Royal Botanical Gardens Kew		
Project:	RBG Kew Learning Centre	**Job No.:**	210699
Weather:	Sunny	**Date:**	25/02/2022
Instruments Used:	GA2000		
Monitored By:	JHL		

Installation No.	Atmospheric Pressure (mbar)	Relative Pressure (mbar)	Peak [1] CH_4 (% vol)	Peak [1] CO_2 (% vol)	Steady [2] CH_4 (% vol)	Steady [2] CO_2 (% vol)	Steady [2] O_2 (% vol)	Total gas flow rate (l/hr)	Peak CH_4 flow rate (l/hr)	Peak CO_2 flow rate (l/hr)	Water Depth to top of cover	Base Depth top of cover	Elevation of cover (m AOD)	Water Depth (m AOD)	Comments
WS01	1025	-0.17	0.1	4.1	<0.1	4.0	17.8	0.1	0.0001	0.0040	-	1.84	6.00	-	Flow rate of -0.1 converted to positive flow in accordance with BS8485 as a precuation.
WS02	1025	-0.17	0.1	4.8	<0.1	4.8	18.2	<0.1	0.0001	0.0048	2.065	2.095	7.52	5.46	
WS05	1025	-0.17	0.1	1.8	<0.1	1.8	19.8	<0.1	0.0001	0.0018	-	1.97	6.50	-	

Background Gas Levels:	CH_4 (%)	CO_2 (%)	O_2 (%)	Atmos (mbar)
Before Monitoring	0.1	0.1	21.0	1025
After Monitoring	<0.1	<0.1	21.0	1025

Characteristic Gas Situation	
1	
2	
3	
4	

[1] The peak reading is the maximum recorded level during a monitoring event.

[2] The steady reading is the level which remained constant after approximately 1 minute.

PICK EVERARD

GAS MONITORING RECORD SHEET

Client:	Royal Botanical Gardens Kew		
Project:	RBG Kew Learning Centre	**Job No.:**	210699
Weather:	Overcast	**Date:**	04/03/2022
Instruments Used:	GA2000		
Monitored By:	JHL		

Installation No.	Atmospheric Pressure (mbar)	Relative Pressure (mbar)	Peak [1] CH_4 (% vol)	Peak [1] CO_2 (% vol)	Steady [2] CH_4 (% vol)	Steady [2] CO_2 (% vol)	Steady [2] O_2 (% vol)	Total gas flow rate (l/hr)	Peak CH_4 flow rate (l/hr)	Peak CO_2 flow rate (l/hr)	Water Depth to top of cover	Base Depth top of cover	Elevation of cover (m AOD)	Water Depth (m AOD)	Comments
WS01	1017	-0.16	0.1	5.9	0.1	5.4	15.8	<0.1	0.0001	0.0054	-	1.845	6.00	-	
WS02	1017	-0.16	0.1	2.8	0.1	2.8	19.5	<0.1	0.0001	0.0028	2.075	2.090	7.52	5.45	
WS05	1017	-0.12	0.1	2.7	0.1	2.1	19.4	0.1	0.0001	0.0021	-	1.97	6.50	-	

Background Gas Levels:	CH_4 (%)	CO_2 (%)	O_2 (%)	Atmos (mbar)
Before Monitoring	0.1	0.1	21	1025
After Monitoring	0.1	0.1	21.4	1025

Characteristic Gas Situation	
1	
2	
3	
4	

[1] The peak reading is the maximum recorded level during a monitoring event.

[2] The steady reading is the level which remained constant after approximately 1 minute.

PICK EVERARD

GAS MONITORING RECORD SHEET

Client:	Royal Botanical Gardens Kew		
Project:	RBG Kew Learning Centre	**Job No.:**	210699
Weather:	Rain	**Date:**	11/03/2022
Instruments Used:	GA2000		
Monitored By:	JHL		

Installation No.	Atmospheric Pressure (mbar)	Relative Pressure (mbar)	Peak [1] CH_4 (% vol)	Peak [1] CO_2 (% vol)	Steady [2] CH_4 (% vol)	Steady [2] CO_2 (% vol)	Steady [2] O_2 (% vol)	Total gas flow rate (l/hr)	Peak CH_4 flow rate (l/hr)	Peak CO_2 flow rate (l/hr)	Water Depth to top of cover	Base Depth top of cover	Elevation of cover (m AOD)	Water Depth (m AOD)	Comments
WS01	1001	-0.02	0.1	5.9	0.1	5.9	15.3	0.1	0.0001	0.0059	-	1.840	6.00	-	
WS02	1001	-0.07	0.1	5.1	0.1	5.1	16.5	<0.1	0.0001	0.0051	2.085	2.090	7.52	5.44	
WS05	1001	-0.14	0.1	1.6	0.1	0.6	20.6	<0.1	0.0001	0.0006	-	1.975	6.50	-	

Background Gas Levels:	CH_4 (%)	CO_2 (%)	O_2 (%)	Atmos (mbar)
Before Monitoring	0.1	<0.1	21.0	1001
After Monitoring	0.1	<0.1	21.2	1001

Characteristic Gas Situation	
1	
2	
3	
4	

[1] The peak reading is the maximum recorded level during a monitoring event.

