TMO GW Discharge Risk Assessment
Temporary Marine Outfall

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Notice

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Document History

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1. Introduction

The Enabling Works and Site Establishment Programme is one of the core programmes of the Sizewell C Project and will be the first programme of works to commence construction. The Enabling Works and Site Establishment are defined as all works necessary to prepare the main development site for the efficient execution of the Main Civil Works and Marine Works construction.

1.1. Package Description

The discharge of surface and groundwater during a specific early stage of construction activity will be primarily via the Temporary Marine Outfall (TMO) onto the foreshore above the mean high water springs level (MHWS).

The principal source waters for this discharge are surface water (i.e. rainfall runoff) within the main construction area (MCA). This is to be managed via a series of mini catchments and collection ponds, pumped out to the TMO via a water treatment plant, which is currently based on sediment removal only.

The TMO may also discharge relatively small volumes of groundwater from dewatering during the construction of a shaft associated with the construction of the desalination intake pipe. The requirement for shaft dewatering/discharge for the construction of the combined discharge outfall (CDO) tunnel, which was included in the previous version of this report, has been removed as the need for dewatering has been designed out.

1.2. Rationale for proposed discharge location

During design it was considered whether the proposed TMO discharge could be made directly into the North Sea, however the preferred option was for the discharge to be made closer to the proposed development onto the foreshore, which is considered less disruptive in terms of public access. It was also considered whether discharge could be made to Sizewell Drain during construction however this was thought to increase the pollution risk due to the proximity to the SSSI.

2. Scope of assessment

2.1. Need for groundwater risk assessment

The Environment Agency (EA) approach to groundwater protection (Environment Agency, 2018) includes position statements on discharge of liquid effluents into the ground. The position statements have been reviewed, and the following were considered relevant:

- **G11 - Discharges from areas subject to contamination**. Discharges of surface water run-off to ground from sites used for the storage of potential pollutants are likely to require an environmental permit. This applies especially to sites where storage, handling or use of hazardous substances occurs (for example, garage forecourts, coach and lorry parks/turning areas and metal recycling/vehicle dismantling facilities). These sites will need to be **subject to risk assessment** with acceptable effluent treatment provided. Some discharges to ground (such as clean roof drainage or highway drainage) may not require permits. However, they can still have the potential to cause pollution if the discharge is not carefully designed or managed.
- **G13 - Sustainable drainage systems**. The design of infiltration Sustainable Drainage System (SuDS) schemes and of their treatment stages needs to be appropriate to the sensitivity of the location and **subject to a relevant risk assessment**, considering the types of pollutants likely to be discharged, design volumes and the dilution and attenuation properties of the aquifer.

2.2. Groundwater activity exclusions from environmental permits

Some extremely low-risk discharges are not considered groundwater activities by the EA. These are called exclusions and you do not need an environmental permit or exemption for them (Environment Agency, 5 August 2021), and include:

- groundwater recirculation: recirculation back into the same strata of water abstracted at natural background quality and unaltered;
- discharge onto ground of groundwater that meets drinking water quality standards, when the:
  - discharge activity is temporary and is for a maximum duration of 30 consecutive days;

- quality of the groundwater is either naturally at Drinking Water Standards (DWS) (Secretary-of-State, 2016), or is groundwater of mains quality that has been treated to drinking water quality standards;
- location (ground) where the discharge is to occur is free from any obvious sources of contamination;
- volume and rate of discharge will not cause pollution or any other adverse environmental impacts, including flooding, to the underlying groundwater or any adjacent surface waters (rivers, streams) or habitats.

Groundwater abstracted through dewatering of the launch/intercept shafts associated with the construction of the desalination intake pipe (herein referred to as Desal Shaft) and CDO tunnel (herein referred to as the CDO shaft) is not expected to meet Drinking Water Standards (DWS) due to existing levels of naturally occurring substances such as manganese (Atkins Ltd, 09 January 2023). The groundwater in the shafts is also expected to be mixed with water added by the contractor during excavation of the shafts to maintain the head of water in the shaft during excavation. It therefore does not meet either of the criteria for groundwater activity exclusions outlined above. There are no exclusions which apply to surface water runoff that may be contaminated, as is the case for runoff from construction sites. Accordingly a groundwater risk assessment is considered necessary for the discharge to go to ground, as detailed in the EA position statements.

2.3. Groundwater risk assessment approach

The assessment has been carried out in accordance with EA guidance *Groundwater risk assessment for your environmental permit* (Environment Agency, 2018).

The guidance sets out a tiered approach to risk assessment that consists of:

- Tier 1 – qualitative risk screening – investigate what the risks are, whether more detailed assessment is needed and what that would need to focus on (risk prioritisation);
- Tier 2 – generic quantitative risk assessment – to collect more information so you can make an informed decision on the risk posed by the site;
- Tier 3 – detailed quantitative risk assessment – to collect more information and formulate a plan if there are clear source-pathway-receptor relationships.

Prior to the risk screening exercise a conceptual model was developed to detail potential source-pathway-receptor (SPR) relationships introduced by the proposed discharge.

The assessment detailed herein has been progressed to Tier 1 - qualitative risk screening, only. All potential contaminant linkages were assessed as having a low or very low risk, and the discharge meets the criteria listed in the guidance that determines the discharge is acceptable and so will not require further assessment. Further assessment is therefore not considered necessary.

3. Sources of information

Numerous phases of design, monitoring and assessment have been completed historically for SZC, and data for this assessment comes from various of these sources as detailed below. Internet hyperlinks are included for documents that are published in the public realm (such as Environmental Statement appendices), and the section/page of the relevant document is included in this report. For any documents that are not published in the public realm, all relevant information for this assessment has been reproduced in this report. The following site specific sources were used for this assessment:

- “SZC-EW0411-ATK-XX-000-XXXXXX-REP-CIV-000010: Groundwater Monitoring Report between 2020-2022,” (Atkins Ltd, 09 January 2023)
- Sizewell C Groundwater Modelling Report prepared for EDF NNB GenCo , January 2020. (Atkins, 2020b)
- “The Sizewell C Project. Environmental Statement 6.3 Volume 2 Main Development Site; Chapter 21 Marine Water Quality and Sediments,” 2020. (EDF Energy, 2020)
- “EW0302 Surface Water Design Report: SZC-EW0302-XX-000-REP-10005,” (Atkins ltd, May 2020)
- “EW0320 Surface Water Discharges Report: SZC-EW0320-XX-000-REP-400001,” (Atkins ltd, August 2020)
- “EW0302 Early Drainage Strategy Technical Note. SZC-EW0302-XX-000-NOT-100000,” (Atkins, March 2020)

- “SZC-EW0400-ATK-XX-000-XXXXXX-NOT-CIV-000011: Desalination Intake Shaft Dewatering. Draft Technical Note,” (Atkins Ltd, August 2023)

4. Outfall environmental setting

4.1. Location and topography

The TMO outfall location is located on the foreshore to the east of the Sizewell C (SZC) MCA, on the seaward side of the sea defence (i.e. the 5m Dune) and above the mean high water springs level (MHWS). The outfall is located at grid reference TM 47654 64053, with an invert level of 1.665 metres above Ordnance Datum (m AOD). A location drawing is included in Appendix A.

Plan and cross section drawings through the proposed outfall are shown in Figure 1 and Appendix A. Downstream of the outfall a level area of 14.85 m length and 6.0 m width will be provided with a Reno mattress (a thin wire basket filled with stone) for erosion protection above a 150 mm bedding layer. The level surface of this area, which is the infiltration area, is at a proposed elevation of 1.484 m AOD.

4.2. Geology

The regional geology of the SZC site predominantly comprises superficial deposits comprising Marine/ Beach Deposits, Peat and Alluvium. The bedrock consists of Crag Group (Red Crag Formation) and Thames Group (London Clay Formation and Harwich Formation), beneath which is the Lambeth Group, Thanet Group and Chalk Group bedrock (shown in page 24, table 2.1 of the Sizewell C Groundwater Modelling Report (Atkins, 2020b)).

The understanding of the geological succession locally to the TMO has been based on logs for nearby boreholes YG25, GW13 and PZ2009_11, shown in Appendix B. The location of the boreholes relative to the proposed outfall is shown in Figure 3. The outfall is expected to be underlain by superficial deposits consisting of Beach Deposits (Sand and Gravels) to an elevation of -3.6 m AOD to -5.8 m AOD. Beneath the Beach Deposits in GW13 and PZ2009_11 is Alluvium to approximately -12 m AOD. In YG25 the Alluvium is absent, and geological cross sections (shown in page 29, plate 2.4 of the Sizewell C Groundwater Modelling Report (Atkins, 2020b)) and (EDF NNB GenCo., 2014) indicate the Alluvium layer pinches out along the coastline. The superficial deposits are underlain by the Crag Deposits to a depth of approximately -44 m AOD to the top of the underlying London Clay over the Chalk (EDF NNB GenCo., 2014).

4.3. Hydrogeology

4.3.1. Aquifer units

The superficial deposits including Beach Deposits and Alluvium are classed as a Secondary A aquifer, whilst the Crag Group and Chalk Group are classified as Principal aquifers. The groundwater within the superficial Beach Deposits is likely to be in hydraulic continuity with the Crag Group, whilst the Crag aquifer is hydraulically separated from the underlying Chalk by the London Clay formation (unproductive strata).

Borehole GW13, screened within the Beach Deposits and borehole PZ2009_11, screened within the Crag aquifer, had groundwater levels in both boreholes ranging between 0.4 and 1.1 m AOD indicating hydraulic continuity between both superficial and bedrock aquifer. An average groundwater level of 0.74 m AOD was measured at both boreholes, with a maximum water level of 1.10 m AOD (Atkins Ltd, 09 January 2023).

A water level of 0.74 m AOD equates to an unsaturated zone thickness of 0.74 m below the infiltration surface. The near surface Beach Deposits are likely to have maximum water level that is reflective of sea levels under surge conditions, and accordingly under worst case scenario it is considered that there could be no unsaturated zone below the infiltration mattress of the outfall. Accordingly an average 0.74 m and a minimum of 0 m was taken forward as unsaturated zone thickness for the groundwater risk assessment exercise.

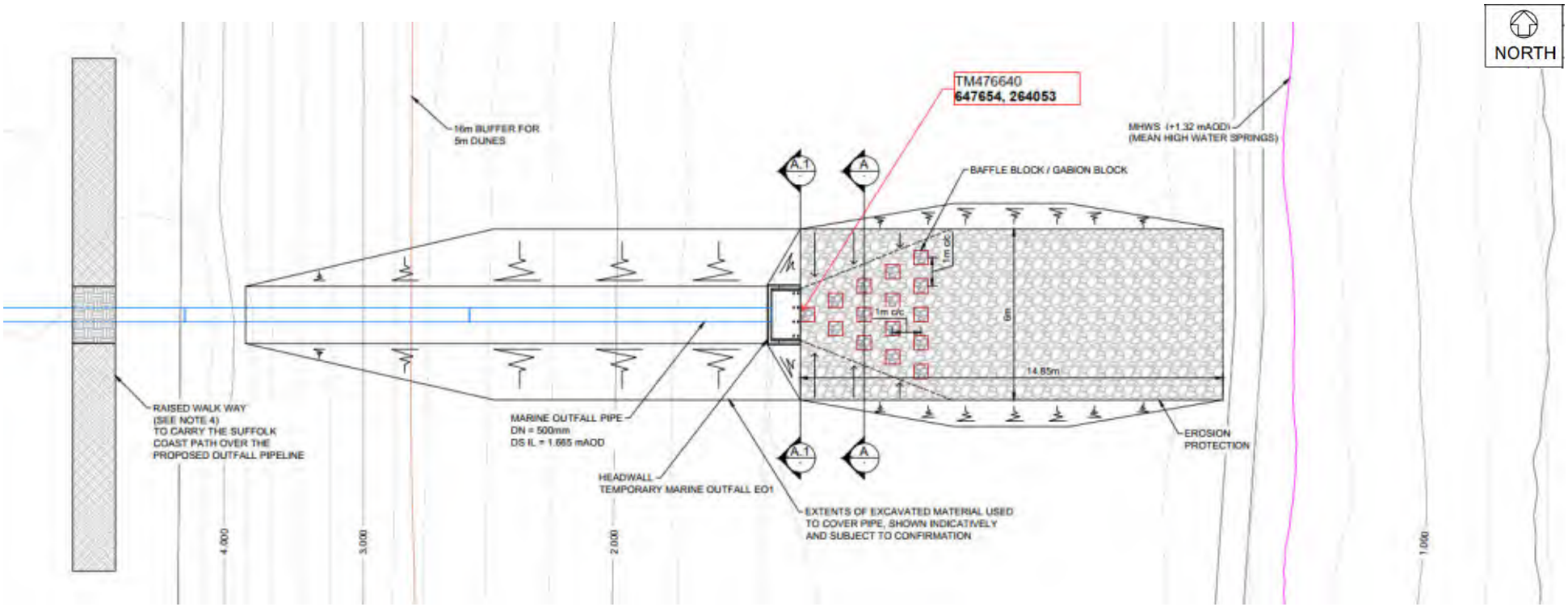
The BGS / EA Groundwater vulnerability mapping (Natural England, n.d.) indicates groundwater vulnerability is Medium-High in areas where the superficial geology is Marine Beach Deposits - Sand and Gravel.

4.3.2. Aquifer properties

There is insufficient site data available for the superficial Beach Deposits to provide any detailed analysis of the hydraulic properties of the aquifer. A published review of hydraulic properties of mixed sand and gravel beach sediments (She, Horn, & Canning, 2007) indicates a possible range hydraulic conductivity between $2x10^{-4}$ and $6x10^{-2}$ m/s, with the proportion and grain size of sand being the controlling factor. Porosity is reported to vary between approximately 20 and 50%. The Crag aquifer at the SZC site is expected to have a range of hydraulic

conductivity between $2.2x10^{-7}$ and $4.33x10^{-4}$ m/s, (with most values falling in the 10^{-4} m/s order of magnitude), total porosity of 25-40% and Specific yield of 4-10% (shown in page 32, table 2.3 of the Sizewell C Groundwater Modelling Report (Atkins, 2020b)).

Figure 1 - Plan view of the proposed TMO outfall



Note: Working design drawing showing the outfall arrangement, erosion and scour protection details only. Detailed design yet to be finalised for elements related to fencing and public rights of way.

4.4. Relevant designations

The outfall is not within a groundwater Source Protection Zone, Drinking Water Safeguard Zone or Drinking Water Protected Area.

The outfall is within a local wildlife site (LWS): Suffolk Shingle Beaches. It is not within a Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar site.

Minsmere-Walberswick Heaths and Sizewell Marshes SSSI, which holds all of those designations, is located 432 m to the north of the discharge, while the sea immediately to the east of the outfall, where occasional discharging will occur, is part of the Outer Thames Estuary SPA and the Southern North Sea SAC (Natural England, n.d.).

5. Discharge characteristics

5.1. Volume of discharge

5.1.1. Surface water volume

The catchment from which surface water runoff will drain to the TMO discharge is considered to comprise all of the MCA area. A calculation to derive the average runoff flows are presented in Table 5-1, which indicates that 398 cubic metres per day (m^3/day) would be discharged on average.

The pumping to the TMO outfall is proposed to have a maximum flow rate of 200 litres per second (l/s), which would equate to a maximum discharge rate of 17,280 m^3/day.

Table 5-1 - Average surface water runoff volume

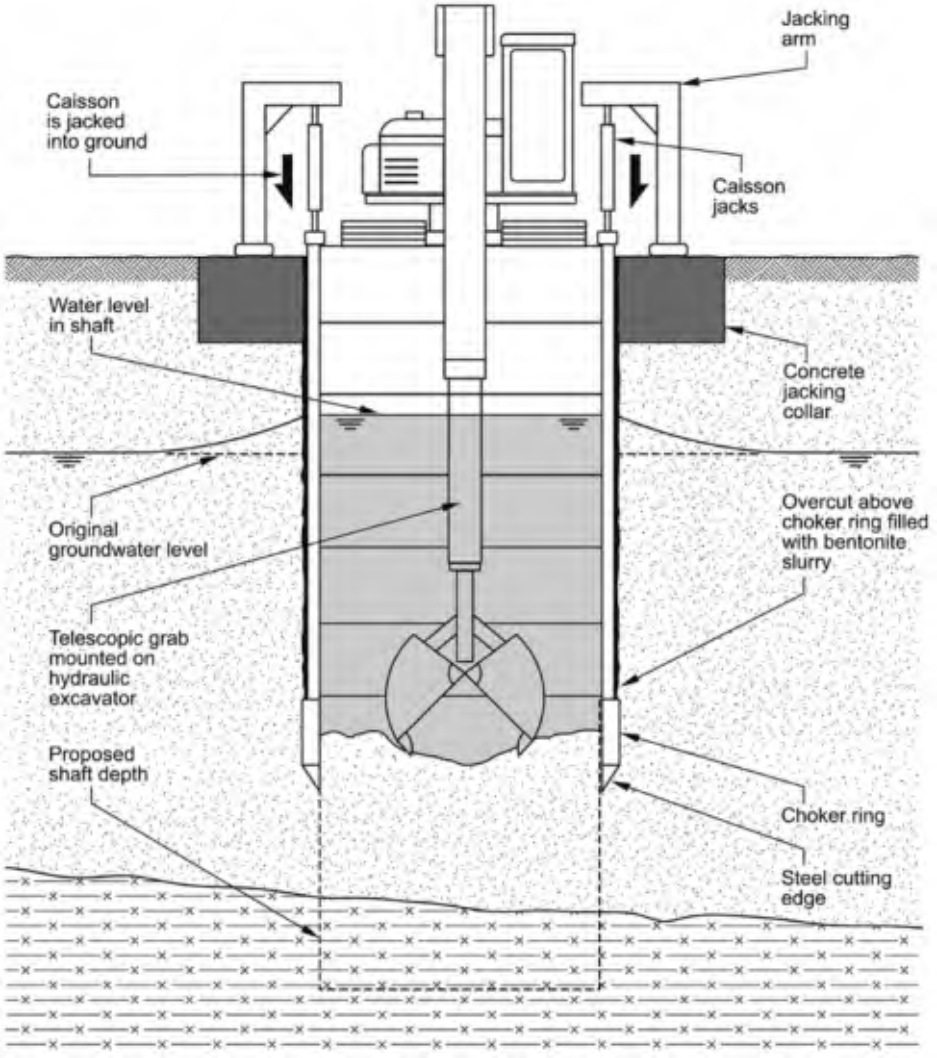
Parameter	Unit	Value	Source / justification
Catchment area	m^2	246,400	Water management zone 9 catchment area (Atkins ltd, May 2020)
Rainfall	mm/yr	628	Page 21, section 2.3.1-2.3.4 of the Sizewell C DCO Groundwater and Surface Water: Numerical Modelling Report (Atkins, 2020b)
Annual runoff volume, assuming zero evaporation	m^3/yr	154,739	Calculated from rainfall and area
Average daily runoff volume, assuming zero evaporation	m^3/day	423	

5.1.2. Groundwater volume

The TMO will also discharge relatively small volumes of groundwater from dewatering during the construction of the Desalination Intake Shaft. The shafts are to be constructed using a wet caisson excavation technique, as illustrated in Figure 2 - Generic construction method – “wet caisson” Figure 2, and a positive water head is anticipated to be required inside of the caisson during shaft construction in order to reduce external water pressure on the shaft and limit groundwater ingress through the base. In order to maintain a positive head in the caisson, small volumes of water are expected to need to be added to the excavation to maintain a head of water in the excavation that is above the head of the surrounding groundwater, in order to reduce external water pressure on the shaft and limit groundwater ingress through the base. All construction elements will be undertaken with regards to relevant guidance and best practice by the contractor. Small volumes of water will be added, which will meet drinking water quality standards. The source of the water will either be treated groundwater or imported drinking water. The activity is expected to meet groundwater activity exemptions listed in EA guidance (Environment Agency, 5 August 2021).

All construction elements will be undertaken with regards to relevant guidance and best practice by the contractor.

Figure 2 - Generic construction method – "wet caisson"



The method of construction and volume/method of dewatering has been outlined in (Atkins Ltd, August 2023). Relevant excerpts detailing the dewatering volume calculation are included below.

The excavation will be undertaken from ground level and it has been assumed that groundwater within the caisson may need to be maintained at circa.1.5 m above the surrounding groundwater level while construction is being undertaken to help reduce risks associated with the ingress of sands during excavation.

Input parameters to calculate dewatering volumes of the intake pumping station shaft are summarised in Table 5-2.

Table 5-2 - Input Parameters for dewatering calculation

Parameter	Value	Reference	Comments
Desalination Intake parameters			
Ground level	3.16 m AOD	(EDF NNB GenCo., 2014)	Proposed ground level
Elevation base of shaft	-17.51 m AOD		Design shaft depth
Diameter of shaft	4.40 m		Outer diameter selected to provide conservative value.
Groundwater levels			

Groundwater level	1.10 m AOD (maximum) 0.74 m AOD (average)	(Atkins Ltd, 09 January 2023)	Maximum value used to provide conservative value.
Groundwater level within the caisson	2.60 m AOD		1.5 m above the maximum GW elevation assumed.
Unit thickness			
Superficial Deposits thickness	7 m	(Atkins, 2020b)	Based on groundwater levels in GW13 and PZ11, it is considered that both aquifer units are in hydraulic continuity, as such they have been considered as one unit.
Crag thickness	At least 35 m	(Atkins, 2020b),	
Saturated zone within shaft	18.5 m		Calculated as maximum water level minus based of the shaft
Water column to ensure balance pressures	20 m		Water level above observed maximum water level
Drainable porosity (maximum)			
Superficial deposits and Crag	0.2	(Atkins, 2020b)	

As a consequence of needing to maintain the water level inside the shaft during excavation, it is assumed that there will be a negligible groundwater ingress into the shaft during excavation works (i.e. as a result of the difference in groundwater head pressures inside/outside the shaft). The volume of water to be dewatered has therefore been calculated based on the water volume contained within the intake shaft following placement of the basal concrete plug. However, it is acknowledged that there will be an additional volume of water derived from the draining of groundwater from saturated materials arising from the excavation that will need to be managed by the contractor as part of the works. This additional volume has been calculated based on the drainable porosity of the material excavated from the shaft structure. These two metrics have been combined to provide an estimated total volume to be dewatered. Groundwater level will be monitored closely in the vicinity monitoring points to ensure water level in the shaft is maintained to higher than the groundwater table. This should prevent groundwater from ingress to the shaft through the lining and the base as high water head is maintained in the shaft.

Intake Shaft Volume

In order to maintain basal stability within the shaft, it has been assumed that the water level inside the shaft during construction will be maintained at a general level of 2.6 m AOD (i.e. 1.5 m above the maximum groundwater level). Following construction of the shaft to the required depth and formation of the base plug, the shaft will be dewatered. The volume has been calculated as the volume of a cylinder. The radius is given by the size of the proposed caisson, whilst the height of the cylinder corresponds to 19 m, the existing saturated thickness plus the assumed 1.5 m to maintain water level above the maximum calculated groundwater level.

Total volume to be dewatered once construction is finalised $= \pi r^2 h$ where,

- r^2 is the radius (2.2 m);
- h is the water depth of the cylindrical shaft from (20 m);

Estimated water volume to be dewatered= 304.1 m^3

Excavated/ Drained Material Volume

An estimate of the groundwater volume originating from saturated materials to be drained and managed is calculated based on the volume of a cylinder and allowing for material porosity.

Existing groundwater volume within the soil matrix in the proposed caisson area prior to construction = $\pi r^2 h n_d$ where,

- r^2 is the radius (2.2 m);

- h is the saturated thickness of the cylindrical shaft (18.5 m);
- n_d is the drainable porosity = 0.2; and

Approximate maximum dewatered volume = 56.3 m^3

Total groundwater abstraction volume

The theoretical maximum total volume of water to be dewatered during shaft construction is estimated to be approximately 360.4 m^3. By taken into account the unexpected event during dewatering operation, e.g. rainfall, an additional factor of 1.25 is taken. Thus, the upper envelop of total dewatering volume is 360.4*1.25 = 450.5 m^3.

Water abstraction rate

In construction stage, a submersible pump will be used for dewatering. Depending on the model of pump selection by the contractor, the pump rate is highly varied. There is also a need to drain the shaft in operation stage for human entry for maintenance purpose. A duty flow rate of up to 26.3 L/s is selected for the sump pump used in dewatering in the operation stage, which equivalent to an hourly abstraction rate of 95 m^3/h. Daily maximum abstraction rate would be 450.5 m^3 based on maximum dewatered volume.

However, as the pump rate is highly dependent on the pump selection and construction activities, it is considered the abstraction may be undertaken over a period of up to two weeks.

Ongoing Dewatering

During the period of the subsequent shaft structure construction after the initial dewatering, ongoing small-scale pump-out within the shaft may be required. Sources of water accumulate in the shaft may include:

- the shaft is designed to be watertight with waterproofing gaskets in all concrete segment joints and waterproofing measures (hydrophilic strips) provided in all cast concrete construction joints including the pipe penetration locations. Never-the-less, the specification defines a daily allowable groundwater leakage from the shaft lining over the 9-months shaft construction period (including shaft finishing & equipment, based on the available construction programme). This is taken to estimate a maximum total leakage = 0.058 m^3 x 9 months x 30 days = 15.66 m^3.
- rainfall

5.2. Quality of discharge

5.2.1. Surface Water runoff quality

Construction surface water drainage strategy is detailed in EW0302 Early Drainage Strategy Technical Note (EDS) (Atkins, March 2020) and EW0320 Surface Water Discharges Report (Atkins ltd, May 2020). This indicates that temporary ditches/bunds and sediment ponds will be created around the site as necessary to capture surface water runoff and allow for settlement of sediments. Silt fences will also be installed at intervals upgradient of the ponds. Water will be pumped from the top of the ponds to Package Settlement Units (FB50 or similar), prior to discharge.

The main activity within the MCA during the period in which water will discharge to the TMO involve shallow earthworks to establish the site, mainly comprising topsoil stripping and earthworks related to the diversion of the Sizewell Drain (Atkins ltd, May 2020). Flow from the Sizewell Drain itself will not be discharged to the TMO. Suspended solids are considered to be the main contaminant in surface water from these activities.

The EW0320 Surface Water Discharges Report indicates other wastewater streams that will be discharged from the MCA after the early phase include:

- runoff pumped from the dewatering of the MCA within the cut-off-wall and bulk earthworks to excavate the MCA;
- treated final effluent originating from the construction phase sewage treatment plant; and
- treated concrete wash water.

The above activities will be carried out after the commissioning of the sites permanent water treatment plant and would be discharged to the sea via the CDO, at which point the TMO would be decommissioned. Prior to construction of the CDO, foul effluent will be tankered off site for appropriate disposal. Accordingly those activities are not considered in this assessment or the permit application which this assessment supports.

Indicative water quality requirements have been adopted for early design of the surface water drainage treatment train for the TMO, based on those at Hinkley Point C (HPC) for discharges to sea (Atkins ltd, August 2020). These indicative requirements for discharges are shown in Table 5-3. For this assessment it is assumed that the treatment train will be designed to reduce suspended solids in the discharge to below 250 mg/l, as per the early design work. It is acknowledged that background marine water quality is different at SZC compared to HPC, and the appropriateness of these indicative requirements are reviewed as part of this risk assessment, and are subject to agreement and permitting with the EA.

Table 5-3 – Surface Water Quality treatment targets for discharges to the TMO (based on HPC discharge limits to sea) (Atkins ltd, August 2020)

Criteria	Treatment Level Required at monitoring point	Sample Type	Notes
Visible oil or grease	No significant trace present so far as is reasonably practicable	Visual inspection	No significant trace
Suspended Solids (measured after drying at 105°C)	250 mg/l	Spot sample	Maximum Allowable Concentration (MAC)
pH	6 to 9	Spot sample	Minimum and maximum

5.2.2. Chemical Spills

The site wide surface water drainage network has been designed with the assumption that it should not be required to treat chemical spills. This assumption is based on the principle that any areas considered to be at potentially high risk of chemical contamination will be impermeable and protected by pollution prevention measures and runoff managed by the Contractor and treated at source (Atkins ltd, August 2020). The EDS (Atkins, March 2020) outlines pollution prevention measures that should be put in place, which include bunding, plant nappies, drip trays and wash down areas. Accordingly it is assumed for this assessment that under normal circumstances all chemical spills will be managed in accordance with pollution response procedures and chemicals, including hydrocarbons, will not enter the surface water drainage systems.

5.2.3. Groundwater quality

Expected groundwater quality for the dewatering from the desalination intake shaft was derived from groundwater monitoring data in the vicinity of the shafts over a period from 2020 to 2024 (Atkins Ltd, 09 January 2023). Twenty-two samples were screened from seven different boreholes for data available after 2020. The boreholes are located within 260 m from the proposed shaft location as shown on Figure 3. It should be noted that even though there are numerous boreholes at close proximity to the shaft location, some have been scoped out of recent groundwater sampling or were never used for sampling purposes.

It should be noted that at the time of writing, a potential change in the location the intake shaft was being considered to address interface issues from adjacent infrastructure. This potential change would relocate the shaft 50-70m south of its current position (Atkins Ltd, August 2023). However, the relocated position is considered to have a negligible implication on the shaft dewatering operation as the groundwater conditions are expected to be very similar in the new location.

Figure 3 - Borehole location

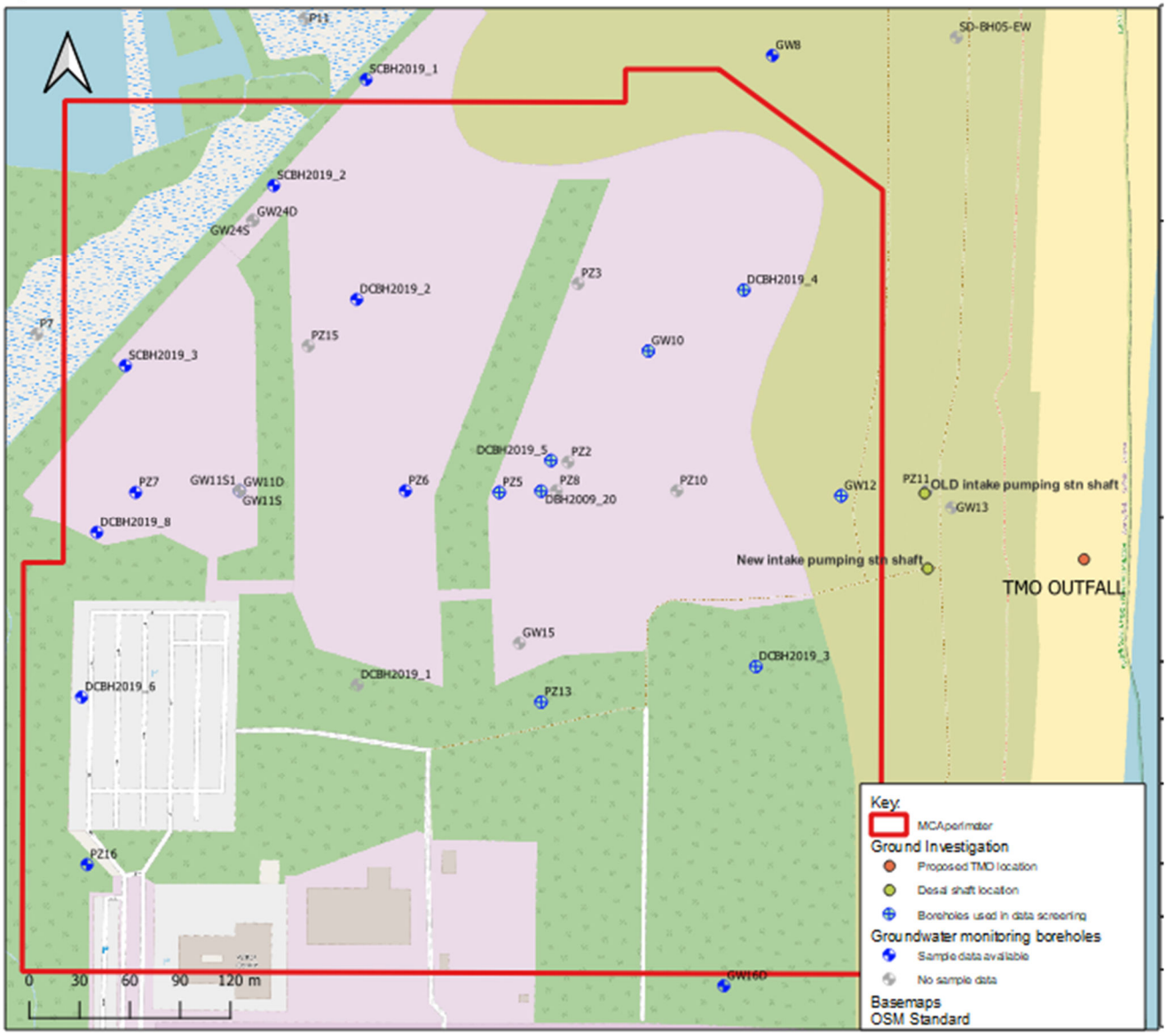


Table 4-4 provides the location and screening information for the selected boreholes.

Table 5-4 - Boreholes used to represent groundwater quality at the Desalination intake Shaft

Borehole ID	Location		Response Zone		Stratum	Samples No.
	Easting	Northing	Top (m bgl)	Bottom (m bgl)		
DBH2009_20	647329.98	264094.78	15.0	40.0	Crag Group	2
DCBH2019_3	647458.10	263990.11	6.5	8.0	Alluvium / Peat	5
DCBH2019_4	647450.90	264214.18	4.0	12.5	Alluvium / Peat	1
DCBH2019_5	647335.85	264112.99	4.2	10.0	Alluvium / Peat	3
GW10	647394.21	264177.67	0.4	5.4	Made Ground	1
GW12	647509.00	264092.00	5.4	13.8	Made Ground / Alluvium	4
PZ13	647330.00	263969.00	9.4	20.0	Crag Group	5
PZ5	647305.00	264094.00	11.0	20.5	Crag Group	1

Note: bgl = below ground level

Groundwater quality results have been compared to Environment Quality Standards (EQS) for an estuarine / coastal environment, and relevant Drinking Water Standards (DWS), to assess potential impact to sensitive receptors. This initial screening compares the relevant water standard with each of the sample results and highlights any exceedances. Relevant DWS values are taken from the UK Water Supply (Water Quality) Regulations (Secretary-of-State, 2016), and where there is no UK DWS, DWS screening criteria are taken from guideline values (World Health Organisation, 2008) (World Health Organisation, 2022). Relevant EQS values are the lowest Coastal and Estuarine EQS value presented in Water Framework Directive (Standards and Classification) Directions (Secretary of State, 2015). The lowest EQS is generally the Annual Average EQS (AA-EQS), except where contaminants have a Maximum Allowable Concentration EQS (MAC-EQS) but no AA-EQS. For total petroleum hydrocarbon tests, which have no EQS values, a conservative initial screening value is adopted based on the AA-EQS for benzene.

The copper Coastal and Estuarine AA-EQS applies to the bioavailable fraction of the dissolved concentration, and varies according to the dissolved organic carbon concentration in the receiving waters. Given uncertainty over the concentration in the sea immediately offshore of DOC and other parameters needed to determine bioavailability, the total dissolved copper has been compared against the lowest bioavailable EQS, conservatively assuming all dissolved copper in the discharge is bioavailable.

A summary of exceedances of EQS and DWS is presented in Table 5-5. Screening spreadsheets have been included within Appendix D.

Certain substances have a higher laboratory testing Limit of Detection (LOD) than the relevant water standard. Where this is the case the substances have been highlighted in Table 5-5, despite there being no detections above the LOD. It is worth noting that different laboratories and/or sample preparation methods can lead to different LODs between sampling rounds. Where some of the samples are tested with an LOD below the relevant standard, and were not detected, the substance is not included in the summary table. All data is included within Appendix D.

Table 5-5 - Summary of Water Quality Standard exceedances

Constituent	Screening Criteria (mg/l)	No. of Samples	Mean Value* (mg/l)	Max. Value (mg/l)	No. of Exceedances
DWS exceedances					
Chloride	250	21	901	10,300	9/21
Ammonium	0.5	21	5.26	20	18/21
Ammoniacal Nitrogen	0.39	21	4.34	16	18/21
Sodium	200	21	545	6600	9/21
Arsenic (Dissolved)	0.01	21	0.0034	0.012	2/21
Iron (Dissolved)	0.2	21	3.79	26	7/21
Manganese (Dissolved)	0.05	21	1.37	4.3	17/21
Boron	1	21	0.24	1.39	1/21
Sulphate	250	21	83.5	1410	1/21
Vinyl Chloride 0.0005 21	0.0006	<0.002			10/21
1,2 - Dibromoethane	0.005	21	0.0025	<0.005	10/21
1,2-Dibromo-3-Chloropropane	0.001	21	0.024	<0.05	20/21
Hexachlorobutadiene	0.0006	21	0.00053	<0.001	10/21
Hexachlorobenzene	0.00005	20	0.0005	<0.0005	20/20
Coastal and Estuarine EQS exceedances					

Copper (Dissolved)	0.00376	21	0.00123	0.008	2/21
Iron (Dissolved)	1	21	3.785	26	6/21
Anthracene	0.0001	21	<0.00001	0.0005	1/21
Fluoranthene	0.0000063	21	0.00009	0.0005	2/21
Zinc (Dissolved)	0.0079	21	0.00975	0.107	4/21
Chromium (Hexavalent)+	0.0006	21	0.00094+	<0.02	1/14
Cyanide (Free)^	0.001	21	<0.005	<0.005	21/21
Hexachlorobutadiene^	0.0006	21	<0.001	<0.001	21/21
2,4-Dichlorophenol^	0.00042	21	<0.0005	<0.0005	21/21
Hexachlorobenzene^	0.00005	21	<0.0005	<0.0005	21/21
Pentachlorophenol^	0.0004	21	<0.0005	<0.0005	21/21
Benzo[a]pyrene^	0.00000017	21	<0.0001	<0.0001	21/21

Notes: DWS = Drinking Water Standard; EQS = Environmental Quality Standard. * Results below the limit of detection (LOD) have been taken at face value (at the LOD) for the calculation of mean. ^ Not detected above LOD in any samples. + The mean result for total dissolved chromium has been used as a proxy for hexavalent chromium (conservatively assuming all measured chromium in each sample is hexavalent), as the total dissolved chromium analysis has a lower LOD and is considered more accurate.

The summary table presented above show elevated concentrations when compared to DWS of inorganics and metals. The elevated concentrations of observed contaminants within the seven boreholes, especially chloride, ammonium and sodium are likely to be influenced by the saline intrusion and may also be affected by the underlying geology, adjacent marshes and farming activities (such as fertiliser spreading). Redox sensitive elements iron and manganese are expected to be present in baseline groundwater in the Crag at relatively high concentrations (E L Ander, 2006). Further discussion of groundwater saline intrusion and baseline quality is presented in section 6.3.

Compared to Coastal and Estuarine EQS the data indicate only sporadic exceedances for the metals iron, copper, zinc and hexavalent chromium, and polycyclic aromatic hydrocarbons (PAH) anthracene and fluoranthene at levels detected above the LOD. Iron was above the EQS in seven of the 21 samples. Zinc was detected above AA-EQS in four samples. Hexavalent chromium was detected at a single sample at borehole PZ13, at a very low concentration. The detected concentration (0.002 mg/l) is lower than the limit of detection of most samples (<0.02 mg/l). Additionally, any subsequent samples at PZ13 did not detect hexavalent chromium. It is noted that dissolved chromium, which comprises the sum of trivalent and hexavalent forms and is analysed at a lower LOD than hexavalent chromium, was below the LOD and the AA-EQS in 15 of the 21 samples. Anthracene was detected in a single sample with a concentration equal to the limit of detection, while fluoranthene was detected in two samples, within an order of magnitude of the LOD.

Of the constituents detected above LOD in groundwater as detailed in Appendix D, arsenic, hexavalent chromium, anthracene and fluoranthene are groundwater hazardous substances in accordance with Groundwater Directive 2006/118/EC (UK Technical Advisory Group on the Water, 2016). All other constituents are non-hazardous pollutants.

Across the wider SZC groundwater monitoring network, fluoranthene, a polycyclic aromatic hydrocarbon (PAH), has been detected in only three out of 497 groundwater samples collected between 2014 and 2023, and anthracene, another PAH, in one of them. The three affected samples were all collected on 17 November 2021, from boreholes DCBH2019_5, PZ5 and PZ7 (all in the MCA), and were analysed as part of the same laboratory batch. Groundwater from DCBH2019_5 has been analysed on two occasions, with no PAHs detected, while sampling and PZ5 and PZ7 has not been repeated as these are not part of the routine monitoring network.

Fluoranthene and anthracene are not expected to occur naturally. They are present as a constituent of Coal Tar distillates or other substances that are derived from coal or in petroleum streams, notably "Anthracene Oil" (European Chemicals Agency, 2007-2023). Anthracene Oil is a hydrocarbon extracted from coal tar which has many purposes including its use as a crop desiccant, defoliant and wood preservative (Hertfordshire, 2023). In addition to fluoranthene, Anthracene Oil includes other PAHs such as anthracene, carbazole, phenanthrene. Given its origin fluoranthene is generally expected to be identified alongside other PAHs, and breakdown

products such as benzene or fluorene. Anthracene, phenanthrene and pyrene were detected alongside fluoranthene on one occasion, but no other PAHs or organic substances.

The three boreholes where PAHs have been detected are within the centre and west of the MCA, from 220 m to 480 m west of the proposed shaft locations. PZ5 and PZ7 both have a response zone within the Crag aquifer at a depth of 11 to 20.5 m bgl (-19.09 to -9.59 m AOD) and 13.5 to 20.0 m bgl (-18.31 to -11.81 m AOD) respectively. The upper 1.1 m/0.95 m of ground at PZ5 and PZ7 comprises sandy Made Ground. DCBH2019 is screened from 4.2 to 10.0 m bgl in Alluvium / Peat, below 4.2 m thickness of Made Ground. The Made Ground in the MCA comprises re-worked natural materials and in understood to have been deposited during construction of Sizewell B. A potential source of PAH in the MCA area could be related to deposition of this Made Ground.

GW12 is considerably closer to the proposed shaft locations than the boreholes where PAH has been identified, and is screened through a similar depth interval of the aquifer as the proposed shaft will be advanced through. PAHs have never been detected at GW12. Given the proposed shaft excavation and dewatering method, groundwater is not expected to be drawn into the excavation from any significant distance away. Accordingly it is considered unlikely that PAHs will be present in the dewatered groundwater, although it can not be ruled out.

Based on the groundwater quality data, which shows the presence at low concentration of three hazardous substances, as well as exceedances of EQS and DWS for a handful of non-hazardous pollutants, the discharge of dewatered groundwater represents a source of contaminants to controlled waters receptors. The magnitude of this source term hazard is considered low, given the small volume of groundwater to be discharged and the concentration and nature of the exceedances, which are mostly naturally occurring substances.

5.2.4. Chemical dosing

In the event of periods of high flow and high suspended solids on the inlet to the Package Settlement Units, a specialist contractor has indicated that chemical dosing with coagulant (Ferric Chloride) and flocculant (Aquatreat 2084) would be required, in order to ensure suspended solids are reduced to the required limit prior to outfall.

Additionally high or low pH in the runoff may be treated by dosing with carbon dioxide gas (to treat high pH waters), or sodium hydroxide (to treat low pH waters).

All chemicals would be dosed on a flow proportional basis via a calibrated mag-flow meter to ensure an accurate dose rate at all flow rates. The chemicals are stored on spill stands inside a dosing unit or dosing container.

Chemical Safety Data Sheets (SDS) for each of these are included in Appendix C, along with further information provided by the specialist contractor.

During winter months, coagulation/flocculation is expected to be required to achieve a suspended solids of <250 mg/l, as gravity settlement would not be sufficient due to the presence of clay particles which exhibit slow settling characteristics. When there are extended periods of rain and solids are given less time to settle in an attenuation pond, the suspended solids are expected be higher than 250 mg/L which will require treatment via coagulation/flocculation to achieve <250 mg/l. In summer months when solids will likely have more time to settle out from suspension, feed waters may be <250 mg/l. The proposed approach is to monitor suspended solids on the inlet of the system to inhibit dosing if the feed water is <250 mg/l suspended solids.

The SDS for Ferric Chloride indicates that it comprises 25 to 99% iron(III) trichloride. The contractor has indicated this would be dosed at a rate of 5 – 10 mg/l. Both ferrous and ferric ions released into (or generated in) water will rapidly precipitate as highly insoluble oxides and oxo-hydroxides. These stable compounds are exactly the forms in which iron is found naturally in the earth's crust (European Chemicals Agency, 2007-2023). Accordingly there is not considered to be any source term for iron associated with the application of this dosing chemical. On the contrary the dosing is likely to reduce dissolve iron by driving the formation of insoluble precipitates. Further evidence of the lack of dissolved iron in the effluent is shown in the table of example testing from a different site provided in the information from the contractor in Appendix C.2

At the dosing rate quoted, chloride in the Ferric Chloride coagulant is at concentrations which are not of relevance to the identified receptors.

The SDS for the flocculant Aquatreat 2084 indicates it comprises organic polymers, predominantly Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics. This class of substance is considered by the European Chemicals Agency to be readily biodegradable based on data for analogue substances, and no ecotoxicity hazard has been identified from it (European Chemicals Agency, 2007-2023). The aim of flocculation is to promote the physical separation of solids from the aqueous phase by increasing particle sizes.

Appropriately dosed, the flocculant will partition into the solid floc, and is therefore not expected to be in the effluent after treatment. The water treatment contractor has indicated a typical dose rate of 1-3 mg/l for the flocculant.

pH adjustment chemicals (CO2 or NaOH) will readily react in the dosed water to form naturally occurring major ions (carbonate, dissolved sodium cations) and water. There are no hazards associated with these major ions and there is no freshwater EQS for any of them.

6. Site conceptual model

6.1. General

The discharge at the TMO is considered to be primarily surface water runoff from the MCA. A minor constituent of the discharge (less than 0.5% of the annual volume) will comprise groundwater abstracted during the construction of a shaft for the desalination intake pipeline. Both surface water and groundwater will be treated to reduce suspended solids prior to discharge.

The outfall for the discharge includes an infiltration area of 14.85 m length and 6 m width will be provided with a RENO mattress for erosion protection above a 150 mm bedding layer. Reno mattresses are thin, flexible rectangular wire mesh cages divided into cells and filled with rock to limit movement during high-flow conditions. The mattresses provides erosion control and scour protection whilst maintaining a highly permeable surface. The level surface of this area, which is considered to be the infiltration area, is at a proposed elevation of 1.484 m AOD.

A conceptual cross section illustrating the hydrogeological conceptual model and identified potential contaminant linkages is presented in Figure 4.

6.2. Sources

The following potential contaminant sources have been identified, associated with discharge at the TMO outfall:

- **S1: Surface water runoff** discharged at the outfall. The surface water is expected to be free of groundwater hazardous substances (UK Technical Advisory Group on the Water, 2016). Suspended solids, which are expected to be elevated in untreated surface water runoff, will be treated via a three-step treatment train to meet an expected limit of 250 mg/l SS. Metals which are naturally occurring in the soils may also be present in a dissolved form in the untreated runoff due to interaction and dissolution from the suspended solids. However treatment to reduce suspended solids is expected also to be effective to remove dissolved metal constituents from the runoff prior to discharge. There is not considered to be any other source contaminant in the surface water to be discharged. Chemicals may be dosed to the water to aid its treatment, as detailed in section 5.2.4, but these are not expected to result in any additional source contaminant in the effluent at the point of discharge.
- **S2: Groundwater abstracted from the shafts** is expected to contain elevated metals and nutrients based on measured groundwater quality in the area. The concentration of contaminants is expected to be at, or less than, background concentrations in the aquifer. In addition, elevated suspended solids are expected, due to entrainment of sediments during the shaft excavation. Constituents that **could** be present in the abstracted groundwater prior to discharge include:
  - hazardous substances arsenic, hexavalent chromium, anthracene and fluoranthene. Of these, hexavalent chromium, anthracene and fluoranthene are not expected to be present in the discharge, but it can not be ruled out due to sporadic detections;
  - non-hazardous pollutants boron, copper, chloride, ammonium, sodium, sulphate, iron, manganese and zinc. Of these only copper, iron and zinc have been measured in excess of coastal and estuarine EQS.

Chemicals may be dosed to the surface water and the groundwater effluent streams to aid its treatment, as detailed in section 5.2.4. Chemical dosing quantities carefully controlled by the system to ensure no residual carry over in the effluent, and the chemicals are not considered to be harmful to the identified receptors, at the dosing rates indicated. Accordingly dosing is not expected to result in any additional source contaminant in the effluent at the point of discharge.

6.3. Receptors

Controlled waters receptors at the site include **R1: groundwater in the Crag and superficial deposits Secondary A aquifers**. The aquifers are considered to be in hydraulic continuity with no geological barrier to flow or contaminant transfer between them. In accordance with the Environmental Permitting Regulations (2016), which enact the Groundwater Directive in the UK, the input of hazardous substances to groundwater in the aquifers must be prevented, whilst input of non-hazardous substances must be limited so they do not cause pollution.

The aquifers are considered to be predominantly freshwater, but do show some impact from saline intrusion based on exceedances of chloride and sodium concentrations in groundwater samples. Near the ground surface in the foreshore Beach Deposits, groundwater is expected to interact with sea water (particularly during high tide or surge events), and be more saline. Accordingly shallow groundwater at the discharge is not considered a drinking water resource, and the groundwater is not considered sensitive to the input of contaminants derived from groundwater affected by saline intrusion: chloride and sodium.

The closest surface water receptor is **R2: the North Sea** immediately offshore of the discharge, which is part of the Outer Thames Estuary SPA. There should be no exceedances of coastal and estuarine EQS, which are attributed to the TMO discharge, in the sea offshore of the outfall. Suspended solids, which does not have an EQS value, should be limited in the discharge such that baseline concentrations in the sea are not altered by operation of the TMO.

There are not considered to be any freshwater surface water receptors in the vicinity of the TMO outfall which could be at risk from discharges from it.

6.4. Pathways

Contaminants discharged in water at the TMO outfall could reach the aquifer by infiltrating through the infiltration surface below the outfall, and percolating through the unsaturated zone above the water table (**P1**). The thickness of the unsaturated zone is considered to be on average 0.74 m thick, but is likely to fluctuate with the tides, and may have zero thickness during surge events. In addition, mounding of the groundwater table beneath the discharge may act to reduce the unsaturated zone thickness. The unsaturated zone is expected to comprise the engineered infiltration surface (RENO mattress over 150 mm bedding layer), over sand and gravel Beach Deposits.

After percolating to the aquifer, contaminants in the discharge may mix into the groundwater body, being diluted by it, and then may migrate with groundwater flow via advection and spread via dispersion and diffusion within aquifer (**P2**).

Contaminants migrating in the aquifer may discharge into the sea via seepages and springs below high water level (**P3**).

At times of high outfall pumping rate, or if sea level is above mean high water, direct discharge of water into the sea, via flowing over the infiltration surface, is possible (**P4**). Suspended solids not removed by treatment in the discharge are likely to settle as the discharged water flows over the Reno mattress and be captured within it, reducing concentration on entering the sea.

6.5. Preliminary Risk Assessment

Table 6-1 below provides the qualitative risk matrix, based on CIRIA guidance (CIRIA, 2001), in which the likelihood or probability of each contaminant linkage being realised is ranked against the severity of the consequences. The result is the relative risk classification, the results of which can inform the due diligence process and allow prioritisation of any further assessments or the implementation of risk management measures.

Table 6-1 - Qualitative Risk Matrix

Risk matrix		Severity of consequence			
		Severe	Medium	Mild	Mild
Probability of contaminant linkage	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk

Definitions of the risk classifications presented in the guidance are given in Table 6-2 below.

Table 6-2 - Risk Classifications

Risk classification	Definition
Very High Risk	There is a high probability that severe harm could arise to a designated receptor from an identified source, or there is evidence that severe harm to a designated receptor is currently happening.
High Risk	Harm is likely to arise to a designated receptor from an identified source.
Moderate Risk	It is possible that harm could arise to a designated receptor from an identified source. However, it is relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild.
Low Risk	It is possible that harm could arise to a designated receptor from an identified source, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low Risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Definitions of the risk, probability and severity of consequence classifications presented in the guidance are given in Table 6-3 and Table 6-4.

Table 6-3 - Probability of Linkage Occurring

Probability class	Definition
High likelihood	There is a pollution linkage, and an event appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage, and all the elements are present and in the right place, which means it is probable that an event will occur. Circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain even over a longer period such event would take place and is less likely in the short term.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable the event would occur even in the long term.

Table 6-4 - Hazard Classification

Hazard class	Definition
Severe	Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part 2A. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. A short-term risk to a particular ecosystem or organism forming part of that ecosystem. Due to the specific hazards ground gas and asbestos place these will always generate a severe hazard classification where potentially present.
Medium	Chronic damage to human health. Pollution of sensitive water resources. A significant change in a particular ecosystem or organism forming part of that ecosystem
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings, structures, services or the environment.
Minor	Harm, not necessarily significant harm, which may result in financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by use of personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.

The individual sources, pathways and receptors identified in previous sections are judged against this risk matrix and professional judgement has been used to estimate the combination of probability of a contaminant linkage being realised and the consequence of the harm that might result in line with CIRIA C552 (CIRIA, 2001). A summary of the potential source pathway receptor contaminant linkages which relate to groundwater receptors, and a qualitative preliminary risk assessment relating to each potential contaminant linkage is presented in Table 6-5.

Figure 4 - Conceptual model cross section

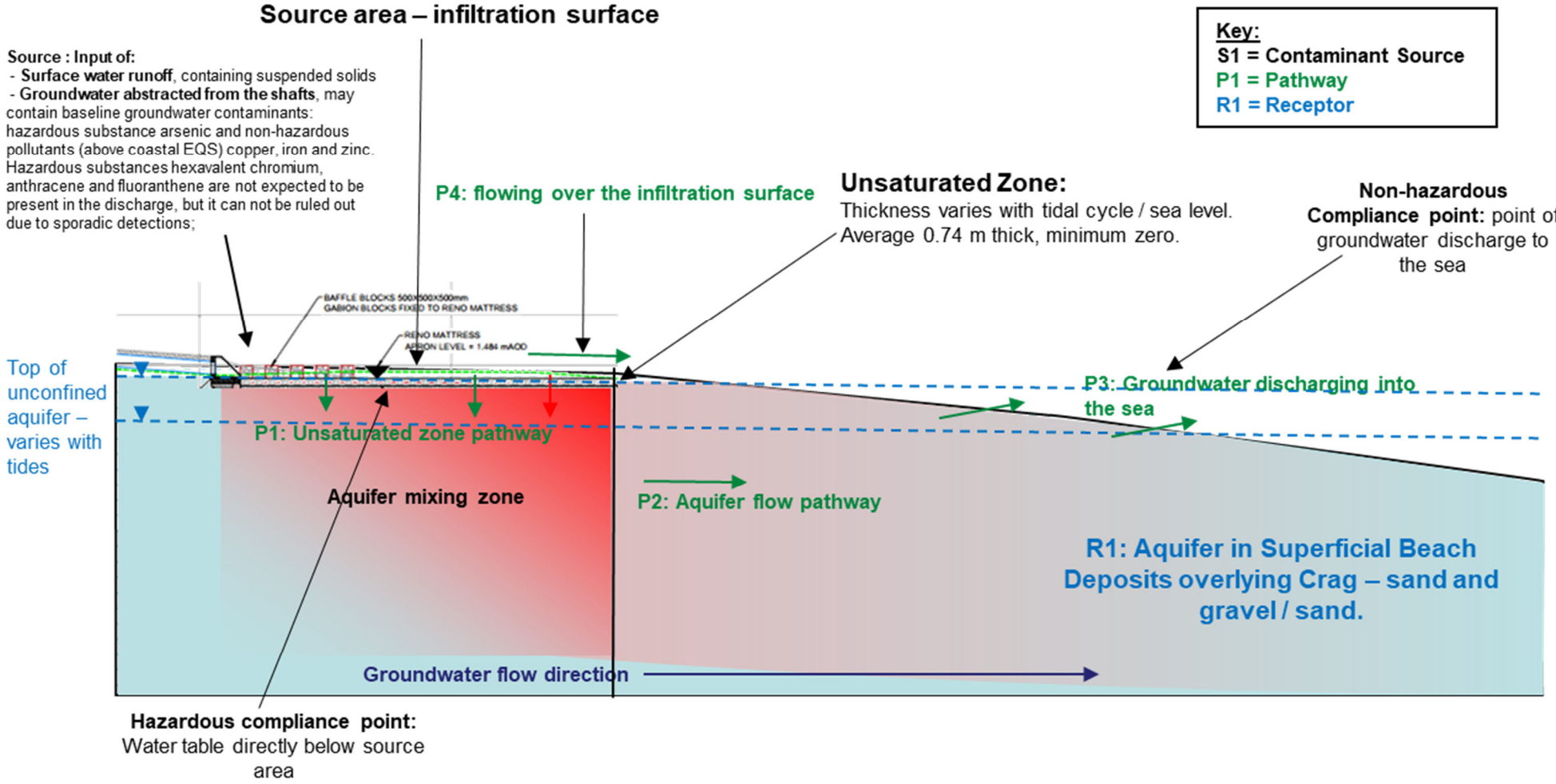


Table 6-5 - Initial Conceptual Site Model and Preliminary Risk Assessment

Sources	Pathway	Receptor	WQS & Compliance point	Probability	Consequence	Classification of Risk
Water discharged at the outfall which comprises: **S1: Surface water runoff from the MCA**, - may contain suspended solids (treated to below 250 mg/l); and **S2: Groundwater abstracted from the shafts,** - **M**ay contain baseline groundwater contaminants: hazardous substance arsenic and non-hazardous pollutants (above coastal EQS) copper, iron and zinc. - Hazardous substances hexavalent chromium, anthracene and fluoranthene are not expected to be present in the discharge, but it can not be ruled out due to sporadic detections.	**P1**: Infiltration through the infiltration surface below the outfall, and percolating through the unsaturated zone above the water table; **P2**: Mixing into the aquifer, and migrating in the aquifer via advection, dispersion and diffusion.	**R1**: Crag and superficial deposits secondary A aquifers	**Hazardous substances**: higher of MRV or natural background levels in the aquifer, at the point of entering groundwater. **Non hazardous pollutants**: higher of Coastal and Estuarine EQS or natural background levels in the groundwater, at the point of groundwater discharge to the sea.	Unlikely	Mild	**Very Low Risk** The abstracted groundwater source is expected to contain dissolved contaminants at no greater concentration than natural background levels in the aquifer. The only contaminant identified in the surface water runoff source, and only one introduced to the abstracted groundwater, is suspended solids. Percolation through the engineered infiltration is expected to remove them prior to entering the aquifer, and the aquifer will further reduce suspended solids prior to discharge to the sea.
	P1 and **P2**, followed by: **P3**: Discharging into the sea via seepages and springs below high water level.	**R2**: North Sea immediately offshore of the discharge, part of the Outer Thames Estuary SPA	Higher of Coastal and Estuarine EQS or natural background levels in the groundwater, at the point of groundwater discharge to the sea.	Unlikely	Mild	**Very Low Risk** As above.
	P4: Direct discharge of water into the sea, via flowing over the infiltration surface		Coastal and Estuarine EQS Background concentration for suspended solids (as there is no EQS)	Unlikely	Medium	**Low Risk** Water discharged at the outfall is expected to infiltrate under normal circumstances. Suspended solids in the discharge are likely to settle as the discharged water flows over the RENO mattress and be captured within it, reducing concentration on entering the sea. Concentration of iron and zinc in dewatered groundwater is expected to be no greater than in groundwater already discharging naturally to the sea, groundwater is expected to make up only a very minor volume of the discharge, and the concentrations are expected to be reduced as part of the water treatment train, through oxidation and precipitation.

Notes: WQS = Water Quality Standard. MRV = Minimum Reporting Value (Environment Agency, 2017).

7. Qualitative risk screening

7.1. General

In accordance with EA guidance (Environment Agency, 2018), qualitative risk screening should assess whether the potential discharge is acceptable and so will not require further assessment. This could be because:

- the discharge has acceptably low concentrations of hazardous substances, or concentrations that are the same as the natural background levels in the groundwater (whichever is the higher concentration);
- the discharge has concentrations of non-hazardous pollutants that are within the relevant environmental standards, or in concentrations that are the same as the natural background levels in the groundwater;
- there's a very low risk to groundwater-fed receptors due to the presence of unproductive drift or unproductive bedrock strata (and there are no aquifers present or near your activity) and remoteness from surface waters; or
- the volume or hydraulic loading rate of the discharge is so small such that only minimal dilution in underlying groundwater will be needed to avoid pollution by non-hazardous pollutants.

7.2. Hazardous substances

7.2.1. Surface water runoff

No groundwater hazardous substances are expected to be present in surface water runoff discharged at the outfall.

7.2.2. Groundwater abstracted from shafts

The hazardous substances arsenic and fluoranthene may be present in the discharge of abstracted groundwater, based on assessment of background groundwater quality from nearby boreholes.

Arsenic present in groundwater is considered to be representative of natural background levels in the Crag aquifer based on published values. Crag groundwater is generally moderately mineralised and contains arsenic at similar concentrations to those observed in the groundwater boreholes at the site (E L Ander, 2006).

Fluoranthene, a poly-aromatic hydrocarbon (PAH), is generally not detected in groundwater at the site. It has been detected in one out of five samples from groundwater boreholes near the proposed shafts, at a concentration in excess of the relevant EQS. The presence of fluoranthene in the aquifer may not be natural, and so the input of fluoranthene in excess of minimum reporting values (MRV) must be prevented (Environment Agency, 2017). As there is no published MRV for fluoranthene, the appropriate limit is considered to be the lower of the laboratory limit of detection or EQS.

Fluoranthene presence in groundwater appears isolated and not widespread, and as such it is not generally expected to be present in groundwater abstracted for the shaft construction. As abstracted groundwater is not expected to be discharged continuously, it is recommended that sampling and testing for PAHs is carried out to confirm its absence prior to discharge.

7.3. Non-hazardous pollutants

7.3.1. Surface water runoff

The only contaminant identified in the surface water runoff source, and only one introduced to the abstracted groundwater, is suspended solids. A treatment train is incorporated into the design of surface water collection and conveyance facilities to treat suspended solids to a concentration below 250 mg/l. The aquifer itself, which is not considered a water resource potential in this area due to saline intrusion, is not considered sensitive to input of suspended solids. Percolation through the engineered infiltration and through the aquifer will further reduce suspended solids prior to

discharge to the sea via pathway P3. Accordingly it is considered highly unlikely that there would be any measurable impact in the sea with regards to pathway P3.

Surface flow from the outfall to discharge to the sea via pathway P4 is not expected to occur routinely, but is likely to occur occasionally, either:

- during high sea level surge events;
- if the volume of discharge exceeds the infiltration capacity of the ground in the infiltration area; or
- groundwater level is at the ground surface preventing infiltration.

Baseline concentrations with respect to suspended solids in the sea offshore of Sizewell have been monitored and reported within the Environmental Statement for the development, reported in Chapter 21 Marine Water Quality and Sediments, page 38, section 21.4.9/10 (EDF Energy, 2020). Sediment suspended in sea water is depth dependent, highly seasonal, and varies throughout the tidal cycle due to processes of deposition and re-suspension. High suspended solids are driven by both high wave energy events and peak spring tidal currents. Monitoring of suspended solids has not been carried out closer than 500 m from the coast, but concentrations are generally expected to be higher in the intertidal zone close to the TMO, than those monitored offshore.

During the first event listed above where there may be direct discharge from the TMO to the sea via pathway P4 (high sea level surge event), baseline suspended solids are expected to be approaching or exceeding the recorded daily maximum values at 500 m offshore, which varies between 266 and 609 mg/l. These baseline values are in excess of the maximum suspended solids expected in the discharge after treatment (250 mg/l), and accordingly the discharge is not expected to have a measurable impact in baseline suspended solids in the sea near the outfall. Such a direct discharge is considered to be intermittent based on the limited circumstances in which it might occur.

On the latter two of the occasions listed above, any intermittent direct discharge to sea is expected to occur into the surf zone, most likely during times of heavy rainfall storms. Again, baseline suspended solids are likely to be higher than the suspended solid content of the discharge, based on daily maximum values at 500 m offshore. Additionally suspended solids in the discharge are expected to settle as the discharged water flows over the Reno mattress and be captured within it, reducing concentration on entering the sea. Accordingly, the risk to the sea in the vicinity of the outfall is considered very low.

Table 7-1 - Baseline suspended solids concentration measured 500 m off the Sizewell coast

Suspended solids statistic	Suspended solids at 0.3 m above the seabed (mg/l)	Suspended solids at 1.0 m above the seabed (mg/l)
Daily minimum	24-28	16-18
Daily mean	103-161	72-105
Daily maximum	357-609	266-459

From Page 39, Table 21.8 of (EDF Energy, 2020).

7.3.2. Groundwater abstracted from shafts

In dewatered groundwater to be discharged at the outfall copper, iron and zinc are the only dissolved non hazardous pollutants which may be present above Coastal EQS, based on analysis of samples from nearby groundwater boreholes. The potential copper, iron and zinc concentration in discharged dewatered groundwater is considered the same as the natural background levels in the groundwater, based on published values for the Crag aquifer (E L Ander, 2006). Accordingly, there is considered to be negligible risk to the aquifer with regards to discharge of dewatered groundwater at the outfall, with respect to non-hazardous pollutants. Risk to coastal surface water in the sea from these metals in the discharge is considered very low, given that it is the same as the baseline condition with regards to concentration of iron in groundwater discharging to the sea.

Dewatered groundwater is expected to constitute only a very minor contribution to the volume of water discharged at the outfall and is likely to be significantly diluted with inputs from surface water runoff, further reducing the risk. Additionally the concentration of iron and zinc are expected to be

reduced as part of the water treatment train, through oxidation and precipitation. As detailed above, direct discharge the sea is not expected under normal circumstances.

7.4. Qualitative screening summary

The identified potential contaminant linkages have been assessed as having low or very low risk. The discharge is considered to meet the first two of the example screening criteria listed in section 7.1 that determines the discharge is acceptable and so will not require further assessment:

- the discharge has acceptably low concentrations of hazardous substances, or concentrations that are the same as the natural background levels in the groundwater; and
- the discharge has concentrations of non-hazardous pollutants that are within the relevant environmental standards, or are the same as the natural background levels in the groundwater.

Accordingly, no further quantitative risk assessment is considered necessary.

8. Coastal Surface Water H1 Assessment

8.1. Approach

Following feedback received from the EA on 31 January 2024, surface water screening tests for estuaries and coastal waters and significant load test have been undertaken in accordance with the latest GOV.UK guidance for surface water pollution risk assessments (Environment Agency, 2022) and more detailed supporting EA internal guidance, "Permitting of hazardous chemicals and elements in discharged to surface waters [LIT 13134]" (H1 Risk Assessment) (Environment Agency, December 2019).

The assessment will be used to understand the risk to surface water in the North Sea offshore of the TMO outfall, from intermittent periods when both:

- intermittent direct discharge to the Sea is occurring, and
- groundwater from the shaft dewatering is being discharged via the TMO.

An H1 assessment is not considered appropriate for the majority of the discharge, which comprises surface water runoff, as there are no specific substances (which have an EQS) liable to be present in the discharge.

For groundwater to be discharged, the screening tests detailed in the guidance that have been undertaken consist of:

- estuaries and coastal waters screening test 1, which checks whether the level of pollutant in the discharge is more than the EQS limits. The test has been carried out for both AA-EQS and MAC-EQS if the chemical and element has both types of EQS, and
- the significant load test for priority hazardous pollutants which are liable to be present in the discharge.

Certain substances have a higher laboratory testing Limit of Detection (LOD) than the relevant EQS. Where this is the case the substances have been included in the screening, even if there were no detections above the LOD. It is worth noting that different laboratories and/or sample preparation methods can lead to different LODs between sampling rounds. Where some of the samples are tested with an LOD below the relevant standard, and there were no detections in any of the sample results, the substance is not considered to be present in the discharge, and in accordance with the guidance no screening is required. In cases that the LOD is not lower than the EQS, constituents were screened at their face value.

Notwithstanding the conservative approach taken in this assessment to include all substances whose LOD is not sufficiently low to assess compliance with the EQS, it is noted that the risk assessment guidance states that:

"*PAHs should only be assessed if they have been introduced to the discharge directly as a result of a trade activity, rather than indirectly through surface water runoff.*"

In this case it is considered that the potential presence of PAHs in the groundwater to be discharge is indirect, as they are not introduced to the groundwater to be discharged as a result of activities on the site.

8.2. H1 Screening Assessment Test 1

The mean and maximum values of substances exceeding the EQS limits during screening were compared against AA-EQS and MAC-EQS based on the guidance provided by the Environment Agency for estuaries and coastal waters (Environment Agency, 2019).

The mean concentration of constituents were compared against AA-EQS standards and the results are presented in Appendix E. Constituents exceeding the AA-EQS are presented in Table 8-1. It is worth noting that the majority of the constituents had zero samples above the LOD. Fluoranthene, chromium hexavalent and iron are the only ones that have samples over the LOD and their mean detection value is above the AA-EQS.

Table 8-1 – Coastal test 1 AA-EQS Screening

Constituent	Mean Value Detected (mg/l)*	AA-EQS (mg/l)	LOD (mg/l)	No. of Samples above LOD
Fluoranthene	0.000625	0.0000063	0.0001	2/21
Iron (Dissolved)	2.24	1.0	0.005	15/21
Chromium (Hexavalent)	0.00094+	0.0006	0.0001-0.02	1/21
Cyanide (Free)^	0.005	0.001	0.005	0
2,4-Dichlorophenol^	0.0005	0.00042	0.0005	0
Pentachlorophenol^	0.0005	0.0004	0.0005	0
Benzo[a]pyrene^	0.0001	0.00000017	0.0005	0
Benzo[b]fluoranthene^	0.0005	0.00000017	0.0001	0
Benzo[k]fluoranthene^	0.0005	0.00000017	0.0001	0
Indeno(1,2,3-c,d)Pyrene^	0.0005	0.00000017	0.0001	0
Benzo[g,h,i]perylene^	0.0005	0.00000017	0.0001	0

Notes: * Results below the limit of detection (LOD) have been taken at face value (at the LOD) for the calculation of mean. ^ Not detected above LOD in any samples. + The mean result for total dissolved chromium has been used as a proxy for hexavalent chromium (conservatively assuming all measured chromium in each sample is hexavalent), as the total dissolved chromium analysis has a lower LOD and is considered more accurate.

The maximum measured concentration of substances in the groundwater dataset were compared against MAC-EQS standards and the results are presented in Table 8-2. Only fluoranthene has maximum value above the detection limit that exceeds the MAC-EQS.

Table 8-2 - Coastal test 1 MAC EQS Screening

Constituent	Maximum Value Detected (mg/l)*	MAC-EQS (mg/l)
Fluoranthene	0.0005	0.00012
Anthracene	0.0005	0.0001
Hexachlorobenzene^	<0.0005	0.00005
Benzo[a]pyrene^	<0.0005	0.000027
Benzo[b]fluoranthene^	<0.0005	0.000017
Benzo[k]fluoranthene^	<0.0005	0.000017
Benzo[g,h,i]perylene^	<0.0005	0.00000082

* Results below the limit of detection (LOD) have been taken at face value (at the LOD). ^ Not detected above LOD in any samples.

8.3. Significant Load Test

Significant loads are annual loads set for all priority hazardous substances. The significant load is calculated by multiplying the mean quality of the substance with the total expected volume. Then the value is compared to the annual significant load provided on Table 1 of Part B screening (Environment Agency, 2019). The annual load is firstly calculated using raw data, and if it exceeds the significant load for that substance, then the calculation is repeated with 'cleaned up' data. The expected volume of dewatering equals to 450.5 m^3. The results are presented on Table 8-3. None

of the constituents exceed the annual significant load and therefore according to guidance the discharge is not liable to cause pollution on the basis of this test.

Table 8-3 - Phase 2 Screening – Significant Load

Constituent	Mean Value Detected (mg/l)	Mean Value Detected (kg/m^3)*	Calculated annual load in groundwater discharge (kg/yr)	Annual Significant Load (Part B) (kg/yr)
Anthracene	0.0007	0.00000007	3.05 x 10^{-5}	1
Cadmium	0.00011	0.00000011	5.02 x 10^{-5}	5
Hexachlorobenzene	0.0005	0.0000005	2.25 x 10^{-4}	1
Hexachlorobutadiene	0.001	0.000001	2.38 x 10^{-4}	1
Mercury	0.00001	0.00000001	5.36 x 10^{-6}	5
Benzo(a)pyrene	0.0001	0.0000001	2.25 x 10^{-4}	5
Sum of 4 PAHs (Benzo(b)-fluor-anthene + Benzo(k)fluor-anthene and Benzo(g,h,i)-perylene + Indeno(1,2,3-cd)-pyrene)	0.0004	0.0000004	1.80 x 10^{-4}	5

* Results below the limit of detection (LOD) have been taken at face value (at the LOD) for the calculation of mean.

8.4. Summary and discussion

The H1 assessment assesses the risk to surface water in the North Sea offshore of the TMO outfall, from dewatering groundwater being discharged. The substances anthracene, fluoranthene, hexavalent chromium and iron fail the initial screening test, taking the sample result values at face value.

As previously detailed in section 5.2.3, it is considered unlikely that hexavalent chromium or PAHs will be present in the dewatered groundwater, although this should be confirmed with sampling of the dewatered groundwater prior to discharge. Once such sampling has taken place to confirm the absence of hexavalent chromium and PAHs, the only remaining substance which fails a screening test is dissolved iron.

For there to be direct discharge of iron to the sea the following events both need to occur simultaneously:

- direct flow from the TMO outfall to the sea is occurring, and
- groundwater from the shaft dewatering is being discharged via the TMO.

The likelihood of these events, and potential measures to control them, is discussed below

Probability of direct flow from the TMO to the sea

The TMO outfall pipe invert is at 1.665 m AOD and the apron (Reno mattress) is at 1.484 m AOD. Mean high water springs (MHWS) is at 1.32 m AOD. Highest astronomical tide (HAT) will be at 1.72 m AOD (based on MHWS-HAT difference at Lowestoft) or 1.77 m AOD (based on Harwich).

The frequency of sea level having exceeded the proposed Reno mattress level in recent observed data has been assessed by Centre for Environment Fisheries and Aquaculture Science (Cefas), utilising tide gauge data from 2016 to 2023. Over this eight year period, water levels above the height of the TMO apron (1.484 m AOD) occurred over a cumulative period of 279 hours (0.53% of the time), spread over 171 days.

Therefore, the apron will be inundated on highest tides but very infrequently.

As previously discussed in section 7, aside from the very infrequent times when the TMO apron is inundated by high tides, direct flow to the sea could occur as a result of either:

- the volume of discharge exceeding the infiltration capacity of the ground in the infiltration area; or
- groundwater level is at the ground surface preventing infiltration.

The former of these is considered to be a function of heavy rainfall leading to high volume of surface water discharge, and the latter would occur as a result of either high rainfall (and therefore surface water discharge rate) causing a discharge mound around TMO outfall, or high sea level causing a rise in groundwater level.

Prevention of groundwater being discharged while there is direct flow from the TMO

The total volume of groundwater dewatering is conservatively estimated to be not more than 450.5m^3, based on draining groundwater from excavation arisings (56.3 m^3) and pumping out the completed sealed shaft (304.1 m^3), plus a 25% margin. As the discharge rate for this dewatering is highly dependent on the pump selection and construction activities, it is considered the abstraction may be undertaken over a period of up to two weeks.

Due to being pumped, the timing of groundwater discharge is inherently controllable, and whilst not being pumped groundwater will remain stored within the shaft.

Due to the expected rarity of events where flow from the TMO is direct to the sea, it is considered likely that the groundwater dewatering element of the discharge will not coincide with an event whereby direct flow from the TMO is occurring. However, with appropriate monitoring of conditions at the outfall it can be ensured that there is no pumping out of groundwater at a time when direct discharge might occur.

In summary:

- Hazardous substances hexavalent chromium and PAHs have been detected sporadically in groundwater in the MCA, but are not expected to be present in the dewatered groundwater to be discharged.
- Confirmatory sampling and testing of groundwater will be carried out prior to pumping to the TMO discharge to determine the presence of hexavalent chromium and PAHs.
- Groundwater will not be pumped to the TMO if hexavalent chromium or PAHs are found to be present. The water would be treated to remove the substances prior to discharge at the TMO, or would be disposed of from the site (for example via tankering to a permitted waste water treatment facility).
- Iron will be present in the groundwater at concentrations that exceed H1 screening test 1. No other substances fail the screening tests (once PAH and hexavalent chromium are confirmed not to be present).
- Direct discharge of the groundwater to the sea is considered unlikely to occur. By monitoring outfall conditions prior to pumping out groundwater, direct discharge can be prevented, to prevent any impact with regards to iron in the sea.

In accordance with the above, the potential for any impact in the marine environment from discharge of pollutants is considered to be extremely low, and can be mitigated, and so any further quantitative modelling is not considered to be required.

Any direct discharge would occur within the wave breaker zone, which means that details of the mixing process will be very dependent on weather conditions (wind strength and direction) and prevailing swell present over a wider sea area. It can be assumed that mixing will be rapid but to quantitatively model it exactly would be potentially impossible.

9. Assessment of accidents

In accordance with EA guidance (Environment Agency, 2018) an assessment has been made of any possible accidents that could affect risks to groundwater and their consequences in terms of groundwater pollution.

9.1. Accident risk assessment method

In line with industry norms, Risk (R) is defined as:

R = P x I

Where:

P = Probability (%) of an event (hazard) occurring

I = Impact of the event (hazard), should it occur

It should be noted for the purposes of this report, impact (I) is defined in terms of impacts to the identified groundwater and surface water receptors.

Definitions of the scale of Probability (P) and Impact (I) values used in this report are presented in Table 9-1 and Table 9-2 below. The rating has been assigned based on professional judgment.

Table 9-3 presents the definitions of the risk levels derived from probability and impact using the risk classification matrix. The overall risk classification shall be considered as qualitative rather than quantitative as the rating is largely based on experience and engineering judgement, therefore the overall risk rating shall not be used for quantitative statistical analyses.

The accident assessment shows the calculated risk result for considered hazards both prior to, and post risk control measures (RCM).

Table 9-1 - Qualitative scale of probability (P)

Probability of event (P)

Scale	Likelihood	Probability (%)
5	Very Likely	>70
4	Likely	40 – 70
3	Possible	10 – 40
2	Unlikely	1 – 10
1	Very Unlikely	<1

Table 9-2 - Qualitative scale of Impact (I)

Scale	Class Descriptor	Controlled Waters impact
5	Very Serious	Significant long term impact to water quality in controlled waters leading to loss of water resources and habitats
4	Serious	Significant breaches of water quality standards leading to measurable change in water resource potential or habitat potential in downgradient receptors
3	Moderate	Impact leading to short term exceedances of water quality standards at compliance points in groundwater and/or surface water
2	Slight	Measurable impact at the discharge, but no exceedances of water quality standards at compliance points or downgradient receptors
1	Negligible	Negligible – no measurable impact

Table 9-3 - Risk classification matrix

		Risk Classification (R)							
		Risk Matrix (R = P x I)						**Risk Classification**	
Probability (P)	5	5	10	15	20	25	17 - 25	High Risk	Unacceptable. Consider unfeasible and review concepts
	4	4	8	12	16	20			
	3	3	6	9	12	15	9 - 16	Medium Risk	Identify and implement all practical risk control measures
	2	2	4	6	8	10			
	1	1	2	3	4	5	5 - 8	Low Risk	Identify and implement cost effective risk control measures
		1	2	3	4	5	1 - 4	Very Low Risk	Acceptable. Monitor at key stages
		Impact (I)							

9.2. Assessment of groundwater risk from accidents

Table 9-4 - Assessment of controlled waters risk from accidents

Ref No	Hazard/Risk Raised	Description of Hazard/Risk	Initial Risk Rating			Proposed Mitigation/Controls	Final Risk Rating		
			P	I	R		P	I	R
1.	Spillage of chemicals including fuel oils	Accidental spillage of chemicals including liquids (fuel oils) or soluble solids, which are then washed into surface water collection ditches/bunds and sediment ponds, pumped from here via package settlement units to the TMO outfall	3	4	Medium	1. Pollution prevention measures put in place at source by contractors, including limiting chemical storage in MCA, bunding, plant nappies, drip trays and wash down areas. 2. Accident management plan / construction environmental management plan (CEMP) to include spill response measures, such as use of spill kits, shut down of surface water discharge pumping and isolation / clean up of affected areas.	2	4	Low
2.	Failure of discharge treatment plant (e.g., package settlement units)	Failure of water treatment for suspended solids to treat water to the required standard, leading to discharge of high suspended solids	3	3	Medium	1. Inspection and Maintenance programme for treatment plant. 2. Accident management plan to include measures, such as shut down of surface water discharge pumping from affected areas	2	3	Low
3.	Discharge of foul water / effluents into surface water collection system	Deliberate discharge of waste water or waste liquids into the site surface water collection system	3	4	Medium	1. Contractor's Site Induction to include awareness of surface water and waste water discharge arrangements. 2. Signage around surface water collection infrastructure to prohibit waste discharge	2	4	Low
4.	Erosion or damage of the beach	High flow rates at the discharge causing erosion or damage of the beach due to flow scouring, and elevated suspended sediments in seawater.	4	3	Medium	1. Erosion and scour control measures included in the design including gabion baffle blocks to reduce flow velocities, and Reno mattress for erosion protection	2	3	Low

10. Conclusions

An assessment of the risk to groundwater quality, and water quality in the sea due to discharges from groundwater, has been carried out for the operation of the TMO outfall during the early construction phase of SZC.

The majority of the discharges will comprise surface water runoff from the MCA, which may contain elevated suspended solids. A treatment train will be incorporated to reduce suspended solids to an indicative level of 250 mg/l, and no other contaminants are expected to be present in the surface water runoff. In addition, the outfall will intermittently be much smaller volumes of groundwater abstracted from the construction of shafts, which is expected to contain the same contaminants as natural baseline groundwater, but possibly also hazardous substance fluoranthene which has been measured in baseline groundwater but is not considered natural.

The conceptual model and preliminary risk assessment demonstrates a very low risk to groundwater in the secondary A aquifer in superficial Beach Deposits and the underlying Crag bedrock, and low risk to surface water in the North Sea offshore of the outfall from suspended solids and other non-hazardous pollutants.

The potential presence of hazardous substances hexavalent chromium, anthracene and fluoranthene in groundwater appears isolated and not widespread, and as such these are not expected to be present in groundwater abstracted for the shaft construction. As abstracted groundwater is not expected to be discharged continuously, it is recommended that sampling and testing for hexavalent chromium and PAHs is carried out to the confirm the absence of these substances prior to discharge. The input of these substances in excess of minimum reporting values (MRV) must be prevented. As there is no published MRV for these substances, the appropriate limit is considered to be any detection of above a suitably low limit of detection, which meets the published value for "concentrations in groundwater below which the danger of deterioration in the quality of the receiving groundwater is avoided" (UK Technical Advisory Group on the Water, 2016). Dewatered groundwater is expected to constitute only a very minor contribution to the volume of water discharged at the outfall and is likely to be significantly diluted with inputs from surface water runoff, further reducing the risk with respect to hazardous substances.

