

14.4 Landslip (10k)

Records within 500m 0

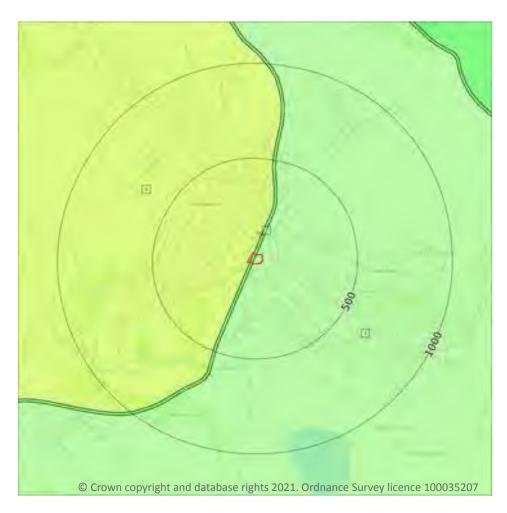
Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

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 3

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 77

ID	Location	LEX Code	Description	Rock age
1	On site	ZZCH-CHLK	Zig Zag Chalk Formation - Chalk	Cenomanian Age
2	On site	WMCH- CHLK	West Melbury Marly Chalk Formation - Chalk	Cenomanian Age
3	On site	TTST-CHLK	Totternhoe Stone Member - Chalk	Cenomanian Age





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



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 79

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	EW205_saffron_walden_v4

This data is sourced from the British Geological Survey.



Contact us with any questions at: info@groundsure.com

info@groundsur 08444 159 000



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

15.2 Artificial and made ground (50k)

Records within 500m 0

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.

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

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 81

ID	Location	LEX Code	Description	Rock description
1	On site	RTD3-XSV	RIVER TERRACE DEPOSITS, 3	SAND AND GRAVEL
2	24m W	RTD2-XSV	RIVER TERRACE DEPOSITS, 2	SAND AND GRAVEL
3	426m S	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.



08444 159 000



15.5 Superficial permeability (50k)

Records within 50m 2

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
24m NW	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).

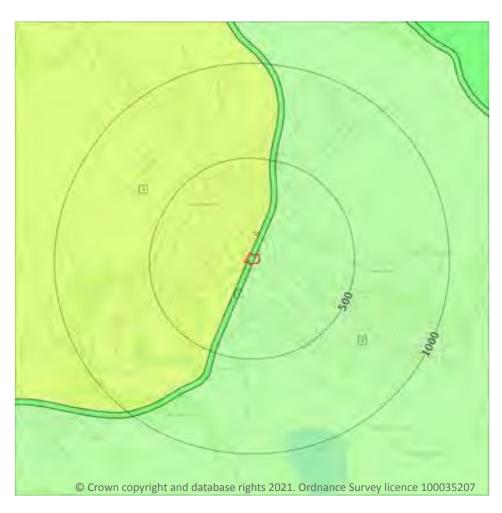
This data is sourced from the British Geological Survey.



Contact us with any questions at: Date: 1 April 2021



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 3

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 83

ID	Location	LEX Code	Description	Rock age
1	On site	TTST-CHLK	TOTTERNHOE STONE MEMBER - CHALK	CENOMANIAN
2	On site	ZZCH-CHLK	ZIG ZAG CHALK FORMATION - CHALK	CENOMANIAN
3	On site	WMCH- CHLK	WEST MELBURY MARLY CHALK FORMATION - CHALK	CENOMANIAN





This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m 3

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	Fracture	Very High	Very High
On site	Fracture	Very High	Very High
On site	Fracture	Very High	High

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.

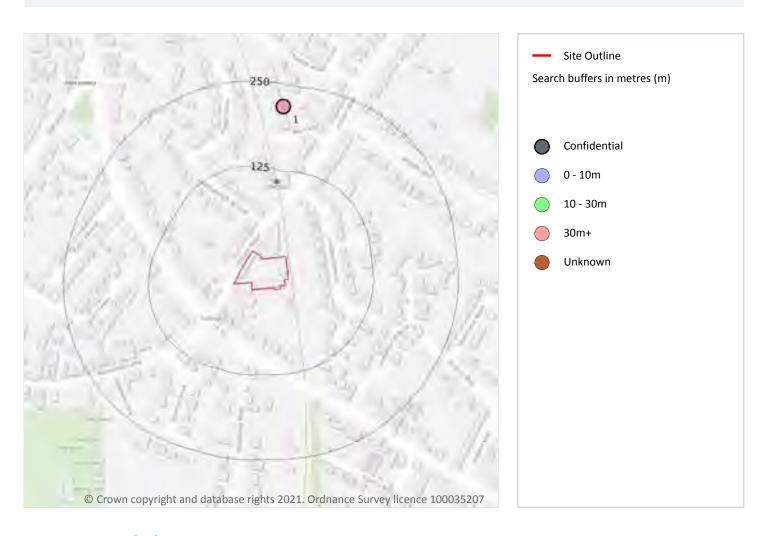


Contact us with any questions at: info@groundsure.com

08444 159 000



16 Boreholes



16.1 BGS Boreholes

Records within 250m

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 85

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	217m N	546520 252350	FLOUR MILL STATION ROAD, GREAT SHELFORD	85.34	N	<u>542586</u>

This data is sourced from the British Geological Survey.





17 Natural ground subsidence - Shrink swell clays



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 86

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

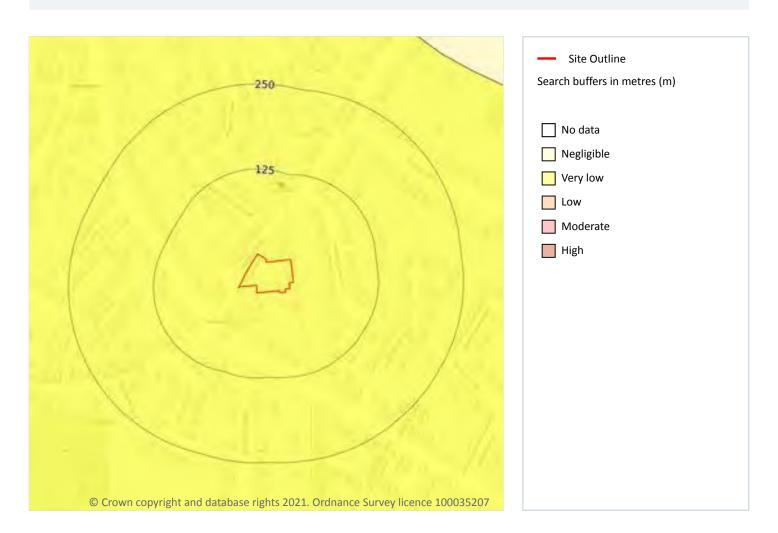
This data is sourced from the British Geological Survey.



ct us with any questions at: Date: 1 April 2021



Natural ground subsidence - Running sands



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 87

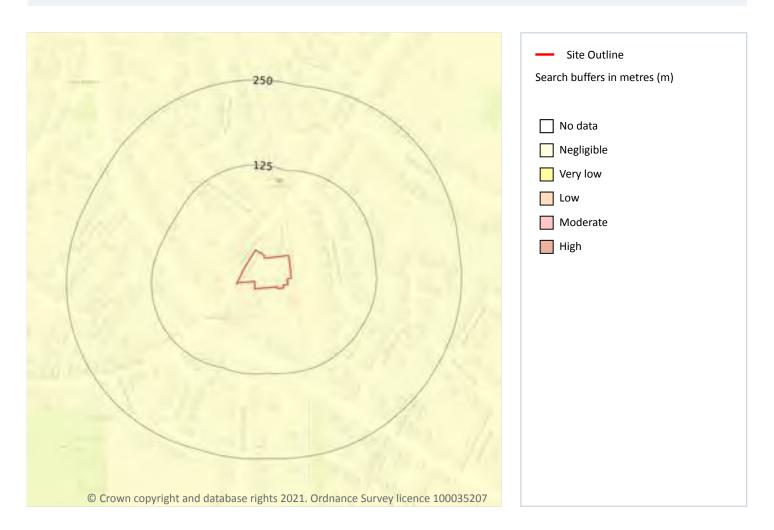
Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.





Natural ground subsidence - Compressible deposits



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 88

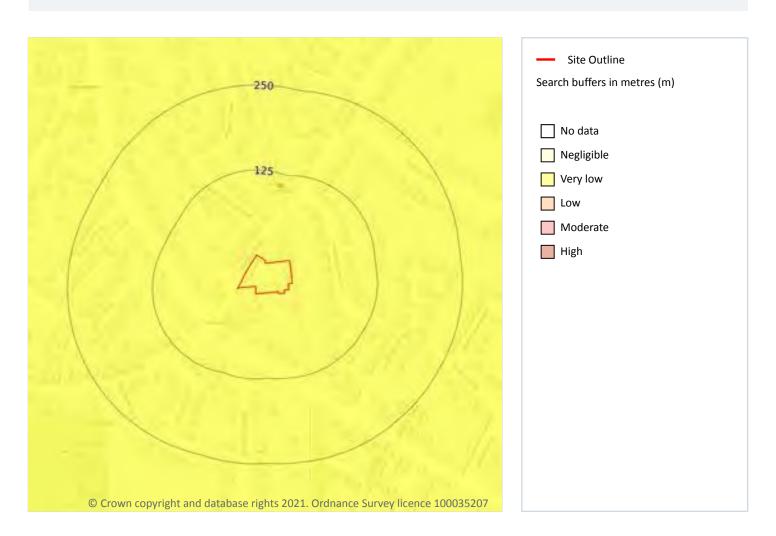
Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.





Natural ground subsidence - Collapsible deposits



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 89

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



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 90

Locatio	n 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



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 91**

Location	Hazard rating	Details
On site	Very low	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.



th any questions at: Date: 1 April 2021



18 Mining, ground workings and natural cavities





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 2

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.

Features are displayed on the Mining, ground workings and natural cavities map on page 93

ID	Location	Details	Description
D	168m NE	Name: The Limes Gravel Pits Address: Stapleford, CAMBRIDGE, Cambridgeshire Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
F	475m SE	Name: Stapleford Gravel Pit Address: Stapleford, CAMBRIDGE, Cambridgeshire Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m 16

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 93

ID	Location	Land Use	Year of mapping	Mapping scale
2	On site	Cuttings	1885	1:10560
Α	On site	Cuttings	1901	1:10560
Α	On site	Cuttings	1901	1:10560
В	On site	Cuttings	1959	1:10560
В	On site	Cuttings	1946	1:10560
В	On site	Cuttings	1901	1:10560



any questions at: Date: 1 April 2021



ID	Location	Land Use	Year of mapping	Mapping scale
С	2m N	Cuttings	1901	1:10560
С	2m N	Cuttings	1901	1:10560
D	151m NE	Gravel Pits	1959	1:10560
D	152m NE	Gravel Pits	1946	1:10560
D	152m NE	Gravel Pits	1901	1:10560
Е	159m S	Cuttings	1901	1:10560
Е	159m S	Cuttings	1901	1:10560
D	197m NE	Gravel Pits	1959	1:10560
D	199m NE	Gravel Pits	1946	1:10560
D	199m NE	Gravel Pits	1901	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 2

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).





Features are displayed on the Mining, ground workings and natural cavities map on page 93

ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Chalk	Α	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
-	650m W	Not available	Chalk	А	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

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.



Contact us with any questions at: Date: 1 April 2021



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 Mining Searches UK.

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



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 98

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 6

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 km². 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 km²; 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	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
24m NW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m 0

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 km²).

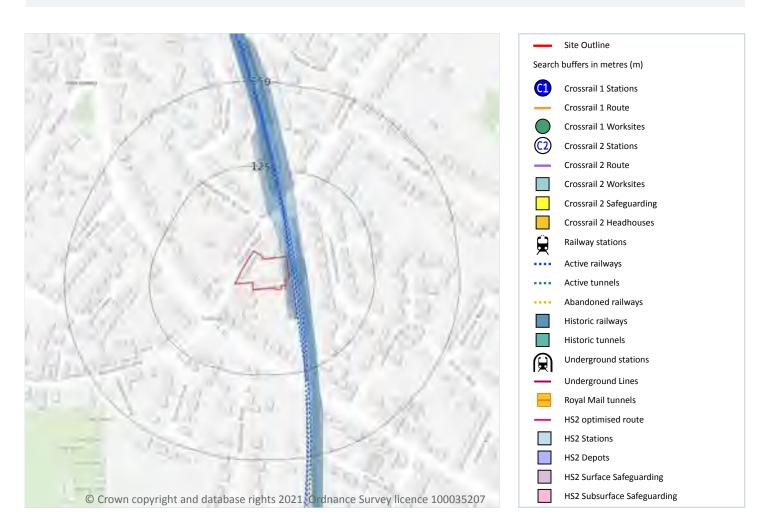
This data is sourced from the British Geological Survey.



Contact us with any questions at: Date: 1 April 2021



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

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 12

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.

Features are displayed on the Railway infrastructure and projects map on page 101

Location	Land Use	Year of mapping	Mapping scale
On site	Railway Sidings	1886	2500
On site	Railway Sidings	1903	2500
On site	Railway Sidings	1885	10560
6m E	Railway Sidings	1946	10560
6m E	Railway Sidings	1901	10560
14m E	Railway Sidings	1886	2500
15m E	Railway Sidings	1970	2500
56m N	Railway Sidings	1959	10560
86m N	Railway Sidings	1901	10560
112m N	Railway Sidings	1886	2500
131m N	Railway Sidings	1886	2500
186m N	Railway Sidings	1901	10560

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 1

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

Features are displayed on the Railway infrastructure and projects map on page 101

Location	Description
225m S	Dismantled

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m 5

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

Features are displayed on the Railway infrastructure and projects map on page 101

Location	Name	Туре
4m E	Not given	Multi Track
7m E		rail
11m E		rail
77m N	Not given	Multi Track
160m S	Not given	Multi Track

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.



104

Catchment Data Explorer



Home Useful Links API Reference Data downloader Help Glossary Noticed a problem?