[2] The steady reading is the level which remained constant after approximately 1 minute.

PICK EVERARD

GAS MONITORING RECORD SHEET

Client:	Royal Botanical Gardens Kew		
Project:	RBG Kew Learning Centre	**Job No.:**	210699
Weather:	Sunny	**Date:**	18/03/2022
Instruments Used:	GA2000		
Monitored By:	JHL		

Installation No.	Atmospheric Pressure (mbar)	Relative Pressure (mbar)	Peak [1] CH_4 (% vol)	Peak [1] CO_2 (% vol)	Steady [2] CH_4 (% vol)	Steady [2] CO_2 (% vol)	Steady [2] O_2 (% vol)	Total gas flow rate (l/hr)	Peak CH_4 flow rate (l/hr)	Peak CO_2 flow rate (l/hr)	Water Depth to top of cover	Base Depth top of cover	Elevation of cover (m AOD)	Water Depth (m AOD)	Comments
WS01	1041	-0.19	0.1	5.9	0.1	5.9	15.3	<0.1	0.0001	0.0059	-	1.845	6.00	-	
WS02	1040	-0.15	0.1	2.6	0.1	2.6	19.3	<0.1	0.0001	0.0026	2.080	2.090	7.52	5.44	
WS05	1041	-0.19	0.1	1.2	0.1	1.2	19.6	0.1	0.0001	0.0012	-	1.975	6.50	-	

Background Gas Levels:	CH_4 (%)	CO_2 (%)	O_2 (%)	Atmos (mbar)
Before Monitoring	0.1	<0.1	21.0	1040
After Monitoring	0.1	<0.1	20.9	1041

Characteristic Gas Situation	
1	
2	
3	
4	

[1] The peak reading is the maximum recorded level during a monitoring event.

[2] The steady reading is the level which remained constant after approximately 1 minute.

PICK EVERARD

GAS MONITORING RECORD SHEET

Client:	Royal Botanical Gardens Kew		
Project:	RBG Kew Learning Centre	**Job No.:**	210699
Weather:	Sunny	**Date:**	25/03/2022
Instruments Used:	GA2000		
Monitored By:	JHL		

Installation No.	Atmospheric Pressure (mbar)	Relative Pressure (mbar)	Peak [1] CH_4 (% vol)	Peak [1] CO_2 (% vol)	Steady [2] CH_4 (% vol)	Steady [2] CO_2 (% vol)	Steady [2] O_2 (% vol)	Total gas flow rate (l/hr)	Peak CH_4 flow rate (l/hr)	Peak CO_2 flow rate (l/hr)	Water Depth to top of cover	Base Depth top of cover	Elevation of cover (m AOD)	Water Depth (m AOD)	Comments
WS01	1030	-0.16	0.1	6.3	0.1	6.2	14.9	0.1	0.0001	0.0062	-	1.835	6.00	-	
WS02	1030	-0.16	0.1	3.1	0.1	3.1	18.4	<0.1	0.0001	0.0031	2.090	2.090	7.52	5.43	
WS05	1030	-0.16	0.1	1.0	0.1	0.6	20.4	<0.1	0.0001	0.0006	-	1.975	6.50	-	

Background Gas Levels:	CH_4 (%)	CO_2 (%)	O_2 (%)	Atmos (mbar)
Before Monitoring	0.1	<0.1	21.0	1030
After Monitoring	0.1	<0.1	20.6	1030

Characteristic Gas Situation	
1	
2	
3	
4	

[1] The peak reading is the maximum recorded level during a monitoring event.

[2] The steady reading is the level which remained constant after approximately 1 minute.

Appendix F – Waste Classification Certificates

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

a) understand the origin of the waste
b) select the correct List of Waste code(s)
c) confirm that the list of determinands, results and sampling plan are fit for purpose
d) select and justify the chosen metal species (Appendix B)
e) correctly apply moisture correction and other available corrections
f) add the meta data for their user-defined substances (Appendix A)
g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

L0031-257J1-9Q2SB

Job name

210699 - RBG Kew

Description/Comments

Preliminary waste classification undertaken on soil samples collected from ground investigation.