As the risk to groundwater has been assessed as having very low risk, no further quantitative risk assessment for impact to groundwater is considered necessary.

As the risk to surface water has been assessed as having low risk, estuaries and coastal waters surface water screening tests have been carried out to better understand the risk to surface water in the North Sea offshore of the TMO outfall, from intermittent periods when both intermittent direct discharge to the sea is occurring, and groundwater from the shaft dewatering is being discharged via the TMO. The outcome of the assessment indicates that:

- iron will be present in the groundwater at concentrations that exceed H1 screening test 1. No other substances in groundwater fail the screening tests (once PAHs and hexavalent chromium are confirmed not to be present); and
- direct discharge of the groundwater to the sea is considered unlikely to occur. By monitoring outfall conditions prior to pumping out groundwater, direct discharge can be prevented, to prevent any impact with regards to iron in the sea.

In accordance with the above, the potential for any impact in the marine environment from discharge of pollutants is considered to be extremely low, and can be mitigated, and so any further quantitative modelling is not considered to be required.

An assessment has been carried out to understand of the impact to controlled waters from accidents on the site. The assessed accident scenarios present a low risk, after considering mitigation measures to be embedded in contractor's management of the site.

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Appendices

Appendix A. Drawings

Appendix B. Relevant borehole logs

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Rotary Core Log

Borehole No.
DBH 2009_20
Sheet 1 of 5

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords:	647329.98 - 264094.78	Hole Type RO
Location:			Level:	1.59	Scale 1:50
Client:	EDF NNB GenCo		Dates:	19/07/2010 - 26/07/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
		0.00 0.00	EW EW							SAND. (Foreman's description) (Possible MADE GROUND/RECENT DEPOSITS) SD_ALV_S

Continued on Next Sheet

Remarks

AGS

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Rotary Core Log

Borehole No.
DBH 2009_20
Sheet 2 of 5

Project Name: Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords: 647329.98 - 264094.78	Hole Type RO
Location:		Level: 1.59	Scale 1:50
Client: EDF NNB GenCo		Dates: 19/07/2010 - 26/07/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										SAND. (Foreman's description) (Possible MADE GROUND/RECENT DEPOSITS) SD_ALV_S
							11.00	-9.41		Peaty CLAY. (Foreman's description) (RECENT DEPOSITS) PEAT
							12.00	-10.41		ATK INTERPRETATION C1
										SAND and shells. (Foreman's description) (CRAG DEPOSITS) CRAG DEPOSITS
										SAND and shells. (Foreman's description) (CRAG DEPOSITS) [ATK TOP/BOTTOM DEPTH INTERPRETATION] C2
							19.91	-18.32		

Continued on Next Sheet

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

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Rotary Core Log

Borehole No.
DBH 2009_20
Sheet 3 of 5

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords: 647329.98 - 264094.78	Hole Type RO
Location:			Level: 1.59	Scale 1:50
Client:	EDF NNB GenCo		Dates: 19/07/2010 - 26/07/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										SAND and shells. (Foreman's description) (CRAG DEPOSITS)
										CRAG DEPOSITS
										SAND and shells. (Foreman's description) (CRAG DEPOSITS) [ATK TOP/BOTTOM DEPTH INTERPRETATION]
										C2
										Continued on Next Sheet

21 22 23 24 25 26 27 28 29 30

Remarks

AGS

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Rotary Core Log

Borehole No.
DBH 2009_20
Sheet 4 of 5

Project Name: Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords: 647329.98 - 264094.78	Hole Type RO
Location:		Level: 1.59	Scale 1:50
Client: EDF NNB GenCo		Dates: 19/07/2010 - 26/07/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										SAND and shells. (Foreman's description) (CRAG DEPOSITS)
										CRAG DEPOSITS
										SAND and shells. (Foreman's description) (CRAG DEPOSITS) [ATK TOP/BOTTOM DEPTH INTERPRETATION]
										C2
							35.59	-34.00		ATK INTERPRETATION
										C3
										Continued on Next Sheet

31 32 33 34 35 36 37 38 39 40

Remarks

AGS

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Rotary Core Log

Borehole No.
DBH 2009_20
Sheet 5 of 5

Project Name: Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords: 647329.98 - 264094.78	Hole Type RO
Location:		Level: 1.59	Scale 1:50
Client: EDF NNB GenCo		Dates: 19/07/2010 - 26/07/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										ATK INTERPRETATION C3
							42.00	-40.41		
							42.00	-40.41		Traces of London CLAY. (Foreman's description) (Possible LONDON CLAY) LC
							45.00	-43.41		London CLAY. (Foreman's description) LC
							48.00	-46.41		End of Borehole at 48.00m

41 42 43 44 45 46 47 48 49 50

Remarks

AGS

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Rotary Core Log

Borehole No.
DCBH2019_3
Sheet 1 of 11

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
		0.00 - 0.60	B							MADE GROUND: Yellowish brown slightly gravelly silty fine SAND with frequent shells. Gravel is subangular to subrounded fine to coarse of flint.
		0.10	ES							
		0.20	ES							
		0.30	D				0.60	1.42		
		0.30	ES							MG
		0.50	ES							
		0.60 - 1.20	B							MADE GROUND: Orangish brown slightly gravelly silty fine SAND with rare shell fragments. Gravel is subrounded fine to coarse of flint.
		0.60 - 1.20	B				1.20	0.82		
		0.80	D							MG
		0.80	ES							
		1.00	ES	100	0	0				MADE GROUND: Dark orangish brown slightly gravelly silty fine to medium SAND. Gravel is subangular to subrounded fine to medium of flint and brick fragments.
		1.50	ES							
		1.50	ES				2.00	0.02		MG
		2.00	ES							
		2.00 - 2.50	ES	32	0	0				
							2.50	-0.48		Partial recovery (32%). Recovered as dark orangish brown slightly gravelly silty fine to medium SAND. Gravel is subangular to subrounded fine to medium of flint and brick fragments.
		2.50 - 3.50		0	0	0				MG
										Assumed zone of core loss.
		3.50 - 5.70		0	0	0				
							5.70	-3.68		Dark brown mottled dark orange gravelly fine to medium SAND. Gravel is subrounded fine to medium of flint.
		5.70 - 6.50	ES	100	0	0				SD_ALV_S
		6.00	ES				5.95	-3.93		Firm dark brown peaty CLAY with frequent plant remains up to 12 x 40mm. Peat is spongy pseudo-fibrous.
										SD_ALV_C
							6.50	-4.48		*6.14-6.25m: becoming spongy black pseudofibrous peat.*
		6.50 - 7.25		32	0	0				Partial recovery (32%). Recovered as black clayey subrounded to rounded fine to medium GRAVEL of flint.
		7.01	ES							SD_ALV
		7.01	ES				7.25	-5.23		Partial recovery (36%). Recovered as spongy black pseudo-fibrous PEAT.
		7.25 - 8.00		36	0	0				PEAT
										Dark grey silty fine SAND.
		8.00	ES				8.00	-5.98		SD_ALV_S
							8.21	-6.19		Spongy dark grey black fibrous PEAT.
		8.00 - 8.75		100	0	0				PEAT
							8.52	-6.50		Dark grey silty fine SAND.
										SD_ALV_S
							8.87	-6.85		Bluish grey mottled brownish orange silty fine to medium SAND with occasional flasers of light grey clay up to 2 x 15mm.
		9.00	ES							NCG
		8.75 - 9.50	ES	100	0	0				
		9.00								*9.11m: medium gravel sized subangular flint.*
		9.50 - 10.50	C				9.50	-7.48		Not logged zone with sampling. Geotechnical sample (NCG). Recovered in a sealed liner.
		9.50 - 10.50	C							NCG

Continued on Next Sheet

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

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Rotary Core Log

Borehole No.
DCBH2019_3
Sheet 2 of 11

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description	
		9.50-10.50 10.50	ES ES	100	0	0	10.50	-8.48		Not logged zone with sampling. Geotechnical sample (NCG). Recovered in a sealed liner. NCG	
		11.00 - 11.93	C				11.00	-8.98		Orangish brown mottled light grey silty fine to medium SAND with frequent flasers of light grey clay and frequent shell fragments. NCG	11
		11.00 - 12.00		93	0	0				Not logged zone with sampling. Geotechnical sample (RCG). Recovered in a sealed liner. NCG	
		12.00	ES				12.00	-9.98		*11.93-12.00m:Assumed zone of core loss.*	12
		12.00 - 12.50		56	0	0	12.28	-10.26		Greyish brown slightly gravelly silty fine to medium SAND with frequent flasers of bluish grey clay up to 2 x 7mm and frequent coarse sand sized comminuted shells. Gravel is subangular to subrounded fine of flint. NCG	
		12.50 - 13.25	C				12.50	-10.48			
		12.50 - 13.25		100	0	0					13
		13.25 - 14.00	C				13.25	-11.23		Assumed zone of core loss. NCG	
		13.25 - 14.00	C							Not logged zone with sampling. Geotechnical sample (RCG). Recovered in a sealed liner. NCG	
		13.25 - 14.00		100	0	0					
		14.00 - 14.65	C				14.00	-11.98		Not logged zone with sampling. Geotechnical sample (C4). Recovered in a sealed liner. NCG	14
		14.00 - 15.50		43	0	0	14.65	-12.63		Not logged zone with sampling. Geotechnical sample (C5). Recovered in a sealed liner. NCG Assumed zone of core loss. NCG	15
		15.50 - 16.05	C				15.50	-13.48		Not logged zone with sampling. Geotechnical sample (C6). Recovered in a sealed liner. NCG	
		15.50 - 16.25		73	0	0				*16.05-16.25m: Assumed zone of core loss.*	16
		16.25 - 17.00	C				16.25	-14.23		Not logged zone with sampling. Geotechnical sample (C7). Recovered in a sealed liner. NCG	
		16.25 - 17.00		100	0	0					
		17.00	ES				17.00	-14.98		Minimal recovery (19%). Recovered as dark bluish grey mottled black fine to medium SAND with frequent coarse sand sized comminuted shells and frequent flasers of light grey clay up to 3 x 14mm. NCG	17
		17.00 - 18.50		19	0	0					18
		18.50 - 19.07	C				18.50	-16.48		Not logged zone with sampling. Geotechnical sample (C8). Recovered in a sealed liner. NLZS	
		18.50 - 19.25		76	0	0				*19.07-19.25m: Assumed zone of core loss.*	19
		19.25 - 20.00	C				19.25	-17.23		Not logged zone with sampling. Geotechnical sample (C9). Recovered in a sealed liner. NLZS	
		19.25 - 20.00		100	0	0					
		20.00 - 20.75	C				20.00	-17.98		Continued on Next Sheet	20

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

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Rotary Core Log

Borehole No.
DCBH2019_3
Sheet 3 of 11

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description	
		20.00 - 20.75		100	0	0				Not logged zone with sampling. Geotechnical sample (NCG0). Recovered in a sealed liner. NLZS	
							20.75	-18.73			
		20.75 - 21.50		45	0	0				Partial recovery (45%). Recovered as dark bluish grey fine to medium SAND with frequent coarse sand sized comminuted shells. RCG	21
		~~21.50 - 22.18~~	C				21.50	-19.48		Not logged zone with sampling. Geotechnical sample (NCG1). Recovered in a sealed liner. RCG	
		21.50 - 22.25		91	0	0				*22.18-22.25m:Assumed zone of core loss.*	22
		~~22.25 - 23.00~~	C				22.25	-20.23		Not logged zone with sampling. Geotechnical sample (NCG2). Recovered in a sealed liner. RCG	
		22.25 - 23.00		100	0	0				Not logged zone with sampling. Geotechnical sample (NCG3). Recovered in a sealed liner. RCG	23
		~~23.00 - 24.00~~	C				23.00	-20.98		Grey fine to medium SAND with frequent coarse sized comminuted shells and rare flasers of stiff grey silt up to 6 x 8mm. RCG	
		23.00 - 24.00	C							Assumed zone of core loss. RCG	
		23.00 - 24.50		67	0	0				Not logged zone with sampling. Geotechnical sample (NCG4). Recovered in a sealed liner. RCG	24
							24.00	-21.98		Assumed zone of core loss. RCG	
							24.14	-22.12		Not logged zone with sampling. Geotechnical sample (NCG5). Recovered in a sealed liner. RCG	
		~~24.50 - 24.88~~	C				24.50	-22.48		*25.94-26.00m: Assumed zone of core loss.*	25
		24.50 - 25.25		51	0	0	24.88	-22.86		Minimal recovery (17%). Recovered as greenish grey fine to coarse SAND with frequent comminuted coarse sized shells and rare flasers of soft grey clay up to 15 x 22mm. RCG	
		~~25.25 - 25.94~~	C				25.25	-23.23		Assumed zone of core loss. RCG	
		25.25 - 26.00		92	0	0				Assumed zone of core loss. RCG	26
							26.00	-23.98		Assumed zone of core loss. RCG	
		26.00 - 26.75		17	0	0				Assumed zone of core loss. RCG	
							26.75	-24.73		Assumed zone of core loss. RCG	27
		26.75 - 27.50		0	0	0				Assumed zone of core loss. RCG	
							27.50	-25.48		Assumed zone of core loss. RCG	
		27.50 - 28.25		0	0	0				Assumed zone of core loss. RCG	28
							28.25	-26.23		Not logged zone with sampling. Geotechnical sample (NCG6). Recovered in a sealed liner. RCG	
		28.25 - 29.00		0	0	0				Assumed zone of core loss. RCG	29
		~~29.00 - 29.31~~	C				29.00	-26.98		Not logged zone with sampling. Geotechnical sample (NCG7). Recovered in a sealed liner. RCG	
		29.00 - 29.75		41	0	0	29.31	-27.29			
		~~29.75 - 30.31~~	C				29.75	-27.73			30

Continued on Next Sheet

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

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Rotary Core Log

Borehole No.
DCBH2019_3
Sheet 4 of 11

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
		29.75 - 30.50		75	0	0				Not logged zone with sampling. Geotechnical sample (NCG7). Recovered in a sealed liner. RCG
		~~30.50 - 30.98~~	C				30.50	-28.48		*30.31-30.50m: Assumed zone of core loss.*
		30.50 - 31.25		64	0	0				Not logged zone with sampling. Geotechnical sample (NCG8). Recovered in a sealed liner. RCG
		~~31.25 - 31.68~~	C				30.98	-28.96		Assumed zone of core loss. RCG
		31.25 - 32.00		57	0	0	31.25	-29.23		Not logged zone with sampling. Geotechnical sample (NCG9). Recovered in a sealed liner. RCG
		32.00 - 32.75		0	0	0	31.68	-29.66		Assumed zone of core loss. RCG
		~~32.75 - 33.36~~	C				32.75	-30.73		Not logged zone with sampling. Geotechnical sample (RCG0). Recovered in a sealed liner. RCG
		32.75 - 33.50		81	0	0				*33.35-33.50m: Assumed zone of core loss.*
		33.50 - 34.25		41	0	0	33.50	-31.48		Partial recovery (41%). Recovered as dark greenish grey silty fine to medium SAND with frequent coarse sized comminuted shell fragments. RCG
		34.25 - 35.00		27	0	0	34.25	-32.23		Partial recovery (27%). Recovered as greenish grey fine to coarse SAND with abundant coarse sized comminuted shell fragments and thick laminations of stiff grey silt. RCG
		~~35.00 - 35.35~~	C				35.00	-32.98		Not logged zone with sampling. Geotechnical sample (RCG1). Recovered in a sealed liner. RCG
		35.00 - 35.75		47	0	0	35.35	-33.33		Assumed zone of core loss. RCG
		~~35.75 - 36.43~~	C				35.75	-33.73		Not logged zone with sampling. Geotechnical sample (RCG2). Recovered in a sealed liner. RCG
		35.75 - 36.50		91	0	0				*36.43-36.50m: Assumed zone of core loss.*
		~~36.50 - 36.97~~	C				36.50	-34.48		Not logged zone with sampling. Geotechnical sample (RCG3). Recovered in a sealed liner. RCG
		36.50 - 37.25		63	0	0	36.97	-34.95		Assumed zone of core loss. RCG
		37.25 - 38.00		0	0	0				
		38.00 - 38.75		0	0	0				Minimal recovery (16%). Recovered as greenish grey fine to medium SAND with abundant coarse sand sized comminuted shell fragments. RCG
		~~38.75~~ 38.75	D ES				38.75	-36.73		Not logged zone with sampling. Geotechnical sample (RCG4). Recovered in a sealed liner. RCG
		38.75 - 39.50		16	0	0				Assumed zone of core loss. RCG
		~~39.50 - 39.89~~	C				39.50	-37.48		
		39.50 - 40.25		52	0	0	39.89	-37.87		

Continued on Next Sheet

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

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Rotary Core Log

Borehole No.
DCBH2019_3
Sheet 5 of 11

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
		~~40.25 - 40.94~~	C				40.25	-38.23		Assumed zone of core loss. RCG
		40.25 - 41.00		92	0	0				Not logged zone with sampling. Geotechnical sample (RCG5). Recovered in a sealed liner. RCG
		~~41.00 - 41.75~~	C				41.00	-38.98		*40.94-41.00m: Assumed zone of core loss.*
		41.00 - 41.75		100	0	0				Not logged zone with sampling. Geotechnical sample (RCG6). Recovered in a sealed liner. RCG
		~~41.75 - 42.44~~	C				41.75	-39.73		
		41.75 - 42.50		92	0	0				Not logged zone with sampling. Geotechnical sample (RCG7). Recovered in a sealed liner. RCG
		~~42.50 - 42.60~~	C				42.50	-40.48		
		42.50 - 43.50	D							Not logged zone with sampling. Geotechnical sample (RCG8). Recovered in a sealed liner. RCG
		42.50 - 44.00		83	0	0				
							43.50	-41.48		
							43.75	-41.73		Greenish grey fine to medium SAND with abundant coarse sand sized comminuted shell fragments. RCG
		~~44.00 - 44.32~~	C				44.00	-41.98		Assumed zone of core loss. RCG
		44.00 - 44.75		43	0	0	44.32	-42.30		Not logged zone with sampling. Geotechnical sample (RCG9). Recovered in a sealed liner. RCG
		44.75 - 45.50		0	0	0				Assumed zone of core loss.
		~~45.50~~	C				45.50	-43.48		Not logged zone with sampling. Geotechnical sample (RCG0). Recovered in a sealed liner. NLZS
		45.50 - 46.25		84	0	0				*46.14-46.25m: Assumed zone of core loss.*
							46.25	-44.23		Minimal recovery (7%). Recovered as very stiff extremely to very closely fissured dark brown silty CLAY. HWH
		46.25 - 47.00		7	0	0				
		~~46.95 - 47.00~~	D				46.95	-44.93		Very stiff extremely to very closely fissured thinly laminated dark brownish grey silty very micaceous glauconitic CLAY with widely spaced very thin to thin beds of very weak to very stiff dark bluish grey volcaniclastic siltstone/claystone/silt/clay. Fissures are randomly orientated planar smooth or rough polished or matt. HWH
		47.00	ES							
		47.00 - 48.50		100	0	0				
		48.35 - 48.50	D							*47.05-47.07m: frequent coarse sand sized comminuted shell fragments.*
		~~48.36 - 48.47~~	D							*47.56-47.58m: becoming very glauconitic.*
										47.68-47.69m: becoming very glauconitic.
										48.18-48.24m: very weak dark bluish grey volcaniclastic siltstone/claystone.
		48.50 - 50.00		100	0	0				*48.32-48.50m: very stiff dark bluish grey volcaniclastic silt/clay.*
		49.51 - 49.65	D							*49.13-49.18m: very stiff dark bluish grey slightly micaceous volcaniclastic silt/clay.*
										49.22-49.26m: very stiff dark bluish grey volcaniclastic silt/clay.
							50.00	-47.98		

Continued on Next Sheet

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

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Rotary Core Log

Borehole No.
DCBH2019_3
Sheet 6 of 11

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
		50.00 - 51.50		26	0	0				Partial recovery (26%). Recovered as very stiff dark bluish grey silty CLAY and very strong bluish grey argillaceous LIMESTONE recovered as angular to sub angular cobbles. HWH
		51.50 - 51.65	D				51.50	-49.48		
		52.00 - 52.10	D	84	0	0				Firm extremely to very closely fissured thinly laminated dark brown slightly micaceous CLAY with medium spaced thin beds of stiff dark bluish grey volcaniclastic silt/clay. Fissures are randomly orientated planar smooth or rough polished or matt. HWH
		51.50 - 53.00					52.65	-50.63		*51.95-52.10m: stiff dark bluish grey slightly micaceous volcaniclastic silt/clay.*
							52.80	-50.78		*52.41-52.51m: stiff dark bluish grey volcaniclastic silt/clay.*
		53.09 - 53.47	C				53.00	-50.98		Very strong dark bluish grey argillaceous LIMESTONE. HWH
		53.69 - 54.10	C	100	0	0				Assumed zone of core loss. HWH
		53.00 - 54.50								
		54.10 - 54.20	D				54.10	-52.08		Stiff extremely to very closely fissured thinly laminated dark brown slightly micaceous glauconitic CLAY. Fissures are randomly orientated planar smooth or rough polished. HWH
		54.50 - 54.90	C							
		54.90 - 55.00	D							Stiff extremely to very closely fissured thinly laminated dark brown micaceous glauconitic silty CLAY. Fissures are randomly orientated planar smooth or rough polished or matt. HWH
		54.50 - 56.00	C	100	0	0				*54.19-54.24m: very thin bed of stiff light brown slightly micaceous clay.*
		55.32 - 55.72	C							
		55.72	ES							
		56.49 - 56.83	C							
		56.00 - 57.50	C	100	0	0				
		56.83 - 57.22					56.83	-54.81		Very stiff extremely to very closely fissured closely laminated dark brown bioturbated micaceous silty CLAY with occasional lenses of dark yellow sand. Fissures are randomly orientated planar smooth or rough matt. Burrows are randomly orientated up to <1 x 4mm infilled with grey silt or dark yellow fine sand. HWH
		57.87 - 58.54	C							
		57.50 - 59.00		100	0	0				
		58.54 - 58.83	C							
		59.00 - 60.50		100	0	0				*59.22m: becoming firm.*
		59.72 - 60.09	C				59.65	-57.63		Stiff dark brownish grey mottled light blue clayey SILT. LMBE_Si

Continued on Next Sheet

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

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Rotary Core Log

Borehole No.
DCBH2019_3
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Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description	
							60.23	-58.21		Stiff dark brownish grey mottled light blue clayey SILT. LMBE_Si	
		60.50 - 62.00 61.39 - 61.82	C	100	0	0				Stiff light greyish brown mottled light blue silty CLAY with occasional calcrete nodules up to 15 x 9mm. LMBE_C *60.42m: subrounded medium gravel sized weak brownish grey claystone.* *60.90m: becoming stiff light brown mottled light blue slightly silty CLAY*	61
							62.00	-59.98			62
		62.23 - 62.73 62.23 - 62.75	C ExU				62.07	-60.05		Strong brown mottled bluish grey MUDSTONE. LMBE_C	
		62.00 - 63.50 62.82 - 63.06	C	100	0	0	62.77	-60.75		Stiff light brown mottled bluish grey CLAY. LMBE_C Firm locally thinly laminated dark brown slightly micaceous SILT. LMBE_Si	63
		64.00 - 64.15 63.50 - 65.00	D	57	0	0					64
							64.37	-62.35		Assumed zone of core loss.	
							65.00	-62.98		Firm grey slightly sandy SILT. Sand is fine. LMBE_Si	65
		65.18 - 65.45	C								
		65.00 - 66.50 65.96 - 66.14	C	100	0	0	65.62	-63.60		Firm thinly interlaminated soft grey SILT and dark grey fine SAND. LMBE_S *65.85m: angular medium gravel sized weak brown siltstone.*	66
							66.63	-64.61		Soft dark grey sandy SILT. Sand is fine. LMBE_Si	
		67.14 - 67.44 66.50 - 68.00 67.44 - 67.69	C C	79	0	0					67
							67.69	-65.67		Assumed zone of core loss. LMBE_Si	
							68.00	-65.98		Very stiff dark brown mottled orangish brown slightly micaceous silty CLAY with frequent nodules of light yellow calcrete up to 21x11mm. LMBE_C *68.20m: lens of calcrete up to 7mm thick.*	68
		68.27 - 68.72	C								
		68.72 - 69.27 68.00 - 69.50	C	100	0	0					69
		69.50 - 70.11	C								
										Continued on Next Sheet	70

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

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Rotary Core Log

Borehole No.
DCBH2019_3
Sheet 8 of 11

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description	
		70.11 - 70.37	C								
		69.50 - 71.00		100	0	0	70.37	-68.35		Very stiff dark brown mottled orangish brown slightly micaceous silty CLAY with frequent nodules of light yellow calcrete up to 21x11mm. LMBE_C	
		~~71.00 - 71.28~~	C							Very stiff multicoloured (bluish grey mottled blue and yellow and spotted red; ferricrete) micaceous clayey SILT with occasional lenses of light grey fine sand up to 5 x 2mm. LMBE_Si	71
		~~71.00 - 72.50~~ 71.81 - 72.17	C	100	0	0					72
		72.14 - 72.50	C								
		72.14 - 72.50	ExU								
							72.50	-70.48		Very stiff very closely to closely fissured dark brown mottled grey glauconitic micaceous CLAY. Fissures are vertically orientated and inclined planar smooth matt. LIST_OC	
		73.02 - 73.43	C				72.90	-70.88			73
		72.50 - 74.00		100	0	0				Very stiff very closely to closely fissured thinly laminated dark grey micaceous glauconitic CLAY. Fissures are randomly orientated planar smooth polished or matt (mostly polished). LIST_OC	
		73.70 - 74.00	C								74
		74.00 - 75.50		100	0	0	74.82	-72.80			
		75.00 - 75.15	D							Stiff extremely closely to very closely fissured thinly laminated dark grey glauconitic micaceous CLAY. Fissures are randomly oriented LIST_OC	75
		75.84 - 76.11	C								
		76.11 - 76.47	C								76
		75.50 - 77.00		100	0	0					
		76.55 - 77.00	C				76.47	-74.45		Very stiff very closely to closely fissured thinly laminated dark grey slightly bioturbated glauconitic micaceous CLAY. Fissures are randomly orientated planar smooth polished or matt (mostly polished). Burrows are up to 14 x 3mm infilled light grey silt. LIST_OC	77
		77.43 - 77.88	C								
		77.00 - 78.50		100	0	0					
		77.88 - 78.11	C								78
		~~78.50 - 78.84~~	C								
		79.13 - 79.55	C								79
		78.50 - 80.00		100	0	0					
		79.55 - 79.78	C								
										Continued on Next Sheet	80

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

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Rotary Core Log

Borehole No.
DCBH2019_3
Sheet 9 of 11

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description	
		80.20 - 80.56	C							Very stiff very closely to closely fissured thinly laminated dark grey slightly bioturbated glauconitic micaceous CLAY. Fissures are randomly orientated planar smooth polished or matt (mostly polished). Burrows are up to 14 x 3mm infilled light grey silt. LIST_OC	81
		80.06 - 81.20	C	100	0	0					
		81.50 - 81.93	C				81.93	-79.91		Very stiff very closely to closely fissured thinly laminated dark reddish brown bioturbated glauconitic micaceous silty CLAY. Fissures are randomly orientated planar smooth polished or matt. Burrows are up to 13 x 3mm infilled with light grey silt. LIST_OC	82
		81.50 - 83.00		100	0	0				Stiff dark greenish grey very glauconitic micaceous CLAY. LIST_OC	
							82.73	-80.71		*82.82-83.00m: flint band. Cobble sized fragment of nodular flint with a thin cortex.*	
							83.00	-80.98			83
		83.16 - 83.55	C							Very weak medium density closely jointed (NI/185/485) white burrow mottled light grey CHALK with rare black specks. Bedding fractures: 4-10? medium spaced (110/282/770) planar or undulating rough generally clean locally with no black specks, lightly stained yellow, no infill. Gently inclined joints: 15-28? widely spaced (95/847/1675) planar or undulating rough clean. Inclined joints: 39-43? widely spaced (200/857/1240) planar or undulating rough clean or with frequent black specks , unstained, no infill. Subvertical joints: 86? planar rough with frequent black specks, unstained, no infill. CHALK	
		83.53 - 83.86	C								
		83.00 - 84.50		100	85	73					84
		84.18 - 84.50	C								
		84.50 - 86.00		100	63	45					85
							85.54	-83.52		*83.06m: flint band. Fine to medium gravel sized fragments of nodular flint with thin cortexes.* *83.93m: inoceramid bivalave shell fragments (up to 7 x 3mm).* *85.32m: shell fragment (up to 8 x 6mm).* *85.47-85.54m: non-intact.*	86
		86.00 - 87.50		93	65	50				Very weak medium density medium jointed (NI/215/1730) white burrow mottled light grey CHALK with occasional black specks. Bedding fractures: 1-10? medium spaced (30/286/1730) planar or undulating or stepped rough clean or with frequent black specks, yellow staining, no infill. Gently inclined joints: 12-29? widely spaced (20/1405/3260) planar or undulating rough generally clean locally with frequent black specks, yellow stained, no infill. Inclined joints: 32-58? very widely spaced (100/2583/12145) planar or undulating or stepped rough clean or with frequent black specks, yellow staining, no infill. Steeply inclined joints: 78? planar rough clean. Subvertical joints: 82-84? very widely spaced (1150/5177/8850) planar rough with frequent black specks, unstained, no infill. CHALK	87
							87.50	-85.48			
		87.50 - 89.00		13	0	0					88
							89.00	-86.98			89
		89.00 - 90.50		100	78	78				*85.54-85.79m: medium strong very high density locally green glauconite-mineralised hardground.* *85.79-85.81m: non-intact.* *86.00-86.11m: Assumed zone of core loss.*	
											90

Continued on Next Sheet

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

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Rotary Core Log

Borehole No.
DCBH2019_3
Sheet 10 of 11

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										Very weak medium density medium jointed (NI/215/1730) white burrow mottled light grey CHALK with occasional black specks. Bedding fractures: 1-10? medium spaced (30/286/1730) planar or undulating or stepped rough clean or with frequent black specks, yellow staining, no infill. Gently inclined joints: 12-29? widely spaced (20/1405/3260) planar or undulating rough generally clean locally with frequent black specks, yellow stained, no infill. Inclined joints: 32-58? very widely spaced (100/2583/12145) planar or undulating or stepped rough clean or with frequent black specks, yellow staining, no infill. Steeply inclined joints: 78? planar rough clean. Subvertical joints: 82-84? very widely spaced (1150/5177/8850) planar rough with frequent black specks, unstained, no infill. CHALK
		90.50 - 92.00		100	81	81				*86.10-86.24m: non-intact.* *86.39m: shell fragment (up to 15 x 9mm).* *86.43-86.48m: non-intact.* *86.96-87.10m: frequent black-stained sponge beds.* *87.00-87.15m: flint band. Fine to coarse gravel sized fragments of nodular flint with thin cortexes.* *87.04-87.13m: non-intact (putified).* *87.40-87.50m: Assumed zone of core loss.*
		92.19 - 92.71	C							Minimal recovery (13%). Recovered as very weak medium density medium jointed (NI/215/1730) white burrow mottled light grey CHALK with occasional black specks. CHALK
		92.00 - 93.50		100	83	77				Very weak medium density medium jointed (NI/215/1730) white burrow mottled light grey CHALK with occasional black specks. Bedding fractures: 1-10? medium spaced (30/286/1730) planar or undulating or stepped rough clean or with frequent black specks, yellow staining, no infill. Gently inclined joints: 12-29? widely spaced (20/1405/3260) planar or undulating rough generally clean locally with frequent black specks, yellow stained, no infill. Inclined joints: 32-58? very widely spaced (100/2583/12145) planar or undulating or stepped rough clean or with frequent black specks, yellow staining, no infill. Steeply inclined joints: 78? planar rough clean. Subvertical joints: 82-84? very widely spaced (1150/5177/8850) planar rough with frequent black specks, unstained, no infill. CHALK
		93.05 - 93.35	C							*89.00-89.17m: non-intact.* *89.47m: shell fragment (up to 4 x 4mm).* *89.71-89.78m: frequent black-stained sponge beds.* *89.94m: shell fragment (up to 7 x 5mm).* *90.56-90.83m: frequent shell fragments (up to 12 x 9mm).* *91.01-91.15m: frequent shell fragments (up to 9 x 8mm).* *91.46m: inoceramid bivalve shell fragment (up to 14 x 3mm).*
		~~93.50 - 93.91~~	C							
		93.50 - 95.00		100	75	70				
		95.57 - 96.06	C							
		95.00 - 96.50		100	87	80				
		96.50 - 98.00		100	91	91				
		98.00 - 99.50		100	85	85				

Continued on Next Sheet

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

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Rotary Core Log

Borehole No.
DCBH2019_3
Sheet 11 of 11

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647458.10 - 263990.11	Hole Type IP+RC
Location: Sizewell		Level: 2.02	Scale 1:50
Client: NNB GenCo		Dates: 10/09/2019 - 24/10/2020	Logged By SHinton

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
		99.50 - 101.00		100	85	73	101.00	-98.98		Very weak medium density medium jointed (NI/215/1730) white burrow mottled light grey CHALK with occasional black specks. Bedding fractures: 1-10? medium spaced (30/286/1730) planar or undulating or stepped rough clean or with frequent black specks, yellow staining, no infill. Gently inclined joints: 12-29? widely spaced (20/1405/3260) planar or undulating rough generally clean locally with frequent black specks, yellow stained, no infill. Inclined joints: 32-58? very widely spaced (100/2583/12145) planar or undulating or stepped rough clean or with frequent black specks, yellow staining, no infill. Steeply inclined joints: 78? planar rough clean. Subvertical joints: 82-84? very widely spaced (1150/5177/8850) planar rough with frequent black specks, unstained, no infill. CHALK *92.13-92.19m: flint band. Fine to medium gravel sized fragments of nodular flint with thick cortexes.* *92.21-92.37m: frequent black-stained sponge beds.* *93.26m: shell fragment (up to 19 x 8mm).* *93.35m: non-intact.* *94.29-94.33m: frequent black-stained sponge beds.* *94.35-94.56m: non-intact.* *94.44m: inoceramid bivalve shell fragment (up to 20 x 3mm).* *95.34-95.46m: frequent shell fragments (up to 19 x 12mm).* *96.59m: fragment of belemnite rostrum (40 x 11mm).* *96.71-96.72m: flint band. Fine gravel sized fragments of nodular flint with thin cortexes.* *96.88-96.92m: frequent black-stained sponge beds.* *97.15m: shell fragment (up to 25 x 15mm).* *98.35-98.38m: flint band. Fine to medium gravel sized fragments of nodular flint with thin cortexes.* *98.56-98.60m: flint band. Fine to medium gravel sized fragments of nodular flint with thin cortexes.* *98.60-98.67m: non-intact.* *98.85-98.93m: non-intact.* *98.93-99.70m: thinned by drilling.* *99.70-99.74m: non-intact.* *100.10-100.29m: occasional shell fragments (up to 20 x 12mm).* End of Borehole at 101.00m

101
102
103
104
105
106
107
108
109
110

Remarks

Technique 1: 1. Services plan was consulted. 2. Position scanned with a CAT and Genny prior to excavation. 3. Inspection pit dug to 1.20m depth. 4. No water strike. 5. Borehole installed with 50mm slotted pipe between 6.50m - 8.00m, plain pipe to ground level. The remainer of the hole was grouted., Technique 2:

AGS

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**1** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
0.00-0.30	1	B									MADE GROUND: Yellowish brown slightly gravelly slightly silty fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of flint. (MADE GROUND)			0 (0.30)	
0.10	101	ES													
0.10	WAC1	ES													
0.20	2	D											1.55	0.30	
0.30	102	ES									MADE GROUND: Orangish brown slightly gravelly slightly silty fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of flint. (MADE GROUND)				
0.30-1.20	3	B												(0.90)	
0.50	103	ES											1		
0.50	WAC2	ES												1	
0.60	4	D													
1.00	104	ES											0.65	1.20	
1.20-2.20											Yellowish brown fine to coarse SAND with occasional comminuted fine gravel sized shell and occasional flasers of silt (2 x 8mm). (SUPERFICIAL DEPOSITS - SAND)			(0.66)	
1.30	105	ES	1xT+2xJ+1xV	66	0	0		100% Water (Brown)					-0.01	1.86	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)			(0.34)	AZCL
2.20-2.90													-0.35	2.20	
2.40	106	ES	1xT+2xJ+1xV	61	0	0		100% Water (Brown)			Greenish brown mottled light green fine to coarse SAND with pockets of black spongy pseudo-fibrous peat (2 x 12mm) and with frequent rootlets and occasional roots. (SUPERFICIAL DEPOSITS - SAND) . . . 2.20-2.31m: thin bed of black spongy pseudo fibrous peat containing frequent rootlets and occasional roots. . . . 2.46-2.58m: thin bed of black spongy pseudo fibrous peat containing frequent rootlets and occasional roots.			(0.43)	
2.90-3.70													-0.78	2.63	AZCL
3.00	107	ES	1xT+2xJ+1xV	26	0	0		100% Water (Brown)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS) Partial recovery (26%). Recovered as grey mottled orangish brown gravelly fine to coarse SAND. Gravel is subrounded to rounded fine to coarse of flint and iron concretions. (SUPERFICIAL DEPOSITS - SAND)		-1.05	2.90	
3.70-4.45														3	
3.70	108	ES	1xT+2xJ+1xV	32	0	0		50% Water (Brown)			Partial recovery (32%). Recovered as soft light bluish grey mottled greenish grey silty CLAY with frequent pockets of black spongy pseudo-fibrous peat (2 x 10 x 9mm) and occasional rootlets up to 20mm in diameter. (SUPERFICIAL DEPOSITS - CLAY)		-1.85	3.70	
													-2	(0.80)	PR / AZCL
														4 (0.75)	PR / AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
22/07/19	06:00	0.00	None	N/R	-
23/07/19	08:00	0.00	None	N/R	-
23/07/19	18:00	1.20	None	N/R	1.20
24/07/19	08:00	1.20	None	N/R	-
24/07/19		1.20	None	200	-
24/07/19		1.20	None	200	-
25/07/19		2.20	2.20	200	1.50
26/07/19	08:00	2.20	2.20	200	0.40

General Remarks

1. Services plan was consulted.
2. Position scanned with a CAT and Genny prior to excavation.
3. Inspection pit hand dug to 1.20m depth.
4. Water seepage at 1.20m depth.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**2** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
4.45-5.20				0	0	0		0% Water			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-2.60 -3 -3.35	4.45 (0.75) 5 5.20	AZCL
5.20-5.95 5.30	109	ES	1xT+2xJ+1xV	73	0	0		0% Water			Soft dark grey mottled greenish grey silty CLAY with occasional relict rootlets and occasional pockets of black spongy pseudo-fibrous peat (up to 5 x 25mm). (SUPERFICIAL DEPOSITS - CLAY)		-3.90	(0.55) 5.75	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS) . . . 5.75-5.95m:Assumed zone of core loss.		-4 -4.10	5.95	AZCL
5.95-6.70				64	0	0		0% Water			Soft dark grey mottled greenish grey silty CLAY with occasional relict rootlets and occasional pockets of black spongy pseudo-fibrous peat (up to 5 x 25mm). (SUPERFICIAL DEPOSITS - CLAY)		-4.58	6 (0.48) 6.43	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-4.85	6.70	AZCL
6.70-7.45				71	0	0		0% Water			Soft dark grey mottled greenish grey silty CLAY with occasional relict rootlets and occasional pockets of black spongy pseudo-fibrous peat (up to 5 x 25mm). (SUPERFICIAL DEPOSITS - CLAY)		-5 -5.38	(0.53) 7 7.23	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-5.60	7.45	AZCL
7.45-8.20				15	0	0		50% Water (Grey)			Minimal recovery (15%). Recovered as soft dark grey mottled greenish grey silty CLAY with occasional relict rootlets and occasional pockets of black spongy pseudo-fibrous peat (up to 5 x 25mm). (SUPERFICIAL DEPOSITS - CLAY)		-6 -6.35	(0.75) 8 8.20	MR/ AZCL
8.20-8.95 8.30 8.30	110 WAC3	ES ES	1xT+2xJ+1xV 1xT+1xJ+1xV	41	0	0		50% Water (Grey)			Partial recovery (41%). Recovered as firm black pseudo-fibrous PEAT with occasional relict rootlets and rare plant remains (up to 2 x 4mm). (SUPERFICIAL DEPOSITS - PEAT)		-7	(0.75)	PR/ AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
26/07/19	11:00	5.95	2.20	200	0.90
29/07/19	12:00	5.95	5.50	200	0.47
29/07/19	18:00	10.45	5.50	200	-
30/07/19	08:00	10.45	5.50	200	-
30/07/19	18:00	17.20	16.20	200	4.50
31/07/19	08:00	17.20	17.00	200	0.40
31/07/19	18:00	22.45	22.45	200	0.00
01/08/19	08:00	22.45	22.45	200	2.30

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**3** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
8.95-9.70 9.00	111	ES	1xT+2xJ+1xV	43	0	0		50% Water (Grey)			Partial recovery (43%). Recovered as soft dark greyish brown mottled yellowish brown fine to coarse SAND with occasional pockets of firm black pseudo-fibrous peat (up to 5 x 15mm). (SUPERFICIAL DEPOSITS - SAND)		-7.10 -7.85	8.95 9 (0.75) 9.70	PR/ AZCL
9.70-10.45				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-8 -8.60	10 (0.75) 10.45	AZCL
10.45-11.20				40	0	0		100% Water (Grey)			Partial recovery (40%). Recovered as dark greyish brown mottled black slightly clayey fine to coarse SAND with occasional pockets of spongy black pseudo-fibrous peat and rare coarse sand to fine gravel sized comminuted shells. (NORWICH CRAG FORMATION (UNDIFFERENTIATED))		-9 -9.35	(0.75) 11 11.20	PR/ AZCL
11.20-11.95				19	0	0		100% Water (Grey)			Minimal recovery (19%). Recovered as dark greyish brown mottled black slightly clayey fine to coarse SAND with occasional pockets of peat. (NORWICH CRAG FORMATION (UNDIFFERENTIATED))		-10 -10.10	(0.75) 11.95	MR/ AZCL
11.95-12.70				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-10.85	12 (0.75) 12.70	AZCL
12.70-13.45				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-11	13 (0.75)	AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/08/19	18:00	34.45	34.45	200	3.50
02/08/19	08:00	34.45	34.45	200	0.30
02/08/19	18:00	35.20	35.20	200	2.50
03/08/19	08:00	35.20	35.20	200	2.00
03/08/19	15:45	41.95	41.95	200	0.20
04/08/19	07:30	41.95	41.95	200	2.00
04/08/19	16:00	47.20	46.50	200	0.60
06/08/19	08:00	47.20	46.50	200	2.20

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**4** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
13.45-14.20				92	0	0		100% Water (Greyish brown)			Dark yellowish brown mottled dark grey slightly clayey fine to coarse SAND with occasional coarse sand to fine gravel sized comminuted shells and occasional thick laminae of silt. (NORWICH CRAG FORMATION (UNDIFFERENTIATED))		-11.60	13.45 (0.75)	AZCL
											. . . 14.14-14.20m: Assumed zone of core loss.		-12.35	14.20	
14.20-14.95													-12	14	
14.40-14.95	1	C		91	0	0		100% Water (Greyish brown)			Dark yellowish brown mottled dark grey clayey fine to coarse SAND with occasional coarse sand to fine gravel sized comminuted shells. (NORWICH CRAG FORMATION (UNDIFFERENTIATED))				
											. . . 14.88-14.95m: Assumed zone of core loss.		-13.82	15.67 (1.47)	
14.95-15.70													-13	15	
15.20-15.70	2	C		96	0	0		100% Water (Greyish brown)							
15.70-16.45				41	0	0		100% Water (Greyish brown)			Partial recovery (41%). Recovered as dark yellowish brown mottled dark grey clayey fine to coarse SAND with occasional coarse sand to fine gravel sized comminuted shells. (NORWICH CRAG FORMATION (UNDIFFERENTIATED))		-14.60	16.45 (0.78)	PR / AZCL
16.45-17.20													-14	16	
16.45	112	ES	1xT+2xJ+1xV	71	0	0		100% Water (Greyish brown)			Dark yellowish brown mottled dark bluish grey silty fine to coarse SAND with frequent fine gravel sized comminuted shells and occasional flasers of orangish brown clay (up to 3 x 12mm). (NORWICH CRAG FORMATION (UNDIFFERENTIATED))		-15.13	16.98 (0.53)	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-15.35	17.20	AZCL
17.20-17.95				23	0	0		100% Water (Grey)			Minimal recovery (23%). Recovered as dark yellowish brown grey silty fine to coarse SAND with frequent gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-16	(0.75)	
														17	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
06/08/19	18:00	56.20	48.00	200	3.60
07/08/19	07:30	56.20	56.20	200	0.80
07/08/19	18:00	72.70	72.70	200	2.00
08/08/19	07:30	72.70	72.70	200	2.50
08/08/19	18:00	76.45	76.45	200	3.60
09/08/19	07:30	76.45	76.45	200	-
12/08/19	07:00	76.45	76.45	200	-
13/08/19		76.45	76.45	200	3.40

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**5** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
17.95-18.70				25	0	0		100% Water (Grey)			Minimal recovery (25%). Recovered as dark yellowish brown grey silty fine to coarse SAND with frequent gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-16.10	17.95 18 (0.75)	MR / AZCL
18.70-19.45				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-16.85 -17	18.70 19 (0.75)	AZCL
19.45-20.20				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-17.60 -18	19.45 (0.75) 20	AZCL
20.20-20.95				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-18.35 -19	20.20 (0.75)	AZCL
20.95-21.70				89	0	0		100% Water (Grey)			Dark greenish grey silty fine to medium SAND with abundant fine gravel sized comminuted shells and occasional flasers of grey silt (up to 15 x 20mm). (RED CRAG FORMATION (UNDIFFERENTIATED))		-19.10	20.95 21	
21.70-22.45											. . . 21.62-21.70m: Assumed zone of core loss.		-20		
21.90-22.45	3	C		100	0	0		100% Water (Grey)						22 (2.25)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/08/19	07:30	76.45	76.45	200	-
15/08/19	08:30	76.45	76.45	200	0.00
15/08/19	18:00	81.70	81.70	200	0.60
16/08/19	08:00	81.70	81.70	200	0.00
16/08/19	18:00	95.20	95.20	200	1.40
17/08/19	07:30	95.20	95.20	200	1.20
17/08/19	16:00	102.70	102.70	200	0.80
29/08/19	07:30	102.70	102.70	200	-

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**6** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
22.45-23.20 22.45	113	ES	1xT+2xJ+1xV	100	0	0		100% Water (Grey)					-21 -21.35	23 23.20	
23.20-23.95				35	0	0		100% Water (Grey)			Partial recovery (35%). Recovered as greenish brown silty fine to coarse SAND with occasional fine gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-22 -22.10	(0.75) 23.95	PR / AZCL
23.95-24.70				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)			24	
24.70-25.45				0	0	0		100% Water (Grey)					-23 -23.60	(1.50) 25.45	AZCL
25.45-26.20				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-24 -24.35	(0.75) 26.20	AZCL
26.20-26.95				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-25	(0.75)	AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
29/08/19	18:00	103.00	103.00	200	0.00
30/08/19	07:30	103.00	103.00	200	-
04/09/19		103.00	103.00	200	-
05/09/19	11:30	48.00	48.00	200	1.80
05/09/19	18:00	22.50	22.50	200	0.20
06/09/19	08:00	22.50	22.50	200	0.60
06/09/19	12:00	27.00	27.00	200	0.60
09/09/19		27.00	27.00	200	-

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**7** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
26.95-27.70				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-25.10 -25.85	26.95 27 (0.75) 27.70	AZCL
27.70-28.45				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-26 -26.60	28 (0.75) 28.45	AZCL
28.45-29.20				43	0	0		100% Water (Grey)			Partial recovery (43%). Recovered as soft dark grey sandy SILT with occasional lenses of grey clay (up to 2 x 5mm) and rare comminuted fine gravel sized shells. Sand is fine to coarse. (RED CRAG FORMATION (UNDIFFERENTIATED))		-27 -27.35	(0.75) 29 29.20	PR / AZCL
29.20-29.95				53	0	0		100% Water (Grey)			Dark grey silty fine to coarse SAND with abundant fine gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-27.75	(0.40) 29.60	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-28 -28.10	(0.35) 29.95	AZCL
29.95-30.70 29.95	114	ES	1xT+2xJ+1xV	0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-28.85	30 (0.75) 30.70	AZCL
30.70-31.45				21	0	0		100% Water (Grey)			Minimal recovery (21%). Recovered as dark grey slightly gravelly slightly silty fine to coarse SAND with abundant fine gravel sized comminuted shells. Gravel is subangular fine to coarse of mudstone. (RED CRAG FORMATION (UNDIFFERENTIATED))		-29	31 (0.75)	MR / AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
10/09/19	08:00	27.00	27.00	200	0.80
10/09/19	17:30	100.00	54.00	200	0.20
11/09/19	08:00	100.00	54.00	200	-
12/09/19	08:00	54.00	54.00	200	3.00
12/09/19	17:00	17.70	12.90	200	1.80
13/09/19	08:00	17.70	12.90	200	1.75
13/09/19	18:00	0.00	0.00	N/R	-

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**8** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
31.45-32.20				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-29.60 -30 -30.35	31.45 (0.75) 32 32.20	AZCL
32.20-32.95				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-31 -31.10	(0.75) 32.95	AZCL
32.95-33.70				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		33 -31.85	(0.75) 33.70	AZCL
33.70-34.45				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-32 34 -32.60	(0.75) 34.45	AZCL
34.45-35.20				40	0	0		50% Water (Grey)			Partial recovery (40%). Recovered as dark grey slightly gravelly slightly silty fine to coarse SAND with abundant fine gravel sized shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-33 35 -33.35	(0.75) 35.20	PR / AZCL
35.20-35.95 35.20-35.95	4	C		67	0	0		100% Water (Red)			Not logged zone with sampling. Core sample C4 recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)		-33.85	(0.50) 35.70	NLZS
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-34		AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**9** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
35.95-36.70				0	0	0		100% Water (Red)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-34.10	35.95 36 (0.75)	AZCL
													-34.85	36.70	
36.70-37.45				0	0	0		100% Water (Red)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-35	37 (0.75)	AZCL
													-35.60	37.45	
37.45-38.20				0	0	0		100% Water (Red)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-36	(0.75) 38	AZCL
													-36.35	38.20	
38.20-38.95				45	0	0		100% Water (Red)			Partial recovery (45%). Recovered as brownish green silty fine to coarse SAND with abundant fine gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-37	(0.75)	PR / AZCL
38.95-39.70													-37.10	38.95	
38.95	115	ES	1xT+2xJ+1xV	41	0	0		100% Water (Red)			Partial recovery (41%). Recovered as brownish green silty fine to coarse SAND with abundant fine gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))			39 (0.75)	PR / AZCL
39.70-40.45													-37.85	39.70	
				0	0	0		100% Water (Red)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-38	40 (0.75)	AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**10** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
40.45-41.20				17	0	0		100% Water (Red)			Minimal recovery (17%). Recovered as brownish green silty fine to coarse SAND with abundant fine gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-38.60 -39 -39.35	40.45 (0.75) 41 41.20	AZCL MR / AZCL
41.20-41.95				0	0	0		100% Water (Red)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-40 -40.10	(0.75) 41.95	AZCL
41.95-42.70				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		42 -40.85	(0.75) 42.70	AZCL
42.70-43.45				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-41 43 -41.60	(0.75) 43.45	AZCL
43.45-44.20				19	0	0		100% Water (Grey)			Minimal recovery (19%). Recovered as dark grey silty fine to coarse SAND with frequent fine gravel sized comminuted shells and occasional flasers of clay (up to 2 x 5mm). (RED CRAG FORMATION (UNDIFFERENTIATED))		-42 44 -42.35	(0.75) 44.20	MR / AZCL
44.20-44.95				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-43	(0.75)	AZCL

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**11** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
44.95-45.70				27	0	0		100% Water (Grey)			Partial recovery (27%). Recovered as dark grey gravelly silty fine to coarse SAND with frequent fine gravel sized comminuted shells and occasional flasers of clay (up to 2 x 5mm). Gravel is subangular fine to medium of mudstone. (RED CRAG FORMATION (UNDIFFERENTIATED))		-43.10	44.95 45 (0.75)	AZCL PR/ AZCL
45.70-47.20				55	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-43.85 -44	45.70 (0.68)	AZCL
47.20-48.70											Firm dark grey gravelly CLAY. Gravel is subangular fine to coarse of mudstone. (HARWICH FORMATION, WRABNESS MEMBER)		-44.53	46.38 (0.31)	
47.30	116	ES	1xT+2xJ+1xV	90	0	0		100% Water (Grey)			Very stiff extremely closely to very closely fissured thinly laminated dark grey slightly sandy micaceous glauconitic CLAY with very closely spaced very thin beds of volcaniclastic siltstone/claystone. Sand is fine to medium. Fissures are randomly oriented planar smooth or rough polished or matt. (HARWICH FORMATION, WRABNESS MEMBER) . . . 46.69-46.74m: very weak dark grey volcaniclastic siltstone/claystone. . . . 47.14-47.20m: very weak dark grey volcaniclastic siltstone/claystone. Very stiff extremely to very closely fissured thinly laminated dark greyish brown slightly sandy micaceous glauconitic CLAY. Sand is fine to medium. Fissures are randomly oriented planar smooth or rough polished or matt. (HARWICH FORMATION, WRABNESS MEMBER) . . . 47.20-47.25m: thin bed of light brown gravelly CLAY. Gravel is subangular to subrounded fine to medium of siltstone.		-44.84 -45 -45.35 -46 -46.56	46.69 (0.51) 47 47.20 (1.21) 48 48.41	
48.70-50.20				100	0	0		100% Water (Grey)			Very strong dark grey argillaceous LIMESTONE. (HARWICH FORMATION, WRABNESS MEMBER, HARWICH STONE BAND) . . . 48.55-48.70m:Assumed zone of core loss. Very stiff extremely to very closely fissured thinly laminated dark brownish grey slightly sandy micaceous glauconitic CLAY with closely to widely spaced thinly laminated to thickly bedded very weak dark grey micaceous volcaniclastic siltstone/claystone. Sand is fine to medium. Fissures are randomly oriented planar smooth or rough polished or matt. (HARWICH FORMATION, WRABNESS MEMBER) *Description on next sheet*		-46.85 -47	(0.29) 48.70 49	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**12** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				100	0	0		100% Water (Grey)			. . . 49.25-49.41m: very weak dark grey bioturbated volcaniclastic siltstone/claystone. Burrows are subhorizontal up to 1 x 3mm infilled with light brown silt. . . . 49.76-49.80m: very weak dark grey volcaniclastic siltstone/claystone.		-48	50	
50.20-51.70				100	0	0		100% Water (Grey)			. . . 50.06-50.20m: very weak dark grey bioturbated volcaniclastic siltstone/claystone. Burrows are subhorizontal up to 1 x 4mm infilled with brown silt.		-49	51	
51.70-53.20				100	0	0		100% Water (Grey)			. . . 51.03-51.21m: very weak dark bluish grey micaceous volcaniclastic siltstone/claystone. Top 50mm bioturbated. Burrows are subhorizontal up to 1 x 5mm infilled with light brown silt. . . . 51.31-51.46m: weak dark bluish grey micaceous volcaniclastic siltstone/claystone.		-50	52	
52.64-52.91	5	C									. . . 52.02-52.04m: very weak dark grey micaceous volcaniclastic siltstone/claystone. . . . 52.17-53. 20m: very weak dark grey bioturbated micaceous volcaniclastic siltstone/claystone. Burrows are subhorizontal up to 2 x 5mm infilled with brown silt.		-51	53 (8.81)	
53.20-54.70				100	0	0		100% Water (Grey)			. . . 53.26-53.29m: stiff dark bluish grey micaceous volcaniclastic silty clay. . . . 53.54-53.65m: very stiff dark brownish grey micaceous CLAY becoming slightly silty.		-52		

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**13** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				100	0	0		100% Water (Grey)			. . . 53.40-54.41m: horizontal burrow 7mm wide by 45mm long infilled with dark bluish grey silt.			54	
54.70-56.20											. . . 53.82-54.87m: very weak dark brownish grey burrow mottled light grey brown micaceous volcaniclastic siltstone/claystone.		-53	55	
											. . . 55.20-55.26m: weak dark grey micaceous volcaniclastic siltstone/claystone.				
				100	0	0		100% Water (Grey)							
55.54-55.64	6	C											-54	56	
56.20-57.70											. . . 56.02-56.10m: stiff dark brownish grey micaceous CLAY becoming slightly silty. . . . 56.11-56.20m: very weak dark bluish grey micaceous volcaniclastic siltstone/claystone.				
				100	0	0		100% Water (Grey)					-55	57	
											Stiff locally thinly laminated dark brownish grey slightly sandy micaceous SILT. (HARWICH FORMATION, ORWELL MEMBER)		-55.66	57.51	
57.70-59.20											Minimal recovery (15%). Recovered as stiff locally thinly laminated dark brownish grey slightly sandy micaceous SILT. (HARWICH FORMATION, ORWELL MEMBER)		-55.85	57.70	
				15	0	0		100% Water (Grey)					-56	58	MR / AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**14** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				15	0	0		100% Water (Grey)						(1.50)	MR/AZCL
													-57	59	
59.20-60.40											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-57.35	59.20	
														(0.32)	AZCL
													-57.67	59.52	
59.58-59.88	7	C									Firm light green mottled bluish grey slightly gravelly micaceous SILT. Gravel is subrounded to rounded medium to coarse of flint. (HARWICH FORMATION, WRABNESS MEMBER)		-57.73	59.58	
				73	68	68		100% Water (Grey)					-58		
59.88-60.40	7A	C									Very strong thickly bedded light bluish grey fine grained SILICEOUS SANDSTONE. (READING FORMATION)			(0.95)	
														60	
60.40-60.70											. . . 60.47-60.41m: sandstone weathered brownish orange mottled light greenish blue along jointing.		-58.68	60.53	
				100	43	43					. . . 60.47-60.48m: sandstone weathered brownish orange mottled light greenish blue along jointing.		-58.85	60.70	
60.70-62.20											Firm light brown slightly gravelly sandy SILT. Sand is fine to coarse. Gravel is angular to subrounded fine to medium of sandstone. (READING FORMATION)				
60.70-61.13	8	C											-59		
											Brownish grey mottled dark grey slightly silty fine SAND. (READING FORMATION)			61 (0.75)	
				50	0	0		100% Water (Greyish brown)					-59.60	61.45	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-60	(0.75)	AZCL
														62	
62.20-63.70											Minimal recovery (12%). Recovered as brownish grey mottled dark grey slightly silty fine SAND. (READING FORMATION)		-60.35	62.20	
				12	0	0							-61		MR/AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**15** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				12	0	0		100% Water (Greyish brown)						(1.50) 63	MR / AZCL
													-61.85	63.70	
63.70-64.45				0	0	0		100% Water (Greyish brown)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-62	64 (0.75)	AZCL
													-62.60	64.45	
64.45-65.20				71	0	0		100% Water (Greyish brown)			Dark brownish grey mottled light green fine to medium SAND. (READING FORMATION)		-62.86	64.71	
											Dark yellowish grey mottled dark bluish grey fine to medium SAND. (READING FORMATION)		-63 -63.13	64.98	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-63.35	65 65.20	AZCL
65.20-65.95				41	0	0		100% Water (Greyish brown)			Partial recovery (41%). Recovered as dark yellowish grey mottled dark bluish grey fine to medium SAND. (READING FORMATION)		-64 -64.10	(0.75) 65.95	PR / AZCL
65.95-66.70				64	0	0		100% Water (Grey)			Dark yellowish grey mottled dark bluish grey fine to medium SAND. (READING FORMATION)		-64.58	66 (0.48) 66.43	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-64.85	66.70	AZCL
66.70-67.45				24	0	0		100% Water (Grey)			Minimal recovery (24%). Recovered as dark yellowish grey mottled dark bluish grey fine to medium SAND. (READING FORMATION)		-65	67 (0.75)	MR / AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
67.45-68.20				49	0	0		100% Water (Grey)			Partial recovery (49%). Recovered as dark yellowish grey mottled dark bluish grey fine to medium SAND. (READING FORMATION)		-65.60 -66	67.45 (0.75) 68	PR/ AZCL
68.20-68.95				52	0	0		100% Water (Grey)			Dark yellowish grey mottled dark bluish grey fine to medium SAND. (READING FORMATION) . . . 68.40-69.40m: dark bluish grey mottled replaced by dark bluish grey horizontal streaking . Streaks are 3-4mm wide, forming approximately 25mm apart.		-66.35 -67	68.20 (1.20) 69	
68.95-69.70 68.95-69.30	9	C		100	0	0		100% Water (Grey)					-67.55	69.40	
											Stiff dark greyish brown slightly gravelly CLAY. Gravel is subrounded medium to coarse of mudstone. (READING FORMATION)		-67.70	69.55	
											Dark brownish grey clayey fine to medium SAND. (READING FORMATION)		-67.85	69.70	
69.70-71.20				0	0	0		100% Water (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-68 -69	70 (2.25) 71	AZCL
71.20-71.95				0	0	0		100% Water (Grey)					-70		

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
71.95-72.70				31	0	0		100% Water (Grey)			Partial recovery (31%). Recovered as yellowish brown slightly gravelly slightly clayey fine to medium SAND. Gravel is subrounded medium to coarse of mudstone. (READING FORMATION)		-70.10	71.95 72 (0.58)	PR / AZCL
													-70.68	72.53	
72.70-74.20				93	0	0		100% Water (Brown)			Very stiff extremely closely to very closely fissured thinly laminated dark grey bioturbated micaceous CLAY. Fissures are randomly oriented planar smooth matt or polished. Burrows are randomly orientated up to 2 x 6mm infilled with grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC3) . . . 73.34-73.40m: becoming slightly mottled dark green.		-71 -72	73 74 (3.17)	
74.20-75.70				52	0	0		100% Water (Brown)			. . . 74.10-74.20m: Assumed zone of core loss. . . . 74.70-75.70m: recovered as soft dark grey sandy CLAY. Sand is fine to medium. Clay becoming very fractured. . . . 74.88-74.95m: Assumed zone of core loss.		-73	75	
75.70-76.45				0	0	0		100% Water (Brown)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-73.85 -74	75.70 76 (0.75)	AZCL

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**18** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
76.45-77.20				100	0	0		100% Water (Grey)			Very stiff extremely closely to very closely fissured thinly laminated dark grey bioturbated micaceous sandy CLAY with rare lenses of white sand (up to 2 x 6mm). Fissures are randomly oriented planar smooth matt or polished. Burrows are randomly orientated up to 1 x 4mm infilled with grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC3) . . . 76.45-77.20m: recovered as soft dark grey CLAY.		-74.60	76.45 (0.75)	AZCL
													-75		
													77		
													-75.35	77.20	
77.20-78.70				100	0	0		100% Water (Grey)			Very stiff extremely closely to very closely fissured thinly laminated dark grey mottled dark green bioturbated micaceous glauconitic CLAY with occasional lenses of silt (up to 3 x 15mm). Fissures are randomly orientated planar smooth matt or polished. Burrows are randomly orientated up to 2 x 6mm infilled with grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC3) . . . 77.24-78.24m: loses dark green mottling.				
													-76		
														(1.50)	
													78		
													-76.85	78.70	
78.70-80.20				73	0	0		100% Water (Grey)			Stiff extremely closely to very closely fissured locally thinly laminated dark grey bioturbated glauconitic micaceous SILT. Fissures are randomly orientated planar rough or smooth polished. Burrows are randomly orientated up to 1 x 4mm infilled with grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC3)				
													-77		
														(0.56)	
													79		
													-77.41	79.26	
											Very stiff extremely closely to very closely fissured thinly laminated light grey bioturbated glauconitic micaceous CLAY. Fissures are randomly orientated planar rough or smooth polished. Burrows are randomly orientated up to 1 x 5mm infilled with grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC3)			(0.53)	
													-77.94	79.79	
											. . . 79.50-79.67m: green glauconite-staining		-78		
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)			(0.41)	
													80		AZCL
													-78.35	80.20	
80.20-80.95				100	0	0		100% Water (Grey)			Very stiff extremely closely to very closely fissured thinly laminated light grey bioturbated glauconitic micaceous CLAY. Fissures are randomly orientated planar rough or smooth polished. Burrows are randomly orientated up to 1 x 5mm infilled with grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC3)		-78.57	80.42	
														(0.53)	
											Very stiff extremely closely to very closely fissured locally thinly laminated grey bioturbated micaceous		-79		

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
80.95-81.70				100	0	0		100% Water (Grey)			glauconitic SILT. Fissures are randomly orientated planar rough or smooth matt or polished. Burrows are randomly orientated up to 1 x 7mm infilled with grey silt.. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC3)		-79.10	80.95 81	
81.70-83.20				100	0	0		100% Polymer-Mud (Grey)			Very stiff thinly laminated reddish brown mottled black bioturbated micaceous silty CLAY. Burrows are randomly orientated up to 1 x 4mm infilled with dark grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC2) . . . 82.03-82.14m: non-intact.		-80	(2.16)	
83.20-84.70				37	0	0		100% Polymer-Mud (Grey)			Very stiff extremely closely to very closely fissured locally thinly laminated reddish brown bioturbated micaceous glauconitic SILT. Fissures are randomly orientated planar rough or smooth polished or matt. Burrows are randomly orientated up to 1 x 4mm infilled with dark grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC2) Very stiff dark green micaceous glauconitic gravelly CLAY. Gravel is angular to subrounded fine to coarse of flint. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC1) Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-81	83 (0.36) (0.29) (0.94)	AZCL
84.70-85.45				84	35	0		100% Polymer-Mud (Light grey)			Very weak medium density closely jointed (0/537/870) white burrow mottled light grey CHALK with rare black specks. Bedding fracture: 6° undulating rough clean. Steeply inclined fracture: 86° undulating rough with frequent black specks unstained no infill. (PORTSDOWN FORMATION, BEESTON CHALK MEMBER Grade A3) . . . 85.30-85.45m: Assumed zone of core loss.		-82	84 (0.92)	

-81.26 83.11
-81.62 83.47
-81.91 83.76
-82.85 84.70

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**20** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
85.45-86.20				100	76	56		100% Polymer-Mud (Light grey)			Very weak medium density medium jointed (10/254/2620) white burrow mottled light grey CHALK with rare black specks. Bedding fractures: 1-10° medium spaced (20/290/2620) undulating and planar rough and smooth clean or with occasional black specks, unstained, no infill. Gently inclined: 11-18° widely spaced (20/1127/2780) undulating or planar rough clean and with frequent black specks, locally lightly stained yellow, no infill. Inclined fracture: 60° planar rough clean. Steeply inclined fractures: 62-80° widely spaced (440/1503/4730) undulating and planar rough clean or with frequent black specks, unstained, no infill. Sub-vertical fractures: 84-85° very widely spaced (100/2260/4730) undulating and planar rough clean. (PORTSDOWN FORMATION, WEYBOURNE CHALK MEMBER Grade A2)		-83.77	85.62	
86.20-87.70				100	44	23		100% Polymer-Mud (Light grey)			. . . 85.62-86.54m: medium strong very high density locally green glauconite-mineralised hardground. (Probably Catton Sponge Bed) . . . 85.86-86.02m: occasional inoceramid bivalve shell fragments. . . . 87.02-87.07m: medium strong very high density locally green glauconite-mineralised hardground.		-84	86	
86.79-86.99	10	C											-85	87	
87.70-89.20				100	63	45		100% Polymer-Mud (Light grey)			. . . 87.50m: shell fragment (up to 6mm across).		-86	88	
87.82-88.19	13	C									. . . 88.23-88.38m: flint band. Fine to medium gravel of nodular flint with thin to thick cortexes. . . . 88.40-88.52m: black-stained sponge bed. . . . 88.60-88.67m: fine to medium gravel of nodular flint with thin cortexes. . . . 88.67-88.75m: thinned by drilling.		-87	89	
89.20-90.70				100	59	47					. . . 89.06-89.20m: Assumed zone of core loss.. . . . 89.67-89.74m: black-stained sponge bed.		-88	(7.33)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**21** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				100	59	47		100% Polymer-Mud (Light grey)							
90.70-92.20				100	91	88		100% Polymer-Mud (Light grey)			. . . 90.74-90.81m: black-stained sponge bed. . . . 91.08-91.16m: thinned by drilling. . . . 91.35-91.36m: bivalve shell (up to 13mm across).		-89	90 91	
91.86-92.20	11	C									. . . 91.77-91.80m: occasional bivalve shell fragments (up to 15mm across).		-90	92	
92.20-93.70				50	16	16		100% Polymer-Mud (Light grey)			. . . 92.47-92.58m: black-stained sponge bed. . . . 92.88-92.95m: non-intact. Flint band. Fine to medium gravel of nodular flint with thin cortexes. Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-91 -91.10	92.95 93 (0.75)	AZCL
93.70-94.45				40	0	0		100% Polymer-Mud (Light grey)			Partial recovery (40%). Recovered as very weak medium density closely jointed (0/537/870) white burrow mottled light grey CHALK with rare black specks. Bedding fracture: 6° undulating rough clean. Steeply inclined fracture: 86° undulating rough with frequent black specks unstained no infill. (PORTSDOWN FORMATION, BEESTON CHALK MEMBER)		-91.85 -92	93.70 94 (0.75)	PR / AZCL

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19** End: **13.09.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318		**1.85**	**E:647450.9 N:264214.2**	**22** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
94.45-95.20				0	0	0		100% Polymer-Mud (Light grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-92.60	94.45 (0.82)	AZCL
95.20-95.95				79	60	39		100% Polymer-Mud (Light grey)			. . . 95.20-95.27m: flint band. Fine to medium gravel of nodular flint with thin cortexes. Very weak medium density medium jointed white burrow mottled light grey CHALK with rare black specks. Bedding fractures: 2-10° medium spaced (50/433/1270) undulating and planar rough clean locally with occasional black specks, light yellow staining, no infill. Gently inclined fractures: 13-26° widely spaced (325/1116/2100) undulating, planar and striated rough clean or with occasional black specks, unstained, no infill. Steeply inclined fracture: 80° undulating rough clean. (PORTSDOWN FORMATION, PRE-WEYBOURNE CHALK MEMBER Grade A2)	50 51 52	-93.42 -94 -95 -96 -97	95.27 (5.17)	
95.95-96.70				100	100	89		100% Polymer-Mud (Light grey)			. . . 95.27-95.40m: very weak to weak medium to high density white burrow mottled light grey CHALK with rare black specks. (Possible hard ground) . . . 95.61m: belemnite fragment (9 x 11mm). . . . 95.77-95.95m: Assumed zone of core loss. . . . 96.16m: inoceramid bivalve shell fragment (up to 3 x17mm). . . . 96.54m: belemnite fragment (7 x 10mm).	53 54 55		96 97 98	
96.70-98.20				98	79	70		100% Polymer-Mud (Light grey)			. . . 97.12m: inoceramid bivalve shell fragment (2 x 6mm).	56 57 58 59			
98.20-99.70											. . . 98.06-98.20m: non-intact.	60			
98.34-98.71	14	C		100	80	71					. . . 98.42m: inoceramid bivalve shell fragment. . . . 98.74-99.10m: black-stained sponge bed.				

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_4**

Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**23** of **55**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				100	80	71		100% Polymer-Mud (Light grey)			. . . 99.46-99.51m: flint band. Fine to medium gravel of nodular flint with thin cortexes.	61		99	
												62			
												63			
99.70-101.20											. . . 99.70-99.77m: non-intact.	64 65	-98	100	
												66 67 68			
				51	39	29		100% Polymer-Mud (Light grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-98.59	100.44	
													-99	(0.76)	AZCL
														101	
101.20-102.70											Very weak medium density medium jointed white burrow mottled light grey CHALK with rare black specks. Bedding fractures: 2-10° medium spaced (50/433/1270) undulating and planar rough clean locally with occasional black specks, light yellow staining, no infill. Gently inclined fractures: 13-26° widely spaced (325/1116/2100) undulating, planar and striated rough clean or with occasional black specks, unstained, no infill. Steeply inclined fracture: 80° undulating rough clean. (PORTSDOWN FORMATION, PRE-WEYBOURNE CHALK MEMBER)		-99.35	101.20	
101.58-102.02	12	C										69			
				100	47	39		100% Polymer-Mud (Light grey)			. . . 101.25m: inoceramid bivalve shell fragment.		-100	102 (1.80)	
												70 71			
											. . . 102.38-102.58m: non-intact.				
											. . . 102.48-102.52m: flint band. Fine to medium gravel of nodular flint with thin cortexes.	72 73			
											. . . 102.65m: black-stained sponge bed.		-101		
													-101.15	103.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Comacchio MC450-P1**	**David Henderson**	**HPerry + SHinton + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**24** of **55**

DCBH2019_4 1.20m - 2.90m depth.

DCBH2019_4 2.90m - 4.45m depth.

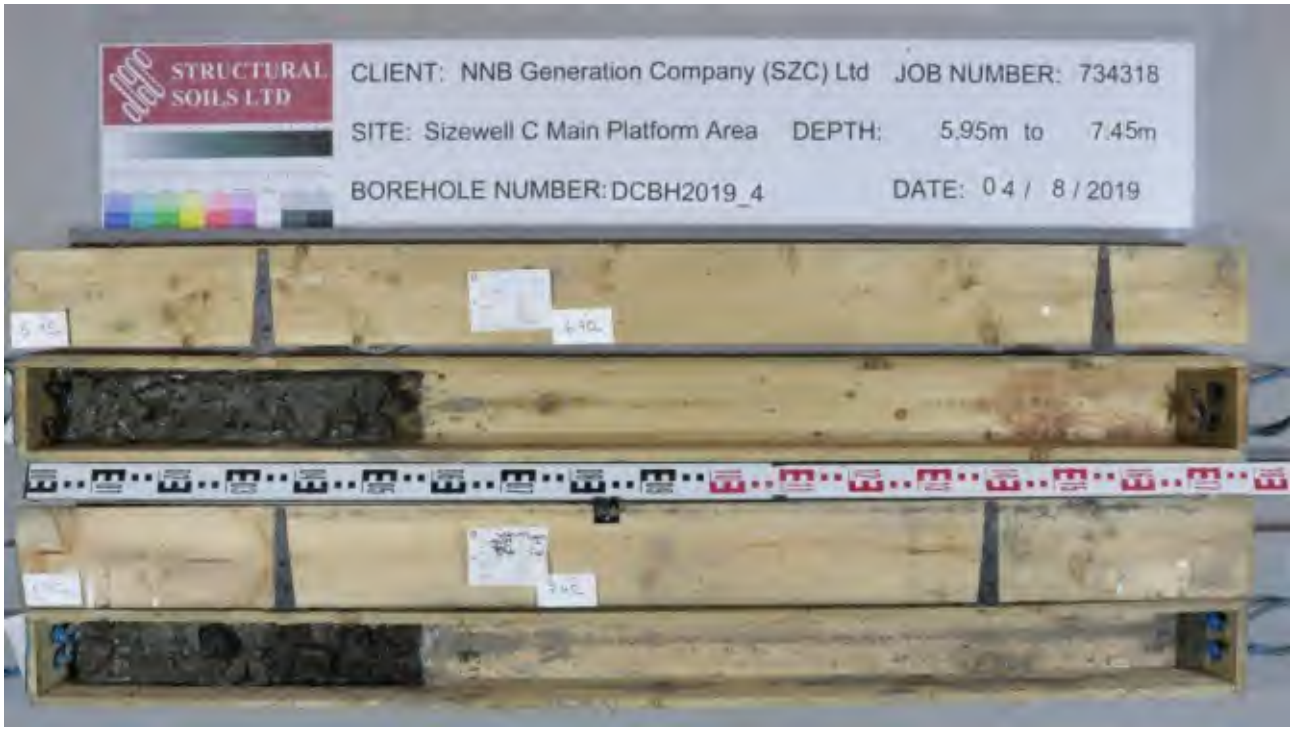
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**25** of **55**

DCBH2019_4 4.45m - 5.95m depth.



DCBH2019_4 5.95m - 7.45m depth.

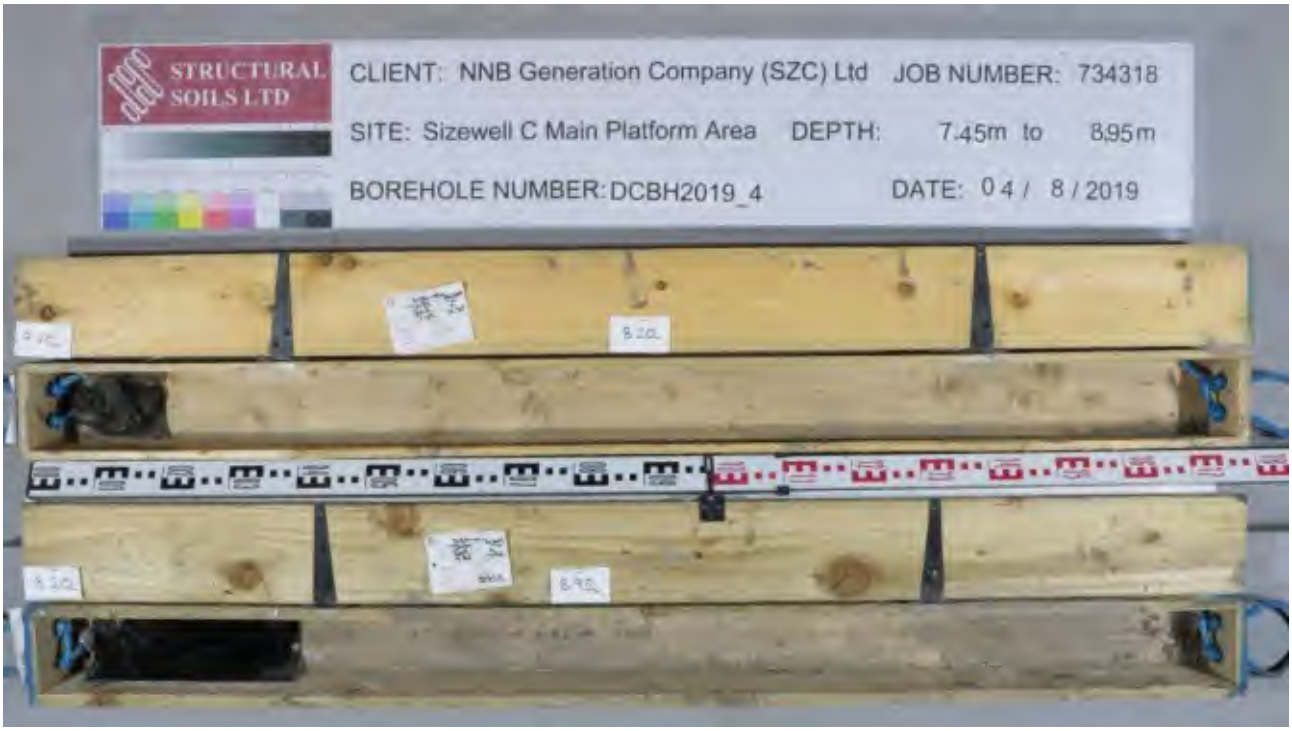
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

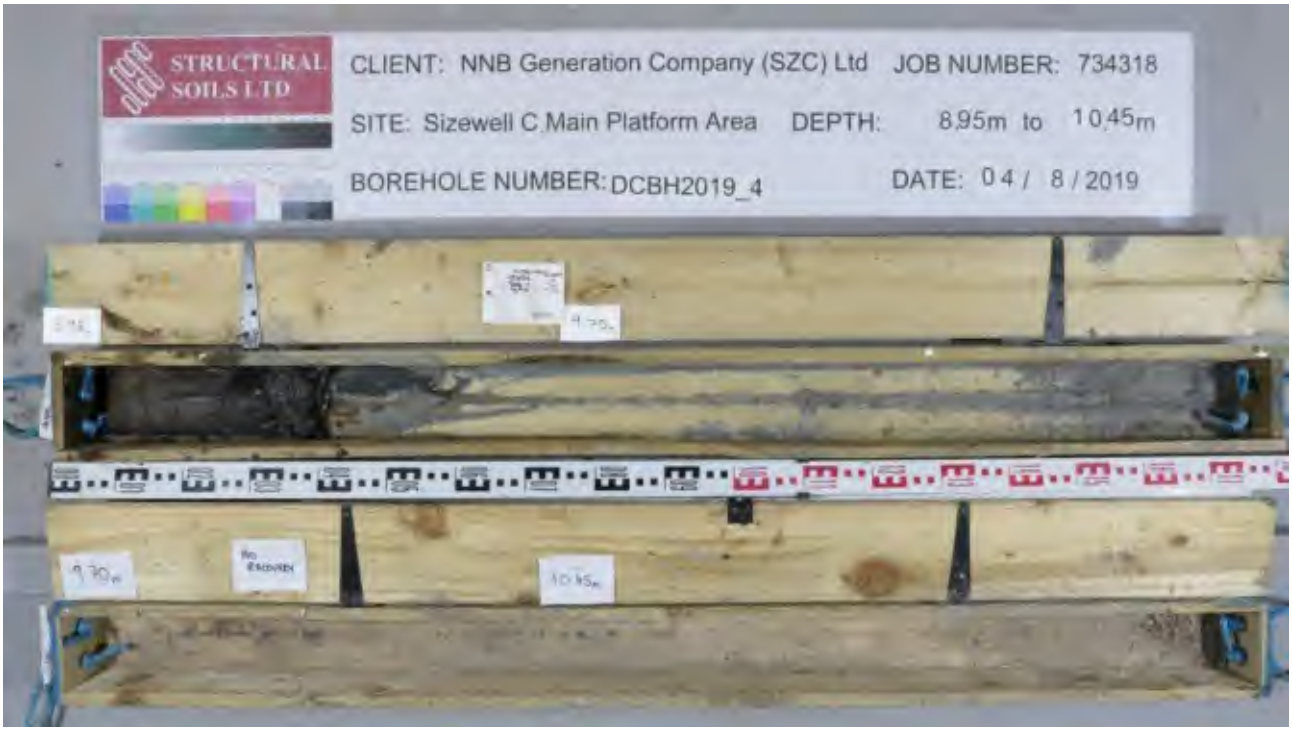
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**26** of **55**

DCBH2019_4 7.45m - 8.95m depth.





DCBH2019_4 Box 1 2 8.95m - 10.45m depth.