Search ▼



Cam and Ely Ouse Chalk Overview

Download Water Body as CSV / GeoJSON

Overall classification for 2019 **Poor**

Id
Туре
Hydromorphological designation (1)
NGR 1
Groundwater area
Surface area
Surveillance Water Body

GB40501G400500	
Groundwater Body	
not applicable	
TL5183229017	
299577.401 ha	
2995.774 km2	
No	

Classifications ⁶

Cycle 2 classifications 6

Down	024	20	CCV
DUWIII	Uau	as	<u> </u>

Classification Item	2013	2014	2015	2016	2019
Overall Water Body	Poor	Poor	Poor	Poor	Poor
Quantitative	Poor	Poor	Poor	Poor	Poor
Chemical (GW)	Poor	Poor	Poor	Poor	Poor

Upstream water bodies

Downstream	water	bodies

Name	
	No data to show

Name
No data to show

Investigations into classification status •

investigations into classifi	Download as CSV				
Classification Element	Cycle	Year	Status	Outcome	
No data to show					

Reasons for not achieving good status and reasons for deterioration ⁶

Download as CSV

Reason Type	SWMI	Activity	Category	More	Classification Element
RNAG	Flow	Groundwater abstraction	Other	<u>Details</u>	Quantitative GWDTEs test
RNAG	Diffuse source	Poor nutrient management	Agriculture and rural land management	<u>Details</u>	General Chemical Test
RNAG	Flow	Groundwater abstraction	Industry	<u>Details</u>	Quantitative Dependent Surface Water Body Status
RNAG	Diffuse source	Transport Drainage	Industry	<u>Details</u>	General Chemical Test
RNAG	Point source	Sewage discharge (continuous)	Water Industry	<u>Details</u>	General Chemical Test
RNAG	Diffuse source	Transport Drainage	Industry	<u>Details</u>	Chemical Drinking Water Protected Area
RNAG	Diffuse source	Poor nutrient management	Agriculture and rural land management	<u>Details</u>	Chemical Drinking Water Protected Area
RNAG	Flow	Groundwater abstraction	Water Industry	<u>Details</u>	Quantitative Water Balance
RNAG	Flow	Groundwater abstraction	Industry	<u>Details</u>	Quantitative Water Balance
RNAG	Flow	Groundwater abstraction	Agriculture and rural land management	<u>Details</u>	Quantitative Water Balance
RNAG	Point source	Sewage discharge (continuous)	Domestic General Public	<u>Details</u>	General Chemical Test
RNAG	Diffuse source	Poor nutrient management	Agriculture and rural land management	<u>Details</u>	General Chemical Test
RNAG	Diffuse source	Poor nutrient management	Agriculture and rural land management	<u>Details</u>	Trend Assessment
RNAG	Diffuse source	Other (not in list, must add details in comments)	Other	<u>Details</u>	Trend Assessment
RNAG	Flow	Groundwater abstraction	Agriculture and rural land management	<u>Details</u>	Quantitative Dependent Surface Water Body Status
RNAG	Flow	Groundwater abstraction	Water Industry	<u>Details</u>	Quantitative Dependent Surface Water Body Status

Objectives ⁶

Download as CSV

			Download as CSV
Classification Item	Status	Year	Reasons
Overall Water Body	Poor	2015	Unfavourable balance of costs and benefits Disproportionate burdens
Quantitative	Poor	2015	Unfavourable balance of costs and benefits Disproportionate burdens
Quantitative Status element	Poor	2015	Unfavourable balance of costs and benefits Disproportionate burdens
Quantitative Saline Intrusion	Good	2015	
Quantitative Water Balance	Poor	2015	Unfavourable balance of costs and benefits
Quantitative GWDTEs test	Good	2027	Disproportionate burdens
Quantitative Dependent Surface Water Body Status	Good	2027	Disproportionate burdens
Chemical (GW)	Poor	2015	Unfavourable balance of costs and benefits
Chemical Status element	Poor	2015	Unfavourable balance of costs and benefits
Chemical Drinking Water Protected Area	Poor	2015	Unfavourable balance of costs and benefits
General Chemical Test	Poor	2015	Unfavourable balance of costs and benefits
Chemical GWDTEs test	Good	2015	
Chemical Dependent Surface Water Body Status	Good	2015	
Chemical Saline Intrusion	Good	2015	

Protected areas ⁶



Download as CSV

PA Name	ID	Directive	Туре	More information
Stansted Mountfitchet G152	G152	Nitrates Directive		
Sandlings and Chelmsford G78	G78	Nitrates Directive		
Anglian Chalk G71	G71	Nitrates Directive		

PA Name	ID	Directive	Туре	More information
Risby	GWSGZ0011	Safeguard Zone		
Sandringham Sands South G150	G150	Nitrates Directive		
Cam and Ely Ouse Chalk	UKGB40501G400500	Drinking Water Protected Area		
Buntingford Chalk G141	G141	Nitrates Directive		
Brettenham	GWSGZ0002	Safeguard Zone		
Euston	GWSGZ0003	Safeguard Zone		
Fleam Dyke 1	GWSGZ0004	Safeguard Zone		
Fowlmere	GWSGZ0005	Safeguard Zone		
Fulbourn 2	GWSGZ0006	Safeguard Zone		
Linton	GWSGZ0007	Safeguard Zone		
Melbourn	GWSGZ0008	Safeguard Zone		
Babraham	GWSGZ0001	Safeguard Zone		
Morden Grange	GWSGZ0009	Safeguard Zone		
North Pickenham	GWSGZ0010	Safeguard Zone		

Issues preventing waters reaching good status

Issues preventing waters reaching good status and the sectors identified as contributing to them are shown in a table in the new summary page.

View Table

Support

Submit feedback or ask for support

<u>FAQs</u>

Announcements

Terms and Conditions

Privacy Notice

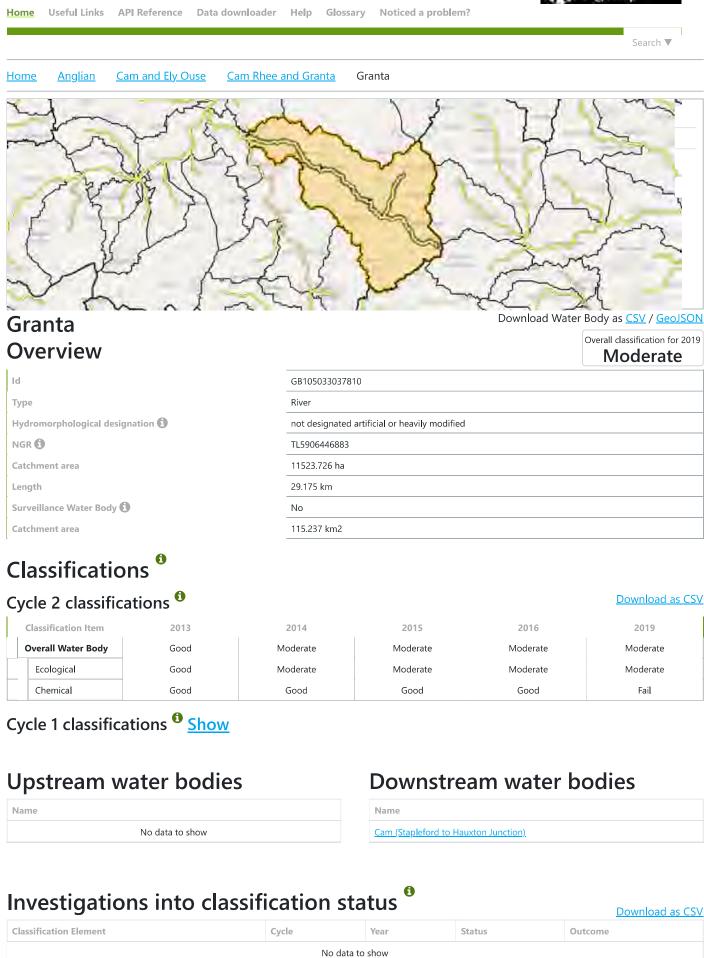
About This Page

All content is available under the <u>Open Government Licence v3.0</u>, except where otherwise stated

Maintained by Swirrl.

Catchment Data Explorer







Reason Type	SWMI	Activity	Category	More	Classification Element
RNAG	Flow	Groundwater abstraction	Water Industry	<u>Details</u>	Hydrological Regime
RNAG	Flow	Surface water abstraction	Agriculture and rural land management	<u>Details</u>	Hydrological Regime
RNAG	Flow	Groundwater abstraction	Local and Central Government	<u>Details</u>	Hydrological Regime
RNAG	Flow	Groundwater abstraction	Industry	<u>Details</u>	Hydrological Regime
RNAG	Flow	Groundwater abstraction	Agriculture and rural land management	<u>Details</u>	Hydrological Regime
RNAG	Point source	Sewage discharge (continuous)	Water Industry	<u>Details</u>	Phosphate
RNAG	Point source	Sewage discharge (continuous)	Water Industry	<u>Details</u>	Macrophytes and Phytobenthos Combined

Objectives ⁶

Download as CSV

Objectives			<u>Download as CSV</u>
Classification Item	Status	Year	Reasons
Overall Water Body	Moderate	2015	No known technical solution is available
Ecological	Moderate	2015	No known technical solution is available
Supporting elements (Surface Water)	Not assessed	2015	
Biological quality elements	Moderate	2015	No known technical solution is available
Macrophytes and Phytobenthos Combined	Moderate	2015	No known technical solution is available
Fish	Good	2015	
Invertebrates	Good	2015	
Hydromorphological Supporting Elements	Supports Good	2015	
Hydrological Regime	Supports Good	2021	
Physico-chemical quality elements	Moderate	2015	No known technical solution is available
Ammonia (Phys-Chem)	Good	2015	
Dissolved oxygen	Good	2015	
рН	Good	2015	
Phosphate	Poor	2015	No known technical solution is available
Temperature	Good	2015	
Specific pollutants	Not assessed	2015	
Chemical	Good	2015	
Priority substances	Does not require assessment	2015	
Other Pollutants	Does not require assessment	2015	
Priority hazardous substances	Does not require assessment	2015	

Protected areas ⁶

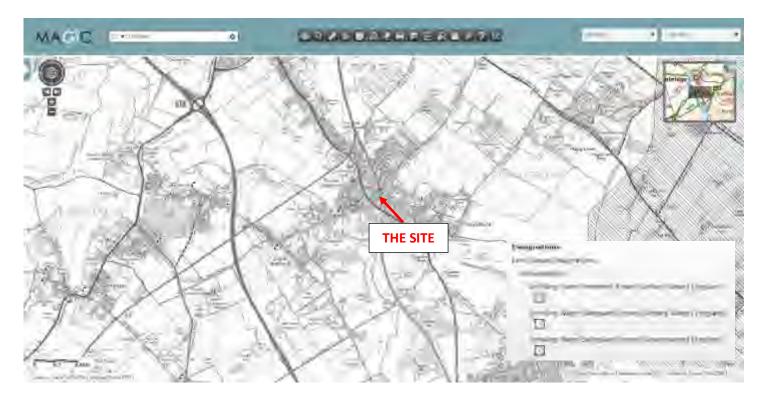
Download as CSV

PA Name	ID	Directive	Туре	More information
Ely Ouse and Cut-off channel NVZ S390	S390	Nitrates Directive		
River Blackwater NVZ S434	S434	Nitrates Directive		
Lower Stour NVZ S424	S424	Nitrates Directive		

Issues preventing waters reaching good status

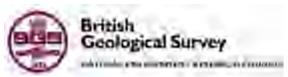
Issues preventing waters reaching good status and the sectors identified as contributing to them are shown in a table in the new summary page.

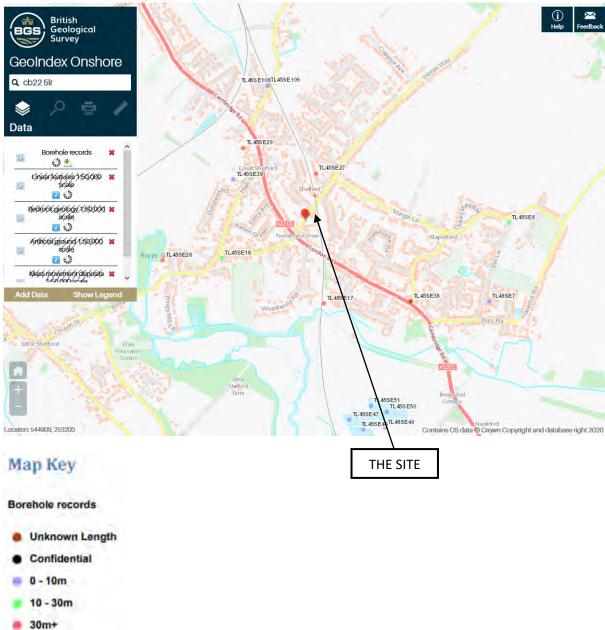
View Table



Notes:

- 1. The maps contain data reproduced under the Open Government Licence, available for viewing at http://www.nationalarchives.gov.uk/doc/open-government-licence
- 2. The maps contain Environment Agency Information © Environment Agency







BGS ID: 542586: BGS Reference: TL45SE27 British National Grid (27700): 546520,252350

McDougalls Flow mill, Stakion Road.

4. Mills by Railway Station.

huface c. 50 O.D.

Shaft so' Dipes 10' from surface. Q. W. L. c. 20' char. Air compressor to saise water. Gield large. Soft water a. 1885. Sited on 6 bambo 54 NW/ 4000/124.12.

googs N.E. of St. May's Ch.

McDougalb glown Mill. Shaft xb; bore lived to 7 ft 3 in b.s. Visited :-Date of one menous, but probably before 1900; such by george buch. In we for boilers and flow wheater conditioning; pumps 24 h.p.d. 5 d.p. week. Electric motor driving autige which rouses vater into shift, compressor, and About & vater returned straight buck to well from any four other our light to be c. 150-120 b.s. from feed tank. (R.W.L. in shape = 7 7 2" b.s. L R.W.L. in bore 4292 lin. b.s.

Bore pumped sordy voter in post; v. soft. insumption unknown but engineering dept. of McDongalla estimated it to be less than Information: from Nanager, and maintainance the notifiable amount. 00.400. A.S. 7 5 60 orgineer.

> Water Supply of Cambs. Hunts. & Rutiana.

Page 89

DATA Bank

Contains British Geological Survey Materials, © NERC 2020



TL 45 SE/27

TL 4652 5235

205/76 Messrs. McDougall, Flour Mill, Station Road, Great Shelford

W.S.C.H.R. p. 89. Surface +60. Shaft 40 x 6; rest bore. Lining tubea: from 7% down. LGS -212. Lack, G., c.1885.