Project

210699

Site

Royal Botanical Gardens Kew, Richmond, TW9 3AG

Classified by

Name:
Elliott Bell
Company:
Pick Everard
Date:
28 Mar 2022 13:01 GMT
Telephone:

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification: **CERTIFIED**

Course	Date
Hazardous Waste Classification	10 Feb 2022

Next 3 year Refresher due by Feb 2025

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	BH01-1-0.50m-20220201	0.50m	Non Hazardous		2
2	WS01-2-0.10m-20220201	0.10m	Non Hazardous		4
3	WS02-3-0.50m-20220201	0.50m	Non Hazardous		6
4	WS03-4-0.60m-20220201	0.60m	Non Hazardous		8
5	WS03-2.00m-20220201	2.00m	Non Hazardous		11
6	WS04-5-1.00m-20220201	1.00m	Non Hazardous		13
7	WS05-6-0.70m-20220201	0.70m	Non Hazardous		16
8	WS06-7-0.30m-20220201	0.30m	Non Hazardous		19

Related documents

#	Name	Description
1	22-01085-1.pdf	Lab results
2	22-01085-1 wac.pdf	WAC results
3	22-01085.hwol	.hwol file used to create the Job
4	RBG Kew	waste stream template used to create this Job

Report

Created by: Elliott Bell
Created date: 28 Mar 2022 13:01 GMT

Classification of sample: BH01-1-0.50m-20220201

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH01-1-0.50m-20220201
Sample Depth:
0.50m m
Moisture content:
14.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.84	pH		8.84	pH	8.84 pH		
2	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
3	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11	mg/kg	1.32	12.476	mg/kg	0.00125 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<1	mg/kg	5.719	<5.719	mg/kg	<0.000572 %		<**LOD**
5	cadmium { cadmium fluoride }	048-006-00-2	232-222-0	7790-79-6		1	mg/kg	1.338	1.149	mg/kg	0.000115 %	✓	
6	copper { tetracopper hexahydroxide sulphate; [1] tetracopper hexahydroxide sulphate hydrate [2] }	029-018-00-7	215-582-3 [1] 215-582-3 [2]	1333-22-8 [1] 12527-76-3 [2]		30	mg/kg	1.779	45.854	mg/kg	0.00459 %	✓	
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		17	mg/kg	1.462	21.343	mg/kg	0.00213 %	✓	
8	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	463	mg/kg		397.717	mg/kg	0.0398 %	✓	
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }	080-002-00-6			1	1.46	mg/kg		1.254	mg/kg	0.000125 %	✓	
11	nickel { nickel(II) carbonate }	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]		16	mg/kg	2.022	27.796	mg/kg	0.00278 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1	mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
13		zinc { trizinc bis(orthophosphate) }				38	mg/kg	1.968	64.252	mg/kg	0.00643 %	✓	
		030-011-00-6	231-944-3	7779-90-0									
14		acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-469-6	83-32-9									
15		acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			205-917-1	208-96-8									
16		anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			204-371-1	120-12-7									
17		benz[a]anthracene				0.07	mg/kg		0.0601	mg/kg	0.00000601 %	✓	
		601-033-00-9	200-280-6	56-55-3									
18		benzo[a]pyrene; benzo[def]chrysene				0.07	mg/kg		0.0601	mg/kg	0.00000601 %	✓	
		601-032-00-3	200-028-5	50-32-8									
19		benzo[b]fluoranthene				0.08	mg/kg		0.0687	mg/kg	0.00000687 %	✓	
		601-034-00-4	205-911-9	205-99-2									
20		benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
21		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
22		chrysene				0.07	mg/kg		0.0601	mg/kg	0.00000601 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
24		fluoranthene				0.13	mg/kg		0.112	mg/kg	0.0000112 %	✓	
			205-912-4	206-44-0									
25		fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
26		indeno[123-cd]pyrene				0.04	mg/kg		0.0344	mg/kg	0.00000344 %	✓	
			205-893-2	193-39-5									
27		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
28		phenanthrene				0.06	mg/kg		0.0515	mg/kg	0.00000515 %	✓	
			201-581-5	85-01-8									
29		pyrene				0.13	mg/kg		0.112	mg/kg	0.0000112 %	✓	
			204-927-3	129-00-0									
30		TPH (C6 to C40) petroleum group				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				TPH									
31		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
32		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
33		ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
34		o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
35		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		603-181-00-X	216-653-1	1634-04-4									
36		polychlorobiphenyls; PCB				<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
										Total:	0.0585 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS01-2-0.10m-20220201