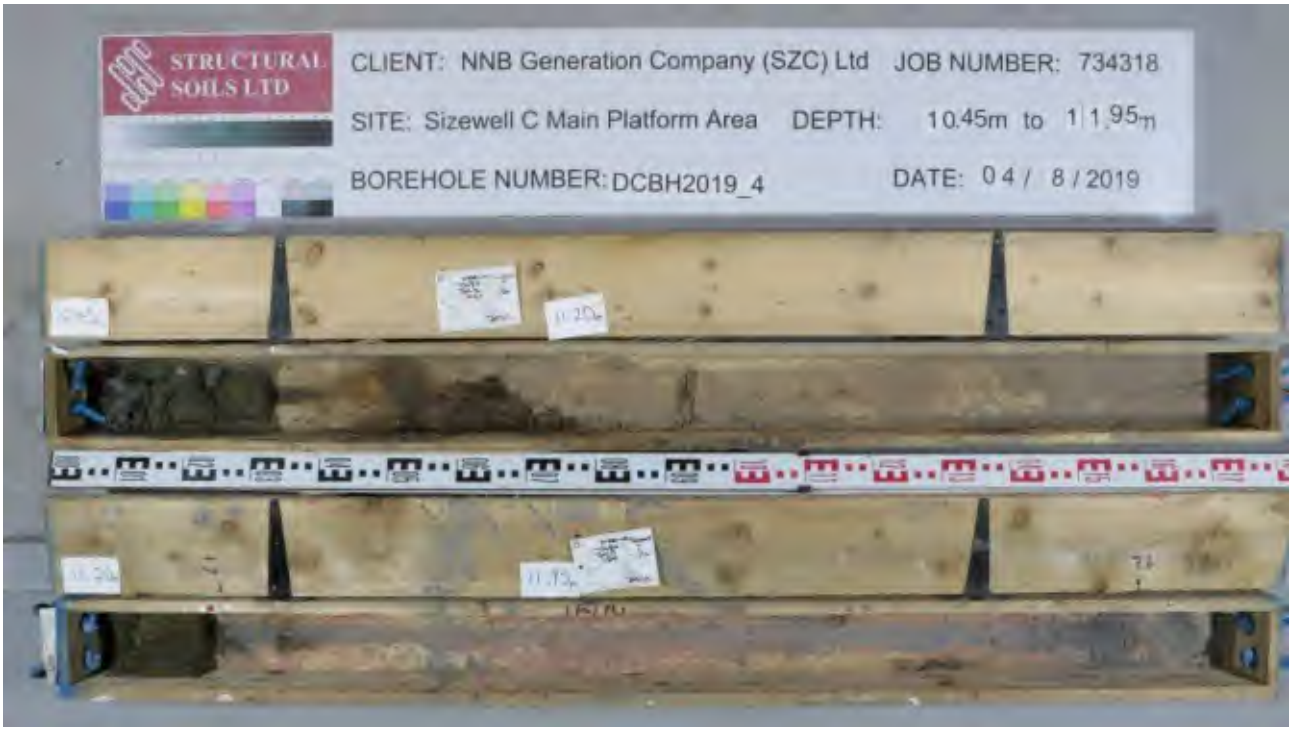
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

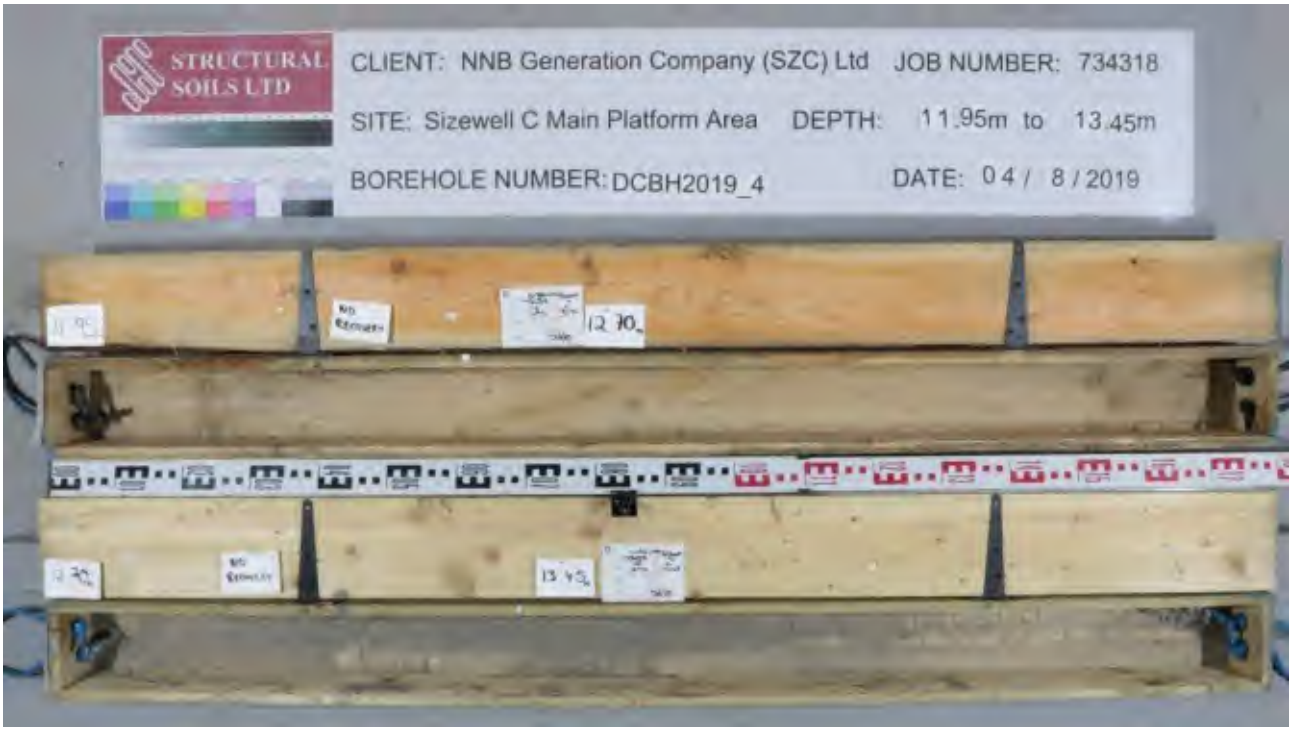
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**27** of **55**

DCBH2019_4 Box 1 2 10.45m - 11.95m depth.





DCBH2019_4 Box 1 2 11.95m - 13.45m depth.

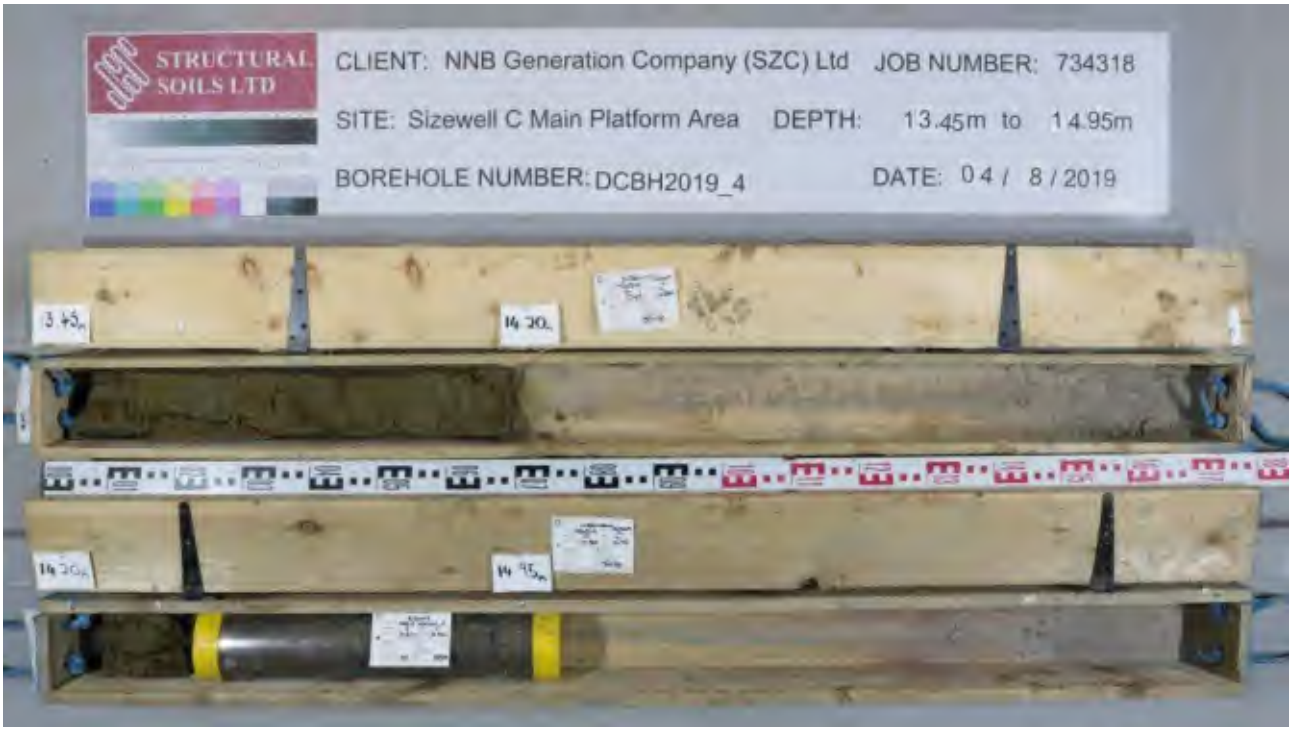
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**28** of **55**

DCBH2019_4 Box 1 2 13.45m - 14.95m depth.



DCBH2019_4 Box 1 2 14.95m - 16.45m depth.

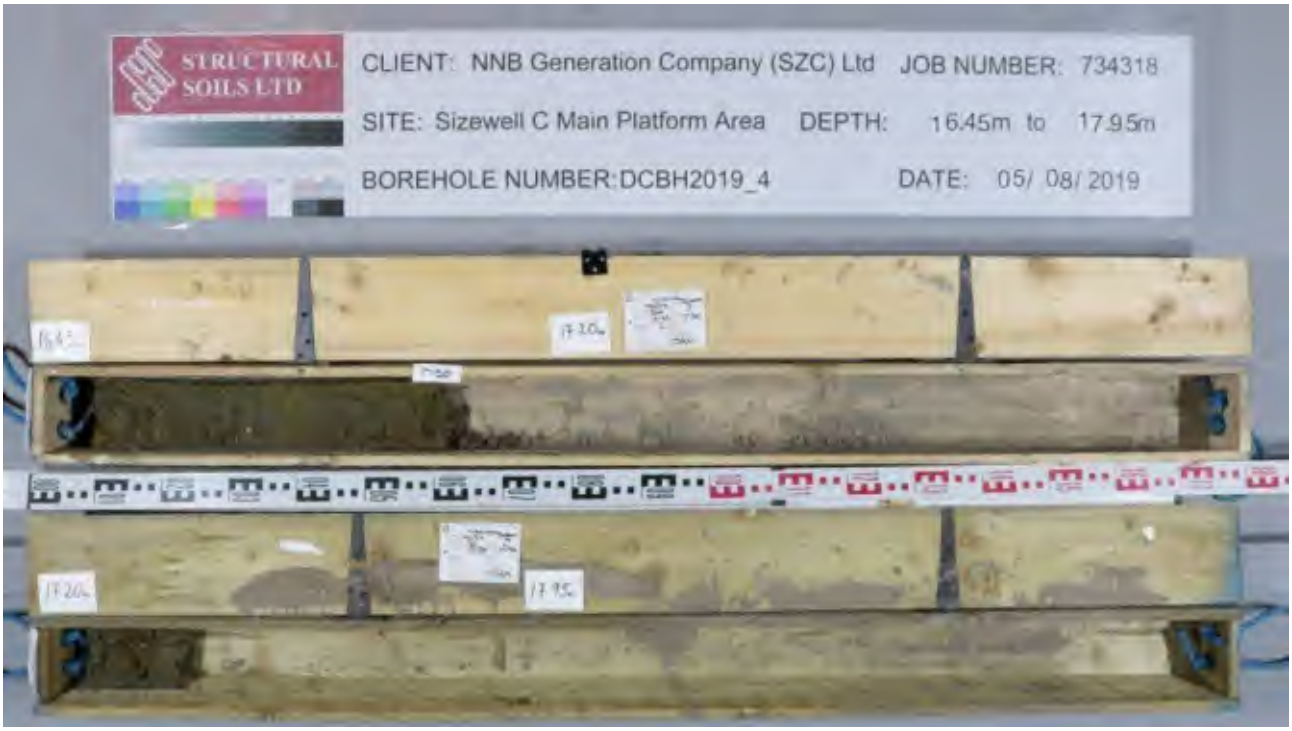
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

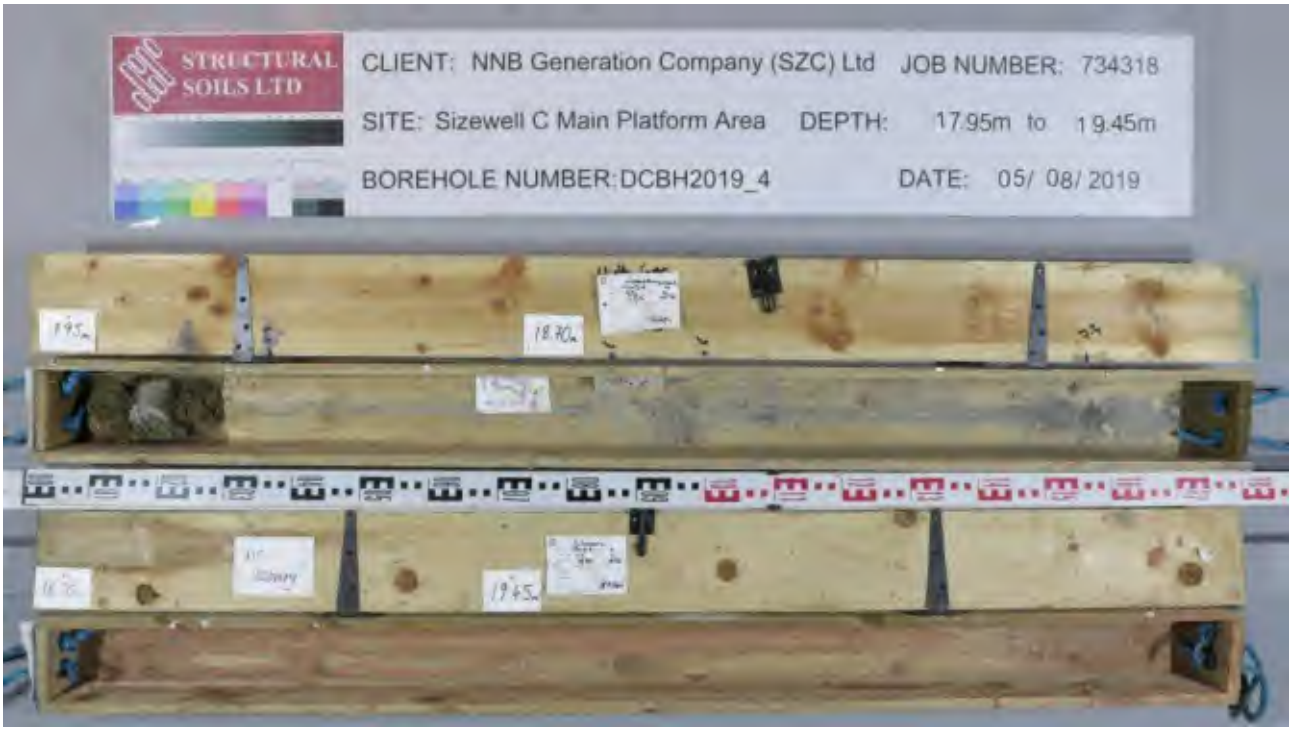
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**29** of **55**

DCBH2019_4 16.45m - 17.95m depth.





DCBH2019_4 17.95m - 19.45m depth.

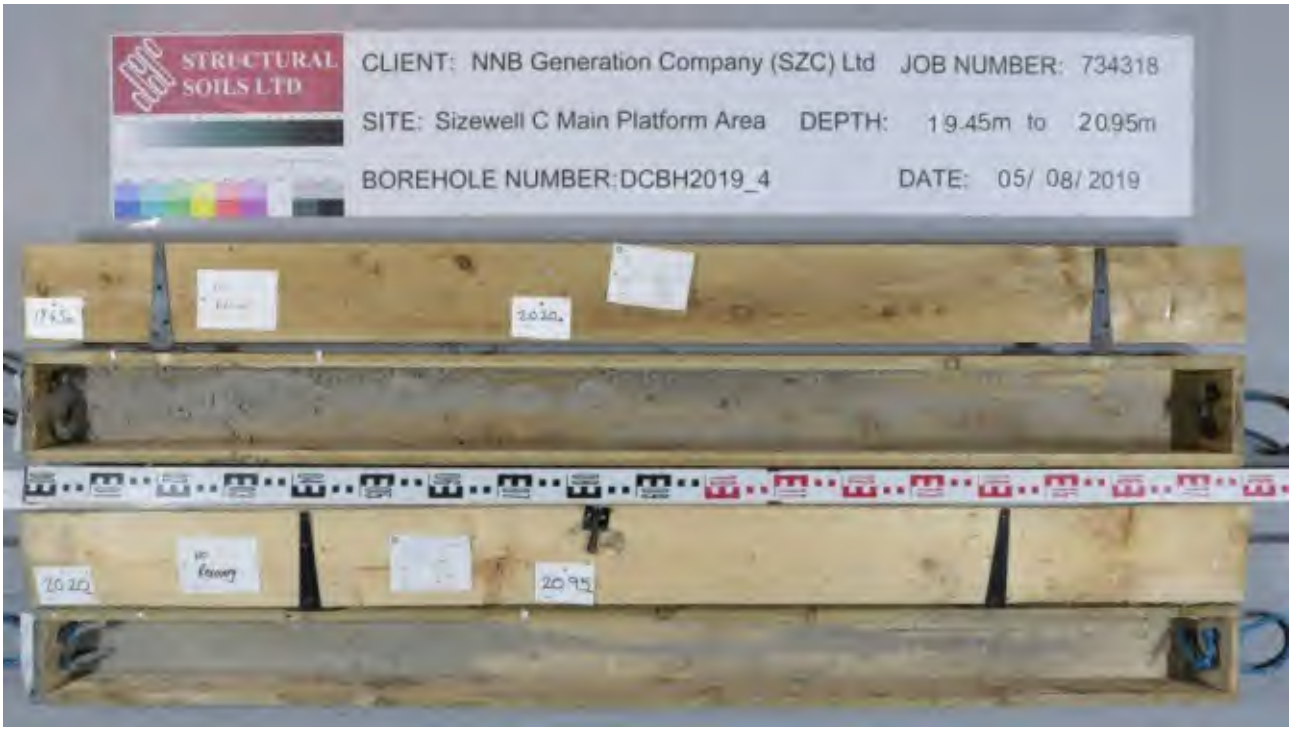
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

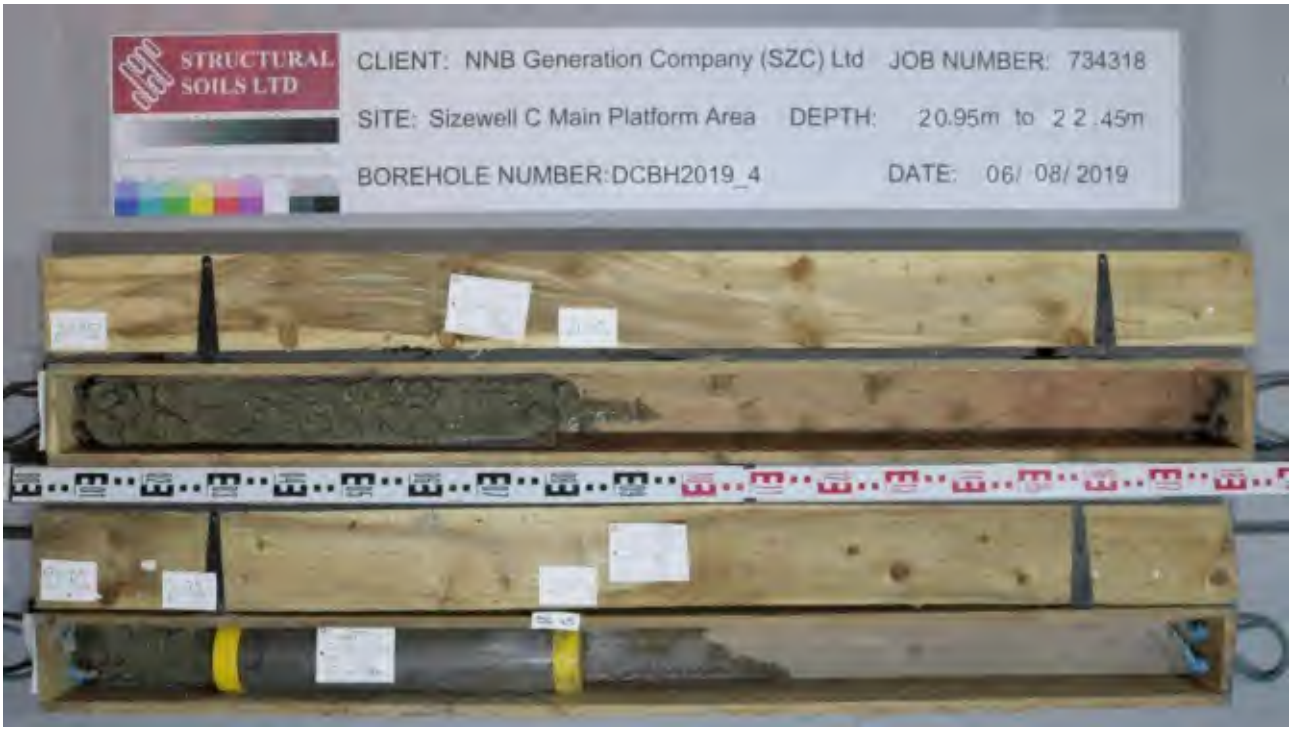
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**30** of **55**

DCBH2019_4 19.45m - 20.95m depth.





DCBH2019_4 20.95m - 22.45m depth.

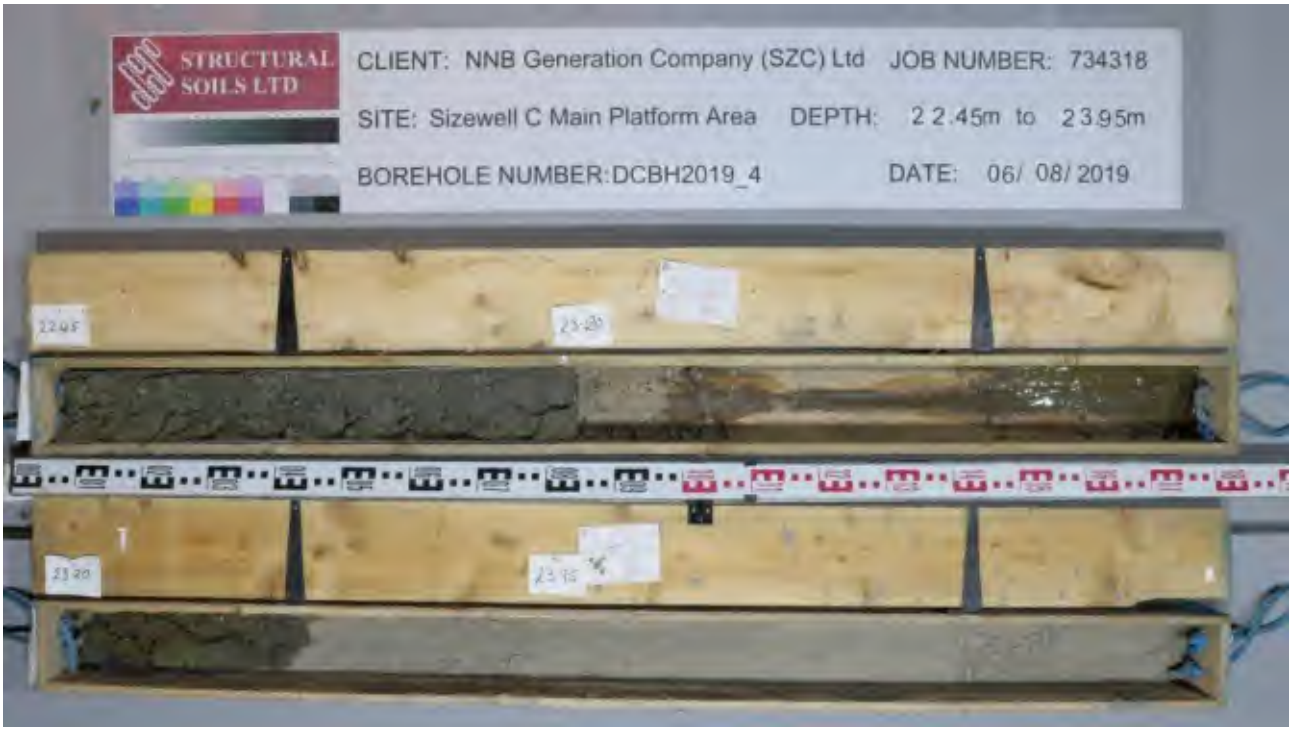
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**31** of **55**

DCBH2019_4 22.45m - 23.95m depth.



DCBH2019_4 23.95m - 25.45m depth.

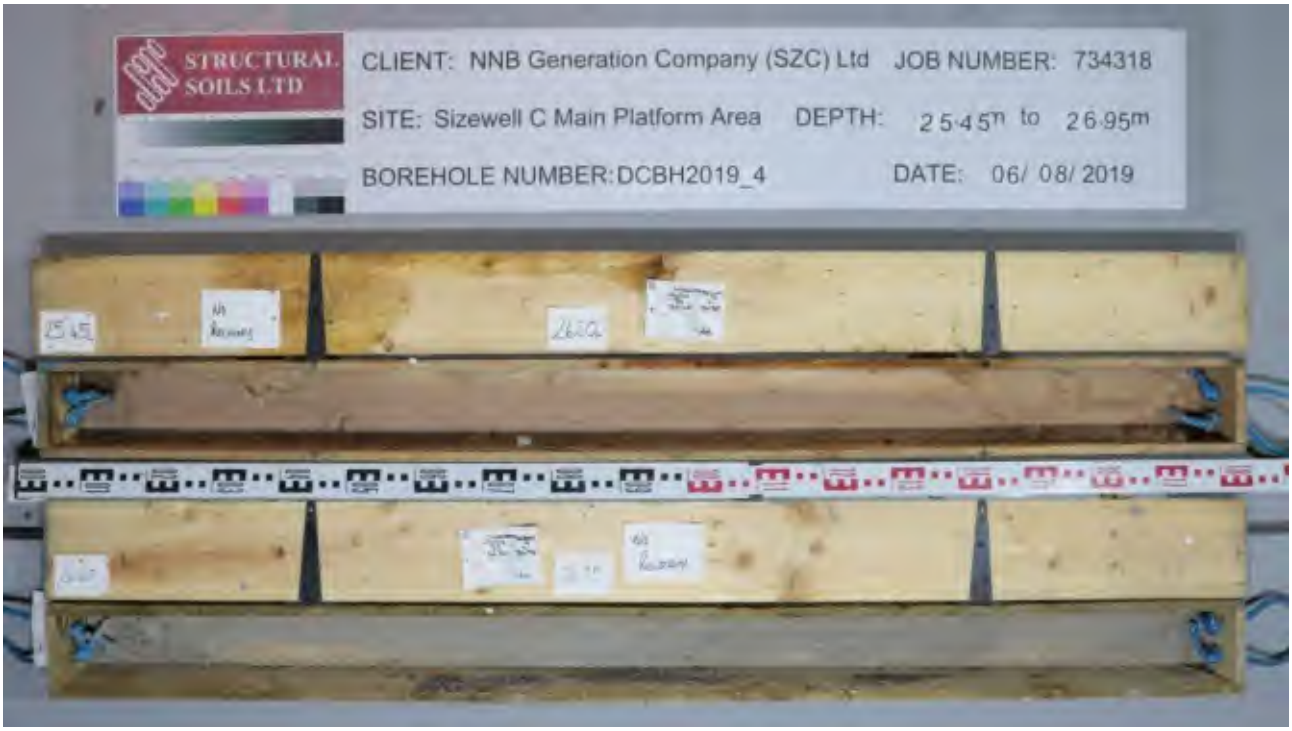
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**32** of **55**

DCBH2019_4 25.45m - 26.95m depth.



DCBH2019_4 26.95m - 28.45m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**33** of **55**

DCBH2019_4 28.45m - 29.95m depth.

DCBH2019_4 29.95m - 31.45m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**34** of **55**

DCBH2019_4 31.45m - 32.95m depth.

DCBH2019_4 32.95m - 34.45m depth.

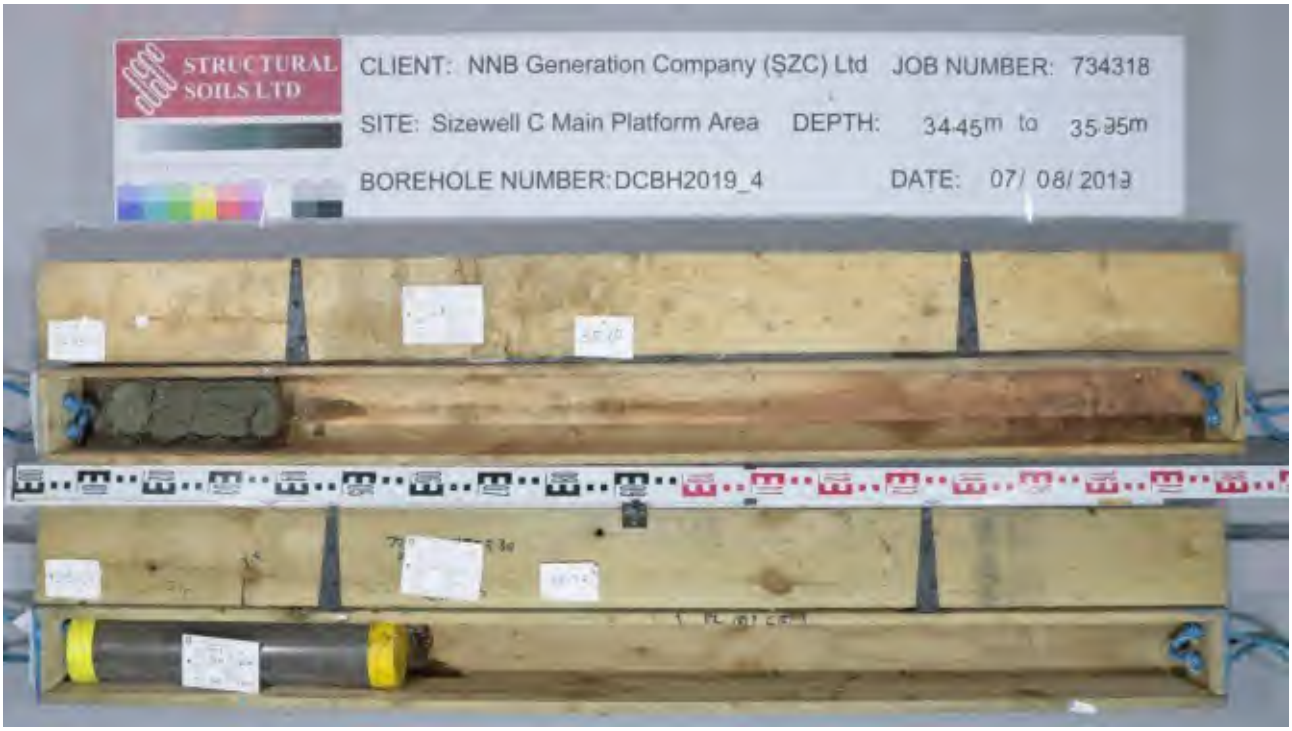
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:

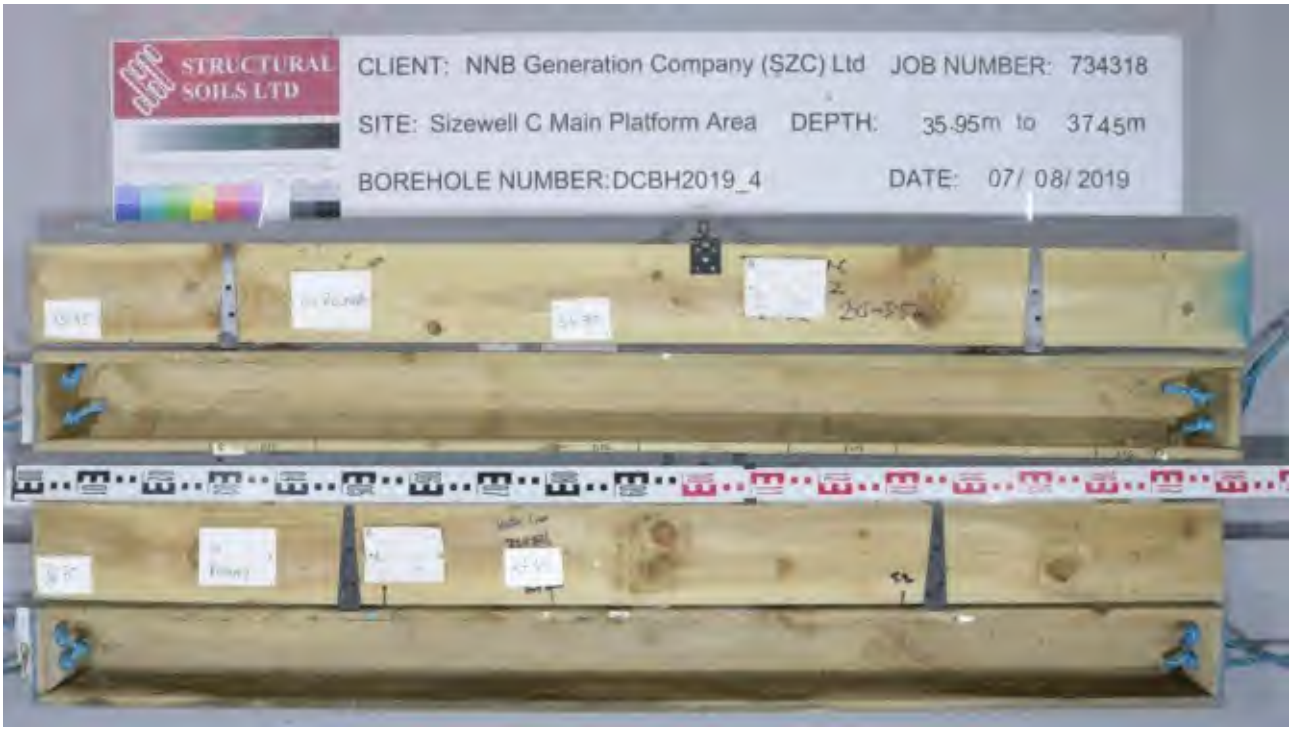
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**35** of **55**

DCBH2019_4 34.45m - 35.95m depth.





DCBH2019_4 35.95m - 37.45m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**36** of **55**

DCBH2019_4 37.45m - 38.95m depth.

DCBH2019_4 38.95m - 40.45m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**37** of **55**

DCBH2019_4 40.45m - 41.95m depth.

DCBH2019_4 41.95m - 43.45m depth.

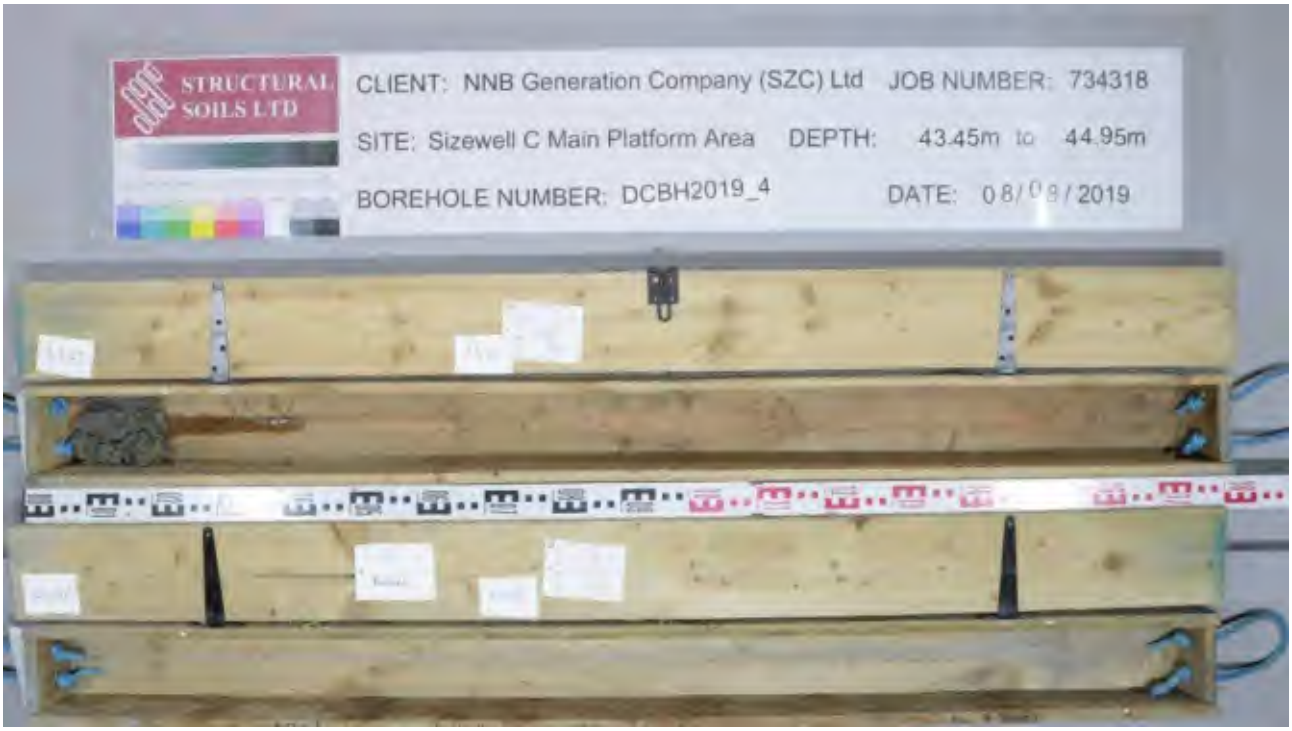
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**38** of **55**

DCBH2019_4 43.45m - 44.95m depth.



DCBH2019_4 44.95m - 47.20m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**39** of **55**

DCBH2019_4 47.20m - 50.20m depth. (Split)

DCBH2019_4 47.20m - 50.20m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**40** of **55**

DCBH2019_4 50.20m - 53.20m depth.

DCBH2019_4 53.20m - 56.20m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**41** of **55**

DCBH2019_4 53.20m - 56.20m depth.

DCBH2019_4 56.20m - 59.20m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**42** of **55**

DCBH2019_4 56.20m - 59.20m depth.

DCBH2019_4 59.20m - 60.70m depth.

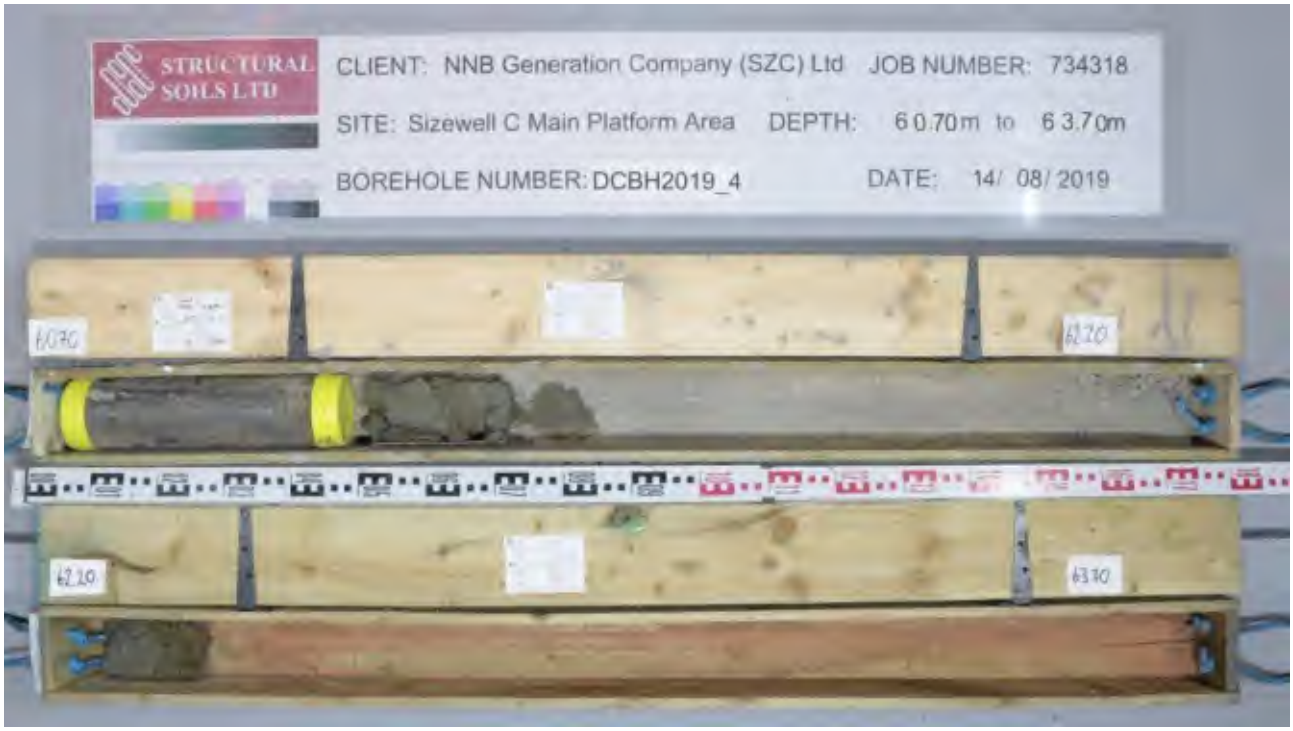
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

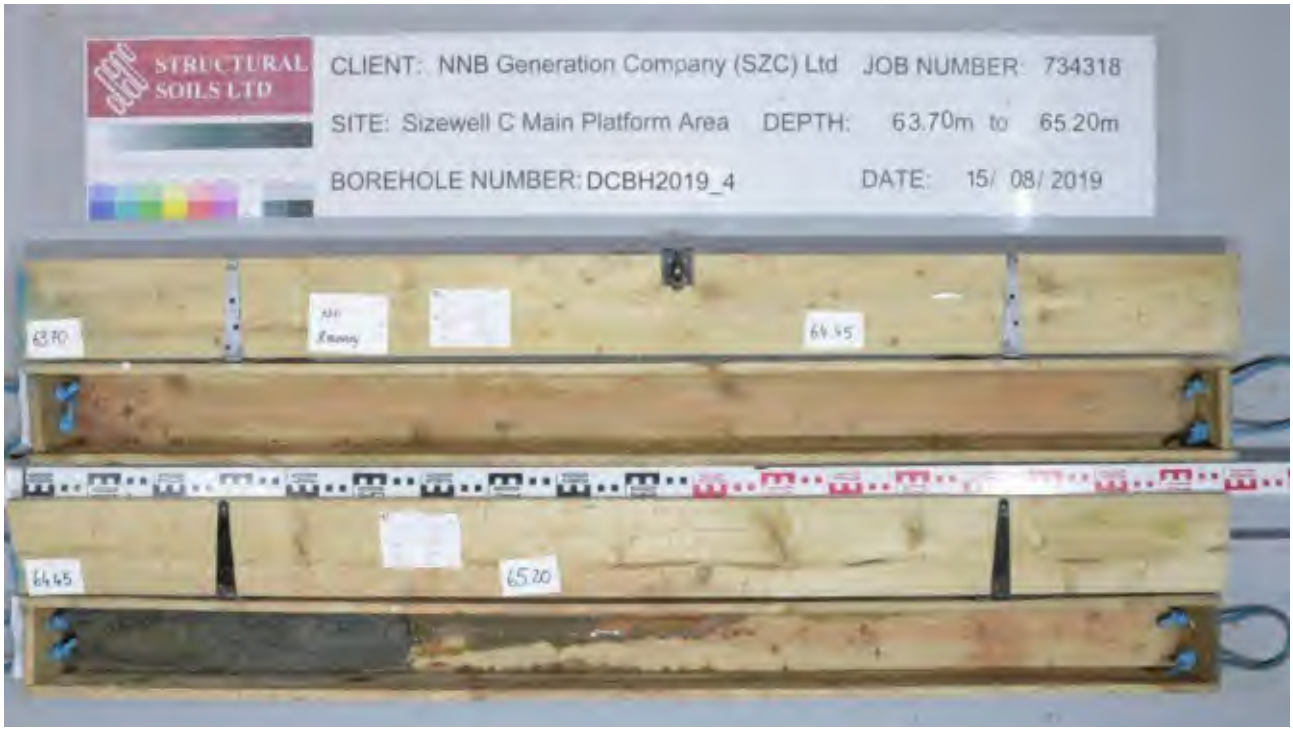
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**43** of **55**

DCBH2019_4 60.70m - 63.70m depth.





DCBH2019_4 63.70m - 65.20m depth.

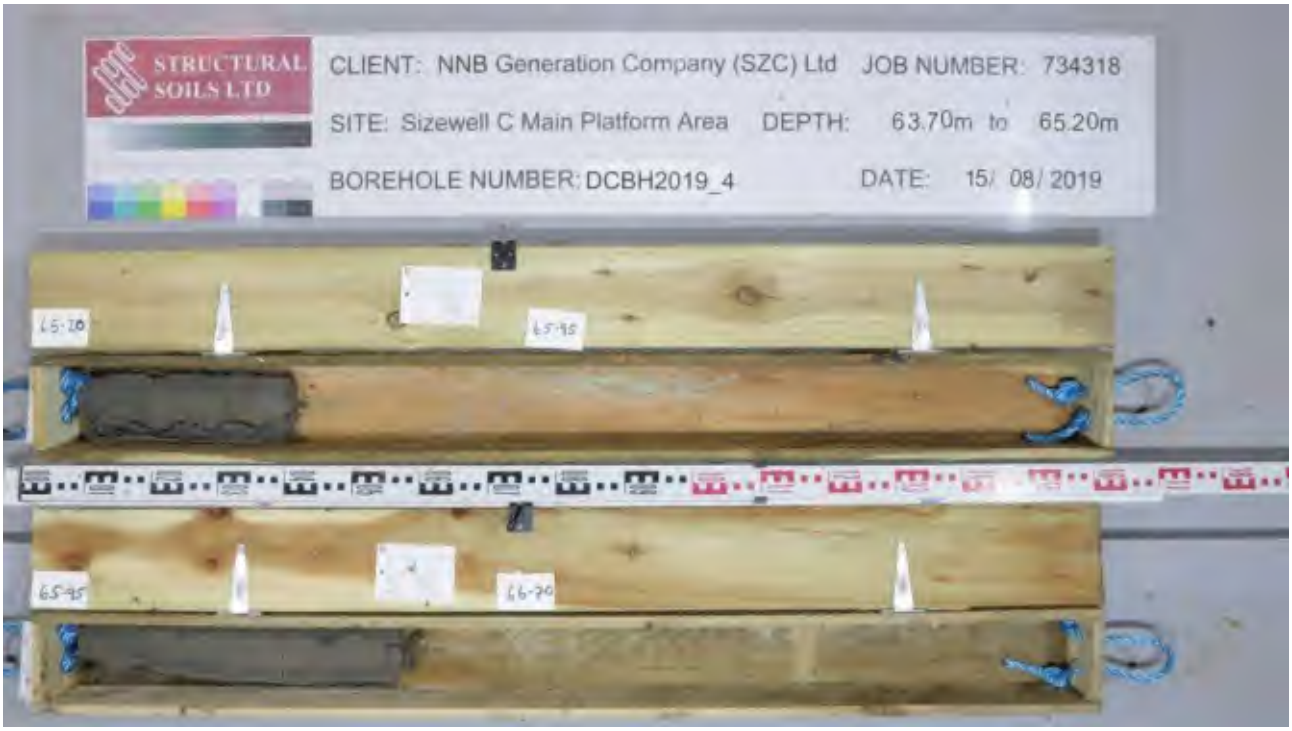
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

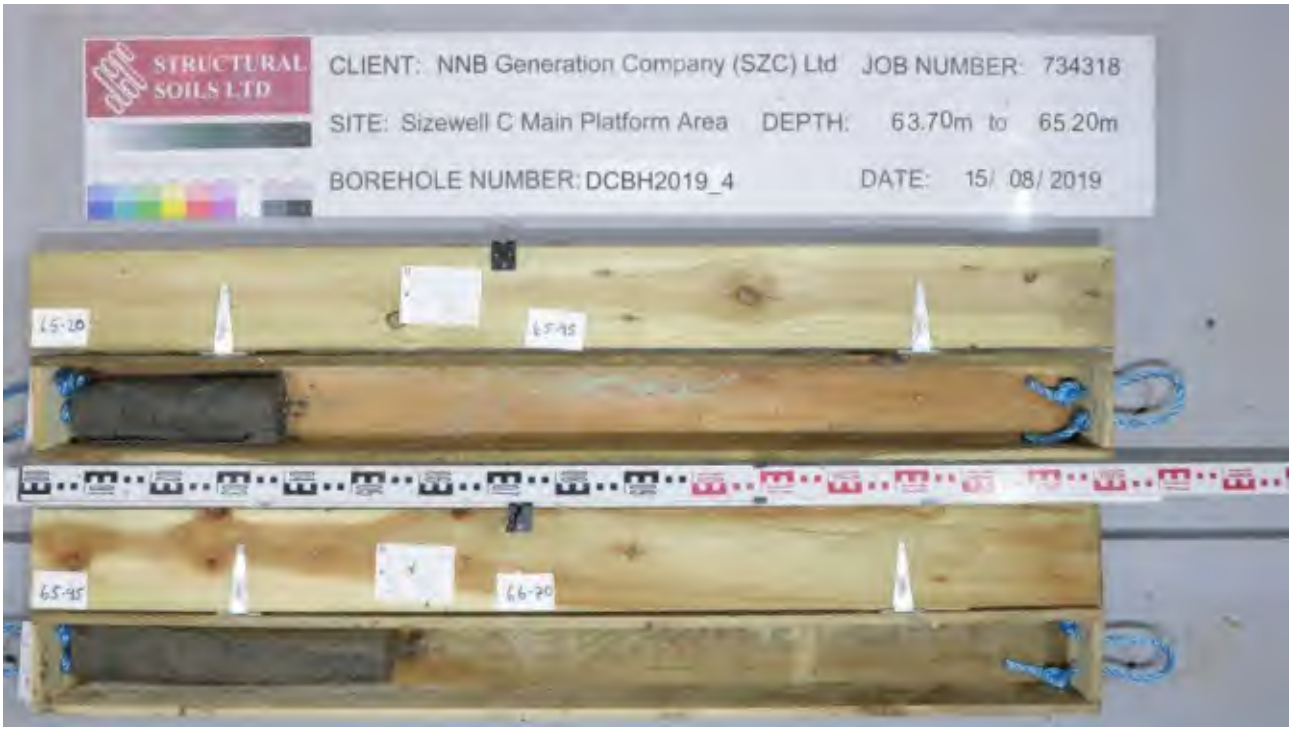
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**44** of **55**

DCBH2019_4 65.20m - 66.70m depth. (Split)





DCBH2019_4 65.20m - 66.70m depth.

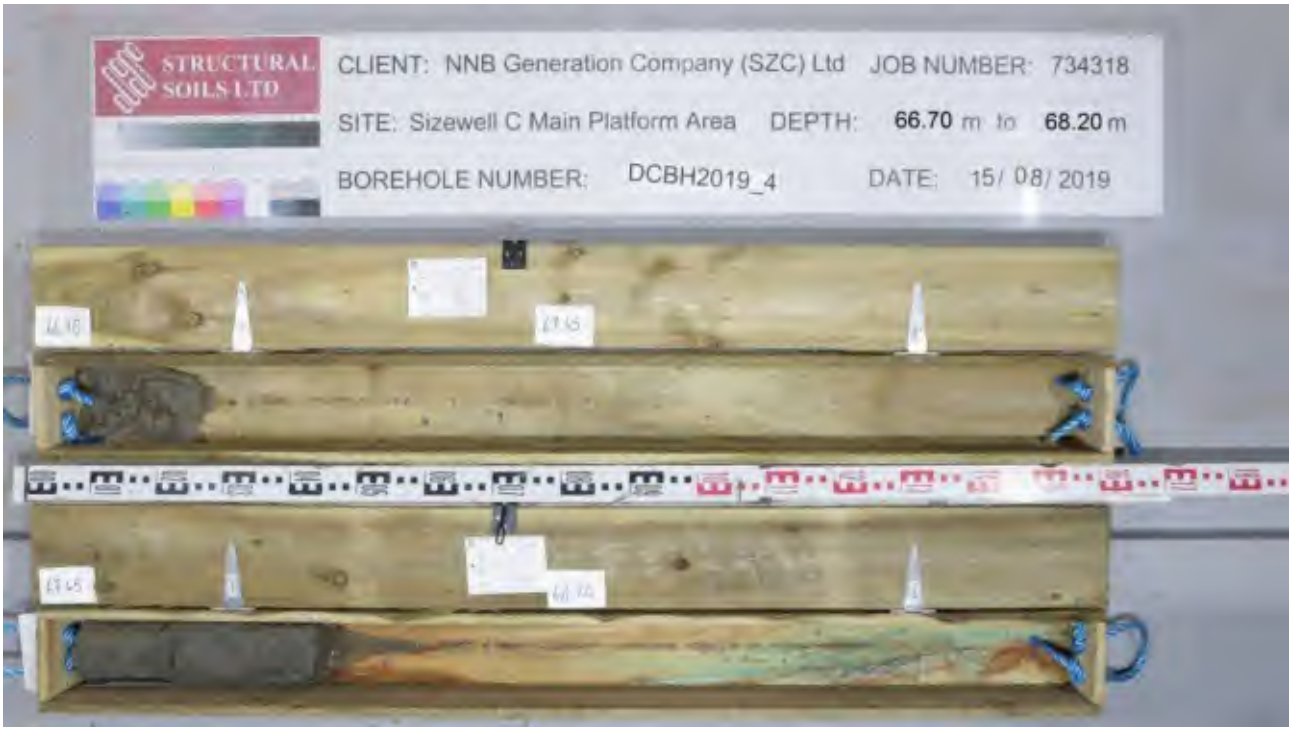
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**45** of **55**

DCBH2019_4 66.70m - 68.20m depth. (Split)



DCBH2019_4 66.70m - 68.20m depth.

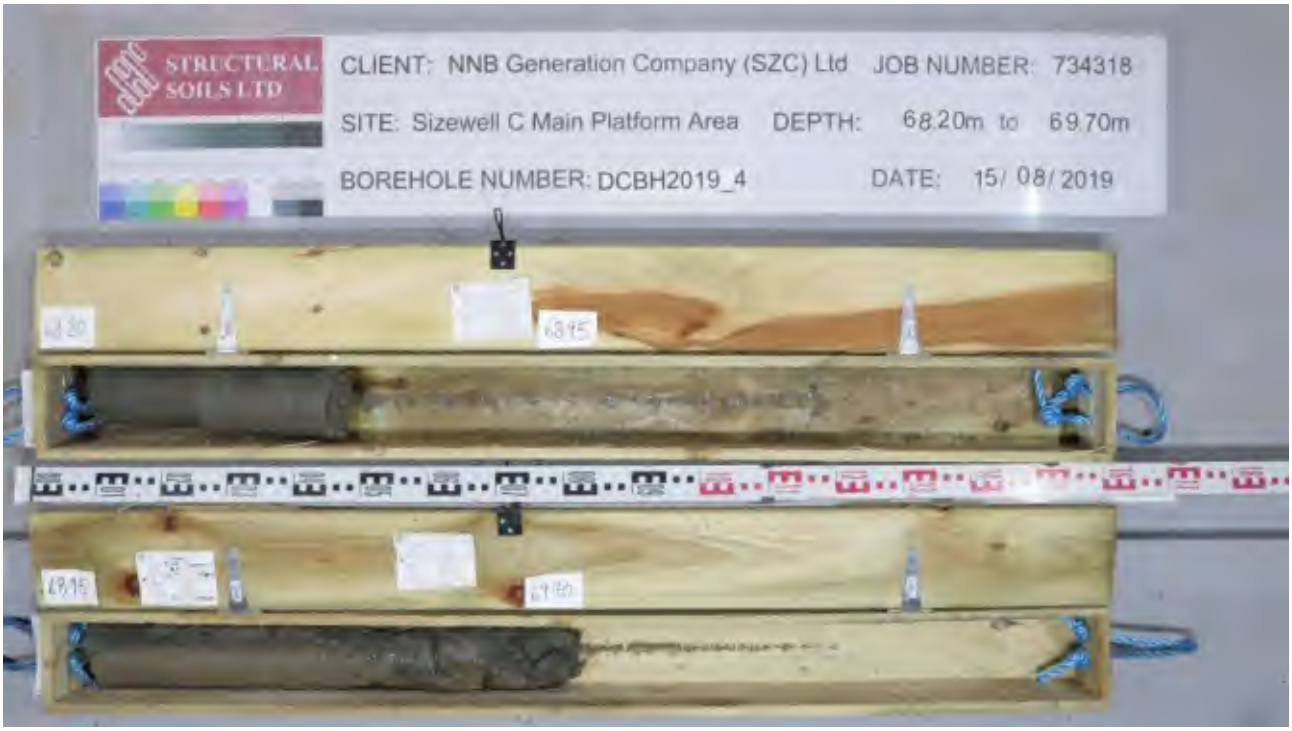
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**46** of **55**

DCBH2019_4 68.20m - 69.70m depth. (Split)



DCBH2019_4 68.20m - 69.70m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**47** of **55**

DCBH2019_4 69.70m - 71.95m depth.

DCBH2019_4 71.95m - 74.20m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**48** of **55**

DCBH2019_4 71.95m - 74.20m depth. (Split)

DCBH2019_4 74.20m - 76.45m depth.

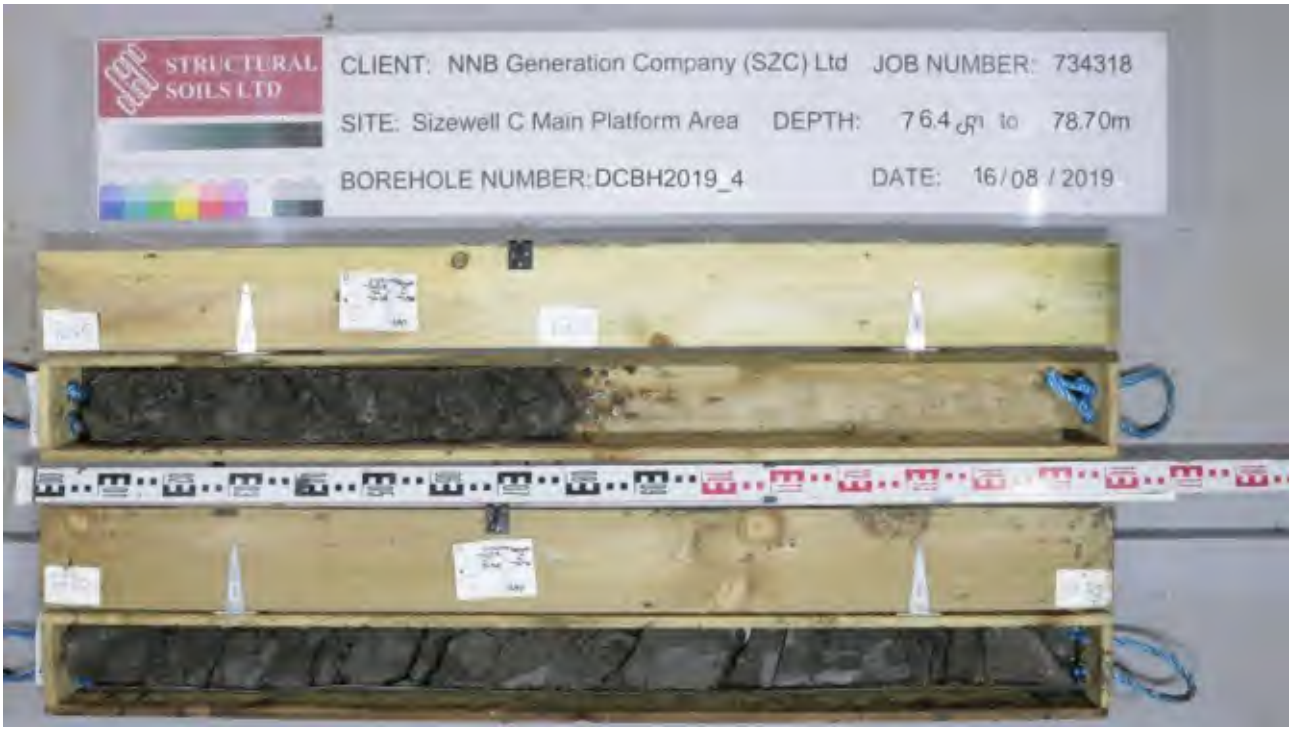
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

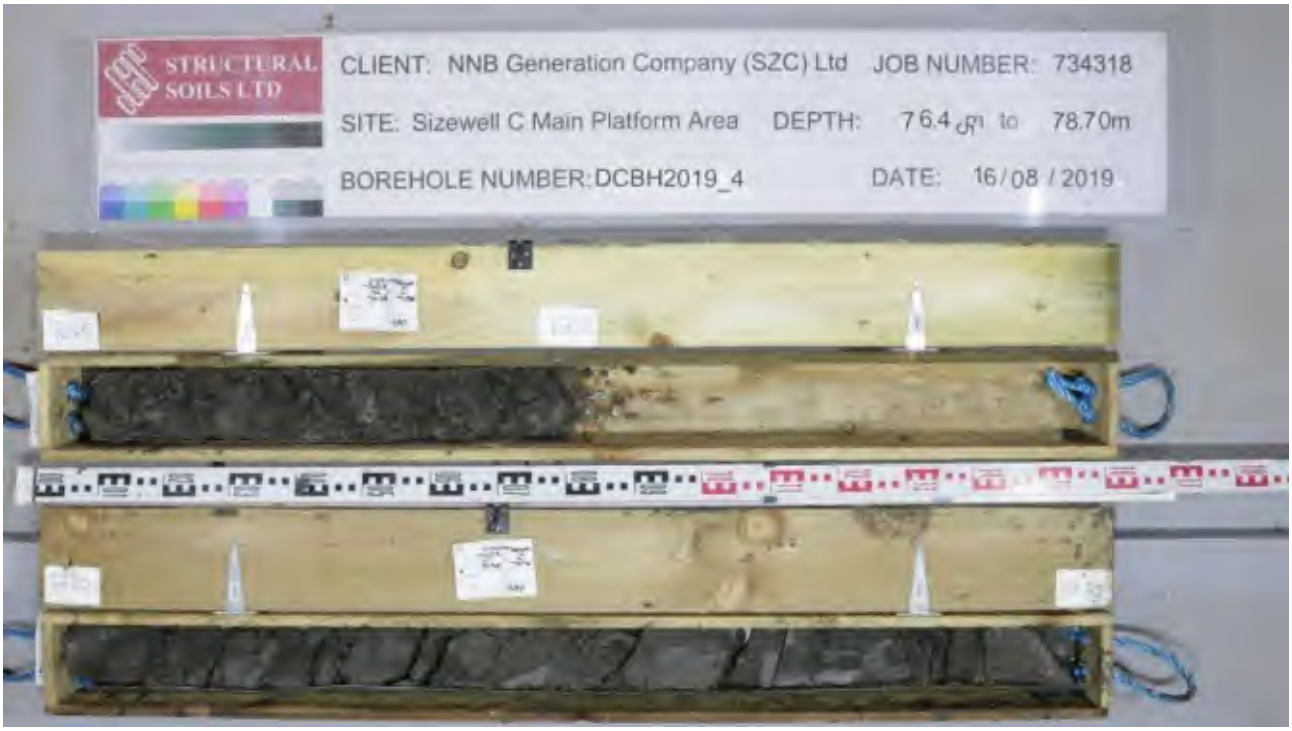
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**49** of **55**

DCBH2019_4 76.45m - 78.70m depth.





DCBH2019_4 76.45m - 78.70m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**50** of **55**

DCBH2019_4 78.70m - 80.95m depth. (Split)

DCBH2019_4 78.70m - 80.95m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**51** of **55**

DCBH2019_4 80.95m - 81.70m depth.

DCBH2019_4 81.70m - 83.20m depth.

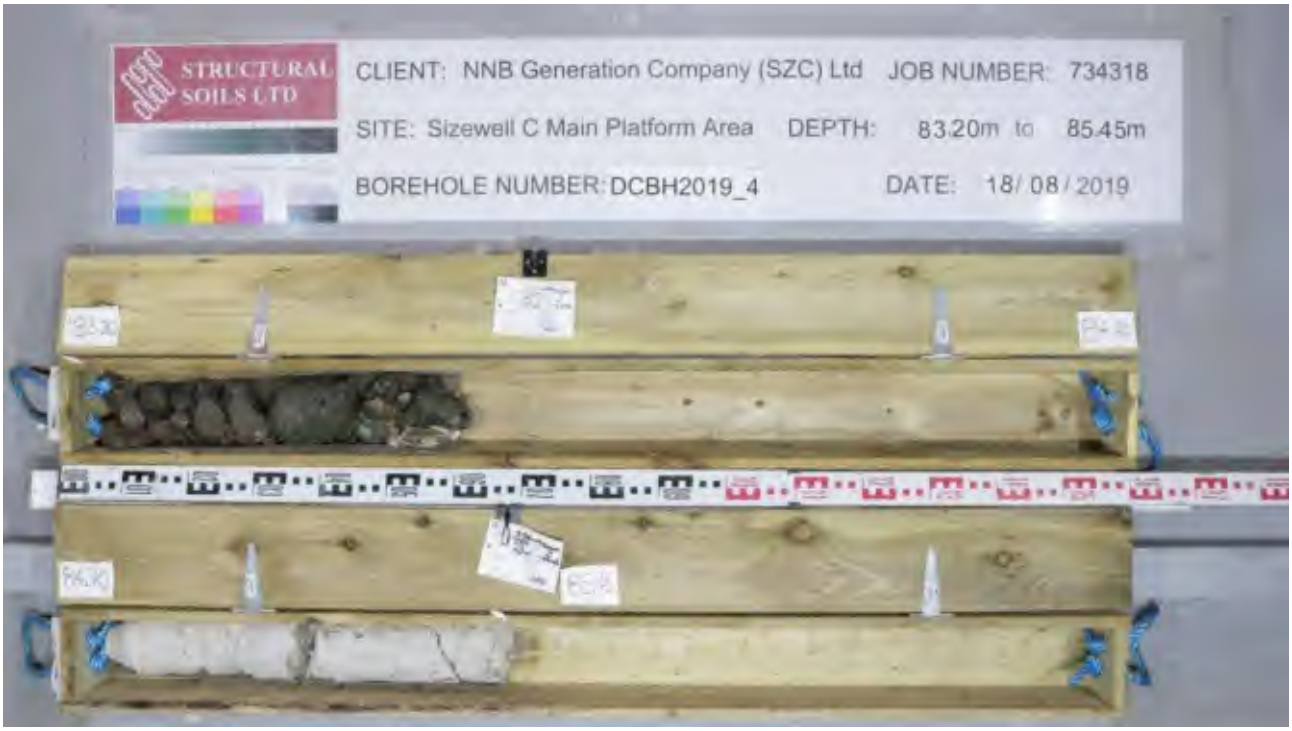
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**52** of **55**

DCBH2019_4 83.20m - 85.45m depth.



DCBH2019_4 85.45m - 87.70m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**53** of **55**

DCBH2019_4 87.70m - 90.70m depth.

DCBH2019_4 90.70m - 93.70m depth.

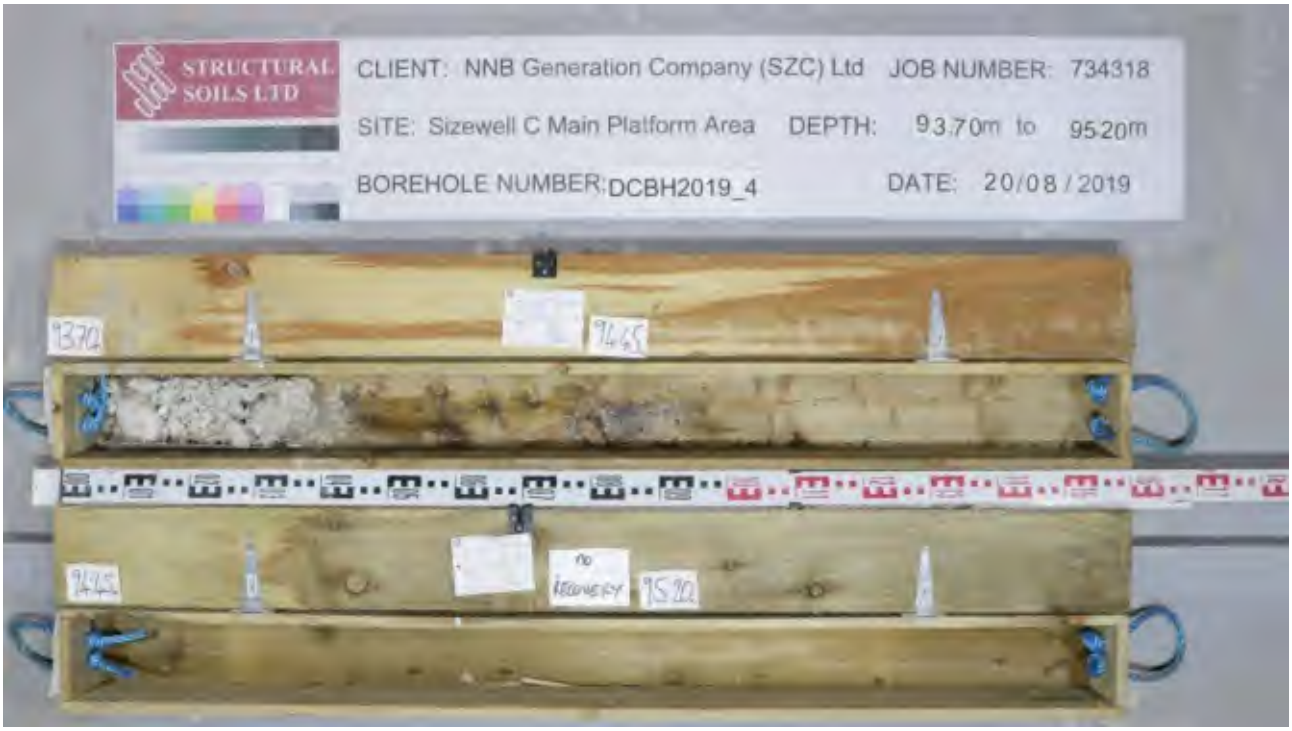
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**54** of **55**

DCBH2019_4 93.70m - 95.20m depth.



DCBH2019_4 95.20m - 96.70m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_4**
Contract Ref:	Start: **22.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **13.09.19**	**1.85**	**E:647450.9 N:264214.2**	**55** of **55**

DCBH2019_4 96.70m - 99.70m depth.

DCBH2019_4 99.70m - 102.70m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Comacchio MC450-P1**	Drilled By:	**David Henderson**	Logged By:	**HPerry + SHinton + HSkaleld**	Checked By:	SAT

SUMMARY OF DISCONTINUITIES - DCBH2019_4

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
1	85.45	BF	8	U-R	-	-	-	Clean.	BEECK	CHALK
2	85.57	BF	6	U-R	-	-	-	Clean.	BEECK	CHALK
3	86.20-86.42	J	80	U-R	-	-	-	Frequent black specks,	WBCK	CHALK
								unstained, no infill.		
4	86.33-86.40	J	68	P-R	-	-	-	Rare black specks,	WBCK	CHALK
								unstained, no infill.		
5	86.62	BF	4	U-R	-	-	-	Clean.	WBCK	CHALK
6	86.62-86.69	J	84	U-R	-	-	-	Clean.	WBCK	CHALK
7	86.75	BF	7	U-R	-	-	-	Clean.	WBCK	CHALK
8	86.99	BF	2	U-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
9	87.05	BF	3	U-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
10	87.05-87.13	J	74	P-R	-	-	-	Frequent black specks,	WBCK	CHALK
								unstained, no infill.		
11	87.05-87.15	J	80	U-R	-	-	-	Frequent black specks,	WBCK	CHALK

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, U-R = Undulating - rough.

STRUCTURAL SOILS
The Old School
Stillhouse Lane
Bedminster
Bristol BS3 4EB

Compiled By		Date	Contract Ref:
KJohnstone	KJOHNSTONE	15.05.20	734318
Contract: Sizewell C Onshore GI Phase 2 2019			Page: 1 of 7

SUMMARY OF DISCONTINUITIES - DCBH2019_4

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
								unstained, no infill.		
12	87.26	PFR	6	U-R	-	-	-	Clean.	WBCK	CHALK
13	87.59	J	15	U-R	-	-	-	Frequent black specks,	WBCK	CHALK
								unstained, no infill.		
14	87.80	BF	2	U-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
15	88.19	BF	10	P-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
16	88.67	BF	1	P-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
17	88.98	BF	8	U-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
18	89.30	BF	7	U-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
19	89.35-89.36	PFR	3	P-SM	-	-	-	Clean.	WBCK	CHALK
20	89.57	BF	6	U-R	-	-	-	Occasional black specks,	WBCK	CHALK

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, U-R = Undulating - rough.

SUMMARY OF DISCONTINUITIES - DCBH2019_4

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
								unstained, no infill.		
21	89.60	BF	5	P-R	-	-	-	Clean.	WBCK	CHALK
22	89.62	BF	4	P-R	-	-	-	Rare black speckles, no	WBCK	CHALK
								staining, no infill.		
23	89.64	BF	8	P-R	-	-	-	Clean.	WBCK	CHALK
24	89.70	BF	7	P-R	-	-	-	Rare black speckles, no	WBCK	CHALK
								staining, no infill.		
25	89.79	BF	7	P-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
26	89.81	BF	7	P-R	-	-	-	Clean.	WBCK	CHALK
27	89.94	BF	6	U-R	-	-	-	Clean.	WBCK	CHALK
28	90.00	PFR	6	P-R	-	-	-	Clean.	WBCK	CHALK
29	90.07	BF	4	P-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
30	90.32-91.33	J	16	U-R	-	-	-	Clean.	WBCK	CHALK
31	90.37	PFR	13	P-R	-	-	-	No black speckles, lightly	WBCK	CHALK

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, U-R = Undulating - rough.

SUMMARY OF DISCONTINUITIES - DCBH2019_4

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
								stained yellow, no infill.		
32	90.38	BF	10	U-R	-	-	-	Clean.	WBCK	CHALK
33	90.41-91.45	J	75	P-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
34	90.41-91.53	J	85	U-R	-	-	-	Clean.	WBCK	CHALK
35	90.43	PFR	4	P-R	-	-	-	Clean.	WBCK	CHALK
36	90.44-90.48	J	60	P-R	-	-	-	Clean.	WBCK	CHALK
37	90.47-90.51	J	62	P-R	-	-	-	Clean.	WBCK	CHALK
38	90.49-90.57	J	85	P-R	-	-	-	Clean.	WBCK	CHALK
39	90.87	BF	9	U-R	-	-	-	Clean.	WBCK	CHALK
40	90.89	BF	6	P-R	-	-	-	Rare black specks, lightly	WBCK	CHALK
								stained yellow, no infill.		
41	91.11	BF	4	U-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill..		
42	91.12-91.13	PFR	5	U-R	-	-	-	Rare black specks,	WBCK	CHALK
								unstained, no infill.		

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, U-R = Undulating - rough.

SUMMARY OF DISCONTINUITIES - DCBH2019_4

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
43	91.87	BF	4	U-R	-	-	-	Clean.	WBCK	CHALK
44	91.89	BF	4	P-R	-	-	-	Rare black specks,	WBCK	CHALK
								unstained, no infill.		
45	92.30-92.30	J	18	U-R	-	-	-	Clean.	WBCK	CHALK
46	92.33	BF	2	U-R	-	-	-	Occasional black specks,	WBCK	CHALK
								unstained, no infill.		
47	92.41-92.42	J	11	U-R	-	-	-	Clean.	WBCK	CHALK
48	92.43-92.44	J	14	U-R	-	-	-	Clean.	WBCK	CHALK
49	92.58-92.61	J	18	U-R	-	-	-	Clean.	WBCK	CHALK
50	95.25	BF	8	U-R	-	-	-	Clean.	AZCL	
51	95.41	BF	10	U-R	-	-	-	Clean.	PWBCK	CHALK
52	95.49	BF	9	U-R	-	-	-	Occasional black specks,	PWBCK	CHALK
								unstained, no infill.		
53	96.15-96.18	J	19	U-R	-	-	-	Occasional black specks,	PWBCK	CHALK
								unstained, no infill.		
54	96.24	BF	4	U-R	-	-	-	Clean.	PWBCK	CHALK

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, U-R = Undulating - rough.

STRUCTURAL SOILS
The Old School
Stillhouse Lane
Bedminster
Bristol BS3 4EB

Compiled By		Date	Contract Ref:
KJohnstone	KJOHNSTONE	15.05.20	734318
Contract: Sizewell C Onshore GI Phase 2 2019			Page: 5 of 7

SUMMARY OF DISCONTINUITIES - DCBH2019_4

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
55	96.37	BF	9	P-R	-	-	-	Occasional black specks,	PWBCK	CHALK
								unstained, no infill.		
56	97.15	BF	4	P-R	-	-	-	Occasional black specks,	PWBCK	CHALK
								unstained, no infill.		
57	97.44	BF	7	P-R	-	-	-	Clean.	PWBCK	CHALK
58	97.58-97.61	J	22	U-R	-	-	-	Clean.	PWBCK	CHALK
59	97.82	BF	9	P-R	-	-	-	Clean.	PWBCK	CHALK
60	98.31	BF	6	P-R	-	-	-	Clean.	PWBCK	CHALK
61	98.94	BF	7	P-R	-	-	-	Clean.	PWBCK	CHALK
62	99.19	BF	2	U-R	-	-	-	No black specks, lightly	PWBCK	CHALK
								stained yellow, no infill.		
63	99.52	BF	3	U-R	-	-	-	No black specks, lightly	PWBCK	CHALK
								stained yellow, no infill.		
64	99.68-99.71	BF	26	P-R	-	-	-	Clean.	PWBCK	CHALK
65	99.77	BF	4	P-R	-	-	-	Clean.	PWBCK	CHALK
66	100.01-100.03	J	19	S-R	-	-	-	Occasional black specks,	PWBCK	CHALK

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, U-R = Undulating - rough.

SUMMARY OF DISCONTINUITIES - DCBH2019_4

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
								lightly stained yellow, no infill.		
67	100.11	BF	5	P-R	-	-	-	Clean.	PWBCK	CHALK
68	100.19	BF	8	P-R	-	-	-	Clean.	PWBCK	CHALK
69	101.46	BF	9	U-R	-	-	-	Clean.	PWBCK	CHALK
70	102.01-102.02	J	13	U-R	-	-	-	Clean.	PWBCK	CHALK
71	102.13	BF	8	U-R	-	-	-	Clean.	PWBCK	CHALK
72	102.57-102.59	J	15	U-R	-	-	-	Occasional black specks,	PWBCK	CHALK
								unstained, no infill.		
73	102.59-102.70	J	80	U-R	-	-	-	Clean.	PWBCK	CHALK

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, U-R = Undulating - rough.