R.W.L. +c.40. Air lift. Apr. 1942. R.W.L. +c.52% (shaft); +18 (bore).

Suction -c.60. Electric air lift. May 1960.

Drift LCk G LGS	V. O. P. O. P. L.	0	10 100 272 280
Coarse gravel	nth coprolite bed at bottom	10	10
[Chalk] Clunch n	rth coprolite bed at bottom	90	100
Soft bluid	L'earth ("bear's muck")	70	270
[Lower Greensand	Brown quek-sand Durk grey wonotone	6	278
	rock	2	280



APPENDIX III – GROUND INVESTIGATION AND MONITORING DATA

This Appendix presents relevant ground investigation factual records, together with summary tables of monitoring data and analytical laboratory test results, as primarily relating to the site. The data was obtained from the following reports:

SLR (October 2018) Fuel Depot, 2 Station Road, Great Shelford: Phase 1 Data Review and Preliminary Land Quality Assessment Ref. 416.05952.00003 –PLQRA Draft v2

SLR (August 2019) Fuel *Depot, 2 Station Road, Great Shelford: Detailed Quantitative Risk Assessment* Ref. 416.05952.00004 –DQRA Final v2

It is noted that the exploratory hole records are not compliant with the edition of BS5930 current at the time of the works (particularly in the omission of accurate strata strengths/consistency terms). It is recommended that the accuracy of data in this Appendix be further assessed on completion of the ground investigation as recommended in Section 6 of the report.





Resource & Environmental Consultants Ltd

3 Crittall Drive Springwood Industrial Estate Braintree Essex CM7 2RT Tel: 01376 554400 Fax: 01355 528980 Borehole: WS22

Project Location: Station Road, Great Shelford

Client: Oakley Soils

Method: Windowless Sampling

Total Depth of Borehole: 5.0m

Project Number: 50740

Date: 25.09.2008

Installation	Elevation (m)	Depth (m)	Lithologic Symbol	Description/Classification of Materials	Sample 2 Additional Control of the C	Remarks
	0.0	0-	~~~~	Ground Surface		
WIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	-0.3			MADE GROUND Tarmac. MADE GROUND Concrete. Dark orange to brown, clayey, sandy (fine to coarse) GRAVEL. Gravel of fine to medium, sub-angular to sub-rounded flint.	D, G	PID=<0.1ppm
Bentonite	-1.6	1		Becoming clayier with much coarse, sub-angular chalk gravel below 0.8m. Soft, dark brown, slightly sandy, gravelly CLAY. Gravel of fine, sub-rounded flint.	D, G	PID=<0.1ppm PID=<0.1ppm
	-2.2	2-		CHALK Recovered as grey to cream calcareous silt with chalk nodules.	D, G	PID=<0.1ppm
		3		·	D, G	PID=<0.1ppm
Gravel	-5.0	4- - - - 5-			D, G	PID=<0.1ppm

B. Bulk, D. Disturbed, W. Water, G. Glass Jar, PID. Photo Ionisation Detector (ppm), V. 40ml Vial Notes: Groundwater at 2.94m.



Resource & Environmental Consultants Ltd.

3 Crittall Drive Springwood Industrial Estate Braintree Essex CM7 2RT Tel: 01376 554400

Fax: 01355 528980

Borehole: WS23

Project Location: Station Road, Great Shelford

Client: Oakley Soils

Method: Windowless Sampling

Total Depth of Borehole: 5.0m

Project Number: 50740

Date: 26.09.2008

		T'				
Installation	Elevation (m)	Depth (m)	Lithologic Symbol	Description/Classification of Materials	Sample advL	Remarks
minimum KXX	0.0	0-		Ground Surface MADE GROUND Tarmac. Soft to firm mid to dark brown, slightly sandy, gravelly CLAY. Gravel of fine sub-rounded flint and course to cobble size sub-angular to angular chalk. Occasional black, carbonaceous inclusions between 0.2 and 0.4m. Occasional pockets of coarse, orange chalky SAND.	D, G	PID=<0.1ppm
	-1.8	- - - -			D, G	PID=<0.1ppm
	-2.4	2-		CHALK Recovered as pale cream to white sandy silt with frequent chalk gravel.	D, G	PID=1.6ppm
		3-		CHALK Recovered as grey sandy silt with hydrocarbon odour and staining.	D, G	PID=43.6ppm
Gravel ³		4-			D, G	PID=83.3ppm
	-5.0	5-			D, G	PID=<0.1ppm

B. Bulk, D. Disturbed, W. Water, G. Glass Jar, PID. Photo Ionisation Detector (ppm), V. 40ml Vial Notes:



Resource & Environmental Consultants Lie

3 Crittall Drive Springwood Industrial Estate Braintree Essex CM7 2RT Tel: 01376 554400

Fax: 01355 528980

Borehole: WS24

Project Location: Station Road, Great Shelford

Client: Oakley Soils

Method: Windowless Sampling

Total Depth of Borehole: 5.0m

Project Number: 50740

Date: 26.09.2008

					•	
Installation	Elevation (m)	Depth (m)	Lithologic Symbol	Description/Classification of Materials	Sample Lype	Remarks
	0.0	0	~~~~~	Ground Surface		
IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	-0.3	1-		MADE GROUND Tarmac over concrete. Soft, mid to dark brown, slightly gravelly, sandy CLAY. Gravel of fine sub-rounded flint and medium to course sub-angular to angular chalk.	D, G	PID=<0.1ppm
	-2.3	2-			D, G	PID=<0.1ppm
		3-		CHALK Recovered as pale grey sandy silt with frequent chalk gravel. Slight hydrocarbon odour throughout.	D, G	PID=224ppm
Gravel ³	ļ	4-			D, G	PID=13.2ppm
	-5.0	- - - - 5-			D, G	PID=0.9ppm

B. Bulk, D. Disturbed, W. Water, G. Glass Jar, PID. Photo Ionisation Detector (ppm), V. 40ml Vial Notes:



Resnurce & Environmental Consultants Li

3 Crittall Drive Springwood Industrial Estate Braintree Essex CM7 2RT Tel: 01376 554400

Fax: 01355 528980

Borehole: WS25

Project Location: Station Road, Great Shelford

Client: Oakley Soils

Method: Windowless Sampling

Total Depth of Borehole: 4.0m

Project Number: 50740

Date: 25.09.2008

Installation	Elevation (m)	Depth (m)	Lithologic Symbol	Description/Classification of Materials	Type ed.	Remarks
T	0.0	0-	~~~~	Ground Surface		
	-0.3	-		MADE GROUND Tarmac over concrete.		
imminimistriis Imminimistriis Bentonite Seal	-0.8	-		Firm, orange brown, very gravelly CLAY. Gravel of medium to coarse and occasional cobble size subangular to sub-rounded flint. - Occasional pockets of soft dark brown clay. CHALK	D, G	PID=<0.1ppm
inton		1-	" h" " h	Recovered as pale grey to cream sandy silt with frequent chalk gravel.		
Be		2		пециен спак длачен.	D, G D, G	PID=<0.1ppm PID=224ppm
	-4.0	3- 			D, G	PID=13.2ppm
Gravel		- -		End of Log		
Sr.		- - - -			D, G	PID=0.9ppm
		5-				

B. Bulk, D. Disturbed, W. Water, G. Glass Jar, PID. Photo Ionisation Detector (ppm), V. 40ml Vial Notes:

Borehole Log

WS410

PAGE 1 OF

CLIENT Mr Paul Davis	DRILLING METHOD Hand Pit and	Windowless Sampling
PROJECT NUMBER 8182	GROUND LEVEL	
PROJECT NAME Great Shelford	EASTING	NORTHING
DRILLING CONTRACTOR Exploration Limited	DATE STARTED 9/1/15	DATE FINISHED 9/1/15
SCALE 1:30	LOGGED BY MT	CHECKED BY MT

	DESCRIPTION OF STRATA		LEGEND	RED. LEVEL	WATER	SAMF REF.	PLING DEPTH	PID RESULTS (ppm)		CKFILL/ ALLATION
	MADE GROUND: Asphalt.).10								
ļ.,	MADE GROUND: Concrete.						0.00	4.5		
	MADE GROUND: Fine to coarse, sub angular gravel of flint.).30					0.30	4.5		
-	Fragments of coal identified throughout.		>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>							
L										

			>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>						6000	
1									6500	
L.			$\times\!\!\times\!\!\times\!\!\times$							
		1.40	***************************************			J	1.40	3.9		
-	ZIG ZAG CHALK FORMATION: Firm off white CHALK.	1.40				J	1.40	3.9		
L.			┈╵┈╵┈ ╢							Backfilled with arisings.
										Ü
			 							
2			 				2.00	3.2		
			<u> </u>							
L .										
-							2.50	1.0		
1			- 					1.0	6800	
										
├ -			 							
3	3	3.00	<u> </u>				3.00	2.2		

Borehole terminated at 3.0m due to refusal.

REMARKS					ROGRE					CAS	SING	
Logged in general accordance with		Date	Time	Hole Depth (m)	Casing Depth (m)	Water Depth (m)	Rema	arks	Top (m)	Base (m)	Diameter (mm)	Remarks
2. PID = volatile vapour concentration	n in ppm.											
				WATE	R OB		TIONS				ISELLI	NG
-		Date	Time	Strike at Depth (m)	Rise to Depth (m)	Time (mins)	Flow Remarks	Casing Depth (m)	Sealed at (m)	From (m)	To (m)	Time (hh:mm)

WS411 Borehole Log CLIENT Mr Paul Davis DRILLING METHOD Hand Pit and Windowless Sampling PROJECT NUMBER 8182 **GROUND LEVEL** PROJECT NAME Great Shelford **EASTING NORTHING DRILLING CONTRACTOR** Exploration Limited DATE STARTED 9/1/15 **DATE FINISHED** 9/1/15 SCALE 1:30 LOGGED BY MT CHECKED BY MT PID RESULTS (ppm) SAMPLING BACKFILL/ DESCRIPTION OF STRATA LEGEND **LEVEL** INSTALLATION REF. DEPTH MADE GROUND: Asphalt. 0.10 MADE GROUND: Fine to coarse, sub angular sandy gravel. Sand is medium to coarse. Gravel is of flint. 0.30 4.8 0.90 3.8 1 ZIG ZAG CHALK FORMATION: Firm off white CHALK. 1.50 4.1 Backfilled with arisings. 2.00 4.3

2.50

3.00

3.50

5.1

5.0

Borehole terminated at 3.5m due to refusal.

REMARKS					ROGRE					CAS		
Logged in general accordance wit PID = volatile vapour concentration		Date	Time	Hole Depth (m)	Casing Depth (m)	Water Depth (m)	Rema	arks	Top (m)	Base (m)	Diameter (mm)	Remarks
2.1 ID - volaule vapoul concentratio	н рүш.											
							TIONS			CH	ISELLI	NG
-		Date	Time	Strike at Depth (m)	Rise to Depth (m)	Time (mins)	Flow Remarks	Casing Depth (m)	Sealed at (m)	From (m)	To (m)	Time (hh:mm)
OHES	OHES Environmental 1 The Courtyard, Denmark Street RG40 2AZ Telephone: 01189 797755											

Borehole Log

WS412

PAGE 1 OF 1

CLIENT Mr Paul Davis	DRILLING METHOD Hand Pit and	Windowless Sampling
PROJECT NUMBER 8182	GROUND LEVEL	
PROJECT NAME Great Shelford	EASTING	NORTHING
DRILLING CONTRACTOR Exploration Limited	DATE STARTED 9/1/15	DATE FINISHED 9/1/15
SCALE 1:30	LOGGED BY MT	CHECKED BY MT

	DESCRIPTION OF STRATA		LEGEND	RED.	WATER	SAMF	PLING	PID RESULTS	BACKFILL/
	DESCRIPTION OF STRATA		LEGEND	LEVEL	WA.	REF.	DEPTH	(ppm)	INSTALLATION
	MADE GROUND: Asphalt.	0.10							
-	MADE GROUND: Fine to coarse gravel of asphalt	0.30					0.30	3.3	
-	MADE GROUND: Mid to yellow brown sandy gravelly clay. Gravel is fine to medium, sub angular and of flint and chalk. Fragments of coal identified throughout.								
-		0.70					0.70	5.1	
- -	MADE GROUND: Fine to medium, sub angular gravel of flint and chalk.								
<u> </u>									Backfilled with arisings.
ļ.							1.40	5.4	
-									
-									
2	Description of the description o	2.00	*******	L	L _ J	J_	2.00	6.6	

Borehole terminated at 2.0m due to refusal.