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS01-2-0.10m-20220201
Sample Depth:
0.10m m
Moisture content:
17.5%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 17.5% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.25	pH		7.25	pH	7.25 pH		
2	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
3	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11	mg/kg	1.32	11.982	mg/kg	0.0012 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<1	mg/kg	5.719	<5.719	mg/kg	<0.000572 %		<**LOD**
5	cadmium { cadmium fluoride }	048-006-00-2	232-222-0	7790-79-6		1.1	mg/kg	1.338	1.214	mg/kg	0.000121 %	✓	
6	copper { tetracopper hexahydroxide sulphate; [1] tetracopper hexahydroxide sulphate hydrate [2] }	029-018-00-7	215-582-3 [1] 215-582-3 [2]	1333-22-8 [1] 12527-76-3 [2]		30	mg/kg	1.779	44.039	mg/kg	0.0044 %	✓	
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		24	mg/kg	1.462	28.939	mg/kg	0.00289 %	✓	
8	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	113	mg/kg		93.225	mg/kg	0.00932 %	✓	
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }	080-002-00-6			1	<0.17	mg/kg		<0.17	mg/kg	<0.000017 %		<**LOD**
11	nickel { nickel(II) carbonate }	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]		18	mg/kg	2.022	30.033	mg/kg	0.003 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1	mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
13		zinc { trizinc bis(orthophosphate) }				86	mg/kg	1.968	139.658	mg/kg	0.014 %	✓	
		030-011-00-6	231-944-3	7779-90-0									
14		acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
			201-469-6	83-32-9									
15		acenaphthylene				0.02	mg/kg		0.0165	mg/kg	0.00000165 %	✓	
			205-917-1	208-96-8									
16		anthracene				0.02	mg/kg		0.0165	mg/kg	0.00000165 %	✓	
			204-371-1	120-12-7									
17		benz[a]anthracene				0.23	mg/kg		0.19	mg/kg	0.000019 %	✓	
		601-033-00-9	200-280-6	56-55-3									
18		benzo[a]pyrene; benzo[def]chrysene				0.32	mg/kg		0.264	mg/kg	0.0000264 %	✓	
		601-032-00-3	200-028-5	50-32-8									
19		benzo[b]fluoranthene				0.39	mg/kg		0.322	mg/kg	0.0000322 %	✓	
		601-034-00-4	205-911-9	205-99-2									
20		benzo[ghi]perylene				0.16	mg/kg		0.132	mg/kg	0.0000132 %	✓	
			205-883-8	191-24-2									
21		benzo[k]fluoranthene				0.15	mg/kg		0.124	mg/kg	0.0000124 %	✓	
		601-036-00-5	205-916-6	207-08-9									
22		chrysene				0.29	mg/kg		0.239	mg/kg	0.0000239 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
24		fluoranthene				0.36	mg/kg		0.297	mg/kg	0.0000297 %	✓	
			205-912-4	206-44-0									
25		fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
			201-695-5	86-73-7									
26		indeno[123-cd]pyrene				0.21	mg/kg		0.173	mg/kg	0.0000173 %	✓	
			205-893-2	193-39-5									
27		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
28		phenanthrene				0.11	mg/kg		0.0908	mg/kg	0.00000908 %	✓	
			201-581-5	85-01-8									
29		pyrene				0.33	mg/kg		0.272	mg/kg	0.0000272 %	✓	
			204-927-3	129-00-0									
30		TPH (C6 to C40) petroleum group				79	mg/kg		65.175	mg/kg	0.00652 %	✓	
				TPH									
										Total:	0.0428 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified during site investigation.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00652%)

Classification of sample: WS02-3-0.50m-20220201

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS02-3-0.50m-20220201
Sample Depth:
0.50m m
Moisture content:
10.5%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10.5% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.16	pH		7.16	pH	7.16 pH		
2	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
3	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11	mg/kg	1.32	12.999	mg/kg	0.0013 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<1	mg/kg	5.719	<5.719	mg/kg	<0.000572 %		<LOD
5	cadmium { cadmium fluoride }	048-006-00-2	232-222-0	7790-79-6		0.9	mg/kg	1.338	1.078	mg/kg	0.000108 %	✓	
6	copper { tetracopper hexahydroxide sulphate; [1] tetracopper hexahydroxide sulphate hydrate [2] }	029-018-00-7	215-582-3 [1] 215-582-3 [2]	1333-22-8 [1] 12527-76-3 [2]		20	mg/kg	1.779	31.851	mg/kg	0.00319 %	✓	
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		24	mg/kg	1.462	31.394	mg/kg	0.00314 %	✓	
8	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	56	mg/kg		50.12	mg/kg	0.00501 %	✓	
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }	080-002-00-6			1	<0.17	mg/kg		<0.17	mg/kg	<0.000017 %		<LOD
11	nickel { nickel(II) carbonate }	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]		18	mg/kg	2.022	32.581	mg/kg	0.00326 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1	mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
13		zinc { trizinc bis(orthophosphate) }				51	mg/kg	1.968	89.847	mg/kg	0.00898 %	✓	
		030-011-00-6	231-944-3	7779-90-0									
14		acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
			201-469-6	83-32-9									
15		acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
			205-917-1	208-96-8									
16		anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
			204-371-1	120-12-7									
17		benz[a]anthracene				0.13	mg/kg		0.116	mg/kg	0.0000116 %	✓	
		601-033-00-9	200-280-6	56-55-3									
18		benzo[a]pyrene; benzo[def]chrysene				0.2	mg/kg		0.179	mg/kg	0.0000179 %	✓	
		601-032-00-3	200-028-5	50-32-8									
19		benzo[b]fluoranthene				0.22	mg/kg		0.197	mg/kg	0.0000197 %	✓	
		601-034-00-4	205-911-9	205-99-2									
20		benzo[ghi]perylene				0.12	mg/kg		0.107	mg/kg	0.0000107 %	✓	
			205-883-8	191-24-2									
21		benzo[k]fluoranthene				0.08	mg/kg		0.0716	mg/kg	0.00000716 %	✓	
		601-036-00-5	205-916-6	207-08-9									
22		chrysene				0.17	mg/kg		0.152	mg/kg	0.0000152 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
24		fluoranthene				0.26	mg/kg		0.233	mg/kg	0.0000233 %	✓	
			205-912-4	206-44-0									
25		fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
			201-695-5	86-73-7									
26		indeno[123-cd]pyrene				0.15	mg/kg		0.134	mg/kg	0.0000134 %	✓	
			205-893-2	193-39-5									
27		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
28		phenanthrene				0.09	mg/kg		0.0805	mg/kg	0.00000805 %	✓	
			201-581-5	85-01-8									
29		pyrene				0.22	mg/kg		0.197	mg/kg	0.0000197 %	✓	
			204-927-3	129-00-0									
30		TPH (C6 to C40) petroleum group				14	mg/kg		12.53	mg/kg	0.00125 %	✓	
				TPH									
										Total:	0.0275 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified during site investigation.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00125%)