STRUCTURAL SOILS
The Old School
Stillhouse Lane
Bedminster
Bristol BS3 4EB

Compiled By		Date	Contract Ref:
KJohnstone	KJOHNSTONE	15.05.20	734318
Contract: Sizewell C Onshore GI Phase 2 2019			Page: 7 of 7

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**1** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
														0	
0.10	1	B									MADE GROUND: Brown gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of granite. (MADE GROUND)		1.53	0.10	
0.10	2	D													
0.10	3	ES													
0.10-0.30	4	B									MADE GROUND: Orangish brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of flint. (MADE GROUND)			(0.60)	
0.30	5	D													
0.30	6	ES													
0.30-0.70	7	B													
0.50	8	D													
0.50	9	ES											0.93	1 0.70	
0.70	10	B									MADE GROUND: Dark orangish brown mottled dark grey slightly gravelly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of flint. (MADE GROUND)				
0.90	11	D												(0.50)	
1.00	12	ES												1	
													0.43	1.20	
1.20-2.20				30	0	0		80% Polymer-Mud (Brown)			Partial recovery (30%). Recovered as MADE GROUND: Blackish green slightly gravelly fine to medium micaceous SAND with occasional to frequent coarse sand to fine gravel sized comminuted shells. Gravel is subangular to surrounded fine to coarse flint. Colour oxidises to dark yellowish brown. (PARTIAL RECOVERY)		0	(1.00)	
														2	
2.20-3.20				80	0	0		80% Polymer-Mud (Brown)			MADE GROUND: Blackish green slightly gravelly fine to medium micaceous SAND with occasional to frequent coarse sand to fine gravel sized comminuted shells. Gravel is subangular to surrounded fine to coarse flint. Colour oxidises to dark yellowish brown. (MADE GROUND)		-0.57	2.20	
													-1	(0.80)	
													-1.37	3.00	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-1.57	3.20	AZCL
3.20-4.20															
3.30	5	ES	1xT+2xJ+1xV								Partial recovery (40%). Recovered as MADE GROUND: Blackish green slightly gravelly fine to medium micaceous SAND with occasional to frequent coarse sand to fine gravel sized comminuted shells. Gravel is subangular to surrounded fine to coarse flint. Colour oxidises to dark yellowish brown. (PARTIAL RECOVERY)				
3.30	WAC4	ES	1xT, 1xJ, 1xV	40	0	0		80% Polymer-Mud (Brown)					-2	(1.00)	
														4	
													-2.57	4.20	
4.20-4.90				53	0	0					Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)			(0.33)	AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
17/07/19		0.00	None	N/R	-
17/07/19		1.20	None	400	-
17/07/19		1.20	None	400	-
17/07/19		1.20	1.00	146	-
17/07/19		1.20	1.00	146	-
19/07/19		1.20	1.00	146	-
19/07/19		11.90	None	146	1.00
20/07/19		11.90	1.00	146	1.50

General Remarks

1. Services plan was consulted.
2. Position scanned with a CAT and Genny prior to excavation.
3. Hand dug inspection pit to 1.20m depth.
4. Slight seepage at 1.00m depth.
5. Borehole installed with 50mm slotted pipe. GL to 4.20m depth plain pipe, 4.20m to 10.00m depth slotted pipe.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleId**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**2** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
													-2.90	4.53	AZCL
4.62	6	ES	1xT+2xJ+1xV	53	0	0		80% Polymer-Mud (Brown)			Spongy black pseudo-fibrous PEAT with occasional relict rootlets up to 3mm. (SUPERFICIAL DEPOSITS - PEAT)		-2.99	4.62	
4.62	WAC5	ES	1xT, 1xJ, 1xV								Very soft dark bluish grey CLAY with occasional relict rootlets up to 25mm, occasional pockets of peat up to 1 x 2mm and rare lenses of fine to medium yellowish brown sand up to 4 x 3mm. (SUPERFICIAL DEPOSITS - CLAY)		-3	(0.28)	
4.90-6.40				0	0	0		0% Polymer-Mud			. . . 4.84-4.90m: thin band of very soft blackish brown slightly gravelly clay with frequent pockets of amorphous peat up to 12 x 30mm and frequent lenses of fine to medium yellowish brown sand up to 4 x 70mm. Occasional fine gravel sized comminuted shells. Gravel is subangular to subrounded fine to medium gravel of iron concretion.		-3.27	4.90	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-4	5 (1.50) 6	AZCL
6.40-7.15				0	0	0		0% Polymer-Mud			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-4.77	6.40	
													-5	(0.75)	AZCL
7.15-7.90				0	0	0		0% Polymer-Mud			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-5.52	7 7.15	
													-6	(0.75)	AZCL
7.90-8.50				0	0	0		0% Polymer-Mud			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-6.27	7.90	
														8 (0.60)	AZCL
8.50-10.00				33	0	0					Partial recovery (33%). Recovered as very soft dark grey CLAY with occasional relict rootlets up to 25mm, occasional pockets of peat up to 20 x 25mm and occasional fine gravel sized comminuted shells. (SUPERFICIAL DEPOSITS - CLAY). The clay is		-6.87	8.50	
8.78	7	ES	1xT+2xJ+1xV										-7		PR / AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
20/07/19		14.80	11.90	146	-
21/07/19		14.80	11.90	146	1.50
21/07/19		22.90	11.90	146	0.30
23/07/19		22.90	11.90	146	1.10
23/07/19		23.50	11.90	146	-
24/07/19		23.50	11.90	146	-
25/07/19		23.50	11.90	146	-
30/07/19		23.50	11.90	146	0.40

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT AGS

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**3** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				33	0	0		0% Polymer-Mud			underlain by spongy black pseudo-fibrous PEAT with occasional relict rootlets up to 5mm and occasional fine gravel sized comminuted shells. (SUPERFICIAL DEPOSITS - CLAY)		-8	9 (1.50)	PR/ AZCL
10.00-10.55				27	0	0		0% Polymer-Mud			Partial recovery (27%). Recovered as grey micaceous fine to medium SAND with rare pockets of peat up to 70 x 70mm. (SUPERFICIAL DEPOSITS - SAND)		-8.37 -8.92	10.00 10 (0.55) 10.55	PR/ AZCL
10.55-10.90				0	0	0		0% Polymer-Mud			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-9	(0.35)	AZCL
10.90-11.50											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-9.27	10.90 11	AZCL
11.15	WAC6	ES	1xT, 1xJ, 1xV	58	0	0		0% Polymer-Mud			Spongy black pseudo-fibrous PEAT. (SUPERFICIAL DEPOSITS - PEAT)		-9.52	11.15 (0.35)	
11.50-11.90				37	0	0		0% Polymer-Mud			Partial recovery (37%). Recovered as grey silty fine to medium SAND with occasional coarse sand sized comminuted shells. (NORWICH CRAG FORMATION (UNDIFFERENTIATED))		-9.87 -10	11.50 (0.40)	PR/ AZCL
11.90-12.60				0	0	0		100% Polymer-Mud (Brown)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-10.27	11.90 12 (0.70) 12.60	AZCL
12.60-13.35				0	0	0		100% Polymer-Mud (Brown)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-10.97 -11	12.60 (0.75)	AZCL
													-11.72	13 13.35	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
30/07/19		24.50	22.40	146	1.05
31/07/19		24.50	22.40	146	-
31/07/19		36.50	35.00	146	-
01/08/19		36.50	22.40	146	1.30
01/08/19		46.70	44.00	146	0.10
02/08/19		46.70	44.00	146	0.10
02/08/19		58.00	44.00	146	0.30
03/08/19		58.00	44.00	146	1.10

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleId**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**4** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
13.35-14.10				11	0	0		100% Polymer-Mud (Brown)			Minimal recovery (11%). Recovered as dark grey micaceous fine to medium SAND with occasional coarse sand to fine gravel size comminuted shells. (NORWICH CRAG FORMATION (UNDIFFERENTIATED))		-12	(0.75)	MR / AZCL
				11	0	0							-12.47	14.10	
14.10-14.80				29	0	0		100% Polymer-Mud (Brown)			Partial recovery (29%). Recovered as dark grey micaceous fine to medium SAND with occasional coarse sand to fine gravel size comminuted shells and rare well rounded fine gravel of quartz. (NORWICH CRAG FORMATION (UNDIFFERENTIATED))		-13	(0.70)	PR / AZCL
													-13.17	14.80	
14.80-15.60											Partial recovery (29%). Recovered as dark grey micaceous fine to medium SAND with occasional coarse sand to fine gravel size comminuted shells. 40mm from base layer of grey micaceous silt. (NORWICH CRAG FORMATION (UNDIFFERENTIATED))			15	
14.80	8	ES	1xT+2xJ+1xV	29	0	0		95% Polymer-Mud (Grey/Brown)						(0.80)	PR / AZCL
													-13.97	15.60	
15.60-16.05											Not logged zone with sampling. Geotechnical sample (C1). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)		-14		
15.60-16.00	1	C		89	0	0		95% Polymer-Mud (Grey/Brown)						(0.45)	NLZS
											. . . 16.00-16.05:Assumed zone of core loss.		-14.42	16.05	
16.05-16.95											Dark grey micaceous fine to medium SAND with occasional coarse sand to fine gravel size comminuted shells. 40mm from base layer of grey micaceous silt. (NORWICH CRAG FORMATION (UNDIFFERENTIATED))		-14.67	16.30	
16.30-16.85	2	C		89	0	0		95% Polymer-Mud (Grey/Brown)			Not logged zone with sampling. Geotechnical sample (C2). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)		-15	(0.65)	NLZS
											. . . 16.85-16.95m: Assumed zone of core loss..		-15.32	16.95	
16.95-17.50											Grey fine to coarse SAND with abundant coarse sand to medium gravel sized comminuted shells (RED CRAG FORMATION (UNDIFFERENTIATED))		-15.37	17.00	
17.00-17.50	3	C		100	0	0		95% Polymer-Mud (Grey/Brown)			Not logged zone with sampling. Geotechnical sample (C3). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)			(0.50)	NLZS
													-15.87	17.50	
17.50-19.00											Grey fine to coarse SAND with abundant coarse sand to medium gravel sized comminuted shells (RED CRAG FORMATION (UNDIFFERENTIATED))		-16	(0.39)	
17.50	WAC7	ES	1xT, 1xJ, 1xV	72	0	0							-16.26	17.89	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/08/19		68.77	44.00	146	0.20
04/08/19		68.77	44.00	146	1.20
04/08/19		82.50	None	146	Dry
05/08/19		82.50	44.00	146	1.20
05/08/19		97.40	44.00	146	0.90
06/08/19		97.40	44.00	146	0.40
06/08/19		100.30	44.00	146	0.40
07/08/19		62.50	44.00	146	3.10

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19** End: **08.08.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318		**1.63**	**E:647335.9 N:264113.0**	**5** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
											Grey fine to medium SAND with occasional coarse sand to medium gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-16.40	18.03	
18.03-18.58	4	C		72	0	0		95% Polymer-Mud (Grey/Brown)			Not logged zone with sampling. Geotechnical sample (C4). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)		-16.95	(0.55) 18.58	NLZS
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-17.37	(0.42) 19.00	AZCL
19.00-20.00				10	0	0		95% Polymer-Mud (Grey/Brown)			Minimal recovery (10%). Recovered as grey fine to medium micaceous SAND with few coarse sand to small gravel sized comminuted shells. Rare fine gravel sized iron concretions. (RED CRAG FORMATION (UNDIFFERENTIATED))		-18.37	(1.00) 20.00	MR/ AZCL
20.00-20.50				40	0	0		95% Polymer-Mud (Grey/Brown)			Partial recovery (40%). Recovered as grey fine to medium micaceous SAND with few coarse sand to small gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-18.87	(0.50) 20.50	PR/ AZCL
20.50-21.10															
20.50-21.10	5	C		100	0	0		95% Polymer-Mud (Grey/Brown)			Not logged zone with sampling. Geotechnical sample (C5). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)		-19.47	(0.60) 21.10	NLZS
21.10-22.00															
21.10-21.55	6	C		50	0	0		95% Polymer-Mud (Grey/Brown)			Not logged zone with sampling. Geotechnical samplee (C6). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)		-19.92	(0.45) 21.55	NLZS
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)				
22.00-22.90				0	0	0					. . . 22.00-22.90m: CRF/AZCL (450mm dropped; 200mm CRF).				AZCL / CRF/ AZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/08/19			20.00	146	0.10
08/08/19	08:20		20.00	146	1.80

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**6** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				0	0	0		95% Polymer-Mud (Grey/Brown)					-21		CRF/ AZCL
22.90-23.50													-21.27	22.90	
22.95-23.50	7	C						80% Polymer-Mud (Brown)			Grey fine to medium micaceous SAND with few coarse sand to small gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-21.32	22.95	
				133	0	0					Not logged zone with sampling. Geotechnical sample (C7). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)			23 (0.55)	NLZS
													-21.87	23.50	
23.50-24.00				0	0	0		85% Polymer-Mud (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-22	(0.50)	AZCL
													-22.37	24.00	
24.00-24.50				40	0	0		85% Polymer-Mud (Grey)			Partial recovery (40%). Recovered as grey fine to medium micaceous SAND with few coarse sand to small gravel sized comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))			24 (0.50)	PR/ AZCL
													-22.87	24.50	
24.50-25.00				0	0	0		85% Polymer-Mud (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-23	(0.50)	AZCL
													-23.37	25.00	
25.00-25.50				60	0	0		85% Polymer-Mud (Grey)			Grey fine to medium SAND with abundant comminuted shells and extremely closely to widely spaced thin to thick laminae of grey micaceous silty clay. (RED CRAG FORMATION (UNDIFFERENTIATED))			25 (0.30)	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-23.67	25.30	AZCL
25.50-26.00				0	0	0		85% Polymer-Mud (Grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-23.87	25.50	
													-24	(0.50)	AZCL
													-24.37	26.00	
26.00-26.75														26	
26.00-26.35	8	C		47	0	0		85% Polymer-Mud (Grey)			Not logged zone with sampling. Geotechnical sample (C8). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)			(0.35)	NLZS
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-24.72	26.35	
													-25	(0.40)	AZCL
26.75-27.50				40	0	0					Partial recovery (40%). Recovered as grey fine to coarse micaceous SAND with abundant comminuted		-25.12	26.75	PR/ AZCL

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				40	0	0		85% Polymer-Mud (Grey)			shells. (RED CRAG FORMATION (UNDIFFERENTIATED))			27 (0.75)	PR/ AZCL
27.50-28.25				60	0	0		85% Polymer-Mud (Grey)			Grey fine to coarse micaceous SAND with abundant comminuted shell fragments and a thin bed of grey micaceous silty clay. (RED CRAG FORMATION (UNDIFFERENTIATED))		-25.87 -26 -26.32	27.50 (0.45) 27.95	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-26.62	28 (0.30) 28.25	AZCL
28.25-29.00				100	0	0		85% Polymer-Mud (Grey)			Grey fine to coarse micaceous SAND with abundant comminuted shell fragments and a thin bed of grey micaceous silty clay. (RED CRAG FORMATION (UNDIFFERENTIATED)) . . . 28.41-28.43m: extremely closely spaced thinly to thickly laminated grey micaceous silty clay. . . . 28.83m: thin laminae of grey micaceous silty CLAY. . . . 28.88m: thin laminae grey micaceous silty CLAY.		-27		
29.00-30.50				100	0	0		85% Polymer-Mud (Grey)			. . . 29.59-29.78m: thin bed of locally thickly laminated grey micaceous firm silty CLAY.		-28	29 (1.70)	
29.95-30.50	9	C									. . . 29.93-29.95m: very thin bed grey micaceous silty CLAY. Not logged zone with sampling. Geotechnical sample(C9). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)		-28.32 -28.87	29.95 30 (0.55) 30.50	NLZS
30.50-32.00 30.50	9	ES	1xT+2xJ+1xV	100	0	0		85% Polymer-Mud (Grey)			Grey fine to coarse micaceous SAND with abundant comminuted shell fragments and a thin bed of grey micaceous silty clay. (RED CRAG FORMATION (UNDIFFERENTIATED))		-29	31	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

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BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
32.00-33.50				100	0	0		85% Polymer-Mud (Grey)					-30	(2.21) 32	
				100	0	0					Grey fine to medium SAND with occasional comminuted shells and extremely closely to very closely spaced thin laminae of slightly glauconitic micaceous fine sandy clay. (RED CRAG FORMATION (UNDIFFERENTIATED))		-31 / -31.08	32.71	
														(0.58) 33	
33.50-35.00				100	0	0					Grey fine to coarse SAND with abundant comminuted shells (RED CRAG FORMATION (UNDIFFERENTIATED))		-31.66	33.29	
													-32	(1.16) 34	
34.45-35.00	10	C									Not logged zone with sampling. Geotechnical sample (C10). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)		-32.82	34.45	
													-33	(0.55)	NLZS
35.00-36.50				100	0	0		85% Polymer-Mud (Grey)			Grey fine to coarse SAND with abundant comminuted shells (RED CRAG FORMATION (UNDIFFERENTIATED))		-33.37	35.00	
														(0.38)	
											Grey fine to medium SAND with occasional comminuted shells (RED CRAG FORMATION (UNDIFFERENTIATED))		-33.75	35.38	
													-34		

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT AGS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
36.50-38.00 36.50	10	ES	1xT+2xJ+1xV	100	0	0		85% Polymer-Mud (Grey)					-35	36 (3.03) 37	
				100	0	0		85% Polymer-Mud (Grey)					-36	38	
38.00-39.50													-36.78	38.41	
				100	0	0		85% Polymer-Mud (Grey)			Grey fine to medium SAND with frequent comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-37	(0.54)	
38.95-39.50	11	C									Not logged zone with sampling. Geotechnical sample (C11). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)		-37.32	38.95 39 (0.55)	NLZS
39.50-41.00				97	0	0		85% Polymer-Mud (Grey)			Grey fine to medium SAND with occasional comminuted shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-37.87 -38	39.50 (0.93) 40	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleId**	SAT

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BOREHOLE LOG

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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
											Grey fine to medium SAND with occasional comminuted shells and shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		38.80	40.43	
				97	0	0							-39		
											. . . 40.81-40.89m: very thin bed of comminuted shells.			(0.90)	
41.00-42.50											. . . 40.84-41.00m: thinly to thickly bedded grey mudstone recovered as angular to subangular fine to coarse gravel.			41	
													39.70	41.33	
41.38-41.85	12	C						85% Polymer-Mud (Grey)			Not logged zone with sampling. Geotechnical sample (C12). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)		-40	(0.55)	NLZS
				57	0	0							40.25	41.88	
											Assume zone of core loss. (ASSUMED ZONE OF CORE LOSS)			42	
														(0.62)	AZCL
													40.87	42.50	
42.50-44.00											Grey fine to medium SAND with occasional comminuted shells and shells. (RED CRAG FORMATION (UNDIFFERENTIATED))		-41		
				100	0	0								43	
43.45-44.00	13	C						85% Polymer-Mud (Grey)						(1.77)	
													-42		
44.00-44.70														44	
				100	0	0					. . . 44.25-44.27m: black rounded medium gravel of flint.		42.64	44.27	
44.50	11	ES	1xT+10xJ+1xV					85% Polymer-Mud (Grey)			Very stiff extremely closely to very closely fissured greyish brown micaceous CLAY with extremely closely to widely spaced thinly laminated to thinly bedded extremely weak to medium strong dark bluish grey to dark grey volcaniclastic siltstone/claystone. Fissures are randomly orientated planar rough or smooth.		-43		
44.70-45.50				81	0	0									

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				81	0	0		85% Water (Grey)			(HARWICH FORMATION, WRABNESS MEMBER) . . . 44.64-44.65m: lens of fine to coarse sand. . . . 44.65-44.67m: significant debris. . . . 44.70-44.98m: backfill. . . . 45.35-45.50m: Assumed zone of core loss.			45	
45.50-47.00				100	0	0		85% Water (Grey)			. . . 45.50-45.58m: thin bed of medium strong dark bluish grey volcaniclastic siltstone/claystone. . . . 45.68-45.71m: very thin bed of extremely weak dark grey volcaniclastic siltstone/claystone. Top 3mm bioturbated with light grey burrows up to 1x2mm. . . . 45.78-45.80m: thin bed of extremely weak dark grey volcaniclastic siltstone/claystone. Top 4mm bioturbated with light grey burrows up to 1x2mm. . . . 46.49m:.thick laminae of extremely weak dark grey volcaniclastic siltstone/claystone. Bioturbated with light grey burrows up to 1x2mm.		-44 -45	(2.43) 46 45.07 46.70	
46.70-47.00	14	C									Not logged zone with sampling. Geotechnical sample (C14). Recovered in a sealed liner. (NOT LOGGED ZONE WITH SAMPLING)			(0.30)	NLZS
47.00-48.50				100	0	0		85% Water (Grey)			Very stiff extremely closely to very closely fissured greyish brown micaceous CLAY with extremely closely to widely spaced thinly laminated to thinly bedded extremely weak to medium strong dark bluish grey to dark grey volcaniclastic siltstone/claystone. Fissures are randomly orientated planar rough or smooth. (HARWICH FORMATION, WRABNESS MEMBER) . . . 47.78-47.88m: extremely close to very closely spaced thinly to thickly laminated dark greenish grey volcaniclastic siltstone/claystone. Top 5mm bioturbated with light grey burrows up to 1 x 2mm. . . . 47.93-48.07m: thin bed of extremely weak dark grey volcaniclastic siltstone/claystone. Top 40mm bioturbated with light grey burrows up to 1x5mm. . . . 48.12-47.15m: very thin bed of extremely weak dark grey volcaniclastic siltstone/claystone. . . . 47.30-47.40m: extremely close to very closely spaced thinly laminated dark greenish grey volcaniclastic siltstone/ claystone. . . . 48.47-48.50m: very thin bed of volcaniclastic siltstone/ claystone.		-45.37	47.00 47 -46 48 (2.54)	
48.50-49.60				99	0	0		85% Water (Grey)			. . . 48.75-48.77m: thick laminae of extremely weak dark grey volcaniclastic siltstone/claystone. . . . 48.78-48.79m:.thick laminae of extremely weak dark grey volcaniclastic siltstone/claystone. . . . 48.88-48.94m:.very thin bed of extremely weak dark grey volcaniclastic siltstone/claystone. . . . 49.12-49.17m:.very thin bed of extremely weak dark grey volcaniclastic siltstone/claystone.		-47	49	
49.17-49.54	15	C													

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleId**	SAT

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Contract:	Client:	Borehole:
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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				99	0	0		85% Water (Grey)					-47.91	49.54	
49.60-51.10				100	0	0		85% Water (Grey)			Very strong dark grey argillaceous LIMESTONE. (HARWICH FORMATION, WRABNESS MEMBER, HARWICH STONE BAND) Very stiff extremely closely to very closely fissured greyish brown micaceous CLAY. Fissures are randomly orientated planar rough or smooth. (HARWICH FORMATION, WRABNESS MEMBER) . . . 49.79-49.84m:.very thin bed of extremely weak dark grey volcaniclastic siltstone/claystone. . . . 50.07-50.12m:.very thin bed of extremely weak dark grey volcaniclastic siltstone/claystone. Bottom 4mm bioturbated with light grey burrows up to 1x2mm. . . . 50.22-50.34m:.thin bed of extremely weak dark grey volcaniclastic siltstone/claystone. . . . 50.49-50. 51m:.thick laminae of extremely weak dark grey volcaniclastic siltstone/claystone. Top 3mm bioturbated with light grey burrows up to 1x2mm. . . . 50.66-50.69m:.very thin bed of extremely weak dark grey volcaniclastic siltstone/claystone.		-48 -48.06	49.69 50 (1.41) -49	
51.10-52.40													-49.47	51.10 51	
51.52-51.83	16	C		100	0	0		85% Water (Grey)			Stiff to very stiff extremely closely to very closely fissured greyish brown bioturbated micaceous SILT with very closely to medium spaced partings of light grey silty fine sand. Fissures are randomly orientated planar rough or smooth. Burrows are subhorizontal up to 3 x 15mm infilled with light grey fine sand. (HARWICH FORMATION, ORWELL MEMBER) . . . 51.18m: subhorizontal burrow 1x6mm. . . . 51.34-51.38m: very thin bed of extremely weak dark grey volcaniclastic siltstone/ claystone. Top 4mm bioturbated with light grey burrows up to 1x2mm. <1mm light grey silt laminae at top. . . . 51.84m: grey micaceous silt parting.		-50	52	
52.40-53.50				82	0	0		85% Water (Grey)			. . . 52.68m: subhorizontal burrow 4x 15mm infilled with dark grey silt. . . . 52.99m: subhorizontal burrow 4x 15mm infilled with dark grey silt. . . . 53.31-53.50m: Assumed zone of core loss..		-51	53 (4.26)	
53.50-55.00				90	0	0					. . . 53.72m: light grey micaceous silt parting.		-52		

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

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BOREHOLE LOG

Contract:	Client:	Borehole:
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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
											. . . 52.95m: subhorizontal burrow 2x 12mm infilled with grey silt.			54	
											. . . 54.12m: light grey slightly sandy silt parting				
											. . . 54.30m: light grey slightly sandy silt parting				
54.47-54.83	17	C		90	0	0		85% Water (Grey)					-53		
											. . . 54.85-55.00m: Assumed zone of core loss.				
55.00-56.50														55	
											. . . 55.11m: light grey slightly sandy silt parting				
											. . . 55.27m: light grey slightly sandy silt parting		-53.73	55.36	
											Stiff to very stiff greyish brown bioturbated micaceous SILT with closely to medium spaced laminations of light grey silt and subhorizontal burrows up to 4 x 22mm infilled with light grey silt. (HARWICH FORMATION, ORWELL MEMBER)		-53.97	55.60	
				100	0	0		85% Water (Grey)			. . . 55.50-55.55m: non intact recovered as clayey gravel. Gravel is subangular medium pyrite		-54	(0.58)	
											Very stiff extremely to very closely fissured greyish brown bioturbated micaceous CLAY. Fissures are randomly orientated planar rough or smooth. Burrows are subvertical and subhorizontal up to 2 x 9mm infilled with light grey silt. (HARWICH FORMATION, ORWELL MEMBER)			56	
											Very stiff extremely to very closely fissured greyish brown bioturbated micaceous CLAY. Fissures are randomly orientated planar rough or smooth. Burrows are subvertical and subhorizontal up to 2 x 7mm infilled with light grey silt. (HARWICH FORMATION, ORWELL MEMBER)		-54.55	56.18	
56.50-58.00											. . . 56.25m: light grey slightly sandy silt parting. . . . 56.31m: light grey slightly sandy silt parting. . . . 56.42m: light grey slightly sandy silt parting.			(0.55)	
											Stiff to very stiff greyish brown bioturbated micaceous SILT with closely to medium spaced thin laminae of light grey silt. (HARWICH FORMATION, ORWELL MEMBER)		-55		
				100	0	0		85% Water (Grey)			. . . 57.00m: thick lamination of dark grey silty fine sand. . . . 57.22-57.28m: very thin bed of dark grey silty fine sand.		-55.10	56.73	
														57 (0.70)	
													-55.80	57.43	
											Firm to stiff light brown slightly sandy bioturbated calcareous slightly micaceous SILT. Burrows are randomly orientated up to 2 x 11mm infilled with brown fine sand. (READING FORMATION)		-56	(0.79)	
58.00-59.30														58	
				96	0	0							-56.59	58.22	
											Firm brown slightly sandy bioturbated calcareous slightly micaceous SILT.				

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

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BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

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734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**14** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				96	0	0		85% Water (Grey)			(READING FORMATION)		-57	59	
59.30-60.80														(2.34)	
59.50-59.80	18	C											-58		
				100	0	0		85% Water (Grey)						60	
													-58.93	60.56	
											Firm to stiff thinly to thickly laminated greyish brown micaceous SILT interbedded with extremely close to very closely spaced firm brown slightly sandy bioturbated calcareous slightly micaceous SILT. (READING FORMATION)		-59		
60.80-62.30													-59.17	60.80	
				13	0	0		85% Water (Brown)			Minimal recovery (13%). Recovered as firm to stiff thinly to thickly laminated greyish brown micaceous SILT interbedded with extremely close to very closely spaced firm brown slightly sandy bioturbated calcareous slightly micaceous SILT. (READING FORMATION)		-60	61 (1.50)	MR / AZCL
														62	
62.30-63.80													-60.67	62.30	
				77	0	0		85% Water (Brown)			Greyish brown calcareous micaceous fine to medium SAND with occasional shell fragments and rare subangular fine gravel of cemented sand. (READING FORMATION)		-61	(1.18)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**15** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				77	0	0		85% Water (Brown)			. . . 63.31-63.42m: thin bed of greyish brown silty sand.		-61.85	63 / 63.48	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-62 / -62.17	(0.32) / 63.80	AZCL
63.80-65.30											Greyish brown calcareous micaceous fine to medium SAND with occasional shell fragments and rare subangular fine gravel of cemented sand. (READING FORMATION)		-62.58	(0.41) / 64.21	
				80	0	0		85% Polymer-Mud (Brown)			Brownish grey calcareous micaceous fine to medium SAND with frequent shell fragments and occasional subangular fine to medium gravel of cemented sand and extremely close to medium spaced partings of black silty sand. (READING FORMATION) . . . 64.50m: gravel of subangular fine cemented sand. . . . 64.75m: gravel of subangular fine cemented sand.		-63	(0.76)	
64.90-65.30	19	C									. . . 64.81m: gravel of subangular fine cemented sand.		-63.34	64.97 / 65	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-63.67	(0.33) / 65.30	AZCL
65.30-66.80				100	0	0		85% Water (Brown)			Brownish grey calcareous micaceous fine to medium SAND with frequent shell fragments and occasional subangular fine to medium gravel of cemented sand and extremely close to medium spaced partings of black silty sand. (READING FORMATION) . . . 65.62m: gravel of subangular fine cemented sand. . . . 65.70m: gravel of subangular medium cemented sand.		-64	(1.16) / 66	
											. . . 66.34-66.46m: thin bed of dark grey silty calcareous micaceous fine to medium SAND		-64.83	66.46	
66.80-67.65				100	0	0		85% Water (Brown)			Very stiff dark grey mottled black and orangish brown slightly sandy bioturbated slightly calcareous micaceous silty CLAY . Burrows are subhorizontal and subvertical up to 7mm by 62mm infilled with. (READING FORMATION) . . . 66.80-67.05m: possible caved in material. . . . 67.07m: lignitic debris.		-65	67	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**16** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
67.65-68.77				100	0	0		85% Water (Brown)			. . . 67.62-67.64 m: subangular fine gravel of greyish brown claystone nodules (?) . . . 67.75-67.82m: possible caved in material.		-66	(2.90)	
68.00-68.30	20	C									. . . 67.96-68.10m: extremely weak fine to medium gravel of light brown siltstone/claystone fragments.			68	
				100	0	0							-67		
68.77-69.71								80% Polymer-Mud (Grey)						69	
				100	0	0		60% Polymer-Mud (Grey)					-67.73	69.36	
											Very stiff greyish green mottled orangish brown micaceous clayey SILT. (UPNOR FORMATION)			(0.28)	
69.71-70.50											Very stiff greyish green mottled pinkish red micaceous clayey SILT. (UPNOR FORMATION)		-68.01	69.64	
				100	0	0								(0.34)	
											Very stiff greyish green mottled orangish brown micaceous clayey SILT. (UPNOR FORMATION)		-68.35	69.98	
70.50-72.00											. . . 70.53-70.60m: mottled pinkish red. . . . 70.71m: parting of light grey fine sand.			70 (0.84)	
				97	0	0		80% Polymer-Mud (Grey)					-69		
											Very stiff locally laminated greyish green micaceous clayey SILT with extremely close to very closely spaced partings of light grey silty fine micaceous sand. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC3) . . . 70.90-71.12m: locally laminated.		-69.19	70.82	
														71 (0.58)	
											Very stiff very closely to closely spaced fissured dark grey slightly bioturbated slighty micaceous glauconitic silty CLAY with occasional non calcareous agglutinant. Fissures are randomly orientated planar rough or smooth or striated. Burrows are subhorizontal and subvertical up to 3 x 17mm infilled with grey silt.		-69.77	71.40	
													-70		

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**17** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
72.00-73.50				97	0	0		80% Polymer-Mud (Grey)			(LISTA FORMATION, ORMESBY CLAY MEMBER, OC3) . . . 71.89-72.00m: striated fissure. (47 degrees)			72	
72.42-72.61	21	C		100	0	0							-71		
											. . . 72.92-73.19m: dark greyish brown.			73	
														(3.96)	
73.50-75.00				97	0	0		80% Polymer-Mud (Grey)					-72	74	
75.00-76.50				90	0	0		80% Polymer-Mud (Grey)			Very stiff extremely closely to very closely fissured dark grey slightly bioturbated slighty micaceous glauconitic SILT with occasional non calcareous agglutinant. Fissures are randomly orientated planar rough or smooth. Burrows are subhorizontal and subvertical up to 7 x 74mm infilled with grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC3)		-73	75	
													-73.73	75.36	
													-74		
														76	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**18** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
76.50-78.00				90	0	0		80% Polymer-Mud (Grey)			. . . 76.40-76.50m: Assumed zone of core loss.		-75	(2.64)	
				100	0	0							-76	77	
78.00-79.50				100	0	0					Very stiff fissured dark grey slightly bioturbated slighty micaceous calcareous glauconitic SILT with occasional calcareous agglutinant. Burrows are subhorizontal and subvertical up to 4 x 23mm infilled with grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC3) . . . 78.00-78.34m: clayey SILT.		-76.37	78.00	
79.50-79.58				100	0	0							-77	79	
79.58-81.00				100	0	0							-78	(2.53)	
													-78.90	80.53	
											Very stiff reddish brown very bioturbated slightly micaceous glauconitic SILT. Burrows are subhorizontal and subvertical infilled with light grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER,		-79	(0.47)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19** End: **08.08.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318		**1.63**	**E:647335.9 N:264113.0**	**19** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				100	0	0					OC2)		-79.37	81.00	
81.00-82.50 81.00-81.34	22	C									Very stiff fissured reddish brown slightly bioturbated glauconitic micaceous silty CLAY. Fissures are very closely to closely spaced randomly orientated planar rough or smooth. Burrows are subhorizontal and subvertical up to 2 x 11mm infilled with light grey silt. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC2)			(0.90)	
				100	15	15		80% Polymer-Mud (Grey)					-80		
													-80.27	81.90	
											Blackish green slightly sandy gravelly glauconitic SILT. Sand is fine coarse. Gravel is subangular to rounded fine to coarse fragments and whole black and brown nodular flint. (LISTA FORMATION, ORMESBY CLAY MEMBER, OC1)			82	
													-80.54	82.17	
82.50-84.00											Very weak medium density closely jointed (NI/196/620) white burrow mottled light grey CHALK. Bedding fractures: 2-9° medium spaced (NI/342/910) undulating rough with rare to occasional black specks, unstained, no infill. Gently inclined joints: 12-22° medium spaced (160/551/810) undulating or planar rough with rare black specks, unstained, no infill. Inclined fractures: 32 and 74° medium spaced with rare black specks, unstained, no infill. (PORTSDOWN FORMATION, BEESTON CHALK MEMBER Grade A3) . . . 82.17-82.27m: non intact. . . . 82.62m: green glauconitic-staining. . . . 83.09-83.24m: non intact. . . . 83.31m: belemnite (12x10mm). . . . 83.60m: medium gravel sized brown phosphatic fragment. . . . 83.63-83.79m: non intact.	1 2 3 4 5 6 7	-81	(1.62)	
				87	65	60		80% Polymer-Mud (Light grey)					-82	83	
													-82.16	83.79	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-82.37	84.00	AZCL
84.00-85.50											Very weak medium density closely jointed (NI/196/620) white burrow mottled light grey CHALK. Bedding fractures: 2-9° medium spaced (NI/342/910) undulating rough with rare to occasional black specks, unstained, no infill. Gently inclined joints: 12-22° medium spaced (160/551/810) undulating or planar rough with rare black specks, unstained, no infill. Inclined fractures: 32 and 74° medium spaced with rare black specks, unstained, no infill. (PORTSDOWN FORMATION, BEESTON CHALK MEMBER) . . . 84.05-84.07m: black-stained sponge bed. . . . 84.18m: full bivalve shell 22 x 11m. . . . 84.27m: medium gravel sized brown phosphatic fragment. . . . 83.31m: belemnite (8 x 21mm).	8 9 10 11 12 13 14 15		(0.91)	
				100	71	51		80% Polymer-Mud (Light grey)					-83		
													-83.28	84.91	
											Strong very high density CHALK with local green glauconitic-staining hard ground. (PORTSDOWN FORMATION, WEYBOURNE CHALK MEMBER: CATTON SPONGE Grade A2)	16 17	-83.70	85 (0.42) 85.33	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**20** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
				100	71	51		80% Polymer-Mud (Light grey)			. . . 84.92m: medium gravel sized brown phosphatic fragment.	18			
85.50-87.00											Very weak medium density medium jointed (NI/405/3300) white burrow mottled light grey CHALK. Bedding fractures: 2-10° widely spaced (10/616/3300) undulating rough with rare black specks, unstained, no infill. Gently inclined: 11-21° widely spaced (220/1539/5220) undulating and stepped rough with rare black specks, unstained, no infill. Inclined: 32-42° very widely spaced (430/3854/7920) undulating or stepped rough with rare black specks, unstained, no infill. Steeply inclined: 88° undulating rough with rare black specks, unstained, no infill. (PORTSDOWN FORMATION, WEYBOURNE CHALK MEMBER Grade A2)	19	-84		
												20			
												21		86	
				100	69	57						22			
												23			
												24			
											. . . 85.50-85.53m: non intact.				
											. . . 85.68-85.72m: black-stained sponge bed.				
											. . . 85.76-85.86m: strong very high density hard ground.		-85		
											. . . 85.76-86.04m: non intact.	25			
											. . . 86.30-86.38m: non intact.				
											. . . 86.75_86.92m: non intact.	26			
87.00-88.50											. . . 87.05-87.15m: flint band. Fine to medium gravel of nodular flint with thin to thick cortexes (possibly not insitu).			87	
											. . . 87.05-87.53m: grey slightly gravelly fine to medium SAND. Gravel is subangular fine to medium chalk. Probably caved in material.				
				100	3	0		80% Polymer-Mud (Light grey)			. . . 87.53-88.50m: disturbed by drilling. Recovered as white slightly sandy slightly gravelly SILT. Gravel is extremely weak to very weak low density subangular white with rare black specks (Dm).		-86		
														88	
88.50-90.00											. . . 88.50-88.62m: non intact.				
88.62-89.00	23	C									. . . 88.63m: green glauconitic-staining.		-87		
89.02-89.47	24	C										27		89	
				100	92	92					. . . 89.19-89.20m: black-stained sponge bed.				
89.47-89.83	25	C										28			
											. . . 89.65m: calcareous sponge (possible Porsphaera).		-88		

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19** End: **08.08.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318		**1.63**	**E:647335.9 N:264113.0**	**21** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
90.00-91.50				100	92	92		80% Polymer-Mud (Light grey)			. . . 89.93m: belemnite (4 x 8mm). . . . 90.01m: black-stained sponge bed. . . . 90.13-90.24m: non intact.	29 30 31		90 (10.01)	
				90	65	65					. . . 91.09-91.33m: non intact. . . . 91.33-91.50m:Assumed zone of core loss.	32	-89	91	
91.50-93.00				100	45	30		80% Polymer-Mud (Light grey)			. . . 91.50-92.44m: disturbed by drilling. . . . 92-92.43m: largely non intact. . . . 92.59m: belemnite (12 x 33m).	33 34 35 36 37	-90 -91	92	
93.00-94.50				97	96	91		80% Polymer-Mud (Light grey)			. . . 94.21-94.46m: flint band. Fine to medium gravel of nodular flint with thin to cortexes	38 39 40 41 42 43	-92	93 94	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**22** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
94.50-96.00				97	96	91		80% Polymer-Mud (Light grey)			. . . 94.41m: green glauconitic-staining.	44	-93		
94.59-94.80	26	C										45			
												46 47			
												48		95	
				57	51	17					. . . 95.16-95.24m: non intact. . . . 95.24-95.34m: flint band. Fine to medium gravel of nodular flint with thin to thick cortexes.		-93.71	95.34	
											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-94	(0.66)	AZCL
96.00-96.20				90	30	0							-94.37	96.00	
96.20-97.40								80% Polymer-Mud (Light grey)			Very weak medium density medium jointed (NI/405/3300) white burrow mottled light grey CHALK. Bedding fractures: 2-10° widely spaced (10/616/3300) undulating rough with rare black specks, unstained, no infill. Gently inclined: 11-21° widely spaced (220/1539/5220) undulating and stepped rough with rare black specks, unstained, no infill. Inclined: 32-42° very widely spaced (430/3854/7920) undulating or stepped rough with rare black specks, unstained, no infill. Steeply inclined: 88° undulating rough with rare black specks, unstained, no infill. (PORTSDOWN FORMATION, WEYBOURNE CHALK MEMBER) . . . 96.00-96.10m: non intact. . . . 96.10-96.16m: flint band. Fine to medium gravel of nodular flint with thin to thick cortexes. . . . 96.16-96.20m:Assumed zone of core loss. . . . 96.20-96.45: non intact. . . . 96.45-96.51m: black-stained sponge bed. . . . 97.13m: black-stained sponge bed.	49	-95	(1.40)	
				95	71	71						50		97	
												51	-95.77	97.40	
97.40-98.90											Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		-96		
														98	
				0	0	0								(1.50)	AZCL
													-97		
													-97.27	98.90	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Sizewell C Onshore GI Phase 2 2019	**NNB Generation Company (SZC) Ltd**	**DCBH2019_5**

Contract Ref:	Start: **17.07.19** End: **08.08.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318		**1.63**	**E:647335.9 N:264113.0**	**23** of **53**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Flush Returns	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
98.90-99.65				0	0	0		80% Polymer-Mud (Light grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)			99 (0.75) 99.65	AZCL
99.65-100.30				0	0	0		80% Polymer-Mud (Light grey)			Assumed zone of core loss. (ASSUMED ZONE OF CORE LOSS)		98.67	(0.65) 100 100.30	AZCL
											Borehole terminated at 100.30m depth.				

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25**

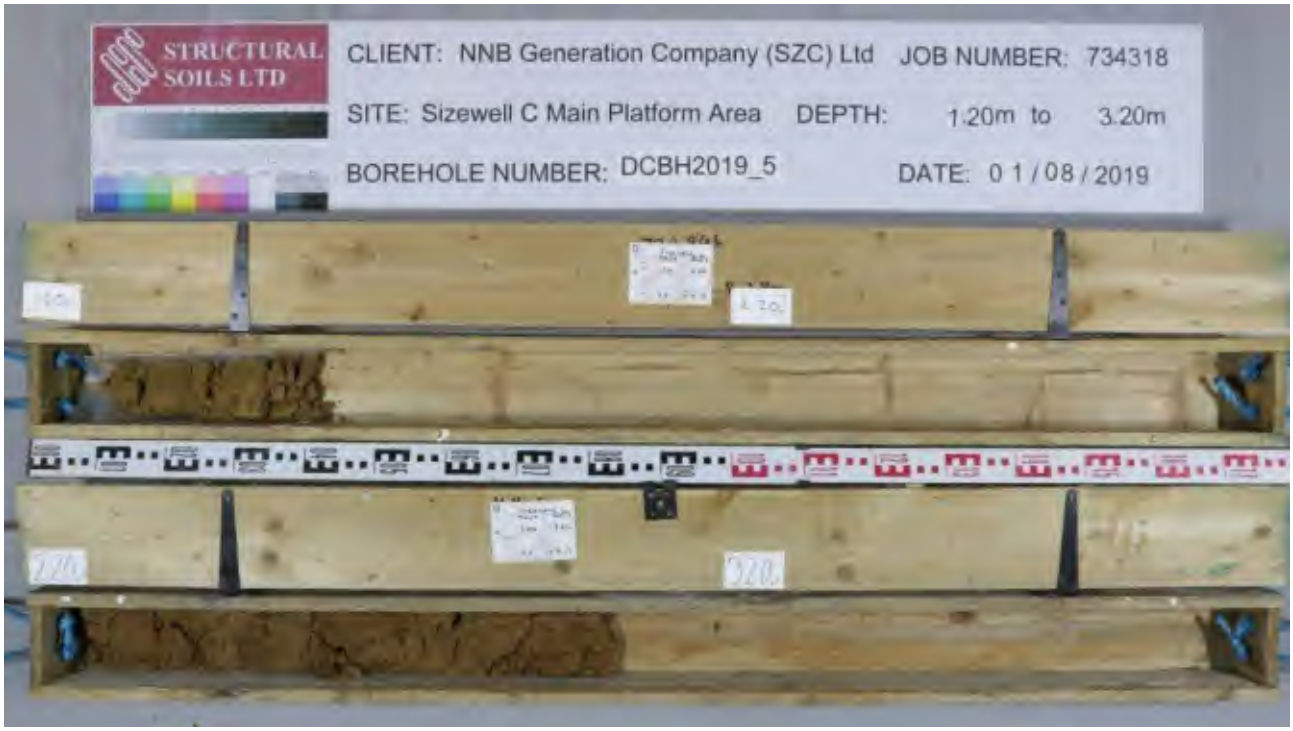
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Trial Pit/trench + Rotary Cored	**Hand tools + Massenza M.I.12**	**Ryan Pincher + Adrian Hopwood**	**HJones + RAndrews + HSkaleld**	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**24** of **53**

DCBH2019_5 1.20m - 3.20m depth.



DCBH2019_5 3.20m - 4.90m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**25** of **53**

DCBH2019_5 4.90m - 7.15m depth.

DCBH2019_5 7.15m - 8.50m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**26** of **53**

DCBH2019_5 8.50m - 10.55m depth.

DCBH2019_5 10.55m - 11.50m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**27** of **53**

DCBH2019_5 11.50m - 12.60m depth.

DCBH2019_5 12.60m - 14.10m depth.

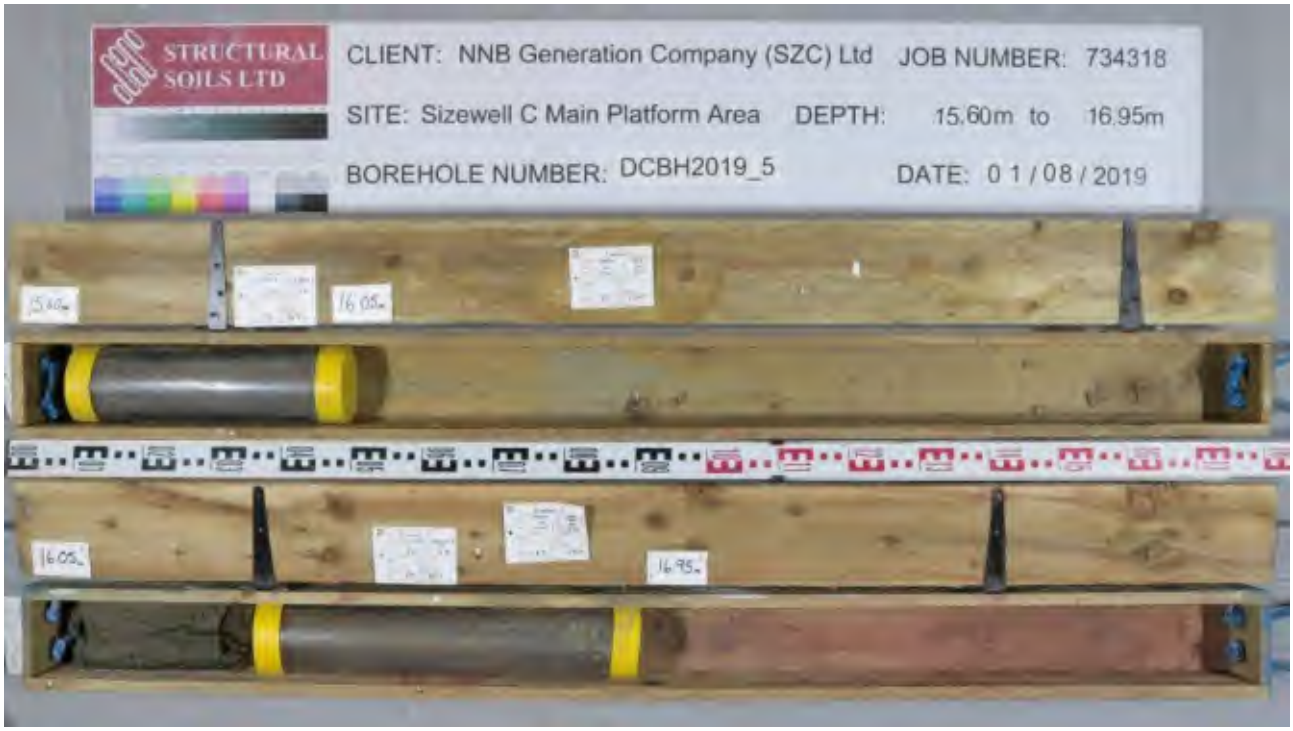
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**28** of **53**

DCBH2019_5 14.10m - 15.60m depth.



DCBH2019_5 15.60m - 16.95m depth.

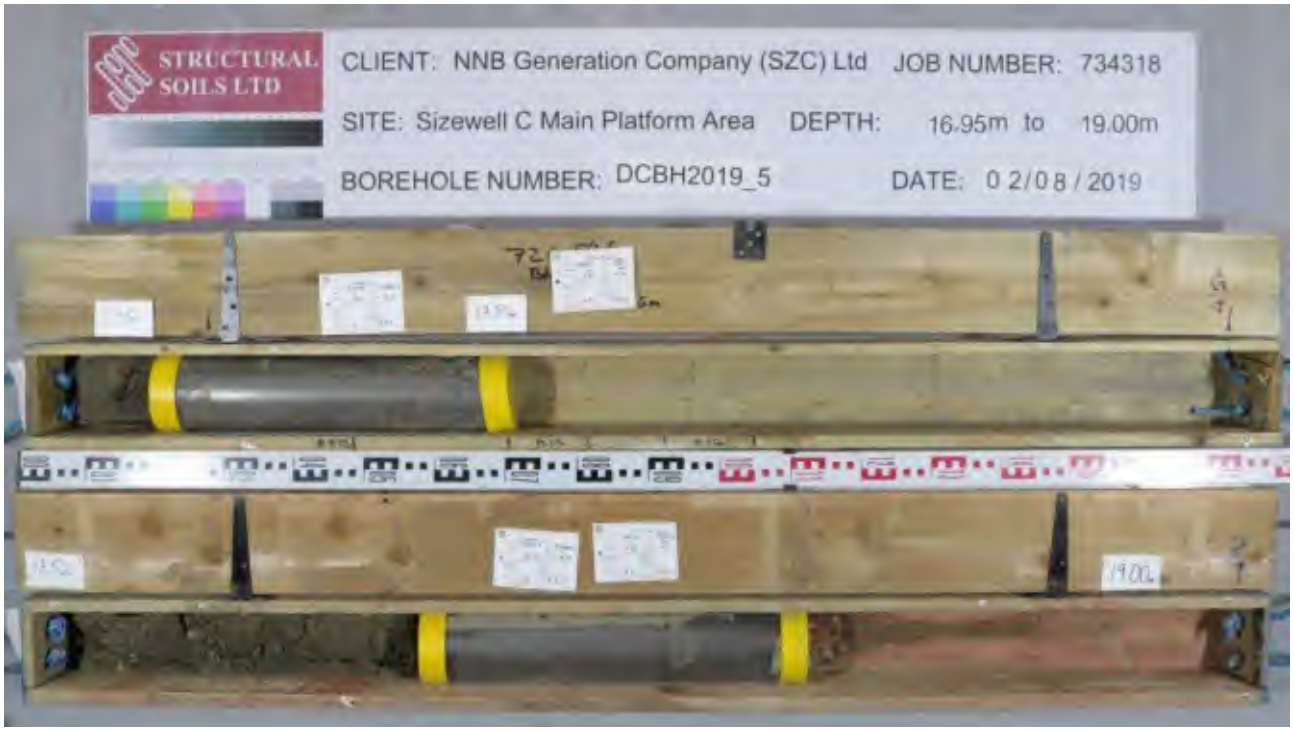
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**29** of **53**

DCBH2019_5 16.95m - 19.00m depth.



DCBH2019_5 19.00m - 20.50m depth.

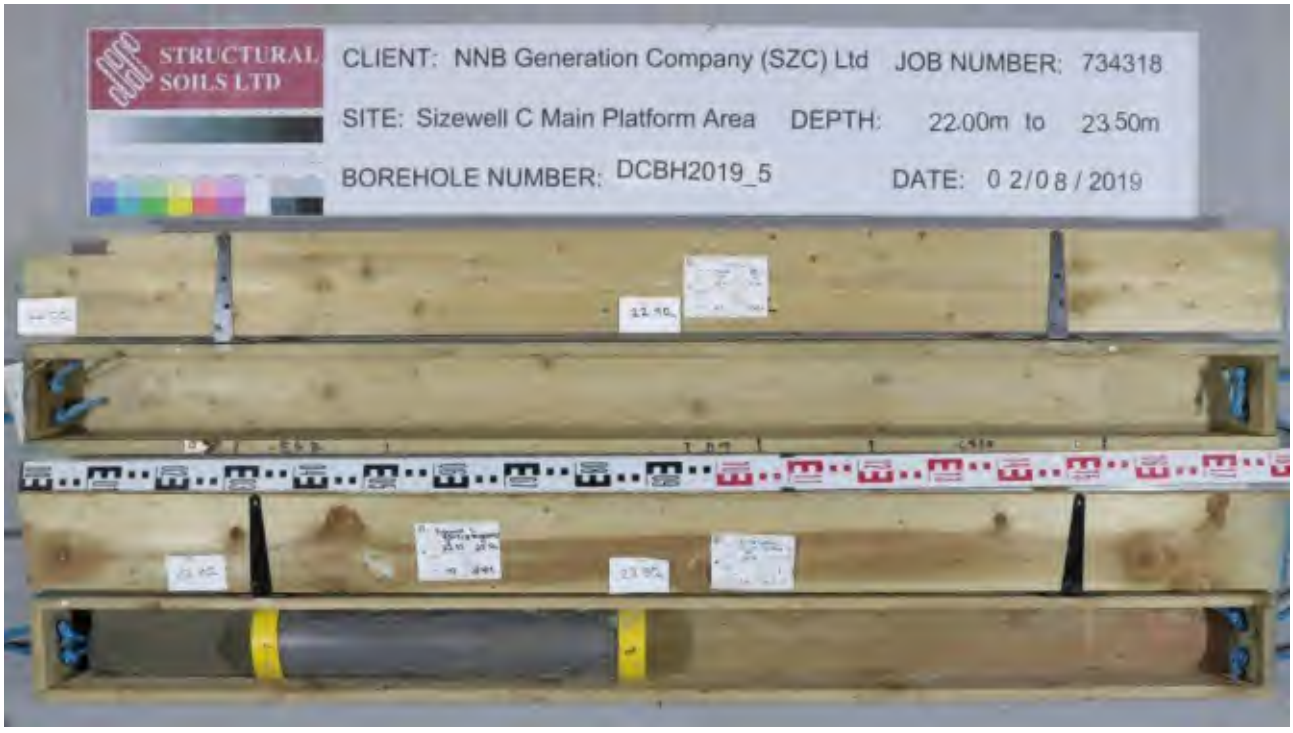
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**30** of **53**

DCBH2019_5 20.50m - 22.00m depth.



DCBH2019_5 22.00m - 23.50m depth.

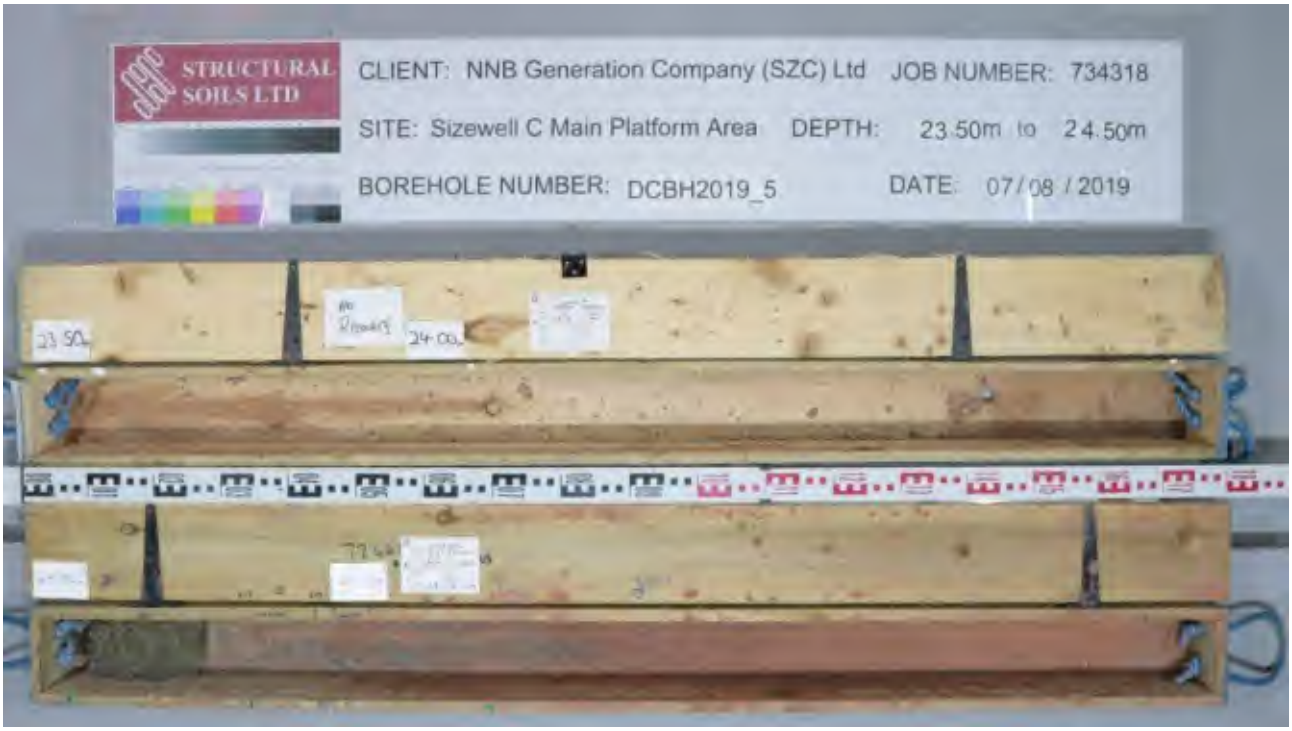
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:

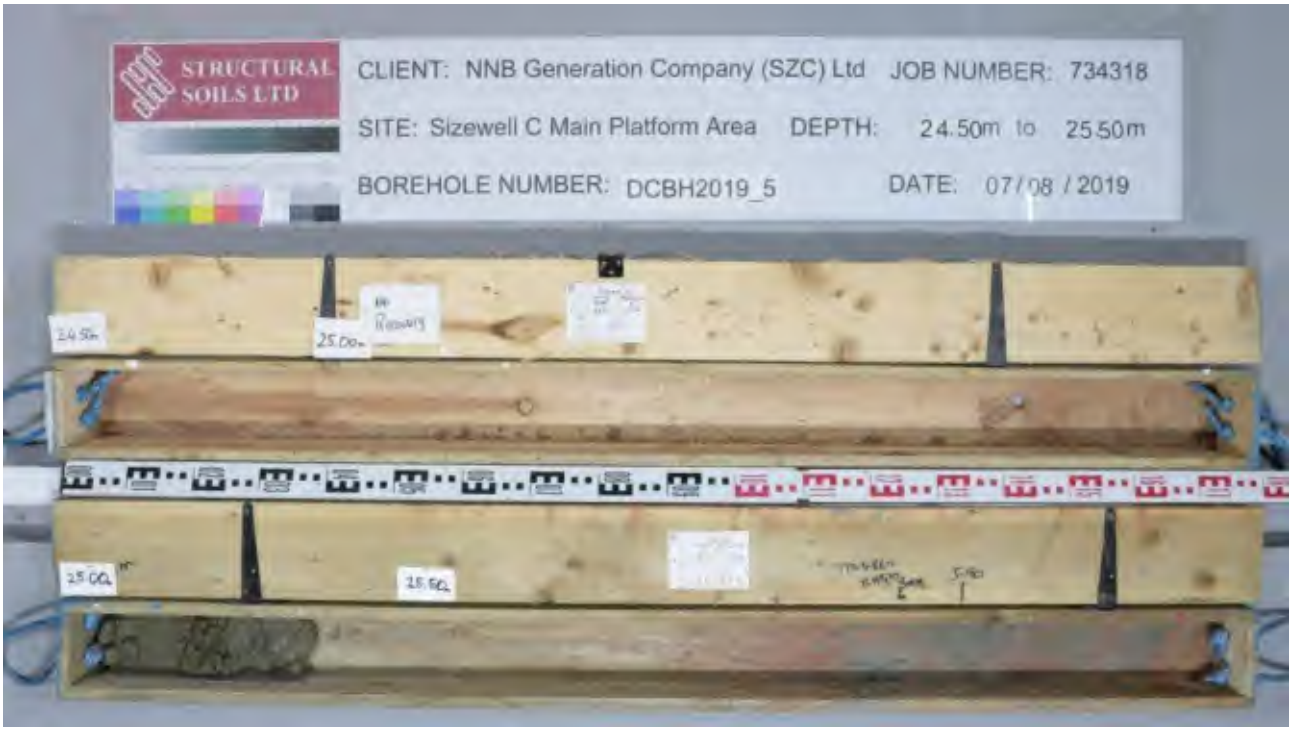
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**31** of **53**

DCBH2019_5 23.50m - 24.50m depth.





DCBH2019_5 24.50m - 25.50m depth.

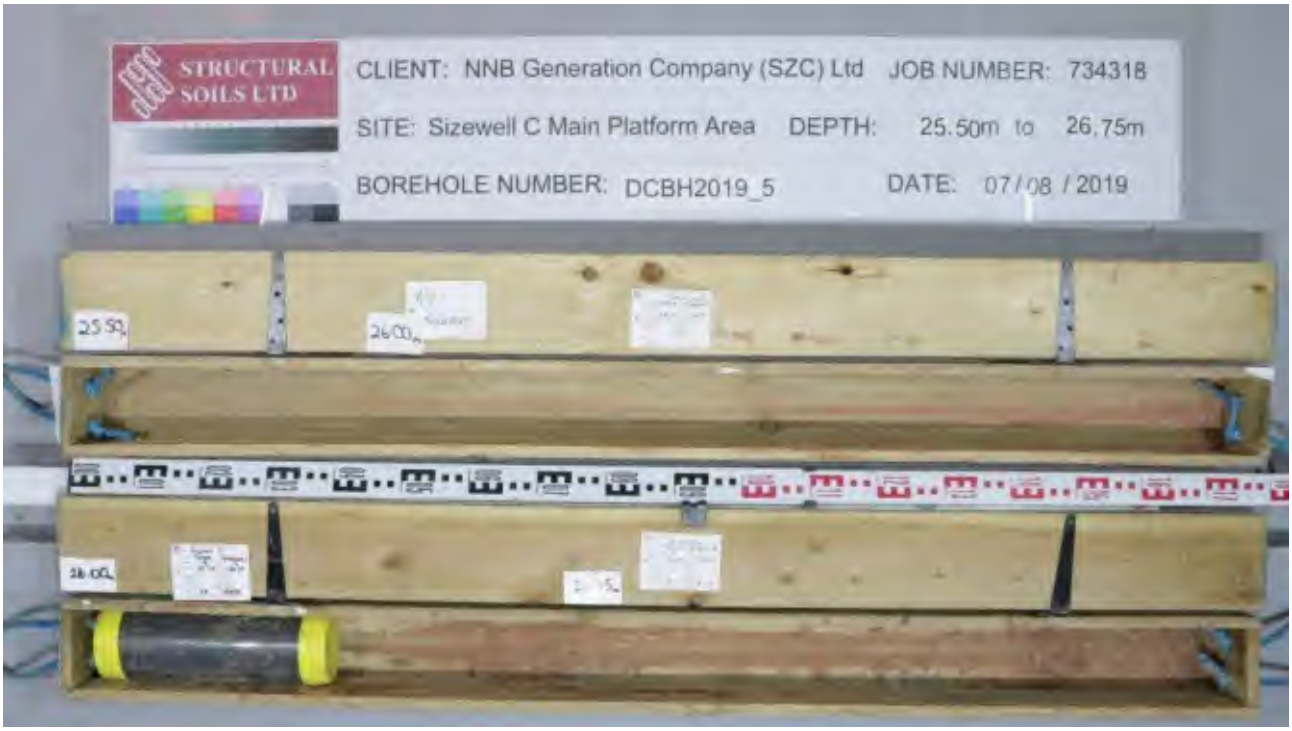
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:

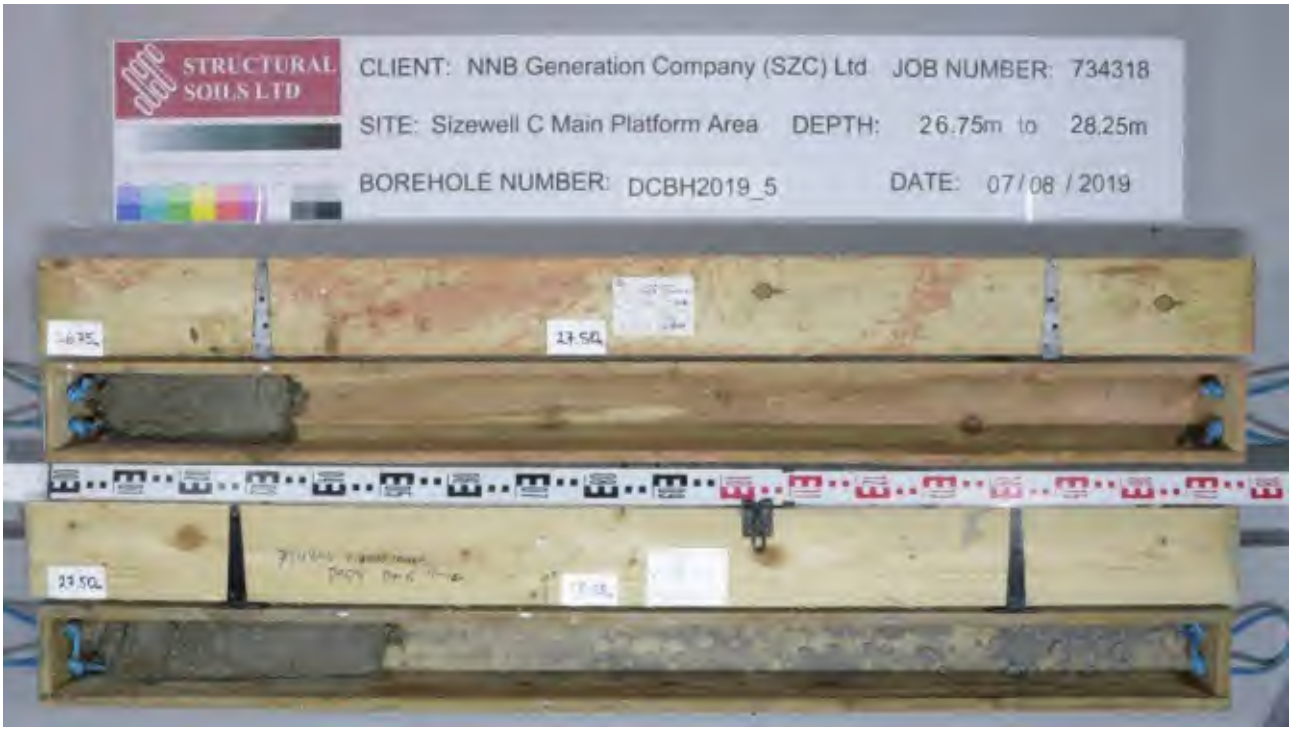
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**32** of **53**

DCBH2019_5 25.50m - 26.75m depth.





DCBH2019_5 26.75m - 28.25m depth.

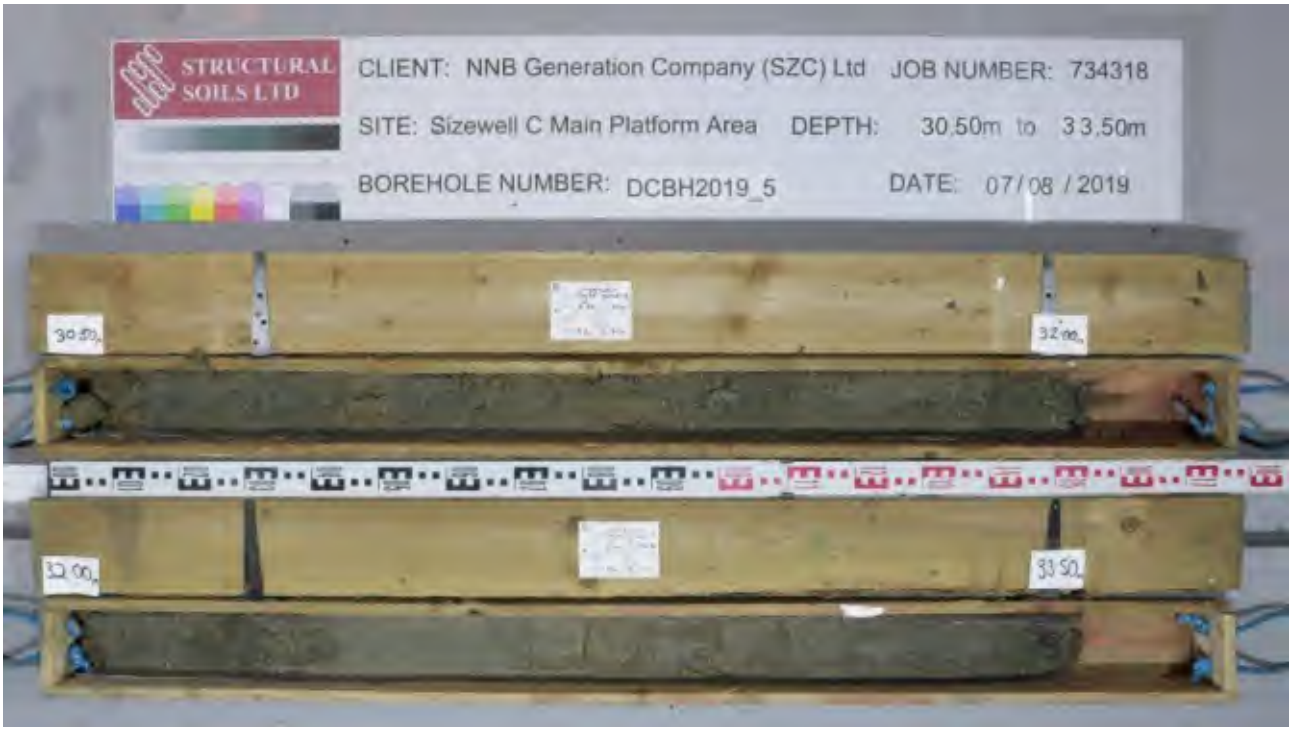
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**33** of **53**

DCBH2019_5 28.25m - 30.50m depth.



DCBH2019_5 30.50m - 33.50m depth.

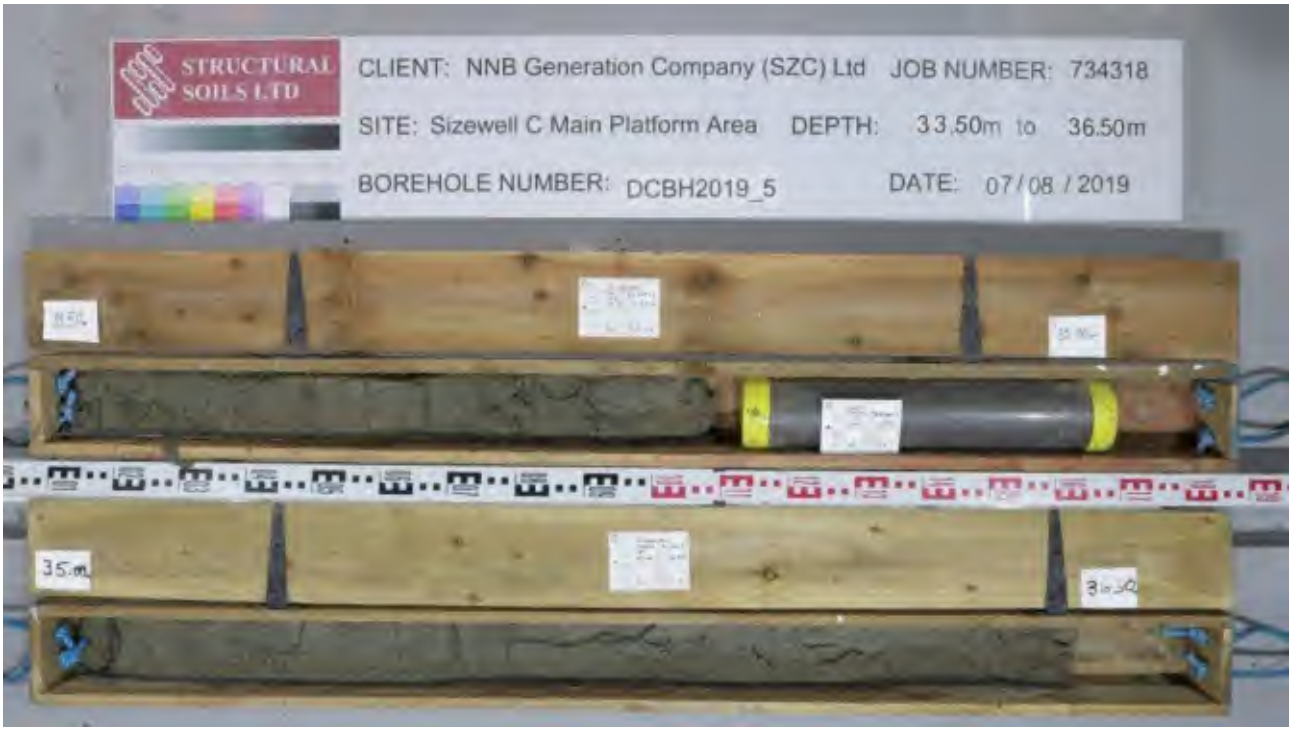
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:	SAT

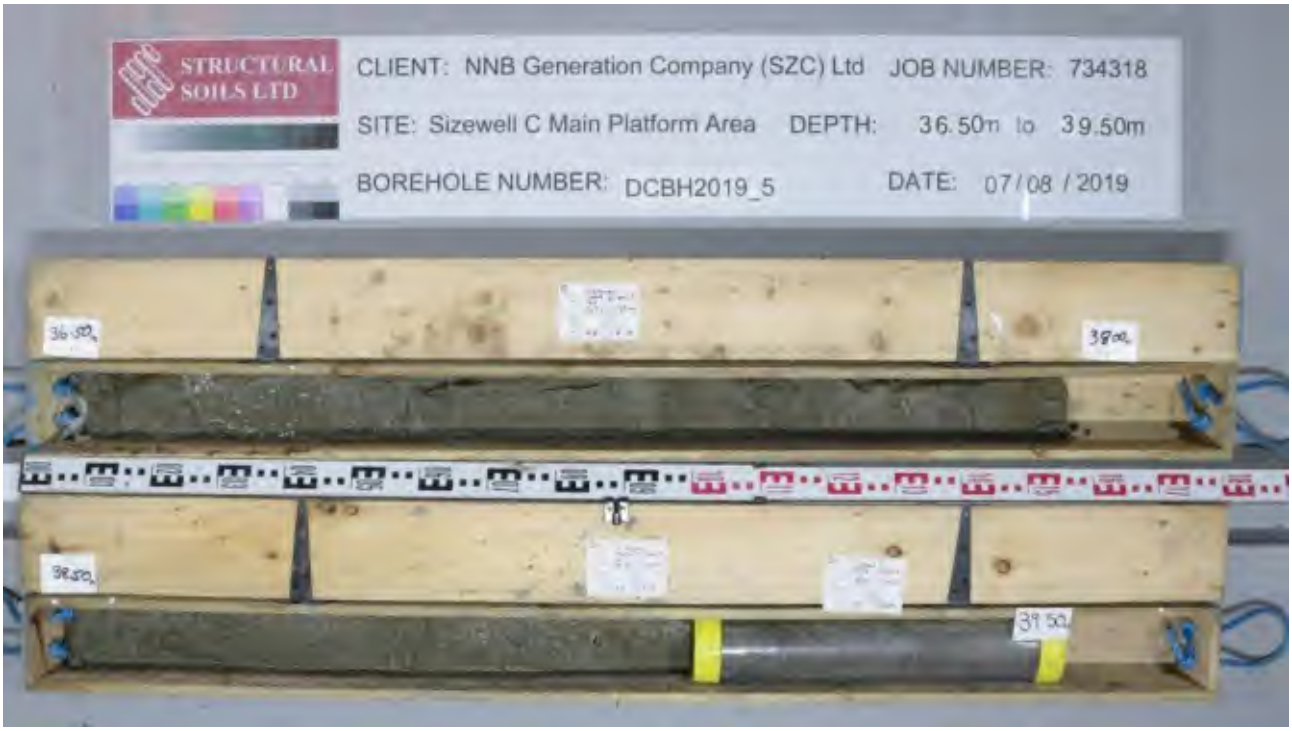
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**34** of **53**

DCBH2019_5 33.50m - 36.50m depth.





DCBH2019_5 36.50m - 39.50m depth.

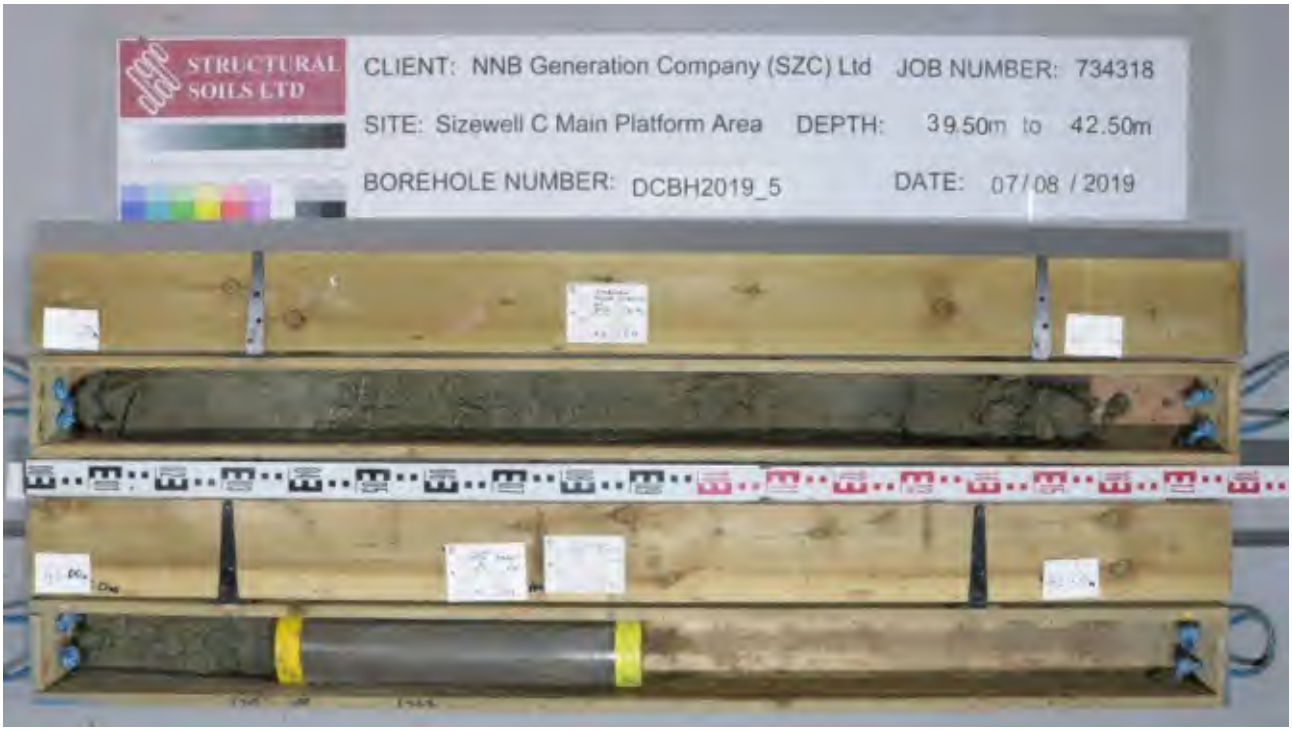
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:

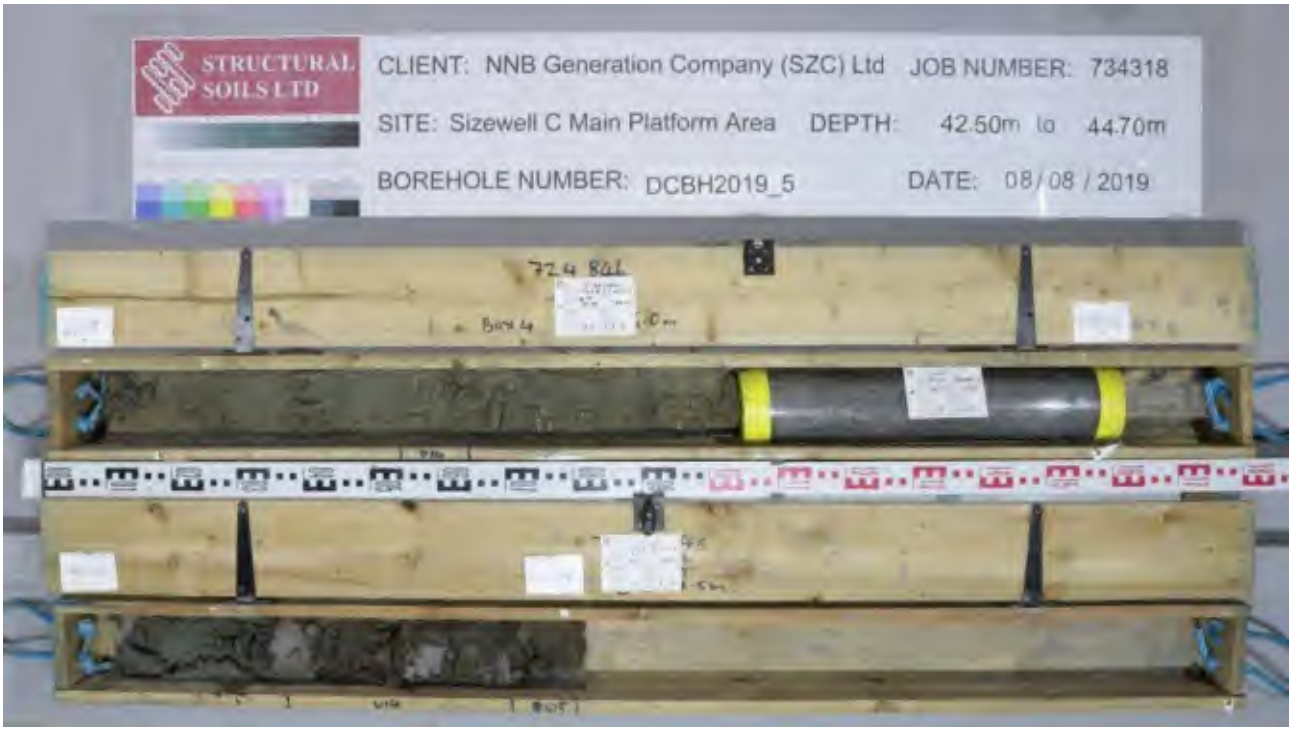
STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**35** of **53**

DCBH2019_5 39.50m - 42.50m depth.





DCBH2019_5 42.50m - 44.70m depth.

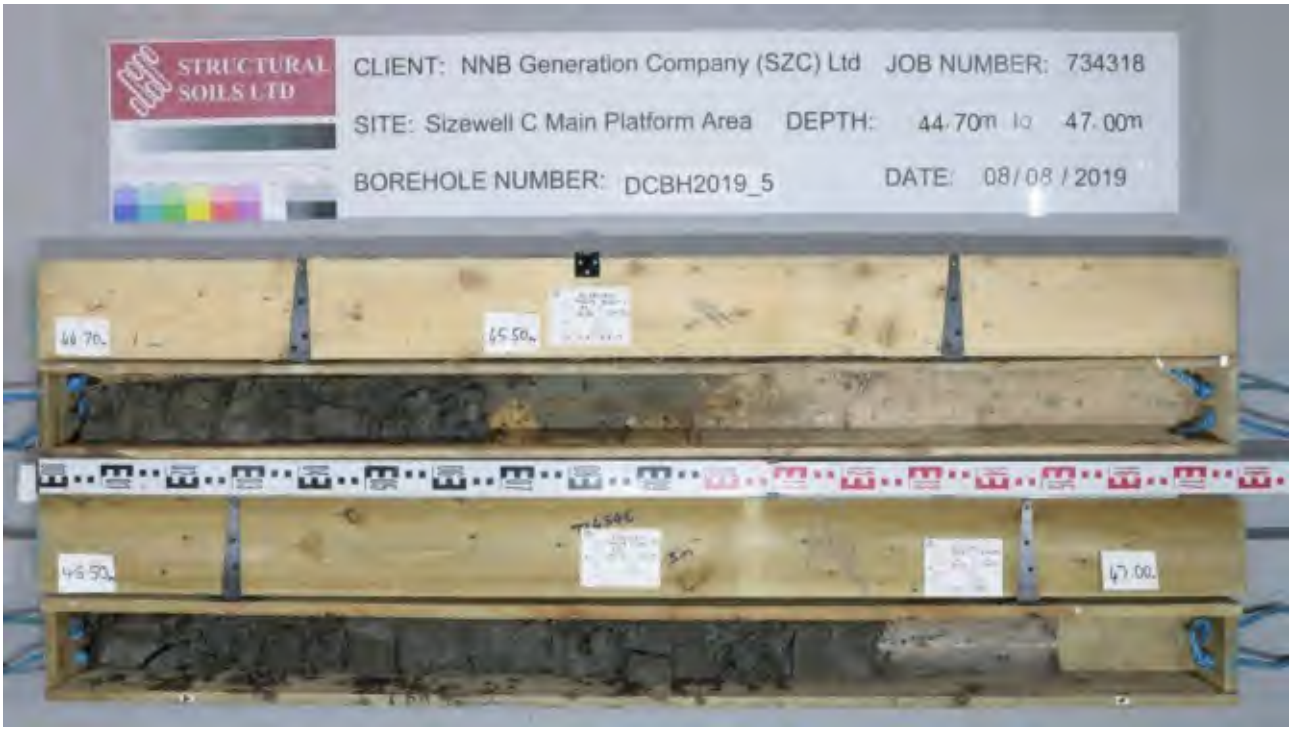
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**36** of **53**

DCBH2019_5 44.70m - 47.00m depth.