REMARKS				PF	ROGRE	ESS					SING	
Logged in general accordance with		Date	Time	Hole Depth (m)	Casing Depth (m)	Water Depth (m)	Rema	arks	Top (m)	Base (m)	Diameter (mm)	Remarks
PID = volatile vapour concentration	n in ppm.											
				WATE	R OBS	SERVA	TIONS			CH	ISELLI	NG
						_						
2		Date	Time	Strike at Depth (m)	Rise to Depth (m)	Time (mins)	Flow Remarks	Casing Depth (m)	Sealed at (m)	From (m)	To (m)	Time (hh:mm)

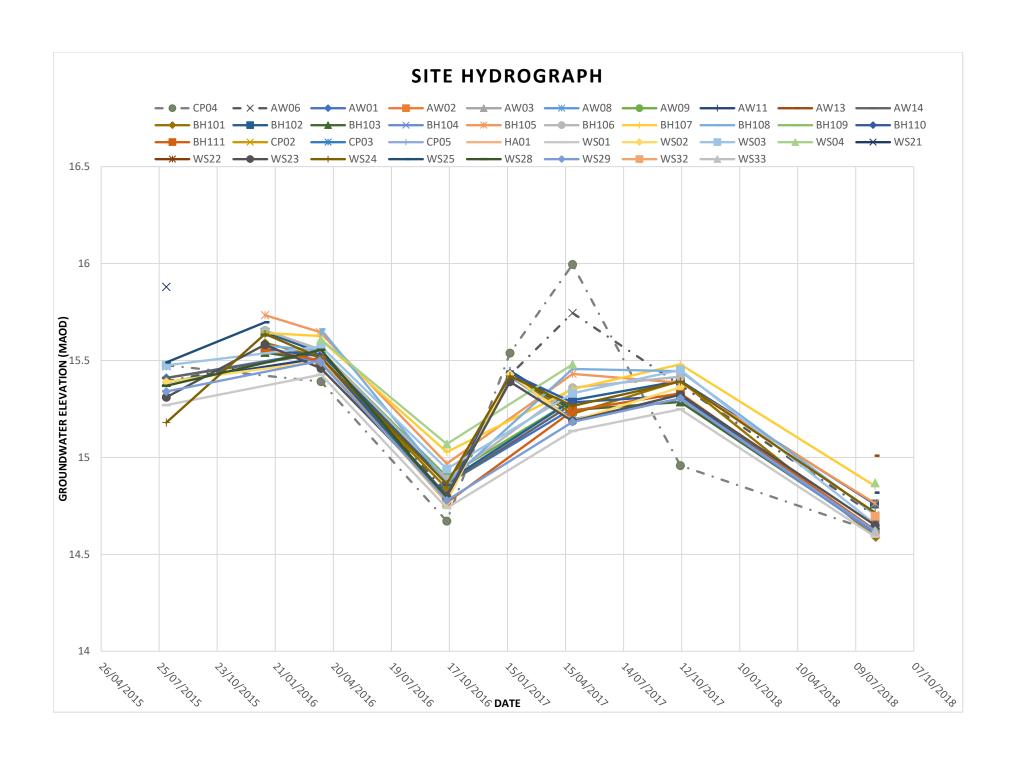
FH Great Shelford Ltd
Station Road Great Shelford - Compiled Groundwater Monitoring Data

BH Ref	Ground Elevation	Date	Groundwater Level	GW Elevation
WS03	18.7	08/08/2018	4.044	14.656
WS04	17.89	01/04/2016	2.282	15.608
WS04	17.89	13/10/2016	2.821	15.069
WS04	17.89	26/04/2017	2.41	15.48
WS04	17.89	10/10/2017	NR	-
WS04	17.89	08/08/2018	3.021	14.869
WS21	18.15	05/08/2015	2.27	15.88
WS21	18.15	10/10/2017	NR	-
WS21	18.15	08/08/2018	3.482	14.668
WS22	18.08	08/08/2018	3.392	14.688
WS23	18.01	05/08/2015	2.7	15.31
WS23	18.01	05/01/2016	2.428	15.582
WS23	18.01	01/04/2016	2.551	15.459
WS23	18.01	13/10/2016	3.212	14.798
WS23	18.01	19/01/2017	2.62	15.39
WS23	18.01	26/04/2017	2.823	15.187
WS23	18.01	10/10/2017	2.687	15.323
WS23	18.01	08/08/2018	3.36	14.65
WS24	17.98	05/08/2015	2.8	15.18
WS24	17.98	05/01/2016	2.343	15.637
WS24	17.98	01/04/2016	2.467	15.513
WS24	17.98	13/10/2016	3.116	14.864
WS24	17.98	19/01/2017	2.56	15.42
WS24	17.98	26/04/2017	2.714	15.266
WS24	17.98	10/10/2017	2.588	15.392
WS24	17.98	08/08/2018	3.265	14.715
WS25	17.97	05/08/2015	2.48	15.49
WS25	17.97	05/01/2016	2.273	15.697
WS25	17.97	10/10/2017	NR	-

Compiled GW Mon

FH Great Shelford Ltd
Station Road Great Shelford - Compiled Groundwater Monitoring Data

BH Ref	Ground Elevation	Date	Groundwater Level	GW Elevation
WS25	17.97	08/08/2018	3.152	14.818
WS28	19.04	05/08/2015	3.67	15.37
WS28	19.04	01/04/2016	3.485	15.555
WS28	19.04	13/10/2016	4.252	14.788
WS28	19.04	26/04/2017	NR	-
WS28	19.04	08/08/2018	4.41	14.63
WS29	17.96	05/08/2015	2.62	15.34
WS29	17.96	30/03/2016	2.462	15.498
WS29	17.96	01/04/2016	2.471	15.489
WS29	17.96	13/10/2016	3.182	14.778
WS29	17.96	26/04/2017	2.777	15.183
WS29	17.96	10/10/2017	2.656	15.304
WS29	17.96	08/08/2018	3.339	14.621
WS32	19.76	08/08/2018	5.063	14.697
WS33	19.22	08/08/2018	4.599	14.621



Compiled LNAPL Thickness data

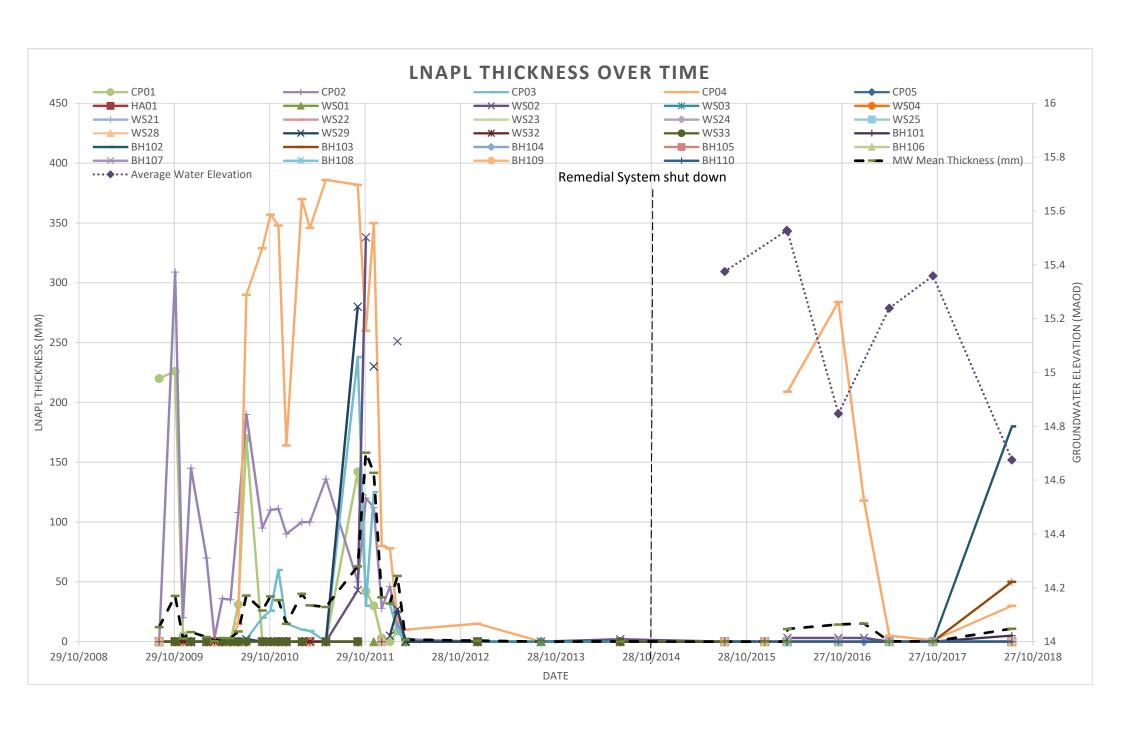
										Pre 8	& During	Remedia	tion								
	Well ID	01/09/2009	01/11/2009	01/12/2009	01/01/2010	01/03/2010	01/04/2010	01/05/2010	01/06/2010	01/07/2010	01/08/2010	01/10/2010	01/11/2010	01/12/2010	01/01/2011	01/03/2011	01/04/2011	01/06/2011	01/10/2011	01/11/2011	01/12/2011
	AW01	0	0	0	0	0	0	0	0				0		0		0	0	0		
	AW02	0	0	3	13	0	0		0	0			0					0			
	AW03	0	0	0	0	0	0	0	0	0			0		0		0	0	0		
	AW04	30	1	1	2	0	1	5	0	0			0		0		0	0	5		
Wells	AW05	40	39	0	2	0	0	2	0	0			0		0		0	0	0		
	AW06	40	13	0	0	0	0	0	0				0		0		0	0	100		
<u></u>	AW07	0	0	0	0	0	0	0	0				0		0		0	0	3		
iat	AW08	20	147	0	0	0	0	0	0	0			0				0	12	20		
Remediation	AW09	10	2	1	0	0	1	8	1	6			0					0	10		
Sen	AW10	0	0	0	0	0	0	0	0				0		0		0	0	50		
_	AW11	0	0	0	0	0	1	0		0			0		0		0	5	20		
	AW12	0	0	0	0	0	0	0	0				0		0		0	0	0		
	AW13	0	0	0	0	0	0	0	10	0			72		40		0	13	20		
	AW14	0	0	0	0	0	0	0	0				0		0		0	0	0		
	CP01	220	226	5	0	0		0	0	31	170	0	0	0	0	0	0	0	142	42	30
	CP02	0	309	20	145	70	3	36	35	108	190	95	110	111	90	100	100	136	50	120	112
	CP03	0	0	0	0	0	0	0	0	1	2	20	26	60	15	10	9	0	238	30	125
	CP04	0	0	1	0	0	0	0	0	15	290	329	357	348	164	370	346	386	382	260	350
	CP05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	HA01	0	0	0	0	0	0	0	0	0	0	0		0	0		0	0	0		
	WS01	0	0	0	0	0		0		0	0	0	0	0	0	0	0	0	0		0
	WS02	0	0		0	0		0	0	0	0	0	0	0	0	0	0	0	43	338	
	WS03	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	WS04	0	0		0	0			0	0	0		0		0		0	0	0		
	WS21	0			0	0				0	0	0		0	0		0	0	0		
	WS22																				
<u>~</u>	WS23	0			0	0				0	0	0			0		0	0	0		
Ne	WS24	0			0	0				0	0	0			0		0	0	0		
, ge	WS25	0			0	0				0	0	0		0	0			0	0		
-E	WS28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Monitoring Wells	WS29	0	0	0	0	0				0	2	0	0	0	0	0		0	280		230
Š	WS32	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0		
	WS33	0	0		0	0		0	0	0	0	0	0	0	0	0		0	0		
	BH101				'			•		Borehole	not drilled u	until Decemb	er 2015								
	BH102									Borehole	not drilled u	until Decemb	er 2015								
	BH103									Borehole	e not drilled u	until Decemb	er 2015								
	BH104									Borehole	not drilled u	until Decemb	er 2015								
	BH105									Borehole	e not drilled u	until Decemb	er 2015								
	BH106									Borehole	not drilled u	until Decemb	er 2015								
	BH107											until Decemb									
	BH108											until Decemb									
	BH109											until Decemb									
	BH110											until Decemb									
	BH111											until Decemb									
RW	/ Mean Thickness (mm)	10	14	0	1	0	0	1	1	1			5		4		0	2	18		
	V Mean Thickness (mm)	12	38	3	8	4	0	3	3	9	38	26	38	35	15	40	30	29	63	158	141
	, ,																				-

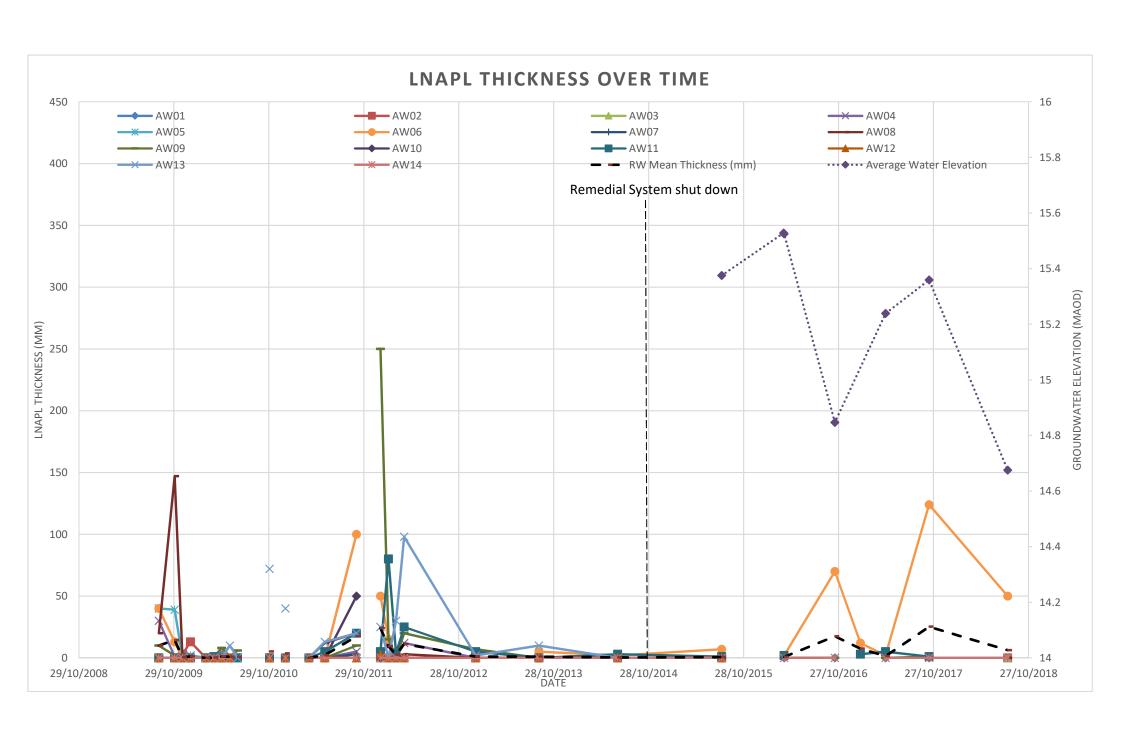
All measured thicknesses in millimetres (mm)
Wells containing measured LNAPL are highlighted red
cell blank = Well not monitored