Classification of sample: WS03-4-0.60m-20220201

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS03-4-0.60m-20220201
Sample Depth:
0.60m m
Moisture content:
3.9%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 3.9% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.45	pH		8.45	pH	8.45 pH		
2	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
3	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7	mg/kg	1.32	8.882	mg/kg	0.000888 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<1	mg/kg	5.719	<5.719	mg/kg	<0.000572 %		<**LOD**
5	cadmium { cadmium fluoride }	048-006-00-2	232-222-0	7790-79-6		0.8	mg/kg	1.338	1.029	mg/kg	0.000103 %	✓	
6	copper { tetracopper hexahydroxide sulphate; [1] tetracopper hexahydroxide sulphate hydrate [2] }	029-018-00-7	215-582-3 [1] 215-582-3 [2]	1333-22-8 [1] 12527-76-3 [2]		9	mg/kg	1.779	15.39	mg/kg	0.00154 %	✓	
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		13	mg/kg	1.462	18.259	mg/kg	0.00183 %	✓	
8	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	62	mg/kg		59.582	mg/kg	0.00596 %	✓	
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }	080-002-00-6			1	2.53	mg/kg		2.431	mg/kg	0.000243 %	✓	
11	nickel { nickel(II) carbonate }	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]		12	mg/kg	2.022	23.322	mg/kg	0.00233 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1	mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
13		zinc { trizinc bis(orthophosphate) }				98	mg/kg	1.968	185.38	mg/kg	0.0185 %	✓	
		030-011-00-6	231-944-3	7779-90-0									
14		acenaphthene				0.02	mg/kg		0.0192	mg/kg	0.00000192 %	✓	
			201-469-6	83-32-9									
15		acenaphthylene				0.02	mg/kg		0.0192	mg/kg	0.00000192 %	✓	
			205-917-1	208-96-8									
16		anthracene				0.1	mg/kg		0.0961	mg/kg	0.00000961 %	✓	
			204-371-1	120-12-7									
17		benz[a]anthracene				0.55	mg/kg		0.529	mg/kg	0.0000529 %	✓	
		601-033-00-9	200-280-6	56-55-3									
18		benzo[a]pyrene; benzo[def]chrysene				0.59	mg/kg		0.567	mg/kg	0.0000567 %	✓	
		601-032-00-3	200-028-5	50-32-8									
19		benzo[b]fluoranthene				0.65	mg/kg		0.625	mg/kg	0.0000625 %	✓	
		601-034-00-4	205-911-9	205-99-2									
20		benzo[ghi]perylene				0.26	mg/kg		0.25	mg/kg	0.000025 %	✓	
			205-883-8	191-24-2									
21		benzo[k]fluoranthene				0.27	mg/kg		0.259	mg/kg	0.0000259 %	✓	
		601-036-00-5	205-916-6	207-08-9									
22		chrysene				0.64	mg/kg		0.615	mg/kg	0.0000615 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		dibenz[a,h]anthracene				0.06	mg/kg		0.0577	mg/kg	0.00000577 %	✓	
		601-041-00-2	200-181-8	53-70-3									
24		fluoranthene				1.2	mg/kg		1.153	mg/kg	0.000115 %	✓	
			205-912-4	206-44-0									
25		fluorene				0.03	mg/kg		0.0288	mg/kg	0.00000288 %	✓	
			201-695-5	86-73-7									
26		indeno[123-cd]pyrene				0.34	mg/kg		0.327	mg/kg	0.0000327 %	✓	
			205-893-2	193-39-5									
27		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
28		phenanthrene				0.5	mg/kg		0.481	mg/kg	0.000048 %	✓	
			201-581-5	85-01-8									
29		pyrene				1	mg/kg		0.961	mg/kg	0.0000961 %	✓	
			204-927-3	129-00-0									
30		TPH (C6 to C40) petroleum group				130	mg/kg		124.93	mg/kg	0.0125 %	✓	
				TPH									
31		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-020-00-8	200-753-7	71-43-2									
32		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-021-00-3	203-625-9	108-88-3									
33		ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4									
34		o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
35		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		603-181-00-X	216-653-1	1634-04-4									
										Total:	0.0457 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified during site investigation.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0125%)