DCBH2019_5 44.70m - 47.00m depth. (Split)

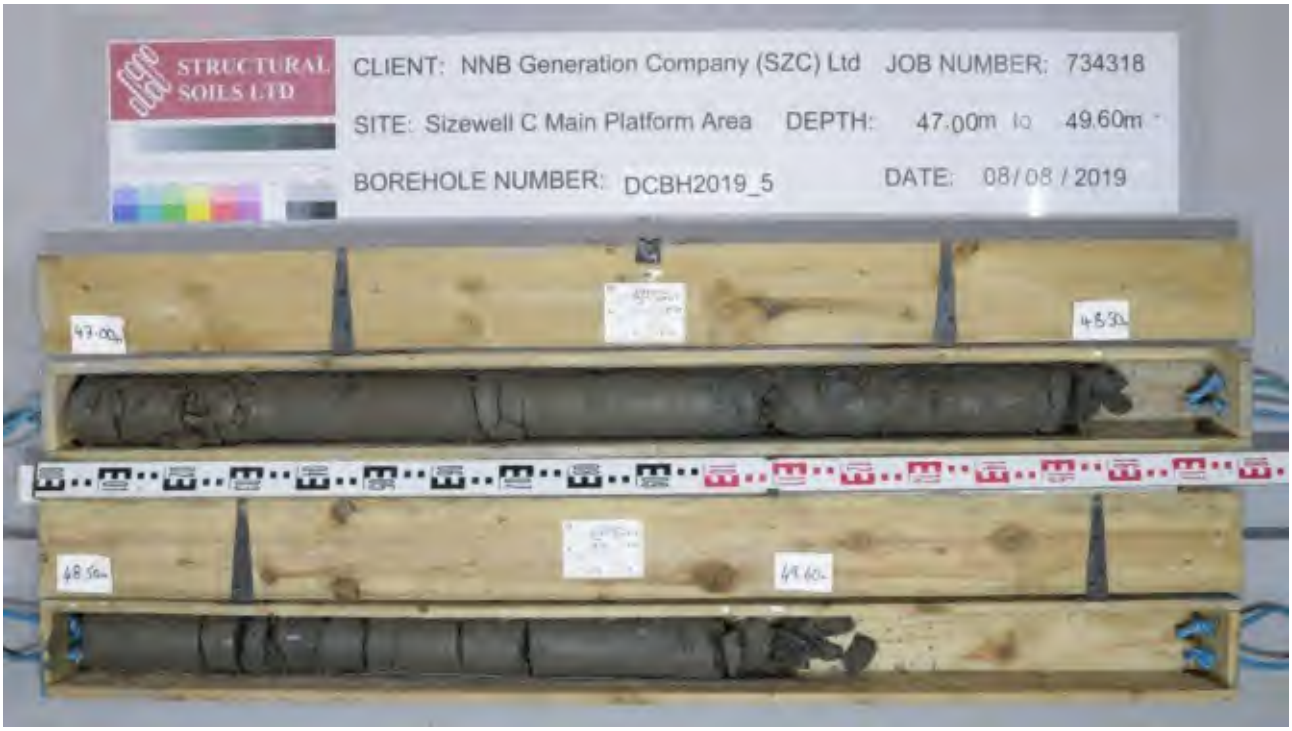
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**37** of **53**

DCBH2019_5 47.00m - 49.60m depth.



DCBH2019_5 47.00m - 49.60m depth. (Split)

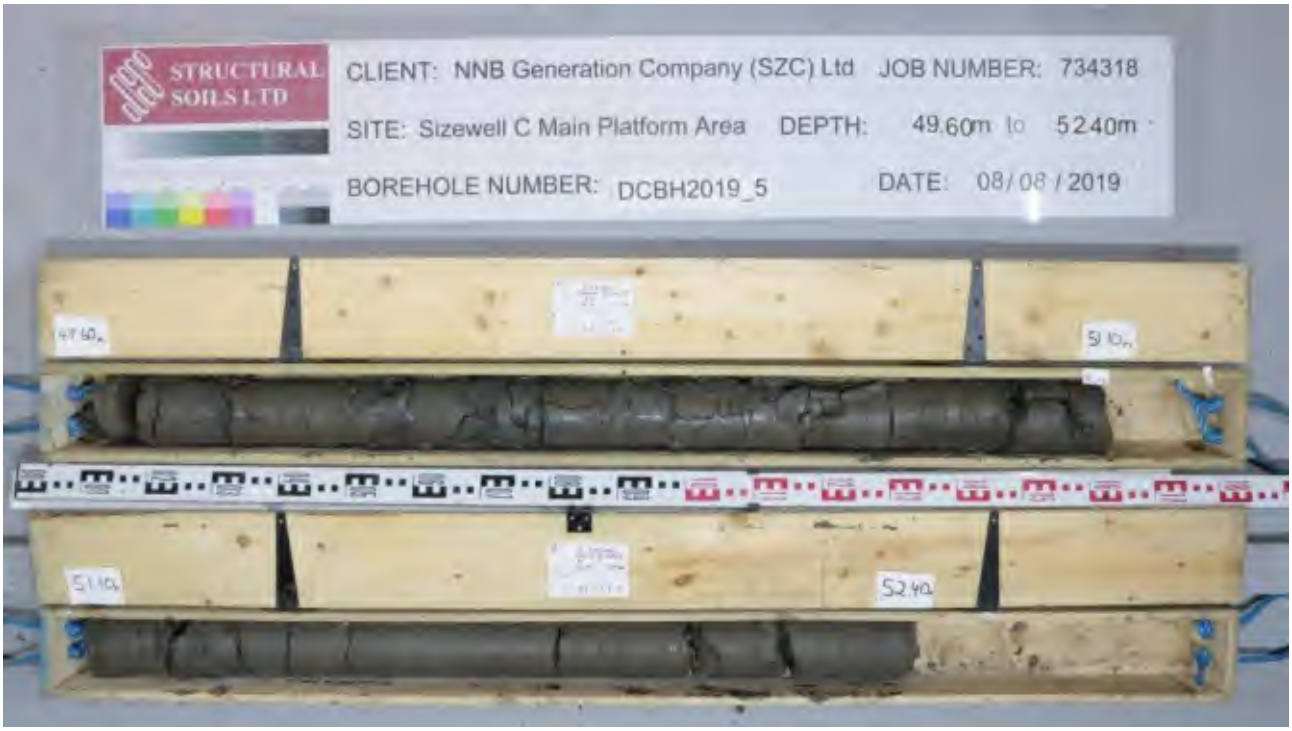
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**38** of **53**

DCBH2019_5 49.60m - 52.40m depth.



DCBH2019_5 49.60m - 52.40m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**39** of **53**

DCBH2019_5 52.40m - 55.00m depth.

DCBH2019_5 52.40m - 55.00m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**40** of **53**

DCBH2019_5 55.00m - 58.00m depth.

DCBH2019_5 55.00m - 58.00m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**41** of **53**

DCBH2019_5 58.00m - 60.80m depth.

DCBH2019_5 58.00m - 60.80m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**42** of **53**

DCBH2019_5 60.80m - 63.80m depth.

DCBH2019_5 60.80m - 63.80m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**43** of **53**

DCBH2019_5 63.80m - 66.80m depth.

DCBH2019_5 63.80m - 66.80m depth. (Split)

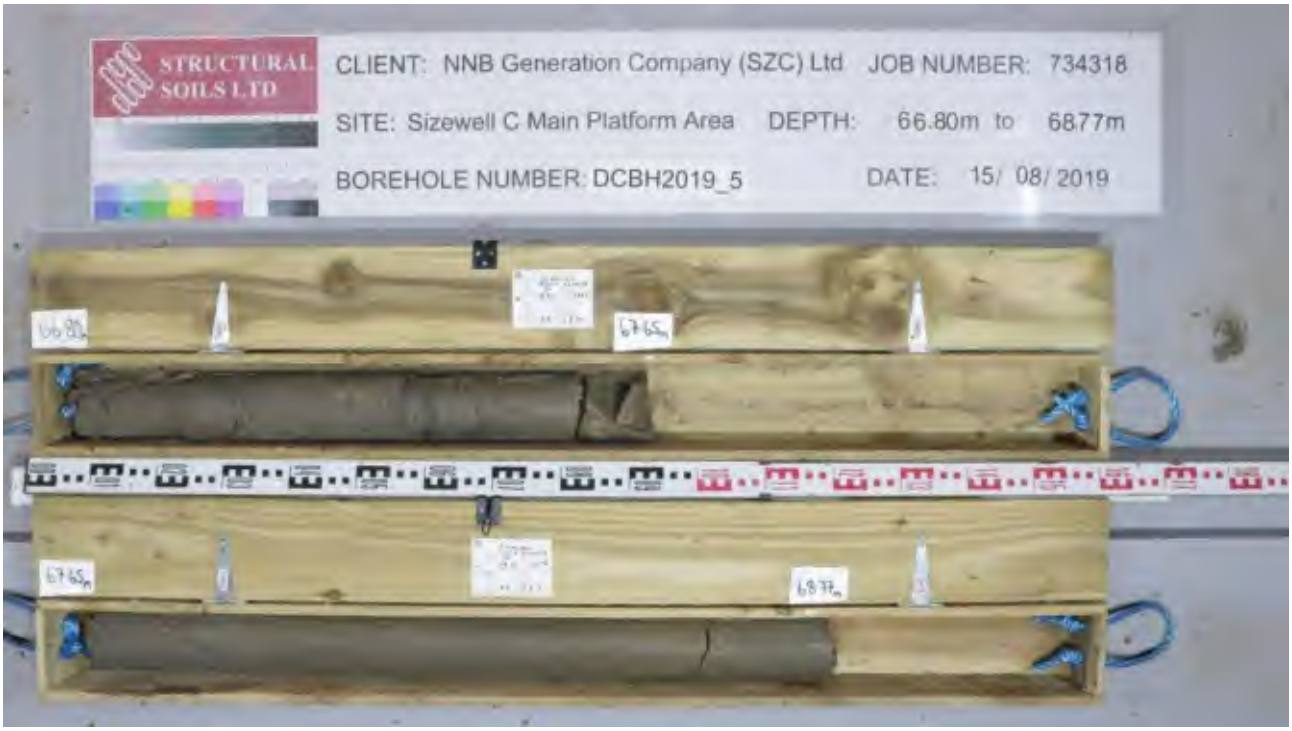
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**44** of **53**

DCBH2019_5 66.80m - 68.77m depth.



DCBH2019_5 66.80m - 68.77m depth. (Split)

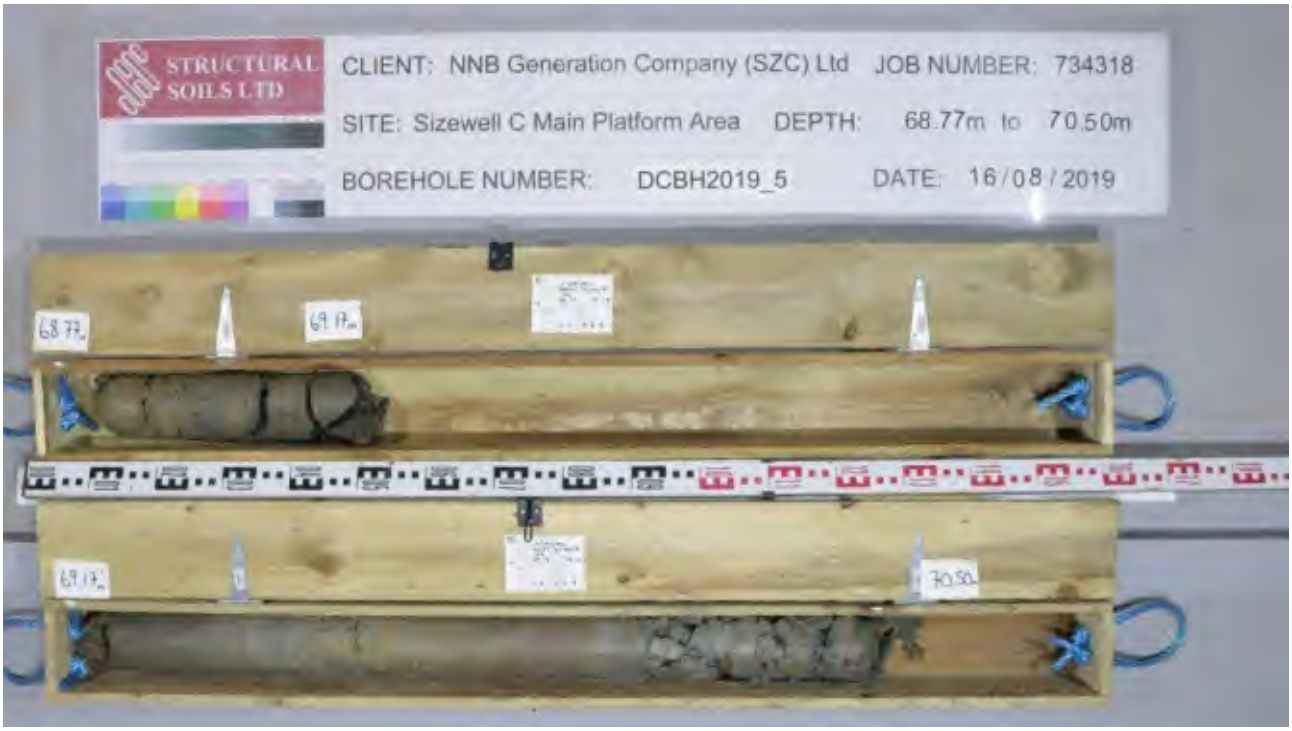
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**45** of **53**

DCBH2019_5 68.77m - 70.50m depth.



DCBH2019_5 68.77m - 70.50m depth. (Split)

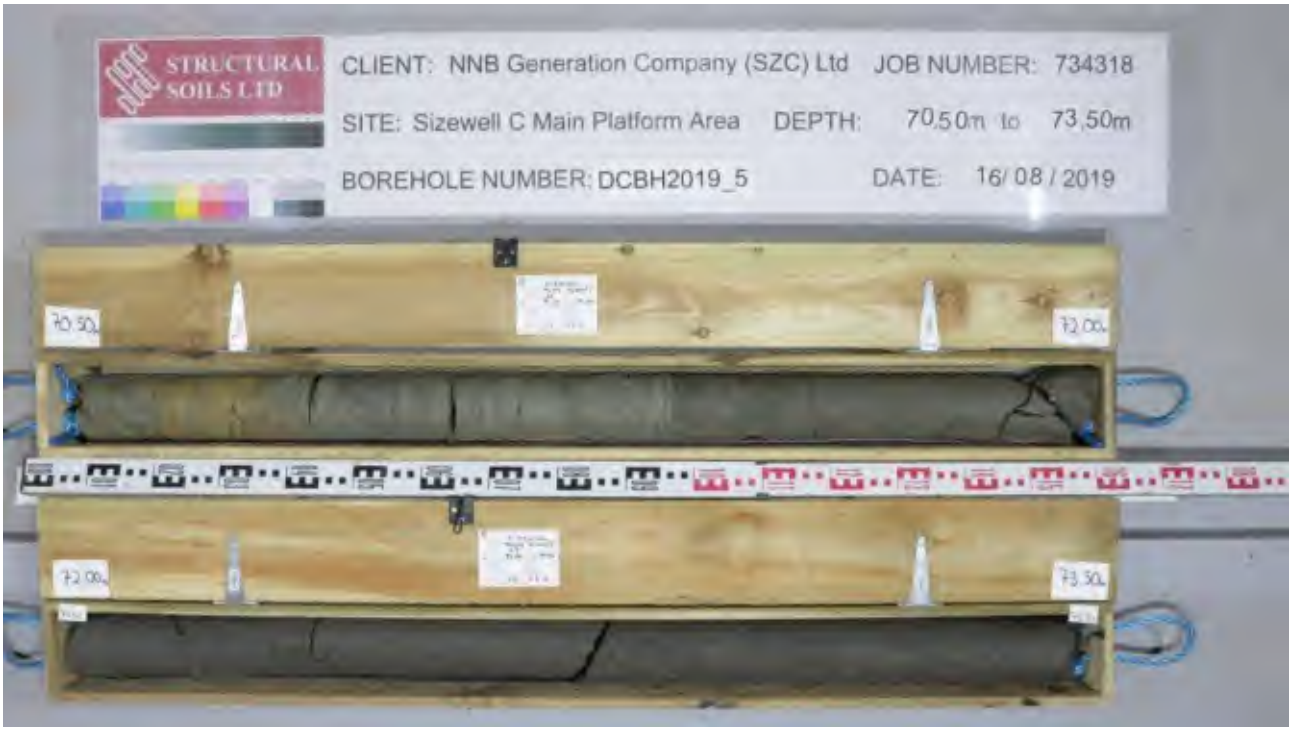
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**46** of **53**

DCBH2019_5 70.50m - 73.50m depth.



DCBH2019_5 70.50m - 73.50m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**47** of **53**

DCBH2019_5 73.50m - 76.50m depth.

DCBH2019_5 73.50m - 76.50m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**48** of **53**

DCBH2019_5 76.50m - 79.50m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**49** of **53**

DCBH2019_5 76.50m - 79.50m depth. (Split)

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**50** of **53**

DCBH2019_5 79.50m - 82.50m depth. (Split)

DCBH2019_5 82.50m - 85.50m depth.

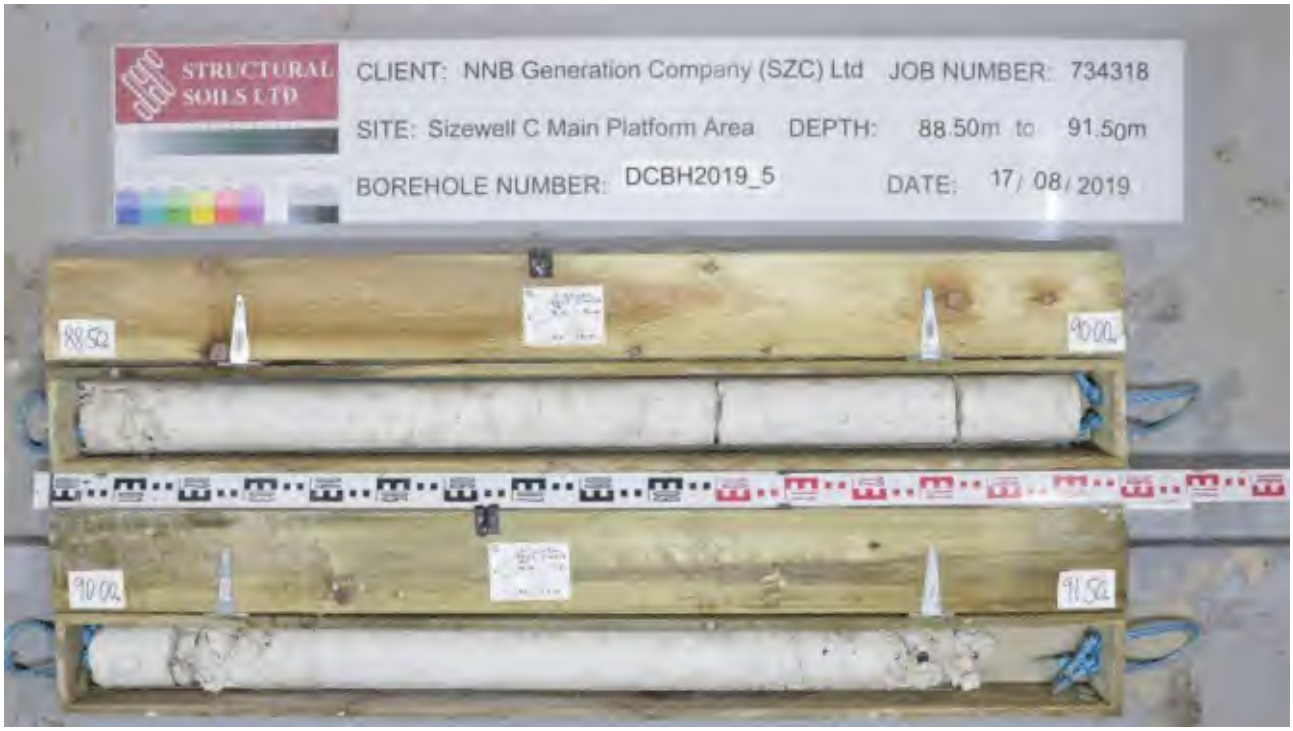
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**51** of **53**

DCBH2019_5 85.50m - 88.50m depth.



DCBH2019_5 88.50m - 91.50m depth.

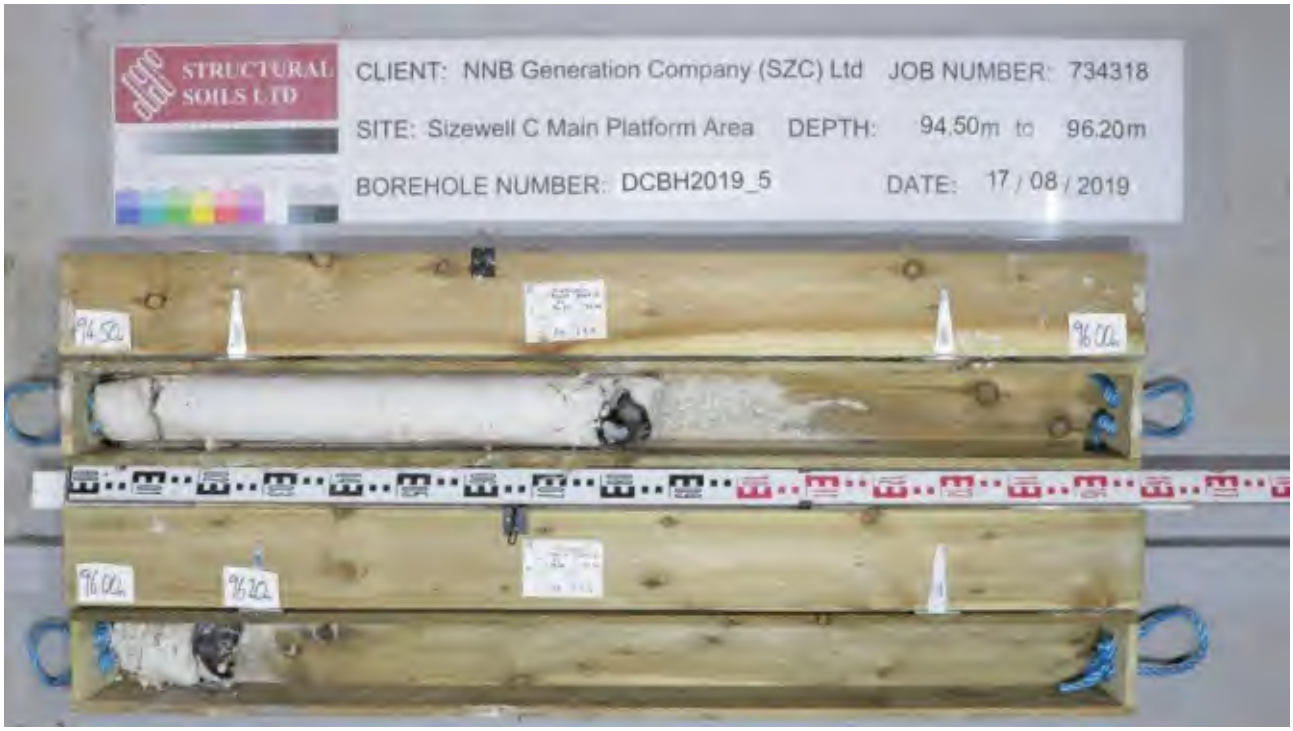
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**52** of **53**

DCBH2019_5 91.50m - 94.50m depth.



DCBH2019_5 94.50m - 96.20m depth.

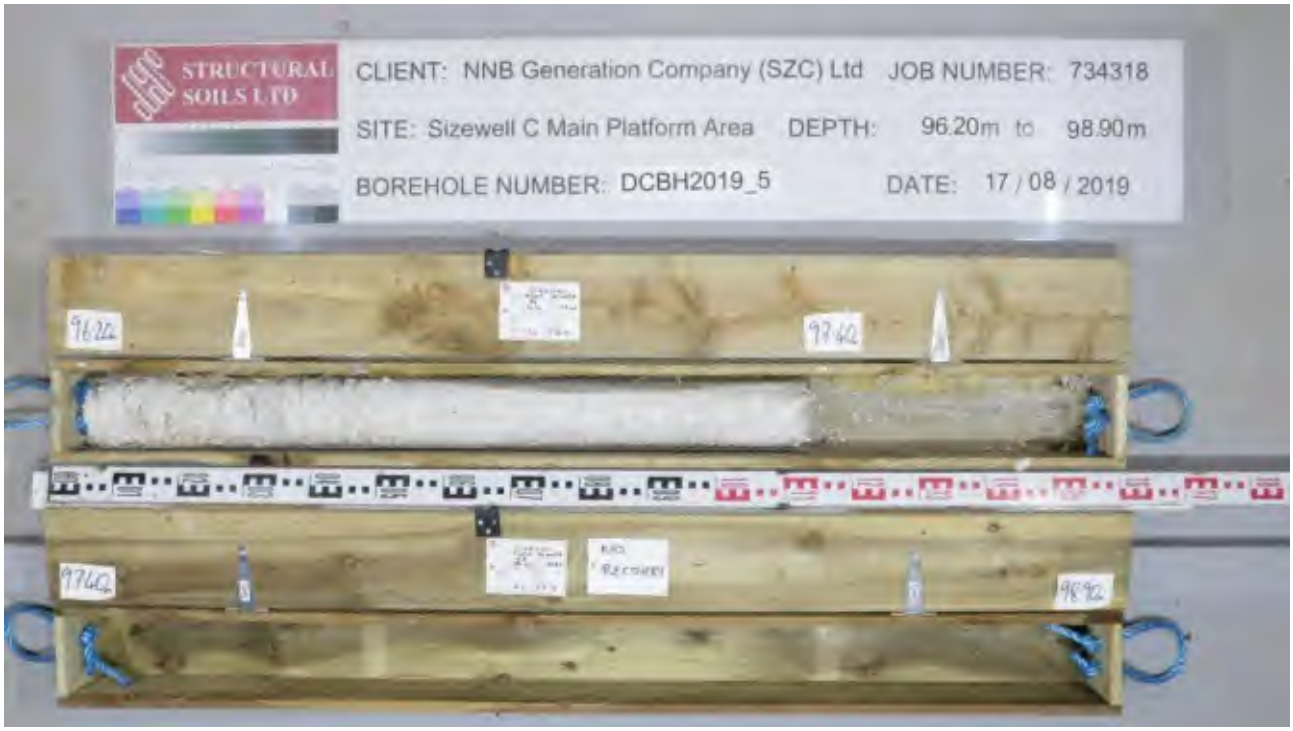
Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleId**	Checked By:	SAT

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Sizewell C Onshore GI Phase 2 2019		**NNB Generation Company (SZC) Ltd**		**DCBH2019_5**
Contract Ref:	Start: **17.07.19**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
734318	End: **08.08.19**	**1.63**	**E:647335.9 N:264113.0**	**53** of **53**

DCBH2019_5 96.20m - 98.90m depth.



DCBH2019_5 98.90m - 100.30m depth.

Method Used:	**Trial Pit/trench + Rotary Cored**	Plant Used:	**Hand tools + Massenza M.I.12**	Drilled By:	**Ryan Pincher + Adrian Hopwood**	Logged By:	**HJones + RAndrews + HSkaleld**	Checked By:

SUMMARY OF DISCONTINUITIES - DCBH2019_5

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
1	82.63	BF	8	U-R	-	-	-	Rare black specks. No	BEECK	CHALK
								staining. No infill.		
2	82.79	J	12	U-R	-	-	-	Rare black specks. No	BEECK	CHALK
								staining. No infill.		
3	82.86	BF	2	U-R	-	-	-	Rare black specks. No	BEECK	CHALK
								staining. No infill.		
4	83.09	BF	5	U-R	-	-	-	Rare black specks. Light	BEECK	CHALK
								staining. No infill.		
5	83.24	J	15	U-R	-	-	-	Rare black specks. Light	BEECK	CHALK
								staining. No infill.		
6	83.40	J	17	P-R	-	-	-	Rare black specks. No	BEECK	CHALK
								staining. No infill.		
7	83.47	BF	3	U-R	-	-	-	Rare black specks. No	BEECK	CHALK
								staining. No infill.		
8	84.00-84.16	J	74	U-R	-	-	-	Rare black specks. No	AZCL	
								staining. No infill.		

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, S-R = Stepped - rough, U-R = Undulating - rough.

STRUCTURAL SOILS
The Old School
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Compiled By		Date	Contract Ref:
KJohnstone	KJOHNSTONE	15.05.20	734318
Contract: Sizewell C Onshore GI Phase 2 2019			Page: 1 of 7

SUMMARY OF DISCONTINUITIES - DCBH2019_5

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
9	84.10-84.13	J	22	P-R	-	-	-	Rare black specks. Light	BEECK	CHALK
								staining. No infill.		
10	84.38	BF	3	U-R	-	-	-	Rare black specks. No	BEECK	CHALK
								staining. No infill.		
11	84.46	BF	4	U-R	-	-	-	Occasional black specks. No	BEECK	CHALK
								staining. No infill.		
12	84.54	PFR	9	U-R	-	-	-	Rare black specks. No	BEECK	CHALK
								staining. No infill.		
13	84.64	J	31	P-R	-	-	-	Rare black specks. No	BEECK	CHALK
								staining. No infill.		
14	84.91	BF	9	U-R	-	-	-	Rare black specks. No	BEECK	CHALK
								staining. No infill.		
15	85.03	BF	4	U-R	-	-	-	Rare black specks. No	WBCK_CS	CHALK
								staining. No infill.		
16	85.23	BF	19	U-R	-	-	-	Rare black specks. No	WBCK_CS	CHALK
								staining. No infill.		

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Small-scale roughness codes: P-R = Planar - rough, S-R = Stepped - rough, U-R = Undulating - rough.

SUMMARY OF DISCONTINUITIES - DCBH2019_5

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
17	85.32-85.36	J	34	U-R	-	-	-	Rare black specks. No	WBCK_CS	CHALK
								staining. No infill.		
18	85.46	J	11	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
19	85.76	BF	4	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
20	85.86	BF	7	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
21	86.04	BF	8	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
22	86.30	BF	7	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
23	86.38	BF	5	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
24	86.44-86.48	J	32	S-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		

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SUMMARY OF DISCONTINUITIES - DCBH2019_5

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
25	86.75	BF	5	P-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
26	86.92	BF	5	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
27	89.00-89.02	J	14	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
28	89.47	BF	5	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
29	89.93	BF	3	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
30	90.13	J	12	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
31	90.35	J	13	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
32	91.09	J	13	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, S-R = Stepped - rough, U-R = Undulating - rough.

SUMMARY OF DISCONTINUITIES - DCBH2019_5

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
33	92.34	BF	8	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
34	92.34-92.42	J	88	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
35	92.38-92.43	J	42	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
36	92.75	BF	9	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
37	92.90	BF	8	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
38	93.07-93.10	J	13	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
39	93.23	BF	4	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
40	93.69	BF	3	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, S-R = Stepped - rough, U-R = Undulating - rough.

SUMMARY OF DISCONTINUITIES - DCBH2019_5

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
41	93.86	BF	6	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
42	94.02	BF	5	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
43	94.20	J	10	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
44	94.59	J	21	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
45	94.80	BF	3	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
46	94.89	BF	4	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
47	94.90	BF	2	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
48	95.08	J	15	S-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, S-R = Stepped - rough, U-R = Undulating - rough.

SUMMARY OF DISCONTINUITIES - DCBH2019_5

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Discontinuity Spacing	Infill Material Description	Remarks	Geology Code	Second Geology Code
49	96.43	BF	7	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
50	96.70	BF	3	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		
51	97.00	BF	4	U-R	-	-	-	Rare black specks. No	WBCK	CHALK
								staining. No infill.		

Key:
Type codes: BF = Bedding fracture, J = Joint, PFR = Possible Fracture.
Small-scale roughness codes: P-R = Planar - rough, S-R = Stepped - rough, U-R = Undulating - rough.

STRUCTURAL SOILS
The Old School
Stillhouse Lane
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Compiled By		Date	Contract Ref:
KJohnstone	KJOHNSTONE	15.05.20	734318
Contract: Sizewell C Onshore GI Phase 2 2019			Page: 7 of 7

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Borehole Log

Borehole No.
GW10
Sheet 1 of 1

Project Name:	Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647394E - 264178N	Hole Type CP
Location:	Sizewell		Level: 1.76	Scale 1:50
Client:	NNB GenCo		Dates: 28/07/2010	Logged By EM

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D					Orangish brown gravelly fine to coarse SAND with low cobble content. Gravel is angular to subangular fine to coarse of mixed lithologies including flint, brick and concrete. Cobbles are angular to subangular of concrete and brick. (MADE GROUND) MG
		0.60	D		0.50	1.26		Greyish brown slightly silty slightly gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse of mixed lithologies including flint. Slight organic odour present. (MADE GROUND) MG
		1.60	D					
		2.50	D					
		3.50	D		3.50	-1.74		Brown sandy GRAVEL. Gravel is subangular to subrounded fine to coarse of mixed lithologies including quartz and flint. (MADE GROUND) MG
		4.50	D					
		5.00	D		5.00	-3.24		Very soft slightly sandy clayey SILT with occasional pockets of firm brown pseudo-fibrous clayey peat. (RECENT DEPOSITS) SD_ALV_Si
		5.50	D					
		6.50	D					
		7.50	D					
		8.50	D		8.50	-6.74		Grey silty fine to medium SAND. (CRAG DEPOSITS) NCG
		9.60	D					
					10.00	-8.24		End of Borehole at 10.00m

Remarks

AGS

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Borehole Log

Borehole No.
GW12
Sheet 1 of 2

Project Name:	Sizewell C Enabling Works	Project No. 5190666	Co-ords:	647508E - 264091N	Hole Type CP
Location:	Sizewell		Level:	8.58	Scale 1:50
Client:	NNB GenCo		Dates:	23/11/2010	Logged By ST

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30	D		0.20	8.38		TOPSOIL. (Foreman's description) Topsoil	
		0.80	D					Orangish brown slightly silty SAND with occasional fine gravel size shell fragments and occasional pockets of stiff grey orange brown silty clay up to 20mm in size. (MADE GROUND) MG	
		1.00	D						1
		2.00	D						2
		3.00	D					*becoming slightly gravelly. Gravel is angular to rounded of flint*	3
		4.00	D						4
					4.50	4.08		Orangish brown slightly silty gravelly SAND with occasional fine gravel size shell fragments. Gravel is angular to rounded fine to coarse of mixed lithologies including concrete, flint and granite. (MADE GROUND) MG	
		5.00	D						5
		6.00	D						6
		7.00	D						7
		8.00	D						8
					8.30	0.28		Multicoloured slightly sandy angular to rounded fine to coarse GRAVEL of mixed lithologies including flint. Sand is fine to coarse. (RECENT DEPOSITS) BCHD	
		9.00	D						9
		10.00	D						10

Continued on Next Sheet

Remarks

AGS

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Borehole Log

Borehole No.
GW12
Sheet 2 of 2

Project Name:	Sizewell C Enabling Works	Project No. 5190666	Co-ords:	647508E - 264091N	Hole Type CP
Location:	Sizewell		Level:	8.58	Scale 1:50
Client:	NNB GenCo		Dates:	23/11/2010	Logged By ST

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		11.00	D		11.00	-2.42		Multicoloured slightly sandy angular to rounded fine to coarse GRAVEL of mixed lithologies including flint. Sand is fine to coarse. (RECENT DEPOSITS) BCHD
		12.00	D					Dark grey slightly sandy angular to rounded fine to coarse GRAVEL of mixed lithologies including flint. Sand is fine to coarse. (RECENT DEPOSITS) BCHD
					12.70	-4.12		End of Borehole at 12.70m

Remarks

AGS

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Borehole Log

Borehole No.
GW13
Sheet 1 of 1

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords:	647575E - 264085N	Hole Type CP
Location:			Level:	3.19	Scale 1:50
Client:	EDF NNB GenCo		Dates:	06/09/2010	Logged By ST

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	D		0.20	2.99		Grey fine to medium SAND with frequent rootlets. (MADE GROUND) MG
		0.70	D		0.80	2.39		Yellowish grey sandy angular to rounded fine to coarse GRAVEL of mixed lithologies including flint. Sand is fine to coarse. (MADE GROUND) MG
		1.20	D					Multicoloured sandy angular to rounded fine to coarse GRAVEL of mixed lithologies including flint. Sand is fine to coarse. (Possibly RECENT DEPOSITS) BCHD
		1.70	D					
		2.70	D					
		3.70	D					
		4.70	D					
		5.70	D		5.50	-2.31		Dark grey slightly sandy angular to rounded fine to coarse GRAVEL of mixed lithologies including flint. Sand is fine to coarse. (Possibly RECENT DEPOSITS) BCHD
		6.70	D		6.80	-3.61		Very soft grey slightly gravelly silty CLAY. Gravel is angular to rounded fine to medium of flint (possibly from above stratum). Strong organic odour present. (RECENT DEPOSITS) SD_ALV_C
		7.50	D					
		8.50	D					
		9.50	D					occasional brown plant debris
					10.00	-6.81		End of Borehole at 10.00m

Remarks

AGS

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Rotary Core Log

Borehole No.
Pz2009_5
Sheet 1 of 3

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647304.50 - 264094.43	Hole Type RO
Location: Sizewell		Level: 1.41	Scale 1:50
Client: NNB GenCo		Dates: 29/09/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										Beige sandy MADE GROUND with shell fragments. MG
							1.10	0.31		Grey green SAND. MG
							4.60	-3.19		Grey black silty SAND. SD_ALV_S
										Continued on Next Sheet

1 2 3 4 5 6 7 8 9 10

Remarks

AGS

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Rotary Core Log

Borehole No.
Pz2009_5
Sheet 2 of 3

Project Name: Sizewell C Enabling Works	Project No. 5190666	Co-ords: 647304.50 - 264094.43	Hole Type RO
Location: Sizewell		Level: 1.41	Scale 1:50
Client: NNB GenCo		Dates: 29/09/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
							10.40	-8.99		Grey black silty SAND. SD_ALV_S
										Dark grey SAND. NCG
							18.10	-16.69		Grey green SAND. NCG
										Continued on Next Sheet

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

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Rotary Core Log

Borehole No.
Pz2009_5
Sheet 3 of 3

Project Name:	Sizewell C Enabling Works	Project No. 5190666	Co-ords:	647304.50 - 264094.43	Hole Type RO
Location:	Sizewell		Level:	1.41	Scale 1:50
Client:	NNB GenCo		Dates:	29/09/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
							20.50	-19.09		Grey green SAND. NCG
										End of Borehole at 20.50m

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Remarks

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Rotary Core Log

Borehole No.
Pz2009_7
Sheet 1 of 2

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords:	647087.88 - 264094.45	Hole Type RO
Location:			Level:	1.69	Scale 1:50
Client:	EDF NNB GenCo		Dates:	11/10/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										Orange SAND. (Possible MADE GROUND) MG
							0.95	0.74		Grey green SAND. MG
							4.30	-2.61		Brown green peaty SAND. PEAT
							5.50	-3.81		PEAT. PEAT
										Continued on Next Sheet

Remarks

AGS

ATKINS
Member of the SNC-Lavalin Group

Rotary Core Log

Borehole No.
Pz2009_7
Sheet 2 of 2

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords: 647087.88 - 264094.45	Hole Type RO
Location:			Level: 1.69	Scale 1:50
Client:	EDF NNB GenCo		Dates: 11/10/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										PEAT. PEAT
										gravelly band
							13.30	-11.61		Grey green SAND with flints. C1
							20.00	-18.31		End of Borehole at 20.00m

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

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Rotary Core Log

Borehole No.
Pz2009_13
Sheet 1 of 2

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords:	647329.63 - 263969.39	Hole Type RO
Location:			Level:	2.05	Scale 1:50
Client:	EDF NNB GenCo		Dates:	06/10/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										Ocre beige sandy MADE GROUND. MG
							1.20	0.85		Grey green SAND with shell fragments. MG
							5.50	-3.45		Dark grey peaty SAND. PEAT
							9.40	-7.35		Grey brown SAND. C1
										Continued on Next Sheet

1 2 3 4 5 6 7 8 9 10

Remarks

AGS

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Rotary Core Log

Borehole No.
Pz2009_13
Sheet 2 of 2

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords:	647329.63 - 263969.39	Hole Type RO
Location:			Level:	2.05	Scale 1:50
Client:	EDF NNB GenCo		Dates:	06/10/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										Grey brown SAND. C1
							16.80	-14.75		Light grey SAND. C1
							20.00	-17.95		End of Borehole at 20.00m

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

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Rotary Core Log

Borehole No.
Pz2009_11
Sheet 1 of 2

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords:	647559.58 - 264095.19	Hole Type RO
Location:			Level:	3.25	Scale 1:50
Client:	EDF NNB GenCo		Dates:	16/10/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
		0.00 0.00	EW EW							Beige SAND with pebbles. MG
							5.10	-1.85		Grey SAND with debris of shell fragments. MG
							8.30	-5.05		Silty to peaty SAND. SD_ALV_S
										Continued on Next Sheet

Remarks

AGS

ATKINS
Member of the SNC-Lavalin Group

Rotary Core Log

Borehole No.
Pz2009_11
Sheet 2 of 2

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords:	647559.58 - 264095.19	Hole Type RO
Location:			Level:	3.25	Scale 1:50
Client:	EDF NNB GenCo		Dates:	16/10/2010	Logged By

Well	Water Strikes	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Depth (m)	Level (m)	Legend	Stratum Description
										Silty to peaty SAND. SD_ALV_S
							15.20	-11.95		Grey green SAND. C1
							20.00	-16.75		End of Borehole at 20.00m

11 12 13 14 15 16 17 18 19 20

Remarks

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Borehole Log

Borehole No.
YG25
Sheet 1 of 2

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords:	647635E - 264041N	Hole Type CP
Location:			Level:	2.20	Scale 1:50
Client:	EDF NNB GenCo		Dates:	10/02/1994	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Sandy GRAVEL becoming gravelly SAND (Beach Deposits) BCHD
					8.00	-5.80		Medium dense yellow brown silty fine to medium SAND with a little shell debris to coarse sand size C1
								Continued on Next Sheet

1 2 3 4 5 6 7 8 9 10

Remarks

AGS

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Borehole Log

Borehole No.
YG25
Sheet 2 of 2

Project Name:	Sizewell C Monitoring and Modelling	Project No. 5129919	Co-ords:	647635E - 264041N	Hole Type CP
Location:			Level:	2.20	Scale 1:50
Client:	EDF NNB GenCo		Dates:	10/02/1994	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Medium dense yellow brown silty fine to medium SAND with a little shell debris to coarse sand size C1
					18.00	-15.80		End of Borehole at 18.00m

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

Appendix C. Dosing chemical Safety Data Sheets

C.1. Example dosing chemical Safety Data Sheets

The following are example MSDS from certain suppliers. The same or similar chemicals from other suppliers may be used.

Section 1: Identification of Substance/mixture and of the company undertaking

1.1: Product Identifier

Product Name AQUATREAT 2084

1.2: Relevant Identified use of substance/mixture and uses advised against

1.3: Details of the Supplier of the safety data sheet

Company Name: Aquatreat
Albany House
North Dock
Llanelli
Carmarthenshire
SA15 2LF

Telephone: 01554 775236
Fax: 01554 772253
E-mail: enquiries@aquatreat.co.uk
Website: www.aquatreat.co.uk

1.4: Emergency Telephone Numbers:

Emergency Telephone: 0333 333 9499

Section 2: Hazards Identification

2.1: Classification of substance/mixture according to Regulation (EC) No 1272/2008

Classification under CLP: NC Not Classified

Additional Information:

2.2: Label Elements: Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Label elements under CLP: NC Not Classified as Hazardous

Signal Words:

Hazard Pictograms:

Precautionary Statements

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

2.3: Other Hazards

Section 3: Composition information on hazardous ingredients

Hydrocarbons, C12 - C15, isoalkanes, cyclics <2% aromatics

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
920-107-4		H302; ASP Tox.1	20 - 45

Isotridecanol, ethoxylated

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
Polymer		H318;Eye Dam.1, H302; Acute Tox.4	<5

Section 4: First Aid Measures

4.1: Description of First Aid measures

Skin Contact: Wash off immediately with soap and plenty of water and remove any contaminated clothing. If persistent irritation occurs, seek medical advice

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Alternatively, rinse immediately with Diphoterine. Get prompt medical attention

Ingestion: Rinse mounth with water. DO NOT induce vomiting. Seek medical attention immediately

Inhalation: Move to fresh air. No special first aid measures required.

4.2: Most important symptoms and effects both accute and delayed

Skin Contact: None under normal use

Eye Contact: None under normal use

Ingestion: None under normal use

Inhalation: None under normal use

4.3: Indication of any immediate medical treatment and special treatment required

None reasonably foerseeable.

Section 5: Fire fighting measures

5.1: Extinguishing media

Use fire extinguishers appropriate to the surrounding fire

Unsuitable Media

None

5.2: Special hazards arising from the substance/mixture

Oxides of Carbon and Nitrogen. Hydrogen cyanide may be produced as a result of combustion in an oxygen deficient atmosphere.

5.3: Advice for firefighters

Wear self contained breathing apparatus and protective clothing. Spills become extremely slippery when wet

Section 6: Accidental Release Measures

6.1: Personal precautions, protective equipment and emergency procedures

Wear appropriate PPE - See section 8

6.2: Environmental precautions

Do not allow spills to enter surface water drains and watercourses

6.3: Methods and Materials for containment and clean up

Soak up with inert material. Sweep and shovel into suitable closed conytainers and arrange disposal

6.4: References to other sections

Section 7.0: Handling and Storage

7.1: Precautions for safe handling

Avoid contact with skin and eyes.Renders surfaces extremely slippery when spilled. Do not eat, drink or smoke when using this product

7.2: Conditions for safe storage.

Keep away from heat and sources of ignition. Do not allow the product to freeze. Incompatible with oxidising agents

7.4: Specific End Use(s)

Section 8: Exposurecontrols/PersonalProtection

8.1: Control Parameters

None known

8 Hour TWA: **15MinSTEL:**

8.2: Exposure Controls

Engineering Measures	Use local exhaust ventilation if misting occurs
Respiratory Protection	respiratory protective equipment is not normally required unser normal conditions of use
Hand Protection	PVC or other plastic material gloves
Eye Protection	Safety glasses with side shields
Skin Protection	Coveralls or chemical apron

Section 9.0: Physical and ChemicalProperties

9.1: Information on basic physical and chemical properties

State:	Liquid
Colour:	Milky
Odour:	Aliphatic
Specific Gravity:	1.05
pH:	5 - 8 @5g/l

9.2: Other Information

Section 10: Stability and Reactivity

10.1: Reactivity

Stable under recommended conditions of storage and use

10.2: Chemical Stability

Stable under recommended conditions of storage and use

10.3: Possibility of Hazardous Reactions

None known

10.4: Conditions to Avoid

Heat, Sunlight and frost

10.5: Incompatible Materials

Oxidising Agents

10.6: Hazardous Decomposition Products

Oxides of Carbon and Nitrogen

Section 11: Toxicological Information

Aqautreat 2084

Dermal	Rat	LD50	>5000 mg/kg (estimated)

Aquatreat 2084

Oral	Rat	LD50	>5000 mg/kg (estimated)

Section 12: Ecological Information

12.1: Toxicity

LC50/Oncorhyncus myKiss/ 96hours>100mg/l (estimated), EC50/Daphnia Magna/48 hours>100mg/l (estimated), IC50/Algae/72 hours>100mg/l(estimated)

12.2: Persistence and Biodegradable

Not readily biodegradable

12.3: Bioaccumulative Potential

This product is not expected to bioaccumulate

12.4: Mobility in Soil

No data available

12.5: Results of PBT and vPvB Assessment

Not according to the criteria of Annex XIII of REACH

12.6: Other adverse effects

None

Section 13: Disposal Information

Dispose of waste in accordance with local or national regulations

Section 14: Transport Information

UN Number	
Shipping Name	Not classified as hazardous for transport
Transport Class	
Packing Group	
Environment Hazard	
Special Precautions	
Tunnel Code	
Transport Category	

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Section 15: Regulatory Information

15.1: Safety, Health and Environmental regulations/legislation specific for the substance/mixture

15.2: Chemical safety assessment

Section 16: Other information

The above information is based on our present knowledge of the product at the time of publication. It is given in good faith, no warranty is implied as to the quality or specification of the product. Information contained in this data does not constitute an assessment of workplace risks. The user must satisfy himself that the product is entirely suitable for their purpose

SAFETY DATA SHEET
Carbon dioxide

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Carbon dioxide

Trade name: Carbon Dioxide Food Grade, R744, Laserpure, CP Grade

Other Name: Carbon Dioxide (Special Gases)

Additional identification

Chemical name:	Carbon dioxide
Chemical formula:	CO2
INDEX No.	-
CAS-No.	124-38-9
EC No.	204-696-9
REACH Registration No.	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Industrial and professional. Perform risk assessment prior to use. Aerosol propellant. Balance gas for mixtures. Beverage applications. Biocidal uses. Blanketing gas. Blast cleaning. Calibration gas. Carrier gas. Chemical synthesis. Combustion, melting and cutting processes. Cooling applications. Fire suppressant gas. Food freezing. Food packaging gas. Freezing, Cooling and heat transfer. Inerting gas. Inflation systems. Laboratory use. Laser gas. Plant growth promoter. Pressure head gas, operational assist gas in pressure systems. Process gas. Purge gas. Refrigerant. Solvent for extraction. Special effects (entertainment). Test gas.
Consumer use. Propellant gas. Shielding gas in gas welding.
It is the responsibility of the end user to ensure that the product as supplied is suitable for its intended use.

Uses advised against Industrial or technical grade is unsuitable for medical and/or food applications or inhalation.

1.3 Details of the supplier of the safety data sheet

Supplier

BOC
Priestley Road, Worsley
M28 2UT Manchester

Telephone: 0800 111 333

E-mail: ReachSDS@boc.com

1.4 Emergency telephone number: 0800 111 333

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended.

Physical Hazards

Gases under pressure	Liquefied gas	H280: Contains gas under pressure; may explode if heated.

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s): H280: Contains gas under pressure; may explode if heated.

Precautionary Statements

General None.

Prevention: None.

Response: None.

Storage: P403: Store in a well-ventilated place.

Disposal None.

Supplemental information

EIGA-As: Asphyxiant in high concentrations.

2.3 Other hazards

Contact with evaporating liquid may cause frostbite or freezing of skin.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name Carbon dioxide
INDEX No.: -
CAS-No.: 124-38-9
EC No.: 204-696-9
REACH Registration No.: Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.
Purity: 100%
The purity of the substance in this section is used for classification only, and does not represent the actual purity of the substance as supplied, for which other documentation should be consulted.
Trade name: Carbon Dioxide Food Grade, R744, Laserpure, CP Grade

Chemical name	Chemical formula	Concentration	CAS-No.	REACH Registration No.	M-Factor:	Notes
Carbon dioxide	CO2	100%	124-38-9	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.	-	#

The concentrations of the components in the SDS header, product name on page one and in section 3.2 are in mol due to regulatory requirements. All concentrations are nominal.
This substance has workplace exposure limit(s).
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

SECTION 4: First Aid Measures

General: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

4.1 Description of first aid measures

Inhalation: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped. Low concentrations of CO2 cause increased respiration and headache.

Eye contact: Rinse the eye with water immediately. Remove contact lenses, if present and easy to do. Continue rinsing. Flush thoroughly with water for at least 15 minutes. Get immediate medical assistance. If medical assistance is not immediately available, flush an additional 15 minutes.

Skin Contact: Contact with evaporating liquid may cause frostbite or freezing of skin.

Ingestion: Ingestion is not considered a potential route of exposure.

4.2 Most important symptoms and effects, both acute and delayed: Respiratory arrest. Contact with liquefied gas can cause damage (frostbite) due to rapid evaporative cooling.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: Respiratory arrest. Contact with liquefied gas can cause damage (frostbite) due to rapid evaporative cooling.

Treatment: Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

SECTION 5: Firefighting Measures

General Fire Hazards: Heat may cause the containers to explode.

5.1 Extinguishing media

Suitable extinguishing media: Material will not burn. In case of fire in the surroundings: use appropriate extinguishing agent.

Unsuitable extinguishing media: None.

5.2 Special hazards arising from the substance or mixture: None.

Hazardous Combustion Products: None.

5.3 Advice for firefighters

Special fire fighting procedures: In case of fire: Stop leak if safe to do so. Continue water spray from protected position until container stays cool. Use extinguishants to contain the fire. Isolate the source of the fire or let it burn out.

Special protective equipment for firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Guideline: EN 469 Protective clothing for firefighters. Performance requirements for protective clothing for firefighting. EN 15090 Footwear for firefighters. EN 659 Protective gloves for firefighters. EN 443 Helmets for fire fighting in buildings and other structures. EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures: Evacuate area. Provide adequate ventilation. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.

6.2 Environmental Precautions: Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up: Provide adequate ventilation.

6.4 Reference to other sections: Refer to sections 8 and 13.

SECTION 7: Handling and Storage:

7.1 Precautions for safe handling: Only experienced and properly instructed persons should handle gases under pressure. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Refer to supplier's handling instructions. The substance must be handled in accordance with good industrial hygiene and safety procedures. Protect containers from physical damage; do not drag, roll, slide or drop. Do not remove or deface labels provided by the supplier for the identification of the container contents. When moving containers, even for short distances, use appropriate equipment eg. trolley, hand truck, fork truck etc. Secure cylinders in an upright position at all times, close all valves when not in use. Provide adequate ventilation. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Avoid suckback of water, acid and alkalis. Keep container below 50°C in a well ventilated place. Observe all regulations and local requirements regarding storage of containers. When using do not eat, drink or smoke. Store in accordance with local/regional/national/international regulations. Never use direct flame or electrical heating devices to raise the pressure of a container. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. Damaged valves should be reported immediately to the supplier Close container valve after each use and when empty, even if still connected to equipment. Never attempt to repair or modify container valves or safety relief devices. Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. Keep container valve outlets clean and free from contaminates particularly oil and water. If user experiences any difficulty operating container valve discontinue use and contact supplier. Never attempt to transfer gases from one container to another. Container valve guards or caps should be in place. Depressurisation of liquid CO2 below approximately 5 bar can create solid CO2 which may block protective devices, pipework and create dry-ice within containers. Containers, which contain or have contained flammable or explosive substances, must not be inerted with liquid carbon dioxide.

7.2 Conditions for safe storage, including any incompatibilities: Containers should not be stored in conditions likely to encourage corrosion. Stored containers should be periodically checked for general conditions and leakage. Container valve guards or caps should be in place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible material.

7.3 Specific end use(s): None.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Carbon dioxide	TWA	5,000 ppm 9,150 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (12 2011)
	STEL	15,000 ppm 27,400 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (12 2011)
	TWA	5,000 ppm 9,000 mg/m3	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)

8.2 Exposure controls

Appropriate engineering controls: Consider a work permit system e.g. for maintenance activities. Ensure adequate air ventilation. Oxygen detectors should be used when asphyxiating gases may be released. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Systems under pressure should be regularly checked for leakages. Preferably use permanent leak tight connections (eg. welded pipes). Do not eat, drink or smoke when using the product. CO2 detectors should be used when CO2 may be released.

Individual protection measures, such as personal protective equipment

General information: A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered. Keep self contained breathing apparatus readily available for emergency use. Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Eye/face protection: Safety eyewear, goggles or face-shield to EN166 should be used to avoid exposure to liquid splashes. Wear eye protection to EN 166 when using gases. Guideline: EN 166 Personal Eye Protection.

Skin protection
Hand Protection: Guideline: EN 388 Protective gloves against mechanical risks.
Additional Information: Wear working gloves while handling containers

Body protection:	No special precautions.
Other:	Wear safety shoes while handling containers Guideline: ISO 20345 Personal protective equipment - Safety footwear.
Respiratory Protection:	When allowed by a risk assessment Respiratory Protective Equipment (RPE) may be used The selection of the Respiratory Protective Device (RPD) must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected RPD. Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres. Guideline: EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.
Thermal hazards:	No precautionary measures are necessary.
Hygiene measures:	Specific risk management measures are not required beyond good industrial hygiene and safety procedures. Do not eat, drink or smoke when using the product.
Environmental exposure controls:	For waste disposal, see section 13.

SECTION 9: Physical And Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	Gas
Form:	Liquefied gas
Colour:	Colourless
Odour:	Odourless
Odour Threshold:	Odour threshold is subjective and is inadequate to warn of over exposure.
pH:	3.2 - 3.7 The pH of saturated CO2 solutions varies from 3.7 at 101 kPa (1 atm) to 3.2 at 2370 kPa (23.4 atm)
Melting Point:	-56.6 °C
Boiling Point:	-78.5 °C
Sublimation Point:	-78.5 °C
Critical Temp. (°C):	31.0 °C
Flash Point:	Not applicable to gases and gas mixtures.
Evaporation Rate:	Not applicable to gases and gas mixtures.
Flammability (solid, gas):	This product is not flammable.
Flammability limit - upper (%):	Not applicable.
Flammability limit - lower(%):	Not applicable.
Vapour pressure:	45.1 bar (10 °C)
Vapour density (air=1):	1.522 (21 °C)

Relative density:	1.512 (-56.6 °C)
Solubility(ies)	
Solubility in Water:	2.900 mg/l (25 °C)
Partition coefficient (n-octanol/water):	0.83
Autoignition Temperature:	Not applicable.
Decomposition Temperature:	Not known.
Viscosity	
Kinematic viscosity:	No data available.
Dynamic viscosity:	0.07 mPa.s (20 °C)
Explosive properties:	Not applicable.
Oxidising Properties:	Not applicable.

9.2 Other information: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

Molecular weight: 44.01 g/mol (CO_2)

SECTION 10: Stability and Reactivity

10.1 Reactivity: No reactivity hazard other than the effects described in sub-section below.

10.2 Chemical Stability: Stable under normal conditions.

10.3 Possibility of Hazardous Reactions: None.

10.4 Conditions to Avoid: None.

10.5 Incompatible Materials: No reaction with any common materials in dry or wet conditions.

10.6 Hazardous Decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

General information: In high concentrations may cause rapid circulatory deterioration even at normal levels of oxygen concentration. Symptoms are headache, nausea and vomiting, which may lead to unconsciousness and even death.

11.1 Information on toxicological effects

Acute toxicity - Oral
Product: Based on available data, the classification criteria are not met.

Acute toxicity - Dermal
Product Based on available data, the classification criteria are not met.

Acute toxicity - Inhalation
Product Based on available data, the classification criteria are not met.

Skin Corrosion/Irritation
Product Based on available data, the classification criteria are not met.

Serious Eye Damage/Eye Irritation
Product Based on available data, the classification criteria are not met.

Respiratory or Skin Sensitisation
Product Based on available data, the classification criteria are not met.

Germ Cell Mutagenicity
Product Based on available data, the classification criteria are not met.

Carcinogenicity
Product Based on available data, the classification criteria are not met.

Reproductive toxicity
Product Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Single Exposure
Product Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Repeated Exposure
Product Based on available data, the classification criteria are not met.

Aspiration Hazard
Product Not applicable to gases and gas mixtures..

SECTION 12: Ecological Information

12.1 Toxicity

Acute toxicity
Product No ecological damage caused by this product.

12.2 Persistence and Degradability
Product Not applicable to gases and gas mixtures..

12.3 Bioaccumulative Potential
Product The subject product is expected to biodegrade and is not expected to persist for long periods in an aquatic environment.

12.4 Mobility in Soil

Product: Because of its high volatility, the product is unlikely to cause ground or water pollution.

12.5 Results of PBT and vPvB assessment

Product: Not classified as PBT or vPvB.

12.6 Other Adverse Effects: No ecological damage caused by this product.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

General information: Do not discharge into any place where its accumulation could be dangerous. Vent to atmosphere in a well ventilated place.

Disposal methods: Refer to the EIGA code of practice (Doc.30 "Disposal of Gases", downloadable at http://www.eiga.org) for more guidance on suitable disposal methods. Dispose of container via supplier only. Discharge, treatment, or disposal may be subject to national, state, or local laws.

European Waste Codes

Container: 16 05 05: Gases in pressure containers other than those mentioned in 16 05 04.

SECTION 14: Transport Information

ADR

14.1 UN Number:	UN 1013
14.2 UN Proper Shipping Name:	CARBON DIOXIDE
14.3 Transport Hazard Class(es)	
Class:	2
Label(s):	2.2
Hazard No. (ADR):	20
Tunnel restriction code:	(C/E)
Emergency Action Code:	2T
14.4 Packing Group:	–
14.5 Environmental hazards:	Not applicable
14.6 Special precautions for user:	–

RID

14.1 UN Number:	UN 1013
14.2 UN Proper Shipping Name	CARBON DIOXIDE
14.3 Transport Hazard Class(es)	
Class:	2
Label(s):	2.2
14.4 Packing Group:	–
14.5 Environmental hazards:	Not applicable
14.6 Special precautions for user:	–

IMDG

14.1 UN Number:	UN 1013
14.2 UN Proper Shipping Name:	CARBON DIOXIDE
14.3 Transport Hazard Class(es)	
Class:	2.2
Label(s):	2.2
EmS No.:	F-C, S-V
14.4 Packing Group:	–
14.5 Environmental hazards:	Not applicable
14.6 Special precautions for user:	–

IATA

14.1 UN Number:	UN 1013
14.2 Proper Shipping Name:	Carbon dioxide
14.3 Transport Hazard Class(es):	
Class:	2.2
Label(s):	2.2
14.4 Packing Group:	–
14.5 Environmental hazards:	Not applicable
14.6 Special precautions for user:	–
Other information	
Passenger and cargo aircraft:	Allowed.
Cargo aircraft only:	Allowed.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

Additional identification: Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers ensure that they are firmly secured. Ensure that the container valve is closed and not leaking. Container valve guards or caps should be in place. Ensure adequate air ventilation.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU Regulations

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, as amended.:
Not applicable

National Regulations

Management of Health and Safety at Work Regulations (1999 No. 3242). The Regulatory Reform (Fire Safety) Order 2005 (2005 No. 1541). Control of Substances Hazardous to Health Regulations (COSHH, 2002 No. 2677). Provision and Use of Work Equipment Regulations (PUWER, 1998 No. 2306). Personal Protective Equipment Regulations (1992 No. 2966). Control of Major Accident Hazards Regulations (COMAH, 2015 No. 483). Pressure Systems Safety Regulations (PSSR, 2000 No. 128). Only products that comply with the food regulations (EC) No. 1333/2008 and (EU) No. 231/2012 and are labelled as such may be used as food additives.
This Safety Data Sheet has been produced to comply with Regulation (EU) 2015/830.

15.2 Chemical safety assessment: Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration. A CSA does not need to be carried out for this product.

SECTION 16: Other Information

Revision Information: Not relevant.

Key literature references and sources for data:

Various sources of data have been used in the compilation of this SDS, they include but are not exclusive to:
Agency for Toxic Substances and Diseases Registry (ATSDR) (http://www.atsdr.cdc.gov/).
European Chemical Agency: Guidance on the Compilation of Safety Data Sheets.
European Chemical Agency: Information on Registered Substances http://apps.echa.europa.eu/registered/registered-sub.aspx#search
European Industrial Gases Association (EIGA) Doc. 169 "Classification and Labelling guide", as amended.
International Programme on Chemical Safety (http://www.inchem.org/)
ISO 10156:2010 Gases and gas mixtures - Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets.
Matheson Gas Data Book, 7th Edition.
National Institute for Standards and Technology (NIST) Standard Reference Database Number 69.
The ESIS (European chemical Substances 5 Information System) platform of the former European Chemicals Bureau (ECB) ESIS (http://ecb.jrc.ec.europa.eu/esis/).
The European Chemical Industry Council (CEFIC) ERICards.
United States of America's National Library of Medicine's toxicology data network TOXNET (http://toxnet.nlm.nih.gov/index.html)
Threshold Limit Values (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH).
Substance specific information from suppliers.
Details given in this document are believed to be correct at the time of publication.
EH40 (as amended) Workplace exposure limits.

Wording of the H-statements in sections 2 and 3

H280	Contains gas under pressure; may explode if heated.

Training information:

Users of breathing apparatus must be trained. The hazard of asphyxiation is often overlooked and must be stressed during operator training. Ensure operators understand the hazards.

Classification according to Regulation (EC) No 1272/2008 as amended.

Press. Gas Liq. Gas, H280

Other information:

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Ensure adequate air ventilation. Ensure all national/local regulations are observed. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted. Note: When the Product Name appears in the SDS header the decimal sign and its position comply with rules for the structure and drafting of international standards, and is a comma on the line. As an example 2,000 is two (to three decimal places) and not two thousand, whilst 1.000 is one thousand and not one (to three decimal places).

Last revised date: 28.04.2021

Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

ConnectingChemistry

BRENNTAG

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

CAUSTIC SODA LIQUOR >=2% - <=50% (11-106 ºTW)

Version 9.0 Print Date 2017/07/13

Revision date / valid from 2017/07/13 **MSDS code: MCSS550**

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name	:	CAUSTIC SODA LIQUOR >=2% - <=50% (11-106 ºTW)
Substance name	:	sodium hydroxide
CAS-No.	:	1310-73-2
EC-No.	:	215-185-5
EU REACH-Reg. No.	:	01-2119457892-27-xxxx

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture	:	Identified use: See table in front of appendix for a complete overview of identified uses.
Uses advised against	:	At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

Company	:	Brenntag UK Limited Alpha House, Lawnswood Business Park GB LS16 6QY Leeds
Telephone	:	+44 (0) 113 3879 200
Telefax	:	+44 (0) 113 3879 280
E-mail address	:	msds@brenntag.co.uk

1.4. Emergency telephone number

Emergency telephone number	:	Emergency only telephone number (open 24 hours): +44 (0) 1865 407333 (N.C.E.C. Culham)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	**Hazard category**	**Target Organs**	**Hazard statements**
Corrosive to metals	Category 1	---	H290
Skin corrosion	Category 1A	---	H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

Most important adverse effects

Human Health	:	See section 11 for toxicological information.
Physical and chemical hazards	:	See section 9/10 for physicochemical information.
Potential environmental effects	:	See section 12 for environmental information.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard symbols :

Signal word : Danger

Hazard statements :

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

Precautionary statements

Prevention :

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response :

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P390	Absorb spillage to prevent material damage.

Hazardous components which must be listed on the label:

- sodium hydroxide

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical nature : Aqueous solution

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)	
		Hazard class / Hazard category	Hazard statements
sodium hydroxide			
Index-No. : 011-002-00-6 CAS-No. : 1310-73-2 EC-No. : 215-185-5 EU REACH-Reg. No. : 01-2119457892-27-xxxx	>= 2 - <= 50	Met. Corr.1 Skin Corr.1A	H290 H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice : Take off all contaminated clothing immediately.

If inhaled : In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

In case of skin contact : Wash off immediately with plenty of water. Call a physician immediately.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.

If swallowed : Rinse mouth with water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms : See Section 11 for more detailed information on health effects and symptoms.

Effects : Extremely corrosive and destructive to tissue. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. See Section

11 for more detailed information on health effects and symptoms.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Incomplete combustion may form toxic pyrolysis products.
Hazardous combustion products	:	Carbon monoxide, Carbon dioxide (CO2), The formation of caustic fumes is possible.

5.3. Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.Wear appropriate body protection (full protective suit)
Specific extinguishing methods	:	Control smoke with water spray.
Further advice	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Keep away unprotected persons. Use personal protective equipment. Ensure adequate ventilation. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist.

6.2. Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities. If material reaches soil inform authorities responsible for such cases.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up : Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Keep in suitable, closed containers for disposal.

	:	Use mechanical handling equipment. Keep in suitable, closed containers for disposal.
Further information	:	Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	:	Keep container tightly closed. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Use respirator with appropriate filter if vapours or aerosol are released. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.
Hygiene measures	:	Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Store in original container.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Further information on storage conditions	:	Keep tightly closed in a dry and cool place. Keep in a well-ventilated place.
Advice on common storage	:	Keep away from food, drink and animal feedingstuffs. Acids Light metals
Suitable packaging materials	:	Stainless steel, Polyethylene, Polypropylene, Polyvinylchloride
Unsuitable packaging materials	:	, Aluminium, Zinc, Copper

7.3. Specific end use(s)

Specific use(s)	:	No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Component:	sodium hydroxide	CAS-No. 1310-73-2

Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

DNEL
Workers, Long-term - local effects, Inhalation : 1.0 mg/m3

DNEL
Consumers, Long-term - local effects, Inhalation : 1.0 mg/m3

Predicted No Effect Concentration (PNEC)

No PNEC value was derived. :

Other Occupational Exposure Limit Values

UK. EH40 Workplace Exposure Limits (WELs), Short Term Exposure Limit (STEL):
2 mg/m3

ELV (IE), Short Term Exposure Limit (STEL):
2 mg/m3

8.2. Exposure controls

Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.

Provide sufficient air exchange and/or exhaust in work rooms.
Personal protective equipment

Respiratory protection

Advice : In case of brief exposure or low pollution use breathing filter apparatus.
Respiratory protection complying with EN 141.
In case of intensive or longer exposure use self-contained breathing apparatus.

Hand protection

Advice : Wear suitable gloves.
The glove material has to be impermeable and resistant to the product / the substance / the preparation.
Take note of the information given by the producer concerning

permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Protective gloves should be replaced at first signs of wear.

Material	:	Natural Rubber
Break through time	:	>= 8 h
Glove thickness	:	0.5 mm

Material	:	polychloroprene
Break through time	:	>= 8 h
Glove thickness	:	0.5 mm

Material	:	Nitrile rubber
Break through time	:	>= 8 h
Glove thickness	:	0.35 mm

Material	:	butyl-rubber
Break through time	:	>= 8 h
Glove thickness	:	0.5 mm

Material	:	Fluorinated rubber
Break through time	:	>= 8 h
Glove thickness	:	0.4 mm

Material	:	Polyvinylchloride
Break through time	:	>= 8 h
Glove thickness	:	0.5 mm

Eye protection

Advice : Safety goggles
Face-shield

Skin and body protection

Advice : Impervious clothing
Chemical resistant apron

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.
If the product contaminates rivers and lakes or drains inform respective authorities.
If material reaches soil inform authorities responsible for such cases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	:	liquid
Colour	:	colourless
Odour	:	odourless
Odour Threshold	:	Not applicable
pH	:	ca. 14 (20 °C)
Melting point/range	:	-17 °C 10% solution 12 °C 50% solution
Boiling point/boiling range	:	105 °C 10% solution 145 °C 50% solution
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Vapour pressure	:	21 hPa (20 °C) 12% solution
Relative vapour density	:	no data available
Density	:	ca. 1.0538 g/cm3 (20 °C) 5% solution ca. 1.175 g/cm3 (20 °C) 15% solution ca. 1.274 g/cm3 (20 °C) 25% solution ca. 1.34 g/cm3 (20 °C) 30% solution ca. 1.38 g/cm3 (20 °C) 35% solution ca. 1.48 g/cm3 (20 °C) 45% solution ca. 1.525 g/cm3 (20 °C) 50% solution ca. 1.2191 g/cm3 (20 °C) 20% solution
Water solubility	:	1090 g/l (20 °C)
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	79 mPa.s (20 °C)
Explosivity	:	Product is not explosive.

Oxidizing properties	:	no data available

9.2. Other information

Corrosion to metals	:	Corrosive to metals

SECTION 10: Stability and reactivity

10.1. Reactivity

Advice	:	No decomposition if stored and applied as directed.

10.2. Chemical stability

Advice	:	Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions	:	Corrosive in contact with metals Gives off hydrogen by reaction with base metals (zinc, aluminium). Reacts exothermically with water. Reacts exothermic with acids.

10.4. Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.
Thermal decomposition	:	no data available

10.5. Incompatible materials

Materials to avoid	:	Materials to avoid: Acids, Light metals, Alcohols, Halogenated hydrocarbon

10.6. Hazardous decomposition products

Hazardous decomposition products	:	hydrogen

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Data for the product
Acute toxicity
Oral
Please find this information in the listing of the component/components below in this section.
Inhalation
no data available

Dermal

no data available

Irritation

Skin

Result : Causes severe skin burns and eye damage.

Eyes

Result : Causes eye burns.

Sensitisation

no data available

CMR effects

CMR Properties

Carcinogenicity : no data available

Mutagenicity : no data available

Reproductive toxicity : no data available

Specific Target Organ Toxicity

Single exposure

no data available

Repeated exposure

no data available

Other toxic properties

Repeated dose toxicity

no data available

Aspiration hazard

no data available

Component: sodium hydroxide CAS-No. 1310-73-2

Acute toxicity

Oral

No valid data available.

Inhalation

No valid data available.

Dermal

No valid data available.

Irritation

Skin

Result	:	Very corrosive (Rabbit) (No guideline followed)

Eyes

Result	:	Irritating to eyes. (Rabbit) (OECD Test Guideline 405)

Sensitisation

Result	:	not sensitizing (human) (No guideline followed)Patch test on human volunteers did not demonstrate sensitisation properties.

CMR effects

CMR Properties

Carcinogenicity	:	No experimental references for cancerogenity available.
Mutagenicity	:	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects
Teratogenicity	:	no data available
Reproductive toxicity	:	Not expected to impair fertility.

Specific Target Organ Toxicity

Single exposure

Remarks	:	The substance or mixture is not classified as specific target organ toxicant, single exposure.

Repeated exposure

Remarks	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Other toxic properties
Aspiration hazard
Not applicable,

SECTION 12: Ecological information

12.1. Toxicity

Data for the product		
Acute toxicity		
Acute aquatic toxicity		
Result	:	The product is not classified as dangerous for the environment.

Component:	sodium hydroxide	CAS-No. 1310-73-2
Acute toxicity		
Fish		
LC50	:	125 mg/l (Gambusia affinis; 96 h) (No guideline followed)
LC50		145 mg/l (Poecilia reticulata; 24 h) (No guideline followed)
Toxicity to daphnia and other aquatic invertebrates		
EC50	:	40.4 mg/l (Ceriodaphnia (water flea); 48 h) (No guideline followed)
algae		
	:	no data available
Bacteria		
EC50	:	22 mg/l (Photobacterium phosphoreum; 15 min) (EPS 1/RM/24)

12.2. Persistence and degradability

Component:	sodium hydroxide	CAS-No. 1310-73-2

Persistence and degradability		
Persistence		
Result	:	no data available
Biodegradability		
Result	:	The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Component:	sodium hydroxide	CAS-No. 1310-73-2
Bioaccumulation		
Result	:	Does not bioaccumulate.

12.4. Mobility in soil

Component:	sodium hydroxide	CAS-No. 1310-73-2
Mobility		
Water	:	The product is mobile in water enviroment.

12.5. Results of PBT and vPvB assessment

Data for the product		
Results of PBT and vPvB assessment		
Result	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Component:	sodium hydroxide	CAS-No. 1310-73-2
Results of PBT and vPvB assessment		
Result	:	The PBT or vPvB criteria of Annex XIII to the REACH Regulation does not apply to inorganic substances.

12.6. Other adverse effects

Data for the product
Additional ecological information

Result	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. Harmful effects to aquatic organisms due to pH-shift.
Result	:	

Component:	**sodium hydroxide**	**CAS-No. 1310-73-2**
	Additional ecological information	

Result	:	Harmful effects to aquatic organisms due to pH-shift. Neutralization is normally necessary before waste water is discharged into water treatment plants. Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	:	Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
Contaminated packaging	:	Dispose of contaminated packaging in the same way as the product. In accordance with local and national regulations. Empty containers retain residue and can be dangerous.
European Waste Catalogue Number	:	No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

SECTION 14: Transport information

14.1. UN number

1824

14.2. UN proper shipping name

ADR	:	SODIUM HYDROXIDE SOLUTION
RID	:	SODIUM HYDROXIDE SOLUTION
IMDG	:	SODIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)

ADR-Class (Labels; Classification Code; Hazard identification No; Tunnel restriction code)	:	8 8; C5; 80; (E)
RID-Class (Labels; Classification Code; Hazard identification No)	:	8 8; C5; 80
IMDG-Class	:	8

(Labels; EmS) 8; F-A, S-B

14.4. Packaging group

ADR : II
RID : II
IMDG : II

14.5. Environmental hazards

Environmentally hazardous according to ADR : no
Environmentally hazardous according to RID : no
Marine Pollutant according to IMDG-Code : no

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Data for the product

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC) : Point Nos.: , 3; Listed

EU. Directive 2012/18/EU (SEVESO III) Annex I : ; The substance/mixture does not fall under this legislation.

Component: sodium hydroxide CAS-No. 1310-73-2

EU. Regulation EU No. 649/2012 concerning the export and import of dangerous chemicals : ; The substance/mixture does not fall under this legislation.

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC) : ; The substance/mixture does not fall under this legislation.

EU. Regulation No 1451/2007 [Biocides], Annex I, OJ (L 325)	:	EC Number: , 215-185-5; Listed
EU. Regulation No. 1223/2009 on cosmetic products, Annex III: List of Restricted Substances in Cosmetic Products	:	Maximum concentration in ready for use preparation: 2 %; Hair straightener: General use; See the text of the regulation for applicable exceptions or provisions. pH < 12,7.; pH adjuster for depilatories; See the text of the regulation for applicable exceptions or provisions. Maximum concentration in ready for use preparation: 4.5 %; Hair straightener: Professional use; See the text of the regulation for applicable exceptions or provisions. pH < 11.; Uses as pH adjuster other than for depilatories; See the text of the regulation for applicable exceptions or provisions. Maximum concentration in ready for use preparation: 5 %; Nail cuticle solvent; See the text of the regulation for applicable exceptions or provisions.
EU. Directive 2012/18/EU (SEVESO III) Annex I	:	; The substance/mixture does not fall under this legislation.
WGK (DE)	:	WGK 1: slightly water endangering: 142; Classification source is Annex 2.

Component:	**sodium hypochlorite, solution**	**CAS-No. 7681-52-9**

Notification status
sodium hypochlorite, solution:

Regulatory List	Notification	Notification number
AICS	YES	
DSL	YES	
EINECS	YES	231-668-3
ENCS (JP)	YES	(1)-237
IECSC	YES	
ISHL (JP)	YES	(1)-237
KECI (KR)	YES	KE-31506
NZIOC	YES	HSR003698
PICCS (PH)	YES	
TSCA	YES	

15.2. Chemical safety assessment

no data available

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

Abbreviations and Acronyms

BCF	bioconcentration factor
BOD	biochemical oxygen demand
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	carcinogenic, mutagenic or toxic to reproduction
COD	chemical oxygen demand
DNEL	derived no-effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LC50	median lethal concentration
LOAEC	lowest observed adverse effect concentration
LOAEL	lowest observed adverse effect level
LOEL	lowest observed effect level
NLP	no-longer polymer
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
OECD	Organisation for Economic Cooperation and Development
OEL	occupational exposure limit
PBT	persistent, bioaccumulative and toxic
PNEC	predicted no-effect concentration
STOT	specific target organ toxicity
SVHC	substance of very high concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
vPvB	very persistent and very bioaccumulative

Further information

Key literature references and sources for data	:	Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were

used to create this safety data sheet.

Methods used for product classification	:	The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.
Hints for trainings	:	The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.
Other information	:	The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

|| Indicates updated section.

CAUSTIC SODA LIQUOR >=2% - <=50% (11-106 ºTW)

No.	Short title	Main User Group (SU)	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Environmental Release Category (ERC)	Article Category (AC)	Specified
1	Manufacture of substance - liquid	3	8	NA	1, 2, 3, 4, 8a, 8b, 9	1	NA	ES035
2	Manufacture of substance - solid	3	8	NA	1, 2, 3, 4, 8a, 8b, 9	1	NA	ES057
3	Industrial use	3	NA	NA	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 15, 19, 23, 24	2, 4, 6a, 6b, 7	NA	ES065
4	Professional use	22	NA	NA	1, 2, 3, 4, 5, 8a, 8b, 9, 10, 11, 13, 15, 19, 23, 24	8a, 8b, 8d, 9a	NA	ES067
5	Consumer use	21	NA	20, 35, 39	NA	8a, 8b, 8d, 9a	NA	ES075

CAUSTIC SODA LIQUOR >=2% - <=50% (11-106 ºTW)

1. Short title of Exposure Scenario 1: Manufacture of substance - liquid		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Sectors of end-use	SU8: Manufacture of bulk, large scale chemicals (including petroleum products)	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Environmental Release Categories	ERC1: Manufacture of substances	
2.1 Contributing scenario controlling environmental exposure for: ERC1		
Product characteristics	Concentration of the Substance in Mixture/Article	Concentration of substance in product : 0% - 50%
Other given operational conditions affecting environmental exposure	Continuous exposure	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Application Area	Industrial use
	Water	Regular control of the pH value during introduction into open waters is required.,In general discharges should be carried out such that pH changes in receiving surface waters are minimised.,In general most aquatic organisms can tolerate pH values in the range of 6-9. This is also reflected in the description of standard OECD tests with aquatic organisms.,Risk management measures related to the environment aim to avoid discharging the substance into municipal wastewater or to surface water, in case such discharges are expected to cause significant pH changes.
Conditions and measures related to external treatment of waste for disposal	Disposal methods	Waste should be reused or discharged to the industrial wastewater and further neutralized if needed.
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9		
Product characteristics	Concentration of the Substance in Mixture/Article	Concentration of substance in product : 0% - 50%
	Physical Form (at time of use)	liquid
Frequency and duration of use	Frequency of use	200 days/year
	Frequency of use	8 hours/day
Technical conditions and measures to control dispersion from source towards the worker	Application Area	Industrial use
	Use closed systems or covering of open containers (e.g. screens) Transport over pipes, technical barrel filling/emptying of barrel with automatic systems (suction pumps etc.) Use of pliers, grip arms with long handles with manual use to avoid direct	

	contact and exposure by splashes (no working over one's head)
Organisational measures to prevent /limit releases, dispersion and exposure	Application Area: Industrial use Replacing, where appropriated, manual processes by automated and/or closed processes. This would avoid irritating mists, sprayings and subsequent potential splashes. Workers in the risky process/areas identified should be trained a) to avoid to work without respiratory protection and b) to understand the corrosive properties and, especially, the respiratory inhalation effects and c) to follow the safety procedures instructed by the employer. The employer has also to ascertain that the required PPE is available
Conditions and measures related to personal protection, hygiene and health evaluation	Application Area: Industrial use In case of dust or aerosol formation: use respiratory protection with approved filter (P2) Wear chemically resistant gloves. material: butyl-rubber, PVC, polychloroprene with natural latex liner, material thickness: 0.5 mm, breakthrough time: >480 min material: nitrile-rubber, fluorinated rubber, material thickness: 0.35-0.4 mm, breakthrough time: > 480 min wear tightly fitting safety goggles, face–shield Wear suitable protective clothing, aprons, shield and suits If splashes are likely to occur: Rubber or plastic boots

3. Exposure estimation and reference to its source

Environment

The aquatic effect and risk assessment only deals with the effect on organisms/ecosystems due to possible pH changes related to OH- discharges, as the toxicity of the metal ion is expected to be insignificant compared to the (potential) pH effect. The high water solubility and very low vapour pressure indicates that the substance will be found predominantly in water. When the risk management measures related to the environment are implemented, there is no exposure to the activated sludge of a sewage treatment plant and there is no exposure to the receiving surface water. The sediment compartment is not considered, because it is not relevant for the substance. If emitted to the aquatic compartment, sorption to sediment particles will be negligible. Significant emissions to air are not expected due to the very low vapour pressure of the substance. If emitted to air as a water-based aerosol, the substance will be rapidly neutralised as a result of its reaction with CO2 (or acids). Significant emissions to the terrestrial environment are not expected. The sludge application route is not relevant for the emission to agricultural soil, as no sorption of the substance to particulate matter will occur in STPs/WWTPs. If emitted to soil, sorption to soil particles will be negligible. Depending on the buffer capacity of the soil, OH- will be neutralised in the soil pore water or the pH may increase. Bioaccumulation will not occur.