Compiled LNAPL Thickness data

MANUS ANOS BANOS ANOS ANOS BANOS ANOS BANOS ANOS BANOS ANOS BANOS BANOS BANOS ANOS BANOS BANO					Pre & Du	uring Rem	nediation						Post	Remedia	ation			
NAMO		Well ID	01/01/2012	01/02/2012				01/09/2013	01/07/2014	05/08/2015	05/01/2016	30/03/2016	01/04/2016	13/10/2016	19/01/2017	26/04/2017	10/10/2017	08/08/2018
NAMOS 1 13 13 12 1 1 1 1 1 1 1 1		AW01	0	0	0	0	0	0	0	0			0	0		0	0	0
ANOS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		AW02	0	0	0	0	0	0	0	0								0
NAMOR SO D D D D D D D D D		AW03	0	0	0	0	0	0	0	0								0
AW11		AW04	1	13	0	12	0	0	0	0								
AW11	SIS	AW05	0	0	0	0	0	0	0	0								
AW11	Š	AW06	50	15	2	0		5	2	7			2	70	12	2	124	50
AW11	ion	AW07	0	0	0	0	0	0	0	0								0
AW11	liat	AW08	3	10	0	3	0	0	0									0
AW12	nec	AW09	250	15	0	20	7	0	0				0	0		0	1	
AW12 AW13 25 0 30 98 27 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Rer	AW10	0	0	0	0	0	0	0	0								
AW13	_	AW11	5	80	4	25	5	0	3	1			2		3	5	1	
AW14		AW12	3	0	0	0	0	0	0	0								
CP01 3		AW13	25	0	30	98	2	10	0	0								0
CP02 CP03 S1 11 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		AW14	0	0	0	0	0	0	0	0			0	0		0	0	0
CPQ3 CPQ4 80 78 19 10 15 0 0 0 0 0 0 0 209 284 118 5 1 CPQ5 HA01 HA01 HA01 HA01 HA01 HA01 HA01 HA01		CP01	3	0	9	0	0	0	0	0	0	0	0	0		0	0	0
CPP4		CP02	28	46	15	2	0	0	0	0	0							50
Note		CP03		31	9	0	0	0	0	0	0							0
HA01		CP04	80	78	19	10	15	0	0	0	0		209	284	118	5	1	30
WS01		CP05					0	0	0		0							0
NS02							0											0
NS02		WS01				0	0	0	0	0			0	0		0	0	0
NS04 NS21 NS22 NS23 NS23 NS24 NS24 NS25					251		0	0	2	0				3	3	0	0	
WS21		WS03				0	0	0	0	0	0		0	0		0	0	0
NS22		WS04					0		0		0		0	0		0		0
WS23		WS21					0		0	0	0							0
WS24 WS25		WS22																0
WS33 Beh101 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	≥	WS23					0		0	0	0		0	0	0	0	0	0
WS33 Beh101 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Ne	WS24					0		0	0	0		0	0	0	0	0	0
WS33 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	, gr	WS25					0		0	0	0							0
WS33 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ori	WS28					0		0	0	0		0	0				0
WS33 Beh101 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	i i	WS29		5	27	0	0		0	0	0	0	0	0		0	0	0
BH101 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ĕ	WS32					0		0	0	0							0
BH102 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		WS33					0		0	0								0
BH103 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0		BH101			Borehole not	drilled until D	ecember 201.	5	•	-	0	0	0	0	0	0	0	5
BH104 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		BH102			Borehole not	drilled until D	ecember 201	5		-	0	0	0	0		0	0	180
BH104 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0										-	0			0	0		0	50
BH106 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		BH104								-	0		0	0	0	0	0	0
BH107 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0										-	0	0	0	0		0	0	0
BH107 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		BH106			Borehole not i	drilled until D	ecember 201.	5		-	0	0	0	0		0	0	0
BH108 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		BH107			Borehole not i	drilled until D	ecember 201.	5		-	0	0	0	0		0	0	0
BH110 Borehole not drilled until December 2015 - 0 <td></td> <td>BH108</td> <td></td> <td></td> <td>Borehole not i</td> <td>drilled until D</td> <td>ecember 201.</td> <td>5</td> <td></td> <td>-</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>0</td> <td>0</td>		BH108			Borehole not i	drilled until D	ecember 201.	5		-	0	0	0	0		0	0	0
BH111 Borehole not drilled until December 2015 - 0 0 0 0 0 0 0 0 0 RW Mean Thickness (mm) 24 10 3 11 1 1 0 1 1 18 8 1 25		BH109			Borehole not i	drilled until D	ecember 201.	5		-	0							0
RW Mean Thickness (mm) 24 10 3 11 1 1 0 1 1 18 8 1 25		BH110			Borehole not i	drilled until D	ecember 201.	5		-	0	0	0	0	0	0	0	0
RW Mean Thickness (mm) 24 10 3 11 1 1 0 1 1 18 8 1 25		BH111			Borehole not i	drilled until D	ecember 201.	5		-	0	0	0	0		0	0	0
	RV	V Mean Thickness (mm)	24						0	1			1	18	8	1	25	6
MVW Mean I NICKNess (mm) 37 32 55 2 1 0 0 0 0 0 11 14 15 0 0	MV	W Mean Thickness (mm)	37	32	55	2	1	0	0	0	0	0	11	14	15	0	0	11

All measured thicknesses in millimetres (mm)
Wells containing measured LNAPL are highlighted red
cell blank = Well not monitored





Borehole Number	1			BH101					BH102					BH103			BH ²	104
Sample Method		Purged	Purged	Grab	Low Flow		Low Flow	Low Flow	Low Flow	Low Flow		Low Flow	Low Flow	Purged	Low Flow		Low Flow	Low Flow
Well Screen Depth (m)	wqs		3	1.5-6.0	<u> </u>				1.5-6.0		<u> </u>			1.0-6.0		<u> </u>	1.0-6.0	1.0-6.0
Sample Depth (m)		3.69	4.85	5.20	5.00		3.62	4.85	5.25	5.0		2.41	4.10	4.05	5.0		2.33	4.20
Sample Date		07/01/16	30/03/16	11/10/16	26/04/17	08/08/18	07/01/16	31/03/16	11/10/16	26/04/17	08/08/18	06/01/16	31/03/16	12/10/16	26/04/17	08/08/18	06/01/16	08/08/18
MTBE	0.015	<0.0001	<0.0001	<0.0001	<0.0001		0.001	0.0005	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	0.0003
Benzene	0.01	< 0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	0.0007	<0.0005	1	0.013	0.0083	0.0088	0.0073		0.015	<0.0005
Toluene	0.074	< 0.0005	<0.005	<0.005	<0.005		<0.0005	< 0.005	< 0.005	< 0.005	1	<0.0005	<0.005	<0.005	< 0.005	1	<0.0005	< 0.005
Ethyl benzene	0.3	<0.0005	<0.0005	<0.0005	<0.001		< 0.0005	<0.0005	<0.0005	<0.001	1	<0.0005	<0.0005	<0.0005	<0.001	1	<0.0005	<0.001
m & p Xylene	0.03	< 0.001	<0.001	<0.001	<0.002		<0.001	<0.001	0.001	< 0.002	1	< 0.001	<0.001	<0.001	< 0.002	1	<0.001	<0.002
o Xylene	0.03	<0.0005	<0.0005	<0.0005	<0.001		< 0.0005	<0.0005	<0.0005	<0.001	1	<0.0005	<0.0005	<0.0005	< 0.001	1	<0.0005	<0.001
Aliphatics C5-C6	0.01	< 0.005	<0.005	<0.005	<0.01		< 0.005	< 0.005	< 0.005	<0.01	1	< 0.005	< 0.005	< 0.005	<0.01		<0.005	<0.01
Aliphatics >C6-C8	0.01	0.029	0.017	0.049	<0.01		0.044	0.006	0.006	<0.01	1	0.049	0.031	0.049	<0.01		<0.005	<0.01
Aliphatics >C8-C10	0.01	0.44	0.095	0.2	0.24		0.27	0.055	0.093	0.22		0.22	0.072	0.26	0.09		0.12	<0.01
Aliphatics >C10-C12	0.01	0.98	0.29	0.096	0.16		0.39	<0.005	<0.005	0.078		1.5	0.13	0.29	0.14		<0.005	<0.005
Aliphatics >C12-C16	0.01	1.9	0.51	0.24	0.27		1.1	<0.01	<0.01	0.23		2.9	0.3	0.67	0.5		<0.01	<0.01
Aliphatics >C16-C21	0.01	1.1	0.23	0.14	0.14		0.82	<0.01	<0.01	0.14		1.7	0.12	0.4	0.41		<0.01	<0.01
Aliphatics >C21-C35	0.01	0.18	<0.01	<0.01	<0.01		0.07	<0.01	<0.01	<0.01		0.46	<0.01	0.06	0.06		<0.01	<0.01
Total aliphatics C5-35	-	4.63	1.14	0.73	0.81		2.69	0.06	0.1	0.67	_	6.83	0.65	1.73	1.2		0.12	<0.01
Aromatics C6-C7	0.01	<0.005	<0.005	<0.005	<0.01		<0.005	<0.005	<0.005	<0.01	_	0.011	800.0	0.008	<0.01		0.012	<0.01
Aromatics >C7-C8	0.01	<0.005	<0.005	<0.005	<0.01		<0.005	<0.005	<0.005	<0.01	_	<0.005	<0.005	<0.005	<0.01		<0.005	<0.01
Aromatics >EC8-EC10	0.01	0.016	<0.005	<0.005	<0.01		<0.005	<0.005	<0.005	<0.01		0.011	<0.005	0.027	<0.01		<0.005	<0.01
Aromatics >EC10-EC12	0.01	0.62	0.61	0.42	0.62		0.5	0.21	0.18	0.41		0.59	0.31	0.36	0.25		0.12	0.23
Aromatics >EC12-EC16	0.01	0.88	0.57	0.36	0.47		0.93	0.21	0.21	0.57		1.1	0.3	0.49	0.22		0.1	0.13
Aromatics >EC16-EC21	0.01	0.63	0.16	0.14	0.01	LNAPL	0.71	<0.01	<0.01	0.19	LNAPL	0.88	0.05	0.2	0.05	LNAPL	<0.01	<0.01
Aromatics >EC21-EC35	0.01	0.18	<0.01	<0.01	<0.01	present	0.17	<0.01	<0.01	<0.01	present	0.22	<0.01	<0.01	<0.01	present	<0.01	<0.01
Total aromatics C5-35	-	2.33	1.34	0.92	1.1		2.31	0.42	0.39	1.17		2.81	0.67	1.09	0.52		0.23	0.36
TPH C5-C35	-	6.96	2.48	1.65	1.91		5.0	0.48	0.49	1.84	-	9.64	1.32	2.82	1.72		0.35	0.36
MNA Parameters											4							
Total Dissolved Iron	-	19.0	47.0	45.0	39.0		38.0	51.0	54.0	48	4	40.0	36.0	28.0	42		27.0	-
Dissolved Manganese	-	1.4	1.6	1.3	1.3		1.8	1.9	1.9	1.8	4	0.8	0.8	0.8	0.84		1.1	
Sulphate	-	12.0	<0.05	0.5	<0.5		5.1	<0.05	1.0	<0.5	-	7.6	1.6	1.1	4.2	ŀ	<0.05	
Nitrate as N	-	<0.05	0.1	<0.05	<0.05		<0.05	<0.05	<0.05	0.08	-	0.1	<0.05	0.8	<0.05		0.1	
Manganese II Total Inorganic Carbon	-	0.5	6.1	4.0	4.2		1.8	1.9	5.5	5.4	4	4.1	0.8	2.0	4.3		3.6	-
•	-	180	180	200	190 17.0		160 14.0	140 17.0	170 18.0	170	-	190	130 15.0	26 18.0	160		150	-
Dissolved Methane Sulphide	-	6.9	8.9 <0.01	16.0						21	-	15.0			17	-	25.0	-
Dissolved Iron II	-	<0.3 <1.00	35.0	<0.01 38.0	<0.01 36.0		<0.3 2.0	<0.01 48.0	<0.01 29.0	<0.01 31	1	<0.3 34.0	<0.01 35.0	<0.01 2.4	<0.01 2.8	1	<0.3	-
Dissolved from III	1 -	19.0	12.0	7.0	36.0		36.0	3.0	25.0	17	1	6.0	1.0	25.6	39.2		2.3	
	Units	13.0	12.0	7.0	3.0		30.0	3.0	25.0	17	4	0.0	1.0	23.0	39.2	-	24.7	
In-Situ Parameters	uS/cm	1705	2173	2517	3256		1356	1747	1909	2268.6	-	339.2	1259	1357	1656.7	1	1198	1835
Electrical Conductivity Oxidation Reduction Potential	mV	143	-31	-37	-73		119	-29	-56	-76.8	-	109	-24	-53	-106	1	109	-91
Dissolved Oxygen	%	0.76	0.59	1.14	0.31		0.54	0.65	0.65	0.27	1	0.66	0.42	0.88	0.16		0.69	0.43
pH	pH units	7.8	6.5	6.4	6.7		8.0	6.4	6.4	6.68	1	8.0	6.4	6.4	6.8		8.1	6.6
Temperature	degrees C	9	12	15	11		11	13	15	11.86	1	11	11	14	11		11	20
romperature	ucyices C	9	12	ເວ				l 19	נו	11.00	I		11	14	11	l	11	20

	<u> </u>
MTBE	Methyl tertiary butyl ether
-	Not analysed/no WQS/unknown
WQS	Water Quality Standard
888	Exceeds WQS
888	Exceeds detection limit
	Unknown Well Screen Interval
	Well installed in Chalk
	River Terrace Deposits & Chalk Strata