Classification of sample: WS03-2.00m-20220201

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS03-2.00m-20220201
Sample Depth:
2.00m m
Moisture content:
2.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 2.8% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		10.9 pH		10.9 pH	10.9 pH		
2	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<**LOD**
3	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6 mg/kg	1.32	7.7 mg/kg	0.00077 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<1 mg/kg	5.719	<5.719 mg/kg	<0.000572 %		<**LOD**
5	cadmium { cadmium fluoride }	048-006-00-2	232-222-0	7790-79-6		0.9 mg/kg	1.338	1.17 mg/kg	0.000117 %	✓	
6	copper { tetracopper hexahydroxide sulphate; [1] tetracopper hexahydroxide sulphate hydrate [2] }	029-018-00-7	215-582-3 [1] 215-582-3 [2]	1333-22-8 [1] 12527-76-3 [2]		12 mg/kg	1.779	20.754 mg/kg	0.00208 %	✓	
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		53 mg/kg	1.462	75.294 mg/kg	0.00753 %	✓	
8	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	27 mg/kg		26.244 mg/kg	0.00262 %	✓	
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }	080-002-00-6			1	2.15 mg/kg		2.09 mg/kg	0.000209 %	✓	
11	nickel { nickel(II) carbonate }	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]		33 mg/kg	2.022	64.871 mg/kg	0.00649 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
13		zinc { trizinc bis(orthophosphate) }				86	mg/kg	1.968	164.542	mg/kg	0.0165 %	✓	
		030-011-00-6	231-944-3	7779-90-0									
14		acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-469-6	83-32-9									
15		acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			205-917-1	208-96-8									
16		anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			204-371-1	120-12-7									
17		benz[a]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
18		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
19		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
20		benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
21		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
22		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
23		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
24		fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
25		fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
26		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
27		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
28		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
29		pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
30		TPH (C6 to C40) petroleum group				105	mg/kg		102.06	mg/kg	0.0102 %	✓	
				TPH									
										Total:	0.0477 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified during site investigation.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0102%)

Classification of sample: WS04-5-1.00m-20220201

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS04-5-1.00m-20220201
Sample Depth:
1.00m m
Moisture content:
7.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.7 pH		7.7 pH	7.7 pH		
2	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<**LOD**
3	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		15 mg/kg	1.32	18.3 mg/kg	0.00183 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<1 mg/kg	5.719	<5.719 mg/kg	<0.000572 %		<**LOD**
5	cadmium { cadmium fluoride }	048-006-00-2	232-222-0	7790-79-6		1 mg/kg	1.338	1.236 mg/kg	0.000124 %	✓	
6	copper { tetracopper hexahydroxide sulphate; [1] tetracopper hexahydroxide sulphate hydrate [2] }	029-018-00-7	215-582-3 [1] 215-582-3 [2]	1333-22-8 [1] 12527-76-3 [2]		20 mg/kg	1.779	32.883 mg/kg	0.00329 %	✓	
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		24 mg/kg	1.462	32.411 mg/kg	0.00324 %	✓	
8	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	143 mg/kg		132.132 mg/kg	0.0132 %	✓	
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }	080-002-00-6			1	<0.17 mg/kg		<0.17 mg/kg	<0.000017 %		<**LOD**
11	nickel { nickel(II) carbonate }	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]		20 mg/kg	2.022	37.374 mg/kg	0.00374 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
13		zinc { trizinc bis(orthophosphate) }				79	mg/kg	1.968	143.685	mg/kg	0.0144 %	✓	
		030-011-00-6	231-944-3	7779-90-0									
14	•	acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-469-6	83-32-9									
15	•	acenaphthylene				0.02	mg/kg		0.0185	mg/kg	0.00000185 %	✓	
			205-917-1	208-96-8									
16	•	anthracene				0.05	mg/kg		0.0462	mg/kg	0.00000462 %	✓	
			204-371-1	120-12-7									
17		benz[a]anthracene				0.26	mg/kg		0.24	mg/kg	0.000024 %	✓	
		601-033-00-9	200-280-6	56-55-3									
18		benzo[a]pyrene; benzo[def]chrysene				0.29	mg/kg		0.268	mg/kg	0.0000268 %	✓	
		601-032-00-3	200-028-5	50-32-8									
19		benzo[b]fluoranthene				0.36	mg/kg		0.333	mg/kg	0.0000333 %	✓	
		601-034-00-4	205-911-9	205-99-2									
20	•	benzo[ghi]perylene				0.13	mg/kg		0.12	mg/kg	0.000012 %	✓	
			205-883-8	191-24-2									
21		benzo[k]fluoranthene				0.14	mg/kg		0.129	mg/kg	0.0000129 %	✓	
		601-036-00-5	205-916-6	207-08-9									
22		chrysene				0.31	mg/kg		0.286	mg/kg	0.0000286 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
24	•	fluoranthene				0.56	mg/kg		0.517	mg/kg	0.0000517 %	✓	
			205-912-4	206-44-0									
25	•	fluorene				0.01	mg/kg		0.0092	mg/kg	0.000000924 %	✓	
			201-695-5	86-73-7									
26	•	indeno[123-cd]pyrene				0.17	mg/kg		0.157	mg/kg	0.0000157 %	✓	
			205-893-2	193-39-5									
27		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
28	•	phenanthrene				0.24	mg/kg		0.222	mg/kg	0.0000222 %	✓	
			201-581-5	85-01-8									
29	•	pyrene				0.47	mg/kg		0.434	mg/kg	0.0000434 %	✓	
			204-927-3	129-00-0									
30	•	TPH (C6 to C40) petroleum group				53	mg/kg		48.972	mg/kg	0.0049 %	✓	
				TPH									
31		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
32		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
33	•	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
34		o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
35		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		603-181-00-X	216-653-1	1634-04-4									
										Total:	0.0461 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified during site investigation.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0049%)