Workers

PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9	Modeled exposure data, very low vapour pressure, Without Local Exhaust Ventilation, without respiratory protection	Inhalation worker exposure	0.17mg/m³	0.17
PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9	Measured exposure data, worst-case	Worker - inhalative, short-term - local	0.33mg/m³	0.33
PROC1, PROC2, PROC3, PROC4,	Measured exposure data, worst-case	Worker - inhalative, long-term - local	0.14mg/m³	0.14

PROC8a, PROC8b, PROC9				

This substance is corrosive. For the handling of corrosive substances and formulations, immediate dermal contacts occur only occasionally and it is assumed that repeated daily dermal exposure can be neglected. Dermal exposure to the substance was not quantified. The substance is not expected to be systemically available in the body under normal handling and use conditions. Systemic effects of NaOH after dermal or inhalation exposure are not expected to occur.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below
If measured data are not available, the DU may make use of an appropriate scaling tool such as ECETOC TRA.
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

Additional good practice advice beyond the REACH Chemical Safety Assessment

Local exhaust ventilation is not required but good practice.
General ventilation is good practice unless local exhaust ventilation

CAUSTIC SODA LIQUOR >=2% - <=50% (11-106 ºTW)

1. Short title of Exposure Scenario 2: Manufacture of substance - solid		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Sectors of end-use	SU8: Manufacture of bulk, large scale chemicals (including petroleum products)	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Environmental Release Categories	ERC1: Manufacture of substances	

2.1 Contributing scenario controlling environmental exposure for: ERC1		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Other given operational conditions affecting environmental exposure	Continuous exposure	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Application Area	Industrial use
	Water	Regular control of the pH value during introduction into open waters is required.,In general discharges should be carried out such that pH changes in receiving surface waters are minimised.,In general most aquatic organisms can tolerate pH values in the range of 6-9. This is also reflected in the description of standard OECD tests with aquatic organisms.,Risk management measures related to the environment aim to avoid discharging the substance into municipal wastewater or to surface water, in case such discharges are expected to cause significant pH changes.

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	200 days/year
	Frequency of use	8 hours/day
Technical conditions and measures to control dispersion from source towards the worker	Application Area	Industrial use
	Use closed systems or covering of open containers (e.g. screens) Transport over pipes, technical barrel filling/emptying of barrel with automatic systems (suction pumps etc.) Use of pliers, grip arms with long handles with manual use to avoid direct contact and exposure by splashes (no working over one's head)	
Organisational measures to prevent /limit releases, dispersion	Application Area	Industrial use
	Replacing, where appropriated, manual processes by automated and/or closed	

and exposure	processes. This would avoid irritating mists, sprayings and subsequent potential splashes. Workers in the risky process/areas identified should be trained a) to avoid to work without respiratory protection and b) to understand the corrosive properties and, especially, the respiratory inhalation effects and c) to follow the safety procedures instructed by the employer. The employer has also to ascertain that the required PPE is available
Conditions and measures related to personal protection, hygiene and health evaluation	Application Area: Industrial use In case of dust or aerosol formation: use respiratory protection with approved filter (P2) Wear chemically resistant gloves. material: butyl-rubber, PVC, polychloroprene with natural latex liner, material thickness: 0.5 mm, breakthrough time: >480 min material: nitrile-rubber, fluorinated rubber, material thickness: 0.35-0.4 mm, breakthrough time: > 480 min wear tightly fitting safety goggles, face–shield Wear suitable protective clothing, aprons, shield and suits If splashes are likely to occur: Rubber or plastic boots

3. Exposure estimation and reference to its source

Environment

The aquatic effect and risk assessment only deals with the effect on organisms/ecosystems due to possible pH changes related to OH- discharges, as the toxicity of the metal ion is expected to be insignificant compared to the (potential) pH effect. The high water solubility and very low vapour pressure indicates that the substance will be found predominantly in water. When the risk management measures related to the environment are implemented, there is no exposure to the activated sludge of a sewage treatment plant and there is no exposure to the receiving surface water. The sediment compartment is not considered, because it is not relevant for the substance. If emitted to the aquatic compartment, sorption to sediment particles will be negligible. Significant emissions to air are not expected due to the very low vapour pressure of the substance. If emitted to air as a water-based aerosol, the substance will be rapidly neutralised as a result of its reaction with CO2 (or acids). Significant emissions to the terrestrial environment are not expected. The sludge application route is not relevant for the emission to agricultural soil, as no sorption of the substance to particulate matter will occur in STPs/WWTPs. If emitted to soil, sorption to soil particles will be negligible. Depending on the buffer capacity of the soil, OH- will be neutralised in the soil pore water or the pH may increase. Bioaccumulation will not occur.

Workers

PROC1, PROC2, PROC3, PROC4, PROC8a, PROC9: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1, PROC2	Modeled exposure data, Low dustiness, no LEV, no respiratory protection (RPE)	Inhalation worker exposure	0.01mg/m³	0.01
PROC3, PROC9	Modeled exposure data, Low dustiness, no LEV, no respiratory protection (RPE)	Inhalation worker exposure	0.1mg/m³	0.1
PROC4, PROC8a	Modeled exposure data, Low dustiness, no LEV, no respiratory protection (RPE)	Inhalation worker exposure	0.5mg/m³	0.5
PROC9	Measured exposure data, worst-case	Worker - inhalative, short-term - local	0.26mg/m³	0.26

This substance is corrosive. For the handling of corrosive substances and formulations, immediate dermal contacts occur only occasionally and it is assumed that repeated daily dermal exposure can be neglected. Dermal exposure

to the substance was not quantified. The substance is not expected to be systemically available in the body under normal handling and use conditions. Systemic effects of NaOH after dermal or inhalation exposure are not expected to occur.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below
If measured data are not available, the DU may make use of an appropriate scaling tool such as ECETOC TRA.
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

Additional good practice advice beyond the REACH Chemical Safety Assessment

Local exhaust ventilation is not required but good practice.
General ventilation is good practice unless local exhaust ventilation

1. Short title of Exposure Scenario 3: Industrial use	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC15: Use as laboratory reagent PROC19: Hand-mixing with intimate contact and only PPE available PROC23: Open processing and transfer operations with minerals/ metals at elevated temperature PROC24: High (mechanical) energy work-up of substances bound in materials and/ or articles
Environmental Release Categories	ERC2: Formulation of preparations ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC6b: Industrial use of reactive processing aids ERC7: Industrial use of substances in closed systems

2.1 Contributing scenario controlling environmental exposure for: ERC2, ERC4, ERC6a, ERC6b, ERC7		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Other given operational conditions affecting environmental exposure	Continuous exposure	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Application Area	Industrial use
	Water	Regular control of the pH value during introduction into open waters is required.,In general discharges should be carried out such that pH changes in receiving surface waters are minimised.,In general most aquatic organisms can tolerate pH values in the range of 6-9. This is also reflected in the description of standard OECD tests with aquatic organisms.,Risk management measures related to the environment aim to avoid discharging the substance into municipal wastewater or to surface water, in case such discharges are expected to cause significant pH changes.
Conditions and measures related to external treatment of waste for disposal	Disposal methods	Waste should be reused or discharged to the industrial wastewater and further neutralized if needed.

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC15, PROC19, PROC23, PROC24		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Concentration of the Substance in Mixture/Article	Concentration of substance in product: > 2%
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	Solid, low dustiness
Frequency and duration of use	Frequency of use	8 hours/day
	Frequency of use	200 days/year
Technical conditions and measures to control dispersion from source towards the worker	Application Area	Industrial use
	Use closed systems or covering of open containers (e.g. screens) Transport over pipes, technical barrel filling/emptying of barrel with automatic systems (suction pumps etc.) Use of pliers, grip arms with long handles with manual use to avoid direct contact and exposure by splashes (no working over one's head)	
Organisational measures to prevent /limit releases, dispersion and exposure	Application Area	Industrial use
	Replacing, where appropriated, manual processes by automated and/or closed processes. This would avoid irritating mists, sprayings and subsequent potential splashes. Workers in the risky process/areas identified should be trained a) to avoid to work without respiratory protection and b) to understand the corrosive properties and, especially, the respiratory inhalation effects and c) to follow the safety procedures instructed by the employer. The employer has also to ascertain that the required PPE is available	
Conditions and measures related to personal protection, hygiene and health evaluation	Application Area	Industrial use
	In case of dust or aerosol formation: use respiratory protection with approved filter (P2) Wear chemically resistant gloves. material: butyl-rubber, PVC, polychloroprene with natural latex liner, material thickness: 0.5 mm, breakthrough time: >480 min material: nitrile-rubber, fluorinated rubber, material thickness: 0.35-0.4 mm, breakthrough time: > 480 min If splashes are likely to occur: wear tightly fitting safety goggles, face–shield Wear suitable protective clothing, aprons, shield and suits Rubber or plastic boots	

3. Exposure estimation and reference to its source

Environment

The aquatic effect and risk assessment only deals with the effect on organisms/ecosystems due to possible pH changes related to OH- discharges, as the toxicity of the metal ion is expected to be insignificant compared to the (potential) pH effect. The high water solubility and very low vapour pressure indicates that the substance will be found predominantly in water. When the risk management measures related to the environment are implemented, there is no exposure to the activated sludge of a sewage treatment plant and there is no exposure to the receiving surface water. The sediment compartment is not considered, because it is not relevant for the substance. If emitted to the aquatic compartment, sorption to sediment particles will be negligible. Significant emissions to air are not expected due to the very low vapour pressure of the substance. If emitted to air as a water-based aerosol, the substance will be rapidly neutralised as a result of its reaction with CO2 (or acids). Significant emissions to the terrestrial environment are not expected. The sludge application route is not relevant for the emission to agricultural

soil, as no sorption of the substance to particulate matter will occur in STPs/WWTPs. If emitted to soil, sorption to soil particles will be negligible. Depending on the buffer capacity of the soil, OH- will be neutralised in the soil pore water or the pH may increase. Bioaccumulation will not occur.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15, PROC19, PROC23, PROC24: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15, PROC19, PROC23, PROC24	liquid, no LEV, no respiratory protection (RPE)	Worker - inhalative, short-term - local	0.17mg/m³	---
PROC1, PROC2	solid, no LEV, no respiratory protection (RPE)	Worker - inhalative, short-term - local	0.01mg/m³	---
PROC3, PROC15	solid, no LEV, no respiratory protection (RPE)	Worker - inhalative, short-term - local	0.1mg/m³	---
PROC4, PROC5, PROC14	solid, no respiratory protection (RPE), With Local Exhaust Ventilation	Worker - inhalative, short-term - local	0.2mg/m³	---
PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC19	solid, no LEV, no respiratory protection (RPE)	Worker - inhalative, short-term - local	0.5mg/m³	---
PROC23	solid, with RPE (90%)	Worker - inhalative, short-term - local	0.4mg/m³	---
PROC24	solid, with RPE (90%)	Worker - inhalative, short-term - local	0.5mg/m³	---

This substance is corrosive. For the handling of corrosive substances and formulations, immediate dermal contacts occur only occasionally and it is assumed that repeated daily dermal exposure can be neglected. Dermal exposure to the substance was not quantified. The substance is not expected to be systemically available in the body under normal handling and use conditions. Systemic effects of NaOH after dermal or inhalation exposure are not expected to occur. Based on workplace measurements and following the proposed risk management measures controlling worker and professional exposure, the inhalation exposure is below the DNEL.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below
If measured data are not available, the DU may make use of an appropriate scaling tool such as ECETOC TRA.

Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

Additional good practice advice beyond the REACH Chemical Safety Assessment

Local exhaust ventilation is not required but good practice.
General ventilation is good practice unless local exhaust ventilation

1. Short title of Exposure Scenario 4: Professional use	
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC15: Use as laboratory reagent PROC19: Hand-mixing with intimate contact and only PPE available PROC23: Open processing and transfer operations with minerals/ metals at elevated temperature PROC24: High (mechanical) energy work-up of substances bound in materials and/ or articles
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8b: Wide dispersive indoor use of reactive substances in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC9a: Wide dispersive indoor use of substances in closed systems

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8b, ERC8d, ERC9a		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Other given operational conditions affecting environmental exposure	Continuous exposure	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Application Area	Professional use
	Water	Regular control of the pH value during introduction into open waters is required.,In general discharges should be carried out such that pH changes in receiving surface waters are minimised.,In general most aquatic organisms can tolerate pH values in the range of 6-9. This is also reflected in the description of standard OECD tests with aquatic organisms.,Risk management measures related to the environment aim to avoid discharging the substance into municipal wastewater or to surface water, in case such discharges are expected to cause significant pH changes.
Conditions and measures related to external treatment of waste for disposal	Disposal methods	Waste should be reused or discharged to the industrial wastewater and further neutralized if needed.

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC15, PROC19, PROC23, PROC24		
Product characteristics	Concentration of the	Covers percentage substance in the product up to

	Substance in Mixture/Article	100 %.
	Concentration of the Substance in Mixture/Article	Concentration of substance in product: > 2%
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	Solid, low dustiness
Frequency and duration of use	Frequency of use	8 hours/day
	Frequency of use	200 days/year
Technical conditions and measures to control dispersion from source towards the worker	Application Area	Professional use
	Use of pliers, grip arms with long handles with manual use to avoid direct contact and exposure by splashes (no working over one's head) Where possible use of specific dispensers and pumps specifically designed to prevent splashes/spills/exposure to occur.	
Organisational measures to prevent /limit releases, dispersion and exposure	Application Area	Professional use
	Replacing, where appropriated, manual processes by automated and/or closed processes. This would avoid irritating mists, sprayings and subsequent potential splashes. Workers in the risky process/areas identified should be trained a) to avoid to work without respiratory protection and b) to understand the corrosive properties and, especially, the respiratory inhalation effects and c) to follow the safety procedures instructed by the employer. The employer has also to ascertain that the required PPE is available	
Conditions and measures related to personal protection, hygiene and health evaluation	Application Area	Professional use
	In case of dust or aerosol formation: use respiratory protection with approved filter (P2) Wear chemically resistant gloves. material: butyl-rubber, PVC, polychloroprene with natural latex liner, material thickness: 0.5 mm, breakthrough time: >480 min material: nitrile-rubber, fluorinated rubber, material thickness: 0.35-0.4 mm, breakthrough time: > 480 min If splashes are likely to occur: wear tightly fitting safety goggles, face–shield Wear suitable protective clothing, aprons, shield and suits Rubber or plastic boots	

3. Exposure estimation and reference to its source

Environment

The aquatic effect and risk assessment only deals with the effect on organisms/ecosystems due to possible pH changes related to OH- discharges, as the toxicity of the metal ion is expected to be insignificant compared to the (potential) pH effect. The high water solubility and very low vapour pressure indicates that the substance will be found predominantly in water. When the risk management measures related to the environment are implemented, there is no exposure to the activated sludge of a sewage treatment plant and there is no exposure to the receiving surface water. The sediment compartment is not considered, because it is not relevant for the substance. If emitted to the aquatic compartment, sorption to sediment particles will be negligible. Significant emissions to air are not expected due to the very low vapour pressure of the substance. If emitted to air as a water-based aerosol, the substance will be rapidly neutralised as a result of its reaction with CO2 (or acids). Significant emissions to the terrestrial environment are not expected. The sludge application route is not relevant for the emission to agricultural soil, as no sorption of the substance to particulate matter will occur in STPs/WWTPs. If emitted to soil, sorption to soil particles will be negligible. Depending on the buffer capacity of the soil, OH- will be neutralised in the soil pore water or the pH may increase. Bioaccumulation will not occur.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC14, PROC15, PROC19, PROC23, PROC24: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC14, PROC15, PROC19, PROC23, PROC24	liquid, no LEV, no respiratory protection (RPE)	Worker - inhalative, short-term - local	0.17mg/m³	---
PROC1, PROC2	solid, no LEV, no respiratory protection (RPE)	Worker - inhalative, short-term - local	0.01mg/m³	---
PROC3, PROC15	solid, no LEV, no respiratory protection (RPE)	Worker - inhalative, short-term - local	0.1mg/m³	---
PROC4, PROC5, PROC11, PROC14	solid, no respiratory protection (RPE)	Worker - inhalative, short-term - local	0.2mg/m³	---
PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC19	solid, no LEV, no respiratory protection (RPE)	Worker - inhalative, short-term - local	0.5mg/m³	---
PROC23	solid, with RPE (90%)	Worker - inhalative, short-term - local	0.4mg/m³	---
PROC24	solid, with RPE (90%)	Worker - inhalative, short-term - local	0.5mg/m³	---

This substance is corrosive. For the handling of corrosive substances and formulations, immediate dermal contacts occur only occasionally and it is assumed that repeated daily dermal exposure can be neglected. Dermal exposure to the substance was not quantified. The substance is not expected to be systemically available in the body under normal handling and use conditions. Systemic effects of NaOH after dermal or inhalation exposure are not expected to occur. Based on workplace measurements and following the proposed risk management measures controlling worker and professional exposure, the inhalation exposure is below the DNEL.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below
If measured data are not available, the DU may make use of an appropriate scaling tool such as ECETOC TRA.
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

Additional good practice advice beyond the REACH Chemical Safety Assessment

Local exhaust ventilation is not required but good practice.
General ventilation is good practice unless local exhaust ventilation

1. Short title of Exposure Scenario 5: Consumer use		
Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)	
Chemical product category	PC20: Products such as ph-regulators, flocculants, pre-cipitants, neutralization agents PC35: Washing and cleaning products (including solvent based products) PC39: Cosmetics, personal care products	
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8b: Wide dispersive indoor use of reactive substances in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC9a: Wide dispersive indoor use of substances in closed systems	
Activity	Note: this Exposure Scenario is only relevant for an appropriated use according to the quality grade of the substance delivered	
2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8b, ERC8d, ERC9a		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	There are no specific risk management measures related to environment.	
Conditions and measures related to external treatment of waste for disposal	Disposal methods	This material and its container must be disposed of in a safe way (e.g. by returning to a public recycling facility)., If container is empty, trash as regular municipal waste., Batteries should be recycled as much as possible (e.g. by returning to a public recycling facility)., Recovery of the substance from alkaline batteries includes emptying the electrolyte, collection and neutralization.
2.2 Contributing scenario controlling consumer exposure for: PC20, PC35, PC39		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	Solid, low dustiness
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	It is required to use resistant labelling-package to avoid its auto-damage and loss of the label integrity, under normal use and storage of the product. The lack of quality of the package provokes the physical loss of information on hazards and use instructions. It is advisable to deliver only in very viscous preparations. It is advisable to delivery only in small amounts. For use in batteries, it is required to use completely sealed articles with a long service life maintenance. It is required that improved use instructions, and product information should always be provided to the consumers. This clearly can efficiently reduce

		the risk of misuse. For reducing the number of accidents in which (young) children or elderly people are involved, it should be advisable to use these products in the absence of children or other potential sensitive groups. Do not apply product into ventilator openings or slots. Keep out of the reach of children.
	Consumer Measures	In case of dust or aerosol formation: use respiratory protection with approved filter (P2) Wear impervious chemical resistant protective gloves. If splashes are likely to occur: wear tightly fitting safety goggles, face–shield

3. Exposure estimation and reference to its source

Environment

Consumer uses relate to already diluted products which will further be neutralized quickly in the sewer, well before reaching a WWTP or surface water.

Consumers

PC39, PC20, PC35: ConsExpo and SrayExpo

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PC20, PC35, PC39	Assessed only for the most critical use, (use of the substance in a spray oven cleaner)	consumer inhalation, acute - local	0.3 - 1.6mg/m³	< 1

The calculated short-term exposure is slightly higher than the long term DNEL for inhalation, but smaller than the short term occupational exposure limit. The substance will be rapidly neutralised as a result of its reaction with CO2 (or other acids). Consumer exposure to the substance in batteries is zero because batteries are sealed articles with a long service life maintenance.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PCs listed above) as given below
If measured data are not available, the DU may make use of an appropriate scaling tool such as ConsEXpo software.
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

ConnectingChemistry

BRENNTAG

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

FERRIC CHLORIDE 25 - 99%

Version 6.1 Print Date 2017/11/20

Revision date / valid from 2017/11/20 **MSDS code: MFIC010**

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : FERRIC CHLORIDE 25 - 99%

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Identified use: See table in front of appendix for a complete overview of identified uses.

Uses advised against : At this moment we have not identified any uses advised against

Remarks : Before referring to any Exposure Scenario attached to this Safety Data Sheet please check the grade of the product: the Exposure Scenarios presented are not related to the product grade

1.3. Details of the supplier of the safety data sheet

Company : Brenntag UK Limited
Alpha House, Lawnswood Business Park
GB LS16 6QY Leeds

Telephone : +44 (0) 113 3879 200

Telefax : +44 (0) 113 3879 280

E-mail address : msds@brenntag.co.uk

1.4. Emergency telephone number

Emergency telephone number : Emergency only telephone number (open 24 hours): +44 (0) 1865 407333 (N.C.E.C. Culham)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	**Hazard category**	**Target Organs**	**Hazard statements**
Corrosive to metals	Category 1	---	H290

Acute toxicity (Oral)	Category 4	---	H302
Skin irritation	Category 2	---	H315
Serious eye damage	Category 1	---	H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

Most important adverse effects

Human Health : See section 11 for toxicological information.

Physical and chemical hazards : See section 9/10 for physicochemical information.

Potential environmental effects : See section 12 for environmental information.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard symbols :

Signal word : Danger

Hazard statements :

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

Precautionary statements

Prevention :

P234	Keep only in original container.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response :

P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P302 + P352	IF ON SKIN: Wash with plenty of water/soap.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:

• Iron trichloride

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical nature : Aqueous solution

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)	
		Hazard class / Hazard category	Hazard statements
Iron trichloride			
CAS-No. : 7705-08-0 EC-No. : 231-729-4 EU REACH-Reg. No. : 01-2119497998-05-xxxx	>= 25 - <= 99	Acute Tox.4 Skin Irrit.2 Eye Dam.1 Met. Corr.1	H302 H315 H318 H290

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice : Take off all contaminated clothing immediately.

If inhaled : Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position. Call a physician immediately.

In case of skin contact : After contact with skin, wash immediately with plenty of water. If symptoms occur, call a physician.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.

If swallowed : Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	: See Section 11 for more detailed information on health effects and symptoms.
Effects	: See Section 11 for more detailed information on health effects and symptoms.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment	: Treat symptomatically.No further information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.
Unsuitable extinguishing media	:	High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Keep containers cool by spraying with water if exposed to fire, Heating will cause a pressure rise - with risk of bursting
Hazardous combustion products	:	Hydrogen chloride gas, Chlorine

5.3. Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.Wear personal protective equipment.
Further advice	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Keep away unprotected persons. Ensure adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapours or spray mist.

6.2. Environmental precautions

Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up	:	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Keep in suitable, closed containers for disposal.

Further information	:	Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	:	Keep container tightly closed. Ensure adequate ventilation. Avoid formation of aerosol. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.
Hygiene measures	:	Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Store in original container.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection. The product is not flammable.
Further information on storage conditions	:	Keep tightly closed in a dry and cool place. Keep in a well-ventilated place.
Advice on common storage	:	Keep away from food, drink and animal feedingstuffs.
Suitable packaging materials	:	Polyethylene
Unsuitable packaging materials	:	, Aluminium, copper, Nickel, Tin, iron

7.3. Specific end use(s)

Specific use(s)	:	Identified use: See table in front of appendix for a complete overview of identified uses.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Component:	Iron trichloride	CAS-No. 7705-08-0

Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

DNEL Workers, Long-term - systemic effects, Inhalation	:	2 mg/m3
DNEL Workers, Acute - systemic effects, Inhalation	:	2 mg/m3
DNEL Workers, Long-term - systemic effects, Skin contact	:	0.57 mg/kg bw/day
DNEL Workers, Acute - systemic effects, Skin contact	:	0.57 mg/kg bw/day
DNEL Consumers, Long-term - systemic effects, Inhalation	:	0.5 mg/m3
DNEL Consumers, Acute - systemic effects, Inhalation	:	0.5 mg/m3
DNEL Consumers, Long-term - systemic effects, Skin contact	:	0.29 mg/kg bw/day
DNEL Consumers, Acute - systemic effects, Skin contact	:	0.29 mg/kg bw/day
DNEL Consumers, Long-term - systemic effects, Ingestion	:	0.29 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Sewage treatment plant (STP) as Fe	:	500 mg/l
Fresh water sediment as Fe	:	49500 mg/kg dry weight (d.w.)
Marine sediment as Fe	:	49500 mg/kg dry weight (d.w.)
Soil as Fe	:	55500 mg/kg dry weight (d.w.)

Other Occupational Exposure Limit Values

UK. EH40 Workplace Exposure Limits (WELs), Short Term Exposure Limit (STEL):, as Fe
2 mg/m3

UK. EH40 Workplace Exposure Limits (WELs), Time Weighted Average (TWA):, as Fe
1 mg/m3

ELV (IE), Time Weighted Average (TWA):, as Fe
1 mg/m3

ELV (IE), Short Term Exposure Limit (STEL):, as Fe
2 mg/m3

8.2. Exposure controls

Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment

Respiratory protection

Advice	:	In case of insufficient ventilation, wear suitable respiratory equipment. When aerosol or mist is formed use suitable respiratory protection. Respiratory protection complying with EN 141. Combination filter:B-P2 Combination filter:E-P2

Hand protection

Advice	:	Protective gloves complying with EN 374. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Protective gloves should be replaced at first signs of wear. The following information applies to aqueous, saturated solutions.
Material	:	Natural Rubber
Break through time	:	>= 8 h
Glove thickness	:	0.5 mm
Material	:	polychloroprene
Break through time	:	>= 8 h
Glove thickness	:	0.5 mm
Material	:	Nitrile rubber
Break through time	:	>= 8 h
Glove thickness	:	0.35 mm

Material	:	butyl-rubber
Break through time	:	>= 8 h
Glove thickness	:	0.5 mm

Material	:	Fluorinated rubber
Break through time	:	>= 8 h
Glove thickness	:	0.4 mm

Material	:	Polyvinylchloride
Break through time	:	>= 8 h
Glove thickness	:	0.5 mm

Eye protection

Advice : Safety goggles

Skin and body protection

Advice : Wear personal protective equipment.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	:	liquid
Colour	:	brown
Odour	:	weak characteristic
Odour Threshold	:	no data available
pH	:	ca. 1
Melting point/freezing point	:	ca. -12 °C
Boiling point/boiling range	:	100 - 105 °C
Flash point	:	Not applicable
Evaporation rate	:	no data available

Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Density	:	1.42 g/cm3 solution 40% 1.48 g/cm3 45% solution
Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	log Kow -4 (24 °C) applies to anhydrous substance
Auto-ignition temperature	:	Not applicable
Thermal decomposition	:	315 °C Decomposes on heating.
Viscosity, dynamic	:	no data available
Explosivity	:	Product is not explosive.
Oxidizing properties	:	not oxidising

9.2. Other information

Corrosion to metals	:	Corrosive to metals

SECTION 10: Stability and reactivity

10.1. Reactivity

Advice : No decomposition if stored and applied as directed.

10.2. Chemical stability

Advice : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : Gives off hydrogen by reaction with metals. Reacts with alkalies. Reacts with reducing agents. Corrosive in contact with metals

10.4. Conditions to avoid

Conditions to avoid : Heat
Thermal decomposition : 315 °C
Decomposes on heating.

10.5. Incompatible materials

Materials to avoid : Strong bases, Acids, alkalis

10.6. Hazardous decomposition products

Hazardous decomposition products : hydrogen chloride, Chlorides

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Data for the product		
Acute toxicity		
Oral		
Acute toxicity estimate	:	505 - 2000 mg/kg) (Calculation method)
Inhalation		
		Not classified based on the calculation method according to CLP regulation.
Dermal		
		Not classified based on the calculation method according to CLP regulation.
Irritation		
Skin		
Result	:	Classified based on the calculation method according to CLP regulation.
Eyes		
Result	:	Classified based on the calculation method according to CLP regulation.
Sensitisation		
Result	:	Not classified based on the calculation method according to CLP regulation.
CMR effects		
CMR Properties		
Carcinogenicity	:	Not classified based on the calculation method according to CLP regulation.
Mutagenicity	:	Not classified based on the calculation method according to CLP regulation.
Teratogenicity	:	no data available

Reproductive toxicity	:	no data available

Specific Target Organ Toxicity

Single exposure

Remarks	:	Not classified based on the calculation method according to CLP regulation.

Repeated exposure

Remarks	:	Not classified based on the calculation method according to CLP regulation.

Other toxic properties

Repeated dose toxicity

no data available

Aspiration hazard

Not applicable,

Component:	**Iron trichloride**	**CAS-No. 7705-08-0**

Acute toxicity

Oral

LD50	:	1300 mg/kg (Mouse) Read-across (Analogy)

Inhalation

no data available

Dermal

LD50	:	> 2000 mg/kg (Rat) (OECD Test Guideline 402)

Irritation

Skin

Result	:	Irritating to skin. (Rat)

Eyes

Result	:	Irreversible damage. (Rabbit) (OECD Test Guideline 405)Read-across (Analogy)

Sensitisation

Result	:	not sensitizing (Local lymph node test; Mouse) (OECD Test Guideline 429)Read-across (Analogy)

CMR effects

Carcinogenicity

(negative, Rat, Fischer 344/DuCrj, male and female)(Oral)(OECD Test Guideline 451)

CMR Properties

Carcinogenicity	:	It is not considered carcinogenic.
Mutagenicity	:	In vitro tests did not show mutagenic effects
Teratogenicity	:	no data available
Reproductive toxicity	:	no data available

Genotoxicity in vitro

Result	:	negative (Chromosome aberration test in vitro; Chinese hamster fibroblasts; with and without metabolic activation) (OECD Test Guideline 487) negative (In vitro gene mutation study in mammalian cells; mouse lymphoma cells; with and without metabolic activation) (OECD Test Guideline 476) negative (reverse mutation assay; Salmonella typhimurium) (OECD Test Guideline 471)

Genotoxicity in vivo

Result	:	negative (Chromosome aberration test in vivo; Mouse)

Specific Target Organ Toxicity

Single exposure

Remarks	:	The substance or mixture is not classified as specific target organ toxicant, single exposure.

Repeated exposure

Remarks	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Other toxic properties

Repeated dose toxicity

NOEL	:	277 mg/kg (Rat, male)(Oral; 90-day) (OECD Test Guideline 408)
NOEL	:	314 mg/kg (Rat, female)(Oral; 90-day) (OECD Test Guideline 408)

Aspiration hazard

No aspiration toxicity classification,

SECTION 12: Ecological information

12.1. Toxicity

Component:	**Iron trichloride**	**CAS-No. 7705-08-0**

Acute toxicity

Fish

LC50	:	20.3 mg/l (Lepomis macrochirus (Bluegill sunfish); 96 h)

Toxicity to daphnia and other aquatic invertebrates

EC50	:	9.6 mg/l (Daphnia magna (Water flea); 48 h) (Immobilization; OECD Test Guideline 202)

algae

ErC50	:	6.9 mg/l (Pseudokirchneriella subcapitata (green algae); 72 h) (OECD Test Guideline 201)
NOEC		2.4 mg/l (Pseudokirchneriella subcapitata (green algae); 72 h) (OECD Test Guideline 201)

Chronic toxicity

Fish

NOEC	:	0.32 mg/l (Pimephales promelas (fathead minnow); 33 d)

Aquatic invertebrates

NOEC		0.7 mg/l (Daphnia magna (Water flea); 21 d)

12.2. Persistence and degradability

Component:	Iron trichloride	CAS-No. 7705-08-0
Persistence and degradability		
Persistence		
Result	:	no data available
Biodegradability		
Result	:	The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Component:	Iron trichloride	CAS-No. 7705-08-0
Bioaccumulation		
Result	:	BCF: < 20 (Cyprinus carpio (Carp); 5 mg/l; Test substance: iron (II) sulfate heptahydrate) Bioaccumulation is not expected.

12.4. Mobility in soil

Component:	Iron trichloride	CAS-No. 7705-08-0
Mobility		
Soil	:	immobile

12.5. Results of PBT and vPvB assessment

Data for the product		
Results of PBT and vPvB assessment		
Result	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Component:	Iron trichloride	CAS-No. 7705-08-0
Results of PBT and vPvB assessment		
Result	:	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).
Result	:	The PBT or vPvB criteria of Annex XIII to the REACH Regulation does not apply to inorganic substances.

12.6. Other adverse effects

Data for the product		
Additional ecological information		
Result	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

Component:	**Iron trichloride**	**CAS-No. 7705-08-0**
Additional ecological information		
Result	:	Do not flush into surface water or sanitary sewer system. Harmful effects to aquatic organisms due to pH-shift. Avoid subsoil penetration.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	:	Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
Contaminated packaging	:	Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. If recycling is not practicable, dispose of in compliance with local regulations.
European Waste Catalogue Number	:	No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

SECTION 14: Transport information

14.1. UN number

2582

14.2. UN proper shipping name

ADR	:	FERRIC CHLORIDE SOLUTION
RID	:	FERRIC CHLORIDE SOLUTION
IMDG	:	FERRIC CHLORIDE SOLUTION

14.3. Transport hazard class(es)

ADR-Class	:	8
(Labels; Classification Code; Hazard identification No; Tunnel restriction code)		8; C1; 80; (E)
RID-Class	:	8

(Labels; Classification Code; Hazard identification No)		8; C1; 80
IMDG-Class	:	8
(Labels; EmS)		8; F-A, S-B

14.4. Packaging group

ADR	:	III
RID	:	III
IMDG	:	III

14.5. Environmental hazards

Environmentally hazardous according to ADR	:	no
Environmentally hazardous according to RID	:	no
Marine Pollutant according to IMDG-Code	:	no

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Data for the product

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC)	:	; The substance/mixture does not fall under this legislation.
EU. Directive 2012/18/EU (SEVESO III) Annex I	:	; The substance/mixture does not fall under this legislation.

Component:	**Iron trichloride**	**CAS-No. 7705-08-0**

EU. Regulation EU No. 649/2012 concerning the export and import of dangerous chemicals	:	; The substance/mixture does not fall under this legislation.
EU. REACH, Annex XVII, Marketing and Use	:	; The substance/mixture does not fall under this legislation.

Restrictions (Regulation 1907/2006/EC)		
EU. Directive 2012/18/EU (SEVESO III) Annex I	:	; The substance/mixture does not fall under this legislation.
UK. Releases to air and water (UK ISR)	:	Annual reporting level threshold: 10,000 kg
WGK (DE)	:	WGK 1: slightly water endangering: 515; Classification source is Annex 2.

Notification status
Iron trichloride:

Regulatory List	Notification	Notification number
AICS	YES	
DSL	YES	
EINECS	YES	231-729-4
ENCS (JP)	YES	(1)-213
IECSC	YES	
ISHL (JP)	YES	(1)-213
KECI (KR)	YES	KE-21134
NZIOC	YES	HSR004016
PICCS (PH)	YES	
TSCA	YES	

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

Abbreviations and Acronyms

BCF	bioconcentration factor

BOD	biochemical oxygen demand
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	carcinogenic, mutagenic or toxic to reproduction
COD	chemical oxygen demand
DNEL	derived no-effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LC50	median lethal concentration
LOAEC	lowest observed adverse effect concentration
LOAEL	lowest observed adverse effect level
LOEL	lowest observed effect level
NLP	no-longer polymer
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
OECD	Organisation for Economic Cooperation and Development
OEL	occupational exposure limit
PBT	persistent, bioaccumulative and toxic
PNEC	predicted no-effect concentration
STOT	specific target organ toxicity
SVHC	substance of very high concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
vPvB	very persistent and very bioaccumulative

Further information

Key literature references and sources for data	:	Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.
Methods used for product classification	:	The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.
Hints for trainings	:	The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.
Other information	:	The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with

regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.

The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

|| Indicates updated section.

FERRIC CHLORIDE 25 - 99%

No.	Short title	Main User Group (SU)	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Environmental Release Category (ERC)	Article Category (AC)	Specified
1	Manufacture of substance	3	8	NA	1, 2, 3, 8b	1	NA	ES950
2	Formulation & (re)packing of substances and mixtures	3	NA	NA	1, 2, 3, 4, 5, 8a, 8b, 9, 14, 15	2, 5	NA	ES952
3	Use in adhesives and sealants	3	NA	NA	5, 7, 8a, 8b, 9, 10, 12, 13, 14	5	NA	ES966
4	Use in adhesives and sealants	21	NA	1	NA	8c, 8f	4, 7, 8, 11, 13	ES978
5	Use in adhesives and sealants	22	NA	NA	8a, 8b, 9, 10, 11, 13, 19	8c, 8f	NA	ES972
6	Use in agrochemicals	21	NA	12, 27	NA	8a, 8d	NA	ES976
7	Use in agrochemicals	22	1	NA	1, 2, 8a, 8b, 11, 13	8a, 8d	NA	ES970
8	Use in laboratories	3	24	NA	15	4	NA	ES1500
9	Use in laboratories	22	24	NA	15	8e	NA	ES969
10	Use in process water treatment	3	NA	NA	2, 5, 8a, 8b	4	NA	ES954
11	Use in process water treatment	22	8, 10, 23, 24	NA	1, 2, 3, 4, 5, 8a, 8b, 9, 15	8c, 8f	NA	ES7412
12	Use in sewage water treatment	3	NA	NA	2, 5, 8a, 8b	5	NA	ES956
13	Use as processing aid	3	8, 14	NA	2, 3, 4, 8b, 9, 15, 22, 26	4, 5, 6a, 6b	NA	ES960
14	Use in metal surface treatment.	3	10, 15, 16	NA	5, 7, 8a, 8b, 13	2, 6b	NA	ES962
15	Use in metal surface treatment.	21	NA	14	NA	8a, 8d	NA	ES974
16	Use in soil treatment	22	19	NA	2, 8a, 8b	8e	NA	ES11596
17	Use in gas treatment	3	NA	NA	2, 8a, 8b	2	NA	ES958

1. Short title of Exposure Scenario 1: Manufacture of substance		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Sectors of end-use	SU8: Manufacture of bulk, large scale chemicals (including petroleum products)	
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities	
Environmental Release Categories	ERC1: Manufacture of substances	
2.1 Contributing scenario controlling environmental exposure for: ERC1		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Amount used	Annual amount per site	145000 ton(s)/year
	Daily amount per site	483.333 tonnes
Frequency and duration of use	Continuous exposure	300 days/year
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	0.15 %
	Emission or Release Factor: Soil	0 %
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Given the highly controlled conditions used in the manufacture of the substance to prevent the release of gases, it can be assumed that the release in any form to air is effectively zero
	Water	Wastewater release into municipal STP.
	Soil	Soil emission controls are not applicable as there is no direct release to soil.
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	10,000 m3/d
	Sludge Treatment	Recovery of sludge for agriculture or horticulture
Conditions and measures related to external treatment of waste for disposal	Waste treatment	Waste water treatment may vary at different sites. Wastewater should be at least treated in either an on-site or a municipal secondary biological treatment plant prior to discharge
	Disposal methods	Can be landfilled or incinerated, when in compliance with local regulations.
	Air emission controls are not appliable as there is no direct release to air.	
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of	liquid

	use)	
	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palm of one hand (240cm2) (PROC1, PROC3)
	Exposed skin area	Palms of both hands (480 cm2) (PROC2)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures(PROC1, PROC2, PROC3)	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.(PROC1, PROC2, PROC3)	
	Wear chemically resistant gloves. (Efficiency: 90 %)(PROC1, PROC2, PROC3)	

2.3 Contributing scenario controlling worker exposure for: PROC8b

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC8b)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Provide local exhaust ventilation (LEV). (Efficiency: 90 %)	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear chemically resistant gloves. (Efficiency: 90 %)	

3. Exposure estimation and reference to its source

Environment

ERC1: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC1	---	Fresh water sediment	PEC	45g/kg	0.9091
ERC1	---	Soil	PEC	53g/kg	0.9636

Workers

PROC1, PROC2, PROC3, PROC8b: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1, PROC2, PROC3, PROC8b	---	Worker - inhalative, long-term - systemic	1.8mg/m³	0.39
PROC1, PROC2, PROC3, PROC8b	---	Worker - dermal, long-term - systemic	0.14mg/kg bw/day	0.11

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented
Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 2: Formulation & (re)packing of substances and mixtures		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC15: Use as laboratory reagent	
Environmental Release Categories	ERC2: Formulation of preparations ERC5: Industrial use resulting in inclusion into or onto a matrix	
2.1 Contributing scenario controlling environmental exposure for: ERC2, ERC5		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Amount used	Annual amount per site	50 ton(s)/year
	Daily amount per site	166.67 kg
Frequency and duration of use	Continuous exposure	300 days/year
Environment factors not influenced by risk management	Dilution Factor (River)	10
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	2 %
	Emission or Release Factor: Soil	0 %
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	Wastewater release into municipal STP.
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
	Sludge Treatment	Disposal or recovery, Recovery of sludge for agriculture or horticulture
Conditions and measures related	Waste treatment	Waste water treatment may vary at different sites.

to external treatment of waste for disposal		Wastewater should be at least treated in either an on-site or a municipal secondary biological treatment plant prior to discharge
	Disposal methods	Can be landfilled or incinerated, when in compliance with local regulations.
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palm of one hand (240cm2) (PROC1, PROC3)
	Exposed skin area	Palms of both hands (480 cm2) (PROC2)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear chemically resistant gloves. (Efficiency: 90 %)	
2.3 Contributing scenario controlling worker exposure for: PROC4, PROC5, PROC9, PROC14, PROC15		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Amount used	Amount per Day	420 kg
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC4, PROC5, PROC9, PROC14)
	Exposed skin area	Palm of one Hand 240 cm² (PROC15)
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear chemically resistant gloves. (Efficiency: 90 %)	
2.4 Contributing scenario controlling worker exposure for: PROC8a, PROC8b		
Product characteristics	Concentration of the Substance in	Covers percentage substance in the product up to 100 %.

	Mixture/Article	
	Physical Form (at time of use)	solid
Amount used	Amount per Day	166.67 kg
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC8b)
	Exposed skin area	Two hands 960 cm² (PROC8a)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Provide local exhaust ventilation (LEV). (Efficiency: 90 %)	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear chemically resistant gloves. (Efficiency: 90 %)	

3. Exposure estimation and reference to its source

Environment

ERC2, ERC5: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC2, ERC5	---	Soil	PEC	50.1g/kg	0.9109
ERC2, ERC5	---	Fresh water sediment	PEC	45g/kg	0.9091

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15	---	Worker - inhalative, long-term - systemic	1.8mg/m³	0.39
PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15	---	Worker - dermal, long-term - systemic	0.7mg/kg bw/day	0.54

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 3: Use in adhesives and sealants		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Process categories	PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC12: Use of blowing agents in manufacture of foam PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation	
Environmental Release Categories	ERC5: Industrial use resulting in inclusion into or onto a matrix	
2.1 Contributing scenario controlling environmental exposure for: ERC5		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Amount used	Annual amount per site	60 ton(s)/year
	Daily amount per site	200 kg
Frequency and duration of use	Continuous exposure	300 days/year
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	2 %
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	Wastewater release into municipal STP.
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
	Sludge Treatment	Recovery of sludge for agriculture or horticulture
Conditions and measures related to external treatment of waste for disposal	Waste treatment	Waste water treatment may vary at different sites. Wastewater should be at least treated in either an on-site or a municipal secondary biological treatment plant prior to discharge
	Disposal methods	Can be landfilled or incinerated, when in compliance with local regulations.
2.2 Contributing scenario controlling worker exposure for: PROC5, PROC8a, PROC8b, PROC9, PROC12, PROC14		
Product characteristics	Concentration of the Substance in	Covers percentage substance in the product up to 100 %.

	Mixture/Article	
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC5, PROC8b, PROC9, PROC14)
	Exposed skin area	Two hands 960 cm² (PROC8a)
	Exposed skin area	Palm of one Hand 240 cm² (PROC12)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Ensure that a mechanical ventilation is in place	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures(except PROC14)	
Conditions and measures related to personal protection, hygiene and health evaluation	Wear chemically resistant gloves. (Efficiency: 90 %)(except PROC14)	
	Wear a respirator conforming to EN140 with Type A/P2 filter or better. (Efficiency: 90 %)	
	Use suitable eye protection. Wear suitable protective clothing.	
2.3 Contributing scenario controlling worker exposure for: PROC7, PROC10, PROC13		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
	Exposure duration	240 min(PROC7)
Human factors not influenced by risk management	Exposed skin area	Hands and forearms. 1500 cm² (PROC7)
	Exposed skin area	Two hands 960 cm² (PROC10)
	Exposed skin area	Palms of both hands (480 cm2) (PROC13)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use(PROC10, PROC13)	
	Indoor or outdoor use(PROC7)	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Ensure that a mechanical ventilation is in place(PROC10)	
	Carry out in a vented booth or extracted enclosure. Provide local exhaust ventilation (LEV).(Indoor PROC7)	
	Ensure containment of the emission source(Outdoor PROC7)	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene	Wear chemically resistant gloves. (Efficiency: 90 %)	

and health evaluation	Use suitable eye protection. Wear suitable protective clothing.
	In case of inadequate ventilation wear respiratory protection. Wear a full face respirator TM3 conforming to EN147 with type A filter or better (Efficiency: 95 %)(Indoor PROC7)
	or Wear a full face respirator TM3 conforming to EN147 with type A filter or better (Efficiency: 95 %)(Outdoor PROC7)

3. Exposure estimation and reference to its source

Environment

ERC5: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC5	---	Soil	PEC	50g/kg	0.9091
ERC5	---	Fresh water sediment	PEC	45g/kg	0.9091

Workers

PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC5, PROC8a, PROC8b, PROC9, PROC12, PROC14	---	Worker - inhalative, long-term - systemic	2.2mg/m³	0.48
PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14	---	Worker - dermal, long-term - systemic	0.3mg/kg bw/day	0.21
PROC7	---	Worker - inhalative, long-term	3.3mg/m³	0.72

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 4: Use in adhesives and sealants		
Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)	
Chemical product category	PC1: Adhesives, sealants	
Article categories	AC4: Stone, plaster, cement, glass and ceramic articles AC7: Metal articles AC8: Paper articles AC11: Wood articles AC13: Plastic articles	
Environmental Release Categories	ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix	
2.1 Contributing scenario controlling environmental exposure for: ERC8c, ERC8f		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
Amount used	Annually total	900 tonnes
Frequency and duration of use	Continuous exposure	365 days/year
Environment factors not influenced by risk management	Dilution Factor (River)	10
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	2 %
	Emission or Release Factor: Soil	0 %
2.2 Contributing scenario controlling consumer exposure for: PC1		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	liquid
Frequency and duration of use	Frequency of use	365 days/year
Other given operational conditions affecting consumers exposure	Indoor use	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	Avoid contact with skin. Avoid contact with eyes.

3. Exposure estimation and reference to its source

Environment

ERC8c, ERC8f: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC8c, ERC8f	---	Fresh water sediment	PEC	45g/kg	0.9091

Consumers

PC1: ConsExpo 4.1

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PC1	---	Consumer - dermal, long-term - systemic	0.0008mg/kg bw/day	0.001

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see:
http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

1. Short title of Exposure Scenario 5: Use in adhesives and sealants		
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Process categories	PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available	
Environmental Release Categories	ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix	
2.1 Contributing scenario controlling environmental exposure for: ERC8c, ERC8f		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Amount used	Annual amount per site	12.300 ton(s)/year
	Daily amount per site	41 kg
Frequency and duration of use	Continuous exposure	300 days/year
Environment factors not influenced by risk management	Dilution Factor (River)	10
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	2 %
	Emission or Release Factor: Soil	0 %
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
	Sludge Treatment	Recovery of sludge for agriculture or horticulture
Conditions and measures related to external treatment of waste for disposal	Waste treatment	Waste water treatment may vary at different sites. Wastewater should be at least treated in either an on-site or a municipal secondary biological treatment plant prior to discharge
	Disposal methods	Collect all unused material for disposal as hazardous waste in compliance with local and national regulations
2.2 Contributing scenario controlling worker exposure for: PROC8a, PROC8b, PROC9, PROC19		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	

Human factors not influenced by risk management	Exposed skin area	Two hands 960 cm² (PROC8a)
	Exposed skin area	Palms of both hands (480 cm2) (PROC8b, PROC9)
	Exposed skin area	More than hands and forearms. 1980 cm² (PROC19)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Ensure that a mechanical ventilation is in place	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear a respirator conforming to EN140 with Type A/P2 filter or better. (Efficiency: 90 %)	
	Wear chemically resistant gloves. (Efficiency: 90 %)	
2.3 Contributing scenario controlling worker exposure for: PROC10, PROC11, PROC13		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
	Exposure duration	240 min(PROC11)
	Frequency of use	3 days/week(PROC11)
Human factors not influenced by risk management	Exposed skin area	Two hands 960 cm² (PROC10)
	Exposed skin area	Hands and forearms. 1500 cm² (PROC11)
	Exposed skin area	Palms of both hands (480 cm2) (PROC13)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use(PROC10, PROC13)	
	Indoor or outdoor use(PROC11)	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Carry out in a vented booth or extracted enclosure. Provide local exhaust ventilation (LEV).(Indoor PROC11)	
	Ensure containment of the emission source(Outdoor PROC11)	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures Clean equipment and the work area every day.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear chemically resistant gloves. (Efficiency: 90 %)	
	If no LEV or vented laminar spray booth available. Wear a full face respirator TM3 conforming to EN147 with type A filter or better (Efficiency: 95 %)(Indoor PROC11)	
	or Wear a full face respirator TM3 conforming to EN147 with type A filter or better (Efficiency: 95 %)(Outdoor PROC11)	

3. Exposure estimation and reference to its source

Environment

ERC8c, ERC8f: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC8c, ERC8f	---	Soil	PEC	50g/kg	0.9091
ERC8c, ERC8f	---	Fresh water sediment	PEC	45g/kg	0.9091

Workers

PROC8a, PROC9, PROC10, PROC11, PROC13, PROC19: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC8a, PROC9, PROC19	---	Worker - inhalative, long-term - systemic	2.2mg/m³	0.48
PROC8a, PROC9, PROC10, PROC13, PROC19	---	Worker - dermal, long-term - systemic	0.27mg/kg bw/day	0.21
PROC11	---	Worker - inhalative, long-term	3.3mg/m³	0.72
PROC11	---	Worker - dermal, long-term - systemic	0.3mg/kg bw/day	0.21

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented
Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 6: Use in agrochemicals		
Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)	
Chemical product category	PC12: Fertilizers PC27: Plant protection products	
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 40 %
Frequency and duration of use	Continuous exposure	365 days/year
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	5 %
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
2.2 Contributing scenario controlling consumer exposure for: PC12, PC27		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 40 %
	Physical Form (at time of use)	liquid
Frequency and duration of use	Frequency of use	365 days/year
Other given operational conditions affecting consumers exposure	Indoor or outdoor use	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	Wear suitable gloves. Avoid contact with skin. Avoid contact with eyes.

3. Exposure estimation and reference to its source

Environment

ERC8a, ERC8d: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC8a, ERC8d	---	Fresh water sediment	PEC	45g/kg	0.9091

Consumers

PC12: StoffenManager (inhalation exposure)

PC12: ECETOC TRA worker V3

PC12, PC27: ConsExpo 4.1

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR

PC12, PC27	Indoor use	Consumer - inhalative, long-term - systemic	0.59mg/m³	0.54
PC12, PC27	solid, with gloves	Consumer - dermal, long-term - systemic	0.28mg/kg bw/day	0.4
PC12	liquid, without gloves	Consumer - dermal, long-term - systemic	0.14mg/kg bw/day	0.2
PC12	Indoor use	Inhalation	0.59mg/m³	0.54
PC12	Indoor use	Inhalation	1.1mg/m³	1

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see:
http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

1. Short title of Exposure Scenario 7: Use in agrochemicals		
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Sectors of end-use	SU1: Agriculture, forestry, fishery	
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring	
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Amount used	Annual amount per site	24 ton(s)/year
	Daily amount per site	200 kg
Frequency and duration of use	Continuous exposure	120 days/year
Environment factors not influenced by risk management	Dilution Factor (River)	10
Other given operational conditions affecting environmental exposure	Number of emission days per year	120
	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	5 %
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	Wastewater release into municipal STP.
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
	Sludge Treatment	Recovery of sludge for agriculture or horticulture
Conditions and measures related to external treatment of waste for disposal	Disposal methods	Can be landfilled or incinerated, when in compliance with local regulations.
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC8a, PROC8b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid

	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	120 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palm of one hand (240cm2) (PROC1)
	Exposed skin area	Palms of both hands (480 cm2) (PROC2, PROC8b)
	Exposed skin area	Two hands 960 cm² (PROC8a)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Ensure that a mechanical ventilation is in place(except PROC1)	
Conditions and measures related to personal protection, hygiene and health evaluation	Wear chemically resistant gloves. (Efficiency: 90 %)	
	Wear a respirator conforming to EN140 with Type A/P2 filter or better. (Efficiency: 90 %)(except PROC1)	
	Use suitable eye protection. Wear suitable protective clothing.	
2.3 Contributing scenario controlling worker exposure for: PROC11, PROC13		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Frequency of use	120 days/year(PROC13)
	Covers daily exposures up to 8 hours(PROC13)	
	Frequency of use	3 days/week(PROC11)
Human factors not influenced by risk management	Exposed skin area	Hands and forearms. 1500 cm² (PROC11)
	Exposed skin area	Palms of both hands (480 cm2) (PROC13)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Carry out in a vented booth or extracted enclosure. Provide local exhaust ventilation (LEV). Avoid carrying out operation for more than 4 hours.(Indoor PROC11)	
	Ensure containment of the emission source(Outdoor PROC11)	
Organisational measures to prevent /limit releases, dispersion and exposure	Clean equipment and the work area every day.	
Conditions and measures related to personal protection, hygiene and health evaluation	Wear chemically resistant gloves. (Efficiency: 90 %)	
	Use suitable eye protection. Wear suitable protective clothing.	
	If no LEV or vented laminar spray booth available. Wear a full face respirator TM3 conforming to EN147 with type A filter or better (Efficiency: 95 %)(Indoor PROC11)	
	or Wear a full face respirator TM3 conforming to EN147 with type A filter or better (Efficiency: 95 %)(Outdoor PROC11)	

3. Exposure estimation and reference to its source

Environment

ERC8a, ERC8d: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC8a, ERC8d	---	Soil	PEC	50g/kg	0.9091
ERC8a, ERC8d	---	Fresh water sediment	PEC	45g/kg	0.9091

Workers

PROC1, PROC2, PROC8a, PROC8b, PROC11, PROC13: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1, PROC2, PROC8a, PROC8b, PROC11, PROC13	---	Worker - dermal, long-term - systemic	0.27mg/kg bw/day	0.21
PROC2, PROC8a, PROC8b	---	Worker - inhalative, long-term - systemic	2.2mg/m³	0.48
PROC11	---	Worker - inhalative, long-term	3.3mg/m³	0.48

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented
Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 8: Use in laboratories		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Sectors of end-use	SU24: Scientific research and development	
Process categories	PROC15: Use as laboratory reagent	
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles	
2.1 Contributing scenario controlling environmental exposure for: ERC4		
As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed		
2.2 Contributing scenario controlling worker exposure for: PROC15		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	solid
Amount used	Worker contact is generally very low as most operations are remotely controlled and sampling/analysis events are of short duration.	
Frequency and duration of use	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palm of one hand (240cm2)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Provide local exhaust ventilation (LEV).	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures Clean equipment and the work area every day.	
Conditions and measures related to personal protection, hygiene and health evaluation	Wear chemically resistant gloves. Wear suitable protective clothing.	
	Wear eye protection/ face protection. If no LEV: Wear respiratory protection Particle filter:P2	

3. Exposure estimation and reference to its source

Environment

No exposure assessment presented for the environment.

Workers

PROC15: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC15	---	Worker - inhalative, long-term - systemic	2.01mg/m³	0.43

PROC15	---	Worker - dermal, long-term - systemic	0.03mg/kg bw/day	0.02

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented
Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 9: Use in laboratories		
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Sectors of end-use	SU24: Scientific research and development	
Process categories	PROC15: Use as laboratory reagent	
Environmental Release Categories	ERC8e: Wide dispersive outdoor use of reactive substances in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8e		
As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed		
2.2 Contributing scenario controlling worker exposure for: PROC15		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	solid
Amount used	Worker contact is generally very low as most operations are remotely controlled and sampling/analysis events are of short duration.	
Frequency and duration of use	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palm of one hand (240cm2)
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Ensure that a mechanical ventilation is in place	
Conditions and measures related to personal protection, hygiene and health evaluation	Wear chemically resistant gloves. (Efficiency: 90 %)	
	Wear a full face respirator conforming to EN136 with Type A/P2 filter or better. (Efficiency: 90 %)	
	Use suitable eye protection. Wear suitable protective clothing.	

3. Exposure estimation and reference to its source

Environment

No exposure assessment presented for the environment.

Workers

PROC15: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC15	---	Worker - inhalative, long-term	2.01mg/m³	0.43
PROC15	---	Worker - dermal, long-term - systemic	0.01mg/kg bw/day	0.01

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented
Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 10: Use in process water treatment		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Process categories	PROC2: Use in closed, continuous process with occasional controlled exposure PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities	
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles	
2.1 Contributing scenario controlling environmental exposure for: ERC4		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Amount used	Annual amount per site	540 ton(s)/year
	Daily amount per site	1800 kg
Frequency and duration of use	Continuous exposure	300 days/year
Environment factors not influenced by risk management	Dilution Factor (River)	10
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	1 %
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	Wastewater release into municipal STP.
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
	Sludge Treatment	Recovery of sludge for agriculture or horticulture
Conditions and measures related to external treatment of waste for disposal	Waste treatment	Waste water treatment may vary at different sites. Wastewater should be at least treated in either an on-site or a municipal secondary biological treatment plant prior to discharge
	Disposal methods	Can be landfilled or incinerated, when in compliance with local regulations.
2.2 Contributing scenario controlling worker exposure for: PROC2, PROC5, PROC8a, PROC8b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	solid

Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC2, PROC8b)
	Exposed skin area	Two hands 960 cm² (PROC8a)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Ensure that a mechanical ventilation is in place(PROC8a, PROC8b)	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures(except PROC5)	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.(except PROC5)	
	Wear chemically resistant gloves. (Efficiency: 90 %)(except PROC5)	
	Wear a respirator conforming to EN140 with Type A/P2 filter or better. (Efficiency: 90 %)(PROC8a, PROC8b)	

2.3 Contributing scenario controlling worker exposure for: PROC5

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear chemically resistant gloves. (Efficiency: 90 %)	

3. Exposure estimation and reference to its source

Environment

ERC4: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC4	---	Fresh water sediment	PEC	45g/kg	0.9091
ERC4	---	Soil	PEC	50g/kg	0.9091

Workers

PROC2, PROC5, PROC8a, PROC8b: ECETOC TRA worker V3

PROC5, PROC8a, PROC8b, PROC9, PROC15: MEASE

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC2, PROC5, PROC8a, PROC8b	---	Worker - inhalative, long-term - systemic	2.01mg/m³	0.43
PROC2, PROC5, PROC8a, PROC8b	---	Worker - dermal, long-term - systemic	0.3mg/kg bw/day	0.23
PROC5, PROC8a, PROC8b, PROC9, PROC15	with gloves	Dermal worker exposure	< 0.69mg/kg	< 0.403

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 11: Use in process water treatment		
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Sectors of end-use	SU8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 10: Formulation [mixing] of preparations and/ or re-packaging (excluding alloys) SU23: Recycling SU24: Scientific research and development	
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15: Use as laboratory reagent	
Environmental Release Categories	ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix	
2.1 Contributing scenario controlling environmental exposure for: ERC8c, ERC8f		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Frequency and duration of use	Continuous exposure	365 days/year
Environment factors not influenced by risk management	Dilution Factor (River)	25
	Dilution Factor (Coastal Areas)	250
	Other data. Other information	Local freshwater dilution factor10 - 40
	Other data. Other information	Local marine water dilution factor100 - 400
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	It is required that the flow of release to municipal wastewater or to surface water do not cause significant in pH changes
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC15		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.

	Physical Form (at time of use)	Aqueous solution
Frequency and duration of use	Frequency of use	220 days/year
	Covers daily exposures up to 8 hours	
Other operational conditions affecting workers exposure	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Provide adequate ventilation.	
Organisational measures to prevent /limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures.	
Conditions and measures related to personal protection, hygiene and health evaluation	Chemically resistant gloves tested to EN374.(except PROC1, PROC2)	

3. Exposure estimation and reference to its source

Environment

Exposure is considered negligible.

Workers

PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC15: MEASE

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC15	with gloves	Dermal worker exposure	< 0.69mg/kg bw/day	< 0.403

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

If measured data are not available, the DU may make use of an appropriate scaling tool such as MEASE (www.ebrc.de/mease.html) to estimate the associated exposure.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 12: Use in sewage water treatment		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Process categories	PROC2: Use in closed, continuous process with occasional controlled exposure PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities	
Environmental Release Categories	ERC5: Industrial use resulting in inclusion into or onto a matrix	
2.1 Contributing scenario controlling environmental exposure for: ERC5		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Amount used	Annual amount per site	73 ton(s)/year
	Daily amount per site	200 kg
Frequency and duration of use	Continuous exposure	365 days/year
Environment factors not influenced by risk management	Dilution Factor (River)	10 (ERC5)
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	1
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	Wastewater release into municipal STP.
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
	Sludge Treatment	Recovery of sludge for agriculture or horticulture
Conditions and measures related to external treatment of waste for disposal	Waste treatment	Waste water treatment may vary at different sites. Wastewater should be at least treated in either an on-site or a municipal secondary biological treatment plant prior to discharge
	Disposal methods	Can be landfilled or incinerated, when in compliance with local regulations.
2.2 Contributing scenario controlling worker exposure for: PROC2, PROC8a, PROC8b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	solid

Frequency and duration of use	Frequency of use	365 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC2, PROC8b)
	Exposed skin area	Two hands 960 cm² (PROC8a)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Ensure that a mechanical ventilation is in place(except PROC2)	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear a respirator conforming to EN140 with Type A/P2 filter or better. (Efficiency: 90 %)(PROC8b)	
	Wear chemically resistant gloves. (Efficiency: 90 %)	

2.3 Contributing scenario controlling worker exposure for: PROC5

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Frequency of use	365 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear chemically resistant gloves. (Efficiency: 90 %)	

3. Exposure estimation and reference to its source

Environment

ERC5: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC5	---	Fresh water sediment	PEC	45g/kg	0.9091
ERC5	---	Soil	PEC	50.8g/kg	0.9236

Workers

PROC8a: ECETOC TRA worker V3

PROC8a, PROC8b: StoffenManager (inhalation exposure)

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC8a	---	Worker - dermal, long-term - systemic	0.3mg/kg bw/day	0.23
PROC8a, PROC8b	---	Inhalation	2.01mg/m³	0.43

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 13: Use as processing aid	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	SU8: Manufacture of bulk, large scale chemicals (including petroleum products) SU14: Manufacture of basic metals, including alloys
Process categories	PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15: Use as laboratory reagent PROC22: Manufacturing and processing of minerals and/or metals at substantially elevated temperature PROC26: Handling of solid inorganic substances at ambient temperature
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC5: Industrial use resulting in inclusion into or onto a matrix ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC6b: Industrial use of reactive processing aids

2.1 Contributing scenario controlling environmental exposure for: ERC4, ERC5, ERC6a, ERC6b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Amount used	Annual amount per site	6000 ton(s)/year
	Daily amount per site	20 tonnes
Frequency and duration of use	Continuous exposure	300 days/year
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	0.5 %
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	Wastewater release into municipal STP.
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
	Sludge Treatment	Recovery of sludge for agriculture or horticulture
Conditions and measures related to external treatment of waste for disposal	Waste treatment	Waste water treatment may vary at different sites. Wastewater should be at least treated in either an on-site or a municipal secondary biological treatment plant prior to discharge

	Disposal methods	Can be landfilled or incinerated, when in compliance with local regulations.
2.2 Contributing scenario controlling worker exposure for: PROC2, PROC3		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC2)
	Exposed skin area	Palm of one hand (240cm2) (PROC3)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Wear chemically resistant gloves. (Efficiency: 90 %)	
	Wear suitable protective clothing. Use suitable eye protection.	
2.3 Contributing scenario controlling worker exposure for: PROC4, PROC9, PROC15, PROC22, PROC26		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC4, PROC9)
	Exposed skin area	Palm of one hand (240cm2) (PROC15)
	Exposed skin area	More than hands and forearms. 1980 cm² (PROC22, PROC26)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear chemically resistant gloves. (Efficiency: 90 %)	
2.4 Contributing scenario controlling worker exposure for: PROC8b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.

	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC8b)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Provide local exhaust ventilation (LEV). (Efficiency: 90 %)	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear chemically resistant gloves. (Efficiency: 90 %)	

3. Exposure estimation and reference to its source

Environment

ERC4, ERC5, ERC6a, ERC6b: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC4, ERC5, ERC6a, ERC6b	---	Soil	PEC	50.8g/kg	0.9236
ERC4, ERC5, ERC6a, ERC6b	---	Fresh water sediment	PEC	45g/kg	0.9091

Workers

PROC2, PROC3, PROC4, PROC8b, PROC9, PROC15, PROC22, PROC26: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC2, PROC3, PROC4, PROC8b, PROC9, PROC15, PROC22, PROC26	---	Worker - inhalative, long-term - systemic	1.8mg/m³	0.39
PROC2, PROC3, PROC4, PROC8b, PROC9, PROC15, PROC22, PROC26	---	Worker - dermal, long-term - systemic	0.7mg/kg bw/day	0.54

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default

values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 14: Use in metal surface treatment.	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	SU 10: Formulation [mixing] of preparations and/ or re-packaging (excluding alloys) SU15: Manufacture of fabricated metal products, except machinery and equipment SU16: Manufacture of computer, electronic and optical products, electrical equipment
Process categories	PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC13: Treatment of articles by dipping and pouring
Environmental Release Categories	ERC2: Formulation of preparations ERC6b: Industrial use of reactive processing aids

2.1 Contributing scenario controlling environmental exposure for: ERC2, ERC6b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Amount used	Annual amount per site	50.100 ton(s)/year
	Daily amount per site	167 kg
Frequency and duration of use	Continuous exposure	300 days/year
Environment factors not influenced by risk management	Dilution Factor (River)	10
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	2 %
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	Wastewater release into municipal STP.
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
	Sludge Treatment	Recovery of sludge for agriculture or horticulture
Conditions and measures related to external treatment of waste for disposal	Waste treatment	Waste water treatment may vary at different sites. Wastewater should be at least treated in either an on-site or a municipal secondary biological treatment plant prior to discharge
	Disposal methods	Can be landfilled or incinerated, when in compliance with local regulations.

2.2 Contributing scenario controlling worker exposure for: PROC5, PROC7, PROC13

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC5, PROC13)
	Exposed skin area	Palm of one hand (240cm2) (PROC7)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Spraying	Use product only in closed system.
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures Regular cleaning of equipment and work area	
Conditions and measures related to personal protection, hygiene and health evaluation	Wear chemically resistant gloves. Use suitable eye protection.	

2.3 Contributing scenario controlling worker exposure for: PROC8a, PROC8b

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	300 days/year
	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Provide local exhaust ventilation (LEV).	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures Regular cleaning of equipment and work area	
Conditions and measures related to personal protection, hygiene and health evaluation	Wear chemically resistant gloves. Use suitable eye protection.	

3. Exposure estimation and reference to its source

Environment

ERC2, ERC6b: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC2, ERC6b	---	Fresh water sediment	PEC	45g/kg	0.9091

ERC2, ERC6b	---	Soil	PEC	51.8g/kg	0.9418

Workers

PROC5, PROC7, PROC8a, PROC8b, PROC13: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC5, PROC7, PROC8a, PROC8b, PROC13	---	Worker - inhalative, long-term - systemic	1.8mg/m³	0.39
PROC5, PROC7, PROC8a, PROC8b, PROC13	---	Worker - dermal, long-term - systemic	0.14mg/kg bw/day	0.11

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented
Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 15: Use in metal surface treatment.		
Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)	
Chemical product category	PC14: Metal surface treatment products, including galvanic and electroplating products	
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d		
No exposure assessment presented for the environment		
2.2 Contributing scenario controlling consumer exposure for: PC14		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 40 %
	Physical Form (at time of use)	liquid
Other given operational conditions affecting consumers exposure	Indoor or outdoor use	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	Wear suitable gloves. Avoid contact with skin. Avoid contact with eyes.

3. Exposure estimation and reference to its source

Environment

No exposure assessment presented for the environment.

Consumers

PC14: ConsExpo 4.1

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PC14	---	Consumer - dermal, long-term - systemic	< 0.36mg/kg bw/day	< 0.86

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

For further information on the assessment method, see:
http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

1. Short title of Exposure Scenario 16: Use in soil treatment		
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Sectors of end-use	SU19: Building and construction work	
Process categories	PROC2: Use in closed, continuous process with occasional controlled exposure PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities	
Environmental Release Categories	ERC8e: Wide dispersive outdoor use of reactive substances in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8e		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Amount used	Annual amount per site	100 tonnes
Frequency and duration of use	Continuous exposure	100 days/year
Environment factors not influenced by risk management	Dilution Factor (River)	10
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0
	Emission or Release Factor: Soil	20 %
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	Wastewater release into municipal STP.
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
	Sludge Treatment	Recovery of sludge for agriculture or horticulture
Conditions and measures related to external treatment of waste for disposal	Disposal methods	Can be landfilled or incinerated, when in compliance with local regulations.
2.2 Contributing scenario controlling worker exposure for: PROC2, PROC8a, PROC8b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid, solid
Amount used	Amount per Day	400 kg/day
Frequency and duration of use	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Breathing volume	10 m3/day
	Body weight	70 kg
	Exposed skin surface	480 cm²(PROC2, PROC8b)
	Exposed skin surface	960 cm²(PROC8a)

Other operational conditions affecting workers exposure	Assumes use at not more than 20°C above ambient temperature.
Technical conditions and measures to control dispersion from source towards the worker	Ensure containment of the emission source Provide adequate ventilation.
Organisational measures to prevent /limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures.
Conditions and measures related to personal protection, hygiene and health evaluation	Safety glasses Use of gloves and working clothes have been considered additionally. In case of dust or aerosol formation: use respiratory protection with approved filter (P2)

3. Exposure estimation and reference to its source

Environment

ERC8e: EUSES 2.1

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC8e	---	Fresh water sediment	PEC	45g/kg	---
ERC8e	---	Agricultural soil	PEC	51.7g/kg	---

Workers

PROC8a: ECETOC TRA worker V3

PROC8a: StoffenManager (inhalation exposure)

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC8a	---	Worker - dermal, long-term - systemic	0.27mg/kg bw/day	0.21
PROC8a	---	Inhalation	2.01mg/m³	0.43

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Clean equipment and the work area every day.
Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 17: Use in gas treatment		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Process categories	PROC2: Use in closed, continuous process with occasional controlled exposure PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities	
Environmental Release Categories	ERC2: Formulation of preparations	
2.1 Contributing scenario controlling environmental exposure for: ERC2		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
Amount used	Annual amount per site	2.409 ton(s)/year
	Daily amount per site	6.6 kg
Frequency and duration of use	Continuous exposure	365 days/year
Environment factors not influenced by risk management	Dilution Factor (River)	10
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Air	0 %
	Emission or Release Factor: Water	1
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Due to enclosed process air emissions are unlikely, except during transfer to and from the digester
	Water	Wastewater release into municipal STP.
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Municipal sewage treatment plant
	Flow rate of sewage treatment plant effluent	2,000 m3/d
	Sludge Treatment	Recovery of sludge for agriculture or horticulture
Conditions and measures related to external treatment of waste for disposal	Waste treatment	Waste water treatment may vary at different sites. Wastewater should be at least treated in either an on-site or a municipal secondary biological treatment plant prior to discharge
	Disposal methods	Can be landfilled or incinerated, when in compliance with local regulations.
2.2 Contributing scenario controlling worker exposure for: PROC2, PROC8a, PROC8b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Physical Form (at time of use)	solid
Frequency and duration of use	Frequency of use	365 days/year

	Covers daily exposures up to 8 hours	
Human factors not influenced by risk management	Exposed skin area	Palms of both hands (480 cm2) (PROC2, PROC8b)
	Exposed skin area	Two hands 960 cm² (PROC8a)
	Breathing volume	10 m3/day
	Body weight	70 kg
Other operational conditions affecting workers exposure	Indoor use	
	Assumes use at not more than 20°C above ambient temperature.	
Technical conditions and measures to control dispersion from source towards the worker	Ensure that a mechanical ventilation is in place(except PROC2)	
Organisational measures to prevent /limit releases, dispersion and exposure	Provide basic employee training to prevent/minimize exposures	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable protective clothing.	
	Wear chemically resistant gloves. (Efficiency: 90 %)	
	Wear a respirator conforming to EN140 with Type A/P2 filter or better. (Efficiency: 90 %)(except PROC2)	

3. Exposure estimation and reference to its source

Environment

ERC2: EUSES

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC2	---	Fresh water sediment	PEC	45g/kg	0.9091
ERC2	---	Soil	PEC	50.1g/kg	0.9109

Workers

PROC2, PROC8a, PROC8b: ECETOC TRA worker V3

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC2, PROC8a, PROC8b	---	Worker - inhalative, long-term - systemic	2.01mg/m³	0.43
PROC2, PROC8a, PROC8b	---	Worker - dermal, long-term - systemic	0.3mg/kg bw/day	0.23

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The environmental emission has been evaluated using EUSES 2.1 (http://ihcp.jrc.ec.europa.eu), in which default values have been used, unless otherwise indicated.
For further information on the assessment method, see: http://www.ecetoc.org/tra
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

Ensure that good work practices are implemented
Assumes a good basic standard of occupational hygiene is implemented.

C.2. Dosing information from the contractor

[redacted]

From: [redacted]
Sent: 13 October 2023 12:06
To: [redacted]
Cc: [redacted]
Subject: RE: Coagulation/Flocculation chemicals

Hi [redacted],

Chemical Dosing Inlet/Outlet

Regarding the coagulant Ferric Chloride, chemical conditioning of suspended particulate matter to improve its settling characteristics only requires very small chemical addition rates. **Accurate dose rates can only be proved by sampling in our own internal lab**.
However, as per Daves email, the typical coagulant dose rate is 5-10mg/L.

When introduced into the water on a flow proportional basis at the optimum pH, virtually all the coagulant (Ferric Chloride) forms an insoluble hydroxide, which is bound up within the settled/floated suspended solids. As a result, virtually all the added chemicals are removed with the settled solids. The concentrations of these chemicals in the solids are, however, very low, and consequently are unlikely to change the waste classification of the settled/floated solids.
In addition to this, there is typically a direct relationship between suspended solids level and concentration of the active metal within water (Iron in the case of Ferric Chloride). If the Iron is in particulate form and we reduce the amount of suspended solids (which the Iron is bound to), we will also reduce the amount of Iron present in the treated water.

As an example, below I have tabulated *external lab results* of a project we have recently undertaken in Cornwall. 'Inlet' refers to the characterisation of the feedwater prior to the addition of any coagulants or flocculants. 'Outlet' refers to the characterisation of the treated water at the point of discharge back to surface watercourse.

Dose rates in to the [redacted] system:

- Ferric Chloride 10mg/l
- Anionic Polymer AQ2084 2mg/l

	pH	TSS(mg/l)	Total Iron (mg/l)	Dissolved Iron (mg/l)
Sample 1 Inlet	7.3	772	29.23	0.47
Sample 1 Outlet	7.2	12	0.99	0.05
Sample 2 Inlet	7.4	882	34.05	0.19
Sample 2 Outlet	7.0	15	0.77	0.18
Sample 3 Inlet	7.2	687	28.46	0.05
Sample 3 Outlet	6.9	17	0.98	0.05

You can see from these results that the inlet concentrations of dissolved metals are virtually the same as the outlet concentrations. The decrease in total Iron from inlet to outlet can be attributed to the removal of suspended solids that were contributing to these readings – even after adding 10mg/l of Ferric Chloride.

250mg/l Target

In short, and especially during the winter months, yes you will require coagulation/flocculation to achieve a TSS of <250mg/l. When you have an extended period of rain and solids are given less time to settle in an attenuation pond, the TSS will almost certainly be higher than 250mg/L which will require treatment via coagulation/flocculation to achieve <250mg/l. In summer months when solids will likely have more time to settle out from suspension, feed waters may be <250mg/l – hence the suggestion of solids monitoring on the inlet of the system to inhibit dosing if the feed water TSS is <250mg/l.

When incoming waters have a TSS >250mg/l, we wouldn't achieve <250mg/l under gravity settlement, due to the presence of clay particles which exhibit slow settling characteristics and require the controlled addition of both a coagulant and flocculant to improve the settling characteristics of the particles.

For reference, Hinkley Point C have a TSS criteria of <250mg/L at 3No. locations – all locations have a [redacted] chemical dosing (coagulation/flocculation) system.

Kind Regards,

[redacted]
Area Sales Manager (Construction) - South

Tel: [redacted]
Mobile: [redacted]
Email: [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Thanks [redacted],

Do you know what the typical concentration of chemicals released at the outlet would be?

[redacted]

[redacted]

Senior Engineer
Environment - Water Management Consultancy
AtkinsRéalis
01865 734011

From: [redacted]>
Sent: 12 October 2023 17:10
To: [redacted]
Cc: [redacted]
Subject: RE: Coagulation/Flocculation chemicals

[redacted],

Please find attached the MSDS sheets for the chemicals that are likely to be required during the works at Sizewell.

The ferric chloride is the coagulant and the Aquatreat 2084 is the flocculant. These chemicals are typically dosed in very small quantities e.g. the coagulant would have a typical dose rate of 5-10mg/l and the flocculant a typical dose rate of 1-3mg/l.

Both the coagulant and flocculant are dosed on a flow proportional basis via a calibrated mag-flow meter to ensure an accurate dose rate at all flow rates. The chemicals are stored on spill stands inside a dosing unit or dosing container.

Carbon Dioxide gas is used to treat high pH waters which will typically be found where any concreting works are present.

The Sodium Hydroxide/Caustic may only be required if low pH waters are encountered (caustic has not been required at Hinkley). It may be prudent to include it as part of the permit as a precaution.

We monitor the inlet water quality and only add chemicals if the levels are above preset limits thus minimising chemical consumption. Additionally, the outlet water quality is monitored and the discharge stopped or diverted if the levels exceed preset limits to prevent out of specification discharge.

I trust the above makes sense but don't hesitate to get in contact if you need any further information.

Kind Regards,

[redacted])
Head of Operations

Tel: [redacted]
Mobile: [redacted]
Email: [redacted]

[redacted]

[redacted]

[redacted]

Subject: Coagulation/Flocculation chemicals

> You don't often get email from [redacted]atkinsrealis.com. Learn why this is important

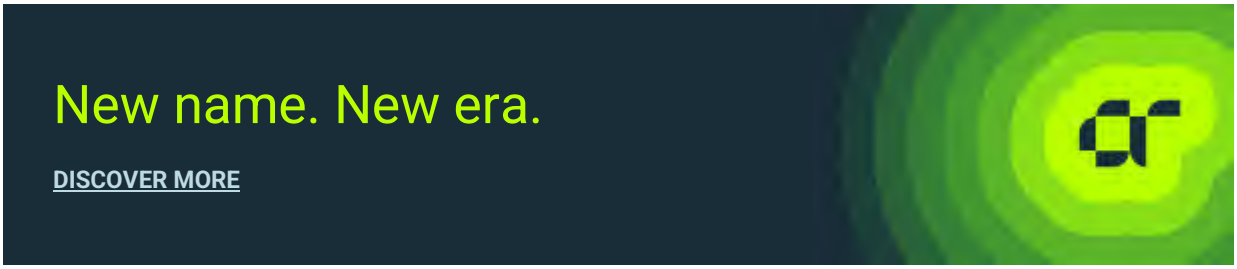
Hi [redacted],

Could you tell me again what chemicals you would be using coagulation and flocculation as part of your system? I'm trying to understand the environmental risks associated with the discharge so am concerned about the release of chemicals from dosing.

Many thanks,

[redacted] (he/him) MSc M.CIWEM C.WEM

Senior Engineer
Environment - Water Management Consultancy
AtkinsRéalis
[redacted]



Podcasts Beyond Engineering Careers

At AtkinsRéalis, we work flexible hours around the world. Although I have sent this email at a time convenient for me, I don't expect you to respond until it works for you.