Borehole Number				BH105					BH106					BH107					BH108		
Sample Method		Low Flow	Low Flow	Purged	Low Flow	Grab	Grab	Low Flow	Low Flow												
Well Screen Depth (m)	WQS			1.0-6.0					1.5-6.5					2.0-6.0					1.5-6.5		
Sample Depth (m)		3.07	4.60	4.75	4.50	5.00	4.13	5.35	5.80	5.00	6.10	2.29	4.00	3.80	4.00	4.00	4.08	5.30	5.65	5.0	5.90
Sample Date		05/01/16	30/03/16	11/10/16	26/04/17	09/08/18	07/01/16	30/03/16	11/10/16	26/04/17	09/08/18	05/01/16	30/03/16	11/10/16	26/04/17	07/08/18	05/01/16	30/03/16	12/10/16	26/04/17	07/08/18
MTBE	0.015	< 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0096	0.0065	0.0024	0.0025	0.0011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	< 0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzene	0.01	< 0.0005	<0.0005	<0.0005	<0.0005	<0.0005	< 0.0005	<0.0005	<0.0005	<0.0005	< 0.0005	<0.0005	<0.0005	< 0.0005	<0.0005	<0.0005	< 0.0005	<0.0005	0.0005	<0.0005	<0.0005
Toluene	0.074	<0.0005	<0.005	<0.005	< 0.005	<0.005	< 0.0005	<0.005	<0.005	<0.005	<0.005	<0.0005	< 0.005	<0.005	<0.005	<0.005	< 0.0005	<0.005	<0.005	<0.005	<0.005
Ethyl benzene	0.3	< 0.0005	<0.0005	<0.0005	<0.001	<0.001	< 0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	< 0.0005	< 0.0005	<0.001	<0.001	< 0.0005	0.001	0.0007	0.002	<0.001
m & p Xylene	0.03	<0.001	<0.001	<0.001	< 0.002	<0.002	< 0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	< 0.002	<0.002	0.019	0.012	0.006	0.03	0.005
o Xylene	0.03	<0.0005	<0.0005	<0.0005	<0.001	<0.001	< 0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	< 0.0005	< 0.0005	<0.001	<0.001	< 0.0005	<0.0005	<0.0005	<0.001	<0.001
Aliphatics C5-C6	0.01	<0.005	<0.005	<0.005	<0.01	<0.01	< 0.005	<0.005	<0.005	<0.01	<0.01	<0.005	< 0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01
Aliphatics >C6-C8	0.01	<0.005	<0.005	<0.005	<0.01	<0.01	0.01	0.016	<0.005	0.02	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	< 0.005	<0.005	<0.005	<0.01	<0.01
Aliphatics >C8-C10	0.01	<0.005	<0.005	<0.005	<0.01	<0.01	0.16	<0.005	<0.005	0.06	<0.01	<0.005	< 0.005	<0.005	<0.01	<0.01	0.082	0.067	0.045	0.17	<0.01
Aliphatics >C10-C12	0.01	<0.005	<0.005	<0.005	< 0.005	<0.005	< 0.005	<0.005	<0.005	<0.005	0.33	<0.005	< 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Aliphatics >C12-C16	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.33	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C16-C21	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C21-C35	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total aliphatics C5-35	-	<0.01	<0.01	<0.01	<0.01	<0.01	0.17	0.02	<0.01	0.08	0.73	<0.01	<0.01	<0.01	<0.01	<0.01	0.08	0.07	0.05	0.17	<0.01
Aromatics C6-C7	0.01	<0.005	<0.005	<0.005	<0.01	<0.01	< 0.005	<0.005	<0.005	<0.01	<0.01	<0.005	< 0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01
Aromatics >C7-C8	0.01	<0.005	<0.005	<0.005	<0.01	<0.01	< 0.005	<0.005	<0.005	<0.01	<0.01	<0.005	< 0.005	< 0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01
Aromatics >EC8-EC10	0.01	<0.005	<0.005	<0.005	<0.01	<0.01	0.008	<0.005	<0.005	<0.01	<0.01	<0.005	< 0.005	<0.005	<0.01	<0.01	0.022	0.017	0.01	0.05	<0.01
Aromatics >EC10-EC12	0.01	0.089	<0.005	<0.005	< 0.005	<0.005	0.25	0.053	0.1	0.12	0.31	<0.005	< 0.005	<0.005	<0.005	<0.005	0.18	0.046	0.031	0.42	0.22
Aromatics >EC12-EC16	0.01	0.06	<0.01	<0.01	<0.01	<0.01	0.23	0.03	0.1	0.11	0.36	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	0.01	<0.01	0.17	0.15
Aromatics >EC16-EC21	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC21-EC35	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total aromatics C5-35	-	0.15	<0.01	<0.01	<0.01	<0.01	0.49	0.08	0.2	0.23	0.73	<0.01	<0.01	<0.01	<0.01	<0.01	0.25	0.07	0.04	0.64	0.37
TPH C5-C35	-	0.15	<0.01	<0.01	<0.01	<0.01	0.66	0.1	0.2	0.31	1.46	<0.01	<0.01	<0.01	<0.01	<0.01	0.33	0.14	0.09	0.81	0.37
MNA Parameters																					
Total Dissolved Iron	-	3.1	0.6	25.0	12	-	24.0	27.0	32.0	30	-	1.5	0.1	<0.02	0.03	-	13.0	16.0	13.0	29	-
Dissolved Manganese	-	0.9	0.7	0.9	0.98	-	2.0	2.1	2.1	2.1	-	1.3	0.1	<0.002	<0.002	-	0.8	0.7	0.6	0.63	-
Sulphate	-	32.0	24.0	36.0	180	-	0.8	0.2	0.9	2.1	-	46.0	54.0	56.0	52	-	16.0	69.0	50.0	2.2	-
Nitrate as N	-	0.4	0.1	<0.05	<0.05	-	<0.05	0.1	0.1	0.08	-	1.5	4.9	11.0	7.8	-	<0.05	0.1	<0.05	<0.05	-
Manganese II	-	1.2	0.9	2.9	1.7	-	1.9	4.5	4.4	4.4	-	1.6	0.1	0.1	<0.02	-	1.8	1.9	1.4	3.2	-
Total Inorganic Carbon	-	170	150	140	140	-	150	150	140	150	-	88	67	62	66	-	190	180	24	200	-
Dissolved Methane	-	1.9	0.7	5.7	1.9	-	13.0	14.0	18.0	17	-	<0.001	<0.001	0.01	0.056	-	6.8	4.4	5.4	12	-
Sulphide	-	<0.3	<0.01	<0.01	<0.01	-	<0.3	<0.01	<0.01	<0.01	-	<0.3	<0.01	<0.01	<0.01	-	<0.3	<0.01	<0.01	<0.01	-
Dissolved Iron II	-	0.5	0.2	2.8	2.2	-	1.4	22.0	2.3	2.5	-	0.1	<0.02	0.1	<0.02	-	1.5	15.0	2.5	27	-
Dissolved Iron III	-	2.6	0.4	22.2	9.8	-	22.6	5.0	29.7	27.5	-	1.4	0.1	<0.04	0.03	-	11.5	1.0	10.5	2	-
In-Situ Parameters	Units																		<u> </u>		
Electrical Conductivity	uS/cm	945	919	848	1306	1099	769	832	915	1068	1072	506	569	550	682	771	301.6	1031	1094	1295	1350
Oxidation Reduction Potential	mV	163	78	-52	-83	-110	112	-28	-59	-94	-104	155	135	133	2	55	132	-15	-32	-72	-67
Dissolved Oxygen	%	0.6	0.8	1.14	0.24	0.33	0.68	0.74	0.99	0.42	0.43	0.56	2.24	4.42	3.92	4.98	0.58	0.81	0.73	1.77	0.37
pH	pH units	8.4	6.7	6.6	6.9	6.8	8.5	6.6	6.6	6.8	6.8	8.5	7.0	6.9	7.2	7.1	8.2	6.5	6.5	6.7	6.6
Temperature	degrees C	11	11	13	11	17	11	11	15	12	17	11	10	13	10	21	11	11	13	11	20

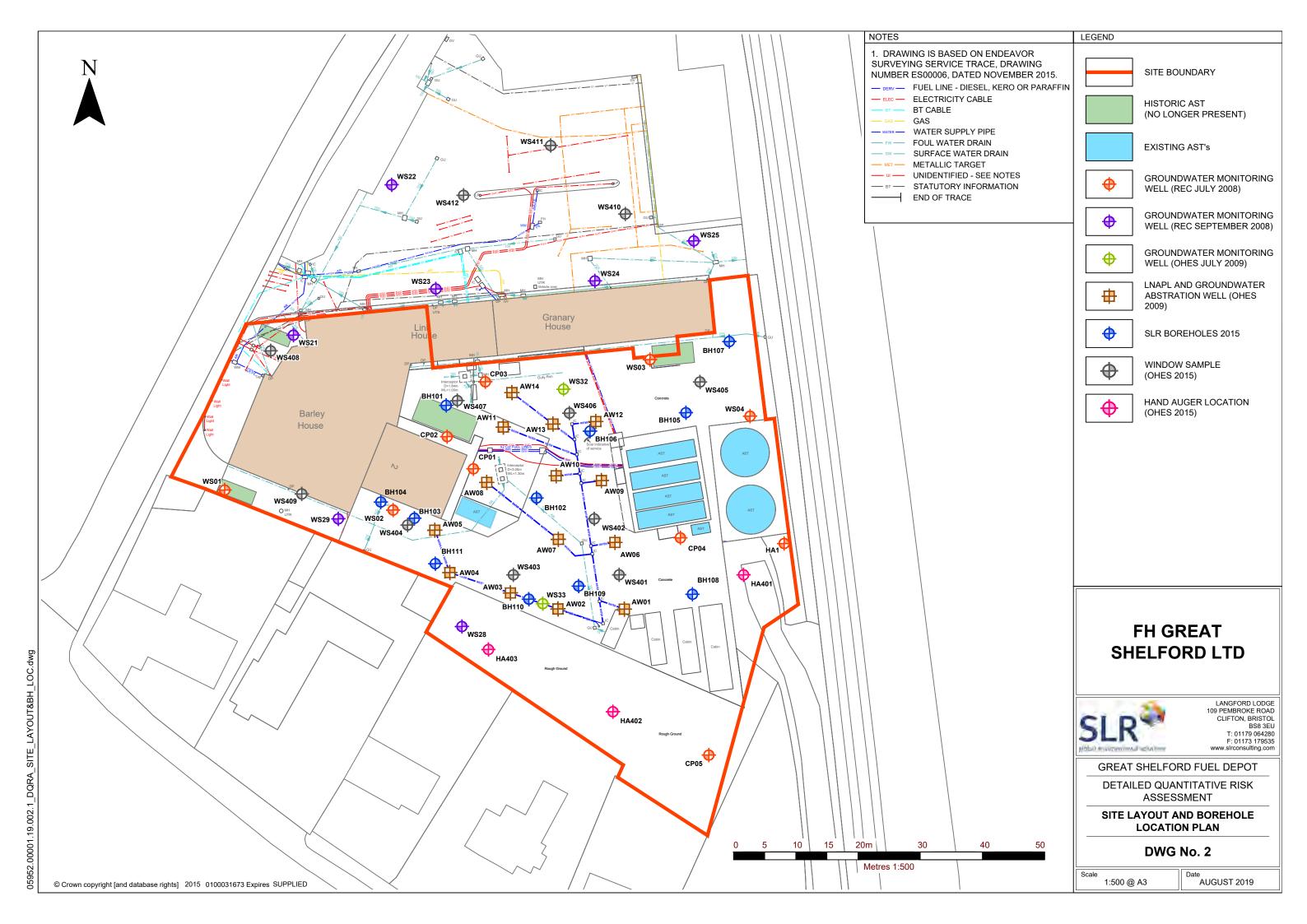
_
Methyl tertiary butyl ether
Not analysed/no WQS/unknown
Water Quality Standard
Exceeds WQS
Exceeds detection limit
Unknown Well Screen Interval
Well installed in Chalk
River Terrace Deposits & Chalk Strata