Classification of sample: WS05-6-0.70m-20220201

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS05-6-0.70m-20220201
Sample Depth:
0.70m m
Moisture content:
5.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 5.8% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		6.73	pH		6.73	pH	6.73 pH		
2	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
3	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11	mg/kg	1.32	13.681	mg/kg	0.00137 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<1	mg/kg	5.719	<5.719	mg/kg	<0.000572 %		<**LOD**
5	cadmium { cadmium fluoride }	048-006-00-2	232-222-0	7790-79-6		1.1	mg/kg	1.338	1.386	mg/kg	0.000139 %	✓	
6	copper { tetracopper hexahydroxide sulphate; [1] tetracopper hexahydroxide sulphate hydrate [2] }	029-018-00-7	215-582-3 [1] 215-582-3 [2]	1333-22-8 [1] 12527-76-3 [2]		21	mg/kg	1.779	35.199	mg/kg	0.00352 %	✓	
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25	mg/kg	1.462	34.42	mg/kg	0.00344 %	✓	
8	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	81	mg/kg		76.302	mg/kg	0.00763 %	✓	
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }	080-002-00-6			1	<0.17	mg/kg		<0.17	mg/kg	<0.000017 %		<**LOD**
11	nickel { nickel(II) carbonate }	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]		23	mg/kg	2.022	43.818	mg/kg	0.00438 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1	mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
13		zinc { trizinc bis(orthophosphate) }				54	mg/kg	1.968	100.128	mg/kg	0.01 %	✓	
		030-011-00-6	231-944-3	7779-90-0									
14		acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-469-6	83-32-9									
15		acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			205-917-1	208-96-8									
16		anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			204-371-1	120-12-7									
17		benz[a]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
18		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
19		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
20		benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
21		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
22		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
23		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
24		fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
25		fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
26		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
27		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
28		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
29		pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
30		TPH (C6 to C40) petroleum group				1	mg/kg		0.942	mg/kg	0.0000942 %	✓	
				TPH									
31		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
32		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
33		ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
34		o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
35		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		603-181-00-X	216-653-1	1634-04-4									
										Total:	0.0318 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified during site investigation.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00009%)