Appendix D. Groundwater Screening data

Assessment Criteria : *Coastal and Estuarine EQS*

Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences	1884390	1884391	1884392	1884393	1884394	1884395	1884396	1884397	1884398	1884399	1884400	1884401	1884402	1887103	1893764	1893765	1893766	1893767	1893768	1893769	1893770
Sample ID									GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2009_5	DBH2009_20
Depth									9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
Date									23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
Strata									Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits		Peat/Alluvium	Peat/Alluvium	Crag Group	Alluvium / Peat	Alluvium / Peat	Crag Group
Zone																													
pH		N/A	6-8.5	21	7.4	8.4	0		7.5	8.2	7.4	8.3	8.2	8.2	8.3	7.6	7.9	8.3	8.2	8.4	7.8	8.4	8.4	7.9	8	8.4	7.8	7.4	7.52
Electrical Conductivity	µS/cm	1	No WSV	21	250	4400	0		890	1100	3600	3100	650	660	950	520	4100	1600	250	1000	1700	930	980	4100	4400	950	1700	2300	2970
Suspended Solids At 105C	mg/l	5	No WSV	21	<5	4000	0		59	100	170	210	23	16	57	110	250	57	47	<5	210	92	24	250	310	22	210	4000	38
Alkalinity (Total)	mg/l	10	No WSV	21	92	840	0		360	540	700	570	290	300	220	92	840	500	370	440	420	340	400	840	620	490	420	140	238
Chloride	mg/l	1	No WSV	21	53	10300	0		120	210	950	860	62	53	150	65	1400	140	220	130	400	130	77	1400	1200	65	400	590	10300
Ammonium	mg/l	0.05	Not appropriate, EQS applies to unionised Ammonia	21	0.13	20	0		3.8	3.7	7.5	8.3	2	1.7	2.7	0.13	20	0.74	10	2	3.4	3.6	0.44	20	14	0.44	3.4	1.1	1.446
Ammoniacal Nitrogen	mg/l	0.05	Not appropriate, EQS applies to unionised Ammonia	21	0.1	16	0		3	3.1	5.9	7.2	1.7	1.5	2.3	0.1	16	0.64	8.6	1.8	2.7	3.1	0.38	16	12	0.39	2.7	0.86	1.12
Nitrite	mg/l	0.02	No WSV	21	<0.02	0.19	0		<0.02	<0.02	<0.02	<0.02	0.03	0.038	0.084	<0.02	<0.02	<0.02	<0.02	<0.02	0.031	<0.02	<0.02	<0.02	<0.02	<0.02	0.031	0.19	<0.1
Nitrate	mg/l	0.5	No WSV	21	<0.1	7	0		7	0.61	<0.5	0.78	<0.5	<0.5	<0.5	4.8	0.65	<0.5	<0.5	<0.5	0.77	<0.5	<0.5	0.65	<0.5	0.5	0.77	0.7	<0.1
Phosphate	mg/l	0.2	No WSV	21	<0.02	3.8	0		3.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.02
Phosphorus	mg/l	0.02	No WSV	21	<0.02	<20	0		1.2	0.021	0.021	0.021	<0.02	0.023	0.021	0.055	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<20
Sulphate	mg/l	1	No WSV	21	<1	1410	0		5	<1	4.8	<1	37	36	44	14	<1	110	2.9	21	<1	2.5	31	<1	<1	27	<1	2.7	1410
Total Oxidised Nitrogen	mg/l	0.2	No WSV	21	<0.1	1.6	0		1.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.22	<0.1
Cyanide (Free)	mg/l	0.005	0.001	21	<0.005	<0.005	0		<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	mg/l	2	No WSV	21	44	531	0		78	92	100	100	110	120	100	44	150	190	93	99	120	72	110	150	130	120	120	290	531
Potassium	mg/l	0.5	No WSV	21	3.3	154	0		17	8.5	35	11	4.6	4.5	20	3.3	34	11	10	17	12	15	7.5	34	20	4.7	12	7	154
Magnesium	mg/l	0.2	No WSV	21	2.2	779	0		16	27	64	50	12	12	19	2.2	89	12	9.4	21	39	15	16	89	64	15	39	25	779
Sodium	mg/l	1.5	No WSV	21	34	6600	0		79	120	540	460	68	65	89	34	870	54	100	84	210	60	42	870	600	68	210	220	6600
Arsenic (Dissolved)	mg/l	0.0002	0.025	21	0.0005	0.012	0		0.0019	0.0019	0.0032	0.0037	0.0031	0.0013	0.00096	0.0012	0.012	0.0024	0.0005	0.0013	0.0037	0.0043	0.0055	0.012	0.0038	0.0043	0.0037	0.0012	<0.001
Boron	mg/l	0.01	7	21	0.03	1.39	0		0.16	0.1	0.64	0.34	0.082	0.084	0.17	0.03	0.31	0.11	0.046	0.22	0.14	0.12	0.055	0.31	0.37	0.087	0.14	0.07	1.39
Cadmium (Dissolved)	mg/l	0.00011	0.0002	21	<0.00008	<0.0002	0		<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00008	<0.00008	0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.0002
Chromium (Dissolved)	mg/l	0.0005	See Cr VI as first pass	21	<0.0005	0.003	0		<0.0005	<0.0005	0.0017	0.0018	<0.0005	<0.0005	<0.0005	0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0025	0.0021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.003
Copper (Dissolved)	mg/l	0.0005	0.00376	21	<0.0005	0.008	2	PZ13; DBH2009_20	0.00054	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0044	0.0016	0.0012	<0.0005	<0.0005	<0.0005	<0.001	<0.001	0.0016	<0.0005	<0.0005	<0.0005	<0.0005	0.008
Iron (Dissolved)	mg/l	0.005	1	21	<0.005	26	6	DCBH2019_3; GW12; DCBH2019_3; DCBH2019_5; DCBH2009_5; DBH2009_20	<0.005	<0.005	0.015	0.039	0.0079	<0.005	0.062	0.015	26	0.14	<0.005	<0.005	0.013	5	0.25	26	6.9	<0.005	0.013	1.2	13.8
Manganese (Dissolved)	mg/l	0.0005	No WSV	21	0.012	4.3	0		1.8	2	1.2	1.2	0.012	0.04	2.4	0.025	4.3	0.4	0.15	2.4	2.6	0.14	0.049	4.3	1.4	0.052	2.6	1.2	0.451
Nickel (Dissolved)	mg/l	0.0005	0.0086	21	<0.0005	0.0035	0		<0.0005	0.00063	0.00089	0.0018	0.0032	0.0035	<0.0005	0.0011	0.001	0.0027	0.00051	<0.0005	0.00053	<0.001	0.0016	0.001	0.0011	0.0017	0.00053	<0.0005	<0.001
Lead (Dissolved)	mg/l	0.0005	0.0013	21	<0.0005	<0.001	0		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Zinc (Dissolved)	mg/l	0.0025	0.0079	21	<0.001	0.107	4	DCBH2019_3; DCBH2019_5; PZ13; DBH2009_20	0.0034	0.01	0.0076	0.013	<0.0025	0.0029	<0.0025	0.023	<0.0025	0.0042	<0.0025	<0.0025	0.004	<0.001	0.002	<0.0025	0.0027	<0.0025	0.004	<0.0025	0.107
Mercury	mg/l	0.00001	0.00007	21	<0.00001	<0.00005	0		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005
Chromium (Hexavalent)	mg/l	0.02	0.0006	14	<0.0001	<0.02	1	PZ13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02				<0.001		<0.0001	0.002			<0.001	<0.001	<0.001	
Chromium III	mg/l	0.001	No WSV	16	<0.0001	<0.02	0		<0.001	<0.001	0.002	0.002	<0.001	<0.001	<0.001	<0.001			<0.02		<0.001	0.003	<0.0001	<0.0001	0.00043	<0.02		<0.02	
Total Organic Carbon	mg/l	2	No WSV	14	<2	97	0		9.1	8.3	13	32	3.6	3.5	11	6.5			<2	<2	<2		97	30	20				
Aliphatic TPH >C5-C6	mg/l	0.0001	0.008	14	<0.0001	<0.001	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aliphatic TPH >C6-C8	mg/l	0.0001	0.008	14	<0.0001	<0.001	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aliphatic TPH >C8-C10	mg/l	0.0001	0.008	14	<0.0001	<0.005	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C10-C12	mg/l	0.0001	0.008	14	<0.0001	<0.005	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C12-C16	mg/l	0.0001	0.008	14	<0.0001	<0.005	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C16-C21	mg/l	0.0001	0.008	14	<0.0001	<0.005	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C21-C35	mg/l	0.0001	0.008	14	<0.0001	<0.005	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C35-C44	mg/l	0.0001	0.008	13	<0.0001	<0.0001	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	
Total Aliphatic Hydrocarbons	mg/l	0.005	No WSV	14	<0.005	<0.005	0		<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	<0.005
Aromatic TPH >C5-C7	mg/l	0.0001	0.008	14	<0.0001	<0.001	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aromatic TPH >C7-C8	mg/l	0.0001	0.008	14	<0.0001	<0.001	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aromatic TPH >C8-C10	mg/l	0.0001	0.008	14	<0.0001	<0.005	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C10-C12	mg/l	0.0001	0.008	14	<0.0001	<0.005	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C12-C16	mg/l	0.0001	0.008	14	<0.0001	<0.005	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C16-C21	mg/l	0.0001	0.008	14	<0.0001	<0.005	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C21-C35	mg/l	0.0001	0.008	14	<0.0001	<0.01	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.01
Aromatic TPH >C35-C44	mg/l	0.0001	0.008	13	<0.0001	<0.0001	0		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	
Total Aromatic Hydrocarbons	mg/l	0.005	No WSV	14	<0.005	<0.01	0		<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	<0.01
Total Petroleum Hydrocarbons	mg/l	0.01	No WSV	14	<0.01	<0.01	0		<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
Dichlorodifluoromethane	mg/l	0.001	No WSV	15	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001							<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Chloromethane	mg/l	0.001	No WSV	21	<0.0001	<0.01	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01
Vinyl Chloride	mg/l	0.001	No WSV	21	<0.0001	<0.002	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromomethane	mg/l	0.005	No WSV	21	<0.0001	<0.005	0		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Chloroethane	mg/l	0.002	No WSV	21	<0.0001	<0.002	0		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Trichlorofluoromethane	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloroethene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Trans 1,2-Dichloroethene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloroethane	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
cis 1,2-Dichloroethene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromochloromethane	mg/l	0.005	No WSV	21	<0.0005	<0.005	0		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Trichloromethane	mg/l	0.001	0.0025	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1,1-Trichloroethane	mg/l	0.001	0.1	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tetrachloromethane	mg/l	0.001	0.012	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloropropene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Benzene	mg/l	0.001	0.008	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichloroethane	mg/l	0.002	0.01	21	<0.0002	<0.002	0		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Trichloroethene	mg/l	0.001	0.01	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichloropropane	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Dibromomethane	mg/l	0.01	No WSV	21	<0.0001	<0.01	0		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromodichloromethane	mg/l	0.005	No WSV	21	<0.0005	<0.01	0		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.01
cis-1,3-Dichloropropene	mg/l	0.01	No WSV	21	<0.001	<0.01	0		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	mg/l	0.001	0.074	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Trans-1,3-Dichloropropene	mg/l	0.01	No WSV	21	<0.001	<0.01	0		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,2-Trichloroethane	mg/l	0.01	0.3	21	<0.0001	<0.01	0		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tetrachloroethene	mg/l	0.001	0.01	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3-Dichloropropane	mg/l	0.002	No WSV	21	<0.0002	<0.002	0		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Dibromochloromethane	mg/l	0.01	No WSV	21	<0.001	<0.01	0		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dibromoethane	mg/l	0.005	No WSV	21	<0.0005	<0.005	0		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Chlorobenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1,1,2-Tetrachloroethane	mg/l	0.002	No WSV	21	<0.0002	<0.002	0		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Ethylbenzene	mg/l	0.001	0.02	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
m & p-Xylene	mg/l	0.001	See Xylenes (total)	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
o-Xylene	mg/l	0.001	See Xylenes (total)	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Styrene	mg/l	0.001	0.05	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tribromomethane	mg/l	0.001	No WSV	21	<0.001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Isopropylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromobenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,3-Trichloropropane	mg/l	0.05	No WSV	21	<0.001	<0.05	0		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
N-Propylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
2-Chlorotoluene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3,5-Trimethylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
4-Chlorotoluene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tert-Butylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,4-Trimethylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Sec-Butylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3-Dichlorobenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
4-Isopropyltoluene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,4-Dichlorobenzene	mg/l	0.001	0.02	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
N-Butylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichlorobenzene	mg/l	0.001	0.02	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dibromo-3-Chloropropane	mg/l	0.05	No WSV	21	<0.001	<0.05	0		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
1,2,4-Trichlorobenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Hexachlorobutadiene	mg/l	0.001	0.0006	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,3-Trichlorobenzene	mg/l	0.002	No WSV	21	<0.0002	<0.002	0		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Methyl Tert-Butyl Ether	mg/l	0.001	No WSV	21	<0.0001	<0.001	0		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
N-Nitrosodimethylamine	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Phenol	mg/l	0.0005	0.0077	21	<0.0005	<0.001	0		<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	<0.001
2-Chlorophenol	mg/l	0.0005	0.05	21	<0.0005	<0.001	0		<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	<0.001
Bis-(2-Chloroethyl)Ether	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
1,3-Dichlorobenzene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
1,4-Dichlorobenzene	mg/l	0.0005	0.02	21	<0.0005	<0.001	0		<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	<0.001
1,2-Dichlorobenzene	mg/l	0.0005	0.02	21	<0.0005	<0.001	0		<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	<0.001
2-Methylphenol (o-Cresol)	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Bis(2-Chloroisopropyl)Ether	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Hexachloroethane	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
N-Nitrosodi-n-propylamine	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
4-Methylphenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Nitrobenzene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Isophorone	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
2-Nitrophenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
2,4-Dimethylphenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Bis(2-Chloroethoxy)Methane	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
2,4-Dichlorophenol	mg/l	0.0005	0.00042	21	<0.0005	<0.001	0		<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	<0.001
1,2,4-Trichlorobenzene	mg/l	0.0005	No WSV	21	<0.0005	<0.003	0		<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	<0.003
Naphthalene	mg/l	0.0005	0.002	21	<0.0005	<0.001	0		<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	<0.001
4-Chloroaniline	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Hexachlorobutadiene	mg/l	0.0005	0.0006	21	<0.0005	<0.001	0		<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	<0.001
4-Chloro-3-Methylphenol	mg/l	0.0005	0.04	21	<0.0005	<0.001	0		<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	<0.001
2-Methylnaphthalene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Hexachlorocyclopentadiene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
2,4,6-Trichlorophenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
2,4,5-Trichlorophenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
2-Chloronaphthalene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
2-Nitroaniline	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Acenaphthylene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Dimethylphthalate	mg/l	0.0005	0.8	21	<0.0005	<0.001	0		<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	<0.001
2,6-Dinitrotoluene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Acenaphthene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
3-Nitroaniline	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Dibenzofuran	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
4-Chlorophenylphenylether	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
2,4-Dinitrotoluene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Fluorene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Diethyl Phthalate	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
4-Nitroaniline	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
2-Methyl-4,6-Dinitrophenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0		<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	<0.001
Azobenzene	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0		<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	
4-Bromophenylphenyl Ether	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0		<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	
Hexachlorobenzene	mg/l	0.0005	0.00005	20	<0.0005	<0.0005	0		<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	
Pentachlorophenol	mg/l	0.0005	0.0004	20	<0.0005	<0.0005	0		<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	
Phenanthrene	mg/l	0.0005	Screen BaP only	20	<0.0005	<0.0005	0		<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	
Anthracene	mg/l	0.0005	0.0001	20	<0.0005	<0.0005	0		<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	
Carbazole	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0		<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	
Di-N-Butyl Phthalate	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0		<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	
Fluoranthene	mg/l	0.0005	0.0000063	20	<0.0005	<0.0005	0		<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	
Pyrene	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0		<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	
Butylbenzyl Phthalate	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0		<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	

Assessment Criteria : *Coastal and Estuarine EQS*

Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences	Location	1884390	1884391	1884392	1884393	1884394	1884395	1884396	1884397	1884398	1884399	1884400	1884401	1884402	1887103	1893764	1893765	1893766	1893767	1893768	1893769	1893770
									Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2009_5	DBH2009_20
									Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
									Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
									Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits		Peat/Alluvium	Peat/Alluvium	Crag Group	Alluvium / Peat	Alluvium / Peat	Crag Group
									Zone																					
Benzo[a]anthracene	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
Chrysene	mg/l	0.0005	Screen BaP only	20	<0.0005	<0.0005	0			<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	
Bis(2-Ethylhexyl)Phthalate	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
Di-N-Octyl Phthalate	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
Benzo[b]fluoranthene	mg/l	0.0005	Screen BaP only	20	<0.0005	<0.0005	0			<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	
Benzo[k]fluoranthene	mg/l	0.0005	Screen BaP only	20	<0.0005	<0.0005	0			<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	
Benzo[a]pyrene	mg/l	0.0005	0.00000017	20	<0.0005	<0.0005	0			<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	
Indeno(1,2,3-c,d)Pyrene	mg/l	0.0005	Screen BaP only	20	<0.0005	<0.0005	0			<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	
Dibenz(a,h)Anthracene	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
Benzo[g,h,i]perylene	mg/l	0.0005	Screen BaP only	20	<0.0005	<0.0005	0			<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	
4-Nitrophenol	mg/l	0.0005	No WSV	20	<0.0001	<0.0005	0			<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	0.00043	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Naphthalene	mg/l	0.0001	0.002	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthylene	mg/l	0.0001	No WSV	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthene	mg/l	0.0001	No WSV	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Fluorene	mg/l	0.0001	No WSV	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Phenanthrene	mg/l	0.0001	Screen BaP only	21	<0.00001	0.00054	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00054	<0.00001	<0.00001	<0.00001	<0.00001
Anthracene	mg/l	0.0001	0.0001	21	<0.00001	0.0005	1	DCBH2019_5		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0005	<0.00001	<0.00001	<0.00001	<0.00001
Fluoranthene	mg/l	0.0001	0.0000063	21	<0.00001	0.0005	2	PZ5; DCBH2019_5		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	0.00043	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0005	<0.00001	<0.00001	<0.00001	<0.00001
Pyrene	mg/l	0.0001	No WSV	21	<0.00001	0.0012	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	0.00057	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0012	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[a]anthracene	mg/l	0.0001	No WSV	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Chrysene	mg/l	0.0001	Screen BaP only	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[b]fluoranthene	mg/l	0.0001	Screen BaP only	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[k]fluoranthene	mg/l	0.0001	Screen BaP only	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[a]pyrene	mg/l	0.0001	0.00000017	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Indeno(1,2,3-c,d)Pyrene	mg/l	0.0001	Screen BaP only	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Dibenz(a,h)Anthracene	mg/l	0.0001	No WSV	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[g,h,i]perylene	mg/l	0.0001	Screen BaP only	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Of 16 PAH's	mg/l	0.002	No WSV	21	<0.00001	0.0027	0			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0027	<0.0002	<0.0002	<0.0002	<0.00001
PCB 28	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 81	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 52	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 77	mg/l	0.00001	No WSV	20	<0.00001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
PCB 105	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 90+101	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 114	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 118	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 118	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 153	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 123	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 138	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 126	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 180	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 156	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 157	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 167	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 169	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 189	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
Total PCBs (12 Congeners)	mg/l	0.00001	No WSV	21	<0.000002	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002
Total PCBs (7 congeners)	mg/l	0.00001	No WSV	21	<0.000002	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002
Total Phenols	mg/l	0.03	No WSV	20	<0.03	<0.03	0			<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Xylenes (Total)	mg/l	0.002	0.03	21	<0.0002	<0.002	0			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002

WSV = Water Screening Value, in this case the lowest Coastal and Estuarine Environmental Quanlity Standard (EQS).
Red highlighted constituents = JAGDAG groundwater hazardous substances detected above LOD
BaP = Benzo(a)pyrene
PAH = Polycyclic aromatic hydrocarbon

Assessment Criteria : *Coastal and Estuarine EQS*

Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences	Location	1884390	1884391	1884392	1884393	1884394	1884395	1884396	1884397	1884398	1884399	1884400	1884401	1884402	1887103	1893764	1893765	1893766	1893767	1893768	1893769	1893770
									Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2009_5	DBH2009_20
									Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
									Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
									Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits		Peat/Alluvium	Peat/Alluvium	Crag Group	Alluvium / Peat	Alluvium / Peat	Crag Group
									Zone																					
pH		N/A	7 - 9.0	21	7.4	8.4	0			7.5	8.2	7.4	8.3	8.2	8.2	8.3	7.6	7.9	8.3	8.2	8.4	7.8	8.4	8.4	7.9	8	8.4	7.8	7.4	7.52
Electrical Conductivity	µS/cm	1	No WSV	21	250	4400	0			890	1100	3600	3100	650	660	950	520	4100	1600	250	1000	1700	930	980	4100	4400	950	1700	2300	2970
Suspended Solids At 105C	µg/l	5000	No WSV	21	<5000	4000000	0			59000	100000	170000	210000	23000	16000	57000	110000	250000	57000	47000	<5000	210000	92000	24000	250000	310000	22000	210000	4000000	38000
Alkalinity (Total)	µg/l	10000	No WSV	21	92000	840000	0			360000	540000	700000	570000	290000	300000	220000	92000	840000	500000	370000	440000	420000	340000	400000	840000	620000	490000	420000	140000	238000
Chloride	µg/l	1000	No WSV	21	53000	10300000	0			120000	210000	950000	860000	62000	53000	150000	65000	1400000	140000	220000	130000	400000	130000	77000	1400000	1200000	65000	400000	590000	10300000
Ammonium	µg/l	50	Not appropriate, EQS applies to unionised Ammonia	21	130	20000	0			3800	3700	7500	8300	2000	1700	2700	130	20000	740	10000	2000	3400	3600	440	20000	14000	440	3400	1100	1446
Ammoniacal Nitrogen	µg/l	50	Not appropriate, EQS applies to unionised Ammonia	21	100	16000	0			3000	3100	5900	7200	1700	1500	2300	100	16000	640	8600	1800	2700	3100	380	16000	12000	390	2700	860	1120
Nitrite	µg/l	20	No WSV	21	<20	190	0			<20	<20	<20	<20	30	38	84	<20	<20	<20	<20	<20	31	<20	<20	<20	<20	<20	31	190	<100
Nitrate	µg/l	500	No WSV	21	<100	7000	0			7000	610	<500	780	<500	<500	<500	4800	650	<500	<500	<500	770	<500	<500	650	<500	500	770	700	<100
Phosphate	µg/l	200	No WSV	21	<20	3800	0			3800	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<20
Phosphorus	µg/l	20	No WSV	21	<20	<20000	0			1200	21	21	21	<20	23	21	55	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20000
Sulphate	µg/l	1000	No WSV	21	<1000	1410000	0			5000	<1000	4800	<1000	37000	36000	44000	14000	<1000	110000	2900	21000	<1000	2500	31000	<1000	<1000	27000	<1000	2700	1410000
Total Oxidised Nitrogen	µg/l	200	No WSV	21	<100	1600	0			1600	<200	<200	<200	<200	<200	<200	1100	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	220	<100
Cyanide (Free)	µg/l	5	1	21	<5	<5	0			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Calcium	µg/l	2000	No WSV	21	44000	531000	0			78000	92000	100000	100000	110000	120000	100000	44000	150000	190000	93000	99000	120000	72000	110000	150000	130000	120000	120000	290000	531000
Potassium	µg/l	500	No WSV	21	3300	154000	0			17000	8500	35000	11000	4600	4500	20000	3300	34000	11000	10000	17000	12000	15000	7500	34000	20000	4700	12000	7000	154000
Magnesium	µg/l	200	No WSV	21	2200	779000	0			16000	27000	64000	50000	12000	12000	19000	2200	89000	12000	9400	21000	39000	15000	16000	89000	64000	15000	39000	25000	779000
Sodium	µg/l	1500	No WSV	21	34000	6600000	0			79000	120000	540000	460000	68000	65000	89000	34000	870000	54000	100000	84000	210000	60000	42000	870000	600000	68000	210000	220000	6600000
Arsenic (Dissolved)	µg/l	0.2	25	21	0.5	12	0			1.9	1.9	3.2	3.7	3.1	1.3	0.96	1.2	12	2.4	0.5	1.3	3.7	4.3	5.5	12	3.8	4.3	3.7	1.2	<1
Boron	µg/l	10	7000	21	30	1390	0			160	100	640	340	82	84	170	30	310	110	46	220	140	120	55	310	370	87	140	70	1390
Cadmium (Dissolved)	µg/l	0.11	0.2	21	<0.08	<0.2	0			<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	0.11	<0.11	<0.11	<0.11	<0.11	<0.08	<0.08	0.11	<0.11	<0.11	<0.11	<0.11	<0.2
Chromium (Dissolved)	µg/l	0.5	See Cr VI as first pass	21	<0.5	3	0			<0.5	<0.5	1.7	1.8	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	2.1	<0.5	<0.5	<0.5	<0.5	<0.5	3
Copper (Dissolved)	µg/l	0.5	3.76	21	<0.5	8	2	PZ13; DBH2009_20		0.54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.4	1.6	1.2	<0.5	<0.5	<0.5	<1	<1	1.6	<0.5	<0.5	<0.5	<0.5	8
Iron (Dissolved)	µg/l	5	1000	21	<5	26000	6	DCBH2019_3; GW12; DCBH2019_3; DCBH2019_5; DCBH2009_5; DBH2009_20		<5	<5	15	39	7.9	<5	62	15	26000	140	<5	<5	13	5000	250	26000	6900	<5	13	1200	13800
Manganese (Dissolved)	µg/l	0.5	No WSV	21	12	4300	0			1800	2000	1200	1200	12	40	2400	25	4300	400	150	2400	2600	140	49	4300	1400	52	2600	1200	451
Nickel (Dissolved)	µg/l	0.5	8.6	21	<0.5	3.5	0			<0.5	0.63	0.89	1.8	3.2	3.5	<0.5	1.1	1	2.7	0.51	<0.5	0.53	<1	1.6	1	1.1	1.7	0.53	<0.5	<1
Lead (Dissolved)	µg/l	0.5	1.3	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.53	<0.5	<0.5	<0.5	<0.5	<1	<1	0.53	<0.5	<0.5	<0.5	<0.5	<1
Zinc (Dissolved)	µg/l	2.5	7.9	21	<1	107	4	DCBH2019_3; DCBH2019_5; PZ13; DBH2009_20		3.4	10	7.6	13	<2.5	2.9	<2.5	23	<2.5	4.2	<2.5	<2.5	4	<1	2	<2.5	2.7	<2.5	4	<2.5	107
Mercury	µg/l	0.01	0.07	21	<0.01	<0.05	0			<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	<0.05
Chromium (Hexavalent)	µg/l	20	0.6	14	<0.1	<20	1	PZ13		<20	<20	<20	<20	<20	<20	<20	<20	0	0	0	<1	0	<0.1	2	0	0	<1	<1	<1	0
Chromium III	µg/l	1	No WSV	16	<0.1	<20	0			<1	<1	2	2	<1	<1	<1	<1	0	0	<20	0	<1	3	<0.1	<0.1	0.43	<20	0	<20	0
Total Organic Carbon	µg/l	2000	No WSV	14	<2000	97000	0			9100	8300	13000	32000	3600	3500	11000	6500	0	0	<2000	<2000	<2000	0	97000	30000	20000	0	0	0	0
Aliphatic TPH >C5-C6	µg/l	0.1	8	14	<0.1	<1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aliphatic TPH >C6-C8	µg/l	0.1	8	14	<0.1	<1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aliphatic TPH >C8-C10	µg/l	0.1	8	14	<0.1	<5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C10-C12	µg/l	0.1	8	14	<0.1	<5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C12-C16	µg/l	0.1	8	14	<0.1	<5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C16-C21	µg/l	0.1	8	14	<0.1	<5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C21-C35	µg/l	0.1	8	14	<0.1	<5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C35-C44	µg/l	0.1	8	13	<0.1	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	0
Total Aliphatic Hydrocarbons	µg/l	5	No WSV	14	<5	<5	0			<5	<5	<5	<5	<5	<5	<5	<5	0	0	0	<5	<5	0	0	0	0	<5	<5	<5	<5
Aromatic TPH >C5-C7	µg/l	0.1	8	14	<0.1	<1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aromatic TPH >C7-C8	µg/l	0.1	8	14	<0.1	<1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aromatic TPH >C8-C10	µg/l	0.1	8	14	<0.1	<5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C10-C12	µg/l	0.1	8	14	<0.1	<5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C12-C16	µg/l	0.1	8	14	<0.1	<5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C16-C21	µg/l	0.1	8	14	<0.1	<5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C21-C35	µg/l	0.1	8	14	<0.1	<10	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<10
Aromatic TPH >C35-C44	µg/l	0.1	8	13	<0.1	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	0
Total Aromatic Hydrocarbons	µg/l	5	No WSV	14	<5	<10	0			<5	<5	<5	<5	<5	<5	<5	<5	0	0	0	<5	<5	0	0	0	0	<5	<5	<5	<10
Total Petroleum Hydrocarbons	µg/l	10	No WSV	14	<10	<10	0			<10	<10	<10	<10	<10	<10	<10	<10	0	0	0	<10	<10	0	0	0	0	<10	<10	<10	<10
Dichlorodifluoromethane	µg/l	1	No WSV	15	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	0	0	0	0	0	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Chloromethane	µg/l	1	No WSV	21	<0.1	<10	0			<1	<1	<1	<1	<1	<1	<1	<1	<2	<2	<2	<2	<2	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10
Vinyl Chloride	µg/l	1	No WSV	21	<0.1	<2	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromomethane	µg/l	5	No WSV	21	<0.1	<5	0			<5	<5	<5	<5	<5	<5	<5	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	<1
Chloroethane	µg/l	2	No WSV	21	<0.1	<2	0			<2	<2	<2	<2	<2	<2	<2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Trichlorofluoromethane	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1-Dichloroethene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Trans 1,2-Dichloroethene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1-Dichloroethane	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
cis 1,2-Dichloroethene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromochloromethane	µg/l	5	No WSV	21	<0.5	<5	0			<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Trichloromethane	µg/l	1	2.5	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1,1-Trichloroethane	µg/l	1	100	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tetrachloromethane	µg/l	1	12	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1-Dichloropropene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Benzene	µg/l	1	8	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dichloroethane	µg/l	2	10	21	<0.2	<2	0			<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Trichloroethene	µg/l	1	10	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dichloropropane	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Dibromomethane	µg/l	10	No WSV	21	<0.1	<10	0			<10	<10	<10	<10	<10	<10	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromodichloromethane	µg/l	5	No WSV	21	<0.5	<10	0			<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
cis-1,3-Dichloropropene	µg/l	10	No WSV	21	<1	<10	0			<10	<10	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/l	1	74	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Trans-1,3-Dichloropropene	µg/l	10	No WSV	21	<1	<10	0			<10	<10	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	µg/l	10	300	21	<0.1	<10	0			<10	<10	<10	<10	<10	<10	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tetrachloroethene	µg/l	1	10	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,3-Dichloropropane	µg/l	2	No WSV	21	<0.2	<2	0			<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Dibromochloromethane	µg/l	10	No WSV	21	<1	<10	0			<10	<10	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	µg/l	5	No WSV	21	<0.5	<5	0			<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Chlorobenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1,1,2-Tetrachloroethane	µg/l	2	No WSV	21	<0.2	<2	0			<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Ethylbenzene	µg/l	1	20	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
m & p-Xylene	µg/l	1	See Xylenes (total)	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
o-Xylene	µg/l	1	See Xylenes (total)	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Styrene	µg/l	1	50	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tribromomethane	µg/l	1	No WSV	21	<1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromobenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2,3-Trichloropropane	µg/l	50	No WSV	21	<1	<50	0			<50	<50	<50	<50	<50	<50	<50	<50	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<1
N-Propylbenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
2-Chlorotoluene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,3,5-Trimethylbenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
4-Chlorotoluene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tert-Butylbenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2,4-Trimethylbenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Sec-Butylbenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,3-Dichlorobenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
4-Isopropyltoluene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,4-Dichlorobenzene	µg/l	1	20	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
N-Butylbenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dichlorobenzene	µg/l	1	20	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dibromo-3-Chloropropane	µg/l	50	No WSV	21	<1	<50	0			<50	<50	<50	<50	<50	<50	<50	<50	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<1
1,2,4-Trichlorobenzene	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Hexachlorobutadiene	µg/l	1	0.6	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2,3-Trichlorobenzene	µg/l	2	No WSV	21	<0.2	<2	0			<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Methyl Tert-Butyl Ether	µg/l	1	No WSV	21	<0.1	<1	0			<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
N-Nitrosodimethylamine	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Phenol	µg/l	0.5	7.7	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Chlorophenol	µg/l	0.5	50	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Bis-(2-Chloroethyl)Ether	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,3-Dichlorobenzene	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,4-Dichlorobenzene	µg/l	0.5	20	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,2-Dichlorobenzene	µg/l	0.5	20	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Methylphenol (o-Cresol)	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Bis(2-Chloroisopropyl)Ether	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Hexachloroethane	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
N-Nitrosodi-n-propylamine	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Methylphenol	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Nitrobenzene	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Isophorone	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Nitrophenol	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4-Dimethylphenol	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Bis(2-Chloroethoxy)Methane	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4-Dichlorophenol	µg/l	0.5	0.42	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,2,4-Trichlorobenzene	µg/l	0.5	No WSV	21	<0.5	<3	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<3
Naphthalene	µg/l	0.5	2	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Chloroaniline	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Hexachlorobutadiene	µg/l	0.5	0.6	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Chloro-3-Methylphenol	µg/l	0.5	40	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Methylnaphthalene	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Hexachlorocyclopentadiene	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4,6-Trichlorophenol	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4,5-Trichlorophenol	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Chloronaphthalene	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Nitroaniline	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Acenaphthylene	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Dimethylphthalate	µg/l	0.5	800	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,6-Dinitrotoluene	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Acenaphthene	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
3-Nitroaniline	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Dibenzofuran	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Chlorophenylphenylether	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4-Dinitrotoluene	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Fluorene	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Diethyl Phthalate	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Nitroaniline	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Methyl-4,6-Dinitrophenol	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Azobenzene	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
4-Bromophenylphenyl Ether	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Hexachlorobenzene	µg/l	0.5	0.05	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Pentachlorophenol	µg/l	0.5	0.4	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Phenanthrene	µg/l	0.5	Screen BaP only	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Anthracene	µg/l	0.5	0.1	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Carbazole	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Di-N-Butyl Phthalate	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Fluoranthene	µg/l	0.5	0.0063	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Pyrene	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Butylbenzyl Phthalate	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0

Assessment Criteria :									Coastal and Estuarine EQS																							
										Location	1884390	1884391	1884392	1884393	1884394	1884395	1884396	1884397	1884398	1884399	1884400	1884401	1884402	1887103	1893764	1893765	1893766	1893767	1893768	1893769	1893770
										Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2009_5	DBH2009_20
										Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
										Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
										Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits		Peat/Alluvium	Peat/Alluvium	Crag Group	Alluvium / Peat	Alluvium / Peat	Crag Group
Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences		Zone																					
Benzo(a)anthracene	µg/l	0.5	No WSV	20	<0.5	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Chrysene	µg/l	0.5	Screen BaP only	20	<0.5	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Bis(2-Ethylhexyl)Phthalate	µg/l	0.5	No WSV	20	<0.5	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Di-N-Octyl Phthalate	µg/l	0.5	No WSV	20	<0.5	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[b]fluoranthene	µg/l	0.5	Screen BaP only	20	<0.5	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[k]fluoranthene	µg/l	0.5	Screen BaP only	20	<0.5	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[a]pyrene	µg/l	0.5	0.00017	20	<0.5	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Indeno(1,2,3-c,d)Pyrene	µg/l	0.5	Screen BaP only	20	<0.5	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Dibenz(a,h)Anthracene	µg/l	0.5	No WSV	20	<0.5	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[g,h,i]perylene	µg/l	0.5	Screen BaP only	20	<0.5	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
4-Nitrophenol	µg/l	0.5	No WSV	20	<0.1	<0.5	0				<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	0.43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Naphthalene	µg/l	0.1	2	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Acenaphthylene	µg/l	0.1	No WSV	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Acenaphthene	µg/l	0.1	No WSV	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Fluorene	µg/l	0.1	No WSV	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Phenanthrene	µg/l	0.1	Screen BaP only	21	<0.01	0.54	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.54	<0.01	<0.01	<0.01	<0.01
Anthracene	µg/l	0.1	0.1	21	<0.01	0.5	1	DCBH2019_5			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.5	<0.01	<0.01	<0.01	<0.01
Fluoranthene	µg/l	0.1	0.0063	21	<0.01	0.5	2	PZ5; DCBH2019_5			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	0.43	<0.01	<0.01	<0.01	<0.01	<0.01	0.5	<0.01	<0.01	<0.01	<0.01
Pyrene	µg/l	0.1	No WSV	21	<0.01	1.2	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	0.57	<0.01	<0.01	<0.01	<0.01	<0.01	1.2	<0.01	<0.01	<0.01	<0.01
Benzo[a]anthracene	µg/l	0.1	No WSV	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Chrysene	µg/l	0.1	Screen BaP only	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[b]fluoranthene	µg/l	0.1	Screen BaP only	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[k]fluoranthene	µg/l	0.1	Screen BaP only	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[a]pyrene	µg/l	0.1	0.00017	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Indeno(1,2,3-c,d)Pyrene	µg/l	0.1	Screen BaP only	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Dibenz(a,h)Anthracene	µg/l	0.1	No WSV	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[g,h,i]perylene	µg/l	0.1	Screen BaP only	21	<0.01	<0.1	0				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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 Of 16 PAH's	µg/l	2	No WSV	21	<0.01	2.7	0				<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	1	<0.2	<0.2	<0.2	<0.2	<0.2	2.7	<0.2	<0.2	<0.2	<0.01
PCB 28	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 81	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 52	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 77	µg/l	0.01	No WSV	20	<0.01	<0.01	0				<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
PCB 105	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 90+101	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 114	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 118	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 118	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 153	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 123	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 138	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 126	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 180	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 156	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 157	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 167	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 169	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
PCB 189	µg/l	0.01	No WSV	21	<0.001	<0.01	0				<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	<0.001
Total PCBs (12 Congeners)	µg/l	0.01	No WSV	21	<0.002	<0.01	0				<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	<0.002
Total PCBs (7 congeners)	µg/l	0.01	No WSV	21	<0.002	<0.01	0				<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	<0.002
Total Phenols	µg/l	30	No WSV	20	<30	<30	0				<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	0
Xylenes (Total)	µg/l	2	30	21	<0.2	<2	0				<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2

WSV = Water Screening Value, in this case the lowest Coastal and Estuarine Environmental Quanlity Standard (EQS).
Red highlighted constituents = JAGDAG groundwater hazardous substances detected above LOD
BaP = Benzo(a)pyrene
PAH = Polycyclic aromatic hydrocarbon

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Assessment Criteria : *Drinking Water Standard England and Wales/WHO*

Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences
pH		N/A	6.5-9.5	21	7.4	8.4	0	
Electrical Conductivity	µS/cm	1	No WSV	21	250	4400	0	
Suspended Solids At 105C	mg/l	5	No WSV	21	<5	4000	0	
Alkalinity (Total)	mg/l	10	No WSV	21	92	840	0	
Chloride	mg/l	1	250	21	53	10300	9	DCBH2019_4; DCBH2019_5; DCBH2019_3; DCBH2019_3; DCBH2019_3; DCBH2019_5; DCBH2019_3; DCBH2009_5; DBH2009_20
Ammonium	mg/l	0.05	0.5	21	0.13	20	18	GW12; DCBH2019_3; DCBH2019_4; DCBH2019_5; PZ13; PZ13; GW12; DCBH2019_3; GW10; PZ5; GW12; DCBH2019_3; GW12; DCBH2019_3; DCBH2019_5; DCBH2019_3; DCBH2009_5; DBH2009_20
Ammoniacal Nitrogen	mg/l	0.05	0.39	21	0.1	16	18	GW12; DCBH2019_3; DCBH2019_4; DCBH2019_5; PZ13; PZ13; GW12; DCBH2019_3; GW10; PZ5; GW12; DCBH2019_3; GW12; DCBH2019_3; DCBH2019_5; DCBH2019_3; DCBH2009_5; DBH2009_20
Nitrite	mg/l	0.02	0.5	21	<0.02	0.19	0	
Nitrate	mg/l	0.5	50	21	<0.1	7	0	
Phosphate	mg/l	0.2	No WSV	21	<0.02	3.8	0	
Phosphorus	mg/l	0.02	No WSV	21	<0.02	<20	0	
Sulphate	mg/l	1	250	21	<1	1410	1	DBH2009_20
Total Oxidised Nitrogen	mg/l	0.2	No WSV	21	<0.1	1.6	0	
Cyanide (Free)	mg/l	0.005	0.05 (applies to total cyanide)	21	<0.005	<0.005	0	
Calcium	mg/l	2	No WSV	21	44	531	0	
Potassium	mg/l	0.5	No WSV	21	3.3	154	0	
Magnesium	mg/l	0.2	No WSV	21	2.2	779	0	
Sodium	mg/l	1.5	200	21	34	6600	9	DCBH2019_4; DCBH2019_5; DCBH2019_3; DCBH2019_3; DCBH2019_3; DCBH2019_5; DCBH2019_3; DCBH2009_5; DBH2009_20
Arsenic (Dissolved)	mg/l	0.0002	0.01	21	0.0005	0.012	2	DCBH2019_3; DCBH2019_3
Boron	mg/l	0.01	1	21	0.03	1.39	1	DBH2009_20
Cadmium (Dissolved)	mg/l	0.00011	0.005	21	<0.00008	<0.0002	0	
Chromium (Dissolved)	mg/l	0.0005	0.05	21	<0.0005	0.003	0	
Copper (Dissolved)	mg/l	0.0005	2	21	<0.0005	0.008	0	
Iron (Dissolved)	mg/l	0.005	0.2	21	<0.005	26	7	DCBH2019_3; GW12; PZ13; DCBH2019_3; DCBH2019_5; DCBH2009_5; DBH2009_20
Manganese (Dissolved)	mg/l	0.0005	0.05	21	0.012	4.3	17	GW12; DCBH2019_3; DCBH2019_4; DCBH2019_5; GW12; DCBH2019_3; GW10; PZ5; GW12; DCBH2019_3; GW12; DCBH2019_3; DCBH2019_5; PZ13; DCBH2019_3; DCBH2009_5; DBH2009_20
Nickel (Dissolved)	mg/l	0.0005	0.02	21	<0.0005	0.0035	0	
Lead (Dissolved)	mg/l	0.0005	0.01	21	<0.0005	<0.001	0	
Zinc (Dissolved)	mg/l	0.0025	3	21	<0.001	0.107	0	
Mercury	mg/l	0.00001	0.001	21	<0.00001	<0.00005	0	
Chromium (Hexavalent)	mg/l	0.02	See Total Chromium	14	<0.0001	<0.02	0	
Chromium III	mg/l	0.001	See Total Chromium	16	<0.0001	<0.02	0	
Total Organic Carbon	mg/l	2	No WSV	14	<2	97	0	
Aliphatic TPH >C5-C6	mg/l	0.0001	15	14	<0.0001	<0.001	0	
Aliphatic TPH >C6-C8	mg/l	0.0001	15	14	<0.0001	<0.001	0	
Aliphatic TPH >C8-C10	mg/l	0.0001	0.3	14	<0.0001	<0.005	0	
Aliphatic TPH >C10-C12	mg/l	0.0001	0.3	14	<0.0001	<0.005	0	
Aliphatic TPH >C12-C16	mg/l	0.0001	0.3	14	<0.0001	<0.005	0	
Aliphatic TPH >C16-C21	mg/l	0.0001	No WSV	14	<0.0001	<0.005	0	
Aliphatic TPH >C21-C35	mg/l	0.0001	No WSV	14	<0.0001	<0.005	0	
Aliphatic TPH >C35-C44	mg/l	0.0001	No WSV	13	<0.0001	<0.0001	0	
Total Aliphatic Hydrocarbons	mg/l	0.005	No WSV	14	<0.005	<0.005	0	
Aromatic TPH >C5-C7	mg/l	0.0001	0.01	14	<0.0001	<0.001	0	
Aromatic TPH >C7-C8	mg/l	0.0001	0.7	14	<0.0001	<0.001	0	
Aromatic TPH >C8-C10	mg/l	0.0001	0.3	14	<0.0001	<0.005	0	
Aromatic TPH >C10-C12	mg/l	0.0001	0.09	14	<0.0001	<0.005	0	
Aromatic TPH >C12-C16	mg/l	0.0001	0.09	14	<0.0001	<0.005	0	
Aromatic TPH >C16-C21	mg/l	0.0001	0.09	14	<0.0001	<0.005	0	
Aromatic TPH >C21-C35	mg/l	0.0001	0.09	14	<0.0001	<0.01	0	
Aromatic TPH >C35-C44	mg/l	0.0001	No WSV	13	<0.0001	<0.0001	0	
Total Aromatic Hydrocarbons	mg/l	0.005	No WSV	14	<0.005	<0.01	0	
Total Petroleum Hydrocarbons	mg/l	0.01	No WSV	14	<0.01	<0.01	0	
Dichlorodifluoromethane	mg/l	0.001	No WSV	15	<0.0001	<0.001	0	
Chloromethane	mg/l	0.001	No WSV	21	<0.0001	<0.01	0	
Vinyl Chloride	mg/l	0.001	0.0005	21	<0.0001	<0.002	0	
Bromomethane	mg/l	0.005	No WSV	21	<0.0001	<0.005	0	
Chloroethane	mg/l	0.002	No WSV	21	<0.0001	<0.002	0	
Trichlorofluoromethane	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
1,1-Dichloroethene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
Trans 1,2-Dichloroethene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
1,1-Dichloroethane	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
cis 1,2-Dichloroethene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
Bromochloromethane	mg/l	0.005	No WSV	21	<0.0005	<0.005	0	
Trichloromethane	mg/l	0.001	See Trihalomethanes	21	<0.0001	<0.001	0	
1,1,1-Trichloroethane	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
Tetrachloromethane	mg/l	0.001	0.004	21	<0.0001	<0.001	0	
1,1-Dichloropropene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
Benzene	mg/l	0.001	0.001	21	<0.0001	<0.001	0	
1,2-Dichloroethane	mg/l	0.002	0.003	21	<0.0002	<0.002	0	
Trichloroethene	mg/l	0.001	0.01 (sum of TCE & PCE)	21	<0.0001	<0.001	0	
nde	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
Dibromomethane	mg/l	0.01	No WSV	21	<0.0001	<0.01	0	
Bromodichloromethane	mg/l	0.005	See Trihalomethanes	21	<0.0005	<0.01	0	
cis-1,3-Dichloropropene	mg/l	0.01	No WSV	21	<0.001	<0.01	0	
Toluene	mg/l	0.001	0.7	21	<0.0001	<0.001	0	
Trans-1,3-Dichloropropene	mg/l	0.01	No WSV	21	<0.001	<0.01	0	
1,1,2-Trichloroethane	mg/l	0.01	No WSV	21	<0.0001	<0.01	0	
Tetrachloroethene	mg/l	0.001	0.01 (sum of TCE & PCE)	21	<0.0001	<0.001	0	
1,3-Dichloropropane	mg/l	0.002	No WSV	21	<0.0002	<0.002	0	
Dibromochloromethane	mg/l	0.01	See Trihalomethanes	21	<0.001	<0.01	0	
1,2-Dibromoethane	mg/l	0.005	0.0004	21	<0.0005	<0.005	0	
Chlorobenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
1,1,1,2-Tetrachloroethane	mg/l	0.002	No WSV	21	<0.0002	<0.002	0	
Ethylbenzene	mg/l	0.001	0.3	21	<0.0001	<0.001	0	
m & p-Xylene	mg/l	0.001	See Xylenes (total)	21	<0.0001	<0.001	0	
o-Xylene	mg/l	0.001	See Xylenes (total)	21	<0.0001	<0.001	0	
Styrene	mg/l	0.001	0.02	21	<0.0001	<0.001	0	
Tribromomethane	mg/l	0.001	No WSV	21	<0.001	<0.001	0	
Isopropylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
Bromobenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
1,2,3-Trichloropropane	mg/l	0.05	No WSV	21	<0.001	<0.05	0	
N-Propylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
2-Chlorotoluene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
1,3,5-Trimethylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
4-Chlorotoluene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
Tert-Butylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
1,2,4-Trimethylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
Sec-Butylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
1,3-Dichlorobenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
4-Isopropyltoluene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
1,4-Dichlorobenzene	mg/l	0.001	0.3	21	<0.0001	<0.001	0	
N-Butylbenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
1,2-Dichlorobenzene	mg/l	0.001	1	21	<0.0001	<0.001	0	
1,2-Dibromo-3-Chloropropane	mg/l	0.05	0.001	21	<0.001	<0.05	0	
1,2,4-Trichlorobenzene	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
Hexachlorobutadiene	mg/l	0.001	0.0006	21	<0.0001	<0.001	0	
1,2,3-Trichlorobenzene	mg/l	0.002	No WSV	21	<0.0002	<0.002	0	
Methyl Tert-Butyl Ether	mg/l	0.001	No WSV	21	<0.0001	<0.001	0	
N-Nitrosodimethylamine	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Phenol	mg/l	0.0005	0.05	21	<0.0005	<0.001	0	
2-Chlorophenol	mg/l	0.0005	0.3	21	<0.0005	<0.001	0	
Bis-(2-Chloroethyl)Ether	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
1,3-Dichlorobenzene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
1,4-Dichlorobenzene	mg/l	0.0005	0.3	21	<0.0005	<0.001	0	
1,2-Dichlorobenzene	mg/l	0.0005	1	21	<0.0005	<0.001	0	
2-Methylphenol (o-Cresol)	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Bis(2-Chloroisopropyl)Ether	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Hexachloroethane	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
N-Nitrosodi-n-propylamine	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
4-Methylphenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Nitrobenzene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Isophorone	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
2-Nitrophenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
2,4-Dimethylphenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Bis(2-Chloroethoxy)Methane	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
2,4-Dichlorophenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
1,2,4-Trichlorobenzene	mg/l	0.0005	No WSV	21	<0.0005	<0.003	0	
Naphthalene	mg/l	0.0005	See BaP	21	<0.0005	<0.001	0	
4-Chloroaniline	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Hexachlorobutadiene	mg/l	0.0005	0.0006	21	<0.0005	<0.001	0	
4-Chloro-3-Methylphenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
2-Methylnaphthalene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Hexachlorocyclopentadiene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
2,4,6-Trichlorophenol	mg/l	0.0005	0.2	21	<0.0005	<0.001	0	
2,4,5-Trichlorophenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
2-Chloronaphthalene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
2-Nitroaniline	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Acenaphthylene	mg/l	0.0005	See BaP	21	<0.0005	<0.001	0	
Dimethylphthalate	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
2,6-Dinitrotoluene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Acenaphthene	mg/l	0.0005	See BaP	21	<0.0005	<0.001	0	
3-Nitroaniline	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
Dibenzofuran	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
4-Chlorophenylphenylether	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	
2,4-Dinitrotoluene	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0	

Location	1884390	1884391	1884392	1884393	1884394	1884395	1884396	1884397	1884398	1884399	1884400	1884401	1884402	1887103	1893764	1893765	1893766	1893767	1893768	1893769	1893770
Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2009_5	DBH2009_20
Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	20m
Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits		Peat/Alluvium	Peat/Alluvium	Crag Group	Alluvium / Peat	Alluvium / Peat	Crag Group
Zone																					
pH	7.5	8.2	7.4	8.3	8.2	8.2	8.3	7.6	7.9	8.3	8.2	8.4	7.8	8.4	8.4	7.9	8	8.4	7.8	7.4	7.52
Electrical Conductivity	890	1100	3600	3100	650	660	950	520	4100	1600	250	1000	1700	930	980	4100	4400	950	1700	2300	2970
Suspended Solids At 105C	59	100	170	210	23	16	57	110	250	57	47	<5	210	92	24	250	310	22	210	4000	38
Alkalinity (Total)	360	540	700	570	290	300	220	92	840	500	370	440	420	340	400	840	620	490	420	140	238
Chloride	120	210	950	860	62	53	150	65	1400	140	220	130	400	130	77	1400	1200	65	400	590	10300
Ammonium	3.8	3.7	7.5	8.3	2	1.7	2.7	0.13	20	0.74	10	2	3.4	3.6	0.44	20	14	0.44	3.4	1.1	1.446
Ammoniacal Nitrogen	3	3.1	5.9	7.2	1.7	1.5	2.3	0.1	16	0.64	8.6	1.8	2.7	3.1	0.38	16	12	0.39	2.7	0.86	1.12
Nitrite	<0.02	<0.02	<0.02	<0.02	0.03	0.038	0.084	<0.02	<0.02	<0.02	<0.02	<0.02	0.031	<0.02	<0.02	<0.02	<0.02	<0.02	0.031	0.19	<0.1
Nitrate	7	0.61	<0.5	0.78	<0.5	<0.5	<0.5	4.8	0.65	<0.5	<0.5	<0.5	0.77	<0.5	<0.5	0.65	<0.5	0.5	0.77	0.7	<0.1
Phosphate	3.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.02
Phosphorus	1.2	0.021	0.021	0.021	<0.02	0.023	0.021	0.055	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<20
Sulphate	5	<1	4.8	<1	37	36	44	14	<1	110	2.9	21	<1	2.5	31	<1	<1	27	<1	2.7	1410
Total Oxidised Nitrogen	1.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.22	<0.1
Cyanide (Free)	<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	78	92	100	100	110	120	100	44	150	190	93	99	120	72	110	150	130	120	120	290	531
Potassium	17	8.5	35	11	4.6	4.5	20	3.3	34	11	10	17	12	15	7.5	34	20	4.7	12	7	154
Magnesium	16	27	64	50	12	12	19	2.2	89	12	9.4	21	39	15	16	89	64	15	39	25	779
Sodium	79	120	540	460	68	65	89	34	870	54	100	84	210	60	42	870	600	68	210	220	6600
Arsenic (Dissolved)	0.0019	0.0019	0.0032	0.0037	0.0031	0.0013	0.00096	0.0012	0.012	0.0024	0.0005	0.0013	0.0037	0.0043	0.0055	0.012	0.0038	0.0043	0.0037	0.0012	<0.001
Boron	0.16	0.1	0.64	0.34	0.082	0.084	0.17	0.03	0.31	0.11	0.046	0.22	0.14	0.12	0.055	0.31	0.37	0.087	0.14	0.07	1.39
Cadmium (Dissolved)	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00008	<0.00008	0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.0002
Chromium (Dissolved)	<0.0005	<0.0005	0.0017	0.0018	<0.0005	<0.0005	<0.0005	0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0025	0.0021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.003
Copper (Dissolved)	0.00054	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0044	0.0016	0.0012	<0.0005	<0.0005	<0.0005	<0.001	<0.001	0.0016	<0.0005	<0.0005	<0.0005	<0.0005	0.008
Iron (Dissolved)	<0.005	<0.005	0.015	0.039	0.0079	<0.005	0.062	0.015	26	0.14	<0.005	<0.005	0.013	5	0.25	26	6.9	<0.005	0.013	1.2	13.8
Manganese (Dissolved)	1.8	2	1.2	1.2	0.012	0.04	2.4	0.025	4.3	0.4	0.15	2.4	2.6	0.14	0.049	4.3	1.4	0.052	2.6	1.2	0.451
Nickel (Dissolved)	<0.0005	0.00063	0.00089	0.0018	0.0032	0.0035	<0.0005	0.0011	0.001	0.0027	0.00051	<0.0005	0.00053	<0.001	0.0016	0.001	0.0011	0.0017	0.00053	<0.0005	<0.001
Lead (Dissolved)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Zinc (Dissolved)	0.0034	0.01	0.0076	0.013	<0.0025	0.0029	<0.0025	0.023	<0.0025	0.0042	<0.0025	<0.0025	0.004	<0.001	0.002	<0.0025	0.0027	<0.0025	0.004	<0.0025	0.107
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005
Chromium (Hexavalent)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02				<0.001		<0.0001	0.002			<0.001	<0.001	<0.001	
Chromium III	<0.001	<0.001	0.002	0.002	<0.001	<0.001	<0.001	<0.001			<0.02		<0.001	0.003	<0.0001	<0.0001	0.00043	<0.02		<0.02	
Total Organic Carbon	9.1	8.3	13	32	3.6	3.5	11	6.5			<2	<2	<2		97	30	20				
Aliphatic TPH >C5-C6	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aliphatic TPH >C6-C8	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aliphatic TPH >C8-C10	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C10-C12	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C12-C16	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C16-C21	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C21-C35	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C35-C44	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	
Total Aliphatic Hydrocarbons	<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	<0.005
Aromatic TPH >C5-C7	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aromatic TPH >C7-C8	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aromatic TPH >C8-C10	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C10-C12	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C12-C16	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C16-C21	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C21-C35	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.01
Aromatic TPH >C35-C44	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	
Total Aromatic Hydrocarbons	<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	<0.01
Total Petroleum Hydrocarbons	<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
Dichlorodifluoromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001							<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Chloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01
Vinyl Chloride	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromomethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Chloroethane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Trichlorofluoromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Trans 1,2-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
cis 1,2-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromochloromethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Trichloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1,1-Trichloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tetrachloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloropropene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Benzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichloroethane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Trichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
nde	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Dibromomethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromodichloromethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.01
cis-1,3-Dichloropropene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Trans-1,3-Dichloropropene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,2-Trichloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tetrachloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3-Dichloropropane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Dibromochloromethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dibromoethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Chlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1,1,2-Tetrachloroethane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
m & p-Xylene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
o-Xylene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Styrene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tribromomethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Isopropylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,3-Trichloropropane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
N-Propylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
2-Chlorotoluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3,5-Trimethylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
4-Chlorotoluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tert-Butylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,4-Trimethylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Sec-Butylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
4-Isopropyltoluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,4-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
N-Butylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dibromo-3-Chloropropane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
1,2,4-Trichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Hexachlorobutadiene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,3-Trichlorobenzene	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Methyl Tert-Butyl Ether	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
N-Nitrosodimethylamine	<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	<0.001
Phenol	<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	<0.001
2-Chlorophenol	<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	<0.001
Bis-(2-Chloroethyl)Ether	<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	<0.001
1,3-Dichlorobenzene	<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	<0.001
1,4-Dichlorobenzene	<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	<0.001
1,2-Dichlorobenzene	<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	<0.001
2-Methylphenol (o-Cresol)	<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	<0.001
Bis(2-Chloroisopropyl)Ether	<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	<0.001
Hexachloroethane	<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	<0.001
N-Nitrosodi-n-propylamine	<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	<0.001
4-Methylphenol	<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	<0.001
Nitrobenzene	<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	<0.001
Isophorone	<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	<0.001
2-Nitrophenol	<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	<0.001
2,4-Dimethylphenol	<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	<0.001
Bis(2-Chloroethoxy)Methane	<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	<0.001
2,4-Dichlorophenol	<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	<0.001
1,2,4-Trichlorobenzene	<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	<0.003
Naphthalene	<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	<0.001
4-Chloroaniline	<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	<0.001
Hexachlorobutadiene	<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	<0.001
4-Chloro-3-Methylphenol	<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	<0.001
2-Methylnaphthalene	<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	<0.001
Hexachlorocyclopentadiene	<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	<0.001
2,4,6-Trichlorophenol	<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	<0.001
2,4,5-Trichlorophenol	<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	<0.001
2-Chloronaphthalene	<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	<0.001
2-Nitroaniline	<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	<0.001
Acenaphthylene	<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	<0.001
Dimethylphthalate	<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	<0.001
2,6-Dinitrotoluene	<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	<0.001
Acenaphthene	<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	<0.001
3-Nitroaniline	<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	<0.001
Dibenzofuran	<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	<0.001
4-Chlorophenylphenylether	<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	<0.001
2,4-Dinitrotoluene	<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	<0.001

Assessment Criteria : *Drinking Water Standard England and Wales/WHO*

Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences	Location	1884390	1884391	1884392	1884393	1884394	1884395	1884396	1884397	1884398	1884399	1884400	1884401	1884402	1887103	1893764	1893765	1893766	1893767	1893768	1893769	1893770
									Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2009_5	DBH2009_20
									Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	20m
									Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
									Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits		Peat/Alluvium	Peat/Alluvium	Crag Group	Alluvium / Peat	Alluvium / Peat	Crag Group
									Zone																					
Fluorene	mg/l	0.0005	See BaP	21	<0.0005	<0.001	0			<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	<0.001
Diethyl Phthalate	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0			<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	<0.001
4-Nitroaniline	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0			<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	<0.001
2-Methyl-4,6-Dinitrophenol	mg/l	0.0005	No WSV	21	<0.0005	<0.001	0			<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	<0.001
Azobenzene	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
4-Bromophenylphenyl Ether	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
Hexachlorobenzene	mg/l	0.0005	0.00005	20	<0.0005	<0.0005	0			<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	
Pentachlorophenol	mg/l	0.0005	0.009	20	<0.0005	<0.0005	0			<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	
Phenanthrene	mg/l	0.0005	See BaP	20	<0.0005	<0.0005	0			<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	
Anthracene	mg/l	0.0005	See BaP	20	<0.0005	<0.0005	0			<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	
Carbazole	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
Di-N-Butyl Phthalate	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
Fluoranthene	mg/l	0.0005	See BaP	20	<0.0005	<0.0005	0			<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	
Pyrene	mg/l	0.0005	See BaP	20	<0.0005	<0.0005	0			<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	
Butylbenzyl Phthalate	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
Benzo[a]anthracene	mg/l	0.0005	See BaP	20	<0.0005	<0.0005	0			<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	
Chrysene	mg/l	0.0005	See BaP	20	<0.0005	<0.0005	0			<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	
Bis(2-Ethylhexyl)Phthalate	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
Di-N-Octyl Phthalate	mg/l	0.0005	No WSV	20	<0.0005	<0.0005	0			<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	
Benzo[b]fluoranthene	mg/l	0.0005	See PAH Sum of 4	20	<0.0005	<0.0005	0			<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	
Benzo[k]fluoranthene	mg/l	0.0005	See PAH Sum of 4	20	<0.0005	<0.0005	0			<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	
Benzo[a]pyrene	mg/l	0.0005	0.00001	20	<0.0005	<0.0005	0			<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	
Indeno(1,2,3-c,d)Pyrene	mg/l	0.0005	See PAH Sum of 4	20	<0.0005	<0.0005	0			<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	
Dibenz(a,h)Anthracene	mg/l	0.0005	See BaP	20	<0.0005	<0.0005	0			<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	
Benzo[g,h,i]perylene	mg/l	0.0005	See PAH Sum of 4	20	<0.0005	<0.0005	0			<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	
4-Nitrophenol	mg/l	0.0005	No WSV	20	<0.0001	<0.0005	0			<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	0.00043	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Naphthalene	mg/l	0.0001	See BaP	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthylene	mg/l	0.0001	See BaP	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthene	mg/l	0.0001	See BaP	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Fluorene	mg/l	0.0001	See BaP	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Phenanthrene	mg/l	0.0001	See BaP	21	<0.00001	0.00054	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00054	<0.00001	<0.00001	<0.00001	<0.00001
Anthracene	mg/l	0.0001	See BaP	21	<0.00001	0.0005	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0005	<0.00001	<0.00001	<0.00001	<0.00001
Fluoranthene	mg/l	0.0001	See BaP	21	<0.00001	0.0005	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	0.00043	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0005	<0.00001	<0.00001	<0.00001	<0.00001
Pyrene	mg/l	0.0001	See BaP	21	<0.00001	0.0012	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	0.00057	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0012	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[a]anthracene	mg/l	0.0001	See BaP	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Chrysene	mg/l	0.0001	See BaP	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[b]fluoranthene	mg/l	0.0001	See PAH Sum of 4	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[k]fluoranthene	mg/l	0.0001	See PAH Sum of 4	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[a]pyrene	mg/l	0.0001	0.00001	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Indeno(1,2,3-c,d)Pyrene	mg/l	0.0001	See PAH Sum of 4	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Dibenz(a,h)Anthracene	mg/l	0.0001	See BaP	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[g,h,i]perylene	mg/l	0.0001	See PAH Sum of 4	21	<0.00001	<0.0001	0			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Of 16 PAH's	mg/l	0.002	No WSV	21	<0.00001	0.0027	0			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0027	<0.0002	<0.0002	<0.0002	<0.00001
PCB 28	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 81	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 52	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 77	mg/l	0.00001	No WSV	20	<0.00001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
PCB 105	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 90+101	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 114	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 118	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 118	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 153	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 123	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 138	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 126	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 180	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 156	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 157	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 167	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 169	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 189	mg/l	0.00001	No WSV	21	<0.000001	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
Total PCBs (12 Congeners)	mg/l	0.00001	No WSV	21	<0.000002	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002
Total PCBs (7 congeners)	mg/l	0.00001	No WSV	21	<0.000002	<0.00001	0			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002
Total Phenols	mg/l	0.03	No WSV	20	<0.03	<0.03	0			<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Xylenes (Total)	mg/l	0.002	0.5	21	<0.0002	<0.002	0			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002
PAH Sum of 4	mg/l	0.00004 - 0.0004	0.0001	21	<0.00004	<0.0004	0			<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004

WSV = Water Screening Value, in this case relvant Drinking Water Standard (DWS).
Red highlighted constituents = JAGDAG groundwater hazardous substances detected above LOD
BaP = Benzo(a)pyrene
PAH = Polycyclic aromatic hydrocarbon
PAH Sum of 4 = The sum of results for benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene

Assessment Criteria : *Drinking Water Standard England and Wales/WHO*

Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences	1884390	1884391	1884392	1884393	1884394	1884395	1884396	1884397	1884398	1884399	1884400	1884401	1884402	1887103	1893764	1893765	1893766	1893767	1893768	1893769	1893770
Sample ID									GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2009_5	DBH2009_20
Depth									9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	20m
Date									23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
Strata									Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits		Peat/Alluvium	Peat/Alluvium	Crag Group	Alluvium / Peat	Alluvium / Peat	Crag Group
Zone																													
pH		N/A	6.5-9.5	21	7.4	8.4	0		7.5	8.2	7.4	8.3	8.2	8.2	8.3	7.6	7.9	8.3	8.2	8.4	7.8	8.4	8.4	7.9	8	8.4	7.8	7.4	7.52
Electrical Conductivity	µS/cm	1	No WSV	21	250	4400	0		890	1100	3600	3100	650	660	950	520	4100	1600	250	1000	1700	930	980	4100	4400	950	1700	2300	2970
Suspended Solids At 105C	µg/l	5000	No WSV	21	<5000	4000000	0		59000	100000	170000	210000	23000	16000	57000	110000	250000	57000	47000	<5000	210000	92000	24000	250000	310000	22000	210000	4000000	38000
Alkalinity (Total)	µg/l	10000	No WSV	21	92000	840000	0		360000	540000	700000	570000	290000	300000	220000	92000	840000	500000	370000	440000	420000	340000	400000	840000	620000	490000	420000	140000	238000
Chloride	µg/l	1000	250000	21	53000	10300000	9	DCBH2019_4; DCBH2019_5; DCBH2019_3; DCBH2019_3; DCBH2019_3; DCBH2019_5; DCBH2019_3; DCBH2009_5; DBH2009_20	120000	210000	950000	860000	62000	53000	150000	65000	1400000	140000	220000	130000	400000	130000	77000	1400000	1200000	65000	400000	590000	10300000
Ammonium	µg/l	50	500	21	130	20000	18	GW12; DCBH2019_3; DCBH2019_4; DCBH2019_5; PZ13; PZ13; GW12; DCBH2019_3; GW10; PZ5; GW12; DCBH2019_3; GW12; DCBH2019_3; DCBH2019_5; DCBH2019_3; DCBH2009_5; DBH2009_20	3800	3700	7500	8300	2000	1700	2700	130	20000	740	10000	2000	3400	3600	440	20000	14000	440	3400	1100	1446
Ammoniacal Nitrogen	µg/l	50	390	21	100	16000	18	GW12; DCBH2019_3; DCBH2019_4; DCBH2019_5; PZ13; PZ13; GW12; DCBH2019_3; GW10; PZ5; GW12; DCBH2019_3; GW12; DCBH2019_3; DCBH2019_5; DCBH2019_3; DCBH2009_5; DBH2009_20	3000	3100	5900	7200	1700	1500	2300	100	16000	640	8600	1800	2700	3100	380	16000	12000	390	2700	860	1120
Nitrite	µg/l	20	500	21	<20	190	0		<20	<20	<20	<20	30	38	84	<20	<20	<20	<20	<20	31	<20	<20	<20	<20	<20	31	190	<100
Nitrate	µg/l	500	50000	21	<100	7000	0		7000	610	<500	780	<500	<500	<500	4800	650	<500	<500	<500	770	<500	<500	650	<500	500	770	700	<100
Phosphate	µg/l	200	No WSV	21	<20	3800	0		3800	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<20
Phosphorus	µg/l	20	No WSV	21	<20	<20000	0		1200	21	21	21	<20	23	21	55	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20000
Sulphate	µg/l	1000	250000	21	<1000	1410000	1	DBH2009_20	5000	<1000	4800	<1000	37000	36000	44000	14000	<1000	110000	2900	21000	<1000	2500	31000	<1000	<1000	27000	<1000	2700	1410000
Total Oxidised Nitrogen	µg/l	200	No WSV	21	<100	1600	0		1600	<200	<200	<200	<200	<200	<200	1100	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	220	<100
Cyanide (Free)	µg/l	5	0.05 (applies to total cyanide)	21	<5	<5	0		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Calcium	µg/l	2000	No WSV	21	44000	531000	0		78000	92000	100000	100000	110000	120000	100000	44000	150000	190000	93000	99000	120000	72000	110000	150000	130000	120000	120000	290000	531000
Potassium	µg/l	500	No WSV	21	3300	154000	0		17000	8500	35000	11000	4600	4500	20000	3300	34000	11000	10000	17000	12000	15000	7500	34000	20000	4700	12000	7000	154000
Magnesium	µg/l	200	No WSV	21	2200	779000	0		16000	27000	64000	50000	12000	12000	19000	2200	89000	12000	9400	21000	39000	15000	16000	89000	64000	15000	39000	25000	779000
Sodium	µg/l	1500	200000	21	34000	6600000	9	DCBH2019_4; DCBH2019_5; DCBH2019_3; DCBH2019_3; DCBH2019_3; DCBH2019_5; DCBH2019_3; DCBH2009_5; DBH2009_20	79000	120000	540000	460000	68000	65000	89000	34000	870000	54000	100000	84000	210000	60000	42000	870000	600000	68000	210000	220000	6600000
Arsenic (Dissolved)	µg/l	0.2	10	21	0.5	12	2	DCBH2019_3; DCBH2019_3	1.9	1.9	3.2	3.7	3.1	1.3	0.96	1.2	12	2.4	0.5	1.3	3.7	4.3	5.5	12	3.8	4.3	3.7	1.2	<1
Boron	µg/l	10	1000	21	30	1390	1	DBH2009_20	160	100	640	340	82	84	170	30	310	110	46	220	140	120	55	310	370	87	140	70	1390
Cadmium (Dissolved)	µg/l	0.11	5	21	<0.08	<0.2	0		<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	0.11	<0.11	<0.11	<0.11	<0.11	<0.08	<0.08	0.11	<0.11	<0.11	<0.11	<0.11	<0.2
Chromium (Dissolved)	µg/l	0.5	50	21	<0.5	3	0		<0.5	<0.5	1.7	1.8	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	2.1	<0.5	<0.5	<0.5	<0.5	<0.5	3
Copper (Dissolved)	µg/l	0.5	2000	21	<0.5	8	0		0.54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.4	1.6	1.2	<0.5	<0.5	<0.5	<1	<1	1.6	<0.5	<0.5	<0.5	<0.5	8
Iron (Dissolved)	µg/l	5	200	21	<5	26000	7	DCBH2019_3; GW12; PZ13; DCBH2019_3; DCBH2019_5; DCBH2009_5; DBH2009_20	<5	<5	15	39	7.9	<5	62	15	26000	140	<5	<5	13	5000	250	26000	6900	<5	13	1200	13800
Manganese (Dissolved)	µg/l	0.5	50	21	12	4300	17	GW12; DCBH2019_3; DCBH2019_4; DCBH2019_5; GW12; DCBH2019_3; GW10; PZ5; GW12; DCBH2019_3; GW12; DCBH2019_3; DCBH2019_5; PZ13; DCBH2019_3; DCBH2009_5; DBH2009_20	1800	2000	1200	1200	12	40	2400	25	4300	400	150	2400	2600	140	49	4300	1400	52	2600	1200	451
Nickel (Dissolved)	µg/l	0.5	20	21	<0.5	3.5	0		<0.5	0.63	0.89	1.8	3.2	3.5	<0.5	1.1	1	2.7	0.51	<0.5	0.53	<1	1.6	1	1.1	1.7	0.53	<0.5	<1
Lead (Dissolved)	µg/l	0.5	10	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.53	<0.5	<0.5	<0.5	<0.5	<1	<1	0.53	<0.5	<0.5	<0.5	<0.5	<1
Zinc (Dissolved)	µg/l	2.5	3000	21	<1	107	0		3.4	10	7.6	13	<2.5	2.9	<2.5	23	<2.5	4.2	<2.5	<2.5	4	<1	2	<2.5	2.7	<2.5	4	<2.5	107
Mercury	µg/l	0.01	1	21	<0.01	<0.05	0		<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	<0.05
Chromium (Hexavalent)	µg/l	20	See Total Chromium	14	<0.1	<20	0		<20	<20	<20	<20	<20	<20	<20	<20	0	0	0	<1	0	<0.1	2	0	0	<1	<1	<1	0
Chromium III	µg/l	1	See Total Chromium	16	<0.1	<20	0		<1	<1	2	2	<1	<1	<1	<1	0	0	<20	0	<1	3	<0.1	<0.1	0.43	<20	0	<20	0
Total Organic Carbon	µg/l	2000	No WSV	14	<2000	97000	0		9100	8300	13000	32000	3600	3500	11000	6500	0	0	<2000	<2000	<2000	0	97000	30000	20000	0	0	0	0
Aliphatic TPH >C5-C6	µg/l	0.1	15000	14	<0.1	<1	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aliphatic TPH >C6-C8	µg/l	0.1	15000	14	<0.1	<1	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aliphatic TPH >C8-C10	µg/l	0.1	300	14	<0.1	<5	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C10-C12	µg/l	0.1	300	14	<0.1	<5	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C12-C16	µg/l	0.1	300	14	<0.1	<5	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C16-C21	µg/l	0.1	No WSV	14	<0.1	<5	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C21-C35	µg/l	0.1	No WSV	14	<0.1	<5	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C35-C44	µg/l	0.1	No WSV	13	<0.1	<0.1	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	0
Total Aliphatic Hydrocarbons	µg/l	5	No WSV	14	<5	<5	0		<5	<5	<5	<5	<5	<5	<5	<5	0	0	0	<5	<5	0	0	0	0	<5	<5	<5	<5
Aromatic TPH >C5-C7	µg/l	0.1	10	14	<0.1	<1	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aromatic TPH >C7-C8	µg/l	0.1	700	14	<0.1	<1	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aromatic TPH >C8-C10	µg/l	0.1	300	14	<0.1	<5	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C10-C12	µg/l	0.1	90	14	<0.1	<5	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C12-C16	µg/l	0.1	90	14	<0.1	<5	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C16-C21	µg/l	0.1	90	14	<0.1	<5	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C21-C35	µg/l	0.1	90	14	<0.1	<10	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<10
Aromatic TPH >C35-C44	µg/l	0.1	No WSV	13	<0.1	<0.1	0		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	0
Total Aromatic Hydrocarbons	µg/l	5	No WSV	14	<5	<10	0		<5	<5	<5	<5	<5	<5	<5	<5	0	0	0	<5	<5	0	0	0	0	<5	<5	<5	<10
Total Petroleum Hydrocarbons	µg/l	10	No WSV	14	<10	<10	0		<10	<10	<10	<10	<10	<10	<10	<10	0	0	0	<10	<10	0	0	0	0	<10	<10	<10	<10
Dichlorodifluoromethane	µg/l	1	No WSV	15	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	0	0	0	0	0	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Chloromethane	µg/l	1	No WSV	21	<0.1	<10	0		<1	<1	<1	<1	<1	<1	<1	<1	<2	<2	<2	<2	<2	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10
Vinyl Chloride	µg/l	1	0.5	21	<0.1	<2	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromomethane	µg/l	5	No WSV	21	<0.1	<5	0		<5	<5	<5	<5	<5	<5	<5	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	<1
Chloroethane	µg/l	2	No WSV	21	<0.1	<2	0		<2	<2	<2	<2	<2	<2	<2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Trichlorofluoromethane	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1-Dichloroethene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Trans 1,2-Dichloroethene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1-Dichloroethane	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
cis 1,2-Dichloroethene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromochloromethane	µg/l	5	No WSV	21	<0.5	<5	0		<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Trichloromethane	µg/l	1	See Trihalomethanes	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1,1-Trichloroethane	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tetrachloromethane	µg/l	1	4	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1-Dichloropropene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Benzene	µg/l	1	1	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dichloroethane	µg/l	2	3	21	<0.2	<2	0		<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Trichloroethene	µg/l	1	0.01 (sum of TCE & PCE)	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
nde	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Dibromomethane	µg/l	10	No WSV	21	<0.1	<10	0		<10	<10	<10	<10	<10	<10	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromodichloromethane	µg/l	5	See Trihalomethanes	21	<0.5	<10	0		<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
cis-1,3-Dichloropropene	µg/l	10	No WSV	21	<1	<10	0		<10	<10	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/l	1	700	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Trans-1,3-Dichloropropene	µg/l	10	No WSV	21	<1	<10	0		<10	<10	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	µg/l	10	No WSV	21	<0.1	<10	0		<10	<10	<10	<10	<10	<10	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tetrachloroethene	µg/l	1	0.01 (sum of TCE & PCE)	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,3-Dichloropropane	µg/l	2	No WSV	21	<0.2	<2	0		<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Dibromochloromethane	µg/l	10	See Trihalomethanes	21	<1	<10	0		<10	<10	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	µg/l	5	0.4	21	<0.5	<5	0		<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Chlorobenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1,1,2-Tetrachloroethane	µg/l	2	No WSV	21	<0.2	<2	0		<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Ethylbenzene	µg/l	1	300	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
m & p-Xylene	µg/l	1	See Xylenes (total)	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
o-Xylene	µg/l	1	See Xylenes (total)	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Styrene	µg/l	1	20	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tribromomethane	µg/l	1	No WSV	21	<1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromobenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2,3-Trichloropropane	µg/l	50	No WSV	21	<1	<50	0		<50	<50	<50	<50	<50	<50	<50	<50	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<1
N-Propylbenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
2-Chlorotoluene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,3,5-Trimethylbenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
4-Chlorotoluene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tert-Butylbenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2,4-Trimethylbenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Sec-Butylbenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,3-Dichlorobenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
4-Isopropyltoluene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,4-Dichlorobenzene	µg/l	1	300	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
N-Butylbenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dichlorobenzene	µg/l	1	1000	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dibromo-3-Chloropropane	µg/l	50	1	21	<1	<50	0		<50	<50	<50	<50	<50	<50	<50	<50	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<1
1,2,4-Trichlorobenzene	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Hexachlorobutadiene	µg/l	1	0.6	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2,3-Trichlorobenzene	µg/l	2	No WSV	21	<0.2	<2	0		<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Methyl Tert-Butyl Ether	µg/l	1	No WSV	21	<0.1	<1	0		<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
N-Nitrosodimethylamine	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Phenol	µg/l	0.5	50	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Chlorophenol	µg/l	0.5	300	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Bis-(2-Chloroethyl)Ether	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,3-Dichlorobenzene	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,4-Dichlorobenzene	µg/l	0.5	300	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,2-Dichlorobenzene	µg/l	0.5	1000	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Methylphenol (o-Cresol)	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Bis(2-Chloroisopropyl)Ether	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Hexachloroethane	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
N-Nitrosodi-n-propylamine	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Methylphenol	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Nitrobenzene	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Isophorone	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Nitrophenol	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4-Dimethylphenol	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Bis(2-Chloroethoxy)Methane	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4-Dichlorophenol	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,2,4-Trichlorobenzene	µg/l	0.5	No WSV	21	<0.5	<3	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<3
Naphthalene	µg/l	0.5	See BaP	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Chloroaniline	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Hexachlorobutadiene	µg/l	0.5	0.6	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Chloro-3-Methylphenol	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Methylnaphthalene	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Hexachlorocyclopentadiene	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4,6-Trichlorophenol	µg/l	0.5	200	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4,5-Trichlorophenol	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Chloronaphthalene	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Nitroaniline	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Acenaphthylene	µg/l	0.5	See BaP	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Dimethylphthalate	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,6-Dinitrotoluene	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Acenaphthene	µg/l	0.5	See BaP	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
3-Nitroaniline	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Dibenzofuran	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Chlorophenylphenylether	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4-Dinitrotoluene	µg/l	0.5	No WSV	21	<0.5	<1	0		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1

ATKINS

Assessment Criteria : *Drinking Water Standard England and Wales/WHO*

Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences	Location	1884390	1884391	1884392	1884393	1884394	1884395	1884396	1884397	1884398	1884399	1884400	1884401	1884402	1887103	1893764	1893765	1893766	1893767	1893768	1893769	1893770
									Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2009_5	DBH2009_20
									Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	20m
									Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
									Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits		Peat/Alluvium	Peat/Alluvium	Crag Group	Alluvium / Peat	Alluvium / Peat	Crag Group
									Zone																					
Fluorene	µg/l	0.5	See BaP	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Diethyl Phthalate	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Nitroaniline	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Methyl-4,6-Dinitrophenol	µg/l	0.5	No WSV	21	<0.5	<1	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Azobenzene	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
4-Bromophenylphenyl Ether	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Hexachlorobenzene	µg/l	0.5	0.05	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Pentachlorophenol	µg/l	0.5	9	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Phenanthrene	µg/l	0.5	See BaP	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Anthracene	µg/l	0.5	See BaP	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Carbazole	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Di-N-Butyl Phthalate	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Fluoranthene	µg/l	0.5	See BaP	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Pyrene	µg/l	0.5	See BaP	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Butylbenzyl Phthalate	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[a]anthracene	µg/l	0.5	See BaP	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Chrysene	µg/l	0.5	See BaP	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Bis(2-Ethylhexyl)Phthalate	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Di-N-Octyl Phthalate	µg/l	0.5	No WSV	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[b]fluoranthene	µg/l	0.5	See PAH Sum of 4	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[k]fluoranthene	µg/l	0.5	See PAH Sum of 4	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[a]pyrene	µg/l	0.5	0.01	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Indeno(1,2,3-c,d)Pyrene	µg/l	0.5	See PAH Sum of 4	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Dibenz(a,h)Anthracene	µg/l	0.5	See BaP	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[g,h,i]perylene	µg/l	0.5	See PAH Sum of 4	20	<0.5	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
4-Nitrophenol	µg/l	0.5	No WSV	20	<0.1	<0.5	0			<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	0.43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Naphthalene	µg/l	0.1	See BaP	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Acenaphthylene	µg/l	0.1	See BaP	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Acenaphthene	µg/l	0.1	See BaP	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Fluorene	µg/l	0.1	See BaP	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Phenanthrene	µg/l	0.1	See BaP	21	<0.01	0.54	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.54	<0.01	<0.01	<0.01	<0.01
Anthracene	µg/l	0.1	See BaP	21	<0.01	0.5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.5	<0.01	<0.01	<0.01	<0.01
Fluoranthene	µg/l	0.1	See BaP	21	<0.01	0.5	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	0.43	<0.01	<0.01	<0.01	<0.01	<0.01	0.5	<0.01	<0.01	<0.01	<0.01
Pyrene	µg/l	0.1	See BaP	21	<0.01	1.2	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	0.57	<0.01	<0.01	<0.01	<0.01	<0.01	1.2	<0.01	<0.01	<0.01	<0.01
Benzo[a]anthracene	µg/l	0.1	See BaP	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Chrysene	µg/l	0.1	See BaP	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[b]fluoranthene	µg/l	0.1	See PAH Sum of 4	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[k]fluoranthene	µg/l	0.1	See PAH Sum of 4	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[a]pyrene	µg/l	0.1	0.01	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Indeno(1,2,3-c,d)Pyrene	µg/l	0.1	See PAH Sum of 4	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Dibenz(a,h)Anthracene	µg/l	0.1	See BaP	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[g,h,i]perylene	µg/l	0.1	See PAH Sum of 4	21	<0.01	<0.1	0			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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 Of 16 PAH's	µg/l	2	No WSV	21	<0.01	2.7	0			<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	1	<0.2	<0.2	<0.2	<0.2	<0.2	2.7	<0.2	<0.2	<0.2	<0.01
PCB 28	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 81	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 52	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 77	µg/l	0.01	No WSV	20	<0.01	<0.01	0			<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
PCB 105	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 90+101	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 114	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 118	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 118	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 153	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 123	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 138	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 126	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 180	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 156	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 157	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 167	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 169	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
PCB 189	µg/l	0.01	No WSV	21	<0.001	<0.01	0			<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	<0.001
Total PCBs (12 Congeners)	µg/l	0.01	No WSV	21	<0.002	<0.01	0			<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	<0.002
Total PCBs (7 congeners)	µg/l	0.01	No WSV	21	<0.002	<0.01	0			<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	<0.002
Total Phenols	µg/l	30	No WSV	20	<30	<30	0			<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	0
Xylenes (Total)	µg/l	2	500	21	<0.2	<2	0			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
PAH Sum of 4	µg/l	0.00004 < 0.0004	0.1	21	<0.04	<0.4	0			<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04

WSV = Water Screening Value, in this case relvant Drinking Water Standard (DWS).
Red highlighted constituents = JAGDAG groundwater hazardous substances detected above LOD
BaP = Benzo(a)pyrene
PAH = Polycyclic aromatic hydrocarbon
PAH Sum of 4 = The sum of results for benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene

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Appendix E. Groundwater discharge coastal and estuarine waters H1 screening assessment

H1 Screening Test 1: Coastal and Estuarine EQS

Constituents	Unit	Limit of Detection	AA EQS	MAC EQS	Number of Samples	Minimum Value	Mean Value (< treated as detection at LOD)	Maximum Value	count of detections	Pre-SCREENING: Is the substance measured above LOD in the discharge?	Pre-SCREENING: Is the LOD sufficiently low?	SCREENING TEST 1: 100% EQS (AA)	Test failed? (AA)	100% EQS (MAC), where available	Test failed? (MAC)
pH		N/A	No EQS	6-8.5	21	7.4	8.01	8.4	21	YES	yes	N/A	N/A	N/A	N/A
Electrical Conductivity	µS/cm	1	No EQS	No EQS	21	250	1830.95	4400	21	YES	yes	N/A	N/A	N/A	N/A
Suspended Solids At 105C	mg/l	5	No EQS	No EQS	21	<5	298.10	4000	20	YES	yes	N/A	N/A	N/A	N/A
Alkalinity (Total)	mg/l	10	No EQS	No EQS	21	92	434.76	840	21	YES	yes	N/A	N/A	N/A	N/A
Chloride	mg/l	1	No EQS	No EQS	21	53	901.05	10300	21	YES	yes	N/A	N/A	N/A	N/A
Ammonium	mg/l	0.05	No EQS	No EQS	21	0.13	5.257	20	21	YES	yes	N/A	N/A	N/A	N/A
Ammoniacal Nitrogen	mg/l	0.05	No EQS	No EQS	21	0.1	4.338	16	21	YES	yes	N/A	N/A	N/A	N/A
Nitrite	mg/l	0.02	No EQS	No EQS	21	<0.02	0.037	0.19	6	YES	yes	N/A	N/A	N/A	N/A
Nitrate	mg/l	0.5	No EQS	No EQS	21	<0.1	1.063	7	10	YES	yes	N/A	N/A	N/A	N/A
Phosphate	mg/l	0.2	No EQS	No EQS	21	<0.02	0.363	3.8	1	YES	yes	N/A	N/A	N/A	N/A
Phosphorus	mg/l	0.02	No EQS	No EQS	21	<0.02	1.030	<20	7	YES	yes	N/A	N/A	N/A	N/A
Sulphate	mg/l	1	No EQS	No EQS	21	<1	83.567	1410	14	YES	yes	N/A	N/A	N/A	N/A
Total Oxidised Nitrogen	mg/l	0.2	No EQS	No EQS	21	<0.1	0.306	1.6	3	YES	yes	N/A	N/A	N/A	N/A
Cyanide (Free)	mg/l	0.005	0.001	0.005	21	<0.005	0.005	<0.005	0	no	NO	0.001	YES	0.005	no
Calcium	mg/l	2	No EQS	No EQS	21	44	139.000	531	21	YES	yes	N/A	N/A	N/A	N/A
Potassium	mg/l	0.5	No EQS	No EQS	21	3.3	21.052	154	21	YES	yes	N/A	N/A	N/A	N/A
Magnesium	mg/l	0.2	No EQS	No EQS	21	2.2	67.362	779	21	YES	yes	N/A	N/A	N/A	N/A
Sodium	mg/l	1.5	No EQS	No EQS	21	34	544.905	6600	21	YES	yes	N/A	N/A	N/A	N/A
Arsenic (Dissolved)	mg/l	0.0002	0.025	No EQS	21	0.0005	0.00347	0.012	20	YES	yes	0.025	no	N/A	N/A
Boron	mg/l	0.01	7.0	No EQS	21	0.03	0.23686	1.39	21	YES	yes	7	no	N/A	N/A
Cadmium (Dissolved)	mg/l	0.00011	0.0002	No EQS	21	<0.00008	0.00011	<0.0002	2	YES	yes	0.0002	no	N/A	N/A
Chromium (Dissolved)	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00094	0.003	6	YES	yes	N/A	N/A	N/A	N/A
Copper (Dissolved)	mg/l	0.0005	0.00376	No EQS	21	<0.0005	0.00123	0.008	6	YES	yes	0.00376	no	N/A	N/A
Iron (Dissolved)	mg/l	0.005	1	No EQS	21	<0.005	3.78500	26	15	YES	yes	1	YES	N/A	N/A
Manganese (Dissolved)	mg/l	0.0005	No EQS	No EQS	21	0.012	1.36757	4.3	21	YES	yes	N/A	N/A	N/A	N/A
Nickel (Dissolved)	mg/l	0.0005	0.0086	0.034	21	<0.0005	0.00123	0.0035	15	YES	yes	0.0086	no	0.034	no
Lead (Dissolved)	mg/l	0.0005	0.0013	0.014	21	<0.0005	0.00057	<0.001	2	YES	yes	0.0013	no	0.014	no
Zinc (Dissolved)	mg/l	0.0025	0.0068	No EQS	21	<0.001	0.00975	0.107	12	YES	yes	0.0068	YES	N/A	N/A
Mercury	mg/l	0.00001	No EQS	0.00007	21	<0.00001	0.00001	<0.00005	0	no	yes	N/A	N/A	0.00007	no
Chromium (Hexavalent)	mg/l	0.0001 - 0.02	0.0006	0.032	21	<0.0001	0.01186	<0.02	1	YES	NO	0.0006	YES	0.032	no
Chromium III	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00466	<0.02	4	YES	yes	N/A	N/A	N/A	N/A
Total Organic Carbon	mg/l	2	No EQS	No EQS	21	<2	17.14286	97	11	YES	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C5-C6	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00016	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C6-C8	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00016	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C8-C10	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00045	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C10-C12	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00045	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C12-C16	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00045	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C16-C21	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00045	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C21-C35	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00045	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C35-C44	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00010	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Total Aliphatic Hydrocarbons	mg/l	0.005	No EQS	No EQS	21	<0.005	0.00500	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C5-C7	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00016	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C7-C8	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00016	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C8-C10	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00045	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C10-C12	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00045	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C12-C16	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00045	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C16-C21	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00045	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C21-C35	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00081	<0.01	0	no	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C35-C44	mg/l	0.0001	No EQS	No EQS	21	<0.0001	0.00010	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Total Aromatic Hydrocarbons	mg/l	0.005	No EQS	No EQS	21	<0.005	0.00536	<0.01	0	no	yes	N/A	N/A	N/A	N/A
Total Petroleum Hydrocarbons	mg/l	0.01	No EQS	No EQS	21	<0.01	0.01000	<0.01	0	no	yes	N/A	N/A	N/A	N/A
Dichlorodifluoromethane	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00064	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Chloromethane	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00160	<0.01	0	no	yes	N/A	N/A	N/A	N/A
Vinyl Chloride	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00060	<0.002	0	no	yes	N/A	N/A	N/A	N/A
Bromomethane	mg/l	0.005	No EQS	No EQS	21	<0.0001	0.00260	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Chloroethane	mg/l	0.002	No EQS	No EQS	21	<0.0001	0.00094	<0.002	0	no	yes	N/A	N/A	N/A	N/A
Trichlorofluoromethane	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,1-Dichloroethene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Trans 1,2-Dichloroethene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,1-Dichloroethane	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
cis 1,2-Dichloroethene	mg/l	0.001	0.01	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	0.01	no	N/A	N/A
Bromochloromethane	mg/l	0.005	No EQS	No EQS	21	<0.0005	0.00245	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Trichloromethane	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane	mg/l	0.001	0.1	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	0.1	no	N/A	N/A
Tetrachloromethane	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,1-Dichloropropene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Benzene	mg/l	0.001	0.008	0.05	21	<0.0001	0.00053	<0.001	0	no	yes	0.008	no	0.05	no
1,2-Dichloroethane	mg/l	0.002	No EQS	No EQS	21	<0.0002	0.00101	<0.002	0	no	yes	N/A	N/A	N/A	N/A
Trichloroethene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,2-Dichloropropane	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Dibromomethane	mg/l	0.01	No EQS	No EQS	21	<0.0001	0.00439	<0.01	0	no	yes	N/A	N/A	N/A	N/A
Bromodichloromethane	mg/l	0.005	No EQS	No EQS	21	<0.0005	0.00288	<0.01	0	no	yes	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene	mg/l	0.01	No EQS	No EQS	21	<0.001	0.00486	<0.01	0	no	yes	N/A	N/A	N/A	N/A
Toluene	mg/l	0.001	0.074	0.37	21	<0.0001	0.00053	<0.001	0	no	yes	0.074	no	0.37	no
Trans-1,3-Dichloropropene	mg/l	0.01	No EQS	No EQS	21	<0.001	0.00486	<0.01	0	no	yes	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane	mg/l	0.01	No EQS	No EQS	21	<0.0001	0.00439	<0.01	0	no	yes	N/A	N/A	N/A	N/A
Tetrachloroethene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,3-Dichloropropane	mg/l	0.002	No EQS	No EQS	21	<0.0002	0.00101	<0.002	0	no	yes	N/A	N/A	N/A	N/A
Dibromochloromethane	mg/l	0.01	No EQS	No EQS	21	<0.001	0.00486	<0.01	0	no	yes	N/A	N/A	N/A	N/A
1,2-Dibromoethane	mg/l	0.005	No EQS	No EQS	21	<0.0005	0.00245	<0.005	0	no	yes	N/A	N/A	N/A	N/A
Chlorobenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,1,1,2-Tetrachloroethane	mg/l	0.002	No EQS	No EQS	21	<0.0002	0.00101	<0.002	0	no	yes	N/A	N/A	N/A	N/A
Ethylbenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
m & p-Xylene	mg/l	0.001	See Xylene Total	See Xylene Total	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
o-Xylene	mg/l	0.001	See Xylene Total	See Xylene Total	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Styrene	mg/l	0.001	0.05	0.5	21	<0.0001	0.00053	<0.001	0	no	yes	0.05	no	0.5	no
Tribromomethane	mg/l	0.001	No EQS	No EQS	21	<0.001	0.00100	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Isopropylbenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Bromobenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,2,3-Trichloropropane	mg/l	0.05	No EQS	No EQS	21	<0.001	0.02410	<0.05	0	no	yes	N/A	N/A	N/A	N/A
N-Propylbenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2-Chlorotoluene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,3,5-Trimethylbenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
4-Chlorotoluene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Tert-Butylbenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,2,4-Trimethylbenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Sec-Butylbenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
4-Isopropyltoluene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
N-Butylbenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	z	N/A	N/A	N/A	N/A
1,2-Dibromo-3-Chloropropane	mg/l	0.05	No EQS	No EQS	21	<0.001	0.02410	<0.05	0	no	yes	N/A	N/A	N/A	N/A
1,2,4-Trichlorobenzene	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Hexachlorobutadiene	mg/l	0.0001 - 0.001	No EQS	0.0006	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	0.0006	no
1,2,3-Trichlorobenzene	mg/l	0.002	No EQS	No EQS	21	<0.0002	0.00101	<0.002	0	no	yes	N/A	N/A	N/A	N/A
Methyl Tert-Butyl Ether	mg/l	0.001	No EQS	No EQS	21	<0.0001	0.00053	<0.001	0	no	yes	N/A	N/A	N/A	N/A
N-Nitrosodimethylamine	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Phenol	mg/l	0.0005	0.0077	0.046	21	<0.0005	0.00052	<0.001	0	no	yes	0.0077	no	0.046	no
2-Chlorophenol	mg/l	0.0005	0.05	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	0.05	no	N/A	N/A
Bis-(2-Chloroethyl)Ether	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2-Methylphenol (o-Cresol)	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Bis(2-Chloroisopropyl)Ether	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Hexachloroethane	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
N-Nitrosodi-n-propylamine	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
4-Methylphenol	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Nitrobenzene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Isophorone	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2-Nitrophenol	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2,4-Dimethylphenol	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Bis(2-Chloroethoxy)Methane	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	mg/l	0.0005	0.00042	0.006	21	<0.0005	0.00052	<0.001	0	no	NO	0.00042	YES	0.006	no
1,2,4-Trichlorobenzene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00062	<0.003	0	no	yes	N/A	N/A	N/A	N/A
Naphthalene	mg/l	0.0005	0.002	0.13	21	<0.0005	0.00052	<0.001	0	no	yes	0.002	no	0.13	no
4-Chloroaniline	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Hexachlorobutadiene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
4-Chloro-3-Methylphenol	mg/l	0.0005	0.04	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	0.04	no	N/A	N/A
2-Methylnaphthalene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Hexachlorocyclopentadiene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2,4,5-Trichlorophenol	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2-Chloronaphthalene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2-Nitroaniline	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Acenaphthylene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Dimethylphthalate	mg/l	0.0005	0.8	4	21	<0.0005	0.00052	<0.001	0	no	yes	0.8	no	4	no

Location																					
Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2019_5	DBH2009_20
Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag Group	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits	Crag Group	Peat/Alluvium	Alluvium / Peat	Crag Group	Alluvium / Peat	Alluvium / Peat	
Zone																					
pH	7.5	8.2	7.4	8.3	8.2	8.2	8.3	7.6	7.9	8.3	8.2	8.4	7.8	8.4	8.4	7.9	8	8.4	7.8	7.4	7.52
Electrical Conductivity	890	1100	3600	3100	650	660	950	520	4100	1600	250	1000	1700	930	980	4100	4400	950	1700	2300	2970
Suspended Solids At 105C	59	100	170	210	23	16	57	110	250	57	47	<5	210	92	24	250	310	22	210	4000	38
Alkalinity (Total)	360	540	700	570	290	300	220	92	840	500	370	440	420	340	400	840	620	490	420	140	238
Chloride	120	210	950	860	62	53	150	65	1400	140	220	130	400	130	77	1400	1200	65	400	590	10300
Ammonium	3.8	3.7	7.5	8.3	2	1.7	2.7	0.13	20	0.74	10	2	3.4	3.6	0.44	20	14	0.44	3.4	1.1	1.446
Ammoniacal Nitrogen	3	3.1	5.9	7.2	1.7	1.5	2.3	0.1	16	0.64	8.6	1.8	2.7	3.1	0.38	16	12	0.39	2.7	0.86	1.12
Nitrite	<0.02	<0.02	<0.02	<0.02	0.03	0.038	0.084	<0.02	<0.02	<0.02	<0.02	<0.02	0.031	<0.02	<0.02	<0.02	<0.02	<0.02	0.031	0.19	<0.1
Nitrate	7	0.61	<0.5	0.78	<0.5	<0.5	<0.5	4.8	0.65	<0.5	<0.5	<0.5	0.77	<0.5	<0.5	0.65	<0.5	0.5	0.77	0.7	<0.1
Phosphate	3.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.02
Phosphorus	1.2	0.021	0.021	0.021	<0.02	0.023	0.021	0.055	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<20
Sulphate	5	<1	4.8	<1	37	36	44	14	<1	110	2.9	21	<1	2.5	31	<1	<1	27	<1	2.7	1410
Total Oxidised Nitrogen	1.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.22	<0.1
Cyanide (Free)	<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	78	92	100	100	110	120	100	44	150	190	93	99	120	72	110	150	130	120	120	290	531
Potassium	17	8.5	35	11	4.6	4.5	20	3.3	34	11	10	17	12	15	7.5	34	20	4.7	12	7	154
Magnesium	16	27	64	50	12	12	19	2.2	89	12	9.4	21	39	15	16	89	64	15	39	25	779
Sodium	79	120	540	460	68	65	89	34	870	54	100	84	210	60	42	870	600	68	210	220	6600
Arsenic (Dissolved)	0.0019	0.0019	0.0032	0.0037	0.0031	0.0013	0.00096	0.0012	0.012	0.0024	0.0005	0.0013	0.0037	0.0043	0.0055	0.012	0.0038	0.0043	0.0037	0.0012	<0.001
Boron	0.16	0.1	0.64	0.34	0.082	0.084	0.17	0.03	0.31	0.11	0.046	0.22	0.14	0.12	0.055	0.31	0.37	0.087	0.14	0.07	1.39
Cadmium (Dissolved)	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00008	<0.00008	0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.0002
Chromium (Dissolved)	<0.0005	<0.0005	0.0017	0.0018	<0.0005	<0.0005	<0.0005	0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0025	0.0021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.003
Copper (Dissolved)	0.00054	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0044	0.0016	0.0012	<0.0005	<0.0005	<0.0005	<0.001	<0.001	0.0016	<0.0005	<0.0005	<0.0005	<0.0005	0.008
Iron (Dissolved)	<0.005	<0.005	0.015	0.039	0.0079	<0.005	0.062	0.015	26	0.14	<0.005	<0.005	0.013	5	0.25	26	6.9	<0.005	0.013	1.2	13.8
Manganese (Dissolved)	1.8	2	1.2	1.2	0.012	0.04	2.4	0.025	4.3	0.4	0.15	2.4	2.6	0.14	0.049	4.3	1.4	0.052	2.6	1.2	0.451
Nickel (Dissolved)	<0.0005	0.00063	0.00089	0.0018	0.0032	0.0035	<0.0005	0.0011	0.001	0.0027	0.00051	<0.0005	0.00053	<0.001	0.0016	0.001	0.0011	0.0017	0.00053	<0.0005	<0.001
Lead (Dissolved)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Zinc (Dissolved)	0.0034	0.01	0.0076	0.013	<0.0025	0.0029	<0.0025	0.023	<0.0025	0.0042	<0.0025	<0.0025	0.004	<0.001	0.002	<0.0025	0.0027	<0.0025	0.004	<0.0025	0.107
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005
Chromium (Hexavalent)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02				<0.001		<0.0001	0.002			<0.001	<0.001	<0.001	
Chromium III	<0.001	<0.001	0.002	0.002	<0.001	<0.001	<0.001	<0.001			<0.02		<0.001	0.003	<0.0001	<0.0001	0.00043	<0.02		<0.02	
Total Organic Carbon	9.1	8.3	13	32	3.6	3.5	11	6.5			<2	<2	<2		97	30	20				
Aliphatic TPH >C5-C6	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aliphatic TPH >C6-C8	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aliphatic TPH >C8-C10	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C10-C12	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C12-C16	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C16-C21	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C21-C35	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C35-C44	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	
Total Aliphatic Hydrocarbons	<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	<0.005
Aromatic TPH >C5-C7	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aromatic TPH >C7-C8	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aromatic TPH >C8-C10	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C10-C12	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C12-C16	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C16-C21	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C21-C35	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.01
Aromatic TPH >C35-C44	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	
Total Aromatic Hydrocarbons	<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	<0.01
Total Petroleum Hydrocarbons	<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
Dichlorodifluoromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001							<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Chloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01
Vinyl Chloride	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromomethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Chloroethane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Trichlorofluoromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Trans 1,2-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
cis 1,2-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromochloromethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Trichloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1,1-Trichloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tetrachloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloropropene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Benzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichloroethane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Trichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichloropropane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Dibromomethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromodichloromethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.01
cis-1,3-Dichloropropene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Trans-1,3-Dichloropropene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,2-Trichloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tetrachloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3-Dichloropropane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Dibromochloromethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dibromoethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Chlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1,1,2-Tetrachloroethane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
m & p-Xylene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
o-Xylene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Styrene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tribromomethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Isopropylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,3-Trichloropropane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
N-Propylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
2-Chlorotoluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3,5-Trimethylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
4-Chlorotoluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tert-Butylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,4-Trimethylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Sec-Butylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
4-Isopropyltoluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,4-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
N-Butylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dibromo-3-Chloropropane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
1,2,4-Trichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Hexachlorobutadiene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,3-Trichlorobenzene	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Methyl Tert-Butyl Ether	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
N-Nitrosodimethylamine	<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	<0.001
Phenol	<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	<0.001
2-Chlorophenol	<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	<0.001
Bis-(2-Chloroethyl)Ether	<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	<0.001
1,3-Dichlorobenzene	<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	<0.001
1,4-Dichlorobenzene	<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	<0.001
1,2-Dichlorobenzene	<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	<0.001
2-Methylphenol (o-Cresol)	<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	<0.001
Bis(2-Chloroisopropyl)Ether	<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	<0.001
Hexachloroethane	<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	<0.001
N-Nitrosodi-n-propylamine	<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	<0.001
4-Methylphenol	<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	<0.001
Nitrobenzene	<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	<0.001
Isophorone	<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	<0.001
2-Nitrophenol	<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	<0.001
2,4-Dimethylphenol	<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	<0.001
Bis(2-Chloroethoxy)Methane	<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	<0.001
2,4-Dichlorophenol	<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	<0.001
1,2,4-Trichlorobenzene	<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	<0.003
Naphthalene	<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	<0.001
4-Chloroaniline	<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	<0.001
Hexachlorobutadiene	<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	<0.001
4-Chloro-3-Methylphenol	<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	<0.001
2-Methylnaphthalene	<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	<0.001
Hexachlorocyclopentadiene	<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	<0.001
2,4,6-Trichlorophenol	<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	<0.001
2,4,5-Trichlorophenol	<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	<0.001
2-Chloronaphthalene	<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	<0.001
2-Nitroaniline	<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	<0.001
Acenaphthylene	<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	<0.001
Dimethylphthalate	<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	<0.001

H1 Screening Test 1: Coastal and Estuarine EQS

Constituents	Unit	Limit of Detection	AA EQS	MAC EQS	Number of Samples	Minimum Value	Mean Value (< treated as detection at LOD)	Maximum Value	count of detections	Pre-SCREENING (Is the substance present in the discharge?): Is the substance measured above LOD in the discharge?	Is the LOD sufficiently low?	SCREENING TEST 1 (Does release concentration (RC) exceed 100% EQS?): 100% EQS (AA)	Test failed? (AA)	100% EQS (MAC), where available	Test failed? (MAC)
2,6-Dinitrotoluene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Acenaphthene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
3-Nitroaniline	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Dibenzofuran	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
4-Chlorophenylphenylether	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2,4-Dinitrotoluene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Fluorene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Diethyl Phthalate	mg/l	0.0005	0.2	1	21	<0.0005	0.00052	<0.001	0	no	yes	0.2	no	1	no
4-Nitroaniline	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
2-Methyl-4,6-Dinitrophenol	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00052	<0.001	0	no	yes	N/A	N/A	N/A	N/A
Azobenzene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	N/A	N/A
4-Bromophenylphenyl Ether	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	N/A	N/A
Hexachlorobenzene	mg/l	0.0005	No EQS	0.00005	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	0.00005	YES
Pentachlorophenol	mg/l	0.0005	0.0004	0.001	21	<0.0005	0.00050	<0.0005	0	no	NO	0.0004	YES	0.001	YES
Phenanthrene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	N/A	N/A
Anthracene	mg/l	0.0005	0.0001	0.0001	21	<0.0005	0.00050	<0.0005	0	no	NO	0.0001	YES	0.0001	YES
Carbazole	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	N/A	N/A
Di-N-Butyl Phthalate	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	N/A	N/A
Fluoranthene	mg/l	0.0005	0.0000063	0.00012	21	<0.0005	0.00050	<0.0005	0	no	NO	0.0000063	YES	0.00012	no
Pyrene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	N/A	N/A
Butylbenzyl Phthalate	mg/l	0.0005	0.00075	0.01	21	<0.0005	0.00050	<0.0005	0	no	yes	0.00075	no	0.01	no
Benzo[a]anthracene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	N/A	N/A
Chrysene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	mg/l	0.0005	0.0013	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	0.0013	no	N/A	N/A
Di-N-Octyl Phthalate	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	N/A	N/A
Benzo[b]fluoranthene	mg/l	0.0005	0.00000017	0.000017	21	<0.0005	0.00050	<0.0005	0	no	NO	0.00000017	YES	0.000017	YES
Benzo[k]fluoranthene	mg/l	0.0005	0.00000017	0.000017	21	<0.0005	0.00050	<0.0005	0	no	NO	0.00000017	YES	0.000017	YES
Benzo[a]pyrene (BaP)	mg/l	0.0005	0.00000017	0.000027	21	<0.0005	0.00050	<0.0005	0	no	NO	0.00000017	YES	0.000027	YES
Indeno(1,2,3-c,d)Pyrene	mg/l	0.0005	0.00000017	No EQS	21	<0.0005	0.00050	<0.0005	0	no	NO	0.00000017	YES	N/A	N/A
Dibenz(a,h)Anthracene	mg/l	0.0005	No EQS	No EQS	21	<0.0005	0.00050	<0.0005	0	no	yes	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene	mg/l	0.0005	0.00000017	0.00000082	21	<0.0005	0.00050	<0.0005	0	no	NO	0.00000017	YES	0.00000082	YES
4-Nitrophenol	mg/l	0.0005	No EQS	No EQS	21	<0.0001	0.00044	<0.0005	1	YES	yes	N/A	N/A	N/A	N/A
Naphthalene	mg/l	0.0001	0.002	0.13	21	<0.00001	0.00004	<0.0001	0	no	yes	0.002	no	0.13	no
Acenaphthylene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Acenaphthene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Fluorene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Phenanthrene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00007	0.00054	1	YES	yes	N/A	N/A	N/A	N/A
Anthracene	mg/l	0.00001 - 0.0001	0.0001	0.0001	21	<0.00001	0.00007	0.0005	1	YES	NO	0.0001	no	0.0001	YES
Fluoranthene	mg/l	0.0001	0.0000063	0.00012	21	<0.00001	0.00009	0.0005	2	YES	NO	0.0000063	YES	0.00012	YES
Pyrene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00013	0.0012	2	YES	yes	N/A	N/A	N/A	N/A
Benzo[a]anthracene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Chrysene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Benzo[b]fluoranthene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Benzo[k]fluoranthene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Benzo[a]pyrene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Indeno(1,2,3-c,d)Pyrene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Dibenz(a,h)Anthracene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene	mg/l	0.0001	No EQS	No EQS	21	<0.00001	0.00004	<0.0001	0	no	yes	N/A	N/A	N/A	N/A
Total Of 16 PAH's	mg/l	0.002	No EQS	No EQS	21	<0.00001	0.00103	0.0027	2	YES	yes	N/A	N/A	N/A	N/A
PCB 28	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 81	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 52	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 77	mg/l	0.00001	No EQS	No EQS	21	<0.00001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 105	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 90+101	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 114	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 118	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 118	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 153	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 123	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 138	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 126	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 180	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 156	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 157	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 167	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 169	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
PCB 189	mg/l	0.00001	No EQS	No EQS	21	<0.000001	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
Total PCBs (12 Congeners)	mg/l	0.00001	No EQS	No EQS	21	<0.000002	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
Total PCBs (7 congeners)	mg/l	0.00001	No EQS	No EQS	21	<0.000002	0.00001	<0.00001	0	no	yes	N/A	N/A	N/A	N/A
Total Phenols	mg/l	0.03	No EQS	No EQS	21	<0.03	0.03000	<0.03	0	no	yes	N/A	N/A	N/A	N/A
Xylenes (Total)	mg/l	0.002	0.03	No EQS	21	<0.0002	0.00123	<0.002	0	no	yes	0.03	no	N/A	N/A

Location																					
Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2019_5	DBH2009_20
Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag Group	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits	Crag Group	Peat/Alluvium	Alluvium / Peat	Crag Group	Alluvium / Peat	Alluvium / Peat	
Zone																					
2,6-Dinitrotoluene	<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	<0.001
Acenaphthene	<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	<0.001
3-Nitroaniline	<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	<0.001
Dibenzofuran	<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	<0.001
4-Chlorophenylphenylether	<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	<0.001
2,4-Dinitrotoluene	<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	<0.001
Fluorene	<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	<0.001
Diethyl Phthalate	<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	<0.001
4-Nitroaniline	<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	<0.001
2-Methyl-4,6-Dinitrophenol	<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	<0.001
Azobenzene	<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	
4-Bromophenylphenyl Ether	<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	
Hexachlorobenzene	<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	
Pentachlorophenol	<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	
Phenanthrene	<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	
Anthracene	<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	
Carbazole	<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	
Di-N-Butyl Phthalate	<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	
Fluoranthene	<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	
Pyrene	<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	
Butylbenzyl Phthalate	<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	
Benzo[a]anthracene	<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	
Chrysene	<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	
Bis(2-Ethylhexyl)Phthalate	<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	
Di-N-Octyl Phthalate	<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	
Benzo[b]fluoranthene	<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	
Benzo[k]fluoranthene	<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	
Benzo[a]pyrene (BaP)	<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	
Indeno(1,2,3-c,d)Pyrene	<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	
Dibenz(a,h)Anthracene	<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	
Benzo[g,h,i]perylene	<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	
4-Nitrophenol	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	0.00043	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Naphthalene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthylene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Fluorene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Phenanthrene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00054	<0.00001	<0.00001	<0.00001	<0.00001
Anthracene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0005	<0.00001	<0.00001	<0.00001	<0.00001
Fluoranthene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	0.00043	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0005	<0.00001	<0.00001	<0.00001	<0.00001
Pyrene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	0.00057	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0012	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[a]anthracene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Chrysene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[b]fluoranthene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[k]fluoranthene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[a]pyrene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Indeno(1,2,3-c,d)Pyrene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Dibenz(a,h)Anthracene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[g,h,i]perylene	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Of 16 PAH's	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0027	<0.0002	<0.0002	<0.0002	<0.00001
PCB 28	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 81	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 52	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 77	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
PCB 105	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 90+101	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 114	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 118	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 118	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 153	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 123	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 138	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 126	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 180	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 156	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 157	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 167	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 169	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 189	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
Total PCBs (12 Congeners)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002
Total PCBs (7 congeners)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002
Total Phenols	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Xylenes (Total)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002

AA EQS = Annual Average Environmental Quality Standard
MAC EQS = Maximum Allowable Concentration Environmental Quality Standard
LOD = Limit of detection
PAH = Polycyclic aromatic hydrocarbon

H1 Screening Test 1: Coastal and Estuarine EQS										Pre-SCREENING Is the substance present in the discharge?		SCREENING TEST 1 Does release concentration (RC) exceed 100% EQS?			
Constituents	Unit	Limit of Detection	AA EQS	MAC EQS	Number of Samples	Minimum Value	Mean Value (< treated as detection at LOD)	Maximum Value	count of detections	Is the substance measured above LOD in the discharge?	Is the LOD sufficiently low?	100% EQS (AA)	Test failed? (AA)	100% EQS (MAC), where available	Test failed? (MAC)
pH		N/A	No EQS	6-8.5	21	7.4	8.01	8.4	21	YES	yes	N/A	N/A	N/A	N/A
Electrical Conductivity	µS/cm	1	No EQS	No EQS	21	250	1830.95	4400	21	YES	yes	N/A	N/A	N/A	N/A
Suspended Solids At 105C	µg/l	5000	No EQS	No EQS	21	<5000	298095.24	4000000	20	YES	yes	N/A	N/A	N/A	N/A
Alkalinity (Total)	µg/l	10000	No EQS	No EQS	21	92000	434761.90	840000	21	YES	yes	N/A	N/A	N/A	N/A
Chloride	µg/l	1000	No EQS	No EQS	21	53000	901047.62	10300000	21	YES	yes	N/A	N/A	N/A	N/A
Ammonium	µg/l	50	No EQS	No EQS	21	130	5256.952	20000	21	YES	yes	N/A	N/A	N/A	N/A
Ammoniacal Nitrogen	µg/l	50	No EQS	No EQS	21	100	4337.619	16000	21	YES	yes	N/A	N/A	N/A	N/A
Nitrite	µg/l	20	No EQS	No EQS	21	<20	37.333	190	6	YES	yes	N/A	N/A	N/A	N/A
Nitrate	µg/l	500	No EQS	No EQS	21	<100	1063.333	7000	10	YES	yes	N/A	N/A	N/A	N/A
Phosphate	µg/l	200	No EQS	No EQS	21	<20	362.857	3800	1	YES	yes	N/A	N/A	N/A	N/A
Phosphorus	µg/l	20	No EQS	No EQS	21	<20	1029.619	<20000	7	YES	yes	N/A	N/A	N/A	N/A
Sulphate	µg/l	1000	No EQS	No EQS	21	<1000	83566.667	1410000	14	YES	yes	N/A	N/A	N/A	N/A
Total Oxidised Nitrogen	µg/l	200	No EQS	No EQS	21	<100	305.714	1600	3	YES	yes	N/A	N/A	N/A	N/A
Cyanide (Free)	µg/l	5	1	5	21	<5	5.000	<5	0	no	NO	1	YES	5	no
Calcium	µg/l	2000	No EQS	No EQS	21	44000	139000.000	531000	21	YES	yes	N/A	N/A	N/A	N/A
Potassium	µg/l	500	No EQS	No EQS	21	3300	21052.381	154000	21	YES	yes	N/A	N/A	N/A	N/A
Magnesium	µg/l	200	No EQS	No EQS	21	2200	67361.905	779000	21	YES	yes	N/A	N/A	N/A	N/A
Sodium	µg/l	1500	No EQS	No EQS	21	34000	544904.762	6600000	21	YES	yes	N/A	N/A	N/A	N/A
Arsenic (Dissolved)	µg/l	0.2	25	No EQS	21	0.5	3.47429	12	20	YES	yes	25	no	N/A	N/A
Boron	µg/l	10	7000.0	No EQS	21	30	236.85714	1390	21	YES	yes	7000	no	N/A	N/A
Cadmium (Dissolved)	µg/l	0.11	0.2	No EQS	21	<0.08	0.11143	<0.2	2	YES	yes	0.2	no	N/A	N/A
Chromium (Dissolved)	µg/l	0.5	No EQS	No EQS	21	<0.5	0.94286	3	6	YES	yes	N/A	N/A	N/A	N/A
Copper (Dissolved)	µg/l	0.5	3.76	No EQS	21	<0.5	1.23048	8	6	YES	yes	3.76	no	N/A	N/A
Iron (Dissolved)	µg/l	5	1000	No EQS	21	<5	3784.99524	26000	15	YES	yes	1000	YES	N/A	N/A
Manganese (Dissolved)	µg/l	0.5	No EQS	No EQS	21	12	1367.57143	4300	21	YES	yes	N/A	N/A	N/A	N/A
Nickel (Dissolved)	µg/l	0.5	8.6	34	21	<0.5	1.22810	3.5	15	YES	yes	8.6	no	34	no
Lead (Dissolved)	µg/l	0.5	1.3	14	21	<0.5	0.57429	<1	2	YES	yes	1.3	no	14	no
Zinc (Dissolved)	µg/l	2.5	6.8	No EQS	21	<1	9.75238	107	12	YES	yes	6.8	YES	N/A	N/A
Mercury	µg/l	0.01	No EQS	0.07	21	<0.01	0.01190	<0.05	0	no	yes	N/A	N/A	0.07	no
Chromium (Hexavalent)	µg/l	0.0001 - 0.02	0.6	32	21	<0.1	11.86429	<20	8	YES	NO	0.6	YES	32	no
Chromium III	µg/l	1	No EQS	No EQS	21	<0.1	4.66438	<20	9	YES	yes	N/A	N/A	N/A	N/A
Total Organic Carbon	µg/l	2000	No EQS	No EQS	21	<2000	17142.85714	97000	18	YES	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C5-C6	µg/l	0.1	No EQS	No EQS	21	<0.1	0.16429	<1	7	YES	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C6-C8	µg/l	0.1	No EQS	No EQS	21	<0.1	0.16429	<1	7	YES	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C8-C10	µg/l	0.1	No EQS	No EQS	21	<0.1	0.45000	<5	7	YES	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C10-C12	µg/l	0.1	No EQS	No EQS	21	<0.1	0.45000	<5	7	YES	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C12-C16	µg/l	0.1	No EQS	No EQS	21	<0.1	0.45000	<5	7	YES	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C16-C21	µg/l	0.1	No EQS	No EQS	21	<0.1	0.45000	<5	7	YES	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C21-C35	µg/l	0.1	No EQS	No EQS	21	<0.1	0.45000	<5	7	YES	yes	N/A	N/A	N/A	N/A
Aliphatic TPH >C35-C44	µg/l	0.1	No EQS	No EQS	21	<0.1	0.10000	<0.1	8	YES	yes	N/A	N/A	N/A	N/A
Total Aliphatic Hydrocarbons	µg/l	5	No EQS	No EQS	21	<5	5.00000	<5	7	YES	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C5-C7	µg/l	0.1	No EQS	No EQS	21	<0.1	0.16429	<1	7	YES	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C7-C8	µg/l	0.1	No EQS	No EQS	21	<0.1	0.16429	<1	7	YES	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C8-C10	µg/l	0.1	No EQS	No EQS	21	<0.1	0.45000	<5	7	YES	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C10-C12	µg/l	0.1	No EQS	No EQS	21	<0.1	0.45000	<5	7	YES	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C12-C16	µg/l	0.1	No EQS	No EQS	21	<0.1	0.45000	<5	7	YES	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C16-C21	µg/l	0.1	No EQS	No EQS	21	<0.1	0.45000	<5	7	YES	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C21-C35	µg/l	0.1	No EQS	No EQS	21	<0.1	0.80714	<10	7	YES	yes	N/A	N/A	N/A	N/A
Aromatic TPH >C35-C44	µg/l	0.1	No EQS	No EQS	21	<0.1	0.10000	<0.1	8	YES	yes	N/A	N/A	N/A	N/A
Total Aromatic Hydrocarbons	µg/l	5	No EQS	No EQS	21	<5	5.35714	<10	7	YES	yes	N/A	N/A	N/A	N/A
Total Petroleum Hydrocarbons	µg/l	10	No EQS	No EQS	21	<10	10.00000	<10	7	YES	yes	N/A	N/A	N/A	N/A
Dichlorodifluoromethane	µg/l	1	No EQS	No EQS	21	<0.1	0.64000	<1	6	YES	yes	N/A	N/A	N/A	N/A
Chloromethane	µg/l	1	No EQS	No EQS	21	<0.1	1.60000	<10	0	no	yes	N/A	N/A	N/A	N/A
Vinyl Chloride	µg/l	1	No EQS	No EQS	21	<0.1	0.60000	<2	0	no	yes	N/A	N/A	N/A	N/A
Bromomethane	µg/l	5	No EQS	No EQS	21	<0.1	2.59524	<5	0	no	yes	N/A	N/A	N/A	N/A
Chloroethane	µg/l	2	No EQS	No EQS	21	<0.1	0.93810	<2	0	no	yes	N/A	N/A	N/A	N/A
Trichlorofluoromethane	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,1-Dichloroethene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
Trans 1,2-Dichloroethene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,1-Dichloroethane	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
cis 1,2-Dichloroethene	µg/l	1	10	No EQS	21	<0.1	0.52857	<1	0	no	yes	10	no	N/A	N/A
Bromochloromethane	µg/l	5	No EQS	No EQS	21	<0.5	2.45238	<5	0	no	yes	N/A	N/A	N/A	N/A
Trichloromethane	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane	µg/l	1	100	No EQS	21	<0.1	0.52857	<1	0	no	yes	100	no	N/A	N/A
Tetrachloromethane	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,1-Dichloropropene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
Benzene	µg/l	1	8	50	21	<0.1	0.52857	<1	0	no	yes	8	no	50	no
1,2-Dichloroethane	µg/l	2	No EQS	No EQS	21	<0.2	1.00952	<2	0	no	yes	N/A	N/A	N/A	N/A
Trichloroethene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,2-Dichloropropane	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
Dibromomethane	µg/l	10	No EQS	No EQS	21	<0.1	4.38571	<10	0	no	yes	N/A	N/A	N/A	N/A
Bromodichloromethane	µg/l	5	No EQS	No EQS	21	<0.5	2.88095	<10	0	no	yes	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene	µg/l	10	No EQS	No EQS	21	<1	4.85714	<10	0	no	yes	N/A	N/A	N/A	N/A
Toluene	µg/l	1	74	370	21	<0.1	0.52857	<1	0	no	yes	74	no	370	no
Trans-1,3-Dichloropropene	µg/l	10	No EQS	No EQS	21	<1	4.85714	<10	0	no	yes	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane	µg/l	10	No EQS	No EQS	21	<0.1	4.38571	<10	0	no	yes	N/A	N/A	N/A	N/A
Tetrachloroethene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,3-Dichloropropane	µg/l	2	No EQS	No EQS	21	<0.2	1.00952	<2	0	no	yes	N/A	N/A	N/A	N/A
Dibromochloromethane	µg/l	10	No EQS	No EQS	21	<1	4.85714	<10	0	no	yes	N/A	N/A	N/A	N/A
1,2-Dibromoethane	µg/l	5	No EQS	No EQS	21	<0.5	2.45238	<5	0	no	yes	N/A	N/A	N/A	N/A
Chlorobenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,1,1,2-Tetrachloroethane	µg/l	2	No EQS	No EQS	21	<0.2	1.00952	<2	0	no	yes	N/A	N/A	N/A	N/A
Ethylbenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
m & p-Xylene	µg/l	1	See Xylene Total	See Xylene Total	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
o-Xylene	µg/l	1	See Xylene Total	See Xylene Total	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
Styrene	µg/l	1	50	500	21	<0.1	0.52857	<1	0	no	yes	50	no	500	no
Tribromomethane	µg/l	1	No EQS	No EQS	21	<1	1.00000	<1	0	no	yes	N/A	N/A	N/A	N/A
Isopropylbenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
Bromobenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,2,3-Trichloropropane	µg/l	50	No EQS	No EQS	21	<1	24.09524	<50	0	no	yes	N/A	N/A	N/A	N/A
N-Propylbenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
2-Chlorotoluene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,3,5-Trimethylbenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
4-Chlorotoluene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
Tert-Butylbenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,2,4-Trimethylbenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
Sec-Butylbenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
4-Isopropyltoluene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
N-Butylbenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	z	N/A	N/A	N/A	N/A
1,2-Dibromo-3-Chloropropane	µg/l	50	No EQS	No EQS	21	<1	24.09524	<50	0	no	yes	N/A	N/A	N/A	N/A
1,2,4-Trichlorobenzene	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
Hexachlorobutadiene	µg/l	0.0001 - 0.001	No EQS	0.6	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	0.6	no
1,2,3-Trichlorobenzene	µg/l	2	No EQS	No EQS	21	<0.2	1.00952	<2	0	no	yes	N/A	N/A	N/A	N/A
Methyl Tert-Butyl Ether	µg/l	1	No EQS	No EQS	21	<0.1	0.52857	<1	0	no	yes	N/A	N/A	N/A	N/A
N-Nitrosodimethylamine	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Phenol	µg/l	0.5	7.7	46	21	<0.5	0.52381	<1	0	no	yes	7.7	no	46	no
2-Chlorophenol	µg/l	0.5	50	No EQS	21	<0.5	0.52381	<1	0	no	yes	50	no	N/A	N/A
Bis-(2-Chloroethyl)Ether	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
2-Methylphenol (o-Cresol)	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Bis(2-Chloroisopropyl)Ether	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Hexachloroethane	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
N-Nitrosodi-n-propylamine	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
4-Methylphenol	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Nitrobenzene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Isophorone	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
2-Nitrophenol	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
2,4-Dimethylphenol	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Bis(2-Chloroethoxy)Methane	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	µg/l	0.5	0.42	6	21	<0.5	0.52381	<1	0	no	NO	0.42	YES	6	no
1,2,4-Trichlorobenzene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.61905	<3	0	no	yes	N/A	N/A	N/A	N/A
Naphthalene	µg/l	0.5	2	130	21	<0.5	0.52381	<1	0	no	yes	2	no	130	no
4-Chloroaniline	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Hexachlorobutadiene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
4-Chloro-3-Methylphenol	µg/l	0.5	40	No EQS	21	<0.5	0.52381	<1	0	no	yes	40	no	N/A	N/A
2-Methylnaphthalene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Hexachlorocyclopentadiene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
2,4,5-Trichlorophenol	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
2-Chloronaphthalene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
2-Nitroaniline	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Acenaphthylene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Dimethylphthalate	µg/l	0.5	800	4000	21	<0.5	0.52381	<1	0	no	yes	800	no	4000	no

Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2019_5	DBH2009_20
Location																					
Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag Group	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits	Crag Group	Peat/Alluvium	Alluvium / Peat	Crag Group	Alluvium / Peat	Alluvium / Peat	
Zone																					
pH	7.5	8.2	7.4	8.3	8.2	8.2	8.3	7.6	7.9	8.3	8.2	8.4	7.8	8.4	8.4	7.9	8	8.4	7.8	7.4	7.52
Electrical Conductivity	890	1100	3600	3100	650	660	950	520	4100	1600	250	1000	1700	930	980	4100	4400	950	1700	2300	2970
Suspended Solids At 105C	59000	100000	170000	210000	23000	16000	57000	110000	250000	57000	47000	<5000	210000	92000	24000	250000	310000	22000	210000	4000000	38000
Alkalinity (Total)	360000	540000	700000	570000	290000	300000	220000	92000	840000	500000	370000	440000	420000	340000	400000	840000	620000	490000	420000	140000	238000
Chloride	120000	210000	950000	860000	62000	53000	150000	65000	1400000	140000	220000	130000	400000	130000	77000	1400000	1200000	65000	400000	590000	10300000
Ammonium	3800	3700	7500	8300	2000	1700	2700	130	20000	740	10000	2000	3400	3600	440	20000	14000	440	3400	1100	1446
Ammoniacal Nitrogen	3000	3100	5900	7200	1700	1500	2300	100	16000	640	8600	1800	2700	3100	380	16000	12000	390	2700	860	1120
Nitrite	<20	<20	<20	<20	30	38	84	<20	<20	<20	<20	<20	31	<20	<20	<20	<20	<20	31	190	<100
Nitrate	7000	610	<500	780	<500	<500	<500	4800	650	<500	<500	<500	770	<500	<500	650	<500	500	770	700	<100
Phosphate	3800	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<20
Phosphorus	1200	21	21	21	<20	23	21	55	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20000
Sulphate	5000	<1000	4800	<1000	37000	36000	44000	14000	<1000	110000	2900	21000	<1000	2500	31000	<1000	<1000	27000	<1000	2700	1410000
Total Oxidised Nitrogen	1600	<200	<200	<200	<200	<200	<200	1100	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	220	<100
Cyanide (Free)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Calcium	78000	92000	100000	100000	110000	120000	100000	44000	150000	190000	93000	99000	120000	72000	110000	150000	130000	120000	120000	290000	531000
Potassium	17000	8500	35000	11000	4600	4500	20000	3300	34000	11000	10000	17000	12000	15000	7500	34000	20000	4700	12000	7000	154000
Magnesium	16000	27000	64000	50000	12000	12000	19000	2200	89000	12000	9400	21000	39000	15000	16000	89000	64000	15000	39000	25000	779000
Sodium	79000	120000	540000	460000	68000	65000	89000	34000	870000	54000	100000	84000	210000	60000	42000	870000	600000	68000	210000	220000	6600000
Arsenic (Dissolved)	1.9	1.9	3.2	3.7	3.1	1.3	0.96	1.2	12	2.4	0.5	1.3	3.7	4.3	5.5	12	3.8	4.3	3.7	1.2	<1
Boron	160	100	640	340	82	84	170	30	310	110	46	220	140	120	55	310	370	87	140	70	1390
Cadmium (Dissolved)	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	0.11	<0.11	<0.11	<0.11	<0.11	<0.08	<0.08	0.11	<0.11	<0.11	<0.11	<0.11	<0.2
Chromium (Dissolved)	<0.5	<0.5	1.7	1.8	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	2.1	<0.5	<0.5	<0.5	<0.5	<0.5	3
Copper (Dissolved)	0.54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.4	1.6	1.2	<0.5	<0.5	<0.5	<1	<1	1.6	<0.5	<0.5	<0.5	<0.5	8
Iron (Dissolved)	<5	<5	15	39	7.9	<5	62	15	26000	140	<5	<5	13	5000	250	26000	6900	<5	13	1200	13800
Manganese (Dissolved)	1800	2000	1200	1200	12	40	2400	25	4300	400	150	2400	2600	140	49	4300	1400	52	2600	1200	451
Nickel (Dissolved)	<0.5	0.63	0.89	1.8	3.2	3.5	<0.5	1.1	1	2.7	0.51	<0.5	0.53	<1	1.6	1	1.1	1.7	0.53	<0.5	<1
Lead (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.53	<0.5	<0.5	<0.5	<0.5	<1	<1	0.53	<0.5	<0.5	<0.5	<0.5	<1
Zinc (Dissolved)	3.4	10	7.6	13	<2.5	2.9	<2.5	23	<2.5	4.2	<2.5	<2.5	4	<1	2	<2.5	2.7	<2.5	4	<2.5	107
Mercury	<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	<0.05
Chromium (Hexavalent)	<20	<20	<20	<20	<20	<20	<20	<20	0	0	0	<1	0	<0.1	2	0	0	<1	<1	<1	0
Chromium III	<1	<1	2	2	<1	<1	<1	<1	0	0	<20	0	<1	3	<0.1	<0.1	0.43	<20	0	<20	0
Total Organic Carbon	9100	8300	13000	32000	3600	3500	11000	6500	0	0	<2000	<2000	<2000	0	97000	30000	20000	0	0	0	0
Aliphatic TPH >C5-C6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aliphatic TPH >C6-C8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aliphatic TPH >C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C10-C12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C12-C16	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C16-C21	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C21-C35	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aliphatic TPH >C35-C44	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	0
Total Aliphatic Hydrocarbons	<5	<5	<5	<5	<5	<5	<5	<5	0	0	0	<5	<5	0	0	0	0	<5	<5	<5	<5
Aromatic TPH >C5-C7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aromatic TPH >C7-C8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<1
Aromatic TPH >C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C10-C12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C12-C16	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C16-C21	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<5
Aromatic TPH >C21-C35	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	<10
Aromatic TPH >C35-C44	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	0	0	0	0	<0.1	<0.1	<0.1	0
Total Aromatic Hydrocarbons	<5	<5	<5	<5	<5	<5	<5	<5	0	0	0	<5	<5	0	0	0	0	<5	<5	<5	<10
Total Petroleum Hydrocarbons	<10	<10	<10	<10	<10	<10	<10	<10	0	0	0	<10	<10	0	0	0	0	<10	<10	<10	<10
Dichlorodifluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	0	0	0	0	0	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<2	<2	<2	<2	<2	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10
Vinyl Chloride	<1	<1	<1	<1	<1	<1	<1	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromomethane	<5	<5	<5	<5	<5	<5	<5	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	<1
Chloroethane	<2	<2	<2	<2	<2	<2	<2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1-Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Trans 1,2-Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1-Dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
cis 1,2-Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Trichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tetrachloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1-Dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dichloroethane	<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Dibromomethane	<10	<10	<10	<10	<10	<10	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromodichloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
cis-1,3-Dichloropropene	<10	<10	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Trans-1,3-Dichloropropene	<10	<10	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,3-Dichloropropane	<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Dibromochloromethane	<10	<10	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,1,1,2-Tetrachloroethane	<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
m & p-Xylene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
o-Xylene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tribromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Bromobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2,3-Trichloropropane	<50	<50	<50	<50	<50	<50	<50	<50	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<1
N-Propylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
2-Chlorotoluene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,3,5-Trimethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
4-Chlorotoluene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Tert-Butylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2,4-Trimethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Sec-Butylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
4-Isopropyltoluene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
N-Butylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2-Dibromo-3-Chloropropane	<50	<50	<50	<50	<50	<50	<50	<50	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<1
1,2,4-Trichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Hexachlorobutadiene	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
1,2,3-Trichlorobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1
Methyl Tert-Butyl Ether	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
N-Nitrosodimethylamine	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Phenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Chlorophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Bis-(2-Chloroethyl)Ether	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,3-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,4-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,2-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Methylphenol (o-Cresol)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Bis(2-Chloroisopropyl)Ether	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Hexachloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
N-Nitrosodi-n-propylamine	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Methylphenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Nitrobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Isophorone	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Nitrophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4-Dimethylphenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Bis(2-Chloroethoxy)Methane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4-Dichlorophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
1,2,4-Trichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<3
Naphthalene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Chloroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Hexachlorobutadiene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Chloro-3-Methylphenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Methylnaphthalene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Hexachlorocyclopentadiene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4,6-Trichlorophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4,5-Trichlorophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Chloronaphthalene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Nitroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Acenaphthylene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Dimethylphthalate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1

H1 Screening Test 1: Coastal and Estuarine EQS										Pre-SCREENING Is the substance present in the discharge?		SCREENING TEST 1 Does release concentration (RC) exceed 100% EQS?			
Constituents	Unit	Limit of Detection	AA EQS	MAC EQS	Number of Samples	Minimum Value	Mean Value (< treated as detection at LOD)	Maximum Value	count of detections	Is the substance measured above LOD in the discharge?	Is the LOD sufficiently low?	100% EQS (AA)	Test failed? (AA)	100% EQS (MAC), where available	Test failed? (MAC)
2,6-Dinitrotoluene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Acenaphthene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
3-Nitroaniline	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Dibenzofuran	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
4-Chlorophenylphenylether	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
2,4-Dinitrotoluene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Fluorene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Diethyl Phthalate	µg/l	0.5	200	1000	21	<0.5	0.52381	<1	0	no	yes	200	no	1000	no
4-Nitroaniline	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
2-Methyl-4,6-Dinitrophenol	µg/l	0.5	No EQS	No EQS	21	<0.5	0.52381	<1	0	no	yes	N/A	N/A	N/A	N/A
Azobenzene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	N/A	N/A
4-Bromophenylphenyl Ether	µg/l	0.5	No EQS	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	N/A	N/A
Hexachlorobenzene	µg/l	0.5	No EQS	0.05	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	0.05	YES
Pentachlorophenol	µg/l	0.5	0.4	1	21	<0.5	0.50000	<0.5	1	YES	NO	0.4	YES	1	YES
Phenanthrene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	N/A	N/A
Anthracene	µg/l	0.5	0.1	0.1	21	<0.5	0.50000	<0.5	1	YES	NO	0.1	YES	0.1	YES
Carbazole	µg/l	0.5	No EQS	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	N/A	N/A
Di-N-Butyl Phthalate	µg/l	0.5	No EQS	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	N/A	N/A
Fluoranthene	µg/l	0.5	0.0063	0.12	21	<0.5	0.50000	<0.5	1	YES	NO	0.0063	YES	0.12	no
Pyrene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	N/A	N/A
Butylbenzyl Phthalate	µg/l	0.5	0.75	10	21	<0.5	0.50000	<0.5	1	YES	yes	0.75	no	10	no
Benzo[a]anthracene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	N/A	N/A
Chrysene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	µg/l	0.5	1.3	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	1.3	no	N/A	N/A
Di-N-Octyl Phthalate	µg/l	0.5	No EQS	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	N/A	N/A
Benzo[b]fluoranthene	µg/l	0.5	0.00017	0.017	21	<0.5	0.50000	<0.5	1	YES	NO	0.00017	YES	0.017	YES
Benzo[k]fluoranthene	µg/l	0.5	0.00017	0.017	21	<0.5	0.50000	<0.5	1	YES	NO	0.00017	YES	0.017	YES
Benzo[a]pyrene (BaP)	µg/l	0.5	0.00017	0.027	21	<0.5	0.50000	<0.5	1	YES	NO	0.00017	YES	0.027	YES
Indeno(1,2,3-c,d)Pyrene	µg/l	0.5	0.00017	No EQS	21	<0.5	0.50000	<0.5	1	YES	NO	0.00017	YES	N/A	N/A
Dibenz(a,h)Anthracene	µg/l	0.5	No EQS	No EQS	21	<0.5	0.50000	<0.5	1	YES	yes	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene	µg/l	0.5	0.00017	0.00082	21	<0.5	0.50000	<0.5	1	YES	NO	0.00017	YES	0.00082	YES
4-Nitrophenol	µg/l	0.5	No EQS	No EQS	21	<0.1	0.43650	<0.5	2	YES	yes	N/A	N/A	N/A	N/A
Naphthalene	µg/l	0.1	2	130	21	<0.01	0.04429	<0.1	0	no	yes	2	no	130	no
Acenaphthylene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Acenaphthene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Fluorene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Phenanthrene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.06952	0.54	1	YES	yes	N/A	N/A	N/A	N/A
Anthracene	µg/l	0.00001 - 0.0001	0.1	0.1	21	<0.01	0.06762	0.5	1	YES	NO	0.1	no	0.1	YES
Fluoranthene	µg/l	0.1	0.0063	0.12	21	<0.01	0.08762	0.5	2	YES	NO	0.0063	YES	0.12	YES
Pyrene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.12762	1.2	2	YES	yes	N/A	N/A	N/A	N/A
Benzo[a]anthracene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Chrysene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Benzo[b]fluoranthene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Benzo[k]fluoranthene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Benzo[a]pyrene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Indeno(1,2,3-c,d)Pyrene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Dibenz(a,h)Anthracene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene	µg/l	0.1	No EQS	No EQS	21	<0.01	0.04429	<0.1	0	no	yes	N/A	N/A	N/A	N/A
Total Of 16 PAH's	µg/l	2	No EQS	No EQS	21	<0.01	1.03381	2.7	2	YES	yes	N/A	N/A	N/A	N/A
PCB 28	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 81	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 52	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 77	µg/l	0.01	No EQS	No EQS	21	<0.01	0.01000	<0.01	1	YES	yes	N/A	N/A	N/A	N/A
PCB 105	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 90+101	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 114	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 118	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 118	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 153	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 123	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 138	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 126	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 180	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 156	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 157	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 167	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 169	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
PCB 189	µg/l	0.01	No EQS	No EQS	21	<0.001	0.00957	<0.01	0	no	yes	N/A	N/A	N/A	N/A
Total PCBs (12 Congeners)	µg/l	0.01	No EQS	No EQS	21	<0.002	0.00962	<0.01	0	no	yes	N/A	N/A	N/A	N/A
Total PCBs (7 congeners)	µg/l	0.01	No EQS	No EQS	21	<0.002	0.00962	<0.01	0	no	yes	N/A	N/A	N/A	N/A
Total Phenols	µg/l	30	No EQS	No EQS	21	<30	30.00000	<30	1	YES	yes	N/A	N/A	N/A	N/A
Xylenes (Total)	µg/l	2	30	No EQS	21	<0.2	1.22857	<2	0	no	yes	30	no	N/A	N/A

Location																					
Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2019_5	DBH2009_20
Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag Group	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits	Crag Group	Peat/Alluvium	Alluvium / Peat	Crag Group	Alluvium / Peat	Alluvium / Peat	
Zone																					
2,6-Dinitrotoluene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Acenaphthene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
3-Nitroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Dibenzofuran	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Chlorophenylphenylether	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2,4-Dinitrotoluene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Fluorene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Diethyl Phthalate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
4-Nitroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
2-Methyl-4,6-Dinitrophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Azobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
4-Bromophenylphenyl Ether	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Hexachlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Pentachlorophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Phenanthrene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Anthracene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Carbazole	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Di-N-Butyl Phthalate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Fluoranthene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Pyrene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Butylbenzyl Phthalate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[a]anthracene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Chrysene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Bis(2-Ethylhexyl)Phthalate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Di-N-Octyl Phthalate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[b]fluoranthene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[k]fluoranthene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[a]pyrene (BaP)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Indeno(1,2,3-c,d)Pyrene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Dibenz(a,h)Anthracene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Benzo[g,h,i]perylene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
4-Nitrophenol	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	0.43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Naphthalene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Acenaphthylene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Acenaphthene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Fluorene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Phenanthrene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.54	<0.01	<0.01	<0.01	<0.01
Anthracene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.5	<0.01	<0.01	<0.01	<0.01
Fluoranthene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	0.43	<0.01	<0.01	<0.01	<0.01	<0.01	0.5	<0.01	<0.01	<0.01	<0.01
Pyrene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	0.57	<0.01	<0.01	<0.01	<0.01	<0.01	1.2	<0.01	<0.01	<0.01	<0.01
Benzo[a]anthracene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Chrysene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[b]fluoranthene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[k]fluoranthene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[a]pyrene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Indeno(1,2,3-c,d)Pyrene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Dibenz(a,h)Anthracene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
Benzo[g,h,i]perylene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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 Of 16 PAH's	<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	1	<0.2	<0.2	<0.2	<0.2	<0.2	2.7	<0.2	<0.2	<0.2	<0.01
PCB 28	<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	<0.001
PCB 81	<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	<0.001
PCB 52	<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	<0.001
PCB 77	<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
PCB 105	<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	<0.001
PCB 90+101	<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	<0.001
PCB 114	<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	<0.001
PCB 118	<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	<0.001
PCB 118	<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	<0.001
PCB 153	<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	<0.001
PCB 123	<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	<0.001
PCB 138	<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	<0.001
PCB 126	<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	<0.001
PCB 180	<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	<0.001
PCB 156	<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	<0.001
PCB 157	<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	<0.001
PCB 167	<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	<0.001
PCB 169	<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	<0.001
PCB 189	<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	<0.001
Total PCBs (12 Congeners)	<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	<0.002
Total PCBs (7 congeners)	<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	<0.002
Total Phenols	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	0
Xylenes (Total)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2

AA EQS = Annual Average Environmental Quality Standard
MAC EQS = Maximum Allowable Concentration Environmental Quality Standard
LOD = Limit of detection
PAH = Polycyclic aromatic hydrocarbon

H1 Screening: Significant Load Test

Constituents	Unit	Limit of Detection	Number of Samples	Minimum Value	Mean Value (< treated as detection at LOD)	Maximum Value	count of detections	Is the substancea Priority Hazardous Substance with a Significant Load limit?	Calculated annual load in groundwater discharge (kg/yr) (total discharge volume = 450.5m3)	Signficant load limit
Chloride	mg/l	1	21	53	901.05	10300	21	No	4.06E+02	
Ammonium	mg/l	0.05	21	0.13	5.257	20	21	No	2.37E+00	
Ammoniacal Nitrogen	mg/l	0.05	21	0.1	4.338	16	21	No	1.95E+00	
Nitrite	mg/l	0.02	21	<0.02	0.037	0.19	6	No	1.68E-02	
Nitrate	mg/l	0.5	21	<0.1	1.063	7	10	No	4.79E-01	
Phosphate	mg/l	0.2	21	<0.02	0.363	3.8	1	No	1.63E-01	
Phosphorus	mg/l	0.02	21	<0.02	1.030	<20	7	No	4.64E-01	
Sulphate	mg/l	1	21	<1	83.567	1410	14	No	3.76E+01	
Total Oxidised Nitrogen	mg/l	0.2	21	<0.1	0.306	1.6	3	No	1.38E-01	
Cyanide (Free)	mg/l	0.005	21	<0.005	0.005	<0.005	0	No	2.25E-03	
Calcium	mg/l	2	21	44	139.000	531	21	No	6.26E+01	
Potassium	mg/l	0.5	21	3.3	21.052	154	21	No	9.48E+00	
Magnesium	mg/l	0.2	21	2.2	67.362	779	21	No	3.03E+01	
Sodium	mg/l	1.5	21	34	544.905	6600	21	No	2.45E+02	
Arsenic (Dissolved)	mg/l	0.0002	21	0.0005	0.00347	0.012	20	No	1.57E-03	
Boron	mg/l	0.01	21	0.03	0.23686	1.39	21	No	1.07E-01	
Cadmium (Dissolved)	mg/l	0.00011	21	<0.00008	0.00011	<0.0002	2	YES	5.02E-05	5
Chromium (Dissolved)	mg/l	0.0005	21	<0.0005	0.00094	0.003	6	No	4.25E-04	
Copper (Dissolved)	mg/l	0.0005	21	<0.0005	0.00123	0.008	6	No	5.54E-04	
Iron (Dissolved)	mg/l	0.005	21	<0.005	3.78500	26	15	No	1.71E+00	
Manganese (Dissolved)	mg/l	0.0005	21	0.012	1.36757	4.3	21	No	6.16E-01	
Nickel (Dissolved)	mg/l	0.0005	21	<0.0005	0.00123	0.0035	15	No	5.53E-04	
Lead (Dissolved)	mg/l	0.0005	21	<0.0005	0.00057	<0.001	2	No	2.59E-04	
Zinc (Dissolved)	mg/l	0.0025	21	<0.001	0.00975	0.107	12	No	4.39E-03	
Mercury	mg/l	0.00001	21	<0.00001	0.00001	<0.00005	0	YES	5.36E-06	5
Chromium (Hexavalent)	mg/l	0.02	21	<0.0001	0.01186	<0.02	1	No	5.34E-03	
Chromium III	mg/l	0.001	21	<0.0001	0.00466	<0.02	4	No	2.10E-03	
Total Organic Carbon	mg/l	2	21	<2	17.14286	97	11	No	7.72E+00	
Aliphatic TPH >C5-C6	mg/l	0.0001	21	<0.0001	0.00016	<0.001	0	No	7.40E-05	
Aliphatic TPH >C6-C8	mg/l	0.0001	21	<0.0001	0.00016	<0.001	0	No	7.40E-05	
Aliphatic TPH >C8-C10	mg/l	0.0001	21	<0.0001	0.00045	<0.005	0	No	2.03E-04	
Aliphatic TPH >C10-C12	mg/l	0.0001	21	<0.0001	0.00045	<0.005	0	No	2.03E-04	
Aliphatic TPH >C12-C16	mg/l	0.0001	21	<0.0001	0.00045	<0.005	0	No	2.03E-04	
Aliphatic TPH >C16-C21	mg/l	0.0001	21	<0.0001	0.00045	<0.005	0	No	2.03E-04	
Aliphatic TPH >C21-C35	mg/l	0.0001	21	<0.0001	0.00045	<0.005	0	No	2.03E-04	
Aliphatic TPH >C35-C44	mg/l	0.0001	21	<0.0001	0.00010	<0.0001	0	No	4.51E-05	
Total Aliphatic Hydrocarbons	mg/l	0.005	21	<0.005	0.00500	<0.005	0	No	2.25E-03	
Aromatic TPH >C5-C7	mg/l	0.0001	21	<0.0001	0.00016	<0.001	0	No	7.40E-05	
Aromatic TPH >C7-C8	mg/l	0.0001	21	<0.0001	0.00016	<0.001	0	No	7.40E-05	
Aromatic TPH >C8-C10	mg/l	0.0001	21	<0.0001	0.00045	<0.005	0	No	2.03E-04	
Aromatic TPH >C10-C12	mg/l	0.0001	21	<0.0001	0.00045	<0.005	0	No	2.03E-04	
Aromatic TPH >C12-C16	mg/l	0.0001	21	<0.0001	0.00045	<0.005	0	No	2.03E-04	
Aromatic TPH >C16-C21	mg/l	0.0001	21	<0.0001	0.00045	<0.005	0	No	2.03E-04	
Aromatic TPH >C21-C35	mg/l	0.0001	21	<0.0001	0.00081	<0.01	0	No	3.64E-04	
Aromatic TPH >C35-C44	mg/l	0.0001	21	<0.0001	0.00010	<0.0001	0	No	4.51E-05	
Total Aromatic Hydrocarbons	mg/l	0.005	21	<0.005	0.00536	<0.01	0	No	2.41E-03	
Total Petroleum Hydrocarbons	mg/l	0.01	21	<0.01	0.01000	<0.01	0	No	4.51E-03	
Dichlorodifluoromethane	mg/l	0.001	21	<0.0001	0.00064	<0.001	0	No	2.88E-04	
Chloromethane	mg/l	0.001	21	<0.0001	0.00160	<0.01	0	No	7.21E-04	
Vinyl Chloride	mg/l	0.001	21	<0.0001	0.00060	<0.002	0	No	2.70E-04	
Bromomethane	mg/l	0.005	21	<0.0001	0.00260	<0.005	0	No	1.17E-03	
Chloroethane	mg/l	0.002	21	<0.0001	0.00094	<0.002	0	No	4.23E-04	
Trichlorofluoromethane	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,1-Dichloroethene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Trans 1,2-Dichloroethene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,1-Dichloroethane	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
cis 1,2-Dichloroethene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Bromochloromethane	mg/l	0.005	21	<0.0005	0.00245	<0.005	0	No	1.10E-03	
Trichloromethane	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,1,1-Trichloroethane	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Tetrachloromethane	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,1-Dichloropropene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Benzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,2-Dichloroethane	mg/l	0.002	21	<0.0002	0.00101	<0.002	0	No	4.55E-04	
Trichloroethene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,2-Dichloropropane	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Dibromomethane	mg/l	0.01	21	<0.0001	0.00439	<0.01	0	No	1.98E-03	
Bromodichloromethane	mg/l	0.005	21	<0.0005	0.00288	<0.01	0	No	1.30E-03	
cis-1,3-Dichloropropene	mg/l	0.01	21	<0.001	0.00486	<0.01	0	No	2.19E-03	
Toluene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Trans-1,3-Dichloropropene	mg/l	0.01	21	<0.001	0.00486	<0.01	0	No	2.19E-03	
1,1,2-Trichloroethane	mg/l	0.01	21	<0.0001	0.00439	<0.01	0	No	1.98E-03	
Tetrachloroethene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,3-Dichloropropane	mg/l	0.002	21	<0.0002	0.00101	<0.002	0	No	4.55E-04	
Dibromochloromethane	mg/l	0.01	21	<0.001	0.00486	<0.01	0	No	2.19E-03	
1,2-Dibromoethane	mg/l	0.005	21	<0.0005	0.00245	<0.005	0	No	1.10E-03	
Chlorobenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,1,1,2-Tetrachloroethane	mg/l	0.002	21	<0.0002	0.00101	<0.002	0	No	4.55E-04	
Ethylbenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
m & p-Xylene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
o-Xylene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Styrene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Tribromomethane	mg/l	0.001	21	<0.001	0.00100	<0.001	0	No	4.51E-04	
Isopropylbenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Bromobenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,2,3-Trichloropropane	mg/l	0.05	21	<0.001	0.02410	<0.05	0	No	1.09E-02	
N-Propylbenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
2-Chlorotoluene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,3,5-Trimethylbenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
4-Chlorotoluene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Tert-Butylbenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,2,4-Trimethylbenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Sec-Butylbenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,3-Dichlorobenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
4-Isopropyltoluene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,4-Dichlorobenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
N-Butylbenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,2-Dichlorobenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
1,2-Dibromo-3-Chloropropane	mg/l	0.05	21	<0.001	0.02410	<0.05	0	No	1.09E-02	
1,2,4-Trichlorobenzene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
Hexachlorobutadiene	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	YES	2.38E-04	1
1,2,3-Trichlorobenzene	mg/l	0.002	21	<0.0002	0.00101	<0.002	0	No	4.55E-04	
Methyl Tert-Butyl Ether	mg/l	0.001	21	<0.0001	0.00053	<0.001	0	No	2.38E-04	
N-Nitrosodimethylamine	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04	
Phenol	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04	
2-Chlorophenol	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04	

Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2019_5	DBH2009_20
Location																					
Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits	Crag Group	Peat/Alluvium	Alluvium / Peat	Crag Group	Alluvium / Peat	Alluvium / Peat	
Zone																					
Chloride	120	210	950	860	62	53	150	65	1400	140	220	130	400	130	77	1400	1200	65	400	590	10300
Ammonium	3.8	3.7	7.5	8.3	2	1.7	2.7	0.13	20	0.74	10	2	3.4	3.6	0.44	20	14	0.44	3.4	1.1	1.446
Ammoniacal Nitrogen	3	3.1	5.9	7.2	1.7	1.5	2.3	0.1	16	0.64	8.6	1.8	2.7	3.1	0.38	16	12	0.39	2.7	0.86	1.12
Nitrite	<0.02	<0.02	<0.02	<0.02	0.03	0.038	0.084	<0.02	<0.02	<0.02	<0.02	<0.02	0.031	<0.02	<0.02	<0.02	<0.02	<0.02	0.031	0.19	<0.1
Nitrate	7	0.61	<0.5	0.78	<0.5	<0.5	<0.5	4.8	0.65	<0.5	<0.5	<0.5	0.77	<0.5	<0.5	0.65	<0.5	0.5	0.77	0.7	<0.1
Phosphate	3.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.02
Phosphorus	1.2	0.021	0.021	0.021	<0.02	0.023	0.021	0.055	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<20
Sulphate	5	<1	4.8	<1	37	36	44	14	<1	110	2.9	21	<1	2.5	31	<1	<1	27	<1	2.7	1410
Total Oxidised Nitrogen	1.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.22	<0.1
Cyanide (Free)	<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	78	92	100	100	110	120	100	44	150	190	93	99	120	72	110	150	130	120	120	290	531
Potassium	17	8.5	35	11	4.6	4.5	20	3.3	34	11	10	17	12	15	7.5	34	20	4.7	12	7	154
Magnesium	16	27	64	50	12	12	19	2.2	89	12	9.4	21	39	15	16	89	64	15	39	25	779
Sodium	79	120	540	460	68	65	89	34	870	54	100	84	210	60	42	870	600	68	210	220	6600
Arsenic (Dissolved)	0.0019	0.0019	0.0032	0.0037	0.0031	0.0013	0.00096	0.0012	0.012	0.0024	0.0005	0.0013	0.0037	0.0043	0.0055	0.012	0.0038	0.0043	0.0037	0.0012	<0.001
Boron	0.16	0.1	0.64	0.34	0.082	0.084	0.17	0.03	0.31	0.11	0.046	0.22	0.14	0.12	0.055	0.31	0.37	0.087	0.14	0.07	1.39
Cadmium (Dissolved)	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00008	<0.00008	0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.0002
Chromium (Dissolved)	<0.0005	<0.0005	0.0017	0.0018	<0.0005	<0.0005	<0.0005	0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0025	0.0021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.003
Copper (Dissolved)	0.00054	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0044	0.0016	0.0012	<0.0005	<0.0005	<0.0005	<0.001	<0.001	0.0016	<0.0005	<0.0005	<0.0005	<0.0005	0.008
Iron (Dissolved)	<0.005	<0.005	0.015	0.039	0.0079	<0.005	0.062	0.015	26	0.14	<0.005	<0.005	0.013	5	0.25	26	6.9	<0.005	0.013	1.2	13.8
Manganese (Dissolved)	1.8	2	1.2	1.2	0.012	0.04	2.4	0.025	4.3	0.4	0.15	2.4	2.6	0.14	0.049	4.3	1.4	0.052	2.6	1.2	0.451
Nickel (Dissolved)	<0.0005	0.00063	0.00089	0.0018	0.0032	0.0035	<0.0005	0.0011	0.001	0.0027	0.00051	<0.0005	0.00053	<0.001	0.0016	0.001	0.0011	0.0017	0.00053	<0.0005	<0.001
Lead (Dissolved)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Zinc (Dissolved)	0.0034	0.01	0.0076	0.013	<0.0025	0.0029	<0.0025	0.023	<0.0025	0.0042	<0.0025	<0.0025	0.004	<0.001	0.002	<0.0025	0.0027	<0.0025	0.004	<0.0025	0.107
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005
Chromium (Hexavalent)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02				<0.001		<0.0001	0.002			<0.001	<0.001	<0.001	
Chromium III	<0.001	<0.001	0.002	0.002	<0.001	<0.001	<0.001	<0.001			<0.02		<0.001	0.003	<0.0001	<0.0001	0.00043	<0.02		<0.02	
Total Organic Carbon	9.1	8.3	13	32	3.6	3.5	11	6.5			<2	<2	<2		97	30	20				
Aliphatic TPH >C5-C6	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aliphatic TPH >C6-C8	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aliphatic TPH >C8-C10	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C10-C12	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C12-C16	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C16-C21	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C21-C35	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aliphatic TPH >C35-C44	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	
Total Aliphatic Hydrocarbons	<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	<0.005
Aromatic TPH >C5-C7	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aromatic TPH >C7-C8	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.001
Aromatic TPH >C8-C10	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C10-C12	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C12-C16	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C16-C21	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.005
Aromatic TPH >C21-C35	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.01
Aromatic TPH >C35-C44	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	
Total Aromatic Hydrocarbons	<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	<0.01
Total Petroleum Hydrocarbons	<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
Dichlorodifluoromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001							<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Chloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01
Vinyl Chloride	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromomethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Chloroethane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Trichlorofluoromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Trans 1,2-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
cis 1,2-Dichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromochloromethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Trichloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1,1-Trichloroethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tetrachloromethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1-Dichloropropene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Benzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichloroethane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Trichloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichloropropane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Dibromomethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromodichloromethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.01
cis-1,3-Dichloropropene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Trans-1,3-Dichloropropene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,2-Trichloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tetrachloroethene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3-Dichloropropane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Dibromochloromethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dibromoethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Chlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,1,1,2-Tetrachloroethane	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
m & p-Xylene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
o-Xylene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Styrene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tribromomethane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Isopropylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bromobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,3-Trichloropropane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
N-Propylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
2-Chlorotoluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3,5-Trimethylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
4-Chlorotoluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Tert-Butylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,4-Trimethylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Sec-Butylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,3-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
4-Isopropyltoluene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,4-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
N-Butylbenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2-Dibromo-3-Chloropropane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
1,2,4-Trichlorobenzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Hexachlorobutadiene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
1,2,3-Trichlorobenzene	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Methyl Tert-Butyl Ether	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
N-Nitrosodimethylamine	<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	<0.001
Phenol	<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	<0.001
2-Chlorophenol	<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	<0.001

H1 Screening: Significant Load Test

Constituents	Unit	Limit of Detection	Number of Samples	Minimum Value	Mean Value (< treated as detection at LOD)	Maximum Value	count of detections	Is the substancea Priority Hazardous Substance with a Significant Load limit?	Calculated annual load in groundwater discharge (kg/yr) (total discharge volume = 450.5m3)	Signficant load limit	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2019_5	DBH2009_20
Location																															
Depth											9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
Date											23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
Strata											Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits	Crag Group	Peat/Alluvium	Alluvium / Peat	Crag Group	Alluvium / Peat	Alluvium / Peat	
Zone																															
Bis-(2-Chloroethyl)Ether	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
1,3-Dichlorobenzene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
1,4-Dichlorobenzene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
1,2-Dichlorobenzene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2-Methylphenol (o-Cresol)	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Bis(2-Chloroisopropyl)Ether	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Hexachloroethane	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
N-Nitrosodi-n-propylamine	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
4-Methylphenol	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Nitrobenzene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Isophorone	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2-Nitrophenol	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2,4-Dimethylphenol	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Bis(2-Chloroethoxy)Methane	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2,4-Dichlorophenol	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
1,2,4-Trichlorobenzene	mg/l	0.0005	21	<0.0005	0.00062	<0.003	0	No	2.79E-04		<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	<0.003
Naphthalene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
4-Chloroaniline	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Hexachlorobutadiene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
4-Chloro-3-Methylphenol	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2-Methylnaphthalene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Hexachlorocyclopentadiene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2,4,6-Trichlorophenol	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2,4,5-Trichlorophenol	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2-Chloronaphthalene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2-Nitroaniline	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Acenaphthylene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Dimethylphthalate	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2,6-Dinitrotoluene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Acenaphthene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
3-Nitroaniline	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Dibenzofuran	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
4-Chlorophenylphenylether	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2,4-Dinitrotoluene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Fluorene	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Diethyl Phthalate	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
4-Nitroaniline	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
2-Methyl-4,6-Dinitrophenol	mg/l	0.0005	21	<0.0005	0.00052	<0.001	0	No	2.36E-04		<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	<0.001
Azobenzene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
4-Bromophenylphenyl Ether	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Hexachlorobenzene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	YES	2.25E-04	1	<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	
Pentachlorophenol	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Phenanthrene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Anthracene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	YES	2.25E-04	1	<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	
Carbazole	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Di-N-Butyl Phthalate	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Fluoranthene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Pyrene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Butylbenzyl Phthalate	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Benzo[a]anthracene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Chrysene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Bis(2-Ethylhexyl)Phthalate	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Di-N-Octyl Phthalate	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Benzo[b]fluoranthene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Benzo[k]fluoranthene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Benzo[a]pyrene (BaP)	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	YES	2.25E-04	5	<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	
Indeno(1,2,3-c,d)Pyrene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Dibenz(a,h)Anthracene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
Benzo[g,h,i]perylene	mg/l	0.0005	21	<0.0005	0.00050	<0.0005	0	No	2.25E-04		<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	
4-Nitrophenol	mg/l	0.0005	21	<0.0001	0.00044	<0.0005	1	No	1.97E-04		<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	0.00043	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Naphthalene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthylene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Fluorene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Phenanthrene	mg/l	0.0001	21	<0.00001	0.00007	0.00054	1	No	3.13E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00054	<0.00001	<0.00001	<0.00001	<0.00001
Anthracene	mg/l	0.0001	21	<0.00001	0.00007	0.0005	1	YES	3.05E-05	1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0005	<0.00001	<0.00001	<0.00001	<0.00001
Fluoranthene	mg/l	0.0001	21	<0.00001	0.00009	0.0005	2	No	3.95E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	0.00043	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0005	<0.00001	<0.00001	<0.00001	<0.00001
Pyrene	mg/l	0.0001	21	<0.00001	0.00013	0.0012	2	No	5.75E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	0.00057	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0012	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[a]anthracene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Chrysene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[b]fluoranthene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[k]fluoranthene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[a]pyrene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Indeno(1,2,3-c,d)Pyrene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Dibenz(a,h)Anthracene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[g,h,i]perylene	mg/l	0.0001	21	<0.00001	0.00004	<0.0001	0	No	2.00E-05		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Of 16 PAH's	mg/l	0.002	21	<0.00001	0.00103	0.0027	2	No	4.66E-04		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0027	<0.0002	<0.0002	<0.0002	<0.00001
PCB 28	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 81	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 52	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 77	mg/l	0.00001	21	<0.00001	0.00001	<0.00001	0	No	4.51E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
PCB 105	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 90+101	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 114	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 118	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 118	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 153	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 123	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 138	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 126	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 180	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 156	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 157	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001

H1 Screening: Significant Load Test																														
											Location																				
											Sample ID	GW12	DCBH2019_3	DCBH2019_4	DCBH2019_5	PZ13	PZ13	GW12	PZ13	DCBH2019_3	GW10	PZ5	GW12	DCBH2019_3	GW12	PZ13	DCBH2019_3	DCBH2019_5	PZ13	DCBH2019_3	DCBH2019_5	DBH2009_20
											Depth	9m	4m	10m	5m	9m	9m	8m	9m	4m	4m	15m	8m	4m	8m	15.00m	4.00m	7.00m	10m	4m	7m	0.79m
											Date	23/08/2023	21/09/2023	20/09/2023	20/09/2023	24/01/2024	24/01/2024	24/01/2024	12/10/2023	17/11/2021	17/11/2021	17/11/2021	08/12/2021	16/06/2022	19/11/2020	19/11/2020	17/11/2021	17/11/2021	08/12/2021	16/06/2022	29/06/2022	18/03/2020
											Strata	Made Ground / Alluvium	Alluvium / Peat	Alluvium / Peat	Alluvium / Peat	Crag Group	Crag Group	Made Ground / Alluvium	Crag Group	Peat/Alluvium	Made Ground	Crag	Made Ground/ Beach Deposits	Peat/Alluvium	Made Ground/ Beach Deposits	Crag Group	Peat/Alluvium	Alluvium / Peat	Crag Group	Alluvium / Peat	Alluvium / Peat	
Constituents	Unit	Limit of Detection	Number of Samples	Minimum Value	Mean Value (< treated as detection at LOD)	Maximum Value	count of detections	Is the substance a Priority Hazardous Substance with a Significant Load limit?	Calculated annual load in groundwater discharge (kg/yr) (total discharge volume = 460.5m3)	Significant load limit		Zone																				
PCB 167	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 169	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
PCB 189	mg/l	0.00001	21	<0.000001	0.00001	<0.00001	0	No	4.31E-06				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001
Total PCBs (12 Congeners)	mg/l	0.00001	21	<0.000002	0.00001	<0.00001	0	No	4.33E-06				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002
Total PCBs (7 congeners)	mg/l	0.00001	21	<0.000002	0.00001	<0.00001	0	No	4.33E-06				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002
Total Phenols	mg/l	0.03	21	<0.03	0.03000	<0.03	0	No	1.35E-02				<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Xylenes (Total)	mg/l	0.002	21	<0.0002	0.00123	<0.002	0	No	5.53E-04				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002
Sum of 4 PAH	mg/l	0.0004	21	<0.0004	0.0004	0.0004	0	YES	1.80E-04	5																						

LOD = Limit of detection
PAH = Polycyclic aromatic hydrocarbon