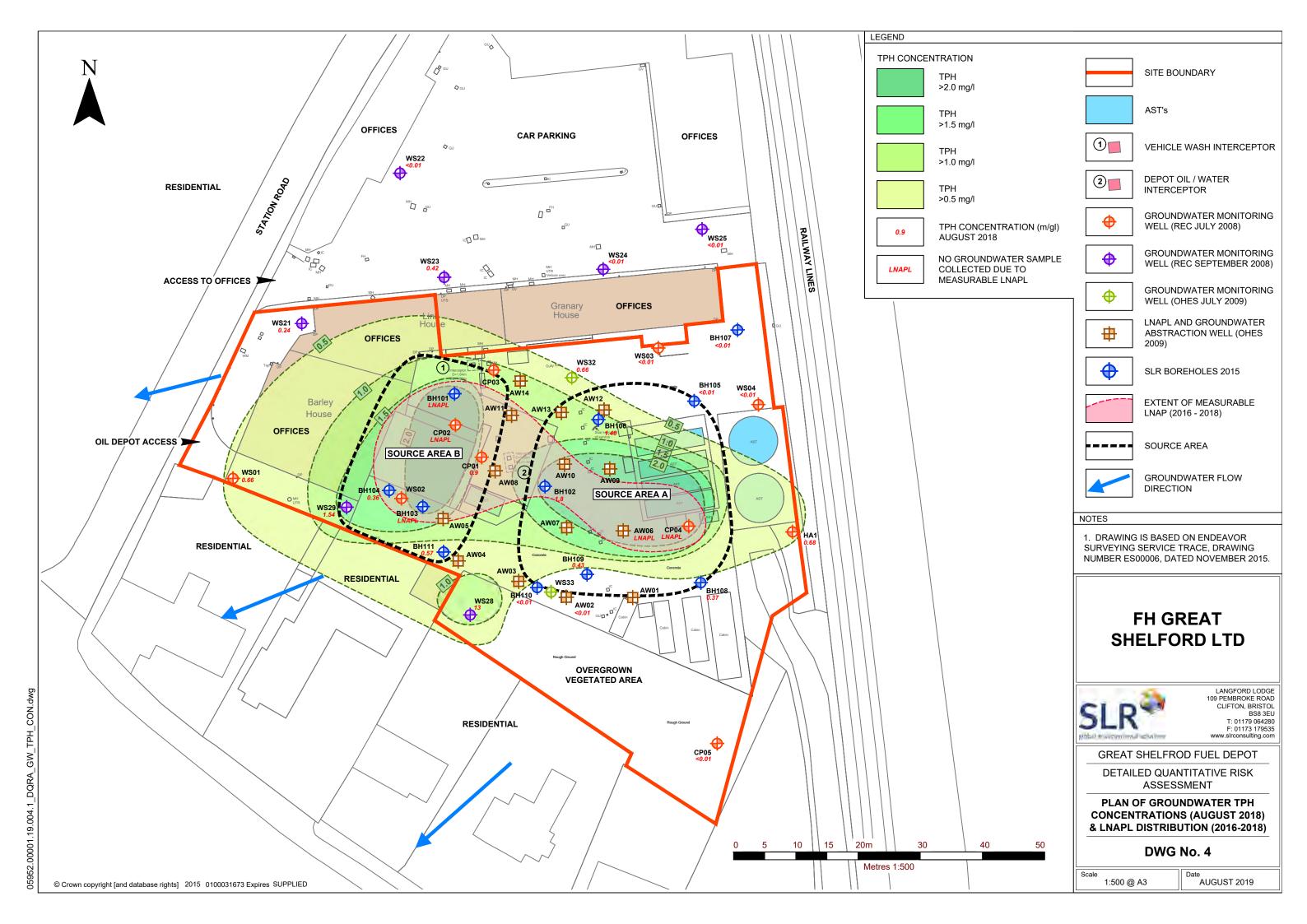
Borehole Number		BH ²	109			BH110					BH111			1	CF	P01		CP05	HA01	WS01	WS03	WS04
Sample Method	1	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Grab	Low Flow	Grab	Grab	Low Flow	Low Flow	Low Flow
Well Screen Depth (m)	WQS	1.0-	-6.0	,		1.5-6.0					1.0-6.0				4.0	-6.0	•	3.0-7.0	1.0-4.0	2.0-4.0	4.0-6.0	4.0-6.0
Sample Depth (m)		3.55	5.10	3.63	4.80	5.15	4.80	4.90	2.56	3.90	4.20	5.0	4.50	4.90	5.25	5.2	5.4	4.7	3.0	3.9	4.0	4.0
Sample Date		05/01/16	09/08/18	06/01/16	31/03/16	12/10/16	26/04/17	09/08/18	06/01/16	31/03/16	12/10/16	26/04/17	08/08/18	31/03/16	11/10/16	27/04/17	08/08/18	09/08/18	09/08/18	09/08/18	09/08/18	09/08/18
MTBE	0.015	<0.0001	<0.0001	<0.0001	0.0006	0.0006	0.0007	0.0007	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.0005	0.001	0.0004	0.0009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzene	0.01	< 0.0005	<0.0005	0.004	0.0021	<0.0005	<0.0005	<0.0005	0.0013	<0.0005	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	< 0.0005	<0.0005	< 0.0005
Toluene	0.074	<0.0005	< 0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.005	<0.005	< 0.005	<0.005	< 0.005	<0.005	0.005	<0.005	< 0.005	<0.005	< 0.005	<0.005	< 0.005
Ethyl benzene	0.3	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
m & p Xylene	0.03	<0.001	< 0.002	<0.001	<0.001	<0.001	< 0.002	<0.002	< 0.001	<0.001	<0.001	<0.002	<0.002	<0.001	0.001	<0.002	<0.002	< 0.002	< 0.002	< 0.002	< 0.002	<0.002
o Xylene	0.03	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	< 0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics C5-C6	0.01	< 0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	< 0.005	< 0.005	<0.005	<0.01	<0.01	< 0.005	< 0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C6-C8	0.01	<0.005	<0.01	0.046	<0.005	<0.005	<0.01	<0.01	0.032	< 0.005	0.033	<0.01	<0.01	0.03	0.008	0.42	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10	0.01	0.14	<0.01	0.19	<0.005	<0.005	<0.01	<0.01	0.34	0.091	0.082	<0.01	<0.01	0.057	0.11	5.8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12	0.01	0.1	<0.005	0.025	<0.005	<0.005	<0.005	<0.01	0.14	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	8.4	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Aliphatics >C12-C16	0.01	0.38	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	0.29	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C16-C21	0.01	0.27	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C21-C35	0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	2.8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total aliphatics C5-35	-	0.94	<0.01	0.3	<0.01	<0.01	<0.01	<0.01	0.86	0.09	0.12	<0.01	<0.01	0.09	0.12	42.42	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics C6-C7	0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	< 0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C7-C8	0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC8-EC10	0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01	0.009	<0.005	<0.005	<0.01	<0.01	<0.005	0.013	0.17	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC10-EC12	0.01	0.36	0.2	0.13	0.28	0.054	0.12	<0.005	0.36	0.36	0.2	0.34	0.42	0.33	0.23	3.3	0.52	<0.005	0.22	0.4	<0.005	<0.005
Aromatics >EC12-EC16	0.01	0.48	0.2	0.07	0.12	0.02	0.05	<0.01	0.26	0.17	0.08	0.15	0.15	0.32	0.27	9.2	0.34	<0.01	0.32	0.26	<0.01	<0.01
Aromatics >EC16-EC21	0.01	0.26	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	8.3	0.04	<0.01	0.14	<0.01	<0.01	<0.01
Aromatics >EC21-EC35	0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	2.7	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total aromatics C5-35	-	1.14	0.43	0.2	0.4	0.07	0.17	<0.01	0.63	0.53	0.28	0.49	0.57	0.65	0.53	23.67	0.9	<0.01	0.68	0.66	<0.01	<0.01
TPH C5-C35	-	2.08	0.43	0.5	0.4	0.07	0.17	<0.01	1.49	0.62	0.4	0.49	0.57	0.74	0.65	66.09	0.9	<0.01	0.68	0.66	<0.01	<0.01
MNA Parameters																						
Total Dissolved Iron	-	0.5	-	28.0	40.0	8.6	27	-	26.0	29.0	37.0	40	-	57.0	65.0	58.0	-	-	-	-	-	_
Dissolved Manganese	-	1.0	-	0.9	0.8	0.4	0.58	-	0.7	0.7	0.8	0.91	-	1.6	1.9	1.6	-	-	-	-	-	 -
Sulphate	-	120.0	-	7.2	4.5	34.0	7.7	-	<0.05	0.1	1.0	<0.5	-	<0.05	<0.5	<0.5	-	-	-	-	-	↓
Nitrate as N	-	22.0	-	<0.05	<0.05	<0.05	<0.05	-	0.1	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	-	-	-	-	↓
Manganese II	-	1.8	-	3.7	0.7	0.8	3.4	-	2.8	0.7	3.3	4.2	-	1.5	6.2	6.1	-	-	-	-	-	 -
Total Inorganic Carbon	-	200	-	210	160	19	180	-	140	120	14	160	-	160	170	190	-	-	-	-	-	
Dissolved Methane	-	0.7	-	11.0	12.0	3.7	9.9	-	11.0	12.0	18.0	16.0	-	23.0	19.0	18	-	-	-	-	-	
Sulphide	-	<0.3	-	<0.3	<0.01	<0.01	<0.01	-	<0.3	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	-	-	-	-	 -
Dissolved Iron II	-	0.1	-	24.0	39.0	1.9	26	-	23.0	29.0	2.3	1.5	-	54.0	2.3	2.9	-	<u> </u>	-	-	-	
Dissolved Iron III	-	0.4	-	4.0	1.0	6.7	1	-	3.0	<0.50	34.7	38.5	-	3.0	62.7	55.1	-	-	-	-	-	
In-Situ Parameters	Units		20.12	1122	4000	4.45.4	470.	202-			44	40=4	4000	400-	4.45=		4655			000		
Electrical Conductivity	uS/cm	377	2842	1138	1323	1434	1791	2307	975	982	1415	1671	1928	1265	1487	-	1855	-	-	800	-	738
Oxidation Reduction Potential	mV	174	-54	130	-8	-6	-78	-66	124	-37	-54	-91	-91	-21	-52	-	-80.3	-	-	-118	-	43
Dissolved Oxygen	%	0.6	0.26	0.65	0.59	0.94	0.2	0.44	0.61	0.59	0.45	0.14	0.41	0.49	0.63	-	0.43	-	-	0.39	-	1.89
pH -	pH units	7.8	6.6	8.1	6.4	6.5	6.7	6.5	8.1	6.5	6.6	6.8	6.6	6.3	6.4	-	6.5	-	-	7.1	-	7.1
Temperature	degrees C	11	14	11	11	13	11	14	11	10	14	10.72	18	12	15	-	17.9	-	-	17.4	-	18.74

	3
MTBE	Methyl tertiary butyl ether
-	Not analysed/no WQS/unknown
WQS	Water Quality Standard
888	Exceeds WQS
888	Exceeds detection limit
	Unknown Well Screen Interval
	Well installed in Chalk
	River Terrace Deposits & Chalk Strata

Borehole Number		WS	321	WS22	WS23	WS	24	WS	S25		WS28		WS29				WS32	WS33		AW06	
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	GRAB	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Well Screen Depth (m)	WQS	4.0-	-5.0	1.0-5.0	3.0-5.0	3.0-	5.0	2.0-	-4.0		3.3-5.3			3.0-	-5.0		-	-		-	
Sample Depth (m)		2.53	4.2	4.3	4.3	2.34	4.10	2.27	3.50	4.40	5.45	4.70	4.00	4.10	5.0	3.8	5.50	3.10	6.30	5.50	5.0
Sample Date		07/01/16	07/08/18	07/08/18	07/08/18	07/01/16	07/08/18	07/01/16	07/08/18	01/04/16	13/10/16	09/08/18	31/03/16	12/10/16	26/04/17	09/08/18	09/08/18	09/08/18	01/04/16	13/10/16	26/04/17
MTBE	0.015	<0.0001	<0.0001	<0.0001	< 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.0009	0.0006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	0.0025	0.0072	0.0014
Benzene	0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0014	<0.0005
Toluene	0.074	<0.0005	<0.005	<0.005	<0.005	<0.0005	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	< 0.005	<0.005	<0.005	<0.005	<0.005
Ethyl benzene	0.3	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001
m & p Xylene	0.03	<0.001	< 0.002	< 0.002	< 0.002	<0.001	< 0.002	<0.001	<0.002	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.002
o Xylene	0.03	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	0.0009	<0.001
Aliphatics C5-C6	0.01	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.01
Aliphatics >C6-C8	0.01	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.01	0.023	0.034	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.01
Aliphatics >C8-C10	0.01	0.13	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	<0.01	0.23	0.058	0.6	0.17	0.11	0.06	<0.01	<0.01	<0.01	<0.005	0.062	<0.01
Aliphatics >C10-C12	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.069	<0.005	0.19	0.13	4.2	<0.005	0.33	0.3	<0.005	0.16	<0.005	0.032	<0.005	0.43
Aliphatics >C12-C16	0.01	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	0.36	0.25	5.5	0.11	1.2	0.9	<0.01	0.21	<0.01	0.22	<0.01	1.9
Aliphatics >C16-C21	0.01	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	0.02	1.3	0.09	0.84	0.59	<0.01	0.12	<0.01	0.28	<0.01	2.5
Aliphatics >C21-C35	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.25	<0.01	0.18	0.08	<0.01	<0.01	<0.01	0.11	<0.01	0.79
Total aliphatics C5-35	-	0.4	<0.01	<0.01	<0.01	<0.01	<0.01	0.1	<0.01	0.82	0.46	11.85	0.39	2.69	1.93	<0.01	0.49	<0.01	0.64	0.06	5.62
Aromatics C6-C7	0.01	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.01
Aromatics >C7-C8	0.01	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.01
Aromatics >EC8-EC10	0.01	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	0.005	<0.01	0.007	0.006	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.01
Aromatics >EC10-EC12	0.01	0.041	0.13	<0.005	0.23	0.042	<0.005	0.061	<0.005	0.22	0.14	0.62	0.45	0.35	0.31	0.99	0.11	<0.005	0.15	0.16	0.26
Aromatics >EC12-EC16	0.01	0.09	0.11	<0.01	0.15	0.08	<0.01	<0.01	<0.01	0.24	0.19	1	0.34	0.58	0.39	0.52	0.06	<0.01	0.28	0.2	1.1
Aromatics >EC16-EC21	0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.38	<0.01	0.39	0.25	0.03	<0.01	<0.01	0.11	<0.01	1.7
Aromatics >EC21-EC35	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	80.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.4
Total aromatics C5-35	-	0.13	0.24	<0.01	0.42	0.12	<0.01	0.06	<0.01	0.46	0.34	2.06	0.8	1.41	0.95	1.54	0.17	<0.01	0.54	0.36	3.46
TPH C5-C35	-	0.53	0.24	<0.01	0.42	0.12	<0.01	0.16	<0.01	1.28	8.0	13.91	1.19	4.1	2.88	1.54	0.66	<0.01	1.18	0.42	9.08
MNA Parameters		0.7				4.0		4.0		4.0	0.0		40.0	47.0	47.0				00.0	50.0	00.0
Total Dissolved Iron	-	0.7	-	-	-	1.0	-	1.3	-	1.2	3.0	-	13.0	17.0	17.0	-	-	-	62.0	50.0	60.0
Dissolved Manganese	-	0.2	-	-	-	0.8	-	0.5	-	0.2	0.3	-	0.9	1.0	1.0	-	-	-	1.5	1.3	1.5
Sulphate	<u>-</u>	23.0 0.9	-	-	-	85.0 0.3	-	42.0	-	44.0	38.0	-	<0.05	1.0	<0.5	-	-	-	1.8	<0.5 0.1	0.9
Nitrate as N Manganese II	-	0.9	_		-	0.3	-	4.5 0.5	-	0.5 0.2	0.2 0.5		<0.05 0.9	<0.05 2.1	<0.05 2.7	-	-	-	0.1 5.9	3.7	<0.05 4.2
Total Inorganic Carbon	-	74				100		49		100	130		140	16	170	_	_		140	140	150.0
Dissolved Methane	-	0.01	-		-	0.6		0.01		0.4	0.8		21.0	24.0	26.0	_	-	-	16.0	16.0	21.0
Sulphide	-	<0.3	_		_	<0.3		<0.3	-	<0.01	<0.01		<0.01	<0.01	<0.01				<0.01	<0.01	<0.01
Dissolved Iron II	-	0.0		_	_	0.2		<0.02		0.8	0.7	_	13.0	14.0	2.3	_	_		59.0	2.1	57.0
Dissolved Iron III	-	0.6	_	_	_	0.8	_	1.3	-	0.4	2.3	-	<0.50	3.0	14.7	_	-	-	3.0	47.9	3.0
In-Situ Parameters	Units										•				1-7.1						0.0
	uS/cm	1165	2371	1187	1146	666	1102.6	615	810.6	704	913	_	1352	1481	1764	1974	1683.8	2594.1	1424	1071	1765.9
·	mV	169	-130	53	-101	74	-1	83	69	83	-57	_	92	-40	-76	-65	-114	-68	-43	-86	-119
Dissolved Oxygen	%	0.65	0.31	5.52	0.29	0.94	0.5	0.68	6.51	0.67	1.08	_	0.93	0.53	0.21	0.46	0.36	0.69	0.65	0.78	0.19
, 0	pH units	7.9	6.9	7.1	7.0	8.1	7.0	8.2	7.3	6.6	6.6	_	6.4	6.5	6.8	6.6	6.9	6.6	6.5	6.5	6.8
<u>'</u>	degrees C	7	23.8	21.15	17.89	6.8	18.5	6.8	24.7	11	12	_	10	15	11	17	17	14	12	14	11

MTBE	Methyl tertiary butyl ether
-	Not analysed/no WQS/unknown
WQS	Water Quality Standard
888	Exceeds WQS
888	Exceeds detection limit
	Unknown Well Screen Interval
	Well installed in Chalk
	River Terrace Deposits & Chalk Strata







Karen Pell-Coggins

South Cambridgeshire District Council
Development Control
South Cambridgeshire Hall (6010)
Cambourne Business Park

Cambourne Cambridge CB3 6EA Our ref:

AC/2019/129012/01-L01

Your ref: s/3809/19

Date:

17 December 2019

Dear Sir/Madam

DEMOLITION OF EXISTING BUILDINGS AND STRUCTURES (EX' FUEL DEPOT) AND THE ERECTION OF A 63-BED CARE HOME (USE CLASS C2) WITH EXTERNAL AMENITY SPACE, ACCESS, CAR PARKING, LANDSCAPING AND OTHER ASSOCIATED WORKS. 2, STATION ROAD, GREAT SHELFORD, CAMBRIDGE, CAMBRIDGESHIRE, CB22 5LR.

Thank you for your consultation.

Site Specific comments.

The site is underlain by River Terrace Deposits Secondary A Aquifer which in turn overlies the Grey Chalk Subgroup Principal Aquifer. Secondary A aquifers are permeable geological strata capable of supporting water supplies at a local rather than strategic scale, and often form an important source of base flow to rivers, wetlands and lakes and private water supplies in rural areas. Principal aquifers are geological strata that exhibit high permeability and provide a high level of water storage. They support water supply and river base flow on a strategic scale. The site is not located within a groundwater source protection zone (SPZ) meaning that it does not lie within the catchment of a protected groundwater abstraction used for water supply. The site is considered to be of high sensitivity and could present potential pollutant/contaminant linkages to controlled waters.

Environment Agency position.

Whilst the Agency has no objection in principle to the proposed development we wish to offer the following recommendations and informatives.

We are reliant on the accuracy and completeness of the reports in undertaking our review, and can take no responsibility for incorrect data or interpretation made by the authors.

Groundwater & Contaminated Land response:

Based on the information provided, we do not consider this proposal to be high priority and we do not have the resource to review these documents at this time. Therefore we will not be providing detailed site-specific advice or comments with regard to land contamination issues for this site at this time.

The developer should address risks to controlled waters from contamination at the site, following the requirements of the National Planning Policy Framework and the Environment

Agency Guiding Principles for Land Contamination.

Notwithstanding the above, we note the reported presence of residual LNAPL beneath the site which has been indicated to be potentially mobile. On this basis we would recommend remediation works to reduce the potential risks to controlled waters, such as source reduction or a barrier to prevent off-site migration.

General Advice to Applicant – Groundwater & Contaminated land. We recommend that developers should:

- Refer to our <u>Groundwater Protection</u> webpages, which include the <u>Groundwater</u> Protection Position Statements;
- Follow the <u>Land Contamination</u>: <u>Risk Management</u> guidance when dealing with land affected by contamination;
- Refer to the <u>CL:AIRE Water and Land Library (WALL)</u> which includes the <u>Guiding Principles for Land Contamination</u> for the type of information that we require in order to assess risks to controlled waters from the site. The Local Authority can advise on risk to other receptors, for example human health;
- 4. Refer to our Land Contamination Technical Guidance;
- Refer to Position Statement on the Definition of Waste: Development Industry Code of Practice;
- 6. Refer to British Standards BS 5930:1999 A2:2010 Code of practice for site investigations and BS10175:2011 A1: 2013 Investigation of potentially contaminated sites code of practice
 Refer to our Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination National Groundwater & Contaminated Land Centre Project NC/99/73. The selected method, including environmental mitigation measures, should be presented in a 'Foundation Works Risk Assessment Report', guidance on producing this can be found in Table 3 of 'Piling Into Contaminated Sites';
- Refer to our <u>Good Practice for Decommissioning Boreholes and Wells</u>.
 Refer to our <u>Dewatering building sites and other excavations: environmental permits</u> guidance when temporary dewatering is proposed.

Other Environmental Informatives and Advice.

Surface Water Drainage and Infiltration Sustainable Drainage Systems (SuDS): All surface water from roofs shall be piped direct to an approved surface water system using sealed downpipes. Open gullies should not be used.

Only clean, uncontaminated surface water should be discharged to any soakaway, watercourse or surface water sewer.

The water environment is potentially vulnerable and there is an increased potential for pollution from inappropriately located and/or designed infiltration (SuDS). We consider any infiltration (SuDS) greater than 2.0 m below ground level to be a deep system and are generally not acceptable. All infiltration SuDS require a minimum of 1.2 m clearance between the base of infiltration SuDS and peak seasonal groundwater levels. All need to meet the criteria in our Groundwater Protection: Principles and Practice (GP3) position statements G1 to G13 which can be found here:

https://www.gov.uk/government/collections/groundwater-protection. In addition, they must not be constructed in ground affected by contamination and if the use of deep bore soakaways is proposed, we would wish to be re-consulted. The proposals will need to comply with our <u>Groundwater protection position statements</u> G1 and G9 to G13.

Pollution Control:

Surface water from roads and impermeable vehicle parking areas shall be discharged via trapped gullies.

Prior to being discharged into any watercourse, surface water sewer or soakaway system, all surface water drainage from lorry parks and/or <u>impermeable</u> parking areas for fifty car park spaces or more and hardstandings should be passed through an oil interceptor designed compatible with the site being drained. Roof water shall not pass through the interceptor.

Site operators should ensure that there is no possibility of contaminated water entering and polluting surface or underground waters.

Foul Water Drainage:

Foul water drainage (and trade effluent where appropriate) from the proposed development should be discharged to the public foul sewer, with the prior approval of AWS, unless it can be satisfactorily demonstrated that a connection is not reasonably available.

Anglian Water Services Ltd. should be consulted by the Local Planning Authority and be requested to demonstrate that the sewerage and sewage disposal systems serving the development have sufficient capacity to accommodate the additional flows, generated as a result of the development, without causing pollution or flooding. If there is not capacity in either of the sewers, the Agency must be reconsulted with alternative methods of disposal.

General Informatives:

Notwithstanding the provision of the Town and Country Planning General Permitted Development Order 1995 (or any order revoking or re-enacting that Order), any oil storage tank shall be sited on an impervious base and surrounded by oil tight bunded walls with a capacity of 110% of the storage tank, to enclose all filling, drawing and overflow pipes. The installation must comply with Control of Pollution Regulations 2001, and Control of Pollution (Oil Storage) Regulations 2001.

Site operators should ensure that there is no possibility of contaminated water entering and polluting surface or underground waters.

Conservation:

Opportunities should be provided for wildlife habitat enhancement through enlargement and/or appropriate management of existing habitats and through creation of new habitats.

De Watering:

There have been changes to the licensing process for de-watering purposes. A provision of the Water Act 2003 was that abstraction of water for de-watering purposes would require an abstraction licence. This is provision is now being implemented and we are inviting applications from existing abstractors from January 2018. There will be a transitional period where abstractors will have up to two years to apply for a licence of a previously exempt activity. When the 2 year application period has closed the Environment Agency can take up to a further 3 years to determine any application.

More information on this and how to apply for a de-watering licence can be found on our website using the below link: https://www.gov.uk/guidance/apply-for-a-new-abstraction-licence-for-a-currently-exempt-abstraction

Yours faithfully

Mr. T.G. Waddams Planning Liaison

Direct e-mail planning.brampton@environment-agency.gov.uk

Please note - Our current hourly charge for pre application assessments is currently £100 + VAT

Environment Agency, East Anglia Area (West), Bromholme Lane, Brampton, Huntingdon, Cambs. PE28 4NE. www.gov.uk/environment-agency



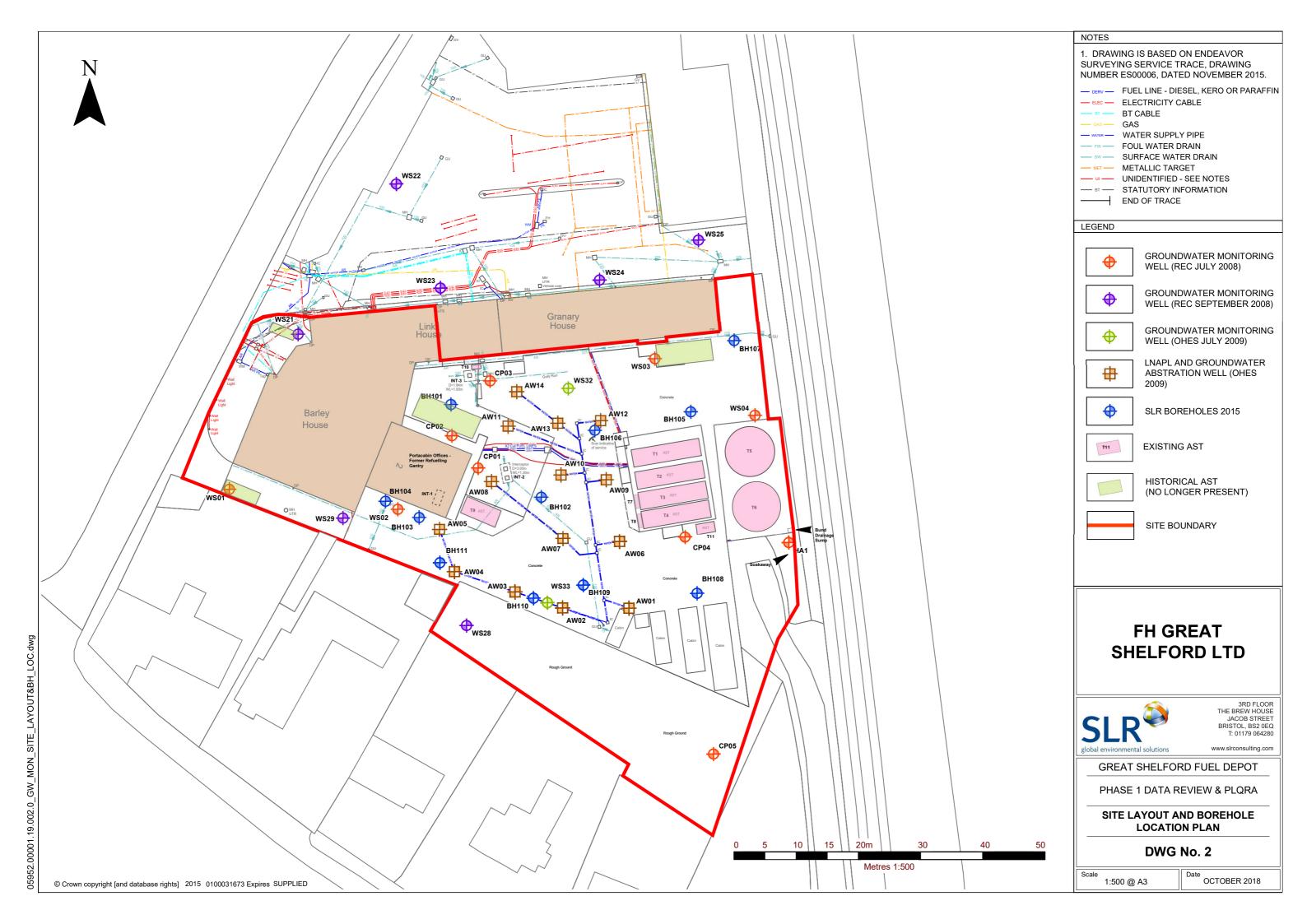
Appendix D SLR report extracts

FUEL DEPOT, 2 STATION ROAD, GREAT SHELFORD

Phase 1 Data Review and Preliminary Land Quality
Assessment

Prepared for: FH Great Shelford Ltd





FH Great Shelford Ltd
Station Road Great Shelford - Compiled Groundwater Monitoring Data

BH Ref	Ground Elevation	Date	Groundwater Level	GW Elevation
WS03	18.7	08/08/2018	4.044	14.656
WS04	17.89	01/04/2016	2.282	15.608
WS04	17.89	13/10/2016	2.821	15.069
WS04	17.89	26/04/2017	2.41	15.48
WS04	17.89	10/10/2017	NR	-
WS04	17.89	08/08/2018	3.021	14.869
WS21	18.15	05/08/2015	2.27	15.88
WS21	18.15	10/10/2017	NR	-
WS21	18.15	08/08/2018	3.482	14.668
WS22	18.08	08/08/2018	3.392	14.688
WS23	18.01	05/08/2015	2.7	15.31
WS23	18.01	05/01/2016	2.428	15.582
WS23	18.01	01/04/2016	2.551	15.459
WS23	18.01	13/10/2016	3.212	14.798
WS23	18.01	19/01/2017	2.62	15.39
WS23	18.01	26/04/2017	2.823	15.187
WS23	18.01	10/10/2017	2.687	15.323
WS23	18.01	08/08/2018	3.36	14.65
WS24	17.98	05/08/2015	2.8	15.18
WS24	17.98	05/01/2016	2.343	15.637
WS24	17.98	01/04/2016	2.467	15.513
WS24	17.98	13/10/2016	3.116	14.864
WS24	17.98	19/01/2017	2.56	15.42
WS24	17.98	26/04/2017	2.714	15.266
WS24	17.98	10/10/2017	2.588	15.392
WS24	17.98	08/08/2018	3.265	14.715
WS25	17.97	05/08/2015	2.48	15.49
WS25	17.97	05/01/2016	2.273	15.697
WS25	17.97	10/10/2017	NR	-

Compiled GW Mon

FH Great Shelford Ltd
Station Road Great Shelford - Compiled Groundwater Monitoring Data

BH Ref	Ground Elevation	Date	Groundwater Level	GW Elevation
WS25	17.97	08/08/2018	3.152	14.818
WS28	19.04	05/08/2015	3.67	15.37
WS28	19.04	01/04/2016	3.485	15.555
WS28	19.04	13/10/2016	4.252	14.788
WS28	19.04	26/04/2017	NR	-
WS28	19.04	08/08/2018	4.41	14.63
WS29	17.96	05/08/2015	2.62	15.34
WS29	17.96	30/03/2016	2.462	15.498
WS29	17.96	01/04/2016	2.471	15.489
WS29	17.96	13/10/2016	3.182	14.778
WS29	17.96	26/04/2017	2.777	15.183
WS29	17.96	10/10/2017	2.656	15.304
WS29	17.96	08/08/2018	3.339	14.621
WS32	19.76	08/08/2018	5.063	14.697
WS33	19.22	08/08/2018	4.599	14.621