Classification of sample: WS06-7-0.30m-20220201

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS06-7-0.30m-20220201
Sample Depth:
0.30m m
Moisture content:
9.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.2% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.43 pH		8.43 pH	8.43 pH		
2	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<**LOD**
3	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10 mg/kg	1.32	11.989 mg/kg	0.0012 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<1 mg/kg	5.719	<5.719 mg/kg	<0.000572 %		<**LOD**
5	cadmium { cadmium fluoride }	048-006-00-2	232-222-0	7790-79-6		0.8 mg/kg	1.338	0.972 mg/kg	0.0000972 %	✓	
6	copper { tetracopper hexahydroxide sulphate; [1] tetracopper hexahydroxide sulphate hydrate [2] }	029-018-00-7	215-582-3 [1] 215-582-3 [2]	1333-22-8 [1] 12527-76-3 [2]		11 mg/kg	1.779	17.772 mg/kg	0.00178 %	✓	
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		17 mg/kg	1.462	22.561 mg/kg	0.00226 %	✓	
8	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	54 mg/kg		49.032 mg/kg	0.0049 %	✓	
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }	080-002-00-6			1	0.29 mg/kg		0.263 mg/kg	0.0000263 %	✓	
11	nickel { nickel(II) carbonate }	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]		14 mg/kg	2.022	25.709 mg/kg	0.00257 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
13		zinc { trizinc bis(orthophosphate) }				36	mg/kg	1.968	64.343	mg/kg	0.00643 %	✓	
		030-011-00-6	231-944-3	7779-90-0									
14		acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-469-6	83-32-9									
15		acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			205-917-1	208-96-8									
16		anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			204-371-1	120-12-7									
17		benz[a]anthracene				0.04	mg/kg		0.0363	mg/kg	0.00000363 %	✓	
		601-033-00-9	200-280-6	56-55-3									
18		benzo[a]pyrene; benzo[def]chrysene				0.04	mg/kg		0.0363	mg/kg	0.00000363 %	✓	
		601-032-00-3	200-028-5	50-32-8									
19		benzo[b]fluoranthene				0.05	mg/kg		0.0454	mg/kg	0.00000454 %	✓	
		601-034-00-4	205-911-9	205-99-2									
20		benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
21		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
22		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
23		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
24		fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
25		fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
26		indeno[123-cd]pyrene				0.03	mg/kg		0.0272	mg/kg	0.00000272 %	✓	
			205-893-2	193-39-5									
27		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
28		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
29		pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
30		TPH (C6 to C40) petroleum group				<5	mg/kg		<5	mg/kg	<0.0005 %		<LOD
				TPH									
										Total:	0.021 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

chromium(III) oxide (worst case) (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

lead compounds with the exception of those specified elsewhere in this Annex (worst case)

GB MCL index number: 082-001-00-6
Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). Review date 29/09/2015

acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

benzo[ghi]perylene (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

fluoranthene (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

indeno[123-cd]pyrene (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

pyrene (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

ethylbenzene (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

polychlorobiphenyls; PCB (EC Number: 215-648-1, CAS Number: 1336-36-3)

GB MCL index number: 602-039-00-4
Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans; POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

Appendix B: Rationale for selection of metal species

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Most likely worst case.

arsenic {arsenic trioxide}

Most likely worst case.

boron {boric acid; [1] boric acid [2]}

Most likely worst case.

cadmium {cadmium fluoride}

Most likely worst case.

copper {tetracopper hexahydroxide sulphate; [1] tetracopper hexahydroxide sulphate hydrate [2]}

Most likely worst case.

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Worst case species (edit as required)

chromium in chromium(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species (edit as required)

lead {lead compounds with the exception of those specified elsewhere in this Annex (worst case)}

Most likely worst case.

mercury {inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex}

Most likely worst case.

nickel {nickel(II) carbonate}

Most likely worst case.

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Most likely worst case.

zinc {trizinc bis(orthophosphate)}

Most likely worst case.

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2017.202.300.300 (23 Mar 2022)
HazWasteOnline Database: 2022.81.5064.9565 (22 Mar 2022)

This classification utilises the following guidance and legislation:
WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
GB MCL List - version 1.1 of 09 June 2021

envirolab
Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number:	22/01085
Issue Number:	1
Date:	18-Feb-22

Client:

Pick Everard
Halford House
Charles Street
Leicester
LE1 1HA

Project Manager:	Elliot Bell/Ross Goodband
Project Name:	RBG Kew
Project Ref:	210699
Order No:	92092
Date Samples Received:	7-Feb-22
Date Instructions Received:	8-Feb-22
Date Analysis Completed:	18-Feb-22

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

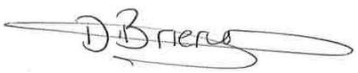
IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

envirolab

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	22/01085/1				
Client Sample Number				1		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				BH01				
Depth to Top				0.5				
Depth to Bottom								
Date Sampled				01/02/2022				
Sample Type				Soil - ES				
Sample Matrix Code				4AB				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**8.84**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.51**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.14**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**2.4**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.82**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**0.67**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH\_CU\_1D\_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1**	**10:1**	**Limit values for compliance leaching test using**		
				mg/l	**mg/kg**	**BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.006	**0.060**	0.5	2	25
Barium	A-T-025	N	N	0.013	**0.130**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	0.002	**0.020**	0.5	10	70
Copper	A-T-025	N	N	0.006	**0.060**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.002	**0.020**	0.5	10	30
Nickel	A-T-025	N	N	<0.001	**<0.01**	0.4	10	40
Lead	A-T-025	N	N	0.116	**1.160**	0.5	10	50
Antimony	A-T-025	N	N	0.001	**0.010**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.003	**0.030**	4	50	200
Chloride	A-T-026	N	N	1	**12**	800	15000	25000
Fluoride	A-T-026	N	N	1.3	**13.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	9	**90**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	62	**620**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	8.1				
Conductivity (µS/cm)	A-T-037	N	N	124				
Mass Sample (kg)				0.211				
Dry Matter (%)	A-T-044	N	N	82.8				